



Chirayu
University

CHIRAYU COLLEGE OF NURSING BHOPAL

(A Constituent College of Chirayu University)

2025 - 2026

E-Souvenir
2025 - 2026

*Exalting Nursing Care:
Intertwining Compassion and Clinical Precision*

Address: Chirayu Medical College and Hospital Campus, Near Bairagarh, Bhopal, Madhya Pradesh,
PIN-462030, Website: cncbhupal.com, Email id - principalchirayu@gmail.com



ABOUT UNIVERSITY



To promulgate scholarly excellence in medical education; practice the acquired knowledge virtuously, safely and with quality; achieve imperative skills obligatory intertwined with compassion, values and gratitude to the citizens of our country and worldwide, Chirayu University, Bhopal was established by Chirayu Charitable Foundation, by an act of Govt. of M.P and published in State Gazette on 20th July 2023. The University is spread over more than 39 acres of land. The University has been approved by UGC under section 2(f) 1956."

Vision:

To promulgate scholarly excellence in medical education; practice the acquired knowledge virtuously, safely and with quality; achieve imperative skills obligatory intertwined with compassion, values and gratitude to the citizens of our country and worldwide. And to gradually diversify into various streams of education in order to become a top multi-disciplinary University.

Mission:

- To escalate our services to the top-ranking level in the country.
- To bestow with academic excellence of exorbitant quality in education, training, research and services.
- To build competent skills with precision, perfection and reliability to accomplish student satisfaction.
- To promote value driven education with a global outlook and demonstrate desirable values and attitudes towards self, others and profession.
- To extrapolate opportunities to conduct funding and non-funding research projects in the areas of education, administration and clinical practice.

Objectives:

- To organize state of the art facilities for education, training and research.
- To establish centre of excellence for efficient use of resources by providing quality assurance.
- To maintain the standard of degrees, diplomas, certificate and other academic distinctions in accordance with the norms laid down by the University Grants Commission and the related regulatory body or regulatory council.
- To afford towering levels of capacity and capability enhancement ability.
- To provide teaching and pedagogies in higher education and dispense advanced knowledge, research and its dissemination.
- To introduce welfare and charitable activities for economically backward section of the society.
- The benefit of the society shall be opened to all, irrespective of caste, creed or religion.
- To gain insight among students in the field of ethnicity, physical and mental education.
- To furnish career counselling and guidance to students for employment.
- To collaborate curricular activities with co-curricular and extra-curricular activities of the students dynamically.
- To accommodate students inside the campus.
- To serve as a liaison between international universities and promote exchange programs for students and faculty.
- To engage the students diligently in the independent learning activities.
- To render sound guidance and counselling to the students community to build vibrant mental health.
- To impart E-learning even to the remote areas through Tele Medicine and Tele Nursing.



Philosophy:

Chirayu University, Bhopal believes in this philosophy and has taken steps forward in that direction to provide quality education for holistic development of the student. We offer wide range of professional programs for the development of youth in the area of health education.

The University provides unique learning opportunities to the students by combining pedagogically sound and comprehensive professional courses for a variety of subjects. It also incorporates innovative teaching and learning methodologies supported by state of the art library resources, focusing on all-round development of the student.



ABOUT COLLEGE



Chirayu College of Nursing belongs to Chirayu Charitable Foundation that was established in the year 2001. the society marched its step towards accomplishment of their vision with Medical College and Hospital. The society further added their feathers with a College of Nursing in the year 2012 with two programs B.Sc Nursing and Diploma in Nursing and Midwifery. Chirayu College of Nursing has taken its growth gradually by offering another two programs: M.Sc. Nursing and P.B.B.Sc Nursing from the academic year 2016-17. our college is affiliated to Madhya Pradesh Medical Science University, Jabalpur and recognised by Indian Nursing Council and Madhya Pradesh Nursing Registration Council.

Our college is committed in providing nursing education and services standard knowledge and skills blended with desirable attitude our goal is to prepare students to take up any situation and manage skilfully with sound knowledge base.

Vision

The College of Nursing's vision is to strive for outstanding educational outcomes exemplified by graduates whose actions, discoveries and voices strengthen and advance the health of individuals, families and communities worldwide.

Mission

1. Advance health through excellence in nursing and interdisciplinary teaching, research, practice and service.
2. Provide quality patient care based on our strong commitment to practice, education, innovation and collaboration.
3. Inspire students to become passionate healers who demonstrate integrity, caring and excellence.
4. Train nursing aspirants for leadership to cater the health care needs of the society.
5. Promote professionalism by quality and value driven education with a global outlook.
6. Demonstrate desirable values and attitudes towards self, others and the profession.

Core Values

In pursuit of its mission Chirayu College of Nursing will:

- Develop Human resource to serve the nation.
- A healthy body is a guest house for the soul.
- Recognize teaching as a unifying activity.
- Nurture integrity, creativity and academic freedom.
- Retain a willingness to experiment with new paradigms.



Philosophy

The college believes that the progress of nation is very much depends upon the health of its citizens and the educational preparation of nurses contributes tremendously towards pursuing this goal. The college believes in training professional nurses from all states of India to meet the great demand in the field of Nursing. Professional nursing is a lifelong service to the people. College prepares its students to develop ability to analyze situations and problems critically and take responsibility for their higher education to maximize professional effectiveness throughout their career. College believes that degree course in nursing prepares nurses for first level position both in the hospital and in the community. Our concept of health as per WHO i.e "Health is a state of complete physical, mental and social well being and merely absence of disease or infirmity.



Chirayu Medical College & Hospital

CHIRAYU MEDICAL COLLEGE & HOSPITAL

(A Unit of Chirayu Charitable Foundation)



MESSAGE

It gives me immense pride and pleasure to extend my heartfelt message on the occasion of this special souvenir, centered around the theme *"Exalting Nursing Care: Intertwining Compassion and Clinical Precision."*

Nursing stands as the very backbone of healthcare, where science meets humanity in its purest form. At Chirayu College of Nursing, we believe that true excellence in nursing is achieved when compassionate care is seamlessly blended with clinical expertise. This delicate balance not only enhances patient outcomes but also upholds the dignity, empathy, and trust that define the noble profession of nursing.

Our institution remains committed to nurturing skilled professionals who are not only clinically proficient but also deeply empathetic in their approach. In an ever-evolving healthcare landscape, precision in practice, supported by knowledge and technology, must go hand in hand with kindness, patience, and understanding.

I commend the efforts of our Principal, dedicated faculty and passionate students, who continuously strive to uphold these values. This souvenir is a reflection of their commitment, achievements, and the shared vision of elevating nursing care to greater heights.

May this theme inspire all of us to continue delivering care that heals not just the body, but also comforts the soul.

With best wishes for continued success and excellence.

Dr. Ajay Goenka

Chief Patron
For Chirayu Charitable Foundation
Chirayu Charitable Foundation
President

Bhopal-Indore Highway, Near Bairagarh, Bhopal (M.P.) 462 030. Tel : 0755-2709101, 102
E-mail: cmchbhopal@gmail.com, Web-site : www.cmchbhopal.com
City Office : Chirayu Hospital, 6 Malipura, Bhopal, Tel.: 0755-2737401/02/03



Chirayu
University

Neelam Goenka
Chancellor

P: 0755 2709601/602
E: chancellor@chirayuuniversity.ac.in

Message

In celebration of this momentous occasion, Chirayu College of Nursing is proud to present the tenth edition of e-souvenir for 2026 with the Theme ***"Exalting nursing care: intertwining compassion and clinical precision"***. I am deeply honored to offer my warmest greetings to everyone on the release of this exceptional souvenir publication. The theme, ***"Exalting nursing care: Intertwining compassion and clinical precision,"*** directly addresses the demands of modern healthcare, where nurses are expected to bridge the gap between high-tech advancements and personalized patient care. This theme highlights that the future of nursing depends on merging advanced technical expertise with emotional empathy to improve patient outcomes in an era of complex health challenges.

Nursing transcends being a simple profession; it represents a dedicated pledge to empathetic care, continuous education, and flexible leadership. The path to becoming a versatile nursing professional requires steady development, the courage to embrace change, and the initiative to lead improvements in patient health. This ongoing cycle of professional renewal empowers nurses to overcome obstacles and provide resilient, heart-centered care that focuses on the whole person.

Our Nursing College stands as a hallmark of excellence, cultivating committed professionals who touch and transform lives daily. Together, let us forge a future where nurses possess the power to lead innovation, elevate patient care, and serve as role models for the healthcare leaders of tomorrow.

I trust this publication will serve as a significant landmark in our collective mission to elevate healthcare and maintain the pinnacle of excellence in nursing education.

Best wishes to the editorial committee, faculty of CCON and the students!

Mrs. Neelam Goenka
Chancellor
Chirayu University, Bhopal



Prof. (Dr.) Sudesh Kumar Sohani
B.Tech., M.E. (CEG-Chennai), PhD (IIT Delhi)
Vice Chancellor



Chirayu
University

Bhopal, M.P.
April 27, 2026

Vice Chancellor's Message

**Warm Greetings from Chirayu University,
Bhopal!**

It is the matter of great pleasure and I would like to extend my heartfelt congratulations that Chirayu College of Nursing is bringing the tenth edition of E-souvenir 2026, themed "Exalting Nursing Care: Intertwining Compassion and Clinical Precision."

The number ten holds a special significance as it reflects a decade of dedication. Ten editions of this souvenir represent ten years of stories told, ten years of nurses inspired, and ten years of an institution consistently committed to elevating the nursing profession.



The theme chosen for this milestone year resonates profoundly and highlights the essence of modern nursing. It demands the precision of a scientist, the empathy of a caregiver, and the resilience of a leader. In today's evolving healthcare system, nurses stand at the forefront, personifying both clinical precision and compassion. Nursing is not merely a profession; it is something deeper, driven by inner motivation, compassion, and a genuine desire to care for others.

I commend the entire team for their continued efforts in bringing out such meaningful publications that inspire, educate, and motivate both current and future healthcare professionals. May this edition serve as a beacon of encouragement for all those who have chosen this noble path.

(Dr. Sudesh Kumar Sohani)
Vice Chancellor



Chirayu
University

Chirayu University

Bhopal-Indore Highway, Bairagarh
Bhopal 462030, MP, India
Email: registrar@chirayuuniversity.ac.in

Date: 07.05.2026

Message

Nursing profession since time immemorial is a domain committed to humanity, care, and selfless service rooted with compassion, where healing extends beyond medicine to include empathy, dignity, and respect for every life. The Chirayu College of Nursing, Chirayu University continues the legacy by shaping the next generation of nursing professionals through expert mentorship, advanced clinical training and a deep focus on ethical practice. The institute has been instrumental in developing young minds into excellent professionals equipped with critical thinking capabilities, technical skills and empathy needed to excel in diverse healthcare settings and lead the profession with confidence.

I wish all the young and bright minds a wonderful learning experience at the institute, as a foundation with deeper roots of understanding thereby helping attain proficiencies in readiness to fly high and achieve brilliance in the field.

Happy Learning!



(Dr. Narendra K. Lariya)
Registrar
Chirayu University, Bhopal



Chirayu Medical College & Hospital

CHIRAYU MEDICAL COLLEGE & HOSPITAL

(A Unit of Chirayu Charitable Foundation)

MESSAGE

It is a matter of great pride and privilege to note that Chirayu College of Nursing, Bhopal, is presenting its annual souvenir, reflecting the profound theme: *“Exalting Nursing Care: Intertwining Compassion and Clinical Precision.”*

I extend my sincere appreciation to Prof. Dr. Pramila R., Principal, Chirayu College of Nursing, for her visionary leadership and unwavering commitment to fostering innovation and excellence in nursing education and practice. Her continuous efforts to nurture both the scientific rigor and the humanistic essence of nursing are truly commendable.

In today's rapidly evolving healthcare landscape, marked by technological advancements and increasing clinical complexity, the role of nurses has expanded significantly. The integration of compassionate care with clinical accuracy is no longer optional but essential. Nurses stand at the forefront of patient-centered care, where empathy complements evidence-based practice, ensuring holistic healing and improved health outcomes.

This souvenir aptly captures the spirit of modern nursing—where precision in clinical skills is seamlessly blended with empathy and ethical responsibility. It serves not only as a reflection of academic and professional achievements but also as an inspiration for future nurses to uphold the highest standards of care.

I wholeheartedly appreciate the initiative taken by the institution in bringing out this meaningful publication. My best wishes to the entire team for continued success in all future endeavors, and I am confident that this souvenir will stand as a testament to the institution's dedication to excellence in nursing.

Warm regards and best wishes for its grand success.

Dr. Ashutosh Mangalgiri

Medical Director
CMCH, Bhopal

Bhopal-Indore Highway, Near Bairagarh, Bhopal (M.P.) 462 030. Tel : 0755-2709101, 102
E-mail: cmchbhopal@gmail.com, Web-site : www.cmchbhopal.com
City Office : Chirayu Hospital, 6 Malipura, Bhopal, Tel.: 0755-2737401/02/03



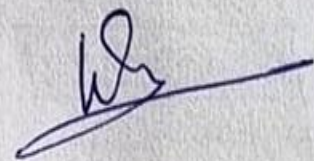
MESSAGE

Publishing e-souvenir with the theme "Exalting Nursing Care: Intertwining Compassion and clinical Precision" is very commandable.

When compassion meets clinical precision, it becomes a beacon of hope for patients. Therefore contents of e-souvenir will be a helpful guide to increase the efficacy of nursing care.

With best wishes

Date:- 11.04.2026

A handwritten signature in blue ink, appearing to be 'Ulka', with a long horizontal stroke extending to the right.

*Dr. Ulka Srivastava
Medical Superintendent
CMCH, Bhopal*

Exalting Nursing Care: Intertwining Compassion and Clinical Precision



Dr Prabhakar A Hiwarkar
Dean, Chirayu Medical College and Hospital, Bhopal.

From the Desk of the Dean,

Nursing care stands at the very heart of the healthcare system, and exalting its importance means recognizing the vital role nurses play in improving patient outcomes and overall well-being. They embody a unique dual responsibility that blends compassion with clinical precision. On one hand, compassion is reflected through empathy, kindness, and a patient-centred approach, ensuring that individuals feel understood, respected, and emotionally supported during their care. On the other hand, clinical precision highlights the technical expertise of nurses, including accurate assessment, skilled interventions, and adherence to evidence-based practices. It is this harmonious integration of human touch and scientific accuracy that defines the true essence of nursing, making it indispensable in delivering safe, effective, and holistic healthcare.

In the evolving landscape of modern healthcare, it continues to expand beyond traditional boundaries, encompassing leadership, research, education, and community outreach. Their unwavering dedication and adaptability are crucial in addressing emerging health challenges and ensuring quality care delivery across diverse settings. At Chirayu Medical College and Hospital, we remain committed to fostering excellence in nursing education and practice by promoting continuous learning, ethical values, and professional development. As we celebrate and recognize the profound contributions of our nursing professionals, we reaffirm our vision to empower them as leaders and change-makers who uphold the highest standards of compassion and clinical excellence in healthcare.



DEAN

Chirayu Medical College and Hospital, Bhopal.

**Chirayu Medical College
And Hospital, Bhopal**



CHIRAYU MEDICAL COLLEGE & HOSPITAL (A Unit of Chirayu Charitable Foundation)

Chirayu Medical College & Hospital



MESSAGE

I am immensely happy to know that Chirayu College of Nursing is bringing it's tenth e - souvenir, 2026 on the theme "Exalting nursing care- Intertwining compassion and clinical precision

Nursing is a profession rooted in both intellect and empathy. Exalting nursing care, therefore, means fostering environments where both competence and kindness are cultivated. Education, leadership and healthcare systems must support this dual excellence, ensuring that neither compassion nor precision is compromised.

Clinical precision ensures that every intervention is accurate, safe and evidence based. Nurses are trained to think critically, act swiftly and maintain the highest standards of care. Their precision safeguards patient outcomes and upholds the integrity of healthcare.

Compassion is also equally important - the quiet strength that allows nurses to connect, comfort and care beyond procedures. A compassionate nurse listens deeply, responds empathetically and creates a sense of trust that no medication alone can provide.

In the end, nursing is more than a profession. It is a calling that demands both head and heart. When compassion and clinical precision are truly intertwined, nursing care reaches its highest form.

I would like to congratulate the principal of Chirayu College of Nursing, madam, Prof. Dr. Pramila R and her team of faculty members who have brought this initiative to life. This souvenir will serve as a valuable source of inspiration and learning for our nursing students.


Dr Aniket Goenka
Consultant Medical Oncologist
Dept of Obstetrics and Gynaecology
Chirayu Cancer Hospital

Bhopal-Indore Highway, Near Bairagarh, Bhopal (M.P.) 462 030. Tel : 0755-2709101, 102
E-mail: cmchbhopal@gmail.com, Web-site : www.cmchbhopal.com
City Office : Chirayu Hospital, 6 Malipura, Bhopal, Tel.: 0755-2737401/02/03



Chirayu Medical College & Hospital

CHIRAYU MEDICAL COLLEGE & HOSPITAL (A Unit of Chirayu Charitable Foundation)



it gives me immense pleasure that Chirayu College of Nursing is giving out its 10th e - souvenir 2026, entitled with the theme "Exalting nursing care - Intertwining compassion and clinical precision.

Nursing stands at the unique crossroads of science and humanity, where technical expertise meets the profound responsibility of caring for lives in their most vulnerable moments. To exalt nursing care is to recognise that excellence in this field is not defined solely by clinical accuracy but by seamless integration of compassion with precision.

Compassion is the force that transforms routine care into meaningful healing. It is found in the reassuring tone of a nurse's voice, the patience to listen beyond symptoms and the empathy that acknowledges fear, pain and uncertainty.

At its core, nursing is grounded in knowledge, understanding, mastering procedures, administering treatment with accuracy. Clinical precision ensures safety, reduces error and builds trust in healthcare systems.

The true artistry of nursing lies in the balance between these two dimensions. When intertwined, compassion and clinical precision elevates nursing into a holistic practice - one that heals both body and spirit.

Chirayu Medical College & Hospital

Chirayu College of nursing is excelling under the leadership of principal Madam Prof. Dr Pramila R and her team of faculty members who are working very hard towards incorporating these values in our students. I extend my regards for the success of this souvenir.

Dr Sneha Goenka

Assistant professor

Dept of obstetrics and Gynaecology

Chirayu medical college and Hospital

Bhopal-Indore Highway, Near Bairagarh, Bhopal (M.P.) 462 030. Tel : 0755-2709101, 102
E-mail:cmchbhopal@gmail.com, Web-site : www.cmchbhopal.com
City Office : Chirayu Hospital, 6 Malipura, Bhopal, Tel.: 0755-2737401/02/03



CHIRAYU MEDICAL COLLEGE & HOSPITAL (A Unit of Chirayu Charitable Foundation)

Chirayu Medical College & Hospital



I would like to extend my heartfelt congratulations to Chirayu College of Nursing on the successful publication of your souvenir on the theme "**Exalting Nursing Care: Intertwining Compassion and Clinical Precision.**" This is a remarkable achievement that truly highlights the essence of nursing as both an art and a science.

The theme beautifully reflects the pivotal role of nurses in the healthcare ecosystem, where compassion and clinical precision must go hand in hand to provide the highest standard of care. By emphasizing the intertwining of these two vital components, you are honoring the spirit of nursing that has always been dedicated to healing the body, mind, and soul of every patient.

As a healthcare professional myself, I understand how crucial it is to bridge the emotional and clinical aspects of care, ensuring that patients not only receive the best medical treatments but also the comfort and empathy they need during their healing journey. The publication of this souvenir not only celebrates the invaluable contributions of nurses but also acknowledges the importance of education in shaping the future of healthcare.

I am deeply inspired by Chirayu College of Nursing's ongoing commitment to nurturing skilled, compassionate, and ethical healthcare providers. Your efforts in promoting both clinical excellence and compassionate care are paving the way for future generations of nurses who will undoubtedly make a lasting impact on the healthcare profession.

Once again, congratulations on this outstanding achievement. I look forward to seeing the continued success and growth of your esteemed institution and the incredible work that your students and faculty will continue to do in the world of nursing.

Warm regards,

Aakriti Goenka
Vice President
(Chirayu Charitable Foundation)

Bhopal-Indore Highway, Near Bairagarh, Bhopal (M.P.) 462 030. Tel : 0755-2709101, 102
E-mail: cmchbhopal@gmail.com, Web-site : www.cmchbhopal.com
City Office : Chirayu Hospital, 6 Malipura, Bhopal, Tel.: 0755-2737401/02/03



THE TRAINED NURSES' ASSOCIATION OF INDIA

FOUNDED IN 1908

Registered under the Society Act XXI of 1860 in 1917, Registration No. 199 Incorporated in it
Students Nurses' Association, Health Visitor's League and Auxiliary Nurse-Midwives Federation
Affiliated to Commonwealth Nurses' and Midwives Federation

Headquarter : L-17, Florence Nightingale Lane, Green Park, New Delhi - 110016. INDIA

Website : www.tnaionline.org



The TNAI is moving ahead with commitment and dedications since 1908

National President
Dr. (Mrs.) Annie Kumar

**National Vice President
(West Region)**
Mr. Dipkamal B. Vyas

**National Vice President
(South Region)**
Dr. Bajji Valli

**National Vice President
(North East Region)**
Prof. Thoudam Nandarani Devi

**National Vice President,
(North Region)**
Mrs. Jyoti Walia

**National Vice President,
(East Region)**
Dr. Abhilekha Biswal

National Treasurer
Dr. (Mrs.) Shiny Chacko

TNAI Headquarters

Secretary - General
Mrs. Evelyn P. Kannan

Dy. Secretary - General
Mrs. Sanghamitra Sawant

Asst. Secretary-General
Mr. Ajinas A.M.

Asst. Secretary-General
Mrs. S. Vatchala Dhinakaran

Asst. Secretary-General
Mrs. Annu Verma

Official Organ:
The Nursing Journal of India
TNAI Bulletin

Message



It gives me immense pleasure to extend my warm wishes to the Principal and faculty and Students of the Chirayu College of Nursing on the occasion of the publication of the **10th e-Souvenir – 2026**, themed “*Exalting Nursing Care: Intertwining Compassion and Clinical Precision.*”

Nursing, at its very core, is a noble blend of **compassionate care and scientific excellence**. In today's rapidly evolving healthcare environment, the role of nurses has expanded beyond traditional caregiving to encompass critical thinking, advanced clinical skills, and leadership in patient care. The true strength of nursing lies in the ability to seamlessly integrate empathy with precision, ensuring holistic and patient-centered outcomes.

This thoughtfully chosen theme reflects the essence of modern nursing practice—where **kindness meets competence and dedication meets discipline**. It reminds us that while technology and innovation continue to transform healthcare, the human touch remains irreplaceable.

I commend the organisers for bringing out this milestone 10th edition of the e-Souvenir, which serves as a platform to share knowledge, celebrate achievements, and inspire the nursing fraternity. Such initiatives play a vital role in motivating young nurses to uphold the highest standards of professional excellence and ethical practice.

I extend my best wishes to the Principal and to all those involved in this endeavour. May this publication inspire continued learning, strengthen professional commitment, and contribute to the advancement of quality nursing care.

With warm regards



Mrs. Evelyn P. Kannan
Secretary General, TNAI

THE TRAINED NURSES' ASSOCIATION OF INDIA

Headquarter : L-17, Florence Nightingale Lane, Green Park, New Delhi - 110016. INDIA

Tel.: +91-11-40195407, 40195409, 26534765, 26966873, 26858304, 26566665

E-mail: tnai_2003@yahoo.com, membership@tnaionline.org, sna@tnaionline.org, tnairecruitment@gmail.com
helpdesk@tnaionline.org, publicationstnai@yahoo.com, hqaccounts@tnaionline.org

Website : www.tnaionline.org

TNAI's Central Institute of Nursing Education & Research and Elderly Care Home (CIN & R and ECH)

Plot No. 37 and 37/1, Knowledge Park-III, Greater Noida - 201308 (U.P.)

Phone : 0120-2323659 E-mail : tnai.cin.ech@gmail.com



MESSAGE

I am happy to know that Chirayu College of Nursing is bringing out its tenth e-souvenir 2026. The theme for this souvenir, **“Exalting Nursing Care: Intertwining Compassion and Clinical Precision”** is not only novel but also very appropriate in today’s scenario in health care where compassionate care which used to be the basis of nursing is getting lost in the world of fast growing “tech- informed” care delivery.

Nursing Educators as well as Nursing Practitioners need to rethink about where we are heading to? “Technical rationality” relates to the prioritization of technical work and language over care. The presence of technology within the healthcare environment is significant and those more technical areas of care carry more status. It is also being observed that presence of technology, such as machines and measuring instruments act as a barrier between nurses and patients. Although we know that machines and sophisticated tech based measuring instruments help in making clinical decisions about patient care with precision, the challenge therefore, for nurses today is how we keep providing compassionate care while using the latest technology to enhance patient outcomes.

When we are faced with challenges, we look for solutions within ourselves and also look for guidelines provided by nursing philosophers who came before us. One such person is ‘Jean Watson’. her theory named “theory of trans-personal human caring” provides nurses of all times the guidelines through ‘Ten Carative Factors’ which are as follows:

1. Formation of humanistic-altruistic system of values
2. Instillation of faith-hope
3. Cultivation of sensitivity for self and others
4. Development of helping-trusting human caring relationship
5. Promotion and acceptance of expressing positive and negative feelings
6. Systematic use of creative problem-solving caring process
7. Promotion of trans-personal teaching and learning
8. Provision of supportive, protective and/or corrective mental, physical, societal and spiritual environment
9. Assistance of gratification of human needs
10. Allowance for existential-phenominological-spiritual forces.

As we can see in the above factors as guideposts for nurses, Watson’s view elicits the finest of nursing art, science and spiritual practice it is meant to be, as it is the highest form of compassionate services to the society and humanity.

I am sure the research studies and other concept articles included in the souvenir will give the readers evidence based content to guide them in their day to day work as compassionate nurses for exalting nursing care.

My best wishes to the “Team Chirayu” headed by Principal Dr Pramila for successfully publishing yet another value packed souvenir 2026.

Dr. Usha Mullick Ukande
R N R M, PhD (N)

Founder Director, Edu. Serum College of Nursing, Indore
President, Society of Midwives India



MESSAGE

“Empathy. Expertise. Excellence”- NURSING.

Nursing stands at the sacred intersection of heart and science. It is a profession where compassion is not a sentiment alone, but a therapeutic force that comforts, heals, and dignifies. Yet, alongside this tenderness lies an uncompromising commitment to clinical precision — the mastery of intellect on Nursing, biopsychosociological, technological subjects, and evidence-based nursing research. To exalt nursing care is to recognize that neither compassion nor precision can exist in isolation. True excellence emerges when the nurse's gentle, tender loving touch is guided by exact knowledge, and when clinical interventions are infused with humanity. This intertwining defines the nobility of nursing and elevates it beyond routine service into a vocation of profound impact. Example A nurse holding a patient's hand while skillfully adjusting an intravenous infusion line — symbolizing empathy and precision working together.

“Nursing is exalted when empathy guides the heart, expertise strengthens the hand, and excellence defines the spirit. This souvenir stands as a tribute to the noble profession that unites compassion with clinical precision, reminding us that every act of care is both science and service. *Empathy. Expertise. Excellence – Nursing.* May this motto inspire our students, faculty, and alumni to uphold the highest ideals of nursing, carrying forward a legacy of healing that touches lives with dignity and precision.”

DR.A.HELEN MARY PERDITA
PRINCIPAL
APOLLO COLLEGE OF NURSING, MADURAI
MADURAI , TAMIL NADU.



Jennys College of Nursing

Approved by Govt. of Tamil Nadu (G.O. No.(MS) No. 26)
(Recognized by the Indian Nursing Council, Tamil Nadu Nurses and
Midwives Council, Affiliated to the Tamil Nadu Dr. MGR Medical University, Chennai)



MESSAGE FOR PUBLICATION

I am delighted to pen this message to **Chirayu College of Nursing** for releasing its **e – souvenir 2026**, entitled with the theme, **“Exalting Nursing Care – Intertwining Compassion and Clinical Precision**. We are living in an AI driven Era and it has its influence almost in all the fields including the Medical and Nursing Profession. AI is a gift to the Nursing profession and it has a tremendous impact in the aspect of Nursing Administration and patient monitoring. However when we consider patient care, nursing professionals are giving care in a harmonious blend of compassion and clinical expertise. **Exalting Nursing Care** cuddles both accuracy and empathy. Hence any specific nursing intervention, together with a compassionate human touch will enhance positive patient outcomes and fabricate confidence and trust, reflecting the **“True Core of Nursing”**. In the current scenario, it has been noted that, there is a need to emphasize on compassion and competence within the nursing and health care profession due to various reason such as excessive invasion of technology in the health care industry, shortage of staff, over burden and emotional exhaustion. We must learn to balance both compassion and clinical precision, by integrating technical proficiency in procedures, accurate patient assessment and inculcate evidence based practice. On the other hand, we have to be aware and understand patient’s sufferings, and respect their shaded emotions. I am sure this souvenir may lay a tribute to dedication, compassion and excellence and prompt you of the countless lives you touch with kindness and healing.

Dr. Prof. K. MARY RITA, M.Sc(N)., Ph.D.,
Principal
JENNYS COLLEGE OF NURSING
2/67 -A, Manigandam Road,
Ramjee Nagar, Trichy - 09.
Phone: 0431 - 2690916, 99407 11666

2/67-A, Manigandam Road, Ramjee Nagar, Tiruchirappalli - 620 009. Tamil Nadu. Phone : 0431-2690916, 99407 11666.
Visit us at : www.jennysnursingedu.in e-mail : jennyscon2010@gmail.com



CHIRAYU COLLEGE OF NURSING

A Unit of Chirayu Charitable Foundation

Chirayu College of Nursing

Recognized by Indian Nursing Council, New Delhi and State Nursing Council & Affiliated to Barkatullah University, Bhopal and MPMSU, Jabalpur

Ref. No. 1299/CCON/PO/2026

Date: 09/04/2026



Message by the Principal

It is with immense pride and a sense of profound accomplishment that I welcome you to the 10th release of our college souvenir. Ten years ago, this institution began its journey to nurture not just nurses, but "healers": individuals equipped with both the knowledge to heal and the heart to care. Reaching this decennial milestone is a testament to our steadfast commitment to excellence in nursing education. This year's theme, "Exalting Nursing Care: Intertwining Compassion and Clinical Precision," strikes at the very heart of the modern nursing profession. In an era where technological advancements in healthcare are rapid, we believe that the soul of nursing remains rooted in human connection. Compassion is the ethical foundation of our practice, while clinical precision represents the competency and critical thinking necessary for patient safety.

As we look back over the past decade, I am immensely proud of how our faculty and students have woven these two critical elements together. We have trained our students to be knowledgeable, competent, and highly skilled professionals who do not just treat diseases, but care for the whole person: physically, emotionally, and spiritually. Our focus has always been to ensure that when our students step into the clinical area, they bring a "smile of healing" alongside scientific expertise.

This Souvenir is a snapshot of that journey: a compilation of our academic rigor, clinical achievements, and the creative spirit of our vibrant campus community.

I extend my heartfelt gratitude to the dedicated faculty members, and energetic students whose combined teamwork has made this journey of ten years possible. Together, let us continue to "exalt care" and make a positive difference in the lives of those we serve.

Wishing good luck to all!!!

Pramila R.
9/4/26

Prof. Dr. Pramila R.

Principal

Chirayu College of Nursing
Chirayu University

Chirayu Medical College & Hospital Campus
Bhopal-Indore Highway, Near Bairagarh
Bhopal (M.P.) 462030

CHIRAYU COLLEGE OF NURSING

CHIRAYU MEDICAL COLLEGE & HOSPITAL CAMPUS

Bhopal & Indore Highway, Near Bairagarh, Bhopal (M.P.) 462 030 Mobile No.: 8889580002

E-mail : principalchirayu@gmail.com, Web-site: www.cncbhopal.com



Message by the Editor-in-Chief

It is with immense pride and profound humility that I introduce the tenth edition of our college souvenir. Ten years ago, this publication began as a fledgling endeavor to document the academic journey of our institution. Today, it stands as a testament to a decade of growth, scholarly ambition, and unwavering dedication to the healing arts.

This year, our theme: "Exalting Nursing Care: Intertwining Compassion and Clinical Precision", reflects the core ethos of modern healthcare that we strive to inculcate in every student, researcher, and clinician within these walls.

In an era dominated by rapid technological advancements and data-driven diagnoses, the essence of medical care can easily be reduced to a binary of accuracy. However, true excellence lies not in choosing between head and heart, but in the seamless intertwining of both. Clinical Precision is the relentless pursuit of knowledge, the mastery of surgical techniques, the accuracy of diagnostics, and the commitment to evidence-based practice. And Compassion is our guiding light.

As we mark this tenth milestone, this issue highlights how our institution bridges the gap between technological efficiency and human connection. We have research papers, and reflections that show how compassionate care not only comforts patients but directly improves clinical outcomes, boosts recovery rates, and fosters trust.

I extend my deepest gratitude to the Editorial Board, our contributors and faculty for their tireless efforts in bringing this tenth souvenir to life. As you flip through these pages, I invite you to reflect on how we can all work together to exalt care: by performing with meticulous precision while serving with unparalleled compassion.

My sincere gratitude is expressed to Dr. Ajay Goenka, M.D., President, Chirayu Charitable Foundation for his massive and consistent support for our college that helps us to spread our wings to the highest possible.

All the people who have contributed directly or indirectly to this souvenir come into my respect.

Happy Reading!

Prof. Dr. Pramila R.

Editor- In- Chief

Prof. Dr. Pramila R.
Principal
Chirayu College of Nursing
Chirayu University
Chirayu Medical College & Hospital Campus
Bhopal-Indore Highway, Near Bairagarh
Bhopal (M.P.) 462030

EDITORIAL COMMITTEE



Editor in Chief
Prof. Dr. Pramila R

1. **Dr. Thamarai Selvi P**
2. **Prof. Nisha Divakaran**
3. **Prof. Sherin Annie Varghese**
4. **Prof. Shefali Latesh**
5. **Prof. Neelofur I. Ali**
6. **Mr. Virendra K Verma**
7. **Mr. Raj Pradhan**



CHIRAYU COLLEGE OF NURSING, BHOPAL

E-Souvenir 2025

INDEX

Sr. No.	Title	Names	Page No.
Research Abstract			
1	Community Health Needs Assessment: Survey Report	Prof. Dr. Pramila R., Principal, CCON, Dr. Thamarai Selvi P Professor, CCON	1
2	A Comparative Study To Assess The Effectiveness Of A Structured Teaching Programme Regarding Knowledge on Effects Of Fast Food On Health Among Middle School Children In Selected Urban And Rural Communities At Bhopal (M.P.)	Mr. Siddharth Jain Associate Professor, CCON	15
3	A Study to Assess the Perceived Ill Effects of Social Media Among Higher Secondary School Students, Teachers and their Parents.	Ms. Salomi Herbert Assistant Professor, CCON	17
4	A Study To Assess The Effectiveness Of Computer Assisted Teaching On Knowledge Regarding ECG And Its Interpretations In Various Cardiac Condition Among B.Sc. Nursing Students In Selected Nursing Colleges At Jabalpur (M.P.)	Ms. Jasmine Walter Tutor, CCON	18
5	A Study To Assess The Effectiveness Of Planned Teaching Programme On Knowledge Regarding Use Of Menstrual Cup Among Girls In Selected College Of Nursing, Bhopal (M.P.)	Ms. Yamini Batham Tutor, CCON	21
Review Article			
6	Exalting Nursing Care: Intertwining Compassion and Clinical Precision	Dr. Thamarai Selvi P Professor, CCON	24
7	Mindfulness and Psychological Well being	Mrs. Sherin Annie Varghese Professor, CCON	26
8	Innovative Application of AI in Pediatric Nursing	Mrs. Nisha Divakaran Professor, CCON	29
9	Trauma-Informed Care in Mental Health Nursing: Reframing Practice for Safer Therapeutic Environments	Mrs. Shefali Latesh Professor, CCON	33
10	Rights-Based Maternal Care	Mrs. Neelofur I. Ali Professor, CCON	36
11	Community Nursing Services for Post-Discharge Chronically Ill Patients in Rural Areas.	Mr. Sandeep Lowanshi Associate Professor, CCON	40
12	E-Cigarettes: A Growing Public Health Concern.	Mr. Arpit Narekar Assistant Professor, CCON	43
13	Mental Health Challenges Among Adolescents: Nursing Perspective and Intervention.	Mr. Virendra K. Verma Assistant Professor, CCON	45
14	Importance of Empathy in Nursing.	Ms. Priya Bane Assistant Professor, CCON	49
15	Antimicrobial Resistance (AMR): A Growing Global Health Threat.	Mr. Shantilal Mewada Assistant Professor, CCON	52
16	Focus on Clinical Faculty Promotion Barriers and Using Case-Based Learning with the Lasater Clinical Judgment Rubric.	Ms. Abhilasha Jhariya Lecturer, CCON	54
17	Mobile Health (Mhealth) Apps For Chronic Disease Management.	Ms. Bharti Kushwaha Lecturer, CCON	56
18	Adenovirus.	Mrs. Bharti Patel Lecturer, CCON	58
19	Effects of Synthetic Polymers in Central Nervous System.	Mr. Raj Pradhan Tutor, CCON	61
20	Nurse Manager Skills: Essentials with Tips	Ms. Ranju Patel Tutor, CCON	63
21	Why Peer Support for Nurses Matters?	Ms. Ritu Raghu Clinical Instructor, CCON	66
22	Youth Empowerment and Career Opportunities in the Medical Field.	Ms. Deepika Kahar Clinical Instructor, CCON	68
23	Chickenpox	Ms. Rajkumari Clinical Instructor, CCON	70



CHIRAYU COLLEGE OF NURSING, BHOPAL

E-Souvenir 2025

INDEX

24	A Step Towards Healthy Living: A Preventive Strategy.	Ms. Kashish Daswani Clinical Instructor, CCON	75
25	Mental Health Awareness.	Ms. Mahima Clinical Instructor, CCON	76
Students Article			
26	Digital Addiction & Screen Time In Children	Ms. Apeksha Jain M.Sc (N) I Year 2024-25	78
27	Stress Experience During Menstrual Cycle Among Adolescent Girls	Mrs. Khomeshwari Bopce M.Sc (N) I Year 2024-25	81
28	Imposter Syndrome	Ms. Muskan Kaushal M.Sc (N) I Year 2024-25	85
29	Robotic Surgery	Ms. Neelu Kushwaha M.Sc (N) I Year 2024-25	87
30	Technology in Society	Mrs. Sonali Malviya M.Sc (N) I Year 2024-25	90
31	Zoonotic Disease	Ms. Saumya Kumari M.Sc (N) I Year 2025-26	92
32	Simulation-Based Teaching	Mr. Shailesh Kumar Maurya M.Sc (N) I Year 2025-26	97
33	Incorporation of Artificial Intelligence into Nursing	Mr. Shubham K Sharma M.Sc (N) I Year 2025-26	101
Crossword Puzzle			
34	Terminologies used in Medical	Mr. Santosh Mewada P.B.B.Sc (N) I Year 2024-25	103
35	Terminologies used in Vascular System	Mr. Satyendra Yadav P.B.B.Sc (N) I Year 2024-25	104
36	Physiology of Respiratory System	Ms. Honey Vashyu GNM I Year 2024-25	105
37	Healthy Habits	Mr. Jaydeep Thakur GNM I Year 2024-25	106
38	Oral Health	Mr. Ramswarup Mewada GNM I Year 2024-25	107
39	Endocrine Puzzle	Ms. Himanshi Dallema GNM I Year 2025-26	108
40	Medical Aid Services	Ms. Pooja GNM I Year 2025-26	109
Riddles			
41	The Clinical Intuition	Mr. Anoop Agarwal B.Sc (N) I Year Semester I 2025-26	110



CHIRAYU COLLEGE OF NURSING, BHOPAL

E-Souvenir 2025

INDEX

42	Essentials of Care	Ms. Ayushi Kori B.Sc (N) I Year Semester I 2025-26	111
43	Lifeline of Safety	Mr. Karan Meena B.Sc (N) I Year Semester I 2025-26	112
44	Clinical Scribe	Ms. Khushi Soni B.Sc (N) I Year Semester I 2025-26	113
45	Bedside Educator	Ms. Mahak Barkhane B.Sc (N) I Year Semester I 2025-26	114
46	The Precision Dose	Mr. Nikhil Verma B.Sc (N) I Year Semester I 2025-26	115
47	Bedside Guardian	Ms. Palak Dangi B.Sc (N) I Year Semester I 2025-26	116
48	The Healer's Round	Mr. Parvendra Ahirwar B.Sc (N) I Year semester I 2025-26	117
49	The Protective Framework	Ms. Richa Mishra B.Sc (N) I Year semester I 2025-26	118
50	The Silent Precursor	Ms. Ritika Arya B.Sc (N) I Year semester I 2025-26	119
51	The Hospital's Pulse	Ms. Roshni Patidar B.Sc (N) I Year semester I 2025-26	120
52	The Rhythms of Life	Ms. Srishti Shriwas B.Sc (N) I Year semester I 2025-26	121
53	The Diagnostic Mind	Ms. Swati Karoche B.Sc (N) I Year semester I 2025-26	122
54	Vitals & Verses	Ms. Vaishali Kushwaha B.Sc (N) I Year semester I 2025-26	123
55	The Caregiver's Code	Ms. Zara Khan B.Sc (N) I Year semester I 2025-26	124
Recent Advancement in Nursing			
56	Smart Wearable Biosensors for Continuous Monitoring: Advancing Digital Nursing Practice	Ms. Shivani Malviya B.Sc (N) I Year semester II 2024-25	125
57	Research Innovations in Nursing	Ms. Archana Sahu B.Sc (N) I Year semester II 2024-25	126
58	Recent Advancements in Specialised Nursing Innovations Shaping Practice, Education, and Patient Care	Ms. Mahi Ahakey B.Sc (N) I Year semester II 2024-25	129
59	Telehealth And Telenursing: Transforming Modern Healthcare Delivery	Mr. Akash Kumar Singh B.Sc (N) I Year semester II 2024-25	131



CHIRAYU COLLEGE OF NURSING, BHOPAL

E-Souvenir 2025

INDEX

60	Drone Ambulance: A Recent Advancement in Emergency and Nursing Care	Ms. Ashwini Mahajan B.Sc (N) I Year semester II 2024-25	133
61	Scope of Forensic Nursing in India	Mr. Piyush Kumar B.Sc (N) I Year semester II 2024-25	137
62	Recent Trends In Nursing Education	Ms. Jyoti Nargesh B.Sc (N) I Year semester II 2024-25	139
63	CRISPR-Based Gene Therapy for Sickle Cell Disease	Ms. Sonal Khasdev B.Sc (N) I Year semester II 2024-25	143
64	Recent Advancements in Nursing: Shaping the Future of Healthcare	Mr. Ajay Kushwaha B.Sc (N) I Year semester II 2024-25	146
65	Smart Devices and Remote Monitoring in Medical Field	Ms. Anshu Raikwar B.Sc (N) I Year semester II 2024-25	149
66	Digital Twin Technology in Patient Care and Nursing Monitoring	Mr. Anil Ahirwar B.Sc (N) I Year semester II 2024-25	151
67	Clinical Decision Support Systems (CDSS)	Ms. Pinky Kapil B.Sc (N) I Year semester II 2024-25	155
68	Recent Advancements In Precision Health And Genomics In Nursing	Mr. Krishnkant Rathore B.Sc (N) I Year semester II 2024-25	158
OBG Instruments			
69	Perinatal Care Tools	Ms.Aasha Morey B.Sc (N) IV Year 2025-26	161
70	Instruments for Cervical Inspection	Ms.Arati Rajput B.Sc (N) IV Year 2025-26	162
71	Hemostatics And Grasping Instruments	Ms.Deepika Parmar & Ms. Deeksha Nagar B.Sc (N) IV Year 2025-26	163
72	Instruments For Prolonged Labour	Mr.Deepak Gurjar & Ms. Muskan Khushwaha B.Sc (N) IV Year 2025-26	165
73	Instruments For Gynecological Surgery	Ms.Diksha Chandrawanshi & Ms. Gori Sharma B.Sc (N) IV Year 2025-26	167
74	Instruments For D & C Procedure	Ms.Diksha Vishwakarma B.Sc (N) IV Year 2025-26	169
75	Essential Neonatal Care Tools	Ms.Harshita Markad & Ms. Sakshi Pancholi B.Sc (N) IV Year 2025-26	170
76	Common Instruments For Fetal Monitoring	Ms.Muskan Verma B.Sc (N) IV Year 2025-26	171



CHIRAYU COLLEGE OF NURSING, BHOPAL E-Souvenir 2025 INDEX

77	Neonatal Therapeutic Equipments	Ms.Nandani Yadav B.Sc (N) IV Year 2025-26	172
Emergency Drugs			
78	Atropine	Mr. Shubham Singh B.Sc (N) IV Year 2025-26	173
79	Nitroglycerine	Mr. Sudhanshu Kaushal B.Sc (N) IV Year 2025-26	176
80	Gentamicin	Ms. Sakshi Pancholi B.Sc (N) IV Year 2025-26	179
81	Sodium Bicarbonate	Ms.Nandani Yadav B.Sc (N) IV Year 2025-26	181
82	Adrenaline	Ms. Khushi Choudhary B.Sc (N) IV Year 2025-26	184
Answer Keys			
Crossword puzzles			
Riddles			
College Report			
Batch Wise Photographs			
College Committee Photographs			
List of Toppers			

COMMUNITY HEALTH NEEDS ASSESSMENT: SURVEY REPORT

Prof. Dr. Pramila R., Principal, CCON,
Dr. Thamarai Selvi P. Professor, CCON

**Preliminary data:**

Name of the village: Barkheda Salam & Bhouri, Huzur Teshil, Bhopal District, Madhya Pradesh.

Surveyors: B.Sc Nursing IV year students, Chirayu College of Nursing, Bhopal, M.P.

Introduction: Village studies play a vital role in understanding the health status of a community and the changes occurring in infrastructure, institutions, and household characteristics. In this context, a survey was conducted in the villages of Barkheda Salam and Bhouri in Madhya Pradesh. These villages are situated in Huzur tehsil of Bhopal District, which is approximately 15–18 km from Bhopal.

Barkheda Salam and Bhouri villages are adopted by the Chirayu Charitable Foundation. The Rural Health Training Centre (RHTC) at Bhouri is fully managed by the Department of Preventive and Social Medicine (PSM), Chirayu Medical College and Hospital, Bhopal, and plays an important role in providing healthcare services and community-based training.

The District is characterized by a predominantly rural landscape, where agriculture is the primary source of livelihood for a large segment of the population. Surrounded by green fields and scenic surroundings, the villages reflect both the charm and the challenges commonly associated with rural life.

Objectives:

- To know about the health status of the people household at Barkheda salam & Bhouri.
- To identify patterns, correlations, and living patterns of the villagers.
- To analyze the challenges and barriers effectively.

Methodology:

The survey was conducted by the students of Chirayu College of Nursing, Batch 2022–2023. To avoid duplication, the students numbered all houses in the villages over a period of two days. Primary data were collected using an individual survey form from each household. In addition, residents were interviewed regarding their daily activities, occupations, sources of income, family structure, health status, education, and other aspects of their lives.

Secondary data were collected to supplement and validate the primary findings. These included information from Government publications, the Panchayat office, and other relevant sources. The collected data were analyzed using MS Excel, where basic algorithms and mathematical operations were applied to interpret the findings and draw conclusions.

An Overview of the study village:

Both villages are surrounded by Neelbad to the Northeast and Bairagarh to the South. They are well connected by National Highway 46. Nearby railway stations are Bhauri Railway Station, and Sant Hirdaram Nagar.

The agricultural land mainly cultivates wheat, channa dal, and soyabean according to the season. While productive, this pattern raises concerns about crop diversity and long-term food security, which could be improved by introducing a wider variety of crops. The village possesses a considerable number of tractors and threshers for cultivation, and most households rear cows and buffaloes. However, there is no nearby animal hospital.

The village has 100% irrigation coverage. Agricultural lands rely on pumps and motors for water supply rather than rainfall. The entire community has access to tap water, and each street is equipped with its own hand pump. Drainage systems are present in both agricultural and residential areas, but waterlogging during the rainy season indicates that these systems are not functioning effectively. Most households have toilets located on or near their premises, constructed with support from government initiatives. Despite this, the village has not yet been officially declared an Open Defecation Free (ODF) area.

Annual income is generated through farming, labor work, private jobs, and small-scale businesses. Most houses are pucca, with some semi-pucca structures. Electricity is available in all houses with separate meters, and households commonly have televisions and smartphones. Educational facilities are available locally, with a primary school about 500 meters away and a higher secondary school approximately 1 kilometer from the village. For legal matters, residents approach the nearby police station at Phanda. Both villages fall under the jurisdiction of Phanda Block of Bhopal District.

The community is located about 12 kilometers from the permanent market or business area and approximately 17 kilometers from the nearest organized market (mandi). However, basic amenities required for daily living are available within the village itself, allowing residents to meet most of their routine needs locally without having to travel long distances. The nearest bank and ATM are located approximately 500 metres from the settlement, making banking services easily accessible to the residents. In the village, marriage functions are usually conducted at individuals' homes. However, some families choose to use a banquet hall located about 5 km away, which provides the necessary facilities.

Healthcare Facilities:

There is no Primary Health Centre (PHC) or Community Health Centre (CHC) within the immediate area of the villages. However, a PHC is located about 5 km away and a CHC about 8 km away, both providing complete government immunization services to mother and children. The Rural Health Training Centre (RHTC) at Bhourri functions as a day-care centre with six beds, where emergency first aid and basic care are provided. Government Health & wellness centre as well as Sanjeevani clinic is available in these villages.

At the Anganwadi Centre immunization services are available for children up to 5 years of age and for pregnant women. At the Anganwadi Centre children under five years of age benefit from the provision of nutritious meals as part of the child welfare and nutrition program. The nearest private hospital is approximately 5 km from the village, the government hospital is about 11 km away, and the maternity hospital is around 15 km away. Ambulance services are available to the village.

Table: 1 Demographic profile of Bhourri & Barkheda Salam

n= 3470

Gender	Bhauri (1778)		Barkheda Salam (1692)	
	Frequency	Percentages	Frequency	Percentages
Male	902	50.73%	864	51.07%
Female	876	49.27%	828	48.93%

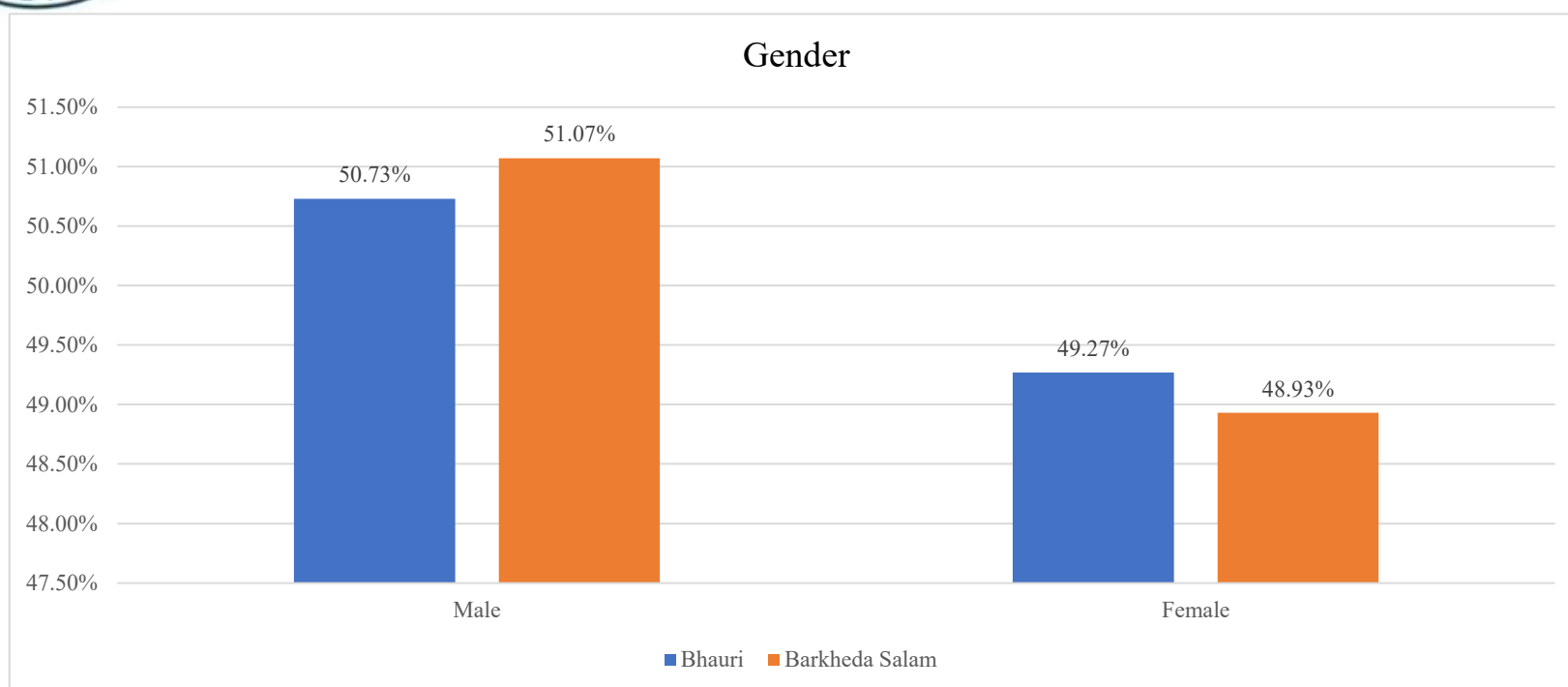


Table 1 & Fig 1 comprises the distribution of gender among population. The total population of the Bhauri is reported to be 1778&Barkheda Salam is 1692 out of which constitutes of 1766 males and 1704 females and the total number of houses are 1043.

Table2: Distribution of age group in villages.

n= 3470

Age Group in year	Bhauri (1778)		Barkheda Salam (1692)	
	Frequency	Percentages	Frequency	Percentages
Infancy 0-1 yrs.	12	0.68%	14	0.83%
Early childhood 1-3 years	49	2.75%	40	2.37%
Pre-school age 3-6 years	74	4.16%	39	2.30%
School age 7-11 years	226	12.72%	220	13.02%
Adolescence 12-18 years	410	23.05%	481	28.42%
Early adult 19-29 year	377	21.20%	327	19.32%
Middle age 30-64 yrs	572	32.18%	510	30.14%
Old age 65 above	58	3.26%	61	3.60%

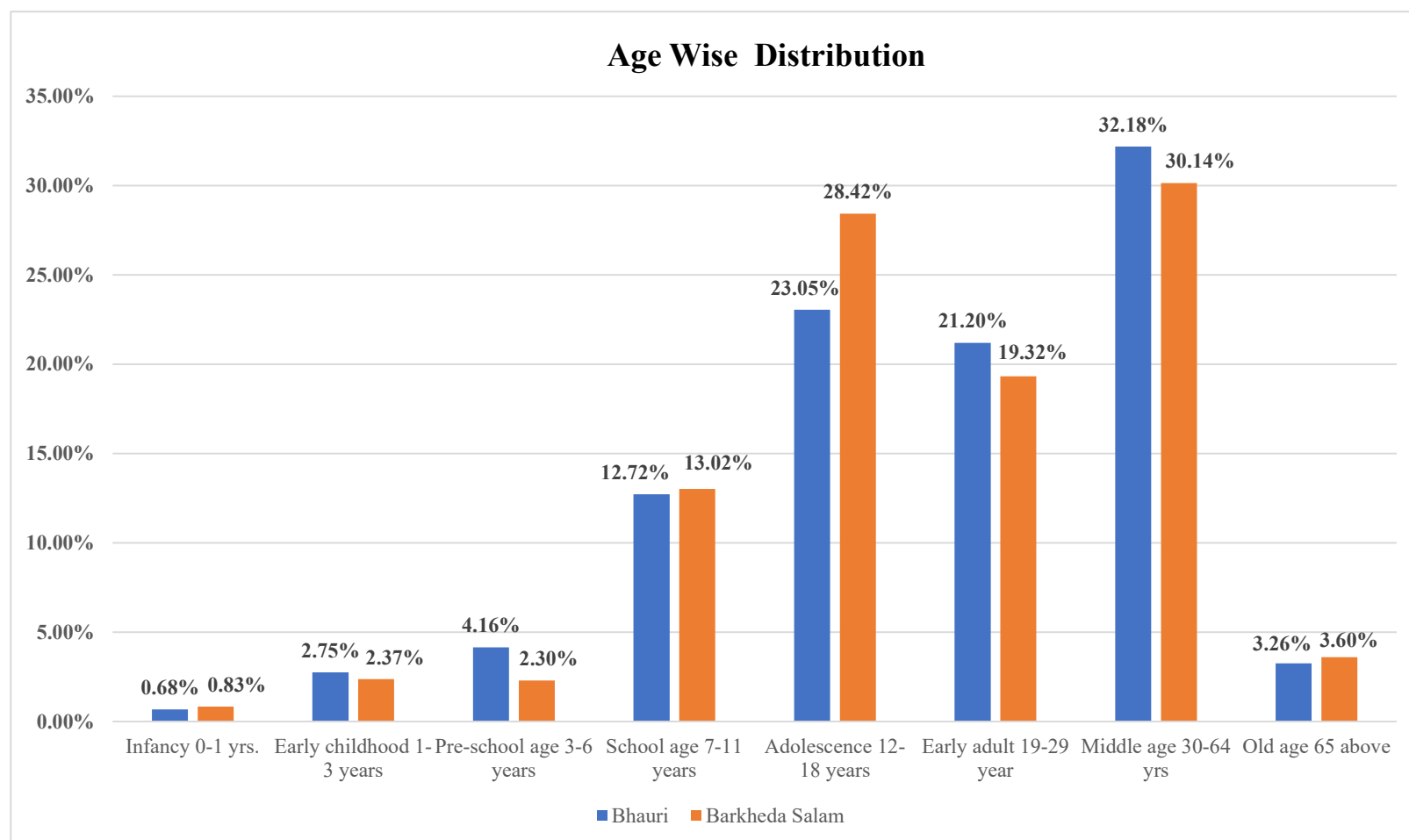


Table & Figure 2 revealed age group of a total population, 26 (0.74%) are infants aged 0–1 year, 89 (2%) were in early childhood (1–3 years), 113 (3%) were pre-school age (3–6 years), and 446 (12%) were school-aged children (7–11 years), 891 individuals (25%) were in adolescence (12–18 years), early adults (19–29 years) with 704 (20%). The highest proportion is seen in the middle-age group (30–64 years) with 1082 individuals (31%), while 119 people (3%) were aged 65 years and above.

Table 3: Distribution of types of family

n=1043

Type of family	Bhauri (657)		Barkheda Salam (386)	
	Frequency	Percentages	Frequency	Percentages
Joint family	502	76.40%	320	82.90%
Nuclear family	102	15.54%	48	12.43%
Extended family	53	8.06%	18	4.66%

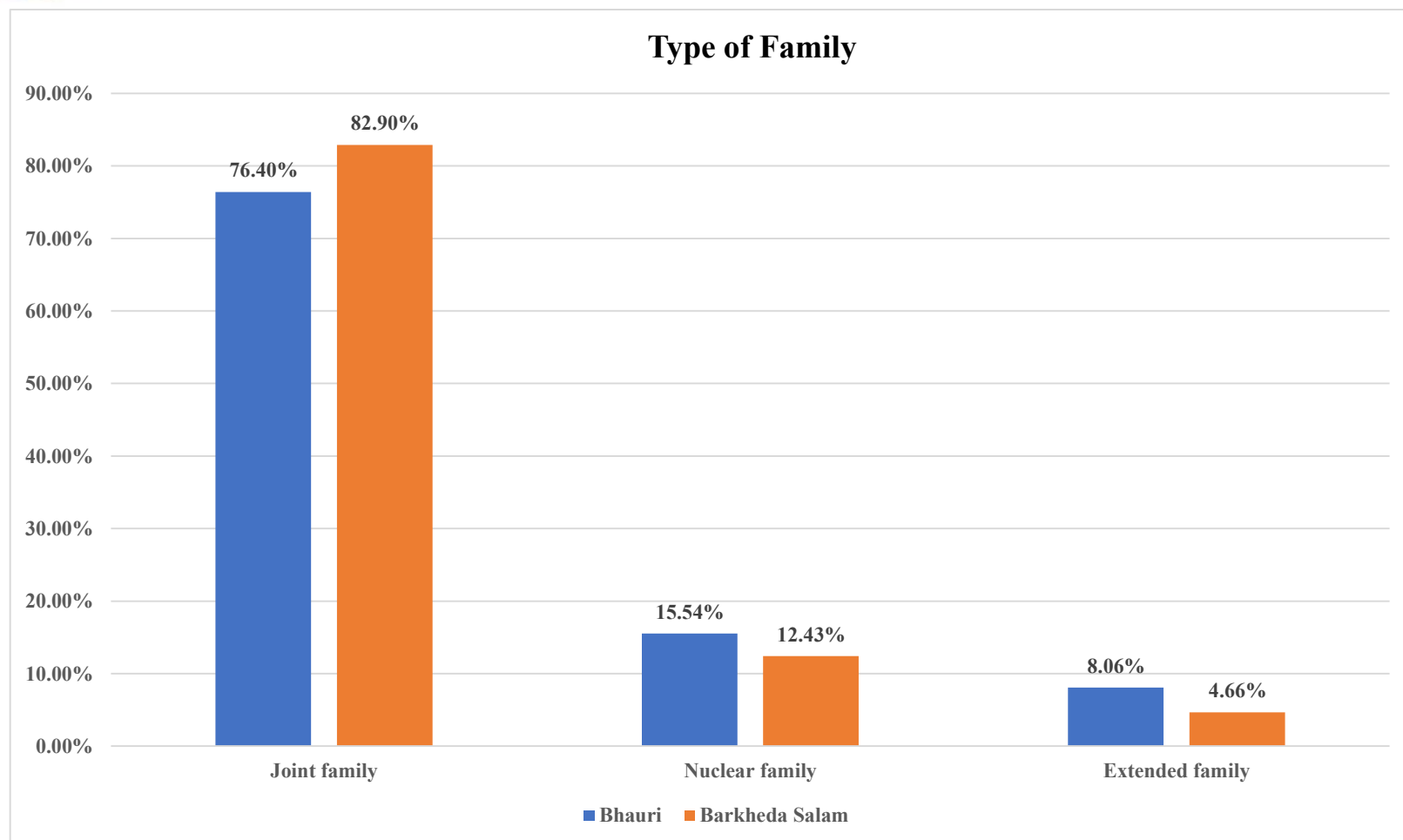


Table 3 & Figure 3 shows the types of family, the majority of the respondents, 822 (79.02%), belong to joint families. A smaller proportion, 150 (14.38%), are from nuclear families, while 71 (6.80%) belong to extended families. This indicates that nuclear family structures are more prevalent in the surveyed community compared to joint and extended family systems.

Table 4: Distributions of the Families according to the occupation

n= 1043

Occupation	Bhauri (657)		Barkheda Salam (386)	
	Frequency	Percentages	Frequency	Percentages
Farming	321	48.85%	138	35.75%
Labor	60	9.13%	73	18.91%
Services	66	10.06%	27	6.99%
Business	210	31.96%	148	38.34%

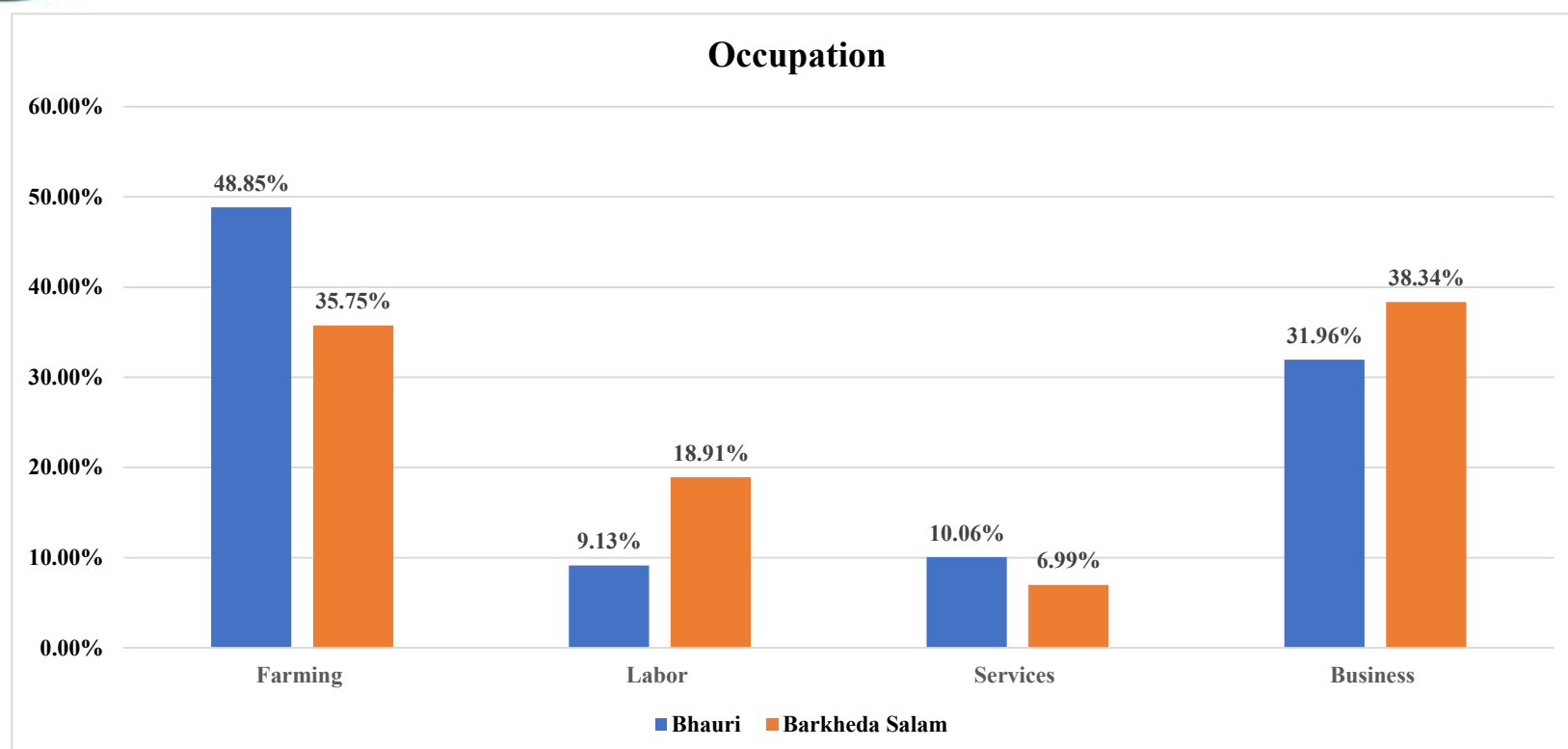


Table & figure 4 revealed the distribution of occupational status of population. In that 459 (44%) were farmers, 133 (13 %) were labour, 93 (9 %) were under services, 358 (34 %) were belongs to other business.

Table 5: Distribution of marital status

n=3470

Marital Status	Bhauri (1778)		Barkheda Salam (1692)	
	Frequency	Percentages	Frequency	Percentages
Married	582	32.73%	848	50.11%
Unmarried	1196	67.27%	844	49.88%

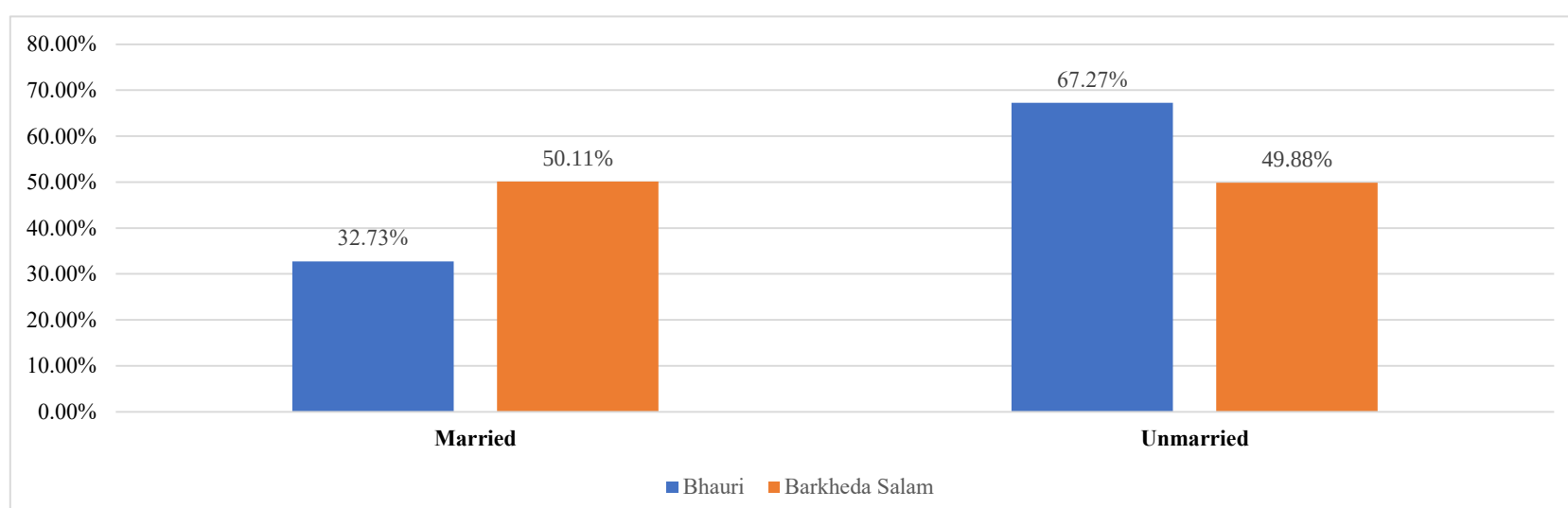


Table & Figure 5 revealed the marital status. Out of the total population1430 (41%) of the individuals are married, while the remaining 2040 (59 %) are unmarried. This shows that a majority of the population in the surveyed community is married.

Table 6: Distribution of Literacy.

n=1043

Educational Status	Bhauri (657)		Barkheda Salam (386)	
	Frequency	Percentages	Frequency	Percentages
Illiterate	148	22.50%	71	18.39%
Literate	509	77.50%	315	81.60%

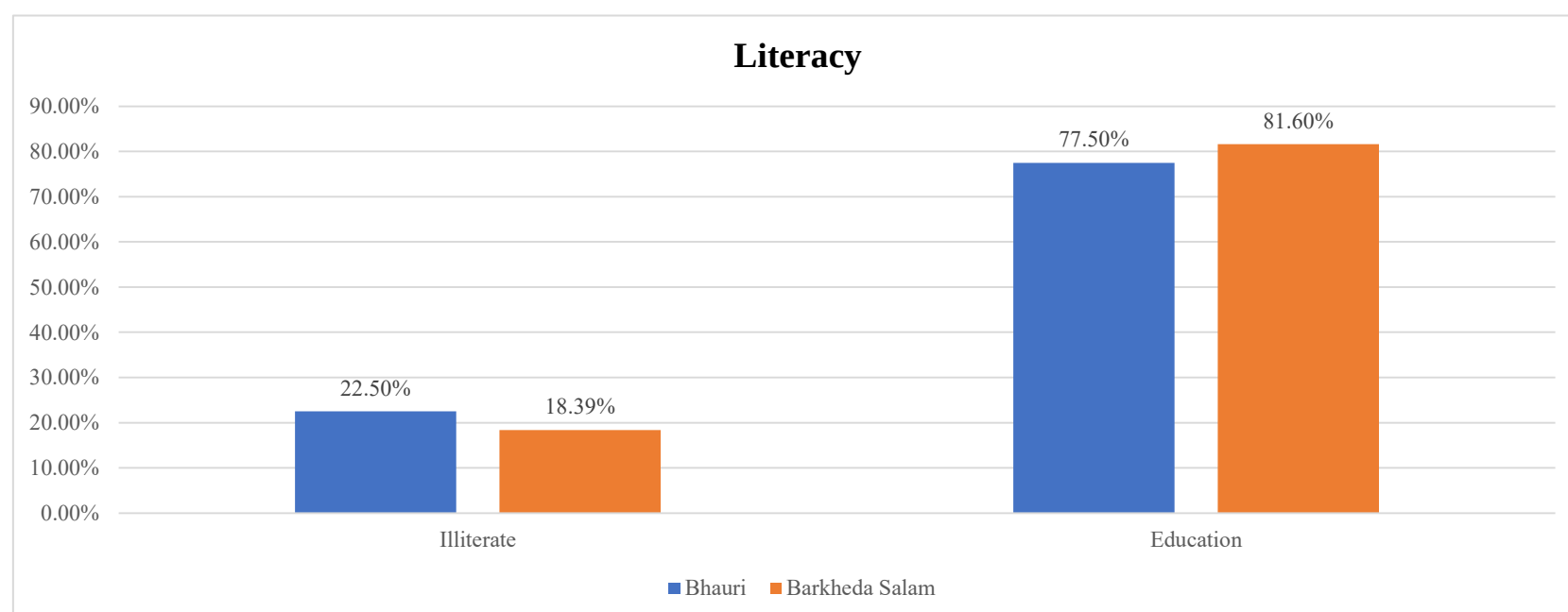


Table & Figure 6 shows the Literacy status of population. In that 824 (79%) families are educated, while 219 (21%) are uneducated. This indicates that a large proportion of the surveyed population lacks formal education.

Table 7: Distribution of Economic status

n=1043

Economic Status	Bhauri (657)		Barkheda Salam (386)	
	Frequency	Percentages	Frequency	Percentages
Upper Class	15	2.28%	14	3.62%
Upper middle class	141	21.46%	94	24.35%
Lower Middle Class	146	22.22%	81	20.98%
Upper Lower Class	119	18.12%	90	23.31%
Lower Class	236	35.92%	107	27.72%

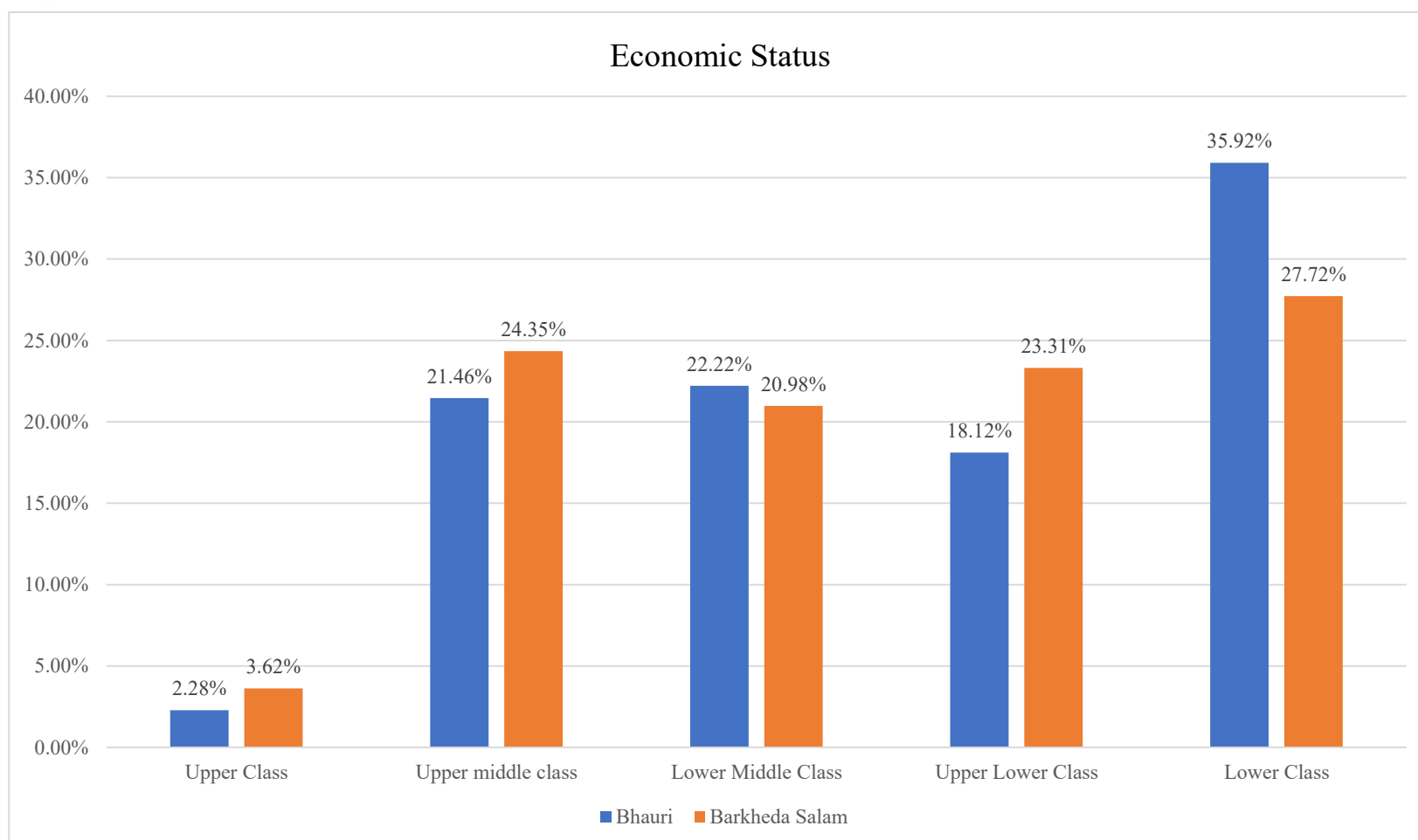


Table & Figure 7 revealed the economic status population, in that the largest group 343 (32.88%), belongs to the lower class. This is followed by 235 (22.53%) individuals from the upper middle class, 227 (21.76%) from the lower middle class, and 209 (20.04%) from the upper lower class. A small proportion, 29 (2.78%), belongs to the upper class. This distribution shows that a significant portion of the surveyed population falls within the lower economic categories.

Table 8: Distribution of the status of pregnancy.

n=63

Number of Pregnancy	Bhauri (46)		Barkheda Salam (17)	
	Frequency	Percentages	Frequency	Percentages
1st Trimester	29	63.04%	09	47.05%
2nd Trimester	09	19.56%	05	29.41%
3rd Trimester	08	17.40%	03	17.64%

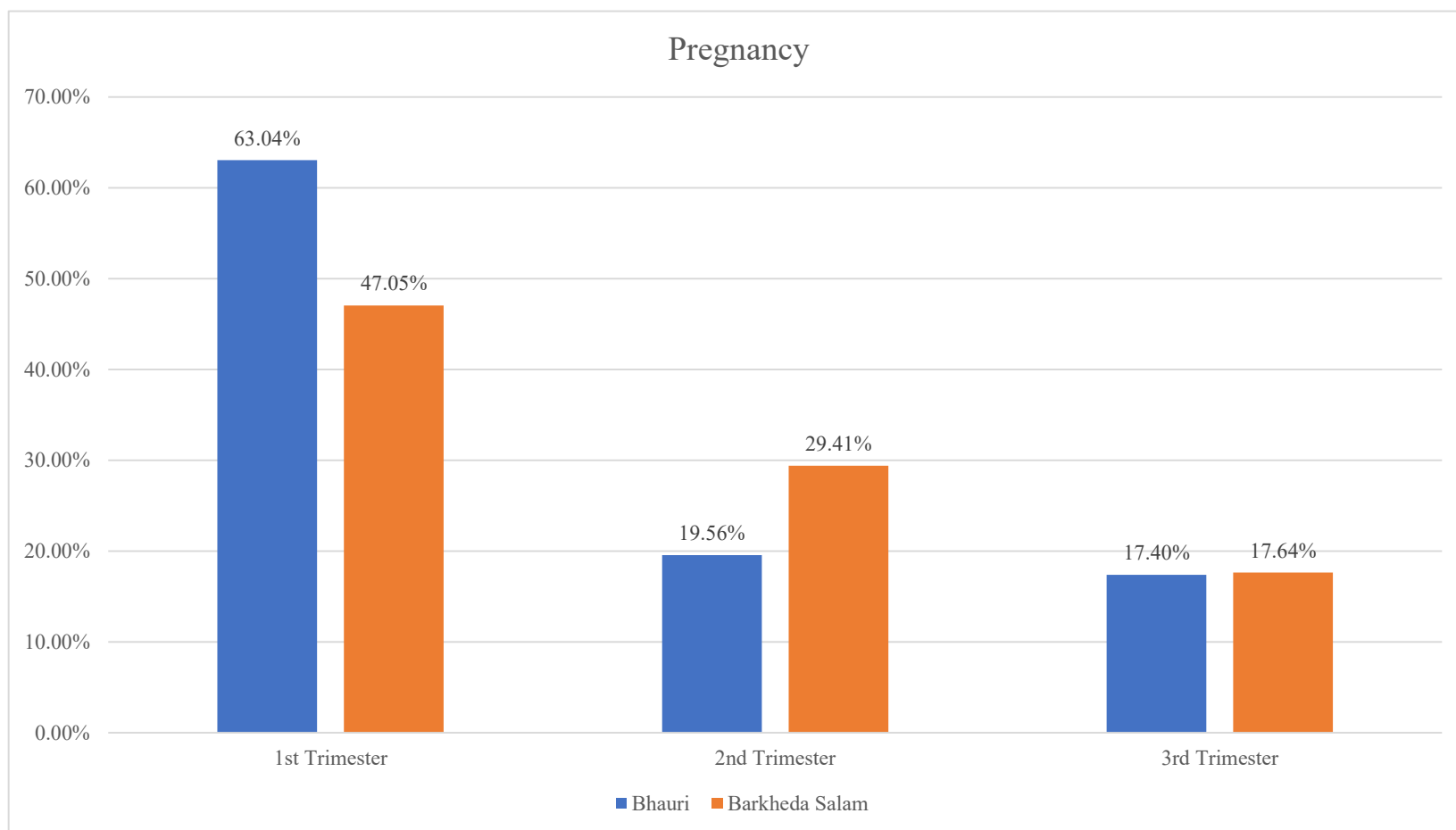


Table & Figure 8 revealed the status of pregnancy, Among 63 pregnancy 38 (61%) were in the first trimester 14 (22 %) were in the second trimester, and 11 (17%) were in the third trimester.

Table 8: Distribution of family planning methods.

n=720

Method	Bhauri 291c (582)		Barkheda Salam 429c (858)	
	Frequency	Percentages	Frequency	Percentages
Condom	105	36.08%	301	70.16%
Oral contraceptive	46	15.80%	98	22.84%
Intra uterine device	68	23.36%	02	0.46%
Injection	9	3.10%	03	0.69%
Sterilization	6	2.07%	12	2.79%
Nothing	57	19.59%	13	3.03%

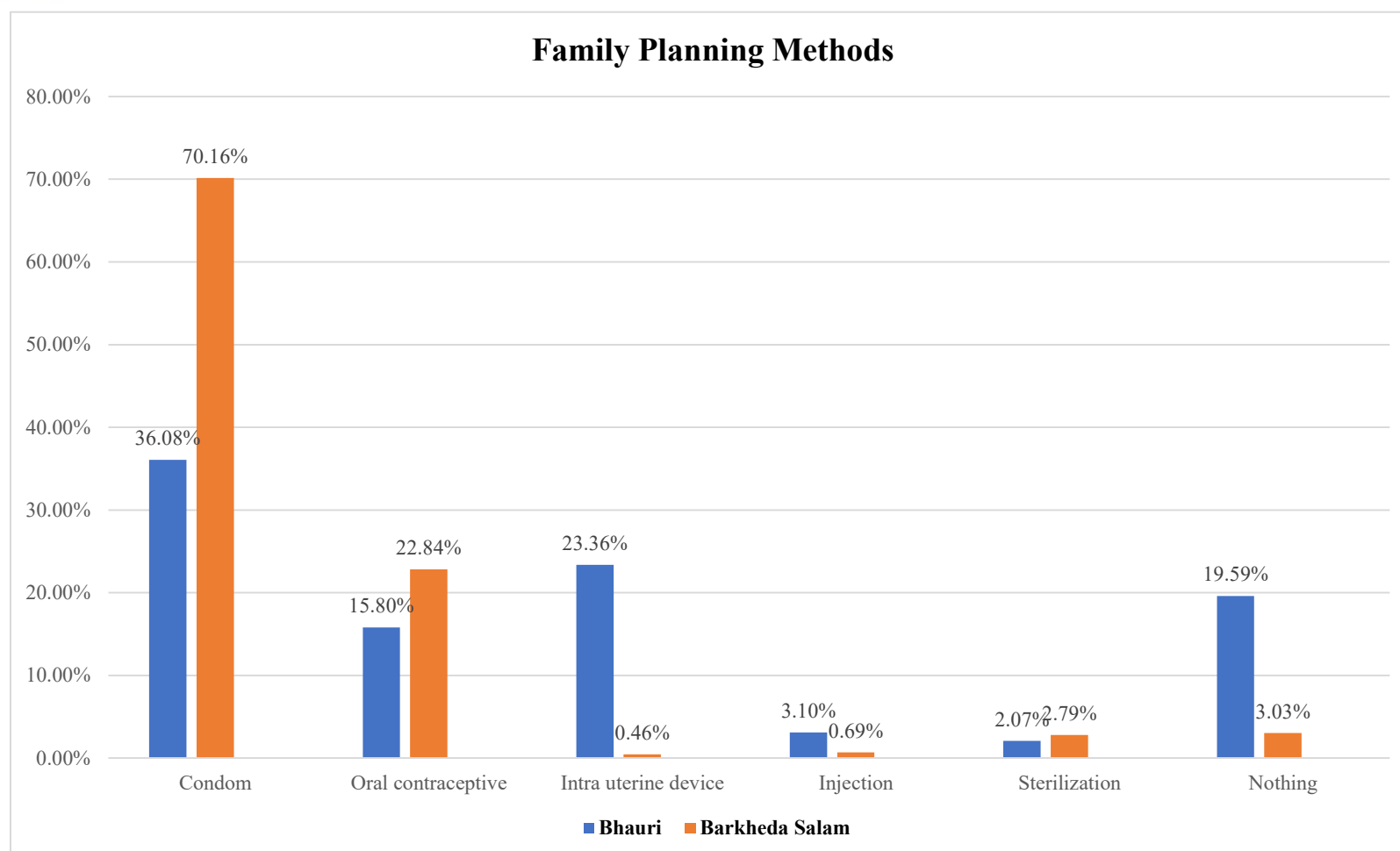


Table & figure 8 revealed the distribution of Family Planning Practices Among Eligible Couples. Out of 720 eligible couples (1440), the majority, 406 (62 %) reported using condoms as a family planning method. 144 (22%) used oral contraceptive pills, while 70 (10 %) used intrauterine devices (IUDs). A small number reported injections 12 (2 %), sterilization 18 (3 %), and no method are 70 (11 %)

Table 9: Distribution of Presence of Illness

n=3470

Presence of illness	Bhauri (1778)		Barkheda Salam (1692)	
	Frequency	Percentages	Frequency	Percentages
Major Illness	301	16.92%	182	10.75%
Minor Illness	1171	65.86%	1102	65.13%
No Illness Found	306	17.21%	408	24.11%

Table 9 revealed the distribution of illness. Major illness was 483 (14%), minor illness was around 2273 (65%) & no illness was around 714 (21%).

Table 10: Distribution of major illness.

n=483

Presence of Major illness	Bhauri (301)		Barkheda Salam (182)	
	Frequency	Percentages	Frequency	Percentages
Diabetes Mellitus	23	7.64%	40	21.97%
Hypertension	74	24.58%	41	22.52%
Cancer	7	2.32%	10	5.49%
Asthma	14	4.65%	10	5.49%
Depression	29	9.63%	40	21.97%
Anemia	154	51.16%	41	22.52%

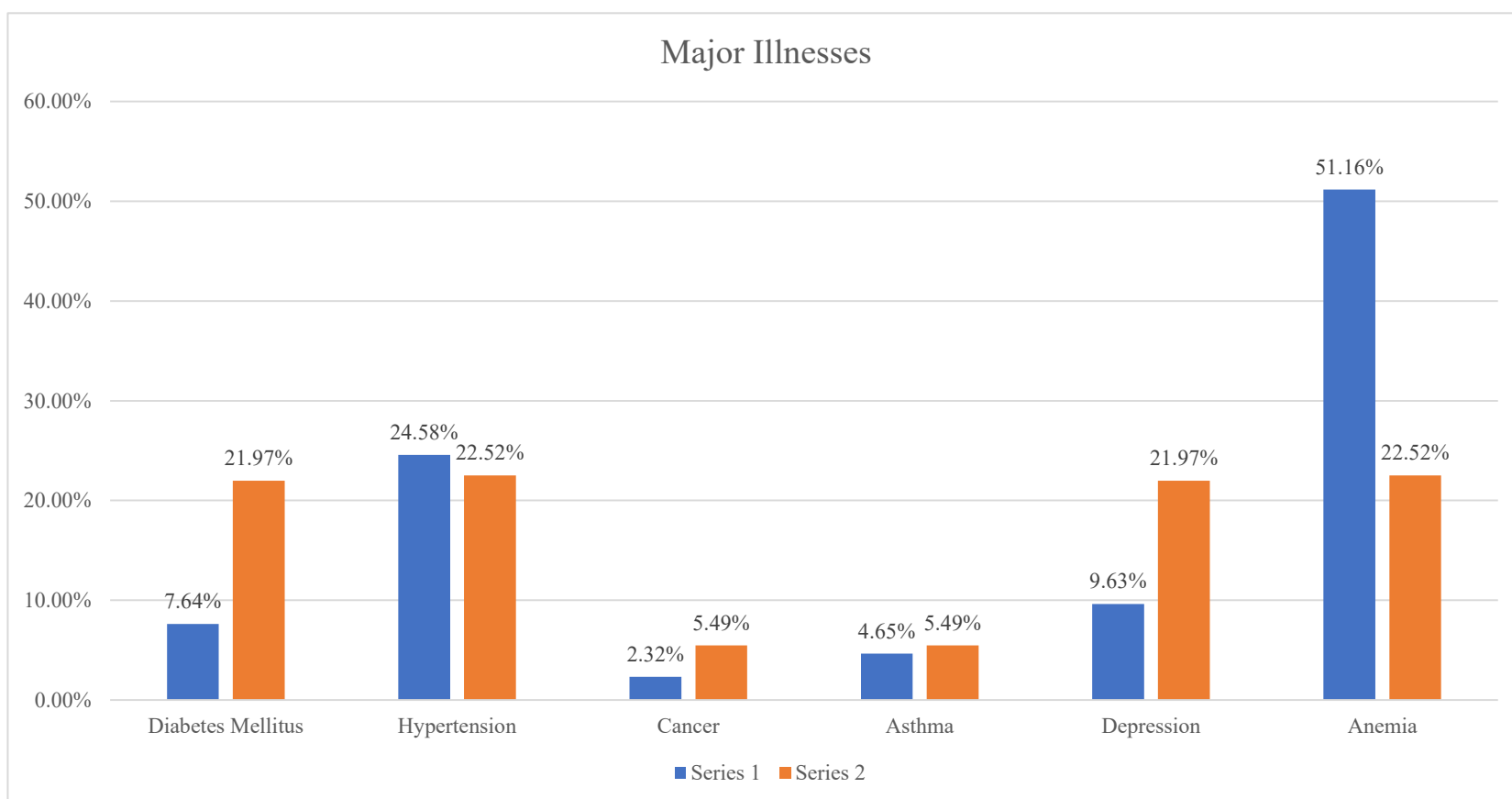


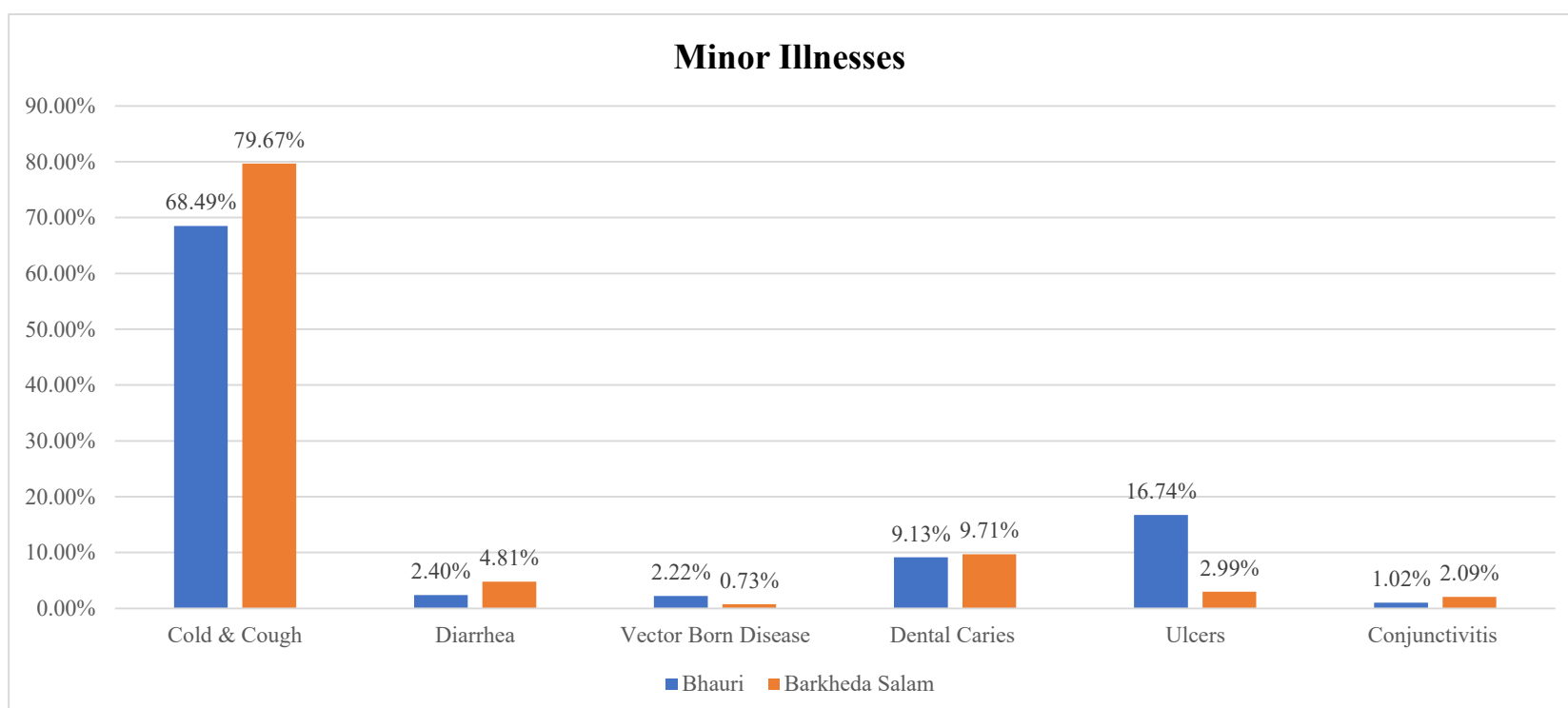
Table & figure 10 shows Major Illness distribution. Out of total population 166 (34%) are affected with anemia, 119 (25%) are affected with depression, 114 (23%) are affected with hypertension, 63 (13%) are affected with diabetic mellitus, and 04 (15) had asthma. The findings indicate that anemia was the most prevalent major illness among the study population, followed by depression and hypertension. Diabetes mellitus was reported in a moderate proportion of participants, whereas asthma was found in only a few cases. Overall, the results suggest that nutritional deficiencies and lifestyle-related disorders are major health concerns in the studied population.

Table 11: Distribution of Presence of Minor Illness

n=2273

Presence of Minor illness	Bhauri (1171)		Barkheda Salam (1102)	
	Frequency	Percentages	Frequency	Percentages
Cold & Cough	802	68.49%	878	79.67%
Diarrhea	28	2.40%	53	4.81%
Vector Born Disease	26	2.22%	08	0.73%
Dental Caries	107	9.13%	107	9.71%
Ulcers	196	16.74%	33	2.99%
Conjunctivitis	12	1.02%	23	2.09%

Table & figure 11 shows Minor Illness distribution. Out of total population 1688 (74%) are affected with Cold and cough, 81 (3%) are affected with diarrhea, 34 (1%) are affected with vector born disease, 214 (10%) are affected with dental carries, 229 (10%) had ulcers and conjunctivitis 35(1%) . The findings indicate that cold and cough were the most common minor illnesses among the study population, affecting nearly three-fourths of the participants. Dental caries and ulcers were also relatively common, each affecting about 10% of the population. In contrast, diarrhea, vector-borne diseases, and conjunctivitis were reported in only a small proportion of participants. Overall, the results suggest that respiratory illnesses are the major health concern in the studied population, while other minor illnesses occur at comparatively lower rates.





Major Concerns of the Community

Water Scarcity and Agriculture: Lack of groundwater during summer affects irrigation and results in poor cultivation practices.

Challenges in Access to Higher Education: The long distance to the nearest UG/PG colleges limits students' opportunities for higher education and career development.

Poor Drainage System: Water logging during the rainy season indicates inadequate drainage facilities in the village.

Limited Access to Markets: The distance to organized markets and limited public transportation reduce the availability and accessibility of goods and services.

Lack of Modern Technology: Limited access to modern technology affects productivity, efficiency, and sustainable development within the community.

Poor Hygiene Practices: Inadequate sanitation facilities and lack of awareness regarding hygiene contribute to preventable diseases and poor health conditions.

Environmental Pollution and Health Hazards: Stubble burning in agricultural fields around Bhauri between March and May causes air pollution, breathing difficulties, skin irritation, and ash accumulation in residential areas.

Infrastructure and Development Issues: Despite being located near the city outskirts, the area experiences slow development in civic amenities such as pavements, parks, and green spaces for children.

Waste Management Problems: Improper waste disposal, poor sewage systems, and delayed garbage management remain major concerns in the rapidly urbanizing rural area.

Stray Cattle and Traffic Hazards: The presence of stray cattle on roads frequently causes traffic congestion and accidents.

Rising Temperatures: Increasing temperatures due to rapid urbanization and reduction of green cover have negatively affected the local environment and living conditions in Bhauri.

Intervention: The community posting enabled us to provide need-based health education and preventive care through various engaging activities such as role play, skit, puppet show, cookery demonstration, school health program, and awareness rally. These activities helped improve community awareness on family planning, nutrition, prevention of anemia, hypertension, and cancer.

1. Created awareness regarding hygiene, sanitation, and prevention of diseases through health education programs.
2. Encouraged to improve waste disposal practices and encourage community participation in cleanliness activities.
3. Conducted awareness programs on the harmful effects of stubble burning and environmental pollution.
4. Provided awareness about road safety and management of stray cattle on roads.

Short-Term Goals

1. Promote water conservation methods to manage water scarcity during summer.
2. Encourage the use of available technology and government schemes for agriculture and education.
3. Improve temporary drainage measures to reduce water logging during rainy seasons.
4. Organize health camps to identify and manage respiratory and skin problems caused by pollution.

Long-Term Goals

1. Develop a sustainable groundwater management system and improve irrigation facilities for agriculture.
2. Establish better drainage and sewage systems to prevent flooding and improve sanitation.
3. Improve access to higher education by establishing colleges or better transportation facilities.
4. Strengthen waste management infrastructure and ensure proper garbage disposal systems.
5. Promote sustainable environmental practices and increase green cover in the community.
6. Enhance civic amenities such as roads, pavements, parks, and recreational spaces.
7. Introduce modern technology and advanced agricultural practices to improve productivity and development.



8. Improve public transportation and market accessibility for better economic growth.
9. Implement long-term pollution control measures to improve air quality and community health.
10. Develop planned urban and rural infrastructure to support the growing population and future development.

Conclusion: The community posting provided valuable opportunities to deliver comprehensive care to community members. During this period, we systematically collected relevant data, implemented appropriate health activities, and ensured accurate documentation. All information was carefully compiled and organized to prepare a clear and evidence-based report and presentation. Overall, the posting enhanced our skills in community assessment, health education, and effective communication while contributing positively to the health knowledge and practices of the community.



A COMPARATIVE STUDY TO ASSESS THE EFFECTIVENESS OF A STRUCTURED TEACHING PROGRAMME REGARDING KNOWLEDGE ON EFFECTS OF FAST FOOD ON HEALTH AMONG MIDDLE SCHOOL CHILDREN IN SELECTED URBAN AND RURAL COMMUNITIES AT BHOPAL (M.P.)

Mr. Siddhart Jain, Associate Professor, CCON, Bhopal



Abstract

Background: Fast food consumption has increased significantly among school-aged children, contributing to obesity and lifestyle disorders.

Objective: To assess and compare the effectiveness of a structured teaching programme (STP) on knowledge regarding the effects of fast food on health among middle school children.

Methodology: A comparative pre-test and post-test design was adopted among urban and rural middle school children aged 12–15 years. Structured questionnaire was used.

Results: Post-test scores showed significant improvement in knowledge after implementation of STP.

Conclusion: Structured teaching programme was effective in improving knowledge regarding harmful effects of fast food.

Introduction

Rapid urbanization and lifestyle changes have altered dietary habits among adolescents. Fast food is high in calories, saturated fats, sugar, and sodium. Adolescents are particularly vulnerable to unhealthy dietary habits, which may lead to obesity, hypertension, diabetes, and cardiovascular diseases. Health education plays a key role in prevention.

Objectives

1. To assess pre-test knowledge regarding the effects of fast food on health.
2. To assess post-test knowledge after implementation of STP.
3. To determine the effectiveness of STP.
4. To find association between knowledge and selected demographic variables.
5. To compare knowledge levels between urban and rural groups.

Hypotheses

H1: There will be a significant difference between pre-test and post-test knowledge scores.

H2: There will be a significant association between knowledge scores and selected demographic variables.

Methodology

- ❖ Research Approach: Quantitative evaluative approach.
- ❖ Research Design: Comparative pre-test and post-test design.
- ❖ Setting: Selected urban and rural middle schools of Bhopal.
- ❖ Population: Middle school children aged 12–15 years.
- ❖ Tool: Structured knowledge questionnaire.
- ❖ Data Analysis: Descriptive and inferential statistics including paired t-test and chi-square test.

Results

Pre-test findings showed inadequate knowledge among majority of students.

Post-test findings revealed significant improvement in knowledge in both urban and rural groups.

Statistical analysis confirmed effectiveness of structured teaching programme ($p < 0.05$).

Discussion

The findings indicate that structured teaching programme significantly improved knowledge among middle school children. Educational interventions are effective tools in promoting healthy dietary awareness among adolescents..

Implications for Nursing Practice

- School-based nutrition education programmes should be strengthened.
- Community health nurses should conduct awareness sessions.
- Collaboration with teachers and parents is essential

Limitations

- Study limited to selected schools in Bhopal.
- Short duration of follow-up.
- Behavioral changes were not measured.

Conclusion

The structured teaching programme was effective in improving knowledge regarding harmful effects of fast food among middle school children in urban and rural communities. Early educational interventions are essential for prevention of lifestyle disorders.

References

1. <https://www.betterhealth.vic.gov.au/health/healthyliving/food-variety-and-a-healthy-diet>
2. https://en.wikipedia.org/wiki/Fast_food.
3. Hellesvig-Gaskell, Karen. "Definition of Fast Foods | LIVESTRONG.COM".LIVESTRONG.COM. Retrieved May 3, 2016
4. Consumption of fast food in American diet [serial online] 2001 [Cited 2009 June 10]; Available from: URL: [http:// www. findarticles.com](http://www.findarticles.com)
5. Fast Food Effects on Health Available from: URL : <http://www.scribd.com/document/147779028/Fast-Food-Effects-on-Health>
6. Shanthi A. Bowman, PhD, Steven L. Gortmaker, PhD.Effects of Fast-Food Consumption on Energy Intake and Diet Quality Among Children in a National Household Survey[serial online] 2004 [Cited 2010 June 8]; Available from: URL : [http:// www.pediatrics.aappublications.org](http://www.pediatrics.aappublications.org)
7. A study published in the noted medical journal Lancet says India is just behind US and China in this global hazard list of top 10 countries with highest number of obese people<http://indiatoday.intoday.in/story/obesity-india-weighs-third-on-obesity-scale/1/365876.html>
8. Diseases Caused by Eating Too Much Fast Food, <http://www.livestrong.com/article/442066-diseases-caused-by-eating-too-much-fast-food/>
9. Junk food can stunt growth: Experts, <http://timesofindia.indiatimes.com/city/bhopal/Junk-food-can-stunt-growth-Experts/articleshow/16257660.cms>
10. Polit FD, Beck CT. Nursing research principles and methods. 7th edition. Philadelphia: Lippincott Williams and Walkins; 2004. P.88 – 9.
11. Rao DR, Vijayapushpam T, Subba Rao GM. Dietary habits and effect of two different educational tools on nutrition knowledge of college going adult girls in Hyderabad, India [serial online] 2002 [Cited 2010 July 20]; Available from :URL : <http://www.pubmed.com>
12. [www.pbmed.com, http://www.ncbi.nlm.nih.gov/pubmed/17414504](http://www.ncbi.nlm.nih.gov/pubmed/17414504)Dietary risk factors for development of childhood obesity. Moreno LA, Rodríguez ,niversity School of Health Sciences, and Department of Pediatrics, University of Zaragoza, C/Domingo Miral s/n, 50009 Zaragoza, Spain. lmoreno@unizar.es
13. Anita Goyal, N.P. Singh. Consumer perception about fast food in India: an exploratory study. British Food Journal [serial online] 2007; 109 (2): 182 – 195.Available from:URL: <http://www.emeraldinsight.com/journals.html>
14. Ultra-processed food consumption in children from a Basic Health Unit. Sparrenberger K, Friedrich RR, Schiffner MD, Schuch I, Wagner MB<http://www.ncbi.nlm.nih.gov/pubmed/26092227>
15. Ryan DH, Bray GA. Consumption of fast food and its side effect among adults in a law college Bangalore [serial online] 1998 [Cited 2010 September 9]; Available from: URL: <http://www.pubmed.com>



A STUDY TO ASSESS THE PERCEIVED ILL EFFECTS OF SOCIAL MEDIA AMONG HIGHER SECONDARY SCHOOL STUDENTS, TEACHERS AND THEIR PARENTS.

Ms. Salomi Herbert, Assistant Professor, CCON, Bhopal



Introduction

Social media is becoming integral part of our life today. People who are addicted to social media may experience negative side effects such as eye strain, social withdrawal or lack of sleep, less interest, muscle strain, neck pain, poor academic performance, irritation, stress. If person spend own time researching problems or arguing with people, people may experience stress, which can have a negative impact on person's health. In today's world, children can access the Internet and social media applications from many different entry points, including iPads, tablets, desktops, laptops, and smartphones, computers etc. Deng and Tavares (2013) noted that social networking has become an integral part of student's social life. It is now seen as a learning platform that could be utilized to enhance student engagement and performance. Social networking and media tools offer school students the opportunity to communicate, get in touch, access information, research, and chat.

Objectives

To assess the perceived impact of social media among higher secondary school students, their parents and teachers and assess the relationship and trends of perception regarding social media among students, their teachers and parents.

Method and Material

Descriptive research design and cross sectional research approach was used for this study. This study was conducted in selected schools of Wardha, District. The sample was higher secondary school students, teachers and their parents. Sample size was 250.

Result

Correlation among teachers and students and parents. The relationship between teacher to teacher the r-value is 1, it shows that positive correlation and teacher to students r-value is -0.142 it shows that negative correlation because the students are more exposed to the technology than the teachers. And teacher to parents, the r-value is 0.037 it shows that positive correlation between teachers and parents. P-value of teachers between students is 0.324 (NS), and p-value of teacher between parents is 0.801 (NS). The relationship between students to teacher is r-value is -0.142 it shows that negative correlation, students to students the r-value is 1 it shows that positive correlation, students to parents, the r-value is 0.050 it shows that positive correlation between students and parents. P-value of students between teachers is 0.324 (NS), and p-value of students between parents is 0.623 (NS). The relationship between parents to teacher is the r-value is 0.037 it shows that positive correlation and parents to students r-value is 0.050 it shows that positive correlation And parents to parents, the r-value is 1 it shows that positive correlation between parents to parents. P-value of parents between students is 0.801 (NS), and p-value of parents between students is 0.623(NS).

Conclusion

Hence it is concluded that the perceived scale on perceived ill effects of social media was used to assess the perceived ill effects of social media among higher secondary school students, teachers and their parents. In the same way all positive and negative impact of social media can assess.

Key words-Ill effects, Social media, Higher secondary school students, Teachers, Parents.

References

1. Andreassen, C.S, and S Pallesen. "Facebook Addiction: a Reply to Griffiths (2012). Psychological Reports.113.3 (2013): 899-902. Print.
2. Campisi, Jay, Pamela Bynog, Hope McGehee, Joshua C. Oakland, Shannon Quirk, Carlee Taga, and Morgan Taylor. "Facebook, Stress, and Incidence of Upper Respiratory Infection in Undergraduate College Students. Cyberpsychology, Behavior, and Social Networking.15.12 (2012): 675-681. Print.



A STUDY TO ASSESS THE EFFECTIVENESS OF COMPUTER ASSISTED TEACHING ON KNOWLEDGE REGARDING ECG AND ITS INTERPRETATIONS IN VARIOUS CARDIAC CONDITION AMONG B.SC. NURSING STUDENTS IN SELECTED NURSING COLLEGES AT JABALPUR

Ms. Jasmine Walter, Tutor , CCON, Bhopal



Abstract

In the recent report in 2018 shows that 60% of the world's heart patients are in India. Approximately 60% of all cardiac deaths occur due to arrhythmias leading to Sudden Cardiac Arrest (SCA) in India. There are several studies which have shown that the nurses have lack of knowledge regarding ECG and its interpretation and management. Therefore, the objective of the study was to assess the knowledge of B.Sc. Nursing students on ECG and to check the effectiveness of a computer assisted teaching programme on ECG and its interpretation.

Introduction

Cardiovascular disease (CVD) is the leading cause of death worldwide, accounting for nearly one-third of global deaths, with a significant burden in India. Conditions such as coronary heart disease (CHD), myocardial infarction (MI), and cardiac arrhythmias contribute greatly to mortality, including sudden cardiac arrest. In this context, electrocardiography (ECG) plays a vital role as a simple, non-invasive, inexpensive, and widely available diagnostic tool that records the heart's electrical activity and helps detect conduction abnormalities, arrhythmias, myocardial ischemia, hypertrophy, and other cardiac disorders. Since its development by Willem Einthoven, ECG has become essential in diagnosis, treatment, monitoring, and evaluation of cardiac patients in emergency and critical care settings. Modern nursing has evolved significantly since the era of Florence Nightingale, and today's nurses are expected to make independent clinical decisions based on sound knowledge, skills, and competency. Therefore, proficiency in ECG recording and interpretation is crucial for nurses to identify life-threatening conditions promptly, correlate clinical findings accurately, and provide effective patient care in an increasingly complex healthcare environment.

Need for the study

Cardiovascular diseases (CVDs) are the leading cause of death in India, with a higher age-standardized death rate than the global average. Sudden cardiac death, heart failure, and other cardiac emergencies require prompt recognition and immediate treatment to save lives. The burden of coronary heart disease and arrhythmias is rapidly increasing, and survival rates in sudden cardiac arrest remain very low. ECG is an essential, non-invasive, and gold standard diagnostic tool for identifying arrhythmias, conduction abnormalities, myocardial infarction, and other cardiac conditions. However, research shows that many nurses are unable to accurately interpret ECG findings, especially in differentiating ischemic and non-ischemic patterns. Since B.Sc. nursing curriculum emphasizes understanding diagnostic tests, it is necessary for nursing students to develop competency in ECG interpretation. Proper knowledge and skill in ECG reading will help nurses detect complications early, make appropriate clinical decisions, and improve patient care. Therefore, there is a need to conduct this study to improve nursing students' knowledge and effectiveness in ECG interpretation through appropriate teaching methods.

Objectives of the study

- To determine the pre-test level of knowledge regarding ECG interpretation among the B.Sc. Nursing student
- To find effectiveness of computer assisted teaching programme regarding ECG interpretation among the B.Sc. Nursing students.
- To explore the association between pre-test level of knowledge of the B.Sc. Nursing students and their selected demographic variables.

Research Hypothesis

- **H1:** There will be significant gaining post-test on ECG interpretation among nursing student as compare to pre-test and post-test knowledge scores.
- **H2:** There will be significant association between the level of knowledge and selected demographic variable of B.Sc. nursing students.

Research Methodology

An evaluative approach was adopted for this study as it aims to test the hypothesis that establishes a relationship between computer assisted teaching programme and level of knowledge regarding ECG and its interpretation. A pilot study was conducted with ten subjects in Vivekananda College of nursing to refine the methodology and to find the feasibility of the study. Through purposive sampling 100 students of third year and fourth year of B.Sc. nursing programme was selected from Premwati College of nursing, Jabalpur. Research design adopted for this study was a pre-experimental, pre-test and post-test design without control group. A structured questionnaire was used to assess the level of knowledge of participants regarding ECG and its interpretation. computer assisted teaching were given for 55 minutes to the samples and knowledge levels were assessed using the structured questionnaire. The participants were taught about ECG and its interpretation using a computer assisted teaching. The results were then analysed using descriptive and inferential statistics.

Result

Analysis regarding the knowledge level of B.Sc. Nursing students on ECG and its interpretation shown that in pre-test 82% of students had inadequate knowledge, 18% had moderately adequate knowledge and none of the samples had adequate knowledge whereas 75% of the students scored adequately in the post test, 25% had moderately adequate knowledge and no one had inadequate knowledge. This shows there was a significant increase in the knowledge level in the post-test when compared to the pre-test. Most of the students had highest scores (mean 78.33%) in basic knowledge of ECG, but had least scores (mean score of 51.48%) in obtaining the ECG. Effectiveness of computer assisted teaching programme was assessed by performing a paired t test. The mean knowledge score was 17.33 in the pre-test with SD of 2.50 and in the post test the mean knowledge score 30.88 with SD of 2.14. The paired t value calculated 31.894 which was significant at 0.005 level of significance. The enhancement mean was 13.55 with SD of 0.36. Hence the hypothesis H01 which states that there was a significant gain in knowledge regarding ECG and its interpretation through computer assisted teaching programme is accepted.

Recommendations

- The study can be replicated in different settings with larger samples.
- A comparative study can be done among nursing students of different nursing colleges.
- A similar study can be done on knowledge of nurses in the hospital setting

Conclusion

The present study assessed the knowledge regarding ECG and its interpretation among nursing students working at selected nursing colleges in Jabalpur. The overall knowledge of the B.Sc. Nursing students regarding interpretation of ECG was found to be inadequate in the pre-test with mean percentage of 43.15 and standard deviation of 2.2. various in Post test none of the respondents had inadequate knowledge about Interpretation of ECG, 26% of the respondents had moderate knowledge, and 74% had adequate knowledge with mean percentage of 43.15 and standard deviation of 2.95. Study was feasible in data collection. The findings showed that nursing students had moderate and inadequate knowledge which signifies the need for a computer assisted teaching programme which is evidenced by significant association between level of knowledge and selected socio demographic variables. The investigator found that the study was useful and computer assisted teaching programme would help the nursing students to improve their knowledge and practice.



Reference

1. Roger V, Go A, Lloyd-J. Heart disease and stroke statistics. A report from the American Heart Association Statistics Committee and Stroke Statistics Subcommittee ;2011.
2. Chadha SL, Gopianth N, Ramachadran K. Epidemiological study of coronary heart disease in Gujarati's in Delhi (India). Indian J Med Res 1992; 96:115-21.
3. Together for health .Geneva. publication assessment global health report. 2002april
4. Indian health survey .New Delhi .An expert assessment of health in India. Assessment report .2000 may.
5. Hurst JW, Morris DC, Crawley S. The history: symptoms due to cardiovascular disease. The heart. McGraw-Hill. 1985;7(5).



A STUDY TO ASSESS THE EFFECTIVENESS OF PLANNED TEACHING PROGRAMME ON KNOWLEDGE REGARDING USE OF MENSTRUAL CUP AMONG GIRLS IN SELECTED COLLEGE OF NURSING, BHOPAL (M.P.)

Ms. Yamini Batham, Tutor, CCON, Bhopal



Abstract

Menstrual hygiene management plays a vital role in maintaining reproductive health and overall well-being of women. The menstrual cup is a reusable, cost-effective, and environmentally friendly alternative to disposable sanitary products. Despite its advantages, awareness and acceptance of menstrual cups remain limited among young women due to cultural barriers, myths, and lack of structured education. The present study aimed to assess the effectiveness of a planned teaching programme on knowledge regarding the use of menstrual cups among nursing students in a selected college of Bhopal. A pre-experimental one group pre-test and post-test design was adopted. Fifty nursing students were selected using convenient sampling technique. The results showed a significant improvement in post-test knowledge scores after implementation of the teaching programme, indicating its effectiveness. The study highlights the importance of structured educational interventions in promoting safe and sustainable menstrual hygiene practices.

Introduction

Menstruation is a natural physiological process occurring in women of reproductive age. Proper menstrual hygiene management is essential to prevent infections, ensure comfort, and promote dignity. In India, sanitary pads and cloth are commonly used; however, sustainable menstrual products such as menstrual cups are gaining attention due to their long-term benefits. A menstrual cup is a flexible, bell-shaped device made of medical-grade silicone that is inserted into the vagina to collect menstrual blood. It is reusable for several years, making it economical and environmentally friendly. However, myths, cultural taboos, fear of insertion, and lack of knowledge limit its usage among young women. Nursing students, as future healthcare providers, must possess adequate knowledge about menstrual hygiene products to educate and counsel others effectively. Hence, a planned teaching programme can significantly improve awareness and acceptance.

Objectives of the Study

1. To assess the pre-test knowledge regarding use of menstrual cups among nursing students.
2. To evaluate the effectiveness of the planned teaching programme by comparing pre-test and post-test knowledge scores.
3. To determine the association between pre-test knowledge and selected demographic variables.

Methodology

A quantitative evaluative approach was adopted. A pre-experimental one group pre-test and post-test research design was used. The study was conducted among 50 nursing students in a selected College of Nursing, Bhopal. Convenient sampling technique was used for selecting participants. A structured knowledge questionnaire was administered before the teaching programme to assess baseline knowledge. The planned teaching programme included information regarding meaning, types, benefits, insertion procedure, cleaning techniques, advantages, disadvantages, and myths related to menstrual cups. A post-test was conducted after the intervention to evaluate improvement in knowledge. Data were analyzed using descriptive and inferential statistics.

Content

A menstrual cup is a reusable, flexible cup made of medical-grade silicone or rubber that is inserted into the vagina to collect menstrual flow instead of absorbing it.

Benefits of Menstrual Cup

- Cost-effective and reusable for 5–10 years



- Eco-friendly and reduces menstrual waste
- Can be worn safely for 6–12 hours
- Reduces long-term financial burden
- Less odor compared to sanitary pads
- Need for Educational Intervention

Many girls lack knowledge regarding correct insertion, cleaning methods, safety, and misconceptions about menstrual cups. Fear of pain, leakage, and cultural myths act as barriers. Structured education helps in improving confidence, knowledge, and acceptance.

Results

The data collected were analyzed using descriptive and inferential statistics. The findings revealed a significant improvement in knowledge scores after implementation of the planned teaching programme.

The mean pre-test knowledge score was 11.2 with a standard deviation of 5.82, indicating inadequate baseline knowledge among nursing students regarding the use of menstrual cup.

After the administration of the planned teaching programme, the mean post-test knowledge score increased to 22.82 with a standard deviation of 3.86.

The mean difference between pre-test and post-test knowledge scores was 11.62. The calculated t-test value was 6.33, which was found to be statistically significant at $p < 0.05$ level. This shows that the difference between pre-test and post-test scores was statistically significant. These findings clearly indicate that the planned teaching programme was effective in improving knowledge regarding the use of menstrual cup among nursing students.

Supportive Research Findings

Fathima Kani and Varghese (2024) conducted a cross-sectional survey titled “Menstrual cup awareness and preference among college going women in Tenkasi district, Tamil Nadu” published in the International Journal of Research in Medical Sciences. The study reported that more than half of participants had low awareness regarding menstrual cups and none were current users. The authors emphasized the need for structured awareness programmes to improve knowledge and acceptance.

Shrivastava et al. (2023) conducted a study titled “Awareness about menstrual cups and hygiene amongst undergraduate medical students of Government Medical College of Central India” published in the Indian Journal of Public Health Research & Development. After an educational intervention, significant improvement was observed in knowledge and acceptability of menstrual cups among students, highlighting the effectiveness of health education.

Negi et al. (2024) conducted a systematic review and meta-analysis titled “Menstrual cup adoption among reproductive age women in India” published in Women’s Health. The review concluded that awareness levels remain moderate to low in India, but acceptance increases significantly after proper education and demonstration. The study recommended educational strategies to enhance adoption.

Conclusion

The study concluded that the planned teaching programme was effective in improving knowledge regarding the use of menstrual cups among nursing students. Educational interventions play a crucial role in promoting safe, economical, and environmentally sustainable menstrual hygiene practices. Increasing awareness among nursing students can further help in community education and wider acceptance of menstrual cups.

References

1. Fathima Kani M, Varghese A. Menstrual cup awareness and preference among college going women in Tenkasi district, Tamil Nadu: a cross-sectional survey. *Int J Res Med Sci.* 2024;12(6):1941-1945.
2. Shrivastava A, Saroshe S, Khare V, Dixit S. Awareness about menstrual cups and hygiene amongst undergraduate medical students of Government Medical College of Central India. *Indian J Public Health Res Dev.* 2023;14(4):21570.



3. Negi S, Tripathy S, Sahoo KC, Shamim MA, Kumar D, Mehta V, et al. Menstrual cup adoption among reproductive age women in India: a systematic review and meta-analysis. *Women's Health*. 2024;64(8):648-661.



EXALTING NURSING CARE: INTERTWINING COMPASSION AND CLINICAL PRECISION

Prof. Dr. Thamarai Selvi P., Professor, CCON, Bhopal



Introduction

Exalted nursing care is achieved when precision and compassion are practiced together in every patient interaction. Precision ensures that nursing actions are accurate, timely, and evidence-based, while compassion ensures that care is delivered with empathy, dignity, respect, and emotional support. This integration results in care that is both clinically effective and deeply humane, addressing the patient as a whole person rather than a set of symptoms.¹ Precision in nursing refers to delivering accurate, exact, timely, and patient-specific care based on careful assessment, correct procedures, and evidence-based decisions. It is a fundamental element of nursing practice that ensures patient safety, improves outcomes, and upholds professional accountability.¹

Precision in nursing involves several key components. It begins with accurate assessment, such as correct measurement of vital signs, pain score, intake and output, wound size, and neurological status. Medication precision is essential, which includes administering the right drug, dose, route, time, and to the right patient, along with careful dose calculations, especially in pediatric and critical care settings. Procedural precision requires maintaining sterile technique and performing skills like IV insertion, catheterization, and specimen collection correctly. Documentation precision demands real-time, complete, factual, and legible recording of patient data. Communication precision through proper handover methods and correct patient identification is equally important. Time management, ethical practices, informed consent, and confidentiality also reflect precision in nursing.²

Precision plays a vital role in preventing medication and procedural errors, reducing hospital-acquired infections, avoiding legal complications, and improving the quality of care. It builds patient trust and supports faster recovery. In various clinical areas, precision is clearly visible. In ICU settings, nurses precisely titrate oxygen and intravenous drugs based on monitor readings. In pediatrics, drug doses are calculated accurately according to body weight. In operation theatres, strict sterile techniques and accurate surgical counts are maintained. In maternity care, precise monitoring of fetal heart rate and partograph plotting is done. In community health, correct vaccine dose, route, and cold chain maintenance are ensured. In emergency units, precise triage and rapid assessment save lives.²

Lack of precision can lead to serious consequences such as medication errors, infections, delayed recovery, increased morbidity and mortality, and legal or ethical issues. Therefore, nurses must follow standard protocols, use checklists, double-check high-alert medications, update their skills through continuous training, and practice evidence-based care to maintain precision.³

Compassionate nursing care is the heart of the nursing profession. It refers to showing empathy, kindness, respect, and genuine concern for patients while meeting their physical, emotional, psychological, and social needs. Compassion goes beyond performing procedures; it involves understanding the patient's feelings, suffering, and experiences, and responding with warmth and support.⁴

Compassionate care begins with empathetic communication. Nurses listen actively to patients, allow them to express fears and concerns, and respond in a calm and reassuring manner. Maintaining patient dignity and respect during all procedures, ensuring privacy, and addressing patients by name are important aspects of compassion. Providing emotional support to patients and their families, especially during pain, anxiety, or terminal illness, reflects compassionate practice.⁵

In daily nursing practice, compassion is shown by being patient, gentle, and attentive while providing care such as feeding, bathing, wound dressing, and medication administration. It includes understanding cultural values, beliefs, and individual preferences of patients. Compassionate nurses are non-judgmental, supportive, and sensitive to the needs of vulnerable individuals such as children, elderly patients, and the critically ill.⁶

Compassionate nursing care plays a vital role in building trust between the nurse and patient, which promotes cooperation with treatment and speeds recovery. It reduces patient anxiety, improves satisfaction, and creates a healing environment. Compassion also supports ethical nursing practice and enhances the professional image of nurses. Lack of compassion may make patients feel neglected, anxious, and dissatisfied, which can negatively affect recovery. Therefore, nurses must develop compassion through self-awareness, good communication skills, patience, and a caring attitude.¹

Precision in nursing is reflected in meticulous assessment, correct medication calculation, adherence to sterile techniques, accurate documentation, and timely interventions. Compassion complements this by shaping how these actions are delivered—through attentive listening, gentle handling, reassuring communication, cultural sensitivity, and preservation of patient dignity. Professional guidance from the American Nurses Association and the International Council of Nurses emphasizes that ethical, patient-centered nursing must combine competence with caring behavior.^{1,6}

In clinical practice, this blend is clearly visible. While administering medications with exact dosage and timing, the nurse explains the purpose calmly to reduce fear. During wound care performed with sterile precision, the nurse minimizes pain through gentle technique and reassuring words. In intensive care, precise monitoring of vital signs and titration of drugs is paired with empathetic communication to distressed family members. In maternity and community settings, accurate procedures are combined with encouragement, education, and reassurance. Evidence from nursing research shows that compassionate presence enhances patient trust, satisfaction, and adherence to treatment, thereby improving outcomes.⁷

Global health guidance from the World Health Organization also highlights people-centered care as essential for quality services, reinforcing that technical accuracy must be delivered with respect for patient experiences and values. When precision and compassion are intertwined, nursing care rises from routine task performance to holistic healing practice. This union reduces errors, lowers anxiety, prevents complications, strengthens therapeutic relationships, and upholds the professional image of nursing.⁸

Conclusion

Nursing care reaches its highest excellence when scientific accuracy is delivered through a caring heart. The harmony of precision and compassion truly exalts nursing care, ensuring complete physical, emotional, and psychological well-being of patients. Compassionate nursing care is essential for holistic healing. By combining clinical skills with empathy and kindness, nurses can provide care that heals both the body and the mind.

References

1. American Nurses Association. Code of ethics for nurses with interpretive statements. Silver Spring (MD): ANA; 2015.
2. World Health Organization. *Patient safety curriculum guide: Multi-professional edition*. Geneva: WHO; 2011.
3. Joint Commission International. *International patient safety goals (IPSG)*. Oakbrook Terrace (IL): JCI; 2021.
4. Journal of Clinical Nursing. Papadopoulos I, Taylor G, Ali S, Aagard M, Akman O, Alpers LM, et al. Exploring nurses' meaning and experiences of compassion: An international online survey. *J Clin Nurs*. 2017;26(11–12):1669–1680.
5. BMJ Quality & Safety. Sinclair S, Norris JM, McConnell SJ, Chochinov HM, Hack TF, Hagen NA, et al. Compassion: A scoping review of the healthcare literature. *BMJ Qual Saf*. 2016;25(7):455–464.
6. International Council of Nurses. The ICN code of ethics for nurses. Geneva: ICN; 2021.
7. Journal of Clinical Nursing. Papadopoulos I, Taylor G, Ali S, Aagard M, Akman O, Alpers LM, et al. Exploring nurses' meaning and experiences of compassion: An international online survey. *J Clin Nurse*. 2017;26(11–12):1669–1680.
8. World Health Organization. *Framework on integrated, people-centred health services*. Geneva: WHO; 2016.

MINDFULNESS AND PSYCHOLOGICAL WELL BEING

Mrs. Sherin Annie Varghese, Professor, CCON, Bhopal



Introduction

In modern society, psychological health has become an increasingly significant concern due to the rapid pace of life, increased work demands, and constant exposure to stressors. Mental health issues such as anxiety, depression, and stress-related disorders are becoming more prevalent worldwide. As individuals and healthcare professionals search for effective strategies to improve psychological well-being, mindfulness has emerged as a widely recognized and evidence-based approach. Mindfulness, which originates from ancient contemplative traditions, particularly Buddhist meditation practices, has been adapted into modern psychological interventions to support mental health and well-being.

Definition

Mindfulness can be defined as the practice of paying deliberate attention to present-moment experiences with openness, curiosity, and acceptance. Rather than dwelling on past events or worrying about the future, mindfulness encourages individuals to focus on the present moment.

Jon Kabat-Zinn, one of the pioneers in introducing mindfulness to Western medicine, described mindfulness as "paying attention in a particular way: on purpose, in the present moment, and non-judgmentally."¹

This definition highlights three essential components of mindfulness:

1. **Intentional attention** – deliberately focusing on present experiences.
2. **Present-moment awareness** – observing thoughts, emotions, and sensations as they occur.
3. **Non-judgmental acceptance** – acknowledging experiences without labeling them as good or bad.

Psychological Health and Well-being

Psychological health refers to an individual's emotional, cognitive, and social well-being. It includes the ability to cope with stress, maintain positive relationships, make decisions, and manage emotions effectively⁴.

However, psychological health can be affected by various factors such as chronic stress, work pressure, trauma, social isolation, financial difficulties and health problems. These factors can lead to psychological disorders including anxiety, depression, burnout, and emotional exhaustion.

Traditional treatments for psychological disorders include psychotherapy, medication, and behavioral interventions. While these approaches are effective, complementary strategies such as mindfulness-based practices are increasingly used to enhance psychological resilience and promote mental well-being.

Mechanisms of Mindfulness in Psychological Health

Mindfulness influences psychological health through several mechanisms. These mechanisms involve changes in cognitive processing, emotional regulation, and physiological responses to stress².

Attention Regulation

One of the primary mechanisms of mindfulness is improving attention control. Mindfulness practices train individuals to focus their attention on a specific object, such as breathing or bodily sensations. Improved attention regulation helps individuals reduce rumination, which is the repetitive thinking about negative experiences. Rumination is strongly associated with anxiety and depression. By developing awareness of thought patterns, individuals can interrupt cycles of negative thinking and redirect their attention.

Emotional Regulation

Mindfulness enhances emotional regulation by increasing awareness of emotional experiences. Instead of suppressing or avoiding difficult emotions, mindfulness encourages individuals to observe them with acceptance and curiosity.



This process allows individuals to create a psychological distance between themselves and their emotions. As a result, they become less reactive to emotional triggers and better able to respond calmly to stressful situations.

Reduction of Stress Response

Mindfulness practices activate the body's relaxation response. Through slow breathing and focused attention, mindfulness reduces activation of the sympathetic nervous system, which is responsible for the "fight or flight" stress response. Mindfulness enhances activation of the parasympathetic nervous system, which promotes relaxation and recovery. This physiological shift reduces stress hormones such as cortisol and contributes to improved psychological well-being.

Increased Self-awareness

Mindfulness encourages individuals to observe their thoughts, feelings, and behaviors without judgment. This heightened self-awareness helps individuals recognize unhealthy patterns and develop healthier coping strategies.

Benefits of Mindfulness for Psychological Health

Numerous studies have demonstrated the positive effects of mindfulness on psychological health. These benefits include reduced stress, improved emotional well-being, and enhanced cognitive functioning. Research on Mindfulness-Based Stress Reduction (MBSR) programs has shown significant reductions in stress levels among participants, including healthcare professionals, students, and individuals with chronic illnesses.⁵ Studies indicate that MBCT can be as effective as antidepressant medication in preventing depressive relapse in individuals with recurrent depression⁶. People who practice mindfulness often report greater life satisfaction, improved mood, and enhanced psychological resilience. Research suggests that mindfulness meditation can enhance working memory capacity and cognitive flexibility, which are important for problem-solving and adapting to new situations.

Mindfulness in Healthcare Settings

Mindfulness is increasingly used in healthcare settings to support both patients and healthcare professionals. Many hospitals and clinics incorporate mindfulness-based interventions as part of holistic care approaches.

Mindfulness for Patients

For patients, mindfulness can help manage chronic pain, anxiety related to illness, and emotional distress. Mindfulness-based programs have been used successfully with patients suffering from conditions such as cancer, cardiovascular disease, and chronic pain. These programs help patients cope with the psychological challenges of illness by promoting acceptance, reducing stress, and improving emotional well-being.

Mindfulness for Healthcare Professionals

Healthcare professionals often experience high levels of stress, burnout, and emotional fatigue due to demanding work environments. Mindfulness training can help healthcare workers develop resilience and maintain emotional balance. Studies have shown that mindfulness programs for nurses and physicians can reduce burnout, improve job satisfaction, and enhance patient care. By improving self-awareness and emotional regulation, mindfulness enables healthcare professionals to respond more effectively to challenging situations.

Practical Mindfulness Techniques⁷

Mindfulness can be practiced through various techniques that are simple and accessible. Some commonly used mindfulness exercises include:

- **Mindful Breathing:** Mindful breathing involves focusing attention on the natural rhythm of breathing. Individuals observe the sensation of inhaling and exhaling without trying to control the breath.
- **Body Scan Meditation:** In a body scan meditation, individuals focus their attention on different parts of the body, noticing sensations such as tension or relaxation.
- **Mindful Walking:** Mindful walking involves paying attention to the sensations of walking, including the movement of the feet and the contact with the ground.
- **Loving-Kindness Meditation:** Loving-kindness meditation focuses on cultivating compassion and kindness toward oneself and others.

Future Directions in Mindfulness Research

Research on mindfulness continues to expand, exploring its applications in various fields including education, workplace wellness, and clinical psychology. Advances in neuroscience have also contributed to understanding how mindfulness affects brain structure and function. Studies using brain imaging techniques have shown that mindfulness meditation can lead to structural changes in brain regions associated with attention, emotional regulation, and self-awareness. These findings provide scientific support for the psychological benefits of mindfulness practices.

Conclusion

Mindfulness has become an important tool for promoting psychological health and well-being in modern society. By encouraging present-moment awareness and non-judgmental acceptance, mindfulness helps individuals manage stress, regulate emotions, and develop greater self-awareness. In healthcare settings, mindfulness supports both patients and healthcare professionals by promoting resilience, reducing burnout, and improving quality of care. Although mindfulness is not a cure-all solution, its growing evidence base highlights its potential as an effective strategy for improving psychological health. As research continues to evolve, mindfulness is likely to play an increasingly important role in promoting mental well-being and helping individuals navigate the challenges of modern life.

References

1. Kabat-Zinn J. Mindfulness-based interventions in context: Past, present, and future. *Clin Psychol Sci Pract.* 2003;10(2):144–156.
2. Brown KW, Ryan RM. The benefits of being present: Mindfulness and its role in psychological well-being. *J Pers Soc Psychol.* 2003;84(4):822–848.
3. Grossman P, Niemann L, Schmidt S, Walach H. Mindfulness-based stress reduction and health benefits: A meta-analysis. *J Psychosom Res.* 2004;57(1):35–43.
4. Khoury B, Lecomte T, Fortin G, Masse M, Therien P, Bouchard V, et al. Mindfulness-based therapy: A comprehensive meta-analysis. *Clin Psychol Rev.* 2013;33(6):763–771.
5. Davidson RJ, Kabat-Zinn J, Schumacher J, Rosenkranz M, Muller D, Santorelli SF, et al. Alterations in brain and immune function produced by mindfulness meditation. *Psychosom Med.* 2003;65(4):564–570.
6. Shapiro SL, Carlson LE. *The Art and Science of Mindfulness: Integrating Mindfulness into Psychology and the Helping Professions.* Washington DC: American Psychological Association; 2009.
7. Creswell JD. Mindfulness interventions. *Annu Rev Psychol.* 2017;68:491–516.

INNOVATIVE APPLICATION OF AI IN PEDIATRIC NURSING

Mrs. Nisha Divakaran, Professor, CCON, Bhopal



Introduction

As healthcare becomes increasingly digitized, Artificial Intelligence (AI) is being integrated into clinical practice to enhance efficiency, accuracy, and personalization. Pediatric nursing, a field characterized by unique developmental, emotional, and physiological complexities, offers fertile ground for the implementation of AI tools. This paper investigates the role of emerging AI technologies in pediatric nursing, offering insights from current research, clinical applications and pilot initiatives. Hospitals across the nation are using artificial intelligence (AI) tools to improve health outcomes and patient experiences. While AI offers important insights for medical professionals, these applications have unique implications for pediatrics.



A study conducted on 2022 by Lin et al., evaluated the use of AI-powered predictive models in Neonatal Intensive Care Units (NICUs) and reported a 30% improvement in early sepsis detection rates. Similarly, research conducted by the Children's Hospital of Philadelphia (2021) [6] highlighted the benefits of machine learning algorithms in optimizing medication dosing and reducing adverse drug events in pediatric oncology patients. A systematic review by Ghafur et al. (2023) identified 18 clinical trials involving AI in pediatric nursing contexts, showing consistent results in improving diagnostic accuracy, reducing hospital readmissions, and enhancing patient monitoring. However, the review also noted the underrepresentation of pediatric populations in AI training datasets, raising concerns about model bias and generalizability.

AI Application in Pediatric Nursing Clinical Decision Support Systems (CDSS)

AI-powered CDSS enhance decision-making by analyzing EHR data, vital signs, and lab results. In pediatric care, such systems are being used to detect early signs of critical conditions like sepsis and congenital anomalies.



Predictive Analytics

Predictive models can estimate risks of hospitalization, asthma attacks, or complications from chronic diseases. These tools allow nurses to implement preventive care strategies tailored to each child's profile.



Robotic and Virtual Assistance

Interactive robots are used for distraction therapy during painful procedures, while AI virtual assistants help nurses document care, educate families, and interact with children in all age groups.



AI Image Health Education E-books

Canva AI can transform complex health concepts into easy-to-understand charts and illustrations. Such visual presentations can help children grasp important information faster. At the same time, Canva AI can create interactive games and quizzes. These activities can not only improve children's sense of participation but can also allow them to learn health knowledge through games, enhancing the learning effects. In addition, Canva AI can create stories and case sharing. This content can help children understand the importance of healthy behaviors and practice healthy behaviors. In summary, Canva AI significantly improves children's understanding of health knowledge through the creation of visual teaching materials, interactive learning, and personalized content, and helps nurses deliver health information more effectively. The nursing teacher applied Canva AI to generate AI image health education e-books on five topics of common examinations and treatments for children—namely, “vital signs measurement of children”, “bedside ultrasound of children”, “aerosol therapy of children”, “intravenous injection of children”, and “small volume enema of children. These were integrated with the learning needs of the nursing students, as well as in the examinations and treatments commonly seen in pediatric units and in literature reviews. The accuracy and suitability of the content and information conveyed in the AI image health education e-books were tested in terms of their validity by six nursing teachers with more than three years of clinical experience

Remote and Virtual Assistance

Wearable tech equipped with AI algorithms tracks pediatric patients' health in real-time. Examples include glucose monitors for diabetic children and sleep trackers for those with neurological conditions.

Benefits to Pediatric Nursing Practice

- **Improved Clinical Outcomes:** AI supports faster, evidence-based decisions that reduce complications. Personalization: Tailors care based on individual data including genetic, social, and environmental factors.
- **Efficiency:** Automates routine tasks like charting and scheduling, saving nurses' time.
- **Supportive Communication:** Chatbots and language processors improve interactions with multilingual families or children with communication disorders.

Challenges and Ethical Considerations

- **Data Security:** Pediatric data needs rigorous safeguards to protect privacy and maintain trust.
- **Bias and Fairness:** AI trained on non-diverse data may lead to skewed outcomes.
- **Professional Readiness:** Nurses require training and support to integrate AI effectively.
- **Ethical Dilemmas:** Decision-making by machines in pediatric contexts raises consent, autonomy and liability questions.

Future Directions

- **Inclusive AI Training Data:** Ensuring models represent diverse pediatric populations.
- **Ethical and Regulatory Standards:** Developing guidelines for responsible AI deployment
- **Education and Training:** Integrating AI competencies into nursing curriculum.
- **Collaborative Development:** Encouraging partnerships among nurses, tech developers and policy-makers.

Opportunities for pediatric care

AI has the potential to help providers produce better health outcomes and provide more efficient care delivery for pediatric patients. Various AI tools can streamline administrative tasks, improve diagnostic accuracy, support personalized treatments, and more.

Examples of AI use for children includes

Early diagnosis and predictive analytics: AI quickly analyzes large datasets from electronic health records to identify patterns and predict the onset of disease. This supports clinicians in making earlier, more



accurate diagnosis. Highly sensitive machine learning is a great tool for screening and early disease detection in children, which can help prevent disease progression later on in life.

Imaging and diagnostics: AI tools can improve diagnostic accuracy in pediatric imaging, such as reading X-rays and MRIs. It can also help identify fractures, tumors, and pneumonia, reducing the need for repeated imagery and minimizing young patients' exposure to radiation.

Ambient listening: AI can allow health care providers to spend more time focused on patient-facing care with children and families and reduce “pajama time” tasks, or work providers complete at home. An ambient listening tool that record patient visits and create notes for providers is an example of how this can be achieved.

Administrative tasks: AI streamlines administrative tasks by automating medical coding and billing, scheduling and appointment management, processing claims, managing medical records, and processing administrative documents. This makes administrative processes at children's hospitals more efficient, improving patient health care delivery.

Virtual health assistants: AI chatbots and virtual health assistants provide patients with personalized health information, answer families' medical questions, and offer guidance on managing chronic conditions. These tools enhance patient engagement and enable pediatric providers to deliver more accessible and efficient care.

Medical education and training: AI-powered simulators and virtual reality platforms provide pediatric health care professionals with realistic training scenarios and feedback, enhancing their clinical skills and knowledge in a safe environment.

Unique considerations for children: AI in health care poses unique considerations for children. These span across data availability, data use consent, data complexity, bias, and others.

Lack of children's data to inform AI tools: AI models must be trained with existing information and large data sets to produce accurate outputs. Some pediatric conditions have few samples or data points, making this data difficult to obtain. Data experts and researchers at children's hospitals are working to make data sets interpretable for computerized learning.

Complexity in child medical data: Pediatric medical data has more input than adult medical data. Most adult medical files include notes from the patient and the clinician. However, children's medical data includes various inputs that can include providers, parents or caregivers, numerous subspecialists, teachers, and more. Merging these data sources increases the difficulty of obtaining accurate predictions.

Challenges in receiving consent: Consent to work with pediatric data is usually obtained first via parental agreement. Approval for use of a child's health data is reobtained when children reach the age of consent. This requires strict monitoring over consent status and can limit the use of this data to inform AI tools.

Innovative solutions at children's hospitals: AI technology and tools created for health care are generally tailored to adult care. To combat these challenges, children's hospitals have leveraged their expertise and invested in efforts to ensure that AI can improve patient care for children.

Reducing epilepsy surgery referral times: Cincinnati Children's is using AI and machine learning to reduce neurosurgery epilepsy surgery referral times. With the goal of decreasing the current time of six years from diagnosis to surgical referral, Cincinnati Children's has trained AI to capture electronic health record data and alert physicians when a patient is eligible to be reviewed by the surgical committee.

Predicting neurodevelopmental deficits in infants: Comer Children's Hospital at the University of Chicago Medical Center has utilized a virtual model of an infant's gut micro biome so providers can track

how microbiome development affects development deficits. This has helped providers predict infants at higher risk of neurodevelopmental deficits and facilitate earlier treatment, leading to improved health outcomes.

Detecting patient deterioration: Akron Children's Hospital uses an AI-powered tool to produce a deterioration index score indicating a patient's risk factor for deterioration and illustrating the patient's trendline over time. Care providers can see developing trends and use the index scores to validate their own judgments when they feel something is not right with a patient.

Improving pediatric heart transplants: Pediatric heart transplants are one of the most challenging surgeries to coordinate. A team from Cincinnati Children's is using AI to more effectively match heart donors with recipients. A deep-learning model can examine cardiac images in seconds, accomplishing what takes a cardiologist 30 minutes.

Conclusion

Artificial intelligence holds transformative potential for paediatric nursing, offering tools that enhance accuracy, efficiency, and personalization of care. While current applications are promising, thoughtful integration guided by ethical principles and nurse engagement is crucial for success. With proper support, AI can become a valuable ally in addressing the complex healthcare needs of children and families.

References

1. <https://www.frontiersin.org/research-topics/53028/artificial-intelligence-for-child-health-and-wellbeing>
2. <https://www.childrenshospitals.org/content/public-policy/fact-sheet/artificial-intelligence-and-childrens-health>
3. <https://pmc.ncbi.nlm.nih.gov/articles/PMC12314565/#:~:text=Traditionally%2C%20pediatric%20medicine%20has%20focused,intersection%20of%20nursing%20and%20AI.>
4. Ghafur S, Bessa A, Sheikh A, Coughlan D. Artificial intelligence in paediatric nursing: A systematic review of clinical applications and outcomes. *Journal of Paediatric Nursing*. 2023.
5. Lin Y, Martinez J, Patel R. Predictive modeling in neonatal intensive care: Improving early detection of sepsis using artificial intelligence. *Pediatric Critical Care Medicine*, 2022.
6. Shahmoradi L, Safdari R, Meidani Z. The role of artificial intelligence in tele paediatrics: Applications and challenges. *Telemedicine and e-Health*, 2020.
7. Children's Hospital of Philadelphia. Improving paediatric oncology safety with AI-driven medication dosing tools, 2021. 5. Lin X, Zhang Y, Chen L, et al. AI-powered prediction of neonatal sepsis: impact on early detection and outcomes. *J Paediatr Health Care*. 2022;36(5):412-419.
8. Children's Hospital of Philadelphia. Machine learning to optimize pediatric oncology dosing. *CHOP Med J*. 2021;33(3):205-212.

TRAUMA-INFORMED CARE IN MENTAL HEALTH NURSING: REFRAMING PRACTICE FOR SAFER THERAPEUTIC ENVIRONMENTS

Mrs. Shefali Latesh, Professor, CCON, Bhopal



Abstract

Mental health nursing has evolved beyond symptom management toward holistic, recovery-oriented care. One of the most transformative developments in recent decades is trauma-informed care (TIC). Given the high prevalence of trauma among individuals with mental health conditions, integrating trauma-sensitive approaches into nursing practice is essential. This article explores the principles of trauma-informed care, its relevance to psychiatric settings, the role of the mental health nurse, challenges in implementation, and recommendations for education and policy. Emphasizing safety, empowerment, and collaboration, trauma-informed nursing strengthens therapeutic relationships and improves patient outcomes.

Introduction

Mental health disorders affect millions of individuals worldwide, often intersecting with experiences of trauma such as abuse, neglect, violence, or loss. Research consistently shows a strong association between traumatic experiences and the development of conditions like depression, anxiety disorders, post-traumatic stress disorder (PTSD), and substance use disorders. For mental health nurses, understanding trauma is not optional—it is foundational.

Trauma-informed care represents a shift from asking, “What is wrong with you?” to “What has happened to you?” This perspective fosters empathy, reduces stigma, and promotes healing. In psychiatric settings where patients may already feel vulnerable, trauma-informed approaches are critical to building trust and preventing re-traumatization.

Understanding Trauma in Mental Health

Trauma refers to experiences that overwhelm an individual’s ability to cope, leaving lasting psychological, emotional, and physiological effects. These experiences may include childhood abuse, domestic violence, community violence, systemic discrimination, or medical trauma.

The neurobiological impact of trauma alters stress responses and emotional regulation. Patients may exhibit hypervigilance, dissociation, aggression, withdrawal, or self-harm behaviors. Without trauma awareness, these behaviors may be misunderstood as non-compliance or resistance rather than adaptive survival strategies.

Mental health nurses frequently encounter patients whose trauma histories influence their engagement with care. Therefore, trauma-informed practice is not a specialized intervention—it is a universal precaution.

Core Principles of Trauma-Informed Care

- Trauma-informed care is guided by several key principles:
- Safety – Ensuring physical and emotional safety within the care environment.
- Trustworthiness and Transparency – Building reliable and consistent relationships.
- Peer Support – Recognizing the value of shared experiences.
- Collaboration and Mutuality – Reducing power imbalances between staff and patients.
- Empowerment and Choice – Supporting autonomy and strengths.
- Cultural, Historical, and Gender Sensitivity – Acknowledging systemic and cultural influences on trauma.

For nurses, applying these principles may involve explaining procedures clearly, seeking consent before physical contact, minimizing the use of restraints, and involving patients in care planning.



The Role of the Mental Health Nurse

Mental health nurses serve as frontline providers in inpatient units, outpatient clinics, community programs, and crisis settings. Their consistent patient contact uniquely positions them to implement trauma-informed practices.

1. Therapeutic Communication

Active listening, validation, and non-judgmental responses strengthen therapeutic alliances. Nurses who communicate with sensitivity reduce anxiety and foster trust.

2. Environmental Modifications

Simple adjustments—such as reducing noise, ensuring privacy, and maintaining predictable routines—can significantly decrease distress in trauma survivors.

3. De-escalation Strategies

Understanding triggers helps nurses use verbal de-escalation and grounding techniques rather than coercive measures. This reduces incidents of aggression and the need for seclusion or restraint.

4. Advocacy

Mental health nurses advocate for policies that promote dignity and human rights. This includes challenging stigmatizing language and supporting patient-centered care models.

Benefits of Trauma-Informed Nursing Practice

Implementing trauma-informed approaches leads to multiple positive outcomes:

- Improved patient engagement and satisfaction
- Reduction in re-traumatization
- Decreased use of restraint and seclusion
- Enhanced staff satisfaction and reduced burnout
- Strengthened interdisciplinary collaboration

When patients feel safe and respected, they are more likely to participate actively in treatment, contributing to better recovery trajectories.

Challenges in Implementation of Trauma-Informed Nursing Practice

Despite its benefits, integrating trauma-informed care into routine practice presents challenges:

- **Limited training:** Not all nursing curricula emphasize trauma theory.
- **High workload and staffing shortages:** Time constraints may hinder reflective practice.
- **Organizational resistance:** Institutional cultures may prioritize control over collaboration.
- **Emotional burden on staff:** Exposure to trauma narratives can lead to compassion fatigue.

Addressing these barriers requires systemic commitment rather than individual effort alone.

Recommendations for Education and Policy

1. **Curriculum Integration:** Nursing education programs should incorporate trauma theory, communication skills, and self-care strategies.
2. **Ongoing Professional Development:** Workshops and reflective supervision can reinforce trauma-informed competencies.
3. **Organizational Support:** Leadership must model trauma-sensitive policies and provide adequate staffing.
4. **Staff Well-being Programs:** Supporting nurses' mental health prevents burnout and secondary trauma.

Conclusion

Trauma-informed care represents a paradigm shift in mental health nursing. By prioritizing safety, empathy, and collaboration, nurses can create therapeutic environments that foster recovery rather than reinforce harm. As mental health challenges continue to rise globally, integrating trauma-informed approaches into nursing practice is both an ethical responsibility and a clinical necessity. Mental health nursing is not only



about managing symptoms—it is about understanding stories, restoring dignity, and supporting resilience. Through trauma-informed care, nurses can lead the way in transforming mental health services into spaces of healing and hope.

References

1. American Psychiatric Association. (2022). Diagnostic and statistical manual of mental disorders (5th ed., text rev.; DSM-5-TR). American Psychiatric Publishing.
2. Fallot, R. D., & Harris, M. (2009). Creating cultures of trauma-informed care (CCTIC): A self-assessment and planning protocol. Community Connections.
3. Harris, M., & Fallot, R. D. (2001). Using trauma theory to design service systems. Jossey-Bass.
4. Isobel, S., & Delgado, C. (2018). Safe and collaborative mental health care: A systematic review of trauma-informed care in acute settings. *International Journal of Mental Health Nursing*, 27(2), 1–10.
5. Leamy, M., Bird, V., Le Boutillier, C., Williams, J., & Slade, M. (2011). Conceptual framework for personal recovery in mental health: Systematic review and narrative synthesis. *British Journal of Psychiatry*, 199(6), 445–452.
6. Substance Abuse and Mental Health Services Administration. (2014). SAMHSA's concept of trauma and guidance for a trauma-informed approach (HHS Publication No. SMA 14-4884). U.S. Department of Health and Human Services.
7. Sweeney, A., Clement, S., Filson, B., & Kennedy, A. (2016). Trauma-informed mental healthcare in the UK: What is it and how can we further its development? *Mental Health Review Journal*, 21(3), 174–192.
8. World Health Organization. (2022). World mental health report: Transforming mental health for all. World Health Organization

RIGHTS BASED MATERNAL CARE

Mrs. Neelofur I Ali, Professor, CCON, Bhopal



Abstract

Rights-based maternal care, commonly referred to as Respectful Maternity Care (RMC), is an approach grounded in human rights principles that ensures dignity, privacy, informed choice, non-discrimination, and freedom from abuse during pregnancy, childbirth, and the postpartum period. Although institutional deliveries have increased substantially worldwide, evidence indicates that disrespect and abuse during childbirth persist. This review critically examines global, regional, and India-specific literature on respectful maternity care, with recent database evidence from India and Madhya Pradesh. The review highlights determinants, policy frameworks, implementation gaps, and future directions for strengthening rights-based maternal healthcare systems.

Keywords: Respectful maternity care, rights-based care, maternal health, India, Madhya Pradesh, institutional delivery.

Introduction

Maternal healthcare has evolved beyond survival-based indicators to include quality, dignity, and human rights considerations. Rights-based maternal care emphasizes that every woman has the fundamental right to receive safe, respectful, and dignified treatment throughout maternity services. The concept gained global recognition following increasing documentation of mistreatment during childbirth in institutional settings.

Respectful maternity care is aligned with international human rights frameworks and quality-of-care standards proposed by the World Health Organization. It underscores the integration of ethical clinical practice with autonomy, confidentiality, and non-discrimination.

Conceptual Understanding of Respectful Maternity Care

Respectful maternity care extends beyond clinical competence to include:

- Preservation of dignity and privacy
- Informed consent and shared decision-making
- Freedom from physical and verbal abuse
- Confidentiality
- Equitable and non-discriminatory treatment

The literature conceptualizes RMC as both a human right and a quality-of-care indicator. It recognizes women not merely as recipients of care but as rights holders entitled to autonomy and respect.

Global Evidence on Disrespect and Abuse

Systematic reviews across low- and middle-income countries document high prevalence of mistreatment during childbirth. Common forms include verbal abuse, neglect, denial of pain relief, lack of informed consent, and discrimination against marginalized women.

Global analyses indicate that disrespectful care discourages facility-based deliveries, thereby indirectly contributing to maternal morbidity and mortality. Despite policy commitments, implementation remains inconsistent across healthcare systems.

Regional Perspectives: Sub-Saharan Africa and South Asia

Studies from sub-Saharan Africa report frequent instances of neglect, inadequate counselling, and breaches of privacy. Similar trends are observed in South Asian countries, including India. These patterns reflect systemic challenges such as workforce shortages, infrastructure deficits, and entrenched socio cultural hierarchies.

India-Specific Evidence on Respectful Maternity Care

India has significantly improved institutional delivery rates through maternal health schemes such as:

- Janani Suraksha Yojana
- Janani Shishu Suraksha Karyakram

A national landscape review and systematic meta-analysis revealed frequent reports of:

- Lack of informed consent
- Verbal reprimand
- Denial of birth companionship
- Compromised privacy
- Discriminatory attitudes

These findings indicate persistent quality gaps despite improved service utilization.

Recent National Database Evidence (India)

National Family Health Survey (NFHS-5, 2019–21)

Recent nationally representative data show:

- Institutional deliveries (India): 88.6%
- Women receiving postnatal care within 2 days: 78%
- Caesarean section rate: 21.5%

While NFHS-5 demonstrates progress in service utilization, it does not include standardized indicators measuring respectful maternity care components such as informed consent, privacy, or absence of abuse. This highlights a critical measurement gap in national monitoring systems.

Maternal Mortality and Contextual Indicators

According to the Sample Registration System (SRS 2018–20):

- India Maternal Mortality Ratio (MMR): 97 per 100,000 live births

Although maternal mortality has declined substantially, achieving further reduction requires addressing quality-of-care and rights-based dimensions.

Policy Framework Supporting Rights-Based Care in India

The Government of India launched the LaQshya initiative in 2017 to improve labour room quality, emphasizing:

- Privacy measures
- Birth companionship
- Zero tolerance for abuse
- Improved grievance redressal systems

LaQshya certification has expanded across thousands of facilities nationwide. However, implementation quality varies across states.

Additionally, programs such as Pradhan Mantri Surakshit Matritva Abhiyan and Ayushman Bharat strengthen infrastructure and service delivery but require stronger integration of rights-based monitoring indicators.

Madhya Pradesh: State-Level Perspective

Madhya Pradesh presents a critical case for examining respectful maternity care.

NFHS-5 Data (Madhya Pradesh)

- Institutional deliveries: 89.1%
- Postnatal care within 2 days: ~73%
- Caesarean section rate: ~12%

Maternal Mortality

As per SRS (2018–20):

- Madhya Pradesh MMR: ~173 per 100,000 live births

This remains significantly higher than the national average.

Contextual Challenges

Madhya Pradesh faces:

- Large rural and tribal populations
- Staffing shortages

- Overcrowded district hospitals
- Infrastructure limitations

Facility-based observational studies in districts such as Bhopal, Indore, and Gwalior report:

- Limited privacy in labour wards
- Inadequate counselling
- Restricted birth companionship
- Communication gaps between providers and women

Despite LaQshya adoption in several district hospitals, structured statewide data on respectful maternity care indicators remain limited.

Determinants of Respectful Maternity Care

Literature identifies multiple influencing factors:

1. **Provider Training and Attitudes:** Inadequate communication training increases risk of disrespectful interactions.
2. **Institutional Infrastructure:** Overcrowding and lack of partitions compromise privacy.
3. **Socio-Cultural Norms:** Gender and caste hierarchies influence provider behavior.
4. **Patient Awareness:** Educated and empowered women are more likely to demand respectful treatment.
5. **Monitoring Mechanisms:** Absence of standardized RMC indicators limits accountability.

Significance of Rights-Based Maternal Care

Respectful maternity care contributes to:

- Increased maternal satisfaction
- Improved facility-based delivery uptake
- Reduced anxiety and childbirth trauma
- Better postpartum mental health
- Strengthened trust in healthcare systems

Evidence suggests that provider sensitization programs and community awareness interventions improve respectful practices.

Research Gaps and Future Directions

Despite policy advancements, key gaps persist:

- Absence of standardized RMC measurement tools in NFHS and HMIS
- Limited state-level disaggregated data
- Inconsistent LaQshya implementation monitoring
- Insufficient research in tribal and rural Madhya Pradesh
- Need for structured grievance redressal tracking

Future research should focus on developing validated RMC assessment tools and integrating rights-based indicators into national surveys.

Conclusion

The literature confirms that respectful, rights-based maternal care is integral to quality maternal health services. Although institutional deliveries have substantially increased in India and Madhya Pradesh, respectful care is not uniformly guaranteed. Persistent maternal mortality in states like Madhya Pradesh underscores the need to address systemic, infrastructural, and behavioral determinants of care.

Sustained policy commitment, provider training, infrastructure strengthening, community empowerment, and integration of standardized respectful maternity care indicators into national databases are essential for embedding dignity and human rights within maternal healthcare systems.



References

1. Beig MA, et al. Exploring the status of respectful maternity care: A mixed-method systematic review. J Reprod Health Med. 2025.
2. Respectful Maternity Care Worldwide: A Systematic Review of Global Practices, Gaps, and Progress. Int J Stud Midwifery Women's Health. 2025.
3. Respectful Maternity Care in Sub-Saharan Africa: A Scoping Review. EAJHS. 2025.



COMMUNITY NURSING SERVICES FOR POST-DISCHARGE CHRONICALLY ILL PATIENTS IN RURAL AREAS.

Mr. Sandeep Lowanshi, Associate Professor, CCON, Bhopal



Introduction

Community nursing services for post-discharge chronically ill patients in rural areas bridge the gap between hospital and home, providing essential care coordination, health education, medication support, and holistic management to prevent readmissions and improve quality of life, addressing unique rural challenges like limited access by delivering personalized support in familiar environments, focusing on self-management and continuous care for better health outcomes.

Definition

Community nursing for post-discharge chronically ill patients in rural areas involves nurses providing holistic care, health education, and support in patients' homes to manage chronic conditions, prevent complications, and improve quality of life, bridging gaps in rural access through home visits, care coordination, and managing complex treatments like self-injections, aiming for continuity and reduced readmissions by focusing on patient self-management within their local environment.

Key objectives include patient/family education, coordinating care, facilitating healing, and strengthening community health resources to address specific rural needs.

Aims (Overarching Goals)

- **Ensure Continuity of Care:** Provide seamless care from hospital to home, preventing gaps in treatment.
- **Promote Health & Prevent Complications:** Focus on holistic wellness, preventing disease progression, and managing chronic conditions.
- **Enhance Quality of Life (QoL):** Help patients achieve optimal physical, cognitive, and social functioning in their environment.
- **Bridge Rural Healthcare Gaps:** Deliver specialized nursing care and education in underserved areas.
- **Empower Patients & Families:** Equip them with knowledge and skills for self-care and management.



Objectives

- **Patient/Family Education:** Teach about the illness, medications, symptom management, and healthy lifestyles.
- **Complex Care Delivery:** Administer technical nursing procedures at home (e.g., wound care, injections, managing equipment).
- **Care Coordination:** Act as a link between patients, families, doctors, and other health services.
- **Health Promotion:** Encourage healthy behaviors and support community-based resources.
- **Rehabilitation Support:** Assist in functional recovery and adaptation to chronic conditions.
- **Emotional & Mental Support:** Provide compassionate presence and address psychological impacts of chronic illness.
- **Identify At-Risk Groups:** Proactively find and support vulnerable individuals within the community.
- **Strengthen Community Resources:** Build capacity for local health problem-solving.

Community nursing for post-discharge chronically ill patients involves assessment, care coordination, education, monitoring, and hands-on care (like wound care or injections), focusing on smooth transition, self-management, preventing readmission, and coordinating with doctors for personalized plans, ensuring continuity of care at home through support for lifestyle changes and emotional well-being. Key components include medication management, symptom tracking, rehabilitation support, and vital communication between patients, families, and the healthcare team.

Core Components of Community Nursing Services:

1. Assessment & Planning:

- **Comprehensive Assessment:** Evaluating the patient's home environment, support systems, functional status, and specific health needs.
- **Personalized Care Plans:** Developing individualized plans with clear goals, aligning with the nursing process (assessment, diagnosis, planning, implementation, evaluation).

2. Direct Patient Care:

- **Technical Nursing Care:** Administering injections, managing nutrition (e.g., parental nutrition), performing dialysis, and other complex home care tasks.
- **Wound Care & Rehabilitation:** Assisting with physical therapy exercises, monitoring progress, and preventing falls or injuries.

3. Education & Self-Management Support:

- **Condition Education:** Teaching patients and families about their chronic illness and self-care.
- **Lifestyle Guidance:** Providing dietary advice and support for healthy lifestyle changes.

4. Coordination & Communication:

- **Care Coordination:** Liaising with doctors, therapists, and other professionals for seamless care.
- **Physician Consultation:** Altering medication regimes after physician consultation and arranging urgent appointments.

5. Monitoring & Follow-Up:

- **Symptom Tracking:** Monitoring for changes in functional, psychological, or physical status.
- **Continuity of Care:** Ensuring ongoing support and relationship-based care.

6. Emergency & Support:

- **Emergency Response:** Providing support and guidance for acute situations at home.
- **Mental Health Support:** Helping manage emotions and mental well-being related to chronic illness.

Role and responsibilities of a nurse



Conclusion

Community nursing for post-discharge chronically ill patients in rural areas focuses on home visits, telehealth, and coordinated care for monitoring, education (self-management, lifestyle), and bridging access gaps, using strategies like health records management, caregiver training, and multidisciplinary team collaboration to improve well-being and reduce readmissions, despite challenges like staffing shortages. Key interventions include medication adherence support, wound care, psychological support, and adapting care to the home environment.

References

1. Arnold R, Ranchor A, DeJongste M, Koeter G, Ten Hacken N, Aalbers R & Sanderma R (2005) The relationship between self-efficacy and self-reported physical functioning in chronic obstructive pulmonary disease and chronic heart failure. *Behavioral Medicine* 31, 107–115.
2. Barrera C, Machanga M, Connolly P & Yoder M (2003) Nursing care makes a difference: application of Omaha System. *Outcomes Management* 7, 181–185.
3. Bednarz P (1999) The Omaha System: a model for describing school nurse case management. *Journal of School Nursing* 14, 24–29.
4. Borg C, Hallberg I & Blomqvist K (2006) Life satisfaction among older people (65+) with reduced self-care capacity: the relationship to social, health and financial aspects. *Journal of Clinical Nursing* 15, 607–618.
5. Brooten D, Youngblut J, Deatrack J, Naylor M & York R (2003) Patient problems, advanced practice nurse interventions, time and contact among five patient groups. *Journal of Nursing Scholarship* 35, 73–79.

E-CIGARETTES: A GROWING PUBLIC HEALTH CONCERN

Mr. Arpit Narekar, Assistant Professor, CCON, Bhopal



Introduction

Electronic cigarettes, commonly known as e-cigarettes or vapes, are battery-operated devices that heat a liquid to produce an aerosol inhaled into the lungs. Initially marketed as a safer alternative to traditional tobacco smoking, e-cigarettes have rapidly gained popularity worldwide-especially among adolescents and young adults. Despite claims of reduced harm, increasing scientific evidence suggests that e-cigarettes pose significant public health risks.

What Are E-Cigarettes?

E-cigarettes consist of a battery, a heating element (coil), and a cartridge or pod containing eliquid. The liquid typically contains nicotine, propylene glycol, vegetable glycerin, flavoring agents, and other chemicals. When heated, the liquid forms an aerosol that users inhale. Unlike conventional cigarettes, e-cigarettes do not burn tobacco; however, this does not mean they are harmless. The popularity of sleek, easy-to-use devices from companies such as JUUL Labs significantly contributed to the rise of vaping among teenagers. Flavored options such as fruit, mint, and candy varieties have particularly attracted younger users.

Health Risks of E-Cigarettes

1. Nicotine Addiction

Most e-cigarettes contain nicotine, a highly addictive substance that can negatively affect brain development in adolescents. Nicotine exposure during teenage years can impair attention, learning, and impulse control. It also increases heart rate and blood pressure, raising concerns about long-term cardiovascular health.

2. Lung Injury and Respiratory Effects

In 2019, thousands of cases of severe lung injury associated with vaping were reported, a condition known as E-Cigarette or Vaping-Associated Lung Injury (EVALI). Patients experienced symptoms such as shortness of breath, chest pain, cough, fever, and gastrointestinal problems. While many cases were linked to THC-containing products, the outbreak highlighted serious concerns about vaping safety.

Additionally, studies show that vaping can cause airway inflammation, reduced lung function, and increased susceptibility to respiratory infections.

3. Cardiovascular Effects

Emerging research suggests that e-cigarette use may damage blood vessels and increase the risk of heart disease. The chemicals in e-cigarette aerosols can cause oxidative stress and inflammation, both of which are associated with cardiovascular complications.

4. Exposure to Harmful Chemicals

Although e-cigarettes do not produce tar like traditional cigarettes, they still expose users to potentially harmful substances. These may include heavy metals (such as lead and nickel), volatile organic compounds, and flavoring chemicals like diacetyl, which has been linked to serious lung disease.

5. Youth Vaping: A Major Concern

One of the most alarming aspects of e-cigarette use is the rapid increase in vaping among teenagers. Attractive packaging, social media marketing, and flavored products have contributed to this trend. Public health organizations, including the World Health Organization, warn that vaping can create a new generation addicted to nicotine. Early nicotine exposure increases the likelihood of transitioning to traditional cigarette smoking later in life, further compounding the public health burden.

Are E-Cigarettes a Smoking Cessation Tool?

Some researchers argue that e-cigarettes may help adult smokers reduce or quit traditional smoking. Because they do not involve tobacco combustion, they may expose users to fewer toxic chemicals compared to conventional cigarettes. However, their long-term safety remains uncertain, and dual use (both vaping and smoking) is common.

Conclusion

E-cigarettes have transformed the landscape of nicotine consumption in the modern era. While often promoted as a safer alternative to smoking, they carry significant risks, particularly for youth. Nicotine addiction, lung injury, cardiovascular effects, and chemical exposure are serious concerns that cannot be ignored. As research continues, stricter regulations, public awareness campaigns, and preventive strategies are essential to address this growing public health issue. Protecting young populations from nicotine addiction must remain a global priority.

References

1. U.S. Centers for Disease Control and Prevention (CDC) – Health effects of vaping, including nicotine addiction and harmful aerosol substances.
2. American Cancer Society – Risks of e-cigarettes: nicotine addiction, lung and heart effects, and EVALI.
3. World Health Organization (WHO) – Statement on e-cigarettes containing hazardous substances and being addictive and harmful.
4. WHO Questions & Answers on E-Cigarettes – Lung injury (EVALI) cases and comparison of risks between e-cigarettes and tobacco products.
5. British Columbia Medical Journal review – Overview of health effects and associations with cardiovascular and pulmonary issues.
6. PubMed / scientific review – E-cigarette use associated with addiction, lung injury (including EVALI), and other health effects.

MENTAL HEALTH CHALLENGES AMONG ADOLESCENTS: NURSING PERSPECTIVE AND INTERVENTION

Mr. Virendra Kumar Verma, Assistant Professor, CCON, Bhopal



Introduction:

Adolescence is a transitional stage between childhood and adulthood characterized by rapid physical, emotional, and psychological development. During this period, individuals often face multiple social and academic pressures that may influence their mental health. Mental well-being is essential for adolescents because it affects learning, decision-making, relationships, and overall development.

Globally, mental health disorders are increasingly recognized as a major public health issue among adolescents. Studies indicate that approximately one in seven adolescents aged 10–19 years experiences a mental disorder, making it a significant contributor to the global burden of disease in this age group.

Depression, anxiety, behavioral disorders, and substance abuse are among the most common mental health problems affecting adolescents. If these conditions are not addressed early, they can lead to poor academic performance, social isolation, risky behaviors, and even suicide. Therefore, nurses and healthcare professionals play a vital role in early identification, prevention, and management of mental health problems among adolescents.

Concept of adolescent mental health:

Adolescent mental health refers to a state of emotional, psychological, and social well-being that enables young individuals to cope with normal life stresses, maintain productive relationships, and develop their potential.

During adolescence, the brain undergoes significant development, especially in areas responsible for emotional regulation and decision-making. Because of these developmental changes, adolescents are particularly vulnerable to stress, peer pressure, and environmental influences.

Mental health conditions during adolescence may manifest as emotional disturbances, behavioral problems, or cognitive difficulties that interfere with normal functioning.

Global burden of mental health problems in adolescents:

Mental health disorders among adolescents have become a growing global concern.

- Approximately 15% of adolescents experience a mental disorder during their teenage years.
- Depression, anxiety, and behavioral disorders are among the leading causes of illness and disability in adolescents.
- Suicide is reported as the third leading cause of death among individuals aged 15–29 years.
- Anxiety and depression together account for nearly 40% of mental disorders among adolescents.
- These statistics highlight the urgent need for effective mental health promotion, prevention strategies, and accessible support services.

Common mental health challenges in adolescents:

- **Depression:** Depression is one of the most prevalent mental health disorders in adolescents. It is characterized by persistent sadness, lack of interest in activities, low energy, and difficulty concentrating. Adolescents experiencing depression may withdraw from social activities and exhibit changes in appetite or sleep patterns.
- **Anxiety Disorders:** Anxiety disorders include excessive worry, fear, and nervousness that interfere with daily life. Common types include generalized anxiety disorder, social anxiety disorder, and panic disorder. Anxiety among adolescents is often linked to academic pressure, family expectations, and social comparison.
- **Behavioral Disorders:** Behavioral disorders such as conduct disorder and attention-deficit hyperactivity disorder (ADHD) affect adolescents' ability to control impulses and maintain attention.

These disorders can negatively impact academic performance and interpersonal relationships.

- **Substance Abuse:** Some adolescents may use alcohol, tobacco, or drugs as a coping mechanism for stress or emotional problems. Substance abuse can worsen mental health issues and lead to long-term addiction.
- **Cyberbullying and Social Media Impact:** The increasing use of social media exposes adolescents to cyberbullying, unrealistic social comparisons, and online harassment, which may contribute to anxiety, low self-esteem, and depression.

Risk factors contributing to adolescent mental health problems:

Several factors contribute to mental health challenges among adolescents.

- **Biological Factors**
 - Genetic predisposition
 - Hormonal changes during puberty
 - Neurological development
- **Psychological Factors**
 - Low self-esteem
 - Poor coping skills
 - Negative thinking patterns
- **Social and Environmental Factors**
 - Family conflicts
 - Academic stress
 - Peer pressure
 - Bullying
 - Poverty or socioeconomic challenges

Studies have also shown that environmental conditions, emotional skills, family environment, and substance use significantly influence adolescent mental health.

Warning signs of mental health problems in adolescents:

Early recognition is essential to prevent serious consequences.

Common warning signs include:

- Persistent sadness or irritability
- Withdrawal from family or friends
- Decline in academic performance
- Changes in eating or sleeping patterns
- Risk-taking behavior
- Difficulty concentrating
- Thoughts of self-harm or suicide

Healthcare professionals, teachers, and parents should pay close attention to these indicators.

Nursing perspectives in adolescent mental health:

Nurses play a crucial role in promoting and protecting adolescent mental health. Their responsibilities include assessment, early detection, counseling, and coordination of care.

- **Assessment and Screening:** Nurses can identify early symptoms of mental health disorders through routine screening and psychosocial assessment. Holistic evaluation helps detect emotional and behavioral problems early and allows timely intervention.
- **Health Education:** Nurses provide education to adolescents and families regarding stress management, healthy coping strategies, and the importance of mental well-being.
- **Counseling and Emotional Support:** Adolescents often need a safe environment where they can openly discuss their feelings. Nurses provide supportive counseling and encourage positive coping mechanisms.
- **Coordination of Care:** Nurses collaborate with psychologists, psychiatrists, teachers, and families to ensure comprehensive mental health care.



- **Advocacy:** Nurses advocate for improved mental health services, school-based programs, and policies that support adolescent well-being.

Evidence-based interventions for adolescent mental health:

- **School-Based Mental Health Programs:** School programs focusing on emotional resilience, life skills, and stress management have been shown to improve psychological well-being among adolescents.
- **Psychosocial Interventions:** Psychosocial therapies such as cognitive behavioral therapy (CBT) help adolescents recognize negative thought patterns and develop healthier coping strategies. Research indicates that psychosocial interventions are effective in treating anxiety, depression, and self-harm behaviors.
- **Physical Activity:** Regular physical exercise has been shown to reduce symptoms of anxiety and depression while improving self-esteem and social interaction among adolescents.
- **Family-Based Interventions:** Family counseling improves communication and strengthens emotional support systems within families.
- **Digital Mental Health Interventions:** Mobile apps and online counseling services are increasingly used to provide mental health support for adolescents, particularly in areas where mental health professionals are scarce.

Prevention strategies:

Preventive measures are essential to reduce the burden of mental health problems among adolescents.

Key strategies include:

- Promoting mental health awareness in schools
- Encouraging open communication within families
- Providing stress management and coping skills training
- Reducing stigma associated with mental illness
- Strengthening school counseling services
- Integrating mental health education into health programs

Early intervention is critical because many mental health conditions begin during adolescence and may continue into adulthood if untreated.

Conclusion:

Adolescent mental health is a critical component of overall health and well-being. The increasing prevalence of mental health problems among adolescents highlights the need for comprehensive prevention and intervention strategies.

Nurses play a vital role in addressing these challenges through early identification, health education, counseling, and collaboration with multidisciplinary teams. Strengthening mental health programs in schools and communities can significantly improve adolescent well-being.

Promoting supportive environments, reducing stigma, and improving access to mental health services are essential steps toward ensuring healthy psychological development for adolescents.

References

1. Das, J. K., Salam, R. A., Lassi, Z. S., Khan, M. N., Mahmood, W., Patel, V., & Bhutta, Z. A. (2016). Interventions for adolescent mental health: An overview of systematic reviews. *Journal of Adolescent Health*.
2. World Health Organization. (2025). Adolescent mental health. <https://www.who.int>
3. World Health Organization. (2024). Child and adolescent mental and brain health. <https://www.who.int>
4. UNICEF. (2023). Adolescent mental health statistics. <https://data.unicef.org>
5. Mehra, D., et al. (2022). Mental health interventions among adolescents in India: A scoping review. *International Journal of Environmental Research and Public Health*.



6. Campisi, S. C., et al. (2022). Evidence-based interventions for mental health in adolescents. *Current Opinion in Psychology*.
7. Li, Z., et al. (2024). Physical activity as an intervention for adolescent mental health. *Frontiers in Psychology*.
8. Farley, H. R. (2020). Assessing mental health in vulnerable adolescents. *Nursing*.
9. Suvitha, S. (2024). Mental health among adolescents: A literature review. *International Journal of Nursing Education and Research*.
10. Ribeiro, W. S., et al. (2023). Evidence-based interventions for child and adolescent mental health in low-resource settings. *Journal of Child Psychology and Psychiatry*.

IMPORTANCE OF EMPATHY IN NURSING

Ms. Priya Bane, Assistant Professor, CCON, Bhopal



Introduction

Nurses are involved in helping relationships with their patients. Patients undergo a gamut of emotions and experiences (mostly painful and negative) when they are diagnosed with illness and when they come in contact with healthcare. They are generally at their most vulnerable and experience new, unfamiliar needs. Nurses are required to understand the needs, emotions, and situations of their patients, to be able to provide relevant care for them. Empathy is one of the characteristics (and skills) that nurses must possess that will allow them to understand what their patients are going through and offer care accordingly.

Core Aspects of the Importance of Empathy in Nursing

- **Improved Patient Outcomes & Satisfaction:** Empathetic nursing is directly correlated with better clinical results, including faster recovery and reduced complications, as patients feel understood and supported.
- **Enhanced Therapeutic Relationship:** Empathy helps nurses build trust and rapport, encouraging patients to share vital, honest information about their condition, which is essential for accurate assessment.
- **Holistic Care Approach:** It enables nurses to address not just the physical symptoms, but also the psychological, emotional, and social needs of patients.
- **Effective Communication:** By understanding a patient's perspective, nurses can tailor their language and communication style to match the patient's emotional and cognitive state.
- **Reduced Burnout:** While seemingly demanding, practicing genuine empathy can lead to greater job satisfaction for nurses by creating meaningful, positive connections, rather than just providing routine care.
- **Ethical Sensitivity:** Empathetic nurses are better equipped to navigate ethical challenges, respect patient dignity, and honor diverse cultural or personal beliefs.

Compassionate care in nursing can include the following forms of communication:

- **Verbal cues**—focusing on what patients say and don't say.
- **Facial expressions**—noting, for example, whether patients make eye contact.
- **Body language**—sensing when patients seem tense.

Effective patient care for nurses involves practicing active listening, showing genuine empathy, empowering patient self-care, maintaining rigorous safety protocols, and fostering clear, consistent communication. These strategies enhance patient trust, safety, and recovery outcomes.

Patient care is the comprehensive, compassionate, and personalized treatment of individuals, focusing on both physical and emotional well-being to promote, maintain, or restore health. It involves evidence-based, patient-centered, and, in many cases, technology-driven approaches that include diagnosis, treatment, and ongoing support, ultimately enhancing patient satisfaction.

Key Aspects of Patient Care

Patient-Centered Approach: This approach respects and incorporates individual patient preferences, needs, and values into all clinical decisions. It involves treating patients with dignity, compassion, and respect.



Components of Care

- ❖ **Preventive Care:** Involves check-ups, screenings, and vaccinations to prevent illness.
- ❖ **Medical Treatment:** Encompasses diagnosing conditions and providing treatments such as medication, surgery, and therapy.
- ❖ **Emotional Support:** Addresses the psychological needs, such as anxiety and fear, associated with medical issues.
- ❖ **Education:** Empowers patients with information about their health, treatments, and self-care strategies.
- ❖ **Rehabilitation:** Helps patients regain functionality and independence after illness or injury.

The Patient Care Process

1. **Assessment:** Gathering patient information.
2. **Diagnosis:** Identifying the health issue.
3. **Planning:** Developing an individualized care plan.
4. **Implementation:** Executing the care plan.
5. **Evaluation:** Monitoring and modifying the plan based on progress.

Core Principles

1. **Communication:** Effective, transparent, and respectful interaction.
2. **Collaboration:** A team-based approach for comprehensive care.
3. **Documentation:** Accurate, often digital, recording of care.

Benefits

- **Improved Health Outcomes:** Continuous, monitored care improves recovery.
- **Reduced Readmissions:** Effective care transitions (e.g., from hospital to home) reduce readmission risks.

Five key patient care tips for nurses:

- Practice Active Listening and Empathy
- Patients feel more secure and heard when nurses actively listen, maintain eye contact, and demonstrate empathy, which improves trust and allows nurses to gather crucial health information.

Empower Patient Self-Care

- Encourage patient autonomy by educating them on their condition, medications, and self-care techniques, preparing them for health management after discharge.

Ensure Rigorous Safety Protocols

- Prevent errors by diligently following protocols, including verifying patient identification, managing medication safely, and taking steps to prevent falls and infections.

Foster Clear Communication and Collaboration

- Use simple, clear language to communicate with patients and families. Collaborate effectively with other healthcare professionals to ensure continuity of care.

Provide Holistic and Person-Centered Care

- Recognize patients as individuals rather than just their diagnosis, considering their emotional, cultural, and personal needs to create individualized care plans.



Conclusion

Empathy is not just a soft skill but a critical, evidence-based competency that improves both the patient experience and the overall quality of care. It is a fundamental, multifaceted clinical skill (cognitive, affective, and behavioral) that is essential for effective patient-centered care and the development of therapeutic relationships.

References:

1. PubMed Central (PMC) - Empathy in Nursing (Overview of dimensions)
2. PubMed Central (PMC) - Meaning of Empathetic Communication (Nurse-patient relationship)
3. International Journal of Science and Research Archive - Empathy and Nursing (Impact on care quality)
4. MDPI - Empathy in Future Nurses (Burnout and ethical practice)

ANTIMICROBIAL RESISTANCE (AMR): A GROWING GLOBAL HEALTH THREAT

Mr. Shantilal Mewada, Assistant professor, CCON, Bhopal



Introduction

Antibiotic-resistant infections, commonly referred to as antimicrobial resistance (AMR), are becoming one of the most serious global health challenges of the 21st century. Antibiotics have been essential in treating bacterial infections for decades, saving millions of lives. However, the overuse and misuse of these medications have led to bacteria evolving ways to survive even the strongest drugs. As a result, infections that were once easily treatable are becoming harder—and sometimes impossible—to cure. Antimicrobial resistance occurs when microorganisms such as bacteria, viruses, fungi, and parasites evolve and develop the ability to resist medications designed to kill them. In the case of antibiotics, bacteria mutate or acquire resistance genes that allow them to survive drug treatment. When this happens, standard antibiotics become ineffective, infections persist longer, and the risk of spread increases. Although AMR can involve different microbes, antibiotic resistance in bacteria is the most concerning and widely discussed type.

Causes of Antibiotic Resistance

Several factors contribute to the rise of antibiotic-resistant infections:

1. **Overuse of antibiotics**

Antibiotics are often prescribed when they are not needed, such as for viral infections like the common cold or flu.

2. **Incomplete treatment courses**

When patients stop taking antibiotics before completing the prescribed course, some bacteria survive and develop resistance.

3. **Use in agriculture and livestock**

Antibiotics are frequently used in animal farming to promote growth and prevent disease, which can contribute to resistant bacteria entering the food chain.

4. **Poor infection control in healthcare settings**

Inadequate hygiene practices in hospitals and clinics can allow resistant bacteria to spread between patients.

5. **Global travel and trade**

Resistant bacteria can quickly spread across countries and continents through travel and food distribution.

Common Antibiotic-Resistant Infections

Several dangerous antibiotic-resistant bacteria have emerged in recent years. Examples include:

- **Methicillin-resistant Staphylococcus aureus (MRSA)** – causes skin infections, pneumonia, and bloodstream infections.
- **Mycobacterium tuberculosis (drug-resistant tuberculosis)** – resistant forms make tuberculosis more difficult and expensive to treat.
- **Escherichia coli** – certain resistant strains can cause severe urinary tract infections and food-borne illness.
- **Klebsiellapneumoniae** – associated with hospital-acquired infections such as pneumonia and bloodstream infections.

These resistant pathogens can cause severe illness, longer hospital stays, and higher mortality rates.

Global Impact

Antibiotic resistance is a growing worldwide concern. Health experts warn that if current trends continue, millions of deaths could occur annually due to resistant infections in the future. AMR also places a heavy

burden on healthcare systems because resistant infections require longer treatment, more expensive medications, and advanced medical care.

Countries with high antibiotic usage and limited healthcare infrastructure are particularly vulnerable. In many developing regions, antibiotics can be purchased without prescription, increasing the risk of misuse.

Prevention and Control Strategies

Combating antibiotic resistance requires coordinated efforts from governments, healthcare providers, and individuals. Key strategies include:

- Responsible antibiotic prescribing by healthcare professionals
- Completing prescribed antibiotic courses
- Improving infection prevention and hygiene
- Vaccination to reduce infection rates
- Research and development of new antibiotics
- Regulation of antibiotic use in agriculture

Public awareness campaigns also play an important role in educating communities about the dangers of antibiotic misuse.

The Role of Individuals

Everyone can contribute to preventing antibiotic resistance. Individuals should avoid self-medication, only use antibiotics when prescribed by a qualified healthcare professional, and follow the full treatment plan. Practicing good hygiene—such as regular handwashing—can also help prevent infections and reduce the need for antibiotics.

Conclusion

Antibiotic-resistant infections represent a major threat to modern medicine. If antibiotics lose their effectiveness, routine medical procedures such as surgery, chemotherapy, and organ transplantation could become far more dangerous. Addressing antimicrobial resistance requires global cooperation, responsible antibiotic use, and continued scientific innovation. By taking action now, society can help preserve the effectiveness of antibiotics for future generations.

References

1. World Health Organization. Antimicrobial Resistance Fact Sheet.
2. World Health Organization. Antimicrobial Resistance Overview.
3. World Health Organization. Antimicrobial Resistance Health Topic.
4. Pan American Health Organization. Antimicrobial Resistance Overview.
5. Global surveillance reports on antibiotic resistance trends.



FOCUS ON CLINICAL FACULTY PROMOTION BARRIERS AND USING CASE-BASED LEARNING WITH THE LASATER CLINICAL JUDGMENT RUBRIC

Ms. Abhilasha Jhariya, Lecturer , CCON, Bhopal



Introduction

The barriers clinical nursing faculty face in academic promotion and the integration of Case-Based Learning (CBL) with the Lasater Clinical Judgment Rubric (LCJR) to strengthen clinical judgment teaching. Nursing education continues to grapple with workforce and pedagogical challenges as academic institutions expand nursing programs to meet global healthcare demands. This expansion has intensified examination of how faculty are supported in their careers and how effective teaching strategies are used to prepare students for complex clinical practice.

What Clinical Faculty Promotion Barriers Are

Clinical nursing faculty — especially those on nontenure or clinical tracks — play a critical role in educating nursing students. However, research points to significant barriers that limit their advancement and recognition, which include:

- Unclear or vague promotion criteria that undervalue clinical teaching, professional practice, and educational leadership compared with traditional research productivity.
- Inequitable institutional recognition for clinical teaching excellence, leaving many experienced clinical educators without clear paths for career advancement.
- Structural neglect and lack of institutional investment that contribute not only to career stagnation but also emotional challenges like burnout or “imposter syndrome” among faculty.
- Heavy teaching loads and insufficient time for scholarship further hinder faculty from building a promotion-worthy academic portfolio.
- These challenges are reported to foster disengagement and lower morale among clinical educators, despite their essential contributions to nursing education.

Why This Matters in Nursing Education.

Clinical faculty are central to preparing students for real-world practice, yet promotion systems often prioritize research and publication over teaching excellence and clinical expertise. This misalignment can:

- Reduce faculty retention and institutional knowledge,
- Limit mentorship opportunities for novice educators, and
- Undermine efforts to strengthen the clinical workforce pipeline.

These topics align with broader nursing education concerns about supporting the clinician-educator career path and ensuring that faculty who excel in pedagogy and clinical guidance are recognized, rewarded, and retained at rates comparable to research-focused colleagues.

Using Case-Based Learning with the Lasater Clinical Judgment Rubric Clinical Judgment in Nursing Education.

Clinical judgment is a core competency in nursing — it refers to the processes through which nurses notice patient cues, interpret their meaning, respond appropriately, and reflect on their interventions to ensure safe patient care. Current nursing education research consistently emphasizes the importance of intentionally teaching and assessing these skills.

What the Lasater Clinical Judgment Rubric (LCJR) Is

The Lasater Clinical Judgment Rubric, originally developed by Kathie Lasater, provides a structured framework for evaluating clinical judgment based on four key domains:

- Noticing critical patient cues,
- Interpreting their significance,



- Responding with appropriate actions, and
- Reflecting on decisions and outcomes.

The LCJR uses a progression of performance levels (e.g., beginning to exemplary) to measure how nursing students demonstrate clinical judgment in various educational activities, especially clinical simulations.

Researchers and educators have shown that the LCJR can be used as:

A teaching tool to make explicit the components of clinical judgment for students,

A feedback mechanism whereby faculty assess and guide students' judgment development, and

An assessment instrument in simulation, case-based, and clinical activities. \

Role of Case-Based Learning (CBL)

Case-Based Learning is an educational strategy that involves presenting students with realistic patient scenarios that require active problem-solving and application of knowledge. Compared with traditional lecture or skills-check approaches:

- CBL places students in contextually rich situations that mirror actual clinical reasoning demands,
- It triggers active engagement with complex patient problems rather than passive memorization,
- When combined with structured assessment tools like the LCJR, CBL can foster deeper reflection on clinical decision-making.

Evidence from related research shows that unfolding CBL approaches can enhance aspects of clinical judgment, such as students' ability to search for information and integrate new clinical insights, especially when measured with tools like the LCJR.

How CBL and LCJR Work Together

In this integrated approach:

- CBL scenarios physically mimic real clinical cases, prompting students to apply critical thinking and judgment,
- The LCJR provides a consistent rubric for faculty to track and evaluate how students perform in these scenarios, including how well they:
 - ✓ Recognize important patient cues,
 - ✓ Prioritize interventions,
 - ✓ Reflect on decision quality, and
 - ✓ Justify clinical actions with reasoning.

Together, they help shift educational assessment from simple task completion (e.g., correct steps) to thinking processes and judgment outcomes, which is essential for preparing students for complex, unpredictable clinical situations.

References

1. McKee, S. J., Greenwood, W., Haddad, L., & Clements, P. T. (2026). Invisible Climb: Addressing the Emotional and Structural Barriers for Clinical Faculty Promotion. *Nursing Education Perspectives*. (Article exploring structural and emotional barriers that clinical nursing faculty face in promotion processes).
2. Clark, P. C., Fawcett, J., & Barkauskas, V. H. (2020). Strategies for Successful Promotion for Clinical Track Nursing Faculty. *Journal of Nursing Education and Practice*, 10(3), 45-52. (Discusses planning and strategies clinical faculty can use to support academic promotion).
3. American Association of Colleges of Nursing (AACN). (2025). Nursing Faculty Shortage Fact Sheet. AACN. (Includes data on faculty vacancies and factors contributing to nursing faculty workforce challenges).

MOBILE HEALTH (M-HEALTH) APPS FOR CHRONIC DISEASE MANAGEMENT

Ms. Bharti Kushwaha, Lecturer, CCON, Bhopal

**Introduction**

Chronic diseases such as diabetes, hypertension, cardiovascular diseases, chronic respiratory disorders, and arthritis require long-term management and continuous monitoring. Effective care includes medication adherence, lifestyle modification, regular follow-up, and patient education. Mobile Health (mHealth) applications have emerged as innovative digital tools that assist patients and healthcare professionals in managing chronic conditions efficiently. These apps empower patients to actively participate in their care while enabling nurses to monitor health data remotely.

Definition of mHealth

Mobile Health (mHealth) refers to the use of mobile devices such as smartphones, tablets, wearable devices, and wireless technologies to support medical and public health practices. It includes health monitoring apps, remote patient monitoring systems, SMS reminders, wearable fitness trackers, and teleconsultation platforms. mHealth integrates healthcare services with information technology to improve accessibility and quality of care.

Importance in Chronic Disease Management

Chronic diseases require continuous monitoring, long-term medication adherence, lifestyle changes, and early detection of complications. mHealth applications provide real-time tracking, reminders, and communication features that help patients manage their conditions effectively and independently.

Common Chronic Diseases Managed

- Diabetes Mellitus – Blood glucose tracking, insulin reminders, diet monitoring.
- Hypertension – Blood pressure monitoring, medication alerts.
- Cardiovascular Diseases – Heart rate tracking and activity monitoring.
- Asthma and COPD – Symptom tracking and inhaler reminders.
- Obesity and Lifestyle Disorders – Calorie counting and exercise tracking.

Key Features of mHealth Applications

- Real-time monitoring of vital signs.
- Medication reminders and alerts.
- Health education materials.
- Data analytics with charts and reports.
- Remote access for healthcare professionals.
- Teleconsultation integration.
- Emergency alert systems for abnormal readings.

Role of Nurses

Nurses assess patient readiness for technology use, educate patients on app usage, monitor uploaded health data, identify abnormal trends, provide counseling, coordinate care with physicians, and ensure confidentiality and ethical handling of digital information.

Benefits

For Patients: Promotes self-care, improves adherence, reduces hospital visits, increases awareness.

For Healthcare System: Early detection of complications, improved monitoring, better communication, reduced workload, data-driven decisions.

Recent Innovations

Integration with wearable devices, artificial intelligence for risk prediction, cloud-based records, voice assistants, and personalized digital health coaching are recent advancements in mHealth.

Challenges and Limitations

Digital illiteracy, poor internet connectivity, data privacy concerns, high device costs, and lack of standardized regulations remain challenges in implementing mHealth solutions.

Ethical and Legal Considerations

Informed consent for digital monitoring, data security and encryption, patient confidentiality, and adherence to healthcare regulations are essential responsibilities in mHealth usage.

Future Scope

Future developments include AI-based personalized treatment plans, remote ICU monitoring, integration with national health systems, improved rural healthcare access, and predictive analytics for disease prevention.

Conclusion

Mobile Health (mHealth) applications are transforming chronic disease management by improving patient engagement, accessibility, and healthcare efficiency. Nurses play a vital role in guiding patients, monitoring data, and ensuring ethical use of digital tools. By combining technology with compassionate care, mHealth strengthens modern nursing practice.

Bibliography

1. World Health Organization. (2023). Noncommunicable diseases (NCDs) fact sheet. Geneva: WHO.
2. World Health Organization. (2019). WHO guideline: Recommendations on digital interventions for health system strengthening. Geneva: WHO.
3. Centers for Disease Control and Prevention. (2022). Chronic disease prevention and health promotion. Atlanta: CDC.
4. Free, C., Phillips, G., Watson, L., et al. (2013). The effectiveness of mobile-health technologies to improve health care service delivery processes: A systematic review and meta-analysis. *PLOS Medicine*, 10(1), e1001363.
5. Marcolino, M. S., Oliveira, J. A. Q., D'Agostino, M., et al. (2018). The impact of mHealth interventions: Systematic review of systematic reviews. *JMIR mHealth and uHealth*, 6(1), e23.

ADENOVIRUS

Mrs. Bharti Patel, Lecturer, CCON, Bhopal



Introduction

Adenoviridae is a group of medium sized, non- enveloped, double stranded DNA viruses that replicate and produce disease in the eye and in the respiratory, gastrointestinal and urinary tracts. Originally isolated from adenoids. At least 47 serotypes associated with human diseases. Most infections asymptomatic. Infections are common in children.

Morphology

- Icosahedral, about 80- 110 nm diameter
- 252 capsomeres
- Fibre projects from each of 12 vertices
- Resemble a space ship
- Genome is dsDNA
- Replicates in nucleus

Classification

- Family Adenoviridae: 2 genera – Aviadenovirus : adenoviruses of birds; – Mastadenovirus : infect mammals
- 47 serotypes of human origin
- 6 subgroups (A-F) based on genome homology
- Subgroup A : serotypes 12,18 and 31 : highly oncogenic

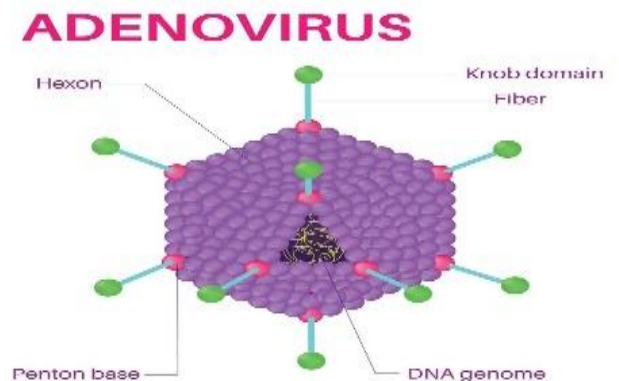
Disease Associations: Serotype Disease at risk 1-7 Acute febrile pharyngitis Children 3,7,14 Pharyngoconjunctival fever Older children 8,9,37 Epidemic keratoconjunctivitis (shipyard eye) Adults 3,4,11 Acute follicular conjunctivitis Any age 40,41 Diarrhoea Infants, young children 11,21 Hemorrhagic cystitis Children

Viral Replication:

- Adenoviruses attach to surface of the cells by their fibers, then penetrate the cell, and once inside the cell, uncoat the viral DNA.
- The viral DNA is then transported into the nucleus of the cell and initiates replication cycle. • Host cell DNA-dependent RNA polymerase transcribes the early genes leading to formation of functional mRNA.
- Then in the cytoplasm, the early mRNA is translated into nonstructural proteins.
- In the nucleus, after viral DNA replication, late mRNA is transcribed and then translated into structural virion proteins.
- This is followed by assembly of virions in the nucleus and release of virions by lysis of the cells, but not by budding.

Pathogenesis:

- Adenoviruses are transmitted mainly by respiratory or feco-oral contact from humans.
- They infect the conjunctiva or the nasal mucosa.
- They may multiply in conjunctiva, pharynx, or small intestine, and then spread to preauricular, cervical and mesenteric lymph nodes, where epithelial cells are infected.





- Adenoviruses may cause three different types of interaction with the infected cells.
- These are (a) lytic infection, (b) latent infection, and (c) transforming infection.

Lytic infection

- Adenoviruses infect muco - epithelial cells in the respiratory tract, gastrointestinal tract, and conjunctiva or cornea, causing damage of these cells directly.
- After local replication of the virus, viremia follows with subsequent spread to visceral organs. • Dissemination occurs more commonly in immunocompromised patients than in the immunocompetent individuals.

Latent infection

- The adenovirus has a unique ability to become latent in lymphoid and other tissues such as adenoids, tonsils, and Payer's patches.
- The exact mechanism of latency of adenoviruses in these tissues is not known.
- These latent infections can be reactivated in patients infected with other agents or in the patients who are immunocompromised.

Oncogenic transformation:

- Some adenoviruses belonging to groups A and B have the property for oncogenic transformation in rodent cells.
- During oncogenesis the multiplication of adenovirus is inhibited followed by integration of viral DNA into the host DNA.
- After integration adenoviruses produce E1A proteins which target rodent cells by altering cellular transcription, finally leading to transformation of rodent cells.
- However, oncogenesis of human cells has not been demonstrated.

Host immunity

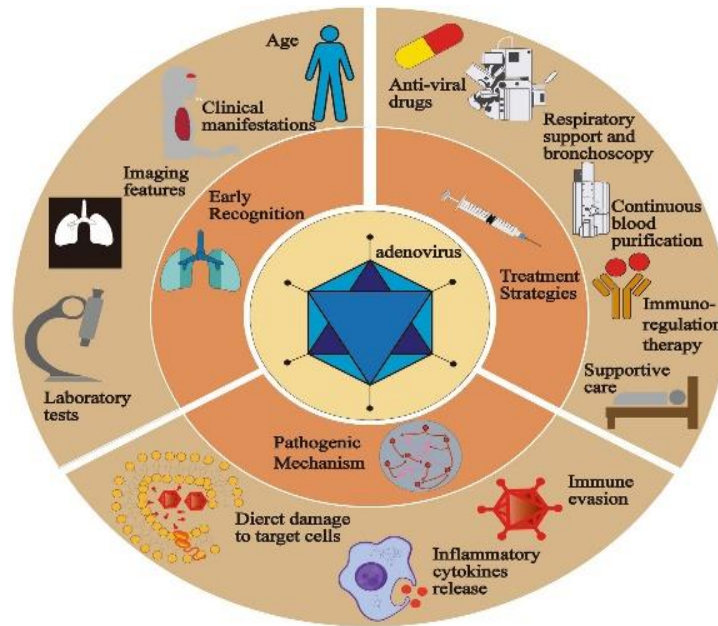
- Adenovirus infection is characterized by development of an effective and long-lasting immunity against reinfection.
- Both cell-mediated immunity (CMI) and humoral immunity are important.
- CMI plays an important role in limiting proliferation and outgrowth of adenoviruses.
- Therefore, different disease is seen in persons whose CMI is immunocompromised.
- Serum antibodies play an important role for resolving adenovirus infection.

Clinical Syndrome

- Adenoviruses primary infect children.
- Adults are also infected.
- More than one serotypes of virus may produce the same clinical syndrome and one serotype of virus may cause clinically different diseases.
- Adenoviruses 1-7 are the common serotypes worldwide and are responsible for most cases of adenovirus-associated infections.
- Incubation period varies from 5 to 8 days.
- The major clinical syndromes caused by the human adenoviruses are as follows.
- Respiratory diseases
- Acute respiratory diseases: This disease is caused by adenovirus serotypes 4 and 7.
- Fever, rhinorrhea, cough, and sore throat are the typical symptoms which last for 3-5 days.
- This syndrome most often affects military recruits living in crowded conditions.
- Pharyngoconjunctival fever: This syndrome occurs primarily in school-going children.
- Fever, sore throat, coryza, and red eye are the classic presentations of the condition.

Laboratory Diagnosis

- **Specimens:** from throat, eye, urine, feces;
- **Isolation of virus:** Inoculation into cell cultures; – human embryonic kidney/HeLa/HEp2 – CPE: cell rounding and aggregation into grape like clusters; – Other tests: HA, Neutralization, CF
- **Serology:** Rise in titre of antibodies in paired sera; (single specimen – not useful) • Electron Microscopy: for stool to see virus
- **Immunofluorescence:** Antigen detection in Nasopharyngeal /ocular specimens



Prophylaxis

- Specific prevention– only for control of outbreaks in closed communities
- Killed and live vaccines tried in Acute Respiratory Disease (ARD)
- No vaccine for general use.

Adeno-associated viruses (aav)

- Also called as: adenosatellite viruses
- Classified as: genus Dependovirus (as they depend on adenoviruses for replication); – Belong to family: Parvoviridae
- Unable to replicate independently as they lack enough DNA
- Found as small icosahedral particles (20-25nm) in adenovirus preparations by Electron microscopy
- Their pathogenic role is uncertain.

Bibliography

1. Pinheiro FP, Travassos da Rosa APA. Arboviral zoonoses of Central and South America. In: Beran GW, editor. Handbook of Zoonoses. Boca Raton, FL: CRC Press; 1994. pp. 201–225. [[Google Scholar](#)]
2. Anderson CR, Spence L, Downs WG, Aitken TH. Oropouche virus: a new human disease agent from Trinidad, West Indies. Am J Trop Med Hyg. 1961;10:574–578. doi: 10.4269/ajtmh.1961.10.574. [[DOI](#)] [[PubMed](#)] [[Google Scholar](#)]
3. Pinheiro FP, Travassos da Rosa AP, Vasconcelos PF. Oropouche fever. In: Feigin RD, editor. Textbook of Pediatric Infectious Diseases. Philadelphia, PA: Saunders; 2004. pp. 2418–23. [[Google Scholar](#)]
4. Pinheiro F, Pinheiro M, Bensabath G, Causey OR, Shope RE. Epidemia de vírus Oropouche em Belém. Revista do Serviço Especial de Saúde Pública. 1962;12:13–23. [[Google Scholar](#)]
5. Chavez R, Colan E, Philips I. Fiebre de Oropouche en Iquitos: reporte preliminar de 5 casos. Rev Farmacol y Terap. 1992;1:12–14. [[Google Scholar](#)]



EFFECTS OF SYNTHETIC POLYMERS IN CENTRAL NERVOUS SYSTEM

Mr. Raj Pradhan, Tutor , CCON, Bhopal

Introduction

As global plastic production has accelerated from 2 megatonnes in 1950 to 475 megatonnes in 2022, synthetic polymers have achieved a state of biological ubiquity.¹ These materials degrade into microplastics and nanoplastics, which enter the human body via ingestion and inhalation.³ While MNPs have been detected in the blood, heart, liver, and placenta, recent evidence suggests that the human brain may act as a critical sequestration site for these particles.² The presence of these anthropogenic contaminants in the CNS raises urgent questions regarding their role in the global rise of neurological disorders and their potential to catalyze neurodegenerative pathways.

The Brain as a Primary Micro and Nano Particle Reservoir

Evidence suggests that the brain accumulates significantly higher concentrations of MNPs than other metabolic organs. A landmark 2025 study found that MNP levels in the frontal cortex were to times higher than those in the liver or kidney.² These particles are predominantly nanoscale shards and flakes, with % of the plastic mass identified as polyethylene (PE), a polymer common in single-use packaging.² Historical analysis of post-mortem samples indicates an exponential upward trend, with concentrations in 2024 samples being % higher than those from 2016.²

Mechanisms of Blood-Brain Barrier (BBB) Breach

The BBB is a highly selective semi-permeable border that protects the brain, yet nanoplastics (m) possess the innate capacity to cross it.⁹

1. Biological Corona: Upon entering human plasma, MNPs rapidly attract a "biological corona" of proteins and lipids. This corona dictates their biological identity; for instance, cholesterol in the corona has been shown to enhance the uptake of polystyrene nanoparticles into the BBB membrane.¹¹

2. Cellular Uptake: Nanoplastics can pass through the BBB by attaching to the membrane and undergoing endocytosis.¹² Once internalized, these particles can increase BBB permeability, allowing other harmful substances to enter the CNS.⁹

3. Hydrophobicity: Research suggests that highly hydrophobic polymers, such as polyethylene and polypropylene, show a remarkable preference for entering the BBB.

Neurotoxicity and Pathophysiological Cascades

Once sequestered in brain tissue, MNPs trigger several deleterious biological responses:

- **Microglial Activation:** MNPs activate microglia, the brain's immune defense cells, triggering the production of reactive oxygen species (ROS) and chronic neuroinflammation.
- **Protein Aggregation:** Nanoplastics may interact with aggregation-prone proteins associated with cognitive impairment, such as -synuclein, amyloid-, and tau, potentially catalyzing their conversion into pathological forms seen in Parkinson's and Alzheimer's diseases.
- **Vascular Obstruction:** Evidence from mouse models shows that MNPs in the bloodstream can be phagocytosed by cells that then obstruct cerebral blood vessels, leading to lower blood perfusion and neurobehavioral disorders.
- **The Analytical Rigor Debate:** "The Bombshell" In early 2026, serious doubts were raised regarding the high concentrations of plastics reported in human brains.

- **The Lipid Problem:** The brain is approximately % fat, and critics argue that human lipids can produce chemical signals during Py-GC-MS analysis that mimic polyethylene and PVC. Some experts have labeled high-profile brain studies as biologically implausible, suggesting the results may be false positives caused by lipid interference.
- **Lack of Standardization:** The absence of standardized protocols for "blank samples" to exclude background contamination has led to calls for greater scientific rigor in MNP detection.

Supportive Research Findings

- **Dementia Correlation (2025):** Brain samples from individuals who died with dementia exhibited plastic concentrations roughly times higher than healthy cohorts, with medians reaching g/g.
- **Cardiovascular-Neurological Link:** Patients with MNP-laden carotid artery plaques—the vessels supplying blood to the brain—face a -fold higher risk of stroke or heart attack within three years.
- **Developmental Risks:** Nanoplastics have been detected in the placentas of premature births at significantly higher concentrations than in full-term births, suggesting that neurological exposure may begin in utero.
- **Cellular Gene Expression:** Research shows that nanoplastics can enter cells and lead to major changes in gene expression related to brain health, such as the depletion of the GFAP protein, a pattern mirrored in depression and dementia.

Conclusion

The sequestration of micro- and nanoplastics in the human brain represents a significant and potentially catastrophic shift in the Anthropocene's public health landscape. While legitimate concerns regarding analytical interference from lipids must be addressed through standardized research protocols, the biological plausibility of MNP-induced neuroinflammation and protein aggregation is supported by an expanding body of evidence. The trillion dollar annual health-related economic loss attributed to the "plastics crisis" underscores the urgency of this issue. Future research must prioritize longitudinal studies to definitively establish the causal links between MNP burden and the rising global incidence of Alzheimer's, Parkinson's, and other neurodegenerative diseases.

References

1. Nature Medicine (2025). Bioaccumulation of microplastics in decedent human brains. 2
2. The Guardian (2026). 'A bombshell': doubt cast on discovery of microplastics throughout human body. 14
3. Science Advances (2025). Microplastics obstruct and block cerebral blood vessels. 8
4. The Lancet (2025). Lancet Countdown on Health and Plastics. 1
5. Nano Today (2024). Biotransformation of nanoplastics in human plasma and their permeation through the BBB. 12
6. Journal of Xenobiotics (2025). Separation and Detection of Microplastics in Human Exposure Pathways. 20
7. NEJM (2024). Microplastics in carotid artery plaques and cardiovascular risk. 17

NURSE MANAGER SKILLS: ESSENTIALS TIPS

Ms. Ranju Patel, Tutor, CCON, Bhopal



Introduction

Nurse manager skills can change the career path of a nurse and help them work in a managerial role. Nurse managers help to develop careers of individual nurses, lead teams of nurses and serve as a liaison between nursing staff and the management. Nurses who want to assume a position of leadership in their department can benefit by learning nurse manager skills. In this article, we discuss nine unique skills relevant to a nurse manager and provide some of the best tips to help you enhance them.

What is a Nurse Manager?

A nurse manager acts as a leader and supervisor in a health care organisation. A nurse manager can balance patient care with organisational responsibilities and is proficient in leadership communication. They supervise staff and process scheduling or clinical logistic issues daily with the team. They usually plan the long-term care of patients in tandem with consulting doctors and other healthcare professionals and take up managerial tasks like managing the staff, creating rosters for the nursing staff and mentoring a team of nurses. Nurse managers also have the responsibility of coming up with more recent and better healthcare plans for their group and the organisation. Their specific duties and responsibilities may vary based on the size and type of healthcare facility they work in. Some work in hospitals, while others work in private practices, outpatient clinics or nursing homes.

Nine Essential Nurse Manager Skills

Possessing strong nurse manager skills can be crucial for success as a nurse manager. Here are nine skills that you can use to help your nursing management career:

1. Decision-making ability

A nurse manager may often require making some of the most crucial decisions to ensure the well-being of their patients. Much of these decisions can dictate the care plan that a patient may be receiving. A nurse manager requires deciding by analysing the situation to ensure the best outcome for a patient.

2. Mentor others

Nurse managers usually lead a team of nurses under them, lead them in their day-to-day activities and assign their daily responsibilities. Nurse managers can groom the nurses under their leadership and help them get promoted to higher positions. Most nurse managers are usually open to mentoring opportunities and teaching their fellow nurses how to be efficient nurse managers. Nurse managers encourage their staff to take on more responsibilities to help them develop for senior roles.

3. Leadership skills

As the role of a nurse manager is a leadership role, they require training and leading a team to succeed. They know how to utilise the strengths of the nursing staff and make an effective team that can handle different challenging medical cases. Interpersonal communication, trust, commitment and satisfaction can be crucial to ensuring the same.

4. Ability to perform under high pressure

The medical fraternity may come across larger influxes of patients and encounter emergency situations that require spontaneous reaction, making the ability to perform under pressure a prerequisite for the job. During such times, it is essential for the nursing staff to remain calm and poised, despite the pressure. A nurse manager who can perform well under pressure, which can include taking important patient care decisions and instructing other nurses. In a crisis like situation, it is imperative to prioritise the patients according to the urgency of treatment necessary and administer the correct medicines at the right time subsequently successfully.

5. Expert communication skills

Having outstanding communication skills can be imperative for nurse managers who communicate with many people every day. Most of this may include listening attentively and patiently and responding to a situation. Strong communication skills can help nurse managers liaison with the staff and the patients and their families. This can also help nurse managers guide their team and promote unity in teamwork effectively.

6. Expertise in clinical matters

Clinical expertise is essential for success as a nurse manager. A nurse manager requires to be aware of the latest updates and introductions in health care to ensure the best care for patients. It may be helpful for them to continue their education by keeping up with reading relevant medical journals and books to stay informed of the latest nursing trends.

7. Positive attitude

The nursing staff relies on the nursing manager for support and help with cases or other administrative work. As a result, nursing managers require positivity in their work approach. Having an optimistic attitude and the ability to implement the best possible treatment is essential for success as a nurse manager.

8. Flexibility

A nurse manager's top skill includes flexibility and the ability to adapt themselves to any situation. They are skilled in encountering any sudden patient complication or other unforeseen events. Nursing managers can adjust to the changing medical technology and can efficiently use newer machines and treatments available. Be it staff requirements or patient requirements, a nursing manager requires to understand them and offer fruitful solutions to ensure maximum efficiency and reputation.

9. Team support

A nursing manager requires to understand their team's capacity and provide the necessary support accordingly. Using supportive encouragement, a nursing manager can encourage their team and help them perform better during long or busy shifts. This can help increase team efficiency and ensure better patient care.

Tips to improve the skills of a nurse manager

It is important for a nurse manager to be skilled at leading and managing teams of nurses. Here is how you can improve your skills as a nurse manager:

1. Review existing skills. Nurse managers can consider the skills they have and make a list of skills they want to develop and work on them. For instance, they can improve their communication skills by talking more in a professional setting and taking feedback and implementing them.

2. Get a mentor. A mentor can help with networking and can also guide a nurse manager on the steps to take to become successful. Finding a helpful and encouraging mentor is, as a result, imperative to growing a nurse manager's career.

3. Take training. Taking necessary training and attending workshops to enhance nursing knowledge and expertise as a nurse manager is essential. Getting pointers from industry experts can help identify areas where an individual can work to improve as a nursing manager.



4. Join an organisation. Aspiring nursing managers can also consider joining a professional organisation to understand nurse manager responsibilities and gain valuable insight into nursing and exposure to leading teams outside a workplace.

Benefits of enhancing skills of a nurse manager

Enhancing the skills of a nurse manager can help the individual and the organisation in which they work. Following is a list of benefits of improving your nurse management skills:

Inspiring junior nurses in the team: A nursing manager with powerful skills serves as the role model for all other nurses who aspire to be like them. It makes nursing managers more efficient and promotes a culture of efficiency in the nursing department.

Improving leadership qualities: Nursing managers can become better and more successful by developing relevant skills. This can be instrumental for a nursing manager's career and help them move into a more senior leadership role. **Enhancing organisational approach:** Nurse managers are in a position where their decisions can have a significant impact on a patient. Nurse managers with good organisational skills ensure they are aware of the details and have the requisite medical reports to make an informed decision effectively.

WHY PEER SUPPORT FOR NURSES MATTERS?

Ms. Ritu Raghu, Clinical Instructor , CCON, Bhopal



Introduction

According to Nurse.com 2024 Nurse Salary and Work-Life Report revealed that feeling overwhelmed, burnout, and prolonged stress were the top three aspects nurses experienced most in the past two years. With the increasing prevalence of these conditions, peer support for nurses becomes even more necessary.

While there are both powerful and joyous moments in our jobs as nurses, it's no secret that we face a unique set of challenges and situations. These experiences are what help us relate to and connect with others within our profession.

Having strong relationships in place is both an important and beneficial aspect of our growing nursing community. Not only do these relationships allow us to help one another emotionally, but they allow us to celebrate each other through different stages of our lives and careers.

But what does it mean to have peer support in nursing, and why do these relationships matter?

Developing professionally

One valuable aspect of being a nurse is the numerous opportunities we have to nurture our professional development. And that, in part, is accomplished by the supportive relationships we acquire on our career journeys. Whether mentorships, preceptorships, or continuing education, experiences like these allow us to learn and grow even further in our careers simply by connecting with our peers. We network. We share knowledge. We provide guidance and insights. We gain new perspectives.

When you get down to it, peer support among nurses is at the core of "lifelong learning." At any stage of our career or at any point in our lives, we can learn from a nurse we know.

Let's talk about mentorships for a moment. For some, there's an assumption that mentorships can only benefit younger or newer nurses. And while mentorships certainly help newer nurses flourish, you can have a mentor at any time in your career. If you're switching specialties, moving across the country, or entering a leadership role, mentorships can challenge your perspective, refine your skills, and give you clarity — all from the relationship you develop with your mentor.

Connecting on a professional level not only helps us learn but can also open doors to new career opportunities. Even if it's learning about a new job opening from a coworker, finding a mentor, or seeking career guidance from a nurse friend, strong and encouraging peer support can contribute to the success you have as a nurse.

A sense of belonging

A sense of belonging within nursing can be a make-it-or-break-it situation for some, especially new nurses. This feeling is a fundamental need for most people, and for nurses, this helps us feel accepted, understood, and valued. Suppose you're a new graduate nurse or a nurse moving into a new work environment, it can feel overwhelming and downright scary to venture into uncharted territory. And feeling as if you're navigating these situations on your own can make you question everything you're doing. But you're not alone. We have all been there at one point or another in our careers, and having other nurses connect and relate to what you're going through can make all the difference. A strong support system defines what belongingness actually is. It's shared experiences, shared challenges, and shared victories. It's a nurse community that understands your goals, builds your resilience, shares your stress, and cheers you on.

Emotional support

Being a nurse is very involved. We wear many different hats and juggle tasks from patient care to charting, all within the confines of our shifts. So it's an understatement to say nursing can be emotionally taxing.



That's why having a community of peers who recognize the emotional demands of the profession is so important. The empathy and support we receive from these professional relationships can be transformative for our mental health and well-being. In fact, research shows that supportive relationships help prevent burnout and compassion fatigue among nurses. Data like this shows the significant effect personal relationships have on professional lives.

As nurses, we're giving so much of ourselves to our patients and our employers. And especially at work, it's vital that we make our mental health a priority. And one way we can achieve that is through building these supportive networks.

A text conversation, a phone call, an online community, or a debriefing, seeking out emotional support when you need it from someone who has walked in your shoes can have a positive ripple effect in your life.

I remember one time when I was working at a hospital in Detroit, Michigan, and I was caring for one of my patients after the shift change was over. My team and I had to administer blood, and the patient wasn't doing well.

Multiple colleagues jumped in to help me with the task so I could support my patient. They even followed up with me after work to make sure I was OK and to tell me what a good job I had done.

This meant everything to me and helped me feel not alone. This type of peer support was what I needed at that moment. We all know how badly we want to leave work after a 12-hour shift, so to have this support from other nurses meant so much.

Ultimately, nursing is a team effort, and having adequate peer support is necessary for us to thrive. By nurturing these relationships, we can find the encouragement, guidance, and community we need to navigate the challenges of our profession and provide quality care for patients.



YOUTH EMPOWERMENT AND CAREER OPPOTRUNITIES IN THE MEDICAL FIELD

Ms. Deepika Kahar, Clinical Instructor, CCON, Bhopal



Introduction

Youth empowerment means giving young people the tools, opportunities, and confidence to pursue meaningful careers and contribute to society. In the context of healthcare, this involves education, guidance, exposure, mentoring, and career planning so that youth can thrive in the diverse world of medical professions.

Step 1: Self-Assessment & Interest Exploration

- Assess personal interests and strengths related to health sciences — e.g., patient care, research, technology, public health.
- Use tools like career tests and counseling sessions to align interests with suitable medical career paths.
- This foundational step ensures motivation and clarity before investing time in long educational paths.

Step 2: Academic Preparation

- Secondary & Entry Education
 - For clinical careers: prepare for NEET or equivalent entrance exams for MBBS, BDS, BSc Nursing, Pharmacy, etc.
 - For allied professions: consider life sciences, biotechnology, psychology, and mathematics in senior secondary.
- Undergraduate Programs Choose a degree aligned with goals:
 - Clinical tracks: MBBS, BDS, BSc Nursing, Physiotherapy
 - Allied health: Radiography, Medical Lab Technology
 - Health management/administration: BBA/BA in Healthcare Management
 - Health research: BSc in Public Health, Medical Research streams

Step 3: Mentoring & Exposure to Healthcare

- Mentorship programs and youth initiatives enhance career decisions by exposing students to real healthcare environments. Example: Programs offering clinical shadowing, hospital rotations, and health summits significantly increase interest in health careers.

Step 4: Practical Experience

- Internships & Volunteering
 - Volunteer with hospitals, health organizations, or NGOs.
 - Participate in community health camps, public health outreach, or research projects.
 - These experiences build leadership, communication, empathy, and clinical skills while expanding professional networks.

Step 5: Skill Development & Specialized Training

- Develop soft skills such as communication, teamwork, and cultural competence, which are essential in healthcare.
 - Pursue certifications and workshops in areas like emergency care, health IT, telemedicine, or health data analytics to stay competitive.

Step 6: Career Guidance & Networking

- Attend career talks, medical conferences, and workshops.
- Connect with professionals through associations, online forums, and alumni groups.
- Seek advice on evolving careers and emerging medical sectors such as AI in healthcare, genomics, or telehealth.

Step 7: Choosing a Pathway

- Clinical Careers
- Physicians (General Medicine, Surgery, Pediatrics, etc.)
- Nurses, Midwives



- Allied Health Professions
- Radiographers, Physiotherapists, Lab Scientists
- Pharmacists, Dental Technicians
- Healthcare Management & Innovation
- Hospital Administration
- Health Informatics, Digital Health Entrepreneurship
- Health Policy & Public Health Specialist

Step 8: Lifelong Learning & Advanced Opportunities

- After initial qualification:
 - Pursue PG degrees, specializations, or fellowships engage in research
 - Transition into leadership, academic, or international roles
 - Healthcare careers are evolving rapidly — youth must adapt by learning continuously.

Youth Empowerment Challenges in Healthcare

- **Systemic barriers** — lack of mentorship or exposure for underrepresented youth.
- **Skills gaps** — need for structured training to bridge education with practical job roles.
- **Access inequality** — especially in low-resource or rural regions.

Programs worldwide show structured mentoring and early exposure to medical settings help youth overcome barriers and confirm career interests.

The Social Impact of Youth Empowerment in Health

Empowered youth entering the healthcare workforce:

- Enhances quality of care for diverse communities.
- Contributes to public health initiatives, especially in underserved areas.
- Increases innovation in health technologies and service delivery.
- Strengthens health systems and workforce capacity globally.

Conclusion

Youth empowerment in the medical field is a dynamic process of:

1. Self-discovery
2. Education and training
3. Practical exposure
4. Mentorship
5. Continuous skill development

As careers in health expand — from traditional clinical roles to digital health, public health leadership, and biotech innovation — youth equipped with knowledge, experience, and support can achieve meaningful and future-proof careers while positively impacting society.

Bibliography

1. Youth empowerment requires multifaceted educational, economic, and health support strategies.
2. Hospital-based mentoring programs influence youth healthcare career choice positively.
3. Mentorship organizations help create healthcare exposure and talent pipelines.
4. Healthcare jobs in India offer stability, digital roles, and women's empowerment.
5. Essential skills for community health — communication, leadership, emergency response.
6. Career guidance and mentoring help youth understand strengths and options.
7. Future healthcare careers include telemedicine, data analysis, and entrepreneurship.
8. Specialized healthcare training and fellowships expand career paths.
9. Young professionals play a critical role in public health workforce futures

CHICKEN POX

Ms. Rajkumari, Clinical Instructor, CCON, Bhopal



Introduction

Chickenpox, also known as varicella, is a highly contagious viral disease caused by the Varicella zoster virus. It is primarily a childhood illness, but it can affect people of any age who have not been vaccinated or previously infected.

Chickenpox is characterized by a generalized itchy rash, fever, and malaise. The rash progresses in stages—starting as red spots (macules), developing into raised bumps (papules), then turning into fluid-filled blisters (vesicles), and finally drying into scabs. One of the typical features of chickenpox is that lesions in different stages are seen at the same time on the body.

Definition

Chickenpox is an acute, self-limiting infectious disease marked by successive crops of pruritic vesicular lesion. Chickenpox is a contagious disease that causes fever and itchy red blisters on the skin, mainly affecting children. C vesicular lesions in different stages of development over the body.

Epidemiological Classification of Chickenpox

1. According to Causative Agent

- Viral disease
- Caused by Varicella zoster virus (DNA virus, herpesvirus family)

2. According to Mode of Transmission

- Airborne disease (droplet nuclei spread)
- Direct contact disease (contact with vesicular fluid)

3. According to Occurrence in Community

- Endemic disease (commonly present in many regions worldwide)
- May cause epidemic outbreaks in schools, hostels, and crowded areas
- Occasionally causes outbreaks in unvaccinated populations

4. According to Age Distribution

- Primarily a childhood disease
- More severe in:
 - Adults
 - Pregnant women
 - Immuno-compromised individuals

5. According to Communicability

- Highly communicable disease
- Secondary attack rate $\approx$ 80–90% among susceptible contacts
- Infectious from 1–2 days before rash until lesions crust

6. According to Preventability

- Vaccine-preventable disease
- Controlled through routine immunization programs

7. According to Duration

- Acute infectious disease
- Self-limiting in most healthy children.

History of chickenpox

Chickenpox is one of the oldest recognized infectious diseases. Its understanding has evolved significantly over centuries—from being confused with smallpox to becoming a vaccine-preventable disease.

1. Early Recognition (16th–18th Century)

- Chickenpox was first described in the 16th century.
- It was often confused with Smallpox because both diseases caused skin rashes.
- In the 18th century, English physician William Heberden clearly distinguished chickenpox from smallpox (around 1767).
- The name “chickenpox” possibly came from:
 - The mild nature of the disease (compared to smallpox), or
 - The rash resembling chicken pecks.

2. Discovery of Viral Cause (19th–20th Century)

- In the late 19th century, researchers recognized that chickenpox was caused by an infectious agent.
- In the early 20th century, it was confirmed to be caused by a virus.
- The causative organism was later identified as the Varicella zoster virus, a member of the herpes virus family.
- Scientists also discovered that the same virus causes Herpes zoster, which occurs due to reactivation of the virus later in life.

3. Vaccine Development (20th Century)

- A major milestone occurred in 1974, when Japanese scientist Michiaki Takahashi developed the first live attenuated varicella vaccine in Japan.
- The vaccine was later licensed in the United States in 1995 and gradually introduced in many countries.
- After vaccination programs started, there was a dramatic reduction in:
 - Disease incidence
 - Hospitalizations
 - Mortality

4. Modern Era (21st Century)

- Chickenpox is now considered a vaccine-preventable disease in many countries.
- Two-dose vaccination schedules are recommended for better protection.
- Ongoing research focuses on:
 - Long-term immunity
 - Breakthrough infections
 - Relationship between varicella vaccination and shingles incidence

Clinical Sign of Chickenpox

1. Prodromal Signs (1–2 Days Before Rash)

These signs appear before the skin rash, especially in older children and adults:

- Mild to moderate fever
- Malaise (general weakness)
- Headache
- Loss of appetite
- Body ache
- Irritability (in children)



2. Skin Rash (Most Important Clinical Sign)

The rash is the hallmark sign of chickenpox.

Characteristics of Rash:

- Starts on face and trunk
- Spreads to arms, legs, and scalp
- Appears in crops (new lesions for 3–5 days)
- Itchy (pruritic)

Stages of Lesions:

1. Macules – Red flat spots
2. Papules – Raised red bumps
3. Vesicles – Fluid-filled blisters (“dew drop on a rose petal”)
4. Pustules – Cloudy fluid
5. Crusts (Scabs) – Dry lesions

Different stages are seen at the same time, which is a key clinical feature.

3. General Physical Signs

- Temperature: 100–102°F (mild to moderate fever)
- Enlarged lymph nodes (sometimes)
- Restlessness due to itching

4. Severe Clinical Signs (Complications)

- In high-risk individuals:
 - Persistent high fever
 - Difficulty breathing (varicella pneumonia)
 - Severe headache, vomiting (encephalitis)
 - Secondary bacterial skin infection (redness, pus, swelling)

Management of Chickenpox

General (Supportive) Management

A. Isolation

- Keep patient isolated until all lesions crust over (usually 5–7 days).
- Prevent spread to others, especially pregnant women and newborns.

B. Rest and Hydration

- Encourage adequate bed rest.
- Give plenty of fluids to prevent dehydration.

C. Fever Management

- Give paracetamol for fever.
- Avoid aspirin (risk of Reye’s syndrome).
- Avoid ibuprofen in some cases (may increase skin complications).

D. Skin Care (To Reduce Itching)

- Apply calamine lotion.
- Give antihistamines (e.g., Cetirizine) for itching.
- Keep nails short to prevent scratching.
- Daily lukewarm bath with mild soap.

Antiviral Treatment: Acyclovir

Given in:

- Adults
- Immuno-compromised patients
- Severe cases
- Pregnant women (after medical advice)

- Most effective if started within 24–48 hours of rash appearance.

3 Management of Complications

Watch for:

- Secondary bacterial infection
- Pneumonia
- Encephalitis
- Dehydration

If infection occurs:

- Give appropriate antibiotics (if bacterial infection present).
- Hospitalization in severe cases.

4 Prevention

Vaccination

- Varicella vaccine is available.
- Given in 2 doses.
- Very effective in prevention.

Post-Exposure Prophylaxis

- Varicella Immunoglobulin (VZIG) for high-risk individuals.

Nursing Management

- Monitor vital signs.
- Assess rash progression.
- Maintain skin hygiene.
- Educate parents about:
 - Avoid scratching
 - Warning signs
 - Importance of vaccination

1. Symptomatic (Supportive) Treatment

Fever Control

- Paracetamol for fever and pain
- Avoid Aspirin (risk of Reye's syndrome)
- Avoid Ibuprofen (may increase skin complications)

Relief of Itching

- Apply Calamine lotion
- Give Antihistamines (Cetirizine, Diphenhydramine)
- Keep nails short to prevent scratching
- Lukewarm bath with mild soap or oatmeal bath

Hydration & Diet

- Encourage plenty of fluids
- Soft, bland diet if mouth ulcers present

2 Antiviral Treatment

Acyclovir

- Given in:
 - o Adults
 - o Severe cases
 - o Immunocompromised patients
 - o Pregnant women (under doctor supervision)
- Most effective if started within 24–48 hours of rash onset



Other antivirals (in selected cases):

- Valacyclovir
- Famciclovir

3. Treatment of Complications

Watch for:

- Secondary bacterial skin infection
- Pneumonia
- Encephalitis
- Dehydration

Management:

- Antibiotics for bacterial infection
- Hospital admission in severe cases
- IV fluids if dehydration present

4 Special Treatment (High-Risk Patients)

- Varicella vaccine for prevention
- Varicella Immunoglobulin (VZIG) for post-exposure protection in high-risk individuals

BIBLIOGRAPHY

1. Falcón DI, Dávila Báez DA, Duran Vera M, et al. Varicella Zoster Virus (VZV) Infection: A Comprehensive Review of Chickenpox. International Journal of Medical Science and Clinical Research Studies, 2023. A detailed review covering etiology, clinical features, treatment and prevention of chickenpox.
2. Lachiewicz AM, Srinivas ML. Varicella-zoster virus post-exposure management and prophylaxis: A review. Preventive Medicine Reports, 2019. Focuses on post-exposure interventions and prevention strategies.
3. Mustafa MB, Arduino PG, Porter SR. Varicella zoster virus: review of its management. Journal of Oral Pathology & Medicine, 2009. Discusses clinical management including antiviral therapy and complications.
4. Bollaerts K, Riera-Montes M, Heininger U, et al. A systematic review of varicella seroprevalence in European countries before universal childhood immunization. Epidemiology and Infection, 2017. Systematic review on disease prevalence prior to routine vaccination.
5. Shah HA, Meiwald A, Perera C, et al. Global Prevalence of Varicella-Associated Complications: A Systematic Review and Meta Analysis. Infectious Diseases and Therapy, 2023. Comprehensive analysis on complication rates worldwide.



A STEP TOWARDS HEALTHY LIVING: A PREVENTIVE STRATEGY

Ms. Kashish Daswani, Clinical Instructor, CCON, Bhopal



Introduction

Health is a state of complete physical, mental, and social well-being and not merely the absence of disease. In recent years, lifestyle-related disorders such as hypertension, diabetes mellitus, cardiovascular diseases, obesity, and stress disorders have increased rapidly. Most of these conditions are preventable through early lifestyle modification. Healthy living involves adopting behaviors that promote overall well-being and reduce disease risk. Preventive strategies focus on eliminating risk factors before disease develops.

Therefore, lifestyle modification is considered one of the most effective and economical approaches to improve public health outcomes.

Benefits of Healthy Living

- Reduces risk of cardiovascular diseases
- Prevents obesity and diabetes
- Improves immune function
- Enhances mental well-being
- Increases life expectancy
- Improves quality of life

Key Components of A Healthy Lifestyle

- Balanced Diet – Adequate intake of fruits, vegetables, whole grains, proteins, and healthy fats.
- Regular Physical Activity – At least 30 minutes of moderate exercise daily.
- Stress Management – Yoga, meditation, relaxation techniques.
- Adequate Sleep – 7–8 hours of quality sleep per night.
- Avoidance of Harmful Habits – No tobacco use and limitation of alcohol consumption.
- Regular Health Check-ups – Early detection and screening of diseases.

Role of Nurse in Promoting Healthy Lifestyle

- Health Educator – Educates individuals and families about diet, exercise, and preventive care.
- Counselor – Guides patients in behavior modification and stress management.
- Motivator – Encourages adherence to lifestyle changes.
- Community Advocate – Conducts awareness programs in community settings.
- Screening Facilitator – Assists in early detection of hypertension, diabetes, and obesity.
- Role Model – Demonstrates healthy lifestyle behaviors in professional practice.

Conclusion

Healthy living is a powerful preventive strategy that can significantly reduce the incidence of non-communicable diseases. Adoption of balanced nutrition, regular exercise, stress management, and avoidance of harmful habits leads to improved physical and mental health. Nurses play a crucial role in promoting healthy behaviors through education, counseling, and community outreach.

References

1. Yusuf S, Joseph P, Rangarajan S, et al. Modifiable risk factors, cardiovascular disease, and mortality (PURE): a prospective cohort study. *Lancet*. 2019;393(10184):2052-2061.
2. Knowler WC, Fowler SE, Hamman RF, et al. 10-year follow-up of diabetes incidence and weight loss in the Diabetes Prevention Program Outcomes Study. *Lancet Diabetes Endocrinol*. 2018;6(3):200-210.
3. Gupta R, Xavier D. Hypertension: The most important non communicable disease risk factor in India. *J Hum Hypertens*. 2018;32(10):565-572.

MENTAL HEALTH AWARENESS

Ms. Mahima, Clinical Instructor, CCON, Bhopal



Introduction

Mental health awareness in nursing refers to understanding, promoting, and protecting the psychological well-being of nurses as well as patients. Nursing is a demanding profession that requires emotional strength, empathy, critical thinking, and physical stamina. Continuous exposure to illness, suffering, emergencies, and long working hours makes nurses vulnerable to mental health challenges. Therefore, awareness and preventive strategies are essential.

Importance of mental health in nursing

For Nurses

- Improves job satisfaction
- Enhances concentration and decision-making
- Reduces medical errors
- Prevents burnout and absenteeism

For Patients

- Better communication and empathy
- Improved recovery outcomes
- Higher patient satisfaction
- Safe and quality care delivery

Common mental health issues in nurses

- Stress
- Caused by workload, emergencies, and time pressure.
- Anxiety
- Fear of making mistakes, handling critical cases, or workplace conflicts.
- Depression
- Persistent sadness, lack of motivation, emotional exhaustion.
- Burnout Syndrome
- Characterized by:
- Emotional exhaustion
- Depersonalization (lack of empathy)
- Reduced personal accomplishment
- V. Compassion Fatigue
- Emotional strain from caring for suffering patients.
- VI Sleep Disorders
- Due to night shifts and irregular schedules.

Causes of mental health problems in nursing

- Long duty hours
- Staff shortage
- Heavy patient load
- Workplace violence or harassment
- Emotional attachment to patients
- Lack of appreciation
- Poor management support

Warning signs of poor mental health

- Irritability
- Mood swings
- Frequent absenteeism
- Low productivity
- Headaches and fatigue
- Social withdrawal
- Loss of interest in work
- Early identification helps prevent serious complications.

Strategies to promote mental health awareness

- Individual Level
- Practice yoga and meditation
- Maintain healthy diet
- Regular physical exercise
- Adequate sleep (7–8 hours)
- Time management skills
- Positive thinking and gratitude journaling
- Workplace Level
- Counseling services
- Employee assistance programs

Role of nurses in promoting patient mental health

- Active listening
- Providing emotional reassurance
- Patient education
- Identifying early symptoms of mental disorders
- Reducing stigma related to mental illness
- Referring patients to mental health professionals

Government & organizational initiatives (india)

- National Mental Health Programme (NMHP)
- Mental Healthcare Act, 2017
- Workplace wellness policies in hospitals
- These initiatives aim to promote mental health services and reduce discrimination.

Conclusion

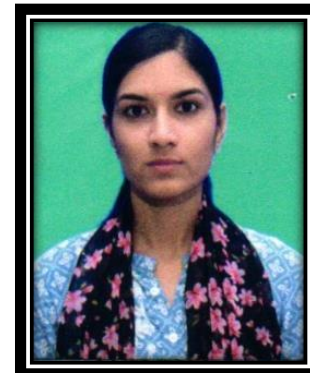
Mental Health Awareness in Nursing is essential for maintaining a strong healthcare system. A mentally healthy nurse provides compassionate, efficient, and safe patient care. Awareness, early intervention, supportive workplace culture, and self-care practices are key to promoting mental well-being in the nursing profession.

Reference -

1. World Health Organization. (2022). World mental health report: Transforming mental health for all. Geneva: WHO Press.
2. Indian Nursing Council. (2021). Guidelines for mental health nursing practice. New Delhi: INC.
3. American Nurses Association. (2014). Psychiatric-Mental Health Nursing: Scope and Standards of Practice (2nd ed.). Silver Spring, MD: ANA.
4. Townsend, Mary C.. (2018). Psychiatric Mental Health Nursing: Concepts of Care in Evidence-Based Practice (9th ed.). Philadelphia: F.A. Davis Company.
5. Varcarolis, Elizabeth M.. (2021). Foundations of Psychiatric-Mental Health Nursing: A Clinical Approach (9th ed.). St. Louis: Elsevier.

DIGITAL ADDICTION & SCREEN TIME IN CHILDREN

Ms. Apeksha Jain, M.Sc. (N) I Year, CCON, Bhopal



Introduction

In the modern era, digital devices such as smartphones, tablets, computers, and television have become an essential part of children's daily lives. Online education, gaming, social media, and entertainment have significantly increased screen exposure. While technology offers many benefits, excessive and uncontrolled use can negatively affect a child's physical, psychological, and social development. This growing concern is known as digital addiction.

Definition

Digital Addiction:-

A behavioral condition characterized by excessive, compulsive, and uncontrolled use of digital devices (internet, smartphones, social media, online games) that interferes with daily life activities, academic performance, and overall health.

Screen Time:-

The total amount of time spent using devices with screens such as mobile phones, computers, tablets, and televisions.

Causes of Digital Addiction

- Easy access to smartphones and internet
- Online gaming and social media attraction
- Online classes and academic requirements
- Lack of parental supervision
- Peer pressure
- Loneliness or boredom
- Working parents with limited monitoring time

Signs and Symptoms

1. Psychological Effects:

- Irritability and mood swings
- Anxiety and stress
- Symptoms of depression
- Poor concentration and attention
- Social withdrawal
- Low self-esteem

2. Physical Effects:

- Sleep disturbances
- Headache and eye strain
- Neck and back pain
- Obesity due to reduced physical activity
- Poor posture

3. Academic Effects:

- Decline in academic performance
- Lack of interest in studies
- Incomplete homework
- Reduced classroom participation



Risk Groups

- Adolescents (10–19 years)
- Children in urban areas
- Children with unsupervised internet access
- Children of working parents
- Children with limited outdoor activities

Recommended Screen Time Guidelines

Below 2 years: Screen time should be avoided

- 2–5 years: Maximum 1 hour per day (supervised)
- 6–12 years: 1–2 hours per day with monitoring
- Adolescents: Balanced and controlled usage

Complications

- Internet Gaming Disorder
- Severe depression and anxiety
- Sleep disorders
- Social isolation
- Academic failure
- Behavioral problems

Prevention and Management

For Parents:

- Set clear rules and time limits
- Encourage outdoor activities and hobbies
- Maintain device-free family time
- Avoid giving personal devices at an early age
- Keep screens out of bedrooms
- Monitor online content

For Schools:

- Conduct digital awareness programs
- Promote sports and extracurricular activities
- Provide counseling services

Role of Nurses

- Early identification of symptoms
- Assessment of screen time habits
- Health education for parents and children
- Counseling and stress management techniques
- Referral to mental health professionals if needed

Conclusion

Digital technology plays an important role in education and communication; however, excessive screen time can negatively impact a child's mental, physical, and social well-being. A balanced and supervised approach to digital usage is essential. Parents, teachers, and healthcare professionals must work together to promote healthy digital habits and prevent digital addiction among children.



References

1. World Health Organization. (2019). International classification of diseases for mortality and morbidity statistics (11th Revision). World Health Organization.
<https://www.who.int/standards/classifications/classification-of-diseases>
2. American Academy of Pediatrics. (2016). Media and young minds. *Pediatrics*, 138(5), e20162591.
<https://doi.org/10.1542/peds.2016-2591>
3. Jean M. Twenge, J. M., & W. Keith Campbell. (2018). Associations between screen time and lower psychological well-being among children and adolescents: Evidence from a population-based study. *Preventive Medicine Reports*, 12, 271–283.
<https://doi.org/10.1016/j.pmedr.2018.10.003>
4. Indian Journal of Community Medicine. (2020). Problematic internet use among school going adolescents in India. *Indian Journal of Community Medicine*, 45(3), 321–325.
5. JAMA Pediatrics. (2019). Association between screen time and children's cognitive and behavioral outcomes: A systematic review. *JAMA Pediatrics*, 173(3), 244–250.
<https://doi.org/10.1001/jamapediatrics.2018.5056>

STRESS EXPERIENCE DURING MENSTRUAL CYCLE AMONG ADOLESCENT GIRLS

Ms. Khomeswari Bhopche, M.Sc. (N) I Year, CCON, Bhopal



Introduction

The menstrual period is one of the crucial periods in adolescent girls, the reported prevalence of about 20 to 40% shows that a significant group of adolescents may be affected by stress and related problems. Reports of stress during menstrual cycle among adolescents in Western Countries indicate a prevalence ranging from 14-40%. Some of the stress-related problems like mood depression, feeling of hopelessness, lethargy, and excessive fatigability may create serious negative consequences for the adolescents, their families, and the social relationship, including low self-esteem, low tolerance to stress, and feeling of inadequacy. Adolescence is a critical transitional period between childhood and adulthood, usually ranging from 10 to 19 years of age. This stage is characterized by rapid physical growth, hormonal changes, emotional development, and the formation of personal identity. For girls, adolescence brings the beginning of menarche, which is the first menstrual period. Menarche is a natural biological process, yet it is often surrounded by myths, taboos, fear, and lack of awareness, particularly in developing societies. Many adolescent girls enter this phase without adequate knowledge about menstruation, leading to confusion, anxiety, and unhealthy practices.

Definition

1. **Stress (Woman)** : A woman is an adult human female who has reached physical and reproductive maturity and plays an important biological, social, and psychological role in society. Biologically, a woman is characterized by female reproductive organs such as ovaries, uterus, and vagina, and the ability to menstruate and conceive.
2. **Menstrual Cycle** : The menstrual cycle is a normal physiological process in females of reproductive age, involving cyclic hormonal changes that prepare the uterus for pregnancy each month. If pregnancy does not occur, the uterine lining sheds in the form of menstrual bleeding. The average cycle length is about 28 days, but it can normally range from 21–35 days.
3. **Adolescence** According to the World Health Organization (WHO): “Adolescence is the period of life between 10 and 19 years of age.” It is a transitional stage between childhood and adulthood marked by rapid physical growth, hormonal changes, emotional development, and sexual maturation.

Causes of Menstrual Problems in Adolescents

1. **Hormonal Imbalance**
 - Immaturity of the hypothalamic–pituitary–ovarian axis.
 - Irregular secretion of estrogen and progesterone.
 - Common in first 2–3 years after menarche.
2. **Anovulatory Cycles**
 - Ovulation does not occur regularly in early adolescence.
 - Leads to irregular periods or heavy bleeding.
3. **Polycystic Ovarian Syndrome (PCOS)**
 - A common endocrine disorder in adolescents.
 - Causes irregular menstruation, obesity, acne, and excessive hair growth.
4. **Stress and Emotional Factors**
 - Academic pressure, family issues, anxiety.
 - Stress affects hormonal balance and delays periods.
5. **Nutritional Deficiency**
 - Iron deficiency anemia.
 - Poor diet or junk food habits.
 - Deficiency of essential vitamins and minerals.

6. Excessive Weight Loss or Eating Disorders

- Anorexia nervosa, crash dieting.
- Low body fat affects estrogen production.
- Can lead to amenorrhea (absence of menstruation).

7. Obesity

- Excess body fat increases estrogen levels.
- Causes irregular cycles and heavy bleeding.

Signs and Symptoms of Menstrual Problems in Adolescents :

1. Absence of menstruation (amenorrhea)
2. Heavy menstrual bleeding (menorrhagia)
3. Scanty menstrual flow
4. Severe lower abdominal pain (dysmenorrhea)
5. Backache during menstruation
6. Nausea or vomiting during periods
7. Headache and fatigue
8. Mood swings and irritability
9. Acne or excessive hair growth (hormonal imbalance signs)

Complications of Menstrual Problems in Adolescents :

1. Iron deficiency anemia
2. Severe weakness and fatigue
3. Reproductive tract infections
4. Infertility in later life
5. Chronic pelvic pain
6. Endometrial hyperplasia (due to prolonged irregular cycles)
7. Psychological problems (anxiety, depression)
8. Poor academic performance
9. Social withdrawal and low self-esteem
10. Increased risk of metabolic disorders (especially in PCOS)

Prevention and Management of Menstrual Problems in Adolescents :

A. Prevention

1. Health Education

- o Provide proper knowledge about menstruation before menarche.
- o Clear myths and misconceptions.

2. Balanced Diet

- o Iron-rich foods (green leafy vegetables, jaggery, dates).
- o Adequate protein, vitamins, and minerals.

3. Regular Physical Activity

- o Moderate exercise helps regulate hormones.
- o Avoid excessive strenuous exercise.

4. Maintain Healthy Body Weight

- o Prevent obesity and extreme weight loss.
- o Encourage healthy lifestyle habits.

5. Menstrual Hygiene Practices

- o Use clean sanitary pads/menstrual cups.
- o Change pads every 4–6 hours.
- o Maintain genital hygiene.



6. Stress Management

- o Yoga, meditation, counseling.
- o Family and peer support.

7. Regular Health Check-ups

- o Early detection of thyroid disorders, anemia, or PCOS.

B. Management

1. Medical Treatment

- Iron supplements for anemia.
- Hormonal therapy for irregular cycles (as prescribed).
- Pain relievers for dysmenorrhea.

2. Dietary Management

- Increase iron and calcium intake.
- Adequate hydration.

3. Lifestyle Modification

- Regular sleep pattern.
- Balanced daily routine.

4. Treatment of Underlying Causes

- Management of thyroid disorders.
- Proper management of PCOS.

5. Counselling and Psychological Support

- Emotional support for anxiety and mood changes.
- School health programs.

6. Referral to Specialist

- Severe bleeding, prolonged amenorrhea, or severe pain requires gynecological consultation.

Role of Nurse in Menstrual Health of Adolescents :

1. Health Education – Teach adolescents about normal menstrual cycle and body changes.
2. Menstrual Hygiene Promotion – Instruct on proper use and disposal of sanitary pads and personal hygiene.
3. Nutritional Guidance – Advise on iron-rich and balanced diet to prevent anemia.
4. Early Identification of Problems – Assess irregular cycles, excessive bleeding, or severe pain.
5. Counselling and Emotional Support – Provide reassurance and reduce fear, myths, and anxiety.
6. Screening and Assessment – Check for anemia, PCOS symptoms, thyroid issues, or infections.
7. Medication Administration – Administer prescribed drugs like iron supplements or hormonal therapy.

Conclusion

Menstrual health is an important aspect of adolescent development and future womanhood. The onset of menstruation marks a significant biological and psychological transition in a girl's life. Although menstrual irregularities are common during adolescence due to hormonal immaturity, proper knowledge, healthy lifestyle, and timely medical care can prevent complications. Lack of awareness, poor hygiene practices, nutritional deficiencies, and social taboos may negatively affect the physical and emotional well-being of adolescent girls. Therefore, education, family support, school health programs, and proper nursing care play a vital role in promoting menstrual health.

References:

1. Anil, et al. Prevalence of stress during menstrual cycle among adolescent's girls, Gwalior, India, International journal of Obstetric & Gynecology. 20 15; 2(4):26-28.
2. Latha P. Evaluate the effectiveness of self-care interventions on cyclic pelvic pain management among adolescent girls in selected nursing hostels, Nellore, A.P. International journal of health sciences and research. 2017; 7 (6):257-261 .



3. Uswala Valsala Francis. Menarche and Menstrual problems. African Journal of reproductive health". September. 2010; 3(1):4-26.
4. Aruna G, Latha P. Effectiveness of self-care intervention son menstrual irregularities among adolescent girls in selected nursing college, Nellore, International Journal Applied Research. 2017; 3(1 1):242-245.
5. Latha P. A study to assess the effectiveness of mentha spicata paste on dysmenorrhea among adolescent girls, in Narayana College of Nursing, Narayana Nursing journal 2017- 4 (1:19-20.

IMPOSTER SYNDROME

Ms. Muskan Kaushal, M.Sc. (N) I Year, CCON, Bhopal



Introduction

In today's competitive world, success is often celebrated publicly, but self-doubt is silently endured. Many high-achieving individuals—students, professionals, and even experts—experience a persistent fear of being exposed as a “fraud.” This psychological experience is known as Imposter Syndrome (also called the Imposter Phenomenon). Despite objective achievements, individuals feel they do not deserve their success and attribute accomplishments to luck or external factors.

The term was first introduced in 1978 by psychologists Pauline Rose Clance and Suzanne Imes, who observed this pattern among high-achieving women. However, later research confirmed that imposter syndrome affects both men and women across professions.

Meaning and definition

Imposter Syndrome is a psychological pattern in which individuals doubt their skills, talents, or accomplishments and have a persistent internalized fear of being exposed as incompetent, despite evidence of their competence. It is not classified as a mental disorder, but it is strongly associated with anxiety, stress, low self-esteem, and burnout.

Common signs and symptoms

- Persistent self-doubt
- Fear of failure
- Difficulty accepting praise
- Attributing success to luck
- Overworking to prove competence
- Comparing oneself negatively with others
- Individuals may appear confident externally but internally struggle with feelings of inadequacy.

Types of Imposter Syndrome

According to research, imposter feelings may present in different forms:

- The Perfectionist – Sets extremely high standards and feels like a failure if goals are not perfectly achieved.
- The Expert – Feels inadequate unless they know everything about a subject.
- The Natural Genius – Believes success should come easily; feels ashamed if effort is required.
- The Soloist – Hesitates to ask for help, believing it signals weakness.
- The Super person – Works excessively hard to prove worth.

Causes of Imposter Syndrome

Several factors contribute to the development of imposter feelings:

- High parental expectations
- Academic pressure
- Competitive environments
- Social comparison through social media
- Workplace culture lacking feedback or mentorship

In healthcare settings, especially among nurses and medical interns, new responsibilities and fear of making mistakes can intensify imposter feelings.

Impact on Mental Health and Professional Performance

Imposter syndrome can have serious consequences:

- Increased stress and anxiety
- Burnout

- Reduced job satisfaction
- Avoidance of leadership roles
- Decreased confidence in decision-making

In professions like nursing and healthcare, lack of confidence may indirectly affect patient care quality.

Imposter Syndrome in Students and Healthcare Professionals

Research shows that nursing students and newly recruited nurses often experience imposter feelings during clinical postings. Transition from theory to practice, fear of committing errors, and evaluation by seniors contribute to self-doubt.

Addressing imposter syndrome in educational and hospital settings is essential to promote resilience, professional growth, and mental well-being.

Coping Strategies and Interventions

- Cognitive Restructuring – Challenging negative self-talk.
- Self-Reflection – Keeping a success journal.
- Mentorship Programs – Guidance from experienced professionals.
- Peer Support Groups – Sharing experiences reduces isolation.
- Self-Compassion Practice – Accepting imperfections as part of growth.
- Professional Counseling – If anxiety becomes overwhelming.

Organizations can also conduct workshops and provide psychological support services to reduce stigma.

Conclusion

Imposter Syndrome is a silent psychological struggle faced by many capable individuals. Although it is not a clinical disorder, its impact on mental health and professional performance can be significant. Recognizing these feelings and addressing them through awareness, mentorship, and supportive environments can help individuals transform self-doubt into self-confidence. Success is not luck—it is earned. Understanding this truth is the first step in overcoming imposter syndrome.

References

1. Clance, P. R., & Imes, S. A. (1978). The imposter phenomenon in high achieving women: Dynamics and therapeutic intervention. *Psychotherapy: Theory, Research & Practice*, 15(3), 241–247. <https://doi.org/10.1037/h0086006>
2. Clance, P. R. (1985). *The imposter phenomenon: Overcoming the fear that haunts your success*. Peachtree Publishers.
3. Sakulku, J., & Alexander, J. (2011). The imposter phenomenon. *International Journal of Behavioral Science*, 6(1), 73–92.
4. Bravata, D. M., Watts, S. A., Keefer, A. L., Madhusudhan, D. K., Taylor, K. T., Clark, D. M., Nelson, R. S., Cokley, K. O., & Hagg, H. K. (2020). Prevalence, predictors, and treatment of imposter syndrome: A systematic review. *Journal of General Internal Medicine*, 35(4), 1252–1275. <https://doi.org/10.1007/s11606-019-05364-1>
5. Neureiter, M., & Traut-Mattausch, E. (2016). An inner barrier to career development: Preconditions of the imposter phenomenon and consequences for career development. *Frontiers in Psychology*, 7, 48. <https://doi.org/10.3389/f>
6. Bernard, N. S., Dollinger, S. J., & Ramaniah, N. V. (2002). Applying the big five personality factors to the imposter phenomenon. *Journal of Personality Assessment*, 78(2), 321–333. https://doi.org/10.1207/S15327752JPA7802_07
7. Cokley, K., McClain, S., Enciso, A., & Martinez, M. (2013). An examination of the impact of minority status stress and imposter feelings on the mental health of diverse ethnic minority college students. *Journal of Multicultural Counseling and Development*, 41(2), 82–95.
8. Cowman, S. E., & Ferrari, J. R. (2002). “Am I for real?” Predicting imposter tendencies from self-handicapping and affective components. *Social Behavior and Personality*, 30(2), 119–125.

ROBOTIC SURGERY

Ms. Neelu Kushwaha, M.Sc. (N) I Year, CCON, Bhopal



Introduction

Robotic surgery, also known as robot-assisted surgery, is an advanced form of minimally invasive surgery in which surgeons use robotic systems to perform complex procedures with enhanced precision, flexibility, and control. One of the most widely used robotic surgical platforms is the da Vinci Surgical System, developed by Intuitive Surgical. Although the word “robotic” is used, the robot does not perform surgery independently. The surgeon remains fully in control at all times.

Evolution of Robotic Surgery

Early Development

The concept of robotic assistance in surgery began in the late 20th century. The technology was initially developed to:

- Improve precision
- Reduce surgeon fatigue
- Enable remote surgery (telesurgery)

Early systems were developed for military and space applications. Eventually, commercial systems like the da Vinci Surgical System revolutionized the field in the early 2000s.

Modern Advancements

Modern robotic systems now offer:

- Enhanced 3D high-definition cameras
- Tremor filtration
- Motion scaling (large hand movements translated into tiny precise movements)
- AI-assisted visualization tools

Robotic surgery has expanded across multiple medical specialties globally.

Components of a Robotic Surgical System

A typical robotic surgery setup consists of three major components:

1. Surgeon Console

- The surgeon sits at a console away from the operating table. From here:
- They view a magnified 3D image of the surgical field.
- They control robotic arms using hand and foot controls.

2. Patient Cart (Robotic Arms)

- Positioned beside the patient:
- Contains 3–4 robotic arms.
- One arm holds a high-definition camera.
- Other arms hold surgical instruments.

3. Vision System

- Provides high-resolution 3D imaging.
- Magnifies the surgical area up to 10–15 times.
- Enhances depth perception.

How Robotic Surgery Works

Here is a simplified step-by-step explanation:

1. Small incisions (usually 1–2 cm) are made.
2. Robotic instruments and camera are inserted.
3. Surgeon sits at console and views the surgical site in 3D.
4. The surgeon's hand movements are translated into precise micro-movements of the robotic instruments.

Specialties Using Robotic Surgery

Robotic surgery is used in many medical fields:

1. Urology
 - Prostate removal (Prostatectomy)
 - Kidney surgery
2. Gynaecology
 - Hysterectomy
 - Fibroid removal
 - Endometriosis treatment
3. Cardiac Surgery
 - Mitral valve repair
 - Coronary artery bypass
4. General Surgery
 - Gallbladder removal
 - Hernia repair
 - Colorectal surgery
5. Orthopaedic Surgery
 - Used in joint replacements and spine surgery.

Advantages of Robotic Surgery

Robotic surgery offers several benefits compared to traditional open surgery:

1. Smaller Incisions
2. Less Blood Loss
3. Less Pain
4. Faster Recovery
5. Shorter Hospital Stay
6. Greater Precision
7. Better Visualization

Disadvantages and Limitations

Despite its benefits, robotic surgery also has limitations:

1. High cost
2. Longer setup time
3. Training required
4. Not suitable for all cases

Safety of Robotic Surgery

Robotic surgery is generally safe when performed by trained surgeons. Safety features include:

- Motion scaling
- Tremor filtration
- Built-in safety alerts
- System checks before operation

Complications are similar to other minimally invasive surgeries:

- Infection
- Bleeding
- Reaction to anaesthesia

Studies show comparable or better outcomes in many procedures.

Training for Robotic Surgeons

To perform robotic surgery, surgeons must:

1. Complete basic surgical training.
2. Undergo robotic system certification.
3. Practice in simulation labs.
4. Perform supervised procedures.
5. Gain credentialing at hospitals.

Continuous training ensures patient safety.

Robotic Surgery in India

India has rapidly adopted robotic surgery in major cities like:

- Delhi
- Mumbai
- Chennai
- Hyderabad

Leading hospitals use systems such as the da Vinci Surgical System.

Robotic surgery in India is:

- More affordable compared to Western countries.
- Increasingly accessible in private hospitals.

Future of Robotic Surgery

The future is highly promising. Emerging developments include:

AI Integration

- AI-assisted decision-making
- Real-time tissue identification

Remote Surgery (Telesurgery)

The first remote surgery was performed in 2001 (Lindbergh Operation).

- Surgeons operating from different cities or countries.

Smart Robotics

- Autonomous suturing assistance
- Enhanced imaging guidance

Miniaturization

- Smaller robots for microsurgery.

Ethical Considerations

- High treatment cost
- Accessibility inequality
- Dependence on technology
- Risk of system malfunction

Proper regulation and training address these issues.

Conclusion

Robotic surgery represents one of the most significant technological advancements in modern medicine. It enhances surgical precision, reduces patient trauma, and improves recovery time. While it is expensive and requires specialized training, its benefits often outweigh its limitations in suitable cases. With continued advancements in AI and robotics, the future of robotic surgery.

TECHNOLOGY IN SOCIETY

Ms. Sonali Malviya, M.Sc. (N) I Year, CCON, Bhopal



Introduction

Technology and society are deeply interconnected and continuously influence each other. Technology refers to the tools, machines, systems, and methods developed through scientific knowledge to solve problems and make human life easier. Society, on the other hand, is a community of people who live together, share common values, traditions, institutions, and interact with one another. From the earliest stone tools used by primitive humans to today's advanced artificial intelligence and digital networks, technology has always played a crucial role in shaping human civilization. Throughout history, technological advancements have transformed the way people live, work, communicate, and think. The invention of the wheel improved transportation, the printing press spread knowledge widely, and the industrial revolution changed economic and social structures. In the modern era, computers, the internet, smartphones, and medical innovations have revolutionized almost every aspect of daily life. Education has become more accessible through online learning platforms, healthcare has improved with advanced medical equipment, and communication has become instant through social media and digital devices.

Definition of Technology and Society

Technology:

Technology is the practical application of scientific knowledge, skills, tools, machines, and systems to solve problems and make human life easier and more efficient.

Society:

Society is a group of people living together in an organized community who share common culture, values, laws, and institutions.

Technology and Society:

Technology and society refer to the relationship between technological developments and their impact on social life. It explains how technology influences human behavior, culture, economy, and social structures, and how society, in turn, shapes the development and use of technology.

Impact of Technology on Society

1. **Communication** : Technology has improved communication through mobile phones, social media, email, and video calls. People can connect instantly across the world.
2. **Education** : Online classes, digital books, and smart boards have made learning easier and more accessible.
3. **Healthcare** : Advanced medical equipment, telemedicine, and new treatments have improved health services and increased life expectancy.
4. **Transportation** : Modern vehicles, trains, and airplanes make travel faster and safer.
5. **Economy and Employment** : Technology creates new job opportunities but also replaces some traditional jobs through automation.

Conclusion of Technology and Society

In conclusion, technology and society are closely connected and continuously influence each other. Technology has transformed every aspect of human life, including communication, education, healthcare, transportation, and the economy. It has made life more comfortable, increased productivity, and provided greater access to information and opportunities. At the same time, society plays an important role in guiding how technology is developed and used according to human needs and values. However, along with its many benefits, technology also brings challenges such as unemployment due to automation, privacy concerns, environmental problems, and social isolation. Therefore, it is important to use technology responsibly and ethically. Proper planning, awareness, and regulation can help reduce its negative effects.



Overall, technology is a powerful tool for social progress. When used wisely, it can improve the quality of life and contribute to the development of a better and more advanced society.

Bibliography –

1. Volti, R. (2017). Society and Technological Change. Worth Publishers.
2. McGinn, R. E. (1991). Science, Technology, and Society. Prentice Hall.
3. Ritzer, G. (2010). Globalization: A Basic Text. Wiley-Blackwell.
4. Bijker, W. E., Hughes, T. P., & Pinch, T. (1987). The Social Construction of Technological Systems. MIT Press.
5. Webster, F. (2006). Theories of the Information Society. Routledge.
6. Macionis, J. (2018). Sociology. Pearson Education.

ZOONOTIC DISEASE

Ms. Saumya Kumari, M.Sc. (N) I Year, CCON, Bhopal



Introduction

Zoonotic diseases, also known as zoonoses, are infectious diseases that are naturally transmitted between animals and humans. These diseases can be caused by a wide range of pathogens, including bacteria, viruses, parasites, and fungi. Transmission may occur through direct contact with infected animals, consumption of contaminated food or water, bites from vectors such as mosquitoes or ticks, or exposure to contaminated environments.

Zoonotic diseases have been recognized since ancient times, but their importance has increased significantly in recent decades due to factors such as population growth, urbanization, deforestation, climate change, globalization, and increased human-animal interaction. According to the World Health Organization, more than 60% of emerging infectious diseases in humans are zoonotic in origin, highlighting their major impact on global public health.

Common examples of zoonotic diseases include rabies, tuberculosis, brucellosis, avian influenza, COVID-19, and Ebola virus disease. These diseases pose serious health, social, and economic challenges, particularly in developing countries where close contact between humans and animals is common and healthcare resources may be limited.

Understanding zoonotic diseases is essential for prevention, early detection, and effective control. A coordinated “One Health” approach—integrating human health, animal health, and environmental health—is crucial to reduce the risk of zoonotic disease outbreaks and protect global health.

Definition

According to the World Health Organization, A zoonotic disease is defined as an infectious disease that is naturally transmitted between vertebrate animals and human beings.

According to the Centers for Disease Control and Prevention, “Zoonotic diseases are diseases that can spread between animals and people.”

Epidemiological Classification of Zoonoses

1. Bacterial
2. Viral
3. Parasitic
4. Mycotic or unconventional agent (prions)

ZOONOTIC DISEASE OF CATTLE PRESENT IN THE WORLDWIDE

1. Anthrax
2. Rabies
3. E.coli
4. Salmonella
5. Tuberculosis
6. Ringworm
7. Q fever
8. Giardia
9. Leptospirosis
10. Listeriosis
11. Pseudocowpox
12. Dermatophilosis
13. Vesicular stomatitis

History of Zoonotic Diseases –

Zoonotic diseases have existed since ancient times, beginning when early humans hunted animals and later domesticated them. Close contact with animals led to the spread of infections from animals to humans. During the medieval period, poor sanitation and urban crowding caused major outbreaks such as the Black Death. With scientific progress in the 19th century, the animal origin of many diseases was discovered, leading to better prevention and control. In the modern era, factors like deforestation, wildlife trade, climate change, and global travel have increased the emergence of zoonotic diseases. Today, global health organizations like the World Health Organization emphasize integrated prevention through the One Health approach.

Rabies

Rabies is a fatal viral zoonotic disease that affects the central nervous system of humans and other warm-blooded animals. It is caused by the rabies virus (a Lyssavirus) and is most commonly transmitted to humans through the bite, scratch, or lick on broken skin from an infected animal, especially dogs.

According to the World Health Organization, rabies is almost always fatal once clinical symptoms appear, but it is 100% preventable through timely post-exposure prophylaxis.

Reservoir animals:

- Dogs (most common in developing countries)
- Bats, foxes, raccoons, wolves
- Mode of transmission:
 - Bite or scratch from a rabid animal
 - Saliva contact with open wounds or mucous membranes

People at Risk

Rabies can affect people of all ages, but certain groups are at higher risk due to increased exposure to animals or limited access to preventive care.

1. Children

- More likely to play with animals
- May not report minor bites or scratches
- High risk in rabies-endemic areas

2. People Living in Rabies-Endemic Areas

- Especially in rural and semi-urban regions
- Close contact with stray or unvaccinated dogs

3. Animal Handlers and Occupational Groups

- Veterinarians
- Animal handlers and dog catchers
- Livestock farmers
- Zoo workers
- Laboratory staff handling rabies virus

4. Pet Owners (Unvaccinated Animals)

- Risk increases if pets are not immunized
- Handling sick or aggressive animals

5. Wildlife Workers and Travelers

- Forest workers
- Wildlife researchers
- Travelers to areas with poor rabies control

6. People Exposed to Stray Dogs or Wild Animals

- Dog bites (major source in India)
- Bites from bats, foxes, raccoons, or monkeys

According to the World Health Organization, children under 15 years of age account for a large proportion of rabies deaths globally, emphasizing the need for awareness and prevention.

Transmission of Rabies

Rabies is transmitted to humans through the bite, scratch, or lick on broken skin or mucous membranes from an infected animal, mainly dogs. The virus is present in the saliva of rabid animals. According to the World Health Organization, rabies is not spread through intact skin or casual contact.

How Rabies Disease Affects Animals ?

Rabies affects animals by attacking the central nervous system. After entering the body through a bite or wound, the virus spreads to the brain, causing behavioral changes such as aggression or abnormal calmness, excessive salivation, difficulty in swallowing, and paralysis. Animals may show furious or dumb (paralytic) forms of rabies. Once symptoms appear, the disease is almost always fatal.

According to the World Health Organization, rabies leads to nearly 100% death in animals after the onset of clinical signs.

Clinical Signs of Rabies

Rabies produces progressive neurological signs in both animals and humans. In animals, the disease usually passes through characteristic stages.

Clinical Signs in Animals

1. Prodromal Stage

- Change in behavior (restlessness or unusual calmness)
- Fever
- Loss of appetite
- Increased sensitivity to light and sound

2. Furious (Excitative) Stage

- Aggressiveness and biting tendency
- Roaming behavior
- Excessive salivation and foaming at the mouth
- Difficulty in swallowing

3. Paralytic (Dumb) Stage

- Weakness and paralysis (starting from hind limbs)
- Drooping jaw
- Inability to swallow
- Coma and death due to respiratory failure

Prevention Measures of Rabies

Rabies is a preventable zoonotic disease if appropriate measures are taken at the individual, community, and public health levels.

1. Prevention in Humans

- Immediate and thorough washing of bite wounds with soap and running water for at least 15 minutes
- Application of antiseptics (iodine or alcohol)
- Timely post-exposure prophylaxis (PEP) including rabies vaccination
- Administration of rabies immunoglobulin (RIG) for severe (Category III) exposures
- Pre-exposure vaccination for high-risk groups (veterinarians, animal handlers, laboratory staff)

2. Prevention in Animals

- Mass vaccination of dogs (most effective measure)
- Control of stray dog population
- Regular vaccination of pets

- Isolation and observation of suspected rabid animals
- 3. Community and Public Health Measures
 - Public education about dog bite prevention and wound care
 - Reporting of animal bites to health authorities
 - Strengthening surveillance systems
 - Collaboration between veterinary and human health sectors (One Health approach)

According to the World Health Organization, vaccinating at least 70% of the dog population can effectively break the transmission cycle of rabies.

Clinical Symptoms of Rabies in Humans – points

- Fever and headache
- Malaise and fatigue
- Pain, itching, or tingling at bite site
- Anxiety and restlessness
- Hydrophobia (fear of water)
- Aerophobia (fear of air)
- Difficulty in swallowing
- Excessive salivation
- Muscle weakness and paralysis
- Coma and death

According to the World Health Organization, rabies is almost always fatal once clinical symptoms appear.

Rabies Management in Humans

- Immediate washing of bite wound with soap and running water
- Application of antiseptics (iodine/alcohol)
- Early initiation of anti-rabies vaccine (ARV)
- Administration of rabies immunoglobulin (RIG) for severe (Category III) bites
- Avoidance of tight bandaging and irritants
- Observation of biting animal when possible
- Completion of full vaccination schedule
- Supportive care only after symptoms appear

Rabies Control

Rabies control focuses on interrupting transmission, preventing human exposure, and eliminating rabies in animal reservoirs, especially dogs.

Rabies Control Measures (Points)

- Mass vaccination of dogs (most effective control strategy)
- Control of stray dog population through sterilization programs
- Regular vaccination of pet animals
- Early reporting and proper management of animal bite cases
- Immediate wound washing and post-exposure prophylaxis (PEP) in humans
- Health education on dog-bite prevention and rabies awareness
- Surveillance and notification of rabies cases
- Coordination between human health and veterinary services (One Health approach)

Treatment of Rabies

Rabies has no specific curative treatment once clinical symptoms appear. Therefore, treatment mainly focuses on prevention after exposure and supportive care.



Treatment Measures (Points)

- Immediate and thorough washing of wound with soap and water
- Application of antiseptics (povidone-iodine/alcohol)
- Anti-rabies vaccine (ARV) as post-exposure prophylaxis
- Rabies immunoglobulin (RIG) for severe (Category III) exposures
- Avoid suturing and tight bandaging of wound
- Supportive and palliative care after onset of symptom

References

1. World Health Organization Zoonoses. Geneva: World Health Organization; latest edition.
2. World Health Organization Managing Zoonotic Public Health Risks at the Human–Animal–Environment Interface. Geneva: WHO.
3. Centers for Disease Control and Prevention Zoonotic Diseases. Atlanta: CDC; updated resources.
4. Food and Agriculture Organization Zoonotic Diseases and Public Health. Rome: FAO.
5. World Organisation for Animal Health Zoonoses and Veterinary Public Health. Paris: WOAHI (formerly OIE).
6. Park, K. Textbook of Preventive and Social Medicine. 26th ed. Jabalpur: Banarsidas Bhanot Publishers.
7. Ananthanarayan & Paniker. Textbook of Microbiology. 10th ed. Hyderabad: Universities Press.
8. Jawetz, Melnick & Adelberg. Medical Microbiology. 28th ed. New York: McGraw-Hill Education.

SIMULATION BASED TEACHING

Mr. Shailesh Kumar Maurya

M.Sc. (N) I Year, CCON, Bhopal



Introduction

Simulation-based teaching is an instructional approach that uses realistic, structured, and interactive scenarios to help learners practice skills, apply knowledge, and develop critical thinking in a safe and controlled environment. Instead of learning only through lectures or textbooks, students actively engage in situations that replicate real world conditions.

This method is widely used in fields such as healthcare, aviation, engineering, military training, management education, and teacher training. It helps bridge the gap between theoretical knowledge and practical application.

Meaning of simulation in education

A simulation is an imitation of real-life processes or systems over time. In education, simulations recreate real world situations so learners can:

- Make decisions
- Solve problems
- Experience consequences
- Reflect on their actions

Simulation-based teaching focuses on experiential learning—“learning by doing.”

Educational theory behind simulation is strongly connected to:

- Experiential Learning Theory by David Kolb
- Constructivist theory by Jean Piaget
- Social learning theory by Lev Vygotsky

Types of Simulation-Based Teaching

Simulation-based teaching can take many forms depending on the discipline and objectives.

1. Role-Playing Simulation: Students act out roles in a structured scenario. Example:

- Teacher–student interaction
- Doctor–patient consultation
- Courtroom drama

This helps develop communication and interpersonal skills.

2. Computer-based simulation: These use software to mimic real-world systems. Examples:

- Flight simulators for pilots
- Business strategy simulation games
- Virtual labs for science students

Many modern simulations use technologies like Virtual Reality (VR) and Artificial Intelligence (AI).

3. Mannequin-Based Simulation: Commonly used in medical and nursing education. For example:

- CPR practice on advanced mannequins
- Emergency response simulation

Institutions like World Health Organization encourage simulation in healthcare training for improving patient safety.

4. Scenario-Based Simulation: Students are given a real-life case scenario and must analyze and respond. Example:

- Disaster management planning
- Business crisis handling

5. **Hybrid Simulation:** Combination of physical, digital, and role-play elements.

Objectives of Simulation-Based Teaching

Simulation-based teaching aims to:

1. Develop practical skills
2. Improve decision-making ability
3. Enhance critical thinking
4. Build confidence
5. Reduce real-world risks
6. Improve teamwork and communication
7. Strengthen problem-solving ability

Key Features of Simulation-Based Teaching

- Realistic environment
- Active participation
- Immediate feedback
- Safe learning space
- Reflection and debriefing

Debriefing is one of the most important steps. After simulation, students discuss:

- What happened
- What went well
- What could be improved

PROCESS OF SIMULATION-BASED TEACHING

Step 1: Planning

- Define learning objectives
- Design scenario
- Arrange materials

Step 2: Briefing

- Explain objectives
- Set rules
- Assign roles

Step 3: Simulation Activity

- Students perform tasks
- Instructor observes

Step 4: Debriefing

- Discussion and feedback
- Reflection on learning

Step 5: Evaluation

- Assess performance
- Provide improvement suggestions

Advantages of Simulation-Based Teaching

1. **Safe Practice Environment :** Students can make mistakes without serious consequences.
2. **Enhances Confidence :** Repeated practice improves skill mastery.
3. **Improves Retention :** Active learning increases memory retention.
4. **Encourages Teamwork :** Many simulations involve group activities.
5. **Bridges Theory and Practice :** Students apply classroom knowledge in realistic settings.



6. Immediate Feedback : Students learn from mistakes instantly.

Limitations of Simulation-Based Teaching:-

1. High Cost : Advanced simulators can be expensive.
2. Requires Trained Instructors : Teachers must be skilled in conducting simulations.
3. Time-Consuming : Preparation and debriefing require time.
4. Technology Dependence : Technical failures may disrupt learning.
5. Not Fully Real : Some real-world unpredictability cannot be perfectly simulated.

Applications in Different Fields

1. Medical Education

Used for:

- Surgical training
- Emergency response
- Clinical skills practice

Institutions such as All India Institute of Medical Sciences use simulation labs for medical training.

2. Aviation: Flight simulators help pilots practice emergency landings without risk.

Organizations like International Civil Aviation Organization emphasize simulator-based training.

3. Business Education: MBA students use management simulation games to practice:

- Marketing strategy
- Financial planning
- Crisis management

Many universities, including Indian Institute of Management Ahmedabad, integrate simulation exercises.

4. Teacher Education

Used for:

- Classroom management practice
- Handling difficult student behavior
- Lesson planning

5. Military Training

Simulations are used for:

- Battlefield strategy
- Tactical planning
- Equipment handling

Role of Technology in Simulation-Based Teaching

Modern simulation includes:

- Virtual Reality (VR)
- Augmented Reality (AR)
- Artificial Intelligence (AI)
- Online interactive platforms

These technologies make simulations more realistic and engaging.

Principles of Effective Simulation-Based Teaching

1. Clear objectives
2. Realistic scenarios
3. Safe environment
4. Structured debriefing
5. Continuous assessment
6. Alignment with curriculum



Evaluation in Simulation-Based Teaching

Evaluation methods include:

- Performance checklists
- Self-assessment
- Peer feedback
- Instructor evaluation
- Reflective journals

Assessment focuses on:

- Knowledge
- Skills
- Attitude

Challenges in Implementation

- Budget constraints
- Lack of infrastructure
- Resistance to change
- Technical maintenance
- Need for faculty training

Future of Simulation-Based Teaching

The future includes:

- AI-driven adaptive simulations
- Fully immersive VR classrooms
- Remote online simulations
- Gamification integration
- Data-driven performance analytics

Simulation-based teaching is expected to become more common in higher education and professional training.

Conclusion

Simulation-based teaching is a powerful instructional method that enhances experiential learning. It allows students to practice real-world skills in a safe and structured environment. Although it requires proper planning, resources, and trained educators, its benefits in improving confidence, competence, and critical thinking make it highly valuable. In today's fast-changing world, where practical skills are as important as theoretical knowledge, simulation-based teaching plays a vital role in preparing learners for real-life challenges.

References

1. Kolb, David A. (1984). *Experiential Learning: Experience as the Source of Learning and Development*. Englewood Cliffs, NJ: Prentice-Hall.
2. Piaget, Jean (1970). *Science of Education and the Psychology of the Child*. New York: Orion Press.
3. Vygotsky, Lev S. (1978). *Mind in Society: The Development of Higher Psychological Processes*. Cambridge, MA: Harvard University Press.
4. Bandura, Albert (1977). *Social Learning Theory*. Englewood Cliffs, NJ: Prentice Hall.
5. Gaba, David M. (2004). The future vision of simulation in health care. *Quality and Safety in Health Care*, 13(Suppl 1), i2–i10.



INCORPORATION OF ARTIFICIAL INTELLIGENCE INTO NURSING

Mr. Shubham K. Sharma, M.Sc. (N) I Year, CCON, Bhopal



Introduction

Artificial Intelligence (AI) is rapidly reshaping healthcare delivery, and nursing—being the backbone of health systems—is at the forefront of this transformation. AI refers to computer systems capable of performing tasks that normally require human intelligence, such as pattern recognition, prediction, decision-making, and natural language processing. In nursing, AI tools are being integrated into clinical practice, education, administration, and research to improve efficiency and patient outcomes.

Understanding AI in Nursing

AI technologies used in nursing include:

Machine Learning (ML): Algorithms that analyze large datasets to predict outcomes (e.g., patient deterioration). **Natural Language Processing (NLP):** Interprets and generates human language (e.g., clinical documentation support).

Predictive Analytics: Forecasts health events such as risk of falls, sepsis, or readmissions.

Chatbots & Virtual Assistants: Support patient education and triage.

Applications of AI in Nursing Practice

1. Clinical Decision Support

AI systems can analyze patient data—vital signs, lab values, medical history—to assist nurses in early warning of deterioration and critical decisions.

For example:

- Predicting risk of sepsis
- Alerting trends in patient vitals before clinical signs appear

2. Workload Optimization and Workflow Efficiency

AI helps automate routine tasks:

- Automated documentation from voice or text
- Scheduling and prioritizing patient care
- Reducing time spent on administrative duties

This allows nurses to dedicate more time to direct patient care.

3. Patient Monitoring

Wearable devices and AI algorithms continuously collect and analyze patient data—for example: Heart rate and oxygen monitoring

- Alerting abnormal patterns without manual input
- Improving early identification of clinical changes

4. Personalized Patient Education

Chatbots and mobile AI tools can deliver tailored health information, medication reminders, and self-care instructions—improving patient engagement and adherence.

AI in Nursing Education

AI tools are transforming how nurses are trained:

- Virtual simulations offer realistic clinical scenarios without risk to patients.
- Adaptive learning systems customize learning based on student performance.
- AI-powered tutoring tools provide feedback and reinforce knowledge.

These technologies improve competence, critical thinking, and confidence among nursing learners.

Benefits of AI Integration in Nursing

- ❖ **Improved Patient Outcomes :** AI promotes faster detection of deterioration, leading to timely interventions and reduced complications.
- ❖ **Increased Efficiency :** Automation reduces documentation burden and repetitive tasks, easing nurse workload and burnout.

- ❖ **Enhanced Quality of Care** : AI helps standardize evidence-based practice and alerts clinicians to best practices.
- ❖ **Supports Evidence-Based Decision Making** : AI systems analyze up-to-date data, literature, and clinical patterns that inform nurse decisions.
- ❖ **Challenges and Limitations** : Despite the promise, several challenges exist:
- ❖ **Ethical Concerns** : Patient privacy and data security, bias in algorithms leading to inequitable care
- ❖ **Technology Adoption Barriers** : Nurses may face:
 - Lack of digital literacy training
 - Fear of replacement or distrust in automated systems
- ❖ **Dependence on Data Quality** : AI models are only as good as the data they are trained on. Incomplete or biased data can lead to inaccurate outputs.
- ❖ **Regulatory & Legal Issues** : There are unresolved legal questions about accountability when AI recommendations are used in patient care.

Nurses' Role in AI Integration

Nurses are essential partners in responsible AI adoption:

- Participating in the design and evaluation of AI tools
- Providing clinical insight to make AI systems relevant
- Advocating for ethical and transparent use
- Leveraging AI to enhance—but not replace—nursing

Conclusion

The integration of Artificial Intelligence (AI) into nursing practice holds great promise for improving healthcare delivery and patient outcomes. AI can enhance the efficiency and accuracy of clinical decision-making, assist in patient monitoring, support administrative tasks, and provide personalized care. By automating routine tasks, AI allows nurses to spend more time engaging with patients, fostering stronger patient-nurse relationships. AI-powered tools, such as predictive analytics, diagnostic support systems, and smart monitoring devices, can help nurses anticipate patient needs and respond more quickly, ultimately reducing human error and improving safety. However, the successful implementation of AI in nursing requires appropriate training, robust ethical considerations, and collaboration between healthcare professionals, technology developers, and policymakers.

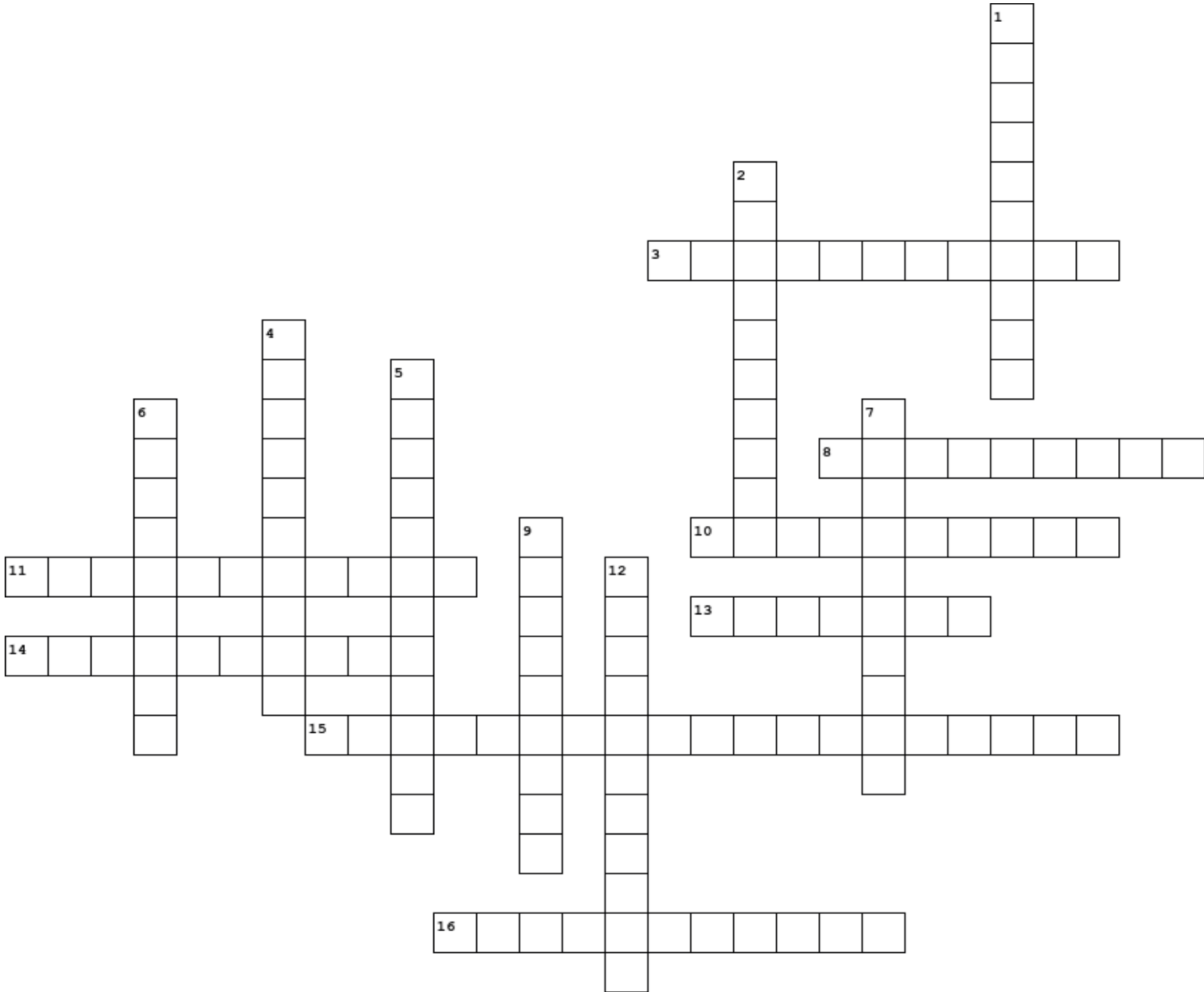
References

1. Topol, E. J. (2019). Deep Medicine: How Artificial Intelligence Can Make Healthcare Human Again. Basic Books.
2. Cresswell, K. M., & Sheikh, A. (2013). The impact of eHealth on the quality and safety of healthcare: a systematic overview. PLoS Med, 10(1), e1001363.
3. Discusses the potential of eHealth technologies, including AI, to improve healthcare systems and their effects on safety and quality.



TERMINOLOGIES USED IN MEDICAL

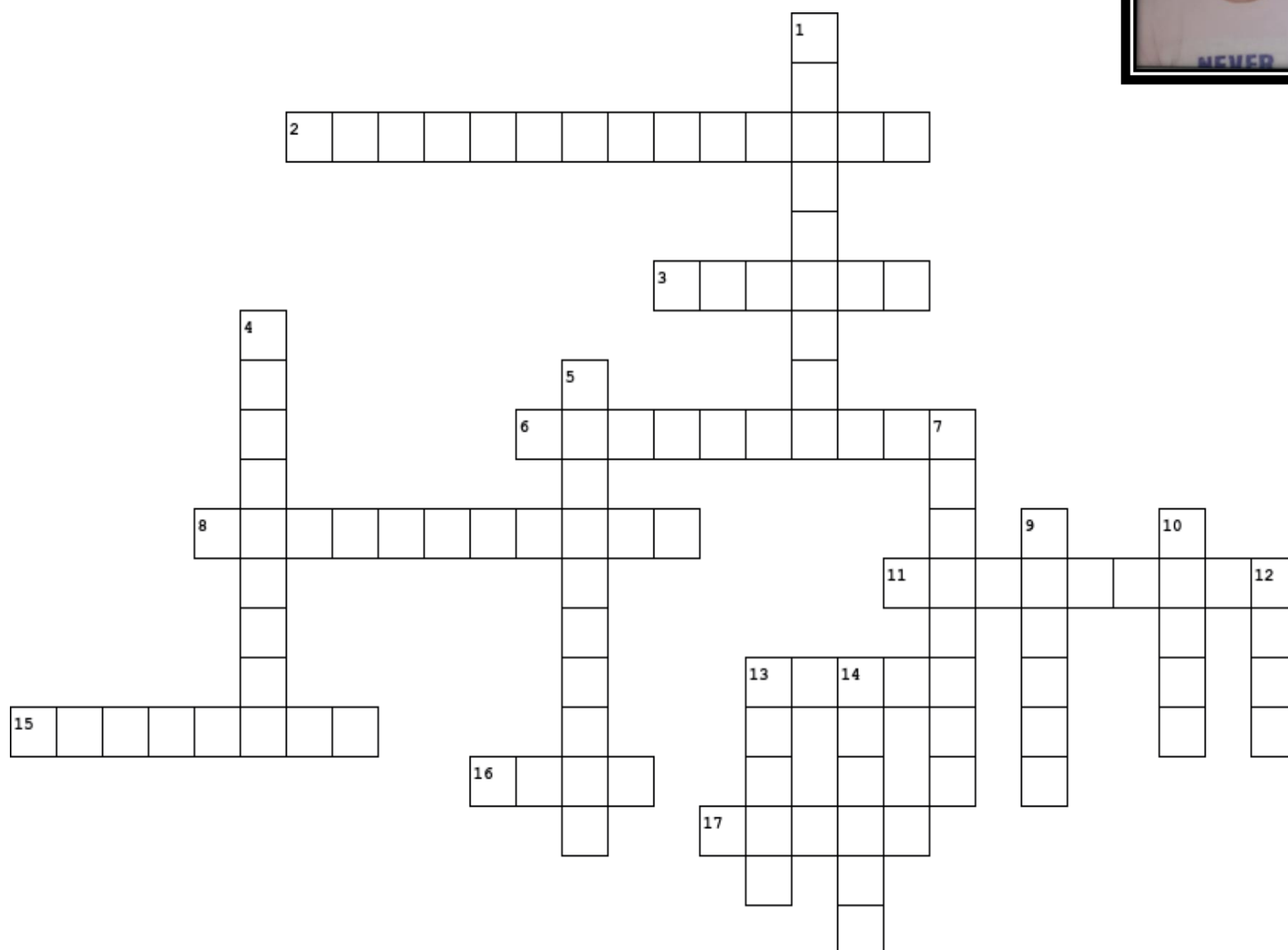
Mr. Santosh Mewada, P.B.B.Sc I Year, CCON, Bhopal



ACROSS	DOWN
3. Sac that encloses the heart	1. Inflammation of the tendon
8. Study of the nervous system	2. Study of the heart
10. Middle layer of the heart wall	4. Iron-containing protein found in red blood cells
11. Study of the lungs	5. Instrument used to view the larynx
13. Study of the urinary system	6. Inflammation of the lungs
14. Inflammation of the bronchi	7. Study of blood
15. Study of the ear, nose and throat	9. Inflammation of the liver
16. Instrument used to listen to heart and lung sounds	

TERMINOLOGIES USED IN VASCULAR SYSTEM

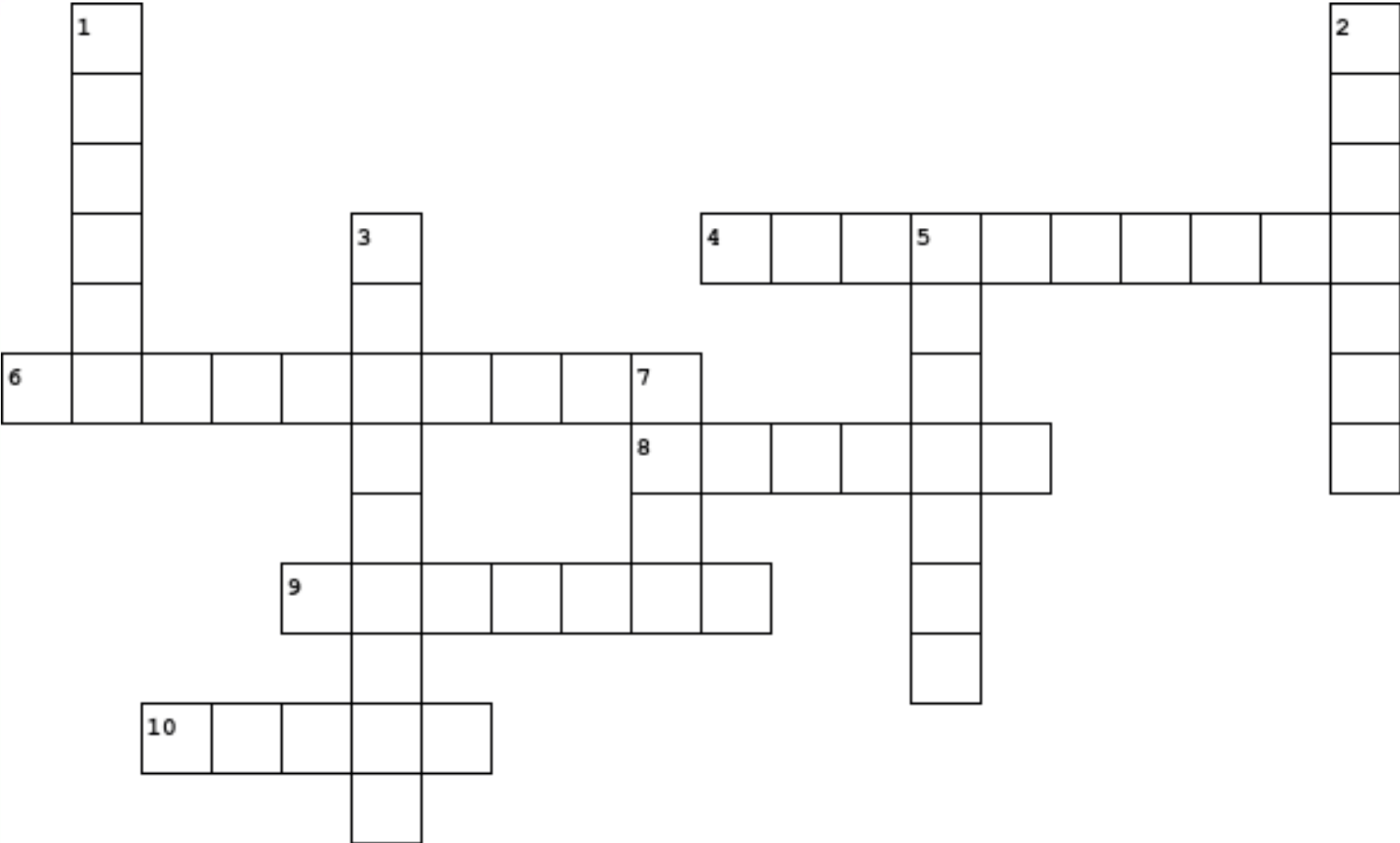
Mr. Satyendra Yadav, P.B.B.Sc I Year, CCON, Bhopal



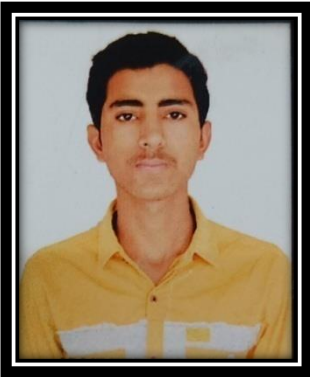
Across	Down
2. Arteries, capillaries and veins are part of this system	1. Set of veins that deliver oxygenated blood from the lungs to the heart
3.This organ filters the blood and removes waste	4.Bones which protect our spinal cord
6. term for White Blood Cells	5.Full form of “HB”
8. System that brings in oxygen and removes carbon dioxide	7. Supports and protects the various organs of the body
11.They are often called thrombocytes and are responsible for blood clotting	9.Smallest bone in the human body
13.Muscular organ that provides blood circulation	10.Biggest bone in the human body
15.Connects bone to other bones	12.Largest organ of the human body
16.Blood vessel that carries blood towards the heart	13. Bone in the body that does not meet another bone
17.Largest internal organ and gland in the human body	14.Blood vessel that carries blood away from the heart



PHYSIOLOGY OF RESPIRATORY SYSTEM
Ms. Honey Vashya, GNM I Year, CCON, Bhopal



Across	Down
4. The process of releasing air from the lungs.	1. The waste gas removed from the body during breathing.
6.The process of taking air into the lungs.	2. The two branches of the trachea that lead to each lung.
8.The gas taken in by the lungs that the body needs to survive.	3. The muscle below the lungs that helps in breathing.
9.The tube that carries air from the throat to the lungs.	5. Tiny air sacs in the lungs where gas exchange occurs.
10.The main organ used for breathing.	7. The passage through which air enters the respiratory system.



HEALTHY HABITS

Mr. Jaydeep Thakur, GNM I Year, CCON, Bhopal

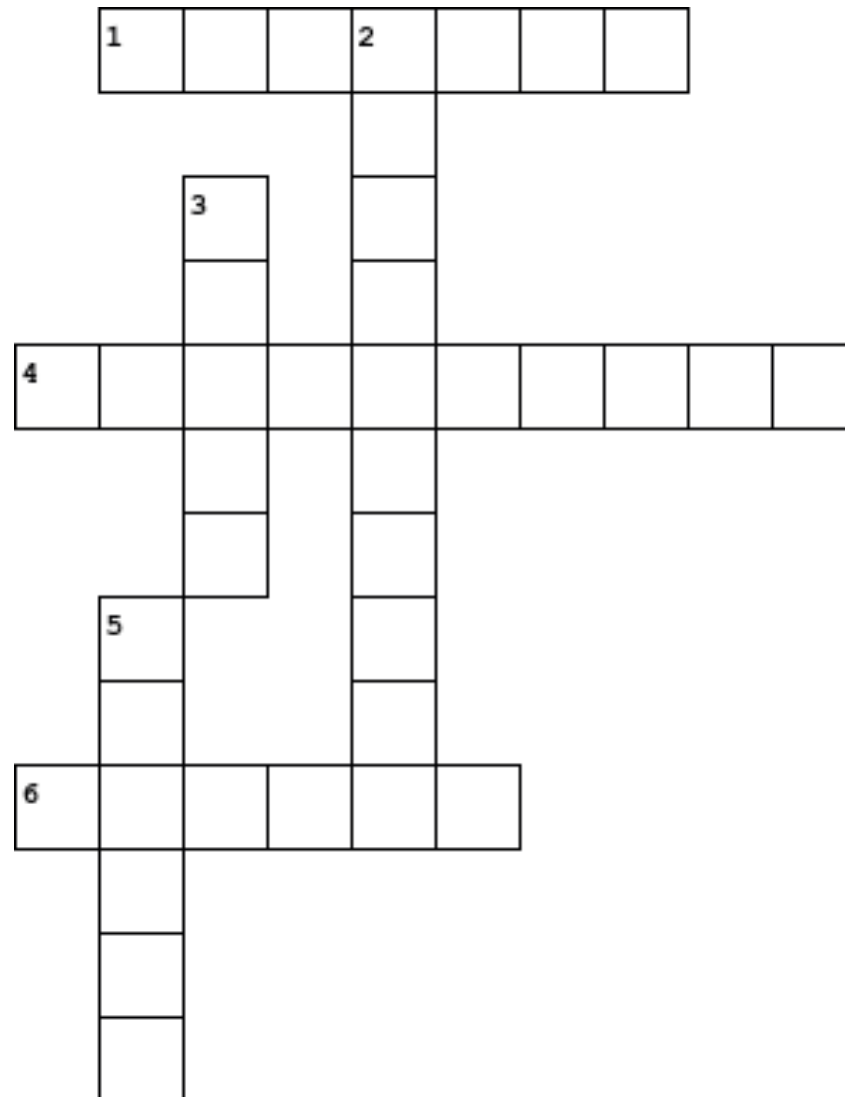
		1			2							
					3		4					
5												

Across	Down
2. Maintaining a harmonious life routine	1. Eating a balanced diet
3. Resting for recovery	2. Drinking an adequate amount of water
5. Physical activity for health	4. Managing mental tension



ORAL HEALTH

Mr. Ramswarup Mewada, GNM I Year, CCON, Bhopal

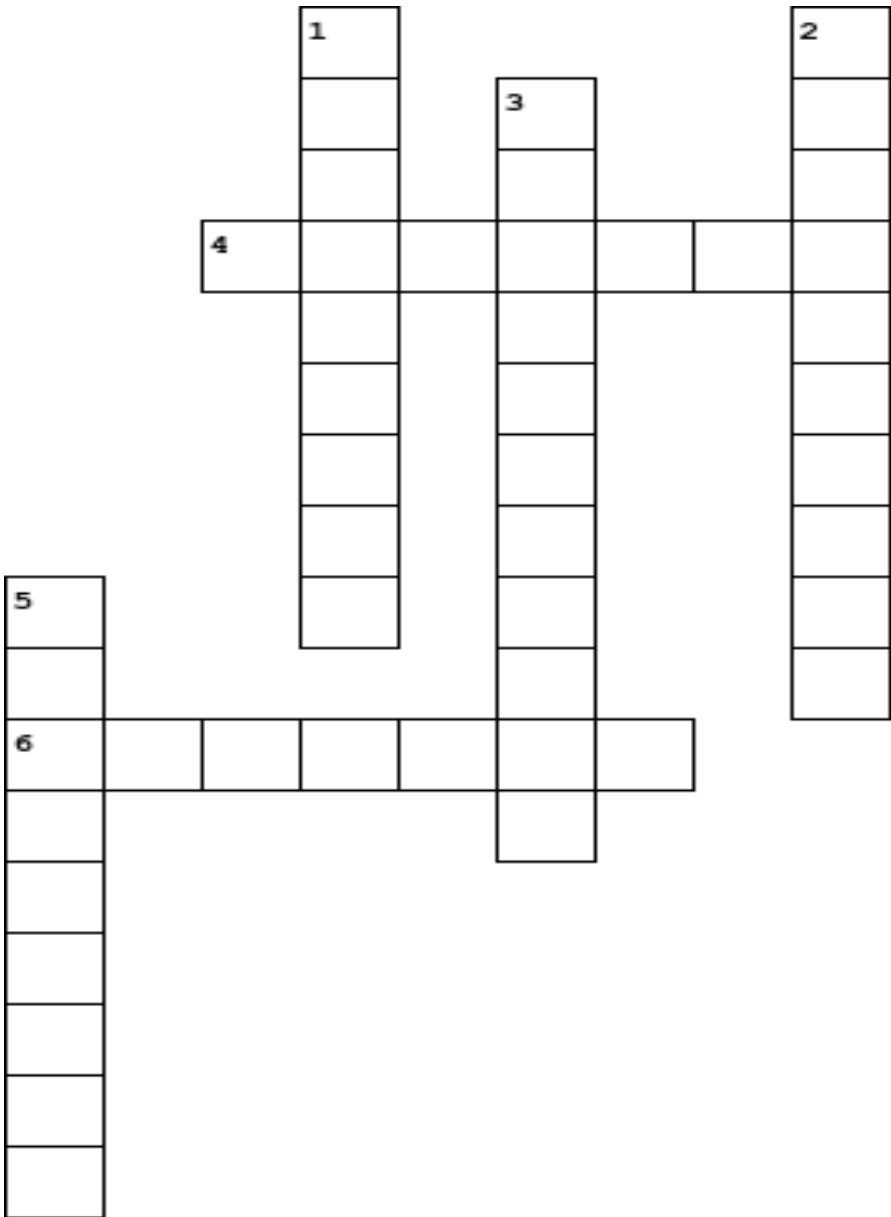


Across	Down
4. A tool with soft bristles used twice a day to clean and remove plaque from teeth.	3. A thin thread clean between teeth.
6. A chronic infection that destroy the enamel.	2. A paste used or prevent decay.
1. A doctor who diagnosis and treat are health condition.	5 A hard white structure in mouth used for chewing



ENDOCRINE PUZZLE

Ms. Himanshi Dallemal, GNM I Year, CCON, Bhopal

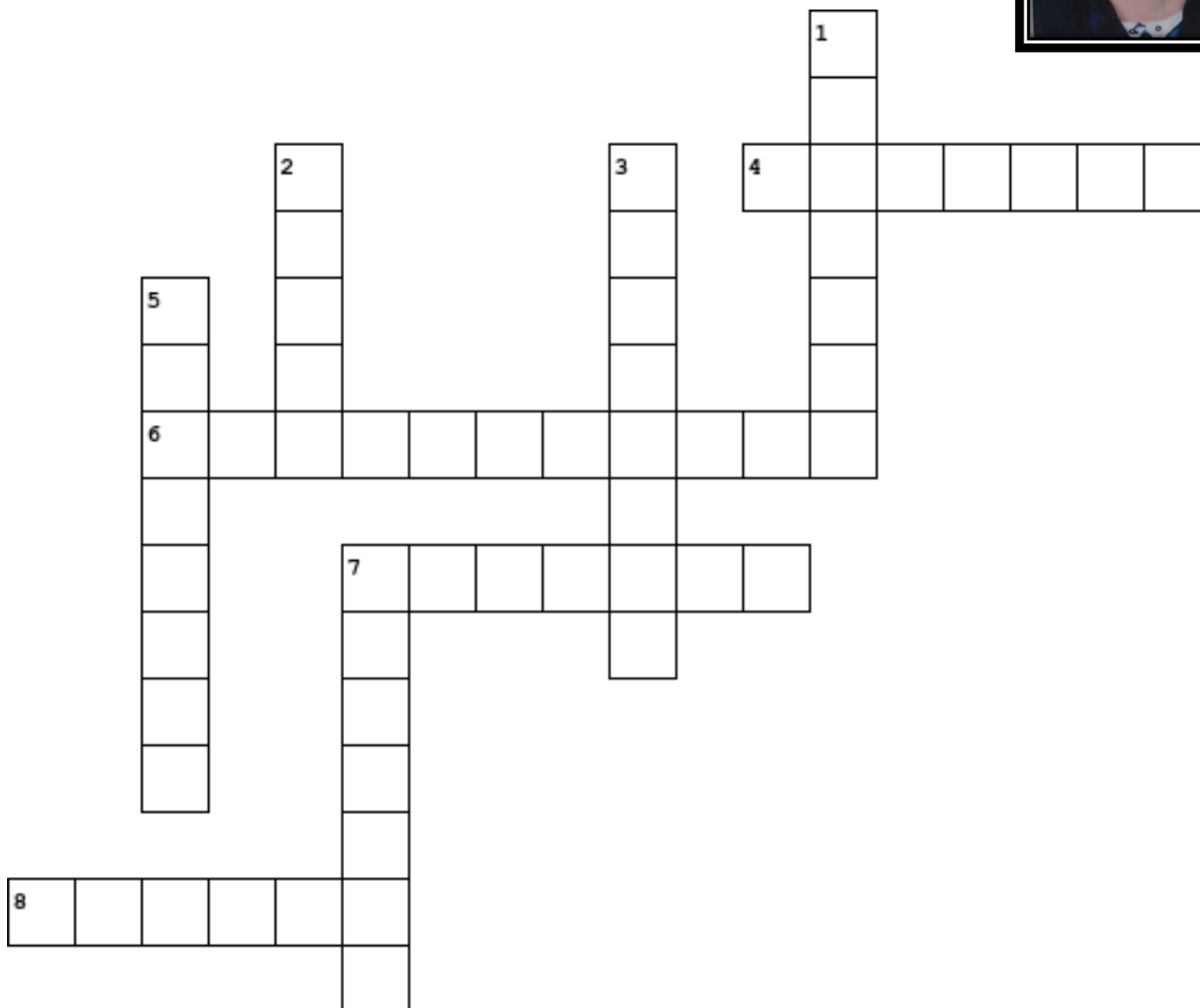


Across	Down
4.Chemical messenger produced by glands	1. Gland that secretes hormone
6.Glands in the neck that produce hormones	2. Hormone released in response to stress or excitement
	3 Body’s ability to maintain stable internal condition
	5. Master gland that controls other glands



MEDICAL AID SERVICES

Ms. Pooja, GNM I Year, CCON, Bhopal



Across	Down
4.A sharp tool used by a surgeon to cut through skin	1.A shot given to help protect against disease
6.A tool used by a doctor to listen to the heart	2.A person who assists a doctor in providing medical care
7.A tool used to inject medicine or draw out fluid	3.A substance taken to help prevent or cure illness
8.A person who helps diagnose and treat medical conditions	5.A place where people go to get medical help
	7.A medical procedure done to repair or remove a body part

THE CLINICAL INTUITION

Mr. Anoop Agarwal, B.Sc. (N) I Semester, CCON, Bhopal



1. I begin when the patient says, "I'm fine."
I end before machines agree. If I fail, numbers lie.
2. I listen without ears.
I beat, but I am not alive.
Nurses use me to hear your life inside.
3. I carry life drop by drop.
Too fast can harm; too slow can stop.
Nurses control my steady rate.
4. I am done without orders,
corrected without permission,
and blamed without witnesses.
5. I am never written in textbooks,
yet seniors know my worth.
Ignoring me invites disaster.
6. I save lives without touching patients.
I prevent errors before they exist.
You miss me only after harm.
7. I am performed even when nothing is happening,
because when something happens, it is too late.
8. I protect the patient from the system itself,
even when protocols disagree.
9. I work when doctors are unavailable.
I act when families panic.
10. I decide when seconds matter.
I fail before vital signs change.
Only trained minds sense me.

ESSENTIALS OF CARE**Ms. Ayushi Koli, B.Sc. (N) I Semester, CCON, Bhopal**

1. I am a symbol of trust and bond so strong connecting patient all day long.
What am I ?
2. Before and after every care you'll find me somewhere killing germs both big and small to protect patient I and all.
Who am I?
3. I shocked the heart back into rhythm during emergency.
Who am I?
4. I wrap around your arm nice and tight to measure pressure with all my mic I have a cut and a gauge you see what medical tool could I be?
5. I prevent infection clean the wound without my use germs will bloom transparent sterile plays with care protecting tissue everywhere.
Who am I?
6. I have a bed but never sleep, and I have a mouth but never speak.
Who am I?
7. I am a band that never plays music, yet I can stop a flow.
Who am I?
8. I have many needles but I cannot sew a single button.
Who am I?
9. I see everything inside of you, but I have no eyes.
Who am I?
10. I am the only "Order" a nurse is happy to see at the end of a shift.
What am I?

LIFELINE OF SAFETY

Mr. Karan Meena, B.Sc. (N) I Semester, CCON, Bhopal



1. I don't wear a white coat, but I Still heal,
I monitor your health and help you feed.
Standing by our side through every onset
Who am I?
2. I work in the night and calm the Fears.
I make sure your rest is without tears.
the quiet guardian of your Snooze?
What am I?
3. I'm Sharp, but I never cut.
I'm small, but my effect packs a punch.
trusted by nurses, to heal with just one touch?
What am I,
4. I don't hold pills, but I know what you need I help you feel better with every speed. Who am I, always
prepared with advice you'll need?
5. I don't speak, but I can tell if you're feeling hot, I give nurses clues with just one shot, keeping you safe
with every dot What am I?
6. I'm not a machine, but I ease your pain, I listen and care when you explain. Who am I, offering
comfort again and again?
7. I move through the halls without making a sound, I check your vitals, making sure they're safe and
sound. I am the one always around. Who am I?
8. In an emergency, I'm never late, I make sure the right medicine's on your plate. What am I, your
lifeline at any rate?
9. I wash my hands and. wear a mask, I keep you safe it's my critical task. What am I protecting you
without being asked ?
10. I beep and flash without taking a break, I tell the nurse if there's a mistake. What am I watching for
your sake?



CLINICAL SCRIBE

Ms. Khushi Soni, B.Sc. (N) I Semester, CCON, Bhopal



1. I am a cuff that seeks to occlude,
waiting for sounds that are rhythmic and crude.
I listen for Korotkoff to start and to fade,
measuring the pressure, the pump has just made.
2. I am the hunger that eats, but never feels full, A thirst like desert with a constant pull.
I turn your vessels to glass, and you're healing to slow, when the islets fail or the cells say "no".
3. I take your temperature, I check your pulse, I make sure you're healthy without much fuss, What am I?
4. I'm not a specialist, but I'll still take care,
I help you feel healthier when you're Scared or in despair. –
I wear scrubs, I'm there day or night, Who am I?
5. I can't make your illness go away, But I help make it easier to face the day.
I offer you care, support, and relief, I can ease your pain but not your grief.
What am I?
6. I write it all down, from day to night, Every test result and every fight.
I make sure the records are clear and neat, Who am I, making the charts complete?
7. I help you when you're hurt, that's clear to see, But when I'm around, you often flee. Though I bring relief, you fear my touch, Who am I that causes this puzzling fuss?



BEDSIDE EDUCATOR

Ms. Mahak Barkhane, B.Sc. (N) I Semester, CCON, Bhopal



1. I stand between the hurt and heal where science blends with what we feel, not doctor, yet not less I things. I bring, a quiet, constant, human things, I am the art within the cure, the steady heart that mistendure, what am I?
2. I teach the till to live anew, what not to do, beyond the ward beyond the bed my lessons echo in their head.
3. I wrap around the arm so tight, then slowly lose my grip form sight, I listen as the pulses speak, first loud knock, then fading weak, numbers rise and numbers rise and numbers fall, I silently record it all.?
4. Through narrow tube I find a vein, delivering medicine to ease your pain sharp yet saving is my at what am I?
5. I echo truth from beating wall, through chambers where red rivers fall, wave on paper tell your tale what am I?
6. I am counted, not touched, yet I warn nurses when danger is near, silent and ever watchful
7. Invisible enemy, small yet grand, I travel freely hand to hand you fight me first before all car, or else I linger everywhere.
8. I measure output drop by drop, too much, too little -I never stop kidney's whisper through my line, balance must align.
9. I chart the day from dusk till dawn, every care that has gone on, legal proof of what was done- what am I?
10. Protect your fragile skin, barrier placed before I begin latex or nitrile guards the way, safety every day.



THE PRECISION DOSE

Mr. Nikhil Verma, B.Sc. (N) I Semester, CCON, Bhopal

1. I calculate drops but never drink, I control flow faster than you think,
Too fast is danger, too slow is pain, I work with tubes inside the vein. Who am I?
2. I am checked before every dose, Right patient, right route - the nurse knows,
Five rights I guide, I never sleep, Medication errors away I keep. Who am I?
3. I measure pain but have no scale, From zero to ten, I tell the tale,
I cannot see, yet patient's rate, Their silent suffering and fate. What am I?
4. I expand and shrink without a sound, In vital signs I can be found,
Systolic high, diastolic low, Through arteries I rise and flow. What am I?
5. I am invisible but must be followed, If broken, legal case is swallowed,
Informed consent is where I stand, Before procedures are planned. What am I?
6. I am calculated by age and weight, Too high or low decides a fate,
In children mostly I am key, Drug safety depends on me. What am I?
7. A tiny sting that makes you wince, But helps your illness weaken since,
Though feared by many, small in size, I bring protection in disguise. What am I?
8. I speak without a mouth, I show numbers without a pen,
When life becomes unstable, You watch me again and again. What am I?
9. I enter the vein but I am not blood, I bring relief like a silent flood,
Measured in drops, slow and steady, In emergency I am always ready. What am I?



BEDSIDE GUARDIAN

Ms. Palak Dangi, B.Sc. (N) I Semester, CCON, Bhopal

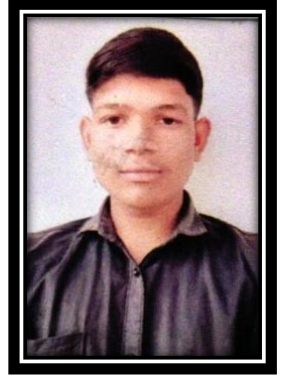


1. I travel through tubes, but I'm not a train. Drop by drop I ease your pain. Too fast is risky, too slow is wrong. I must be steady all night long. What am I?
2. I am worn, but not for style. I protect you all the while. Invisible foes I help prevent. After use, I'm quickly sent. What am I?
3. I have rails, but I'm not a train. I hold the weak and those in pain. Adjusted high, adjusted low. Recovery is where I help you go. What am I?
4. I beep and flash, but never speak. I watch your heart, both strong and weak. If lines go flat, alarm will cry, calling help that rushes by. What am I?
5. I cover wounds, but I'm not clothes. I stop the bleeding when it flows. Changed each day with gentle care. Healing happens under there. What am I?
6. I measure nothing you can see, yet timing matters most to me. Before your dose or after meals, I decide how well you heal. What am I?
7. I carry samples, red or clear, to find what doctors need to hear. From veins to lab I quickly go, revealing secrets hidden below. What am I?
8. When visitors leave and lights grow dim, I'm still awake, checking each limb. Charts and vitals through the night, till morning brings the sun so bright. Who am I?



THE HEALER'S ROUND

Mr. Pravendra Ahirwar, B.Sc. (N) I Semester, CCON, Bhopal



1. Nurses work within my walls so bright,
Where ailing folk regain their might.
A healing place, both day and night.
2. Nurses tend to my bedside chair,
I often need their loving care,
A waiting soul beyond compare.
3. With nurses, I make my daily rounds,
My wisdom on illness abounds.
A healer whose guidance astounds.
4. Nurses offer gentle helping hands,
Meeting needs across all lands.
A comfort that truly expands.
5. I listen to your heart but have no ears. What am I?
6. I am a vessel that carries things away,
But never toward the heart. What am I?
7. I bring the heat, but I'm not the sun.
I make you shiver and I make you sweat.

THE PROTECTIVE FRAMEWORK

Ms. Richa Mishra, B.Sc. (N) I Semester, CCON, Bhopal



1. I have 2 tubes, but no breath to take, I help a nurse for your health sakes, listening to the sound your body can make. Who am I?
2. I am often tiny, round or flat, swallowed down, just like that, to make u better, where it's at. What am I?
3. I protect your brain but I am not a helmet, I am very hard and part of your body. What am I?
4. Mostly I am found in hospitals and I have a very important job, but I am not doctor or nurse. Sometimes I am on wheels and sometimes I'm not. Who am I?
5. I carry no stethoscope, yet I check your beat. I make sure your pulse stays steady and neat. What am I, watching your heart from my seat?
6. I'm sharp, but I never cut.
I'm small, but my effect packs a punch. What am I, trusted by nurses to heal with just one touch?
7. I help nurses stay safe, bold and controlled. What am I, used every day but never old?
8. I see the heart but not with my eyes, I track its rhythm and size. With leads attached just so, I show if blood properly flows. What am I?
9. Patient describes me proper poorly, doctors seek me diligently.
I'm present before diagnosis but disappear after treatment. What am I?
10. I track drops that go inside, my alarm is hard to hide.
When I'm empty or there's air, I alert nurses to come with care. What am I?



THE SILENT PRECURSOR

Ms. Ritika Arya, B.Sc. (N) I Semester, CCON, Bhopal

1. I am not medicine,
But stopping me suddenly can kill.
2. I work best when I am boring;
Excitement means danger.
3. I am done every shift,
But taught once and expected forever.
4. I do not touch the patient,
Yet I decide infection or safety.
5. I am not visible on charts,
But seniors notice when I am missing.
6. I am measured without machines;
An experienced eye detects me first.
7. I do not heal disease,
But I heal cooperation.
8. I am taught in classrooms,
Tested in chaos.
9. I am practiced even when no one is watching,
Because patients cannot complain.
10. I fall quietly before collapse begins;
Early signs whisper my name.
11. I am not speed,
But I save seconds when seconds kill.



THE HOSPITAL'S PULSE

Ms. Roshini Patidar, B.Sc. (N) I Semester, CCON, Bhopal



1. I hang around your neck all day, Listening to secrets from the chest. I have ears but I cannot hear unless you are listening too. What am I?
2. I give a tight hug to your arm but I'm not being friendly I listen for a rhythm and look for two numbers What am I?
3. I have a hub and a shaft and a very sharp bevel. I'm great at giving shots or checking your glucose level.
4. I clip onto your fingertip and shine a little red light. I tell you how much oxygen is keeping you upright.
5. I am not a person, but I have a "plan." I involve a lot of assessment, diagnosis, and Interventions. I am often written at 3:00 AM while crying over a caffeinated beverage. What am I?
6. I come in many colors, but usually, my color is chosen for me by my school. I have more pockets than a pool table, and I am the only outfit that makes it acceptable to wear clogs in public. What am I?
7. I am the most famous "range" in the hospital. I'm between 60 and 100, everyone is happy. If I'm O, nobody is happy. What am I?
8. I'm short, I'm thin, and I've got a "point" to make, but I'm only here for your health's sake. I have wings but I cannot fly, and I'm the bridge between the bag and the guy. What am I?
9. I'm a sharp, 45-degree angle found at the foot of the bed. I'm not a person but I share a name with a resident of Paris I keep the covers tight enough to bounce a quarter What am I?
10. I rise and fall like the tide of the sea, But if I stop, you cease to be. I'm measured in cycles, steady and slow, Too fast or too shallow? Then we need to know. What am I?
11. I have no voice, but I speak of your pace, I quicken when you run a race. I'm felt at the wrist or the side of the neck, I'm the very first rhythm the doctors check. What am I?



THE RHYTHMS OF LIFE

Ms. Srishti Shrivastava, B.Sc. (N) I Semester, CCON, Bhopal



1. I am the silent record of your heart's electrical art Printed in waves, peak and part key What am I?
2. Invisible soldiers I help you create. To remember an enemy before it's too late What am I?
3. Drop by drop I measure time, Balancing flow in rhythm and thyme What am I?
4. When breathing fails and lungs despair, Through plastic path I send fresh air What am I?
5. I am the science of safe hand art, Killing microbes before you start. What am I?
6. I translate symptoms, pulse, and pain, Into a conclusion for treatment gain, What am I?
7. Through narrow path I take a peek, Inside the bladder once a week What am I?
8. When sugar rises more than it should. I bring it down for your good. What am I?
9. I prevent clots from forming tight Keeping blood flowing day and night What am I?
10. I do not speak, yet my sound reveals the line between life and death.
11. You count me, but I am not a number; I am the rhythm of life.
12. I cause pain, yet without me pain may never heal.



THE DIAGNOSTIC MIND

Ms. Swati Karoche, B.Sc. (N) I Semester, CCON, Bhopal



1. I am not counted directly. yet with multiplying two values reveals me. if either becomes zero Life disappears immediately..
2. I balance without thinking. I co-ordinate each move. Damage makes she walking shaky. Smooth motion I improve
3. I am clean but not sterile I reduce but don't erase. in hospital wards i'm essential. To lower case infection case
4. I am a tube that couries air to your lungs. but I have no rings, but no fingers
5. I wrap around your arm when there is a bleed, but i am not a bandage
6. What can you hold on your left hand, and not in your right. I needed but not for energy, Yet without me wounds delay. collagen waits upon my presence. or healing fades away
7. I move without muscles. I travel without blood. From negative to positive shift. I create a sudden flood.



VITALS & VERSES

Ms. Vaishali Kushwaha, B.Sc. (N) I Semester, CCON, Bhopal



1. I'm always on call walking hall to hall checking vitals big and small. My scrubs are neat, my care complete. Who am I?
2. I keep track of what's been done, medications given one by one. Without me care would go astray, I'm updated multiple times a day. What am I?
3. I measure milliliters precisely for when exact amounts are needed nicely. In nursing I'm a common sight ensuring dosages are right
4. I track drops that go inside, my alarm is hard to hide. When I'm empty or there's air, I alert nurses to come with care. What am I?
5. I hold sharps when they are all done, collecting needles one by one. For safety I'm a crucial part, preventing pokes that harm the heart. What am I?
6. I am checked before giving drugs. If I am too low, you may hold the dose; if I am too high, you may act fast. I move through arteries and veins. What am I?
7. I don't speak but I'm always heard. I track your vitals without a word. What am I? Sending information with every curve?
8. I'm a hands-on training environment for nursing students. What am I?
9. I measure the heat of a moment without having feelings. What am I?
10. I follow you in the hospital and show your numbers even when you wish I would not. What am I?



THE CAREGIVER'S CODE

Ms. Zara Khan, B.Sc. (N) I Semester, CCON, Bhopal



1. I touch your life I ease your pain I work day and night sunshine or rain I wear no crown gate I save lives Who am I ?
2. I am given but never kept I entered the body and healing is felt Who am I?
3. I rise and fall fast or slow I tell how well your heart does go Who am I?
4. I show the heart but I'm not fire doctor trust me to inquire Who am I ?
5. High flow in river inside your body without me life becomes so cloudy Who am I ?
6. I am a "gate" in your throat that decides who enters the lungs.
7. I am small, but I record the body's hidden secrets.
8. I cleanse, but I am not water.
9. I flow silently, but if I stop, danger begins.
10. I cannot be seen, yet my absence is felt first.



SMART WEARABLE BIOSENSORS FOR CONTINUOUS MONITORING: ADVANCING DIGITAL NURSING PRACTICE

Ms. Shivani Malviya, B.Sc. (N) II Semester, CCON, Bhopal



Introduction

Continuous monitoring of vital signs is essential in managing patients with chronic illnesses and those at high risk of clinical deterioration. Traditionally, monitoring has been confined to hospital settings or intermittent outpatient visits. However, rapid technological advancement between 2022 and 2024 has led to the development of smart wearable biosensors capable of delivering clinical-grade monitoring beyond healthcare facilities.

Development of Smart Wearable Biosensors

Modern wearable biosensors are designed to continuously measure key physiological parameters, including heart rate, oxygen saturation, blood glucose levels, respiratory rate, and body temperature. These devices utilize advanced sensors and wireless connectivity to transmit data through secure digital health platforms. By integrating with electronic health records and telehealth systems, wearable biosensors allow healthcare professionals to monitor patients remotely. Early warning alerts can be generated when abnormal patterns are detected, enabling timely intervention and reducing preventable complications.

Significance in Nursing Practice

The integration of wearable biosensors significantly enhances nursing practice across various healthcare settings. In community health nursing, these devices facilitate continuous assessment of patients at home. In chronic disease management, they improve long-term monitoring of conditions such as diabetes, cardiovascular disease, and respiratory disorders. Remote patient monitoring programs benefit from real-time data access, supporting early detection of deterioration. Nurses play a central role in interpreting transmitted data, educating patients on device use, and coordinating individualized care plans. Rather than replacing clinical judgment, wearable technology strengthens evidence-based decision-making.

Advantages

Smart wearable biosensors offer multiple advantages, including reduced hospital admissions through early intervention, improved patient adherence to treatment plans, real-time health tracking, and expanded support for home-based care. These benefits contribute to patient-centered healthcare delivery and improved quality of life.

Challenges and Ethical Considerations:

Despite their benefits, wearable biosensors present several challenges. Data privacy and cybersecurity concerns must be addressed to protect sensitive patient information.

Inequality in access to digital technologies may widen healthcare disparities. Additionally, device accuracy and reliability require continuous evaluation to ensure safe clinical application.

Conclusion:

Smart wearable biosensors represent a significant advancement in digital healthcare transformation. By extending monitoring capabilities beyond hospital walls, these technologies empower nurses to deliver proactive, patient-centered care. Ongoing research, policy development, and equitable implementation strategies are essential to maximize their potential in modern healthcare systems.

References:

1. Dunn J, Runge R, Snyder M. Wearables and the medical revolution. NPJ Digital Medicine. 2022;5(1):1–8.
2. Steinhubl SR, Muse ED, Topol EJ. Can mobile health technologies transform healthcare? JAMA. 2023;329(14):1163–1164.
3. World Health Organization. Global strategy on digital health 2023–2027. Geneva: WHO; 2023.

RESEARCH INNOVATIONS IN NURSING

Ms. Archana Sahu, B.Sc. (N) II Semester, CCON, Bhopal



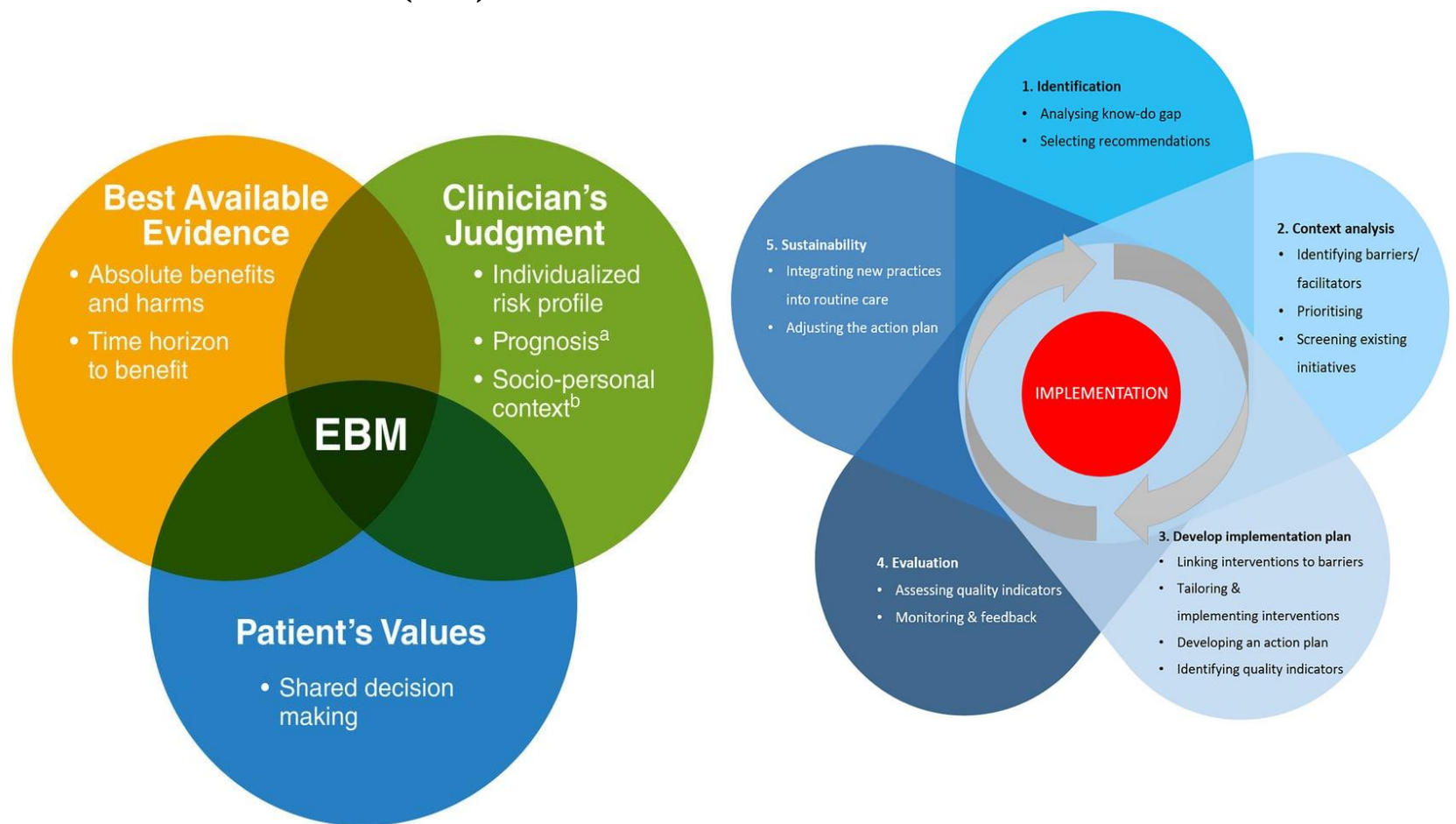
Introduction:

Nursing research has evolved significantly in recent decades, moving from traditional observational studies to highly advanced, technology-driven, and interdisciplinary approaches. Research innovations in nursing are transforming how knowledge is generated, applied, and translated into clinical practice. These innovations support evidence-based practice (EBP), improve patient outcomes, enhance healthcare quality, and strengthen the professional autonomy of nurses.

Modern nursing research emphasizes precision care, digital integration, patient-centered approaches, and global health perspectives, making it a cornerstone of advanced nursing practice and education.

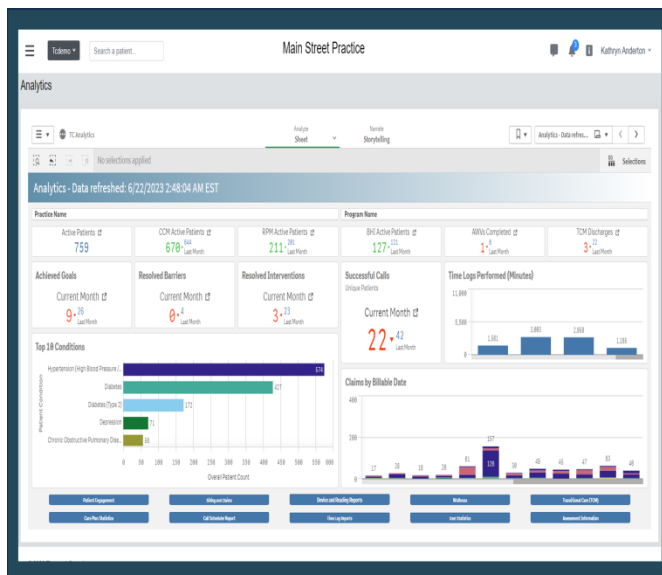
Key Areas of Research Innovations in Nursing:

1. Evidence-Based Practice (EBP) and Translational Research



- EBP integrates best research evidence, clinical expertise, and patient preferences.
- Translational research bridges the gap between research findings and clinical application.
- Promotes standardized, safe, and high-quality care.

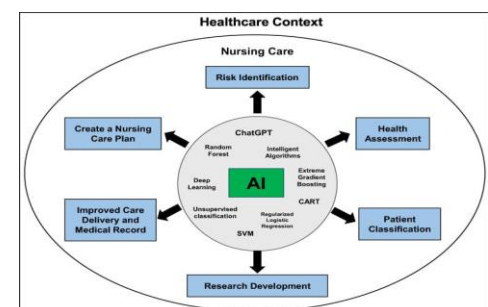
2. Use of Big Data and Health Informatics



- Large datasets from EHRs, registries, and monitoring devices are analyzed.
- Helps identify trends, predict outcomes, and improve care planning.
- Supports population health management and policy decisions.

3. Artificial Intelligence (AI) and Machine Learning in Research

- AI assists in data analysis, prediction, and decision-making.
- Used in early detection of diseases and risk assessment.
- Enhances accuracy and efficiency in research processes.



4. Genomics and Precision Nursing Research

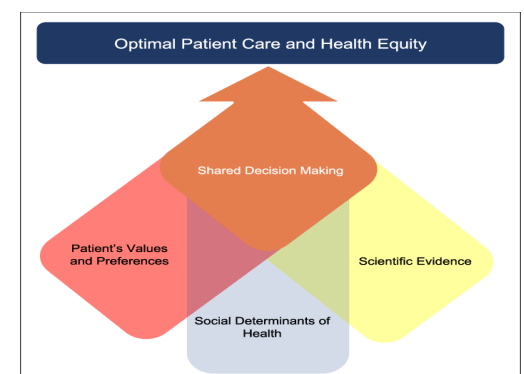
- Focuses on individual genetic variations in disease and treatment.
- Enables personalized care plans.
- Nurses play a role in genetic counseling and patient education.

5. Simulation-Based and Virtual Research Methods

- High-fidelity simulations and VR used for research and training.
- Allows safe testing of interventions without risk to patients.
- Improves clinical skills and decision-making abilities.

6. Patient-Centered and Participatory Research

- Patients actively participate in research design and decision-making.
- Focus on improving patient experience, satisfaction, and outcomes.
- Promotes holistic and culturally sensitive care.



7. Interdisciplinary and Collaborative Research

- Collaboration among nurses, doctors, pharmacists, and other professionals.
- Enhances comprehensive care and innovative solutions.
- Encourages knowledge sharing and integrated healthcare delivery.

8. Digital Health and Telehealth Research

- Research on effectiveness of telemedicine and remote care.
- Improves access to healthcare in rural and underserved areas.
- Evaluates cost-effectiveness and patient outcomes.

9. Nurse-Led and Practice-Based Research

- Nurses independently conduct research to improve clinical practice.
- Focus on quality improvement, patient safety, and care protocols.
- Strengthens nursing leadership and professional development.

Emerging Trends in Nursing Research:

- Integration of AI and predictive analytics
- Growth of precision and personalized medicine
- Increased focus on mental health and resilience research
- Expansion of global health and pandemic preparedness studies
- Use of wearable technology and real-time data collection

Challenges in Nursing Research:

- Limited funding and resources
- Lack of research training among nurses
- Ethical concerns and patient data privacy
- Time constraints in clinical settings
- Difficulty in translating research into practice

Conclusion:

Research innovations in nursing are revolutionizing healthcare by integrating technology, data science, and patient-centered approaches. These advancements enhance evidence-based practice, improve patient outcomes, and empower nurses as key contributors to healthcare research and policy. As healthcare systems become more complex, the role of nursing research will continue to expand, requiring continuous learning, interdisciplinary collaboration, and ethical responsibility. Embracing these innovations will ensure that nursing remains a dynamic, evidence-driven profession capable of meeting future healthcare challenges.

References:

1. World Health Organization. (2020). State of the world's nursing 2020: Investing in education, jobs and leadership. WHO Press.
2. Polit, D. F., & Beck, C. T. (2021). Nursing research: Generating and assessing evidence for nursing practice (11th ed.). Wolters Kluwer.
3. Melnyk, B. M., & Fineout-Overholt, E. (2019). Evidence-based practice in nursing & healthcare (4th ed.). Wolters Kluwer.
4. American Nurses Association. (2022). Nursing informatics: Scope and standards of practice (3rd ed.).
5. McGonigle, D., & Mastrian, K. G. (2022). Nursing informatics and the foundation of knowledge (5th ed.). Jones & Bartlett Learning.
6. International Council of Nurses. (2021). Nursing and digital health transformation. ICN.
7. National Institute of Nursing Research. (2022). Strategic plan: Advancing science, improving lives.
8. Griffiths, P., et al. (2020). Nurse staffing, nursing workload, and patient outcomes. International Journal of Nursing Studies, 103, 103487.



RECENT ADVANCEMENTS IN SPECIALISED NURSING INNOVATIONS SHAPING PRACTICE, EDUCATION AND PATIENT CARE

Ms. Mahi Ahakey, B.Sc. (N) II Semester, CCON, Bhopal



Introduction:

The field of specialized nursing is evolving rapidly, propelled by technological breakthroughs, educational reform, and patient-centred care models that are redefining the future of healthcare. These advancements are enhancing clinical practice, reshaping nursing education, and improving patient outcomes.

1. Technological Innovations in Nursing Practice

- **Artificial Intelligence (AI) and Predictive Analytics** : AI systems assist nurses in early detection of patient deterioration by analyzing vital signs and laboratory trends. Clinical decision support tools provide evidence-based recommendations, improving patient safety and personalized care.
- **Telehealth and Remote Monitoring** : Telehealth platforms enable virtual consultations and chronic disease monitoring, especially benefiting rural and underserved populations.
- **Robotics and Automation** : Robotic systems assist with medication dispensing, patient transport, and rehabilitation support, reducing workload and enhancing efficiency.
- **Electronic Health Records (EHR)** : Modern EHR systems improve documentation accuracy, interoperability, and coordinated care delivery.

2. Innovations in Nursing Education and Training

- **AI-Enhanced Learning Platforms** : Adaptive learning systems personalize education by identifying knowledge gaps and recommending targeted content.
- **Virtual Reality (VR) and Simulation** : High-fidelity simulations and immersive VR technologies allow students to practice complex clinical scenarios safely.
- **Interprofessional Education (IPE)** : Collaborative training among healthcare disciplines strengthens teamwork and communication skills.
- **AI-Assisted Skills Assessment** : Machine learning tools are emerging to support objective evaluation of clinical skills.

3. Research and Evidence-Based Practice

- **Precision Health and Genomics** : Nurses are increasingly involved in integrating genetic insights into personalized care planning.
- **Telehealth Research** : Ongoing studies evaluate the effectiveness of remote care models in improving long-term health outcomes.
- **Nurse-Led Research** : Nurses contribute to clinical research, protocol development, and quality improvement initiatives.

4. Patient-Centred Care Innovations

- **Wearable Monitoring Devices** : Smart health devices enable continuous monitoring of vital signs for early intervention.
- **Digital Communication Tools** : Translation and mobile communication platforms improve patient engagement and interdisciplinary coordination.
- **Interdisciplinary Care Models** : Collaborative bedside rounds enhance shared decision-making and patient satisfaction.

**Conclusion:**

The integration of technology, research, and advanced education is transforming specialized nursing. These innovations empower nurses to deliver safer, more efficient, and personalized care while strengthening their leadership role in modern healthcare systems.

World Health Organization. (2021). Global strategic directions for nursing and midwifery 2021–2025. WHO Press.

References:

1. American Nurses Association. (2022). Nursing informatics: Scope and standards of practice (3rd ed.). ANA.
2. National League for Nursing. (2021). NLN vision for nursing education 2021–2030. NLN Press.
3. Patricia R. Jeffries. (Ed.). (2021). Simulation in nursing education: From conceptualization to evaluation (3rd ed.). Wolters Kluwer.
4. American Association of Colleges of Nursing. (2023). The essentials: Core competencies for professional nursing education. <https://www.aacnnursing.org>
5. International Council of Nurses. (2021). Nursing care continuum and advanced practice. ICN.
6. McGonigle, D., & Mastrian, K. G. (2022). Nursing informatics and the foundation of knowledge (5th ed.). Jones & Bartlett Learning.

TELEHEALTH AND TELENURSING: TRANSFORMING MODERN HEALTHCARE DELIVERY

Mr. Akash Kumar Singh, B.Sc. (N) II Semester, CCON, Bhopal



Introduction

Telehealth refers to the use of electronic information and telecommunication technologies to support long-distance clinical healthcare, patient education, health administration, and public health services. Telenursing, a subset of telehealth, specifically focuses on delivering nursing services remotely through digital platforms such as video conferencing, mobile applications, and remote monitoring devices. The global expansion of digital health systems has redefined healthcare accessibility, especially in rural and underserved communities. The COVID-19 pandemic accelerated telehealth adoption, making it an essential component of healthcare delivery worldwide.

Concept and Scope of Telehealth

Telehealth encompasses a wide range of services, including:

- Live video consultations
- Remote patient monitoring (RPM)
- Mobile health (mHealth) applications
- Store-and-forward technologies
- Health education and virtual training

According to the WHO (2022), telehealth strengthens health systems by promoting equitable access and continuity of care, particularly in resource-limited settings.



Telenursing: Roles and Applications

Telenursing integrates nursing practice with telecommunications technology. Nurses utilize telecommunication tools to conduct virtual patient assessments, provide health education and counseling, monitor chronic conditions, offer mental health support, and deliver post-operative follow-up care. Telenursing enhances continuity of care and empowers patients in self-management, particularly for chronic illnesses (American Nurses Association [ANA], 2020).

Benefits of Telehealth and Telenursing

1. Improved access to care by reducing geographical barriers.
2. Cost-effectiveness through reduced travel expenses and hospital readmissions.
3. Enhanced chronic disease management via remote monitoring.
4. Increased patient satisfaction due to convenience and improved communication.
5. Improved workforce efficiency through virtual platforms.

Challenges and Limitations

Despite its advantages, telehealth and telenursing face challenges such as the digital divide, data privacy concerns, regulatory and licensure issues, reimbursement limitations, and lack of digital literacy among patients and providers.

Ethical and Legal Considerations:

Telehealth must adhere to professional and ethical standards including patient confidentiality, informed consent, secure communication platforms, and compliance with licensure regulations. Healthcare providers must follow established guidelines to ensure safe and ethical practice (WHO, 2022).

Future Directions

Emerging technologies such as artificial intelligence (AI), wearable biosensors, and advanced telemonitoring systems will further enhance telehealth and telenursing services. Integration with electronic health records (EHRs) and improved interoperability will be critical to improving healthcare outcomes.

Conclusion

Telehealth and telenursing represent significant innovations in modern healthcare delivery. By improving access, reducing costs, and enhancing patient-centered care, these approaches are reshaping global healthcare systems. Strategic investments and supportive policies are essential to maximize their long-term benefits.

References:

1. American Nurses Association (ANA). (2020). Core principles on connected health. American Nurses Association.
2. World Health Organization (WHO). (2022). Global strategy on digital health 2020–2025. World Health Organization.
3. Bashshur, R., Doarn, C. R., Frenk, J. M., Kvedar, J. C., & Woolliscroft, J. O. (2020). Telemedicine and the COVID-19 pandemic, lessons for the future. *Telemedicine and e-Health*, 26(5), 571–573. <https://doi.org/10.1089/tmj.2020.29040.rb>
4. Rutledge, C. M., Kott, K., Schweickert, P. A., Poston, R., Fowler, C., & Haney, T. (2017). Telehealth and eHealth in nurse practitioner training: Current perspectives. *Advances in Medical Education and Practice*, 8, 399–409. <https://doi.org/10.2147/AMEP.S116071>
5. Shigekawa, E., Fix, M., Corbett, G., Roby, D. H., & Coffman, J. (2018). The current state of telehealth evidence: A rapid review. *Health Affairs*, 37(12), 1975–1982. <https://doi.org/10.1377/hlthaff.2018.05132>

DRONE AMBULANCE: A RECENT ADVANCEMENT IN EMERGENCY AND NURSING CARE

Ms. Ashwini Mahajan, B.Sc. (N) II Semester, CCON, Bhopal



Introduction

In today's world, there is a lot of traffic on roads which leads to congestion in the whole city. So, in the time of emergency crisis situation, an ambulance which travels via road may not be able to reach the destination in time and the patient might lose his or her life. Thus, it is necessary to introduce a distinct means that would take the objective of „saving human life“ one step closer. A drone or a quadcopter takes aerial route and is not driven by human. Using more number of motors and propellers will produce more thrust. The quad copter which consists of four BLDC motors and propellers attached to it makes it the optimal design and provides the necessary thrust. Four 2200mAh batteries provide power supply to the drone. The drone comprises of a med box which is capable of reaching emergency situations faster than the ambulance and can measure patient's real time health parameters.

The various sensors in this prototype comprises of heartbeat sensor, temperature sensor, and ECG sensor. An ECG Sensor with disposable electrodes is attached directly to the chest to detect every heart beat. The electrodes convert heartbeat to electrical signal and thus ECG Sensors are able to measure continuous heart beat and gives data of heart rate. The temperature of the patient 's body is detected by the temperature sensor. The heartbeat or the pulse rate sensor is used to detect the number of heart beats per minute of the patient. The ZIGBEE technology is used to transmit the real time data from the emergency situation spot to the ambulance which is enroute to the destination. The Zigbee mechanism is simpler and less costly than Wi-Fi system.



What Is an Ambulance Drone?

An ambulance drone is a type of unmanned aerial vehicle (UAV) that medical teams use to deliver essential supplies and care in emergency situations. For example, medical emergencies like cardiac arrest and severe abrasions require immediate support. Despite this, it can take several minutes for nearby medical teams to reach those in need. Oftentimes, emergency medical teams arrive too late for reasons beyond their control. And when this happens, it can mean permanent damage or loss of life. Since the first few minutes are so important during an emergency, medical teams are constantly looking for ways to reach people faster. And this is where ambulance drones come into play. These small devices can transport lifesaving technologies—like medication, CPR kits, and even automated external defibrillators (AEDs)—making it easier to provide rapid-response care.

What Are the Benefits of an Ambulance Drone?

Drones come with a variety of benefits, making them a transformative technology for any medical response team. With that in mind, let's take a look at some of the top benefits that come with using drones during medical emergencies.

Accelerate Response Times

- Ambulance drones can avoid traditional transportation barriers like traffic jams and blocked roads. Due to their nature, they can fly directly to patients instead of navigating congested paths.
- By using drones to respond to medical incidents, teams can transport items before personnel arrives on the scene. This, in turn, allows patients, family members, and friends to receive immediate treatment instead of having to wait—perhaps too long—for help to arrive.

Reach Difficult Places

- Oftentimes, emergencies happen in remote areas, in places that are difficult to reach. To illustrate, a hiker with a severe bee allergy may get stung in the woods, several miles away from the nearest parking lot, and even farther from the nearest hospital. Similarly, someone could have a heart attack on the 20th floor of a building.

Both cases present significant logistical hurdles for emergency responders. But drones can arrive on the scene much faster by taking a direct route to the person through the air while transporting critical supplies. This can buy time before responders can arrive, greatly improving the chances of survival.

Expand Operations

- Ambulances are expensive. In addition to their price tag, they also require human operators, technicians, and medical staff. This makes it very difficult for hospitals to add new units and expand their footprints with any sense of urgency.
- On the other hand, ambulance drones are much more affordable and require fewer people to operate. Hospitals can use drones to expand their operations and cover more ground. As a result, hospitals are able to serve nearby communities more effectively.

Scale Efficiently

- Medical responders need to keep a close watch on shifting populations, especially in areas with seasonal changes and heavy tourism.
- For example, consider a coastal town that draws tons of tourists in the summer but clears out in the winter. In this type of scenario, a medical response team could strategically place more drones in the area for faster triage. They could then scale down when populations decrease during the off-season.
- Drones can also help during large events like fairs and festivals, where issues like heat stroke and substance abuse may occur. In these types of settings, medical teams can add nearby drones during events and then scale down when they conclude.

Improve Disaster Response

- The world is constantly changing, which is challenging emergency response teams to remain agile and up to date with the latest threats. The most recent example is COVID-19, which is forcing providers to find new ways of responding and treating large numbers of patients safely and securely.
- Drones can help provide surveillance and treatment following events, helping locate victims and provide on-site medical response. By using drones, medical providers can have an easier time collecting data and understanding where to send support teams. This can expedite emergency response and help conserve resources.

Enhance Battlefield Safety

- Providing emergency medical response can be immensely challenging for military personnel, especially during live combat scenarios involving multiple team members. Medical teams often put their own lives on the line transporting supplies and providing emergency care for wounded soldiers.

Expand Operations

- Ambulances are expensive. In addition to their price tag, they also require human operators, technicians, and medical staff. This makes it very difficult for hospitals to add new units and expand their footprints with any sense of urgency. On the other hand, ambulance drones are much more

affordable and require fewer people to operate. Hospitals can use drones to expand their operations and cover more ground. As a result, hospitals are able to serve nearby communities more effectively.

Scale Efficiently

- Medical responders need to keep a close watch on shifting populations, especially in areas with seasonal changes and heavy tourism.
- For example, consider a coastal town that draws tons of tourists in the summer but clears out in the winter. In this type of scenario, a medical response team could strategically place more drones in the area for faster triage. They could then scale down when populations decrease during the off-season.
- Drones can also help during large events like fairs and festivals, where issues like heat stroke and substance abuse may occur. In these types of settings, medical teams can add nearby drones during events and then scale down when they conclude.

Improve Disaster Response

- The world is constantly changing, which is challenging emergency response teams to remain agile and up to date with the latest threats. The most recent example is COVID-19, which is forcing providers to find new ways of responding and treating large numbers of patients safely and securely.
- Drones can help provide surveillance and treatment following events, helping locate victims and provide on-site medical response. By using drones, medical providers can have an easier time collecting data and understanding where to send support teams. This can expedite emergency response and help conserve resources.

Enhance Battlefield Safety

- Providing emergency medical response can be immensely challenging for military personnel, especially during live combat scenarios involving multiple team members. Medical teams often put their own lives on the line transporting supplies and providing emergency care for wounded soldiers.
- Thanks to drones, military medical teams can rush supplies to other team members without directly crossing combat zones. By taking this approach, it is possible to transmit critical items like bandages and medicine to other team members while reducing the potential for further injury or harm.

Recent Advancements (2022–2024)

1. Integration with Emergency Dispatch Systems

- Modern drone ambulances are now directly connected to emergency call centers. Once a cardiac arrest is reported, drones are automatically deployed alongside traditional ambulances. This dual-response system enhances early intervention.

2. Delivery of Blood and Critical Medications

- Since 2022, drones have been used in rural and remote regions to transport blood products, insulin, anti-venom, and emergency medications. This has reduced delays in trauma and obstetric emergencies.

3. Real-Time Audio-Visual Guidance

- Advanced drones are equipped with speakers and cameras that allow health care professionals to guide bystanders in performing CPR or using an AED until medical teams arrive

Key Implications for Nursing and Emergency Care

- **Improved Patient Outcomes via Speed:** Drones significantly reduce the time required to deliver essential medical equipment, such as Automated External Defibrillators (AEDs), naloxone, adrenaline, and blood products, especially in rural or remote areas. Studies show drones can arrive 1.8 to 8 minutes faster than traditional ground ambulances.
- **By-stander-Assisted Care:** Drones allow for the delivery of medical supplies directly to lay bystanders, who can then be guided by remote nurses or dispatchers via two-way communication

systems to initiate treatment (e.g., CPR or AED) before paramedics arrive.

- **Enhanced Triage and Scene Assessment:** Drones equipped with cameras and, in some cases, sensors to monitor patient vitals (temperature, heart rate, respiration rate) provide real-time data to nurses and physicians, allowing them to better prepare for, and prioritize, the incoming patient.
- **Increased Scope for Rural Nursing:** In remote or difficult-to-access locations, drones act as a vital link, delivering vaccines, medications, and diagnostic samples, thereby alleviating the challenges of long-distance transport and improving access to care.
- **Safety and Efficiency in Disasters:** In mass casualty incidents or disaster situations, drones can safely deliver medical supplies, such as blood, without endangering personnel.

Challenges and Future Considerations

- **Regulatory and Legal Barriers:** Stringent regulations regarding "Beyond Visual Line of Sight" (BVLOS) operations and privacy issues in urban, populated areas currently limit widespread adoption.
- **Technological Limitations:** Limitations include battery life, payload capacity (weight constraints), and susceptibility to adverse weather conditions (high winds or rain).
- **Training and Integration:** Nurses and EMS staff will require specialized training to integrate drone technology into standard operating procedures and to manage the logistical aspects of dispatching and receiving supplies.
- **Bystander Support:** Simulation studies indicate that while bystanders can successfully receive drones, they often require significant support to effectively use the delivered equipment (e.g., attaching an AED).

Conclusion

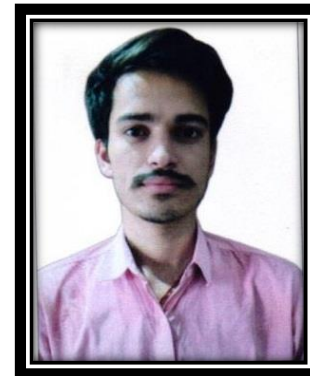
Drone ambulances will likely transform emergency nursing by extending the reach of care, enabling earlier intervention, and providing "eyes on the scene" to guide treatment, though this requires new training and adaptation to strict regulatory frameworks.

References

1. Claesson A, Bäckman A, Ringh M, et al. Time to delivery of an automated external defibrillator using a drone for simulated out-of-hospital cardiac arrests vs emergency medical services. *JAMA*. 2022;327(23):2332–2334.
2. Rosser JC, Vignesh V, Terwilliger BA, Parker BC. Surgical and medical applications of drones: a comprehensive review. *J Med Internet Res*. 2023;25:e43720.
3. Amukele T, Ness PM, Tobian AAR, Boyd J, Street J. Drone transportation of blood products in rural healthcare systems. *Transfusion*. 2022;62(4):761–769.
4. World Health Organization. Digital health and emerging technologies in emergency response. Geneva: WHO; 2023.
5. Chowdhury S, Emelogu A, Marufuzzaman M, Nurre SG, Bian L. Drones for healthcare delivery: recent advancements and challenges. *Health Policy Technol*. 2024;13(1):100754.
6. Federal Aviation Administration. Integration of unmanned aircraft systems in medical emergency response. Washington (DC): FAA; 2023.

SCOPE OF FORENSIC NURSING IN INDIA

Mr. Piyush Kumar, B.Sc. (N) II Semester, CCON, Bhopal



Introduction

Nurses are there when the last breath is taken, and nurses are there when the first breath is taken. Although it is more enjoyable to celebrate the birth, it is just as important to comfort in death. Christine Belle. The core of healthcare system is the nurse. According to Virginia Henderson Nursing is defined as - Assisting the individual, sick or well, in the performance of those activities contributing to health or its recovery (or to peaceful death) that an individual would perform unaided if he had the necessary strength, will or knowledge. The nurse provides safe, effective, high-quality and comprehensive care to every patient. In India, the field of forensic nursing is relatively new and evolving. A forensic nurse is a nurse who specializes in treating patients who are involved in medico-legal matters and dealing deceased bodies. Forensic nursing is the use of the nursing process in public or legal procedures, along with the application of forensic medical care. It is the scientific study of trauma and/or death patients related to abuse, violence, criminal activity, negligence, natural catastrophes, rape victim and accidents. Forensics nursing is one of the career choices in many health science areas. Forensic nursing is essential to delivering the victim with thorough, safe, and efficient care. Nursing still lacks a formal place in India's nursing curriculum manuals

Scope of Forensic Nursing

The field of forensic nursing encompasses a wide range of specializations including. Forensic Nurse Examiners (FNE) A registered nurse can work as a forensic nurse examiner followed by certification in the field of forensics. FNEs inspect victims of all ages who have experienced sexual assault, rape, physical and/or sexual abuse in children, intimate partner violence, non-fatal strangulation, and human trafficking. They are the part of criminal investigations. In addition; they use technology such as forensic photography to gather evidence, offer crisis intervention, provide care and can refer victims for rehabilitative care. Legal nurse consultants (LNC) LNC is a registered nurse (RN) who offers medical advice regarding legal matters. LNCs review and evaluate legal data. Legal nurse consultants advise on legal matters using their expertise in healthcare also advice on medical facts and evidence for ongoing cases to their clients

Forensic psychiatric nurses: A registered nurse (RN) specialized in psychiatric nursing are known as a forensic mental health nurse, or forensic psychiatric nurse (FPN). In order to comprehend the mental health of both criminals and victims of crime, forensic mental health nurses apply their nursing education, which integrates elements of medicine and law. They assist individuals who have suffered physical or emotional trauma.

Correctional nurse consultants: Quality health care services are offered by correctional nursing specialists to people under court custody, including those in jail, juvenile detention centres, and other facilities. Their duties include caring of ill, conducting regular physical examinations, and giving medication.

Forensic Nurse Death Investigators (FNDI): Forensic nurse death investigator, are registered nurse and require at least two years of experience, ideally in an emergency room or critical care setting. They can collaborate with police to identify the precise cause of death and to estimate the time of death. They are typically called to the scene of the crime to investigate the body, obtain samples of blood and tissue, arrange for the body to be brought to the mortuary for an autopsy, and gather evidence that will aid in the investigation of the crime.

Sexual assault nurse examiner (SANE): The number of sexual assault cases is rising, and the victims of these horrible acts endure great physical and mental suffering. The victims of sexual assault are easily bonded to by a female forensic nurse. Sexual assault survivors receive immediate medical attention as well as emotional assistance from sexual assault nurse examiners.

Forensic nurse educators: Forensic nurse educators also impart knowledge regarding forensic nursing, certification programs and continuing education in forensic nursing.

Future Outlook of Forensic nursing

- **Growing Demand and Role Expansion:** The need for specialized forensic nurses—including sexual assault nurse examiners, forensic nurse investigators, and legal nurse consultants—is expanding, especially for forensic pathology and trauma care.
- **Educational Advancements:** The introduction of postgraduate, specialized courses is designed to train nurses in collecting evidence, documenting injuries, and providing legal testimony.
- **Multidisciplinary Integration:** A shift towards a collaborative approach, where forensic nurses work closely with law enforcement, forensic scientists, and legal experts to improve the accuracy of investigations.
- **Addressing Challenges:** The future involves overcoming hurdles such as limited infrastructure, the need for increased awareness, and the requirement for specialized training to handle the emotional impact of the work.
- **Policy & Advocacy:** Continued advocacy for recognizing forensic nurses in legal procedures and developing strict, evidence-based, nation-specific protocols for care.

Conclusion

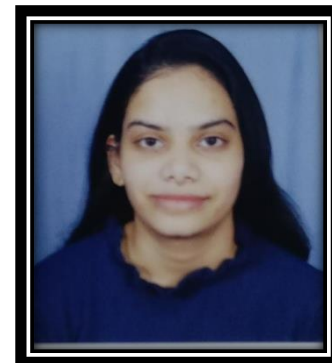
Forensic nursing in India is evolving from a fringe academic interest into a critical pillar of the justice system. While the path ahead requires better institutional hiring and clearer job descriptions, the shift toward trauma-informed evidence collection and specialized medico-legal care is now irreversible. As the legal system demands higher scientific accuracy, the forensic nurse will likely become the indispensable bridge between the hospital ward and the courtroom.

References

1. Ziegler SM. Theory-directed nursing practice. Springer Publishing Company; c2005 Apr 26.
2. Gorea RK, Virginia A. Lynch. Forensic nursing-a boon to the society; c2003. p. 32-36.
3. Kent Wilkinson A. Forensic nursing educational development: An integrated review of the literature. *Journal of Psychiatric and Mental Health Nursing*. 2011 Apr;18(3):236-46.
4. Rajan B, Kundu D, Sarkar S. Rape, Popular Culture, and Nirbhaya: A Study of India's Daughter and Delhi Crime. *Journal of Communication Inquiry*. 2022 May 23:01968599221102527.
5. Inside details of Shraddha Walkar murder case: what we know the Times of India; c2022.
6. Du Mont J, Parnis D. Forensic nursing in the context of sexual assault: comparing the opinions and practices of nurse examiners and nurses. *Applied Nursing Research*. 2003 Aug 1;16(3):173-83.
7. Sharma S, Joseph Jr J. The paradigm of forensic nursing for nursing aspirants in India: Promises, caveats & future directions. *Journal of Forensic and Legal Medicine*. 2022 Feb 1;86:102321.

RECENT TRENDS IN NURSING EDUCATION

Ms. Jyoti Nargesh, B.Sc. (N) II Semester, CCON, Bhopal



Introduction:

Nursing education has undergone substantial transformation over the past five decades, evolving in response to changes in healthcare delivery, professional standards and societal expectations. The transition from hospital-based training to academic degree programs emphasized evidence-based practice, technology integration, cultural responsiveness and interprofessional collaboration. These developments have strengthened educational quality and expanded nursing's role in healthcare delivery. However, nursing education will continue to face considerable challenges in the coming decades, including technological advancement, workforce shortages and the need for enhanced preparedness for global health threats. In this commentary, I examine key developments in nursing education over the past 50 years and discuss emerging challenges that may influence its future direction. Moving forward nursing education is likely to require innovation while maintaining nursing's core values of compassion, advocacy and patient-centred care.

- 1. Virtual Simulation is Reshaping Clinical Training:** Virtual simulation has swiftly become a standard tool in nursing education, moving beyond its previous status as a futuristic concept. Immersive platforms offer nursing students a secure environment to practice complex procedures and enhance clinical judgment by replicating real patient scenarios. This kind of hands-on repetition helps learners build confidence and competence before they step into high-stakes clinical settings. For RNs pursuing a BSN, simulation offers a flexible way to strengthen skills while balancing work and study. Programs that incorporate this technology ensure graduates are better prepared for today's evolving healthcare environments, making simulation one of the most impactful trends in nursing education.
- 2. Competency-Based Education (CBE) Offers Flexible Progression:** Competency-Based Education (CBE) is shifting the focus from credit hours to demonstrated mastery of skills. Instead of advancing through fixed semesters, nurses move forward once they show proficiency in key areas such as patient assessment, leadership, or care coordination. This model allows learners to progress at their own pace, creating more flexibility for working RNs who may want to accelerate certain parts of their education while spending extra time on new or complex material. Many RN-to-BSN programs are adopting CBE to meet the needs of busy professionals. These programs support continuous professional development by acknowledging previous experience and providing flexible learning opportunities.
- 3. Online and Hybrid Learning Are Now the Norm:** What once felt like a temporary solution has now become a permanent fixture, as online and hybrid learning formats are now a standard for nursing education. These flexible options give RNs the ability to balance coursework with professional and personal responsibilities, without sacrificing the quality of their training. Hybrid models, in particular, combine the accessibility of online lectures with in-person labs or clinical experiences, ensuring nurses gain both knowledge and hands-on skills. RN-to-BSN programs have embraced this shift, offering streamlined pathways that fit into demanding schedules. As one of the defining nursing trends 2025, online and hybrid learning make advanced degrees more accessible and keep nurses competitive in a rapidly evolving field.
- 4. Expansion of Digital Care Training:** The rapid growth of telehealth has changed how patients access care, and nursing education is adapting to keep pace. In 2025, more programs are weaving telehealth training into their curricula, preparing nurses to manage virtual visits, use remote monitoring tools, and communicate effectively across digital platforms. These skills are now considered essential, as telehealth



continues to play a major role in primary care, chronic disease management, and rural health access. BSN and RN-to-BSN programs that emphasize telehealth integration give graduates a competitive edge. Nurses can deliver patient-centered care and stay current with the latest technologies by learning to navigate digital care environments, thereby broadening their abilities.

5. **AI Is Personalizing Learning and Skill Development:** One of the latest hot topics in nursing is, believe it or not, artificial intelligence (AI). AI is transforming how nurses learn by tailoring education to individual strengths and gaps. For example, AI-powered platforms can analyze performance data to identify where a student excels and where more practice is needed. This adaptive approach makes study time more efficient, ensuring learners build mastery instead of simply moving through a one-size-fits-all curriculum. It also helps educators provide targeted feedback, supporting both clinical competence and confidence.
6. **Public Health and Health Equity Take Center Stage:** Nursing education is placing a sharper spotlight on public health and equity. The COVID-19 pandemic highlighted how social determinants, such as income, housing, and access to care, directly affect patient outcomes. As a result, programs are placing more emphasis on preparing nurses to address disparities, advocate for vulnerable populations, and work within community-based care models. BSN programs are well-positioned to lead this shift. Coursework often includes population health, epidemiology, and policy, giving nurses the knowledge to identify inequities and implement solutions. For RNs advancing their education, this focus helps ensure graduates are ready to promote both quality and fairness in care delivery.
7. **Nursing Faculty Shortages Drive Innovation:** The ongoing shortage of nursing faculty continues to be a pressing challenge, limiting program capacity at a time when demand for nurses is higher than ever. According to the American Association of Colleges of Nursing, U.S. nursing schools cited faculty shortages as their top reason for not accepting qualified candidates. In response, schools are rethinking how education is delivered. Many are turning to creative solutions such as virtual classrooms, shared faculty resources, and expanded use of adjunct instructors. Others are leveraging simulation and digital platforms to supplement clinical instruction without overburdening faculty. For RNs seeking to complete a BSN, these innovations often translate into more flexible pathways and greater access to programs.
8. **Inter professional Education (IPE) Enhances Team Collaboration:** Healthcare is a team effort, and nursing education is reflecting that reality through interprofessional education (IPE). In this model, nursing students learn alongside peers in medicine, pharmacy, social work, and other allied health fields. Future healthcare providers gain a deeper understanding of each other's roles and learn to coordinate effectively in real-world settings by practicing communication and problem-solving together. BSN programs that emphasize IPE give graduates an edge in today's collaborative healthcare system. Nurses who train in interprofessional environments enter the workforce ready to lead, adapt, and deliver patient care that is safer and more cohesive.
9. **"BSN in 10" Legislation Gains Momentum:** The "BSN in 10" initiative, which requires nurses with an associate degree to earn their Bachelor of Science in Nursing (BSN) within ten years of licensure, is still most closely associated with New York, the only state where it is currently law. However, the idea continues to spark national conversation, with other states exploring similar requirements. Advocates believe that raising the standard of education improves patient outcomes and prepares nurses for increasingly complex care environments. As more states adopt or consider this policy, earning a BSN is becoming less of an option and more of a professional expectation. This shift underscores one of the most significant hot topics in nursing, highlighting the value of advancing education sooner rather than later.



- 10. Greater Demand for Geriatric Nursing Skills:** As the U.S. population continues to age, the need for nurses with expertise in geriatric care is expanding rapidly. Population data projects that the number of older adults in the United States will increase from 58 million in 2022 to 82 million by 2050. Older adults often present with multiple chronic conditions, complex medication regimens, and unique social needs, requiring specialized knowledge and sensitivity. In response, nursing programs are placing more emphasis on topics such as dementia care, palliative support, and strategies for promoting quality of life in later years. BSN programs are particularly well-suited to meet this demand, as their curricula often include advanced coursework in community health and aging populations.
- 11. Increased Focus on Nurse Leadership and Policy Engagement:** Nurses are increasingly vital not just as frontline caregivers, but also as powerful voices shaping healthcare leadership and policy. Education programs emphasize skills such as strategic decision-making, advocacy, and health policy analysis to prepare nurses for roles that extend beyond the bedside. Whether influencing legislation, serving on hospital boards, or leading community initiatives, nurses are being encouraged to step into positions that shape the future of healthcare. BSN curricula often integrate leadership and policy courses, helping nurses build the confidence and expertise needed to take on these responsibilities.
- 12. Growth in Microcredentials and Stackable Certifications:** Professional development is becoming more flexible through microcredentials and stackable certifications. Instead of committing to long, traditional programs, nurses can now pursue smaller, focused credentials that build specific skills, such as wound care, informatics, or leadership, and later apply them toward a larger degree. This modular approach allows nurses to tailor their education to immediate career goals while keeping the door open for advanced study. BSN programs are increasingly recognizing these microcredentials, integrating them into pathways that reward prior learning and reduce duplication. As one of the fastest-growing trends in nursing education, stackable education gives RNs more control over how and when they advance their professional qualifications.
- 13. Emphasis on Nurse Mental Health and Resilience:** Burnout, compassion fatigue, and high stress levels have long been challenges in nursing, but they're receiving more attention than ever. Educators are embedding resilience training into coursework, focusing on mindfulness practices, stress management techniques, and strategies for maintaining a healthy work-life balance. These efforts aim to equip nurses with the tools to protect their mental health while continuing to provide high-quality patient care. BSN programs support this focus by offering leadership and professional development courses that highlight resilience as a vital skill. The goal is clear: to prepare nurses who are not only clinically competent but also able to sustain long, fulfilling careers.
- 14. Expanded Access Through Multi-State Licensing (eNLC):** The Enhanced Nurse Licensure Compact (eNLC) is removing barriers for nurses who want to practice across state lines. With one multistate license, RNs can provide care in participating states without going through additional licensing processes. This flexibility is especially valuable for travel nurses, telehealth providers, and those who relocate frequently. It also helps healthcare systems respond more quickly to staffing needs during emergencies or shortages. Many BSN programs highlight the advantages of eNLC participation, since graduates often pursue careers that extend beyond their home state. The compact enhances patient care accessibility across the nation while simultaneously creating new career prospects through increased mobility.
- 15. Rising Demand and Compensation for BSN-Prepared Nurses:** Employers are increasingly seeking nurses with bachelor's degrees, recognizing the link between higher education and improved patient outcomes. Hospitals with a larger proportion of BSN-prepared nurses often report benefits, including lower mortality rates stronger care coordination, and better overall patient satisfaction. This demand is also



reflected in compensation, as many organizations now offer higher salaries or leadership opportunities to nurses who hold a BSN.

Pursuing a bachelor's degree is becoming less about preference and more about long-term career security. Choosing a BSN program ensures you remain competitive in a field that continues to reward advanced education, making this one of the top nursing trends of 2025.

16. Preparing for the Future of Nursing Starts Now: For nurses looking to advance their education and keep pace with the evolving healthcare landscape, Nevada State University's RN to BSN online program offers a practical and supportive pathway. Designed for licensed professionals, this flexible program empowers you to continue working while completing your bachelor's degree, making it an efficient choice for career-driven RNs. The curriculum emphasizes critical areas such as clinical decision-making, community health, leadership, and cultural awareness, preparing students to meet modern challenges with confidence. Direct practice experiences further strengthen clinical and professional skills, ensuring graduates are ready to lead in diverse settings.

Conclusion:

Recent trends in nursing education clearly reflect a dynamic shift toward innovation, flexibility, and responsiveness to evolving healthcare needs. The integration of technologies such as virtual simulation, artificial intelligence, and telehealth has transformed traditional teaching–learning methods into more interactive, personalized, and competency-driven approaches. Simultaneously, models like competency-based education, online and hybrid learning, and micro credentialing have enhanced accessibility and lifelong learning opportunities for nurses.

References:

1. American Association of Colleges of Nursing (AACN). (2023). The impact of education on nursing practice. <https://www.aacnnursing.org>
2. Billings, D. M., & Halstead, J. A. (2020). Teaching in nursing: A guide for faculty (6th ed.). Elsevier.
3. World Health Organization. (2020). State of the world's nursing 2020: Investing in education, jobs and leadership. WHO Press.
4. National League for Nursing (NLN). (2021). NLN vision for nursing education 2021–2030. NLN Press.
5. Jeffries, P. R. (Ed.). (2021). Simulation in nursing education: From conceptualization to evaluation (3rd ed.). Wolters Kluwer.

CRISPR-BASED GENE THERAPY FOR SICKLE CELL DISEASE

Ms. Sonal Khasdev, B.Sc. (N) II Semester, CCON, Bhopal



Introduction

CRISPR gene editing is a genetic engineering technique in molecular biology by which the genomes of living organisms may be modified. It is based on a simplified version of the bacterial CRISPR-Cas9 antiviral defense system. By delivering the Cas9 nuclease complexes with a synthetic guide RNA (gRNA) into a cell, the cell's genome can be cut at a desired location, allowing existing genes to be removed or new ones added *in vivo*. Gene therapy as a strategy to provide therapeutic benefit includes modifying genes via disruption, correction, or replacement. Gene therapy has witnessed both early successes and tragic failures in a clinical setting. The discovery and development of the CRISPR/Cas9 system has provided a second opportunity for gene therapy to recover from its stigma and prove to be valuable therapeutic strategy. The recent advent of CRISPR technology in clinical trials has paved way for the new era of CRISPR gene therapy to emerge. However, there are several technical and ethical considerations that need addressing when considering its use for patient care.

Sickle Cell Disease (SCD) is a serious inherited blood disorder that affects millions of people worldwide. It causes red blood cells to become rigid, sticky, and shaped like a crescent or 'sickle.' These abnormal cells block blood flow, leading to severe pain, anemia, infections, organ damage, and reduced life expectancy. In 2023, the U.S. FDA approved the first CRISPR-based gene therapy for sickle cell disease, marking a historic breakthrough toward a functional cure.

Understanding Sickle Cell Disease

SCD is caused by a mutation in the β -globin (HBB) gene responsible for hemoglobin production. Abnormal hemoglobin (HbS) causes red blood cells to sickle, blocking vessels and reducing oxygen supply. Sickle cell disease is a rare, debilitating and life-threatening blood disorder with significant unmet need, and we are excited to advance the field especially for individuals whose lives have been severely disrupted by the disease by approving two cell-based gene therapies today. "Gene therapy holds the promise of delivering more targeted and effective treatments, especially for individuals with rare diseases where the current treatment options are limited."

Common Symptoms

- Severe pain crises
- Chronic anemia
- Fatigue
- Frequent infections
- Risk of stroke and organ damage

What is CRISPR-Cas9?

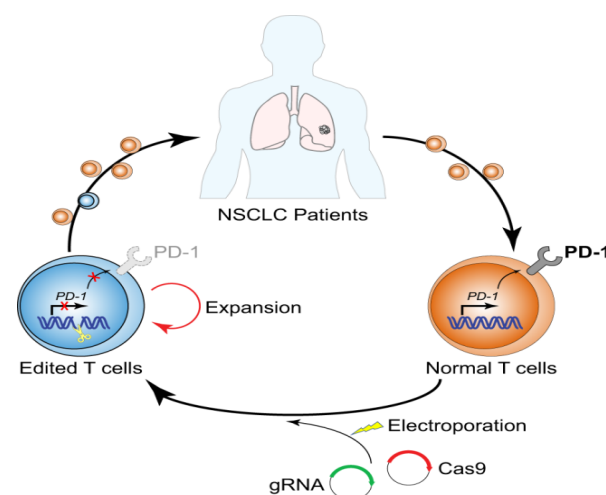
CRISPR-Cas9 is a powerful gene-editing technology often described as molecular scissors. It uses guide RNA (gRNA) and the Cas9 enzyme to precisely cut and modify DNA.

How CRISPR Therapy Works:

Stem cells are collected from the patient. Cells are edited in the laboratory (targeting BCL11A to reactivate fetal hemoglobin). Chemotherapy conditioning prepares the bone marrow. Edited stem cells are reinfused. Healthy red blood cells are produced after engraftment. Stem cells are collected from the patient. Cells are edited in the laboratory (targeting BCL11A to reactivate fetal hemoglobin). Chemotherapy conditioning prepares the bone marrow. Edited stem cells are reinfused. Healthy red blood cells are produced after engraftment.

Future Directions:

- Making gene therapy safer
- Reducing costs
- Developing less toxic conditioning methods
- Expanding treatment to younger patients
- Applying CRISPR to other genetic disorders



Ethical Considerations

- **Germline vs. Somatic Editing:** Editing germline cells (embryos) is highly controversial because it affects all future descendants and is considered irreversible. Somatic editing (treating an existing person) is generally viewed as more ethically acceptable, similar to conventional medicine.
- **Eugenics and Enhancement:** Risks include moving beyond treating disease to enhancing traits like intelligence or appearance, which could revive eugenic ideologies.
- **Informed Consent and Safety:** There are profound challenges in obtaining consent for future, unborn generations. Technical risks include "off-target" effects (unintended mutations).
- **Justice and Access:** The high cost of CRISPR therapies could widen health disparities, creating a society where only the wealthy can access "superior" genetic traits.

Risks and Limitations

- **Off-Target Effects:** The CRISPR-Cas9 system may mistakenly cut DNA at locations similar to the target site, potentially causing harmful mutations, oncogene activation, or cancer.
- **Immunogenicity:** The immune system may recognize and attack the bacterial-derived Cas9 protein, rendering the treatment ineffective or causing severe inflammation.
- **Delivery Challenges:** Efficiently delivering the CRISPR components (Cas9 and guide RNA) into the specific, desired cells inside the human body remains a significant hurdle.
- **Low Efficiency and Mosaicism:** The editing process may not be 100% efficient, resulting in some cells being edited and others not (mosaicism). Additionally, homology-directed repair (precise editing) is less efficient than error-prone repair mechanisms.
- **Chromosomal Abnormalities:** The creation of double-stranded DNA breaks can sometimes lead to large-scale chromosomal rearrangements and, in some cases, cell death.
- **Long-Term Uncertainty:** The long-term effects of permanently altering the genome are not fully understood, and there are currently limited ways to reverse an "off-target" edit once it occurs.
- **Ethical Concerns:** The potential for unintended, inheritable changes has raised severe ethical issues, especially regarding embryo editing.

Conclusion:

CRISPR therapy is a high-stakes balancing act between unprecedented healing potential and unpredictable genomic risks. While the approval of Casgevy proves that we can successfully navigate these hurdles for specific blood disorders, the “holy grail” of safe, universal gene correction still requires overcoming off-target mutations, delivery barriers, and global ethical disagreements.

References:

1. Humbert O, Davis L, Maizels N. Targeted gene therapies: tools, applications, optimization. Crit Rev Biochem Mol Biol. (2012) 47:264–81. 10.3109/10409238.2012.658112
2. Amer MH. Gene therapy for cancer: present status and future perspective. Mol Cell Ther. (2014) 2:27. 10.1186/2052-8426-2-27



3. Prakash V, Moore M, Yanez-Munoz RJ. Current progress in therapeutic gene editing for monogenic diseases. *Mol Ther.* (2016) 24:465–74. 10.1038/mt.2016.5
4. Rosenberg SA, Aebersold P, Cornetta K, Kasid A, Morgan RA, et al. Gene transfer into humans—immunotherapy of patients with advanced melanoma, using tumor-infiltrating lymphocytes modified by retroviral gene transduction. *N Engl J Med.* (1990) 323:570–8. 10.1056/NEJM199008303230904
5. Blaese RM, Culver KW, Miller AD, Carter CS, Fleisher T, Clerici M, et al. T lymphocyte-directed gene therapy for ADASCID: Initial trial results after 4 years. *Science.* (19

RECENT ADVANCEMENTS IN NURSING: SHAPING THE FUTURE OF HEALTHCARE

Mr. Ajay Kushwaha, B.Sc. (N) II Semester, CCON, Bhopal



Introduction

Nursing, a cornerstone of global healthcare, continues to evolve rapidly in response to technological innovation, complex patient needs, and rising expectations for quality care. Recent advancements are redefining nursing roles, improving outcomes, and supporting more efficient, compassionate healthcare delivery. This article highlights key transformations shaping modern nursing practice.

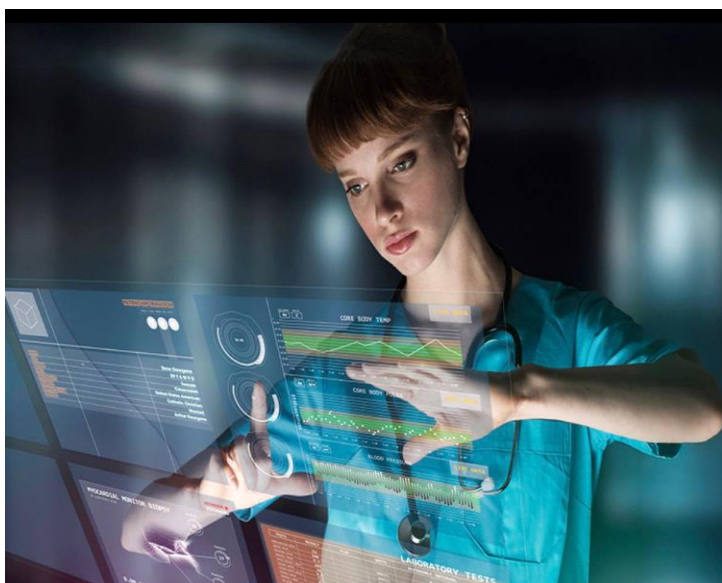
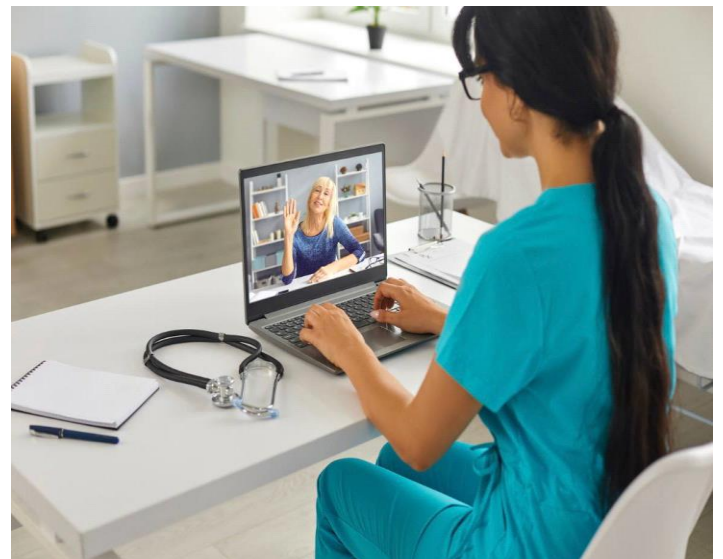
1. Integration of Digital Health Technologies:

(a) Telehealth and Remote Monitoring

Telehealth has expanded significantly since the COVID-19 pandemic, enabling nurses to deliver care beyond traditional clinical settings. Virtual assessments, remote follow-ups, and digital triage tools have increased access to care—especially for rural and underserved populations. Nurses are trained in virtual communication skills and remote monitoring technology, allowing real-time evaluation of vital signs, symptoms, and adherence to treatment plans.

Additional advancements include:

- Mobile health applications for chronic disease tracking
- AI-supported triage systems in emergency departments
- Digital medication adherence tools
- Cloud-based care coordination platforms



(b) Electronic Health Records (EHR) and Predictive Analytics:

Modern EHR systems have become indispensable in daily nursing workflows. Nurses use data analytics embedded in EHRs to anticipate patient risks—such as fall probability, infection likelihood, or early signs of deterioration—enhancing preventive care and reducing adverse events.

Emerging predictive models now assist in:

- Sepsis early warning detection
- Pressure injury risk identification
- Readmission prevention planning
- Population health trend analysis

2. Artificial Intelligence (AI) and Decision Support:

AI-powered tools are augmenting clinical decision-making. Examples include:

- AI chatbots for patient education and symptom screening.
- Clinical decision support systems that flag abnormal trends or suggest evidence-based interventions.
- Natural language processing to extract valuable insights from clinical notes.
- Automated documentation through voice recognition systems.

These tools help nurses streamline documentation, improve diagnostic accuracy, and spend more time on direct patient care.

3. Expanded Roles and Advanced Practice Nursing:

(a) Nurse Practitioners (NPs) and Clinical Nurse Specialists (CNS)

The role of advanced practice nurses has expanded significantly. Nurse practitioners are increasingly recognized as primary care providers in many regions, offering diagnosis, treatment planning, and medication management. Clinical nurse specialists contribute high-level expertise in specialized settings such as oncology, critical care, and cardiovascular health.

(b) Nurse Leadership in Policy and Administration

More nurses are influencing healthcare policy and organizational strategy. Their frontline experience positions them to advocate effectively for patient safety improvements, workforce wellbeing, and equitable healthcare delivery.

Nurses are now actively involved in:

- Health policy advisory boards
- Hospital executive leadership roles
- Quality improvement committees
- Global health advocacy initiatives

4. Simulation and Immersive Learning:

Simulation laboratories and virtual reality (VR) training environments allow nursing students and professionals to practice rare or complex scenarios in a risk-free setting. From high-fidelity manikins to VR operating rooms, these tools boost confidence, enhance clinical judgment, and translate into safer patient care.

Modern simulation advancements include:

- Interprofessional simulation exercises
- Disaster response simulations
- Augmented reality (AR)-assisted anatomy training
- Remote simulation platforms for distance education



5. Personalized and Precision Health Approaches:

Nursing care is shifting from a one-size-fits-all approach to personalized health strategies. Nurses increasingly leverage genetic, lifestyle, and environmental data to guide preventive measures and therapies specific to individual patients.

6. Emphasis on Mental Health and Wellbeing:

Recent advancements addressing workforce wellbeing include:

- Wellness programs for nurses.
- Organizational strategies to reduce burnout.
- Peer support networks.
- Flexible scheduling and resilience training.

This holistic focus improves nurse wellbeing and positively impacts patient outcomes.

7. Interprofessional Collaboration and Team-Based Care:

Modern healthcare emphasizes collaborative care models. Nurses work alongside physicians, pharmacists, therapists, social workers, and community health teams in coordinated care planning. This team-based approach improves resource utilization and enhances continuity of care.

8. Global Health and Sustainability in Nursing:

A growing focus on sustainability and climate-resilient healthcare systems has positioned nurses at the forefront of environmental health advocacy. Nurses contribute to:

- Green hospital initiatives
- Waste reduction programs
- Climate change health education
- Disaster preparedness and response planning

Global nursing networks are strengthening capacity building in low- and middle-income countries, supporting equitable healthcare access.

Challenges and Future Directions:

While advancements bring growth, nursing faces challenges including ensuring equitable access to new technologies, addressing ethical concerns around AI, providing continuous training for evolving tools, and overcoming workforce shortages. Ongoing investment in education, policy support, and research is crucial to sustain momentum.

Conclusion

The nursing profession stands at an exciting crossroads where innovation meets compassionate care. Digital technologies, expanded roles, immersive education, and data-driven practices are transforming how nurses deliver health services. As nursing continues to lead in clinical excellence, advocacy, and patient-centered care, it will play a pivotal role in shaping the future of global health.

References

1. World Health Organization. (2020). State of the World's Nursing 2020: Investing in Education, Jobs and Leadership. Geneva: WHO.
2. International Council of Nurses. (2021). The Global Nursing Workforce and the COVID-19 Pandemic.
3. American Nurses Association. (2022). The Future of Nursing: Scope and Standards of Practice.
4. National Academy of Medicine. (2021). The Future of Nursing 2020–2030: Charting a Path to Achieve Health Equity.
5. Topaz, M., & Pruinelli, L. (2017). Big data and nursing: Implications for the future. *Nursing Outlook*, 65(5), 565–573.

SMART DEVICES AND REMOTE MONITORING IN THE MEDICAL FIELD

Ms. Anshu Raikwar, B.Sc. (N) II Semester, CCON, Bhopal



Introduction

Advancements in digital technology have significantly transformed the healthcare sector. Smart devices—such as wearable sensors, mobile health applications, and Internet of Things (IoT)-enabled medical equipment—facilitate real-time data collection and analysis. Remote monitoring allows healthcare providers to track patient health outside traditional clinical settings, promoting patient-centered care.

Concept of Smart Devices in Healthcare

Smart devices are electronic tools equipped with sensors, connectivity features, and software that enable them to collect, process, and transmit health-related data.

Examples of Smart Devices

- Wearable fitness trackers (heart rate, steps, sleep patterns)
- Smartwatches (ECG monitoring, oxygen saturation)
- Glucose monitoring devices
- Smart inhalers
- Blood pressure monitors

These devices are often connected to smartphones or cloud platforms for real-time data sharing.

Remote Patient Monitoring (RPM)

Remote Patient Monitoring refers to the use of digital technologies to collect medical and health data from individuals in one location and electronically transmit it to healthcare providers in a different location.

Key Components

- Data collection devices
- Communication technologies (Bluetooth, Wi-Fi)
- Data storage (cloud-based systems)
- Healthcare provider interface

Applications in Healthcare

Smart devices and remote monitoring are widely used in various fields:

1. Chronic Disease Management

- Diabetes: Continuous glucose monitoring
- Hypertension: Regular blood pressure tracking
- Cardiac diseases: ECG monitoring

2. Post-operative Care

- Monitoring recovery progress
- Detecting complications early

3. Elderly Care

- Fall detection systems
- Medication reminders
- Vital signs monitoring

4. Telemedicine Integration

- Real-time patient consultation
- Virtual follow-ups
- Reduced need for hospital visits

5. Pandemic Management

- During outbreaks such as COVID-19, remote monitoring minimized exposure risks and allowed home-based care.

Advantages

- Improved patient outcomes through early detection
- Reduced hospital admissions and readmissions
- Cost-effective healthcare delivery
- Enhanced patient engagement and self-care
- Access to healthcare in remote areas

Challenges and Limitations

- Data privacy and security concerns
- Technical issues and device reliability
- High initial costs
- Lack of digital literacy among patients
- Regulatory and ethical issues

Role of Nurses in Smart Healthcare

- Nurses play a vital role in implementing and managing smart devices:
- Educating patients on device usage
- Monitoring patient data
- Interpreting clinical information
- Coordinating with healthcare teams
- Ensuring patient compliance

Future Prospects

The future of smart devices in healthcare is promising with advancements such as:

- Artificial Intelligence (AI) integration
- Predictive analytics for disease prevention
- Personalized medicine
- Expansion of telehealth services
- Development of more accurate and affordable devices

Conclusion

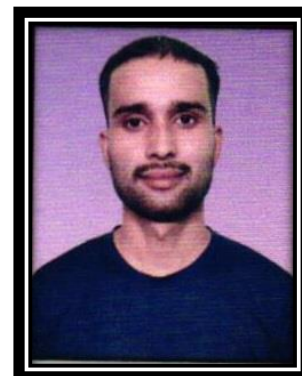
Smart devices and remote monitoring are transforming the healthcare landscape by making it more efficient, accessible, and patient-centered. Despite challenges, continued technological advancements and proper implementation strategies will enhance their effectiveness and acceptance in clinical practice.

Bibliography

1. World Health Organization (WHO). (2021). Global Strategy on Digital Health 2020–2025.
2. Topol, E. (2019). Deep Medicine: How Artificial Intelligence Can Make Healthcare Human Again. Basic Books.
3. Sharma, S., & Bashir, M. (2020). Use of wearable devices in healthcare: A systematic review. *Journal of Medical Systems*, 44(5), 1–9.
4. American Telemedicine Association. (2022). Remote Patient Monitoring Guidelines.
5. Kumar, S., & Nilsen, W. J. (2017). Mobile health technology evaluation: The mHealth evidence workshop. *American Journal of Preventive Medicine*, 45(2), 228–236.
6. Ministry of Health and Family Welfare, Government of India. (2020). Telemedicine Practice Guidelines.
7. Patel, S., Park, H., Bonato, P., Chan, L., & Rodgers, M. (2012). A review of wearable sensors in healthcare. *Journal of NeuroEngineering and Rehabilitation*, 9(1),

DIGITAL TWIN TECHNOLOGY IN PATIENT CARE AND NURSING MONITORING

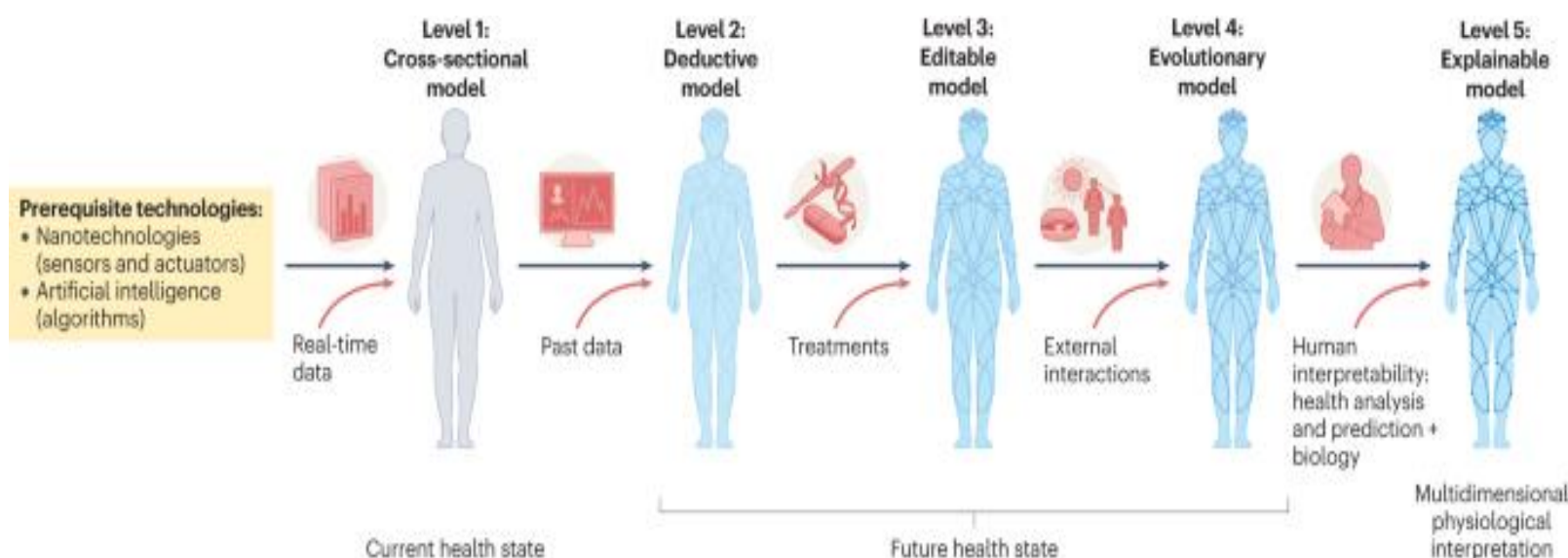
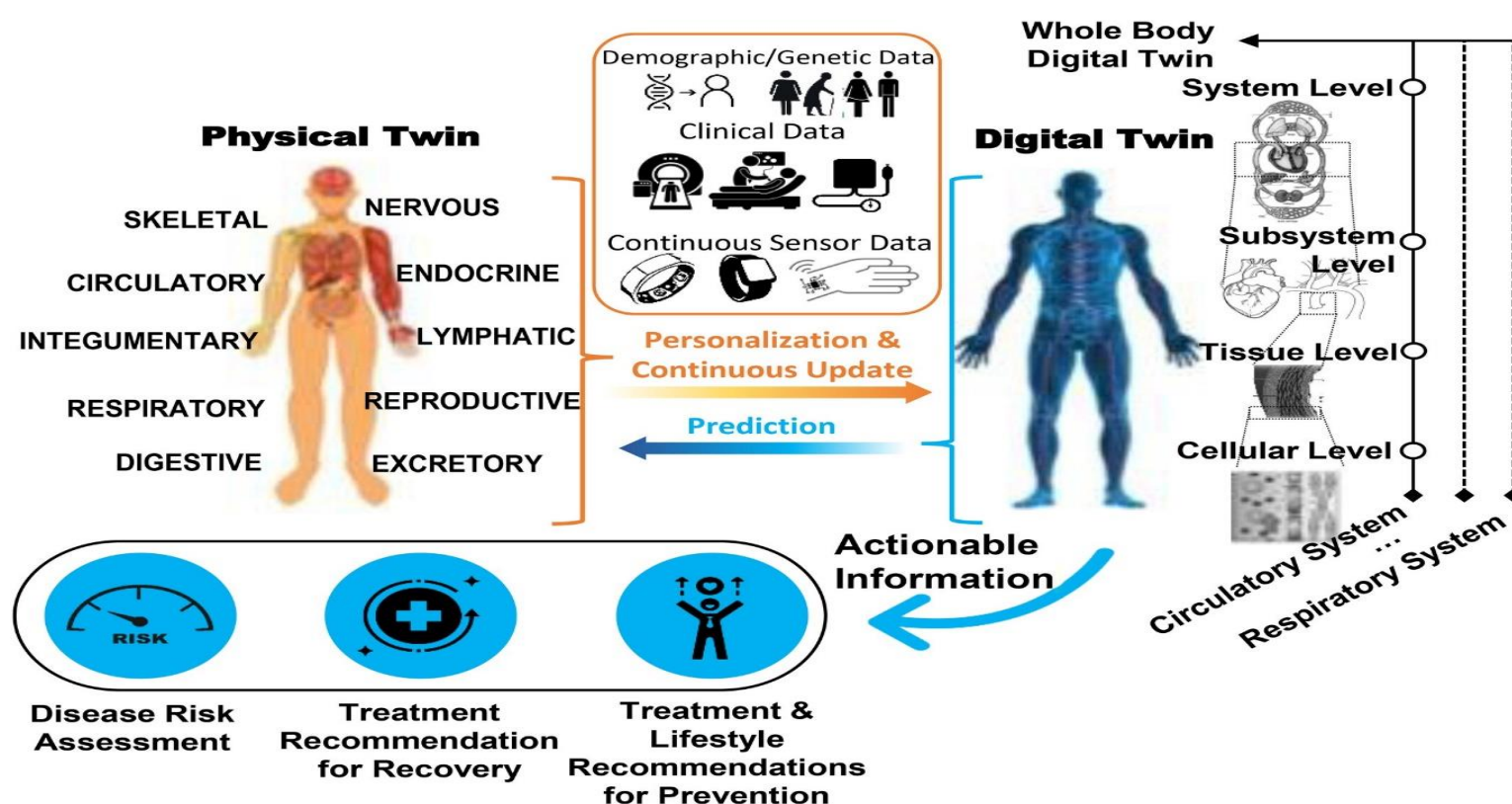
Mr. Anil Ahirwar, B.Sc. (N) II Semester, CCON, Bhopal



Introduction

Digital Twin Technology is an advanced innovation in healthcare that involves creating a virtual replica of a patient, organ, or healthcare system using real-time data. This digital model continuously updates through inputs from sensors, electronic health records (EHR), imaging, and wearable devices. In nursing, digital twins are transforming patient care by enabling continuous monitoring, predictive analysis, and personalized interventions. This technology aligns with modern healthcare goals of precision medicine, patient safety, and proactive care, making it a significant advancement in specialized nursing practice.

Concept of Digital Twin in Healthcare



A digital twin consists of three key components:

1. **Physical Entity** – The actual patient or biological system
2. **Digital Representation** – A virtual model created using AI and data analytics
3. **Data Integration System** – Continuous data flow from sensors, EHR, and monitoring devices

This integration allows healthcare professionals, especially nurses, to visualize patient conditions in real time and predict future outcomes.

Key Features of Digital Twin Technology:

1. Real-Time Monitoring

- Continuous collection of vital signs (HR, BP, SpO₂, temperature)
- Integration with wearable devices and bedside monitors
- Helps nurses detect subtle changes early

2. Predictive Analytics

- Uses AI algorithms to forecast complications (e.g., sepsis, cardiac arrest)
- Supports early intervention and reduces morbidity

3. Personalized Care Planning

- Treatment plans tailored based on individual patient data
- Enhances patient-centered care

4. Simulation of Clinical Scenarios

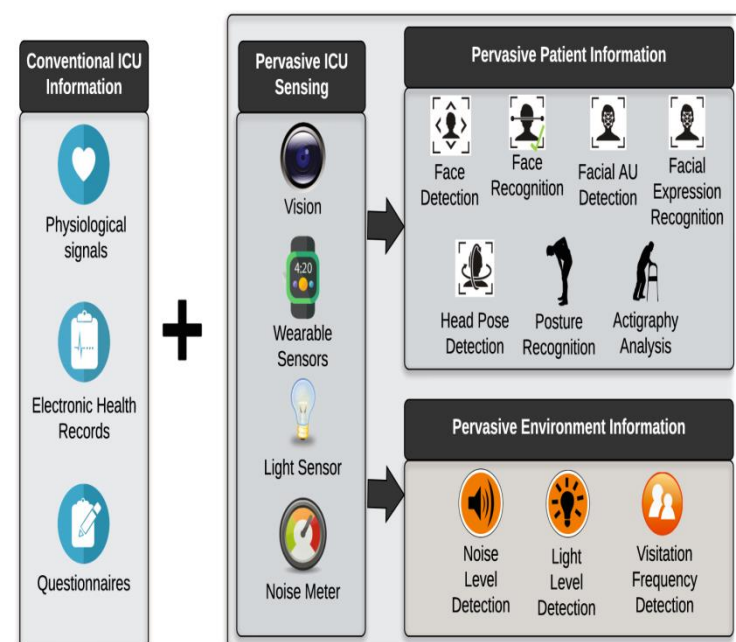
- Nurses can test interventions virtually before applying them
- Reduces risk and improves decision-making

Applications in Nursing Practice

1. Critical Care Monitoring



a)



b)

- Real-time ICU monitoring
- Early detection of deterioration
- Improved response time by nurses

2. Chronic Disease Management

- Monitoring patients with diabetes, hypertension, COPD
- Continuous tracking through wearable devices
- Prevents complications and hospital readmissions

3. Remote Patient Monitoring (RPM)

- Useful in home care and telehealth
- Nurses can track patient status without physical presence
- Enhances rural and community healthcare delivery

4. Surgical and Preoperative Planning

- Simulation of surgical outcomes
- Helps nurses prepare patients better
- Improves peri-operative care

5. Rehabilitation and Recovery

- Tracks progress in physiotherapy and recovery
- Provides feedback on patient improvement
- Supports individualized rehabilitation plans

Role of Nurses in Digital Twin Technology

- Data Interpretation: Analyze real-time patient data
- Clinical Decision Support: Use insights for timely interventions
- Patient Education: Guide patients on wearable devices and monitoring
- Care Coordination: Collaborate with multidisciplinary teams
- Ethical Responsibility: Ensure privacy and data security

Advantages

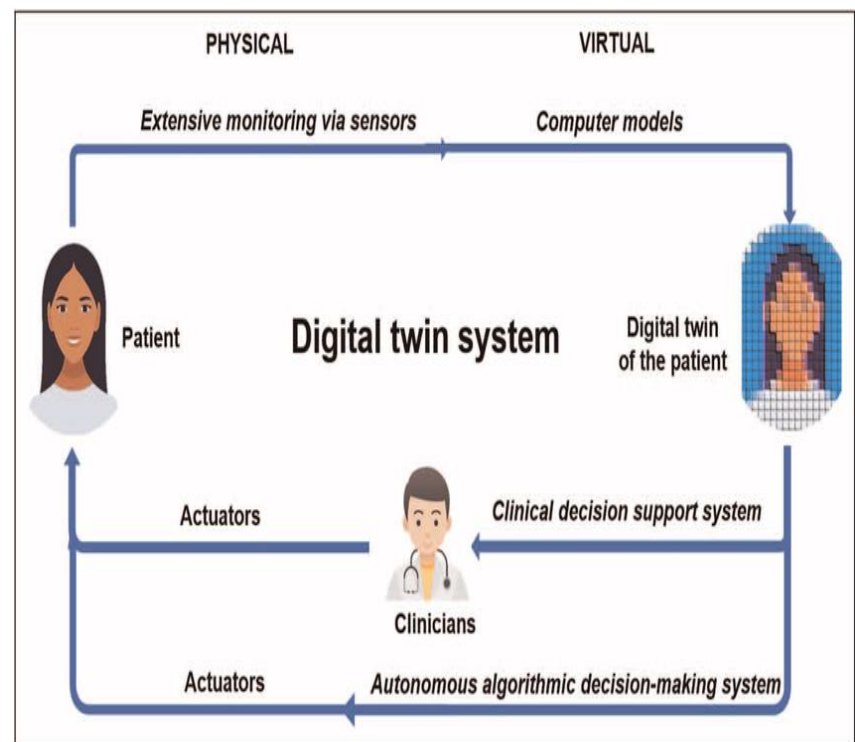
- Early detection of complications
- Improved patient safety
- Enhanced clinical decision-making
- Reduced hospital stay and cost
- Personalized and holistic care

Challenges and Limitations

- High implementation cost
- Need for technical training among nurses
- Data privacy and cybersecurity concerns
- Dependence on accurate data input
- Limited availability in low-resource settings

Future Scope in Nursing

- Integration with Artificial Intelligence and Machine Learning
- Development of fully personalized virtual patients
- Expansion in community and home-based care
- Use in nursing education and simulation training
- Global adoption in smart hospitals and digital healthcare systems





Conclusion

Digital Twin Technology represents a revolutionary advancement in healthcare and nursing practice. By enabling real-time monitoring, predictive analysis, and personalized care, it enhances patient outcomes and supports evidence-based nursing interventions.

Although challenges such as cost, training, and data security remain, the future of digital twin technology is promising. As healthcare continues to evolve, nurses will play a pivotal role in integrating this technology into clinical practice, ensuring safe, efficient, and patient-centered care. This innovation not only strengthens nursing practice but also aligns with the broader goal of delivering high-quality, technology-driven healthcare.

References

1. World Health Organization. (2021). Global strategy on digital health 2020–2025. WHO Press.
2. International Council of Nurses. (2022). Nursing and digital health transformation. ICN.
3. Fuller, A., Fan, Z., Day, C., & Barlow, C. (2020). Digital twin: Enabling technologies, challenges and open research. *IEEE Access*, 8, 108952–108971.
4. Bruynseels, K., Santoni de Sio, F., & van den Hoven, J. (2018). Digital twins in health care: Ethical implications of an emerging engineering paradigm. *Frontiers in Genetics*, 9, 31.
5. McGonigle, D., & Mastrian, K. G. (2022). *Nursing informatics and the foundation of knowledge* (5th ed.). Jones & Bartlett Learning.
6. American Nurses Association. (2022). *Nursing informatics: Scope and standards of practice* (3rd ed.).
7. National Academy of Medicine. (2020). *Digital health and patient care innovations*.
8. Tao, F., & Zhang, M. (2019). Digital twin shop-floor: A new paradigm for smart manufacturing. *IEEE Access*, 7, 129915–129927.

CLINICAL DECISION SUPPORT SYSTEM (CDSS)

Mr. Pinky Kapil, B.Sc. (N) II Semester, CCON, Bhopal



Introduction

Healthcare systems today face increasing challenges such as rising patient loads, complex diseases, and the need for evidence-based practice. Clinical Decision Support Systems (CDSS) help clinicians manage these challenges by providing intelligent recommendations based on patient data and clinical guidelines.

CDSS is commonly integrated with Electronic Health Records (EHRs), allowing real-time analysis and decision-making support. These systems are particularly useful in reducing variability in clinical practice and improving the quality of care.

Definition

Clinical Decision Support Systems are computer-based applications that analyze patient data and medical knowledge to provide decision-making assistance to healthcare professionals.

Objectives of CDSS

- To improve clinical decision-making accuracy
- To reduce medical errors and adverse events
- To promote evidence-based practice
- To enhance efficiency in healthcare delivery
- To improve patient safety and outcomes

Architecture of CDSS

CDSS typically consists of the following components:

1. **Knowledge Base**
 - Contains clinical guidelines, protocols, drug databases, and disease information
 - Sources include research articles, clinical trials, and expert recommendations
2. **Inference Engine**
 - The “brain” of CDSS
 - Applies logical rules (e.g., IF-THEN statements) to patient data
 - Generates alerts, recommendations, or diagnoses
3. **Clinical Data Repository**
 - Stores patient data such as medical history, lab results, medications, and vital signs.
4. **User Interface**
 - Allows interaction between the user and the system Should be user-friendly and accessible
5. **Communication Mechanism**
 - Ensures data exchange between EHRs, laboratory systems, and other healthcare platforms

Types of CDSS

1. **Knowledge-Based CDSS**
 - Uses predefined rules and guidelines
 - Example: Drug allergy alerts
2. **Non-Knowledge-Based CDSS**
 - Uses machine learning and AI algorithms
 - Identifies patterns and predicts outcomes
3. **Standalone CDSS**
 - Operates independently without integration with EHR
4. **Integrated CDSS**
 - Embedded within EHR systems for real-time decision support



5. Active CDSS

- Automatically provides alerts and reminders

6. Passive CDSS

- Provides information only when requested by the user

Functions of CDSS

- Diagnostic assistance
- Drug prescription support
- Clinical guideline implementation
- Risk assessment and prediction
- Alert generation (e.g., abnormal lab values)
- Preventive care reminders
- Applications of CDSS

1. Disease Diagnosis

- CDSS assists clinicians in diagnosing diseases by comparing patient symptoms with known medical conditions.

2. Medication Management

- Checks for drug interactions Suggests correct dosage Prevents medication errors

3. Chronic Disease Management

- Diabetes, hypertension, asthma monitoring
- Long-term treatment planning

4. Emergency Care

- Rapid decision-making in critical situations
- Triage support

5. Preventive Healthcare

- Immunization reminders
- Screening recommendations

6. Nursing Practice

- Clinical documentation
- Care planning
- Monitoring patient progress

Advantages of CDSS

- Improves diagnostic accuracy
- Reduces medication errors
- Enhances patient safety
- Saves time for healthcare professionals
- Promotes standardized care
- Supports continuous learning

Limitations and Challenges

1. Technical Challenges

- Integration with existing systems
- System errors or downtime

2. Human Factors Resistance to adoption

- Over-reliance on technology

3. Alert Fatigue

- Excessive alerts may be ignored

4. Data Quality Issues

- Inaccurate data leads to incorrect recommendations

5. Cost and Infrastructure

- High implementation and maintenance costs

6. Ethical and Legal Issues

- Responsibility for errors
- Patient data confidentiality

Role of Nurses in CDSS

Nurses play a vital role in ensuring effective use of CDSS:

- Accurate data entry into systems
- Monitoring alerts and recommendations
- Supporting clinical decision-making
- Educating patients about treatment plans
- Ensuring patient safety and compliance
- Collaborating with multidisciplinary teams

Evaluation of CDSS

- Evaluation is essential to ensure effectiveness:
- Accuracy of recommendations
- User satisfaction Impact on patient outcomes
- Reduction in medical errors
- Cost-effectiveness

Future Trends in CDSS

- Integration with Artificial Intelligence and Machine Learning
- Use of Big Data for predictive analytics
- Personalized and precision medicine
- Voice-enabled and mobile CDSS
- Integration with wearable devices
- Cloud-based healthcare solutions

Conclusion

Clinical Decision Support Systems are an integral part of modern healthcare, enhancing clinical decision-making and improving patient care. While challenges exist, continuous advancements in technology and proper training of healthcare professionals will ensure their successful implementation and widespread adoption.

References

1. Berner, E. S. (2007). Clinical Decision Support Systems: Theory and Practice. Springer.
2. Shortliffe, E. H., & Cimino, J. J. (2014). Biomedical Informatics: Computer Applications in Health Care and Biomedicine. Springer.
3. Sutton, R. T., et al. (2020). "An Overview of Clinical Decision Support Systems." NPJ Digital Medicine, 3(17).
4. Bates, D. W., et al. (2003). "Clinical Decision Support Systems." JAMA, 289(15), 1909–1914.
5. World Health Organization (WHO). (2021). Digital Health Interventions.

RECENT ADVANCEMENTS IN PRECISION HEALTH AND GENOMICS IN NURSING

Mr. Krishnakant Rathore, B.Sc. (N) II Semester, CCON, Bhopal



Introduction

Genomics is the science of understanding the genetic information in our cells and how that information influences everything in our daily lives. Precision medicine is the process of using each individual's genetic information to prevent disease or better inform medical care to treat problems after they arise. Precision medicine, which at its core is about matching the right drugs and treatments to the right people, has begun to make a difference in the treatment of some cancers. Researchers are changing how they classify tumors. The genetics of some breast cancers, for example, may be more like stomach tumors than other breast cancers. With precision medicine, cancers that are genetically alike are treated similarly. Imagine the perfect diet for you or the perfect drug for your disease, not just the regimen ordered for everyone else. Recent advances in genomic technologies, molecular diagnostics, and nursing competencies have significantly expanded nursing practice in this area.

Integration of Genomics into Nursing Practice

Modern DNA sequencing and genomic technologies are transforming healthcare delivery. Nurses now incorporate genetic information into: -

- Disease risk assessment
- Screening recommendations
- Diagnosis support
- Treatment planning
- Health promotion strategies

Molecular Diagnostics in nursing

Molecular diagnostics in nursing involves utilizing lab techniques like PCR to analyze DNA/RNA for rapid, precise, and early detection of diseases, infections, and genetic conditions. Nurses play a critical role in collecting high-quality samples (blood, tissue, fluids), interpreting results, and providing patient education to guide personalized treatment and monitoring



Key Aspects of Molecular Diagnostics in Nursing

- **Infectious Diseases:** Rapid identification of bacteria, viruses (e.g., COVID-19, SARS-CoV-2, HIV), and fungi, allowing for targeted antibiotic stewardship.
- **Oncology:** Tumor molecular profiling to identify genetic markers that determine treatment efficacy and disease progression.
- **Genetic Testing:** Testing for hereditary risks, such as BRCA1/BRCA2, helping patients understand their predisposition to disease.
- **Point-of-Care (POC) Testing:** Using rapid molecular tests (e.g., for Influenza, Malaria) to make real-time, bedside clinical decisions.

Key Clinical Advancements (2024–2025):

- **Pharmaco genomics (PGx) Integration:** Nurses are increasingly responsible for ensuring "the 5 rights" of medication administration by accounting for a patient's genetic profile. This includes coordinating tests (e.g., TPMT/NUDT15 for thiopurines) to prevent severe adverse reactions and monitoring for efficacy based on genetic markers.

- **Rapid Genomic Sequencing:** In acute and neonatal care, rapid whole-genome sequencing (WGS) is becoming a standard tool for diagnosing previously undiagnosed genetic conditions, with nurses playing a central role in sample collection and result communication.
- **Polygenic Risk Scores (PRS):** Emerging use of PRS allows nurses to identify predispositions for complex chronic conditions like diabetes and cardiovascular disease earlier than traditional methods.
- **Oncology Precision:** Nurses utilize tumor-specific molecular profiles to guide targeted therapies (e.g., **HER2** or **EGFR** markers) and manage patient expectations during personalized cancer treatment.

Technological & Data Innovations

- **AI and Machine Learning:** Artificial intelligence is now used for variant interpretation and predicting disease risk by analyzing massive multi-omics datasets (genomics, transcriptomics, proteomics, and metabolomics).
- **EHR Integration:** Clinical decision support tools are being embedded directly into Electronic Health Records (EHRs), allowing nurses to access genomic alerts and evidence-based guidelines at the point of care.
- **Point-of-Care Testing (POCT):** Advances in micro fluidic technologies are bringing genomic diagnostics directly to the bedside, making screening more accessible in remote or resource-limited settings.

Strategic Nursing Initiatives

- **The TIGER Program:** The TIGER initiative (Translation and Integration of Genomics is Essential to Doctoral Nursing) uses a "train-the-trainer" model to equip doctoral nursing faculty with the skills to lead genomic integration in curricula and research.
- **National Competency Frameworks:** Organizations like the American Nurses Association (ANA) and the Genomics Education Programme (NHS England) have updated standards of proficiency to ensure all registered nurses possess foundational genomic literacy.
- **Global Alliances:** The Global Genomics Nursing Alliance (G2NA) and Canadian Nursing and Genomics (CNG) are unifying global efforts to overcome barriers like low genomic literacy and policy gaps.

Emerging Challenges

- **Knowledge-Practice Gap:** Despite high perceived importance, many nurses still report a lack of confidence and actual knowledge (scoring as low as 30% on validated tests like the Genomic Nursing Concept Inventory).
- **Precision Ethics:** Nurses are at the forefront of managing ethical concerns regarding data privacy, potential bias in AI algorithms, and the psychological impact of returning genetic results to families.

Conclusion

Nursing is the most trusted profession with the highest patient interaction. Inevitably, patients will ask about precision health. Equally inevitable, you will become part of a team applying the results of precision medicine. Nurses play a key role in genomic research by bridging the gap between complex scientific data and patient care. There are many roles for nurses in research. They can contribute by participating in research studies, collecting and managing genetic data, and ensuring ethical standards are upheld. There are many opportunities for nurses to be part of research or simply to refer patients who may be eligible for particular research projects.



References

1. Dewell S, Walker T, Swadas N. Linking the nursing process with genomics. Nursing Clinics of North America. 2025.
2. Colomer-Lahiguera S, et.al. Achieving comprehensive patient-centered cancer services: Role of advanced practice nurses in precision health. Seminars in Oncology Nursing. 2024.
3. McLaughlin L, et.al. A systematic review of genomic education for nurses and nursing students. Nursing Outlook. 2024.
4. Ensuring equity in the age of precision health: Genomic nursing competency simulation. Clinical Simulation in Nursing. 2025.
5. Oncology Nursing Society. Nursing inquiry and innovation in genomics and precision medicine. 2024.
6. University of Texas School of Nursing. Training nurse scientists in precision health. 2025.
7. Sigma Repository. Integrating genomics into nursing education. 2025.

PERINATAL CARE TOOLS

Ms. Asha Morey, B.Sc. (N) IV Year, CCON, Bhopal



1. Episiotomy Scissors

Introduction: Episiotomy scissors are specially designed surgical scissors used during childbirth.

Definition: Episiotomy scissors are instruments used to make an incision in the perineum during delivery.

Indications:

- Difficult delivery
- Need to enlarge vaginal opening during childbirth

Uses:

- Performing episiotomy
- Facilitating safe delivery of the baby



2. Cord Clamp

Introduction: Cord clamp is used after delivery of the baby to clamp the umbilical cord.

Definition: A cord clamp is a device used to clamp the umbilical cord after birth.

Indications:

- Immediately after delivery of the baby

Uses:

- Prevent bleeding from umbilical cord
- Secure cord before cutting



INSTRUMENTS FOR CERVICAL INSPECTION

Ms. Arti Rajput, B.Sc. (N) IV Year, CCON, Bhopal



1. Sims Vaginal Speculum

Introduction: Sim's speculum is commonly used in gynecological examinations to visualize the cervix and vaginal wall.

Definition: A Sims vaginal speculum is a medical instrument used to retract the vaginal wall for examination of the cervix and vagina.

Indications:

- Vaginal examination
- Pap smear test
- Cervical inspection

Uses:

- Retracting vaginal wall
- Viewing cervix
- Assisting gynaecological procedures



2. Cusco's Speculum

Introduction: Cusco's speculum is a self-retaining vaginal speculum used for gynecological examinations.

Definition: A Cusco's speculum is a bivalve instrument used to open the vaginal canal to visualize the cervix.

Indications:

- Vaginal examination
- Pap smear collection
- IUCD insertion

Uses:

- Visualizing cervix
- Performing cervical procedures
- Vaginal examination





HEMOSTATICS AND GRASPING INSTRUMENTS

Ms. Deeksha Nagar & Ms. Deepika Parmar

B.Sc. (N) IV Year, CCON, Bhopal



1. Towel Clip

Introduction: Towel clip is a surgical instrument used in obstetric and gynecological procedures to secure sterile drapes around the operative field.

Definition: A towel clip is a sharp-pointed surgical instrument used to hold sterile drapes or towels in position during surgical procedures.

Indications:

- During delivery procedures
- During gynecological surgeries
- While preparing sterile operative field

Uses:

- Holding sterile drapes in place
- Maintaining sterile field during surgery or delivery
- Sometimes used to hold tissues



2. Mucus suction device

Introduction: This device is used immediately after birth to remove mucus from the new born's airway.

Definition: A mucus suction device is a rubber or plastic bulb instrument used to remove mucus, blood, or amniotic fluid from the mouth and nose of a new born baby.

Indications:

- Immediately after birth
- When airway of new born is blocked by mucus or fluid

Uses:

- Clearing airway of new born
- Preventing aspiration
- Helping new born breathe properly





HEMOSTATICS AND GRASPING INSTRUMENTS

Ms. Deeksha Nagar & Ms. Deepika Parmar

B.Sc. (N) IV Year, CCON, Bhopal



3. Sponge Holding Forceps

Introduction: Sponge holding forceps are commonly used during surgical and delivery procedures.

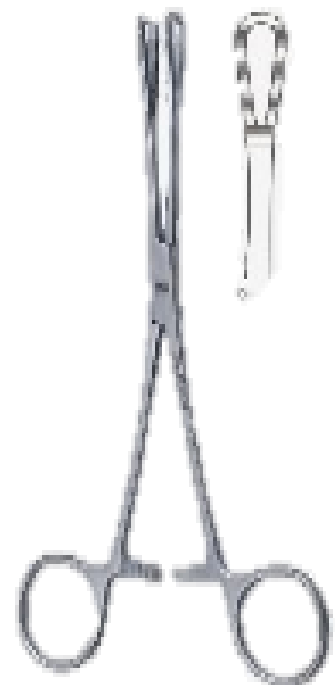
Definition: A sponge holding forceps is a long forceps used to hold gauze or sponge during surgical procedures.

Indications:

- Surgical procedures
- Vaginal cleaning during delivery
- Antiseptic application

Uses:

- Holding gauze or sponge
- Cleaning operative area
- Applying antiseptic solution



4. Artery Forceps

Introduction: Artery forceps are commonly used in surgical procedures to control bleeding.

Definition: An artery forceps is a clamp-like surgical instrument used to grasp blood vessels and control haemorrhage.

Indications:

- Surgical procedures
- Control of bleeding
- Tissue handling

Uses:

- Clamping blood vessels
- Preventing bleeding
- Holding tissues





INSTRUMENTS FOR PROLONGED LABOUR

Mr. Deepak Gurjar & Ms. Muskan Kushwaha

B.Sc. (N) IV Year, CCON, Bhopal



1. Wrigley's Forceps

Introduction: Wrigley's forceps are short obstetric forceps used to assist delivery when the fetal head is low in the birth canal.

Definition: Wrigley's forceps are short obstetric forceps used to assist the delivery of the baby's head during the second stage of labour.

Indications:

- Low forceps delivery
- Fetal distress
- Maternal exhaustion during labour

Uses:

- Assisting vaginal delivery
- Guiding the baby's head during childbirth
- Delivering the baby when labour progress is slow



2. Obstetric Forceps

Introduction: Obstetric forceps are instruments used to assist in delivery of the baby.

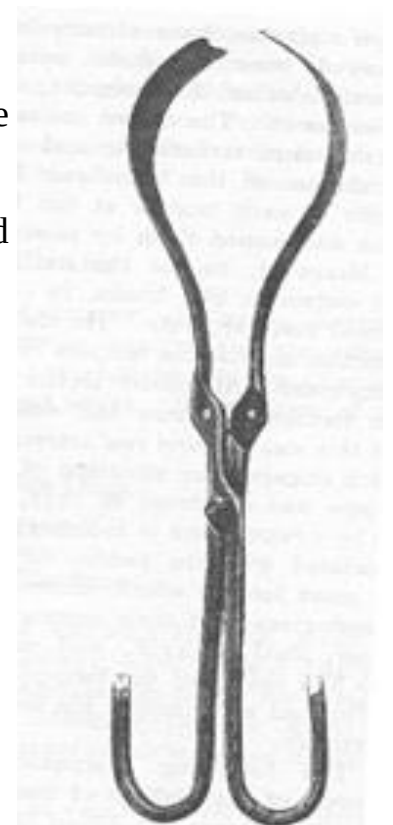
Definition: Obstetric forceps are metal instruments used to grasp the baby's head and assist delivery during difficult labor.

Indications:

- Prolonged second stage of labor
- Fetal distress
- Maternal exhaustion

Uses

- Assisting delivery
- Guiding baby's head out during childbirth





INSTRUMENTS USED FOR PROLONGED LABOUR

Mr. Deepak Gurjar & Ms. Muskan Kushwaha

B.Sc. (N) IV Year, CCON, Bhopal



3. Vacuum Extractor

Introduction: Vacuum extractor is used in assisted vaginal delivery.

Definition: A vacuum extractor is a device that uses suction to assist in the delivery of the baby.

Indications:

- Prolonged labor
- Fetal distress
- Maternal exhaustion

Uses

- Assisting vaginal delivery
- Helping baby's head come out





INSTRUMENTS FOR GYNECOLOGICAL SURGERIES

Ms. Diksha Chandravanshi & Ms. Gori Sharma

B.Sc. (N) IV Year, CCON, Bhopal



1. Kocher's Forceps

Introduction: Kocher's forceps are strong forceps used to hold tough tissues.

Definition: A Kocher's forceps is a surgical instrument with toothed jaws used to grasp strong tissues securely.

Indications:

- Surgical procedures
- Holding fascia or tough tissue

Uses

- Holding tissues
- Assisting during surgery



2. Needle Holder

Introduction: Needle holder is used during suturing procedures.

Definition: A needle holder is a surgical instrument used to hold a needle while suturing tissues.

Indications:

- Episiotomy repair
- Surgical suturing

Uses

- Holding suture needle
- Assisting in stitching tissues





INSTRUMENTS USED FOR GYNECOLOGICAL SURGERIES

Ms. Diksha Chandravanshi & Ms. Gori Sharma

B.Sc. (N) IV Year, CCON, Bhopal



3. Allis Tissue Forceps

Introduction: Allis tissue forceps are used to grasp and hold tissues during surgical procedures.

Definition: An Allis tissue forceps is a surgical instrument with multiple teeth used to hold soft tissues firmly.

Indications:

- Surgical procedures
- Tissue handling during gynecological surgery

Uses:

- Holding tissues
- Assisting in surgical procedures



4. Vulsellum Forceps

Introduction: Vulsellum forceps are commonly used in gynecological procedures to grasp the cervix.

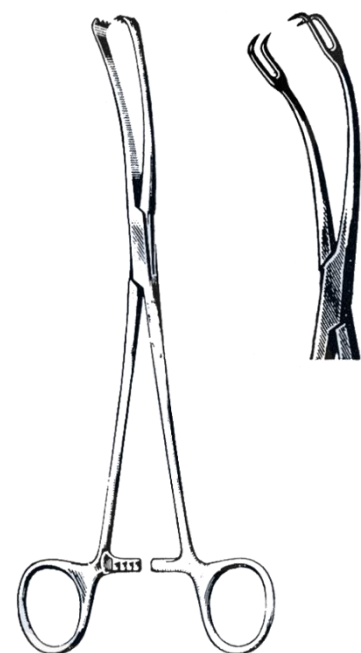
Definition: A vulsellum forceps is a surgical instrument with toothed jaws used to hold and stabilize the cervix during gynecological procedures.

Indications:

- IUCD insertion
- Cervical biopsy
- Dilatation and curettage (D&C)

Uses:

- Holding the cervix firmly
- Stabilizing the uterus during procedures
- Assisting gynecological surgeries



INSTRUMENTS FOR D&C PROCEDURES

Ms. Diksha Vishwakarma, B.Sc. (N) IV Year, CCON, Bhopal



1. Uterine Sound

Introduction: Uterine sound is used in gynecological procedures to measure the depth and direction of the uterine cavity.

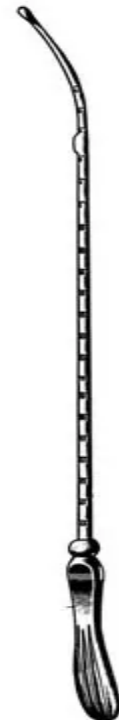
Definition: A uterine sound is a slender instrument used to measure the length and direction of the uterus.

Indications:

- Before IUCD insertion
- Uterine examination
- Diagnostic procedures

Uses:

- Measuring uterine depth
- Determining uterine position



2. Hegar Dilator

Introduction: Hegar dilators are used in gynecological procedures for dilation of the cervix.

Definition: A Hegar dilator is a cylindrical instrument used to dilate the cervical canal.

Indications:

- Dilation and curettage (D&C)
- Cervical stenosis
- Gynecological procedures

Uses:

- Dilating cervix
- Preparing cervix for surgical procedures





ESSENTIAL NEONATAL CARE TOOLS
Ms. Harshita Markad & Ms. Sakshi Pancholi
 B.Sc. (N) IV Year, CCON, Bhopal



1. Mucus Sucker

Introduction: Mucus sucker is used immediately after birth to clear secretions from the newborn's airway.

Definition: A mucus sucker is a device used to remove mucus, blood, or amniotic fluid from the mouth and nose of a newborn baby.

Indications:

- Immediately after delivery
- Newborn airway obstruction

Uses:

- Clearing airway of newborn
- Preventing aspiration
- Helping newborn breathe properly



2. Breast Pump

Introduction: Breast pump is a device used by lactating mothers to express breast milk.

Definition: A breast pump is a manual or electric device used to extract milk from the breast of a lactating mother.

Indications:

- Breast engorgement
- When baby cannot suckle
- Milk storage for feeding later

Uses:

- Expressing breast milk
- Relieving breast engorgement
- Feeding premature or sick babies



COMMON INSTRUMENTS FOR FETAL MONITORING

Ms. Muskan Verma, B.Sc. (N) IV Year, CCON, Bhopal



1. Fetal Doppler

Introduction: Fetal Doppler is used during antenatal check-ups to monitor fetal heartbeat.

Definition: A fetal Doppler is a handheld ultrasound device used to detect fetal heart sounds.

Indications:

- Antenatal examination
- Monitoring fetal wellbeing

Uses:

- Detecting fetal heartbeat
- Monitoring fetal condition



2. Cardiotocography Machine (CTG)

Introduction: CTG machine monitors fetal heart rate and uterine contractions.

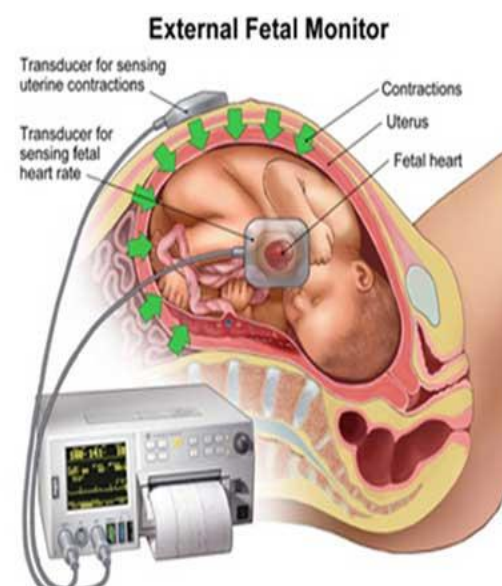
Definition: A cardiotocography machine is an electronic device used to record fetal heart rate and uterine contractions during pregnancy and labour.

Indications:

- High-risk pregnancy
- Monitoring labour

Uses:

- Monitoring fetal heart rate
- Recording uterine contractions



NEONATAL THERAPEUTIC EQUIPMENTS

Ms. Nandani Yadav, B.Sc. (N) IV Year, CCON, Bhopal



1. Infant Radiant Warmer

Introduction: Radiant warmer provides warmth to newborn babies.

Definition: An infant radiant warmer is a device used to maintain body temperature of newborn infants.

Indications:

- Premature babies
- Low birth weight babies

Uses:

- Preventing hypothermia
- Providing thermal care



2. Fiber Optic Phototherapy (Biliblanket)

Introduction: Fiber optic phototherapy is a modern and portable method of treating neonatal jaundice. This technique allows continuous treatment while maintaining mother-baby bonding, feeding, and handling without interruption.

Definition: Fiber Optic Phototherapy (Biliblanket) is a type of phototherapy in which light is delivered through fiber-optic cables to a pad/blanket that is applied directly to the new-born's skin to reduce bilirubin levels.

Indications:

- a. Mild to moderate neonatal jaundice
- b. Early discharge cases requiring home treatment
- c. When continuous phototherapy is needed
- d. Preterm or low birth weight babies (selected cases)
- e. Situations where separation from mother should be minimized

Uses

- a. Allows breastfeeding during therapy
- b. Promotes mother-infant bonding
- c. Used for home-based or hospital-based treatment
- d. Reduces need for intensive phototherapy in mild cases.



ATROPINE

Mr. Shubham Singh, B.Sc. (N) IV Year, CCON, Bhopal



INTRODUCTION

Anticholinergic drugs are which blocks the effect of ACh cholinergic receptors but conventionally antimuscarinic drugs are referred to as anticholinergic drugs. They are also called cholinergic blocking agent or parasympathomimetic drugs.

MECHANISM OF ACTION

Atropine works on the different organ. Inhibits the action of acetylcholine at postganglionic sites located in smooth muscle secretory glands, CNS (antimuscarinic activity).

BRAND NAME Atropen Atropisol Atotas

GENERIC NAME Atropine sulfate

Low doses decrease sweating, salivation, respiratory secretion. Intermediate doses result in mydriasis (pupillary dilation), cycloplegia (loss of visual accommodation), increased heart rate. GIT and GU tract motility are decreased at larger doses.

THERAPEUTIC EFFECT

Increased heart rate Decreased GI and respiratory secretions Reversal of muscarinic effects

INDICATION

IM: Given preoperatively to decrease oral and respiratory secretions IV: Treatment of sinus bradycardia and heart block

IV: Reversal of adverse muscarinic effects of anticholinesterase agents (neostigmine, physostigmine or pyridostigmine)

IM/IV: Treatment of anticholinesterase (organophosphate pesticide) poisoning

INHALATION Inhalational: Treatment of exercise induced bronchospasm

PHARMACOKINETICS

Absorption: well absorbed following subcutaneous or IM administration

Distribution: readily crosses the bloodbrain barrier, crosses the placenta and enters breast milk

Metabolism and excretion: mostly metabolized by the liver, 30–50% excreted unchanged by the kidneys

Half life: Children 2 yr: 4–10 hr Children

Children 2 yr: 4–10 hr

Children <2 yr: 1.5–3 hr

Adults: 4–5 hr

ROUTE / DOSE

Preanesthesia (to decrease salivation secretion)

IM, IV, Subcut (Adults): 0.4–0.6 mg 30–60 min preop

IM, IV Subcut (children 5 kg): 0.01–0.02 mg/kg/dose 30–60 min preop

(maximum 0.4 mg/dose, minimum 0.1 mg/dose) Bradycardia (IV)

Adults: 0.5–1 mg may repeat as needed every 5 min not to exceed 2 mg

Reversal of adverse muscarinic effects of anticholinesterase

IV (Adults): 0.6–1.2 mg for each 0.5–2.5 mg of neostigmine methylsulfate

Organophosphate poisoning

IM (Adults): 2 mg initially then 2 mg every 10 min as needed up to 3 times total

IV (Adults): 1–2 mg/min until atropine effects observed (4 hr for 24 hr, up to long infusion)

Bronchospasm inhalation (Adults)

0.025–0.05 mg/kg/dose every 4–6 hr as needed

Maximum 2.5 mg/dose



ADVERSE REACTION

CNS: drowsiness, confusion, hyperpyrexia

EENT: blurred vision, cycloplegia, photophobia, dry eyes

CV: tachycardia, palpitations, arrhythmias

GI: dry mouth, constipation, impaired GI motility

GU: urinary hesitancy, retention, impotence

Resp: tachypnea, pulmonary edema

Misc: flushing, decreased sweating

CONTRAINDICATION

- Hypersensitivity
- Angleclosure glaucoma
- Acute hemorrhage
- Tachycardia secondary to cardiac insufficiency or hypoxia
- Obstructive disease of the GI tract

SIDE EFFECTS

- Dry mouth
- Blurred vision
- Photophobia
- Tachycardia
- Constipation
- Urinary retention

CNS EFFECT

- Restlessness
- Confusion
- Agitation
- Hallucinations
- Delirium

THE ANTIDOTE FOR ATROPINE

- Physostigmine:
- It is a reversible acetylcholinesterase inhibitor
- Increases acetylcholine level
- Crosses the bloodbrain barrier so it reverses both:
- Central symptoms (delirium, agitation)
- Peripheral symptoms (tachycardia, dry skin, dilated pupils)

NURSING RESPONSIBILITY

- Assess vital signs and ECG tracings frequently during IV drug therapy.
- Report any significant change in heart rate, BP or increased ventricular ectopy or angina to health care professional promptly.
- Monitor intake and output ratios in elderly or surgical patients because atropine may cause urinary retention.
- Assess patients routinely for abdominal distention and auscultate for bowel sounds.
- If constipation becomes a problem increasing fluids and adding bulk to the diet may help alleviate constipation.



- Toxicity and overdose: If overdose occurs physostigmine is the antidote. Inform the physician in case of tachycardia. Avoid giving atropine when there is cardiac arrest.
- Caution patients that oral rinses, sugarless gum or candy and frequent oral hygiene may help relieve dry mouth.
- Pediatric: Instruct parents or caregivers that medication may cause fever and to notify health care professional before administering to a febrile child.
- Geriatric: Inform male patients with benign prostatic hyperplasia that atropine may cause urinary hesitancy and retention.

Changes in urinary stream should be reported to health care professional.

CONCLUSION

Atropine is a widely used antimuscarinic drug that plays an important role in emergency and clinical practice. It works by blocking parasympathetic activity, leading to effects such as increased heart rate, reduced secretions and pupil dilation.



NITROGLYCERINE

Mr. Sudhanshu Kaushal, B.Sc. (N) IV Year, CCON, Bhopal

INTRODUCTION

Nitroglycerine is a fast acting medication primarily used in the management of heart related chest known as angina. it belongs to a class of drug called nitrates, which work by relaxing and widening blood Vessels (A process known as Vasodilation). This vasodilation reduces the workload on heart and improves blood flow to heart muscle thereby relieving causes By reduced oxygen Supply.

DEFINITION: Nitroglycerine is nitrate medication that acts as a vasodilator, used mainly to relieve and prevent Angina pectoris by relaxing blood vessels and improve blood flow to the heart muscle.

CHEMICAL FORMULA $C_3H_5N_3O_9$

CLINICAL IMPORTANCE

- Used to relieve Angina pectoris (Chest pain due to reduce blood supply to The heart.)
- Helpful in congestive heart failure during myocardial infarction [heart attack]
- Can be used in hypertension emergencies. rapidly lowering of blood pressure.
- Sublingually it effect rapidly (fast relief)

Generic name

- Nitroglycerin
- glyceryl trinitrate

Trade name

- Nitrostat
- Nitrodur
- Nitrolingual
- Tridil
- Nitrobid.

DRUG GROUP

Nitroglycerine belongs to the class of:

- organic nitrates
- also classified as vasodilator

ACTION

1. Vasodilation (most important)

- Dilates veins more than arteries
- Reduce Venous return to heart
- Decrease Cardiac workload and O₂ demand

2. Coronary Artery dilation

- Dilates Coronary arteries
- Improve blood supply to heart muscle
- Helps pain relieve in angina pectoris.

3. Reduction of myocardial oxygen demand.

- By reducing preload and slightly lowering After load .
- It makes the heart require less oxygen Relieves ischemia

4. Redistribution of blood flow

- Improve blood flow to ischemic area of the heart.

INDICATION:

- Angina pectoris (stable, unstable, variant)
- Acute Coronary syndrome (Acs)
- Acute heart failure (pulmonary edema)
- Hypertensive Emergencies (Sometime)



- Coronary artery spasm
- Controlled hypotension during surgery (to reduce bleeding)
- Esophageal spasm
- Anal fissure

CONTRAINDICATION

- Hypotension (BP < 90 mmhg)
- Right ventricular infraction (preloaddependent State Can Cause shock)
- Seller anemia
- Perused intracranial pressure
- hypertrophic obstructive cardiomyopathy)
- Aortic Stenosis
- Dehydration
- glaucoma.

DOSE /ROUTE / FORM

- Sublingual tablets (eg. 0.3mg, 0.4mg, 0.6mg)
- Sublingual spray
- transdermal patches (for chronic prevention)
- Topical Ointment
- Oral sustainedrelease Capsule
- Intravenous infusion (hospital use)

ADVERSE EFFECTS :

- Headache
- Flushing (warm, red skin)
- Dizziness / light headness
- postural hypotension (fall in BP on standing)
- Reflexes tachycardia
- vertigo
- Cyanosis, shortness of breath
- Burning sensation
- Dry mouth
- Epigastric discomfort
- Nausea
- blurred vision (rarely)

NURSING RESPONSIBILITY

1. Check vital sign (most important)

- measure blood pressure and pulse before administer drug.
- Hold the drug if BP<90 mmHg
- monitor for hypotension after each close

Assess Chest pain

- Note location, severity, duration
- Rashes after giving drug to evaluate Effectiveness.
- Important in Condition like angina pectoris

3. Correct administration technique

Sublingual tablet:

- place under tongue, do not swallow or chew
- Allow to dissolve completely.
- give Correct dose as per doctor order.
- check Expiry date.

4.Ensure patient safety position

- Keep patient sitting or lying down
- prevents dizziness, Syncope, and falls.

5. monitor after administration.

Recheck Bp and heart rate, observe for:

- Headache
- Dizziness
- Hypotension
- watch closely in acute coronary syndrome

6. Check drug interactions.

- Sildenafil
- Tadalafil
- Can Cause severe fatal hypotension

7. Evaluate Response

- Relief of chest pain = effectively
- If pain persists after 3 doses→ seek emergency care immediately

8. Patient education.

- Sit before taking medicine
- Do not swallow sublingual tablet
- Carry mastication at all times
- Store properly (light sensitive drug)



GENTAMICIN

Mr. Sakshi Pancholi, B.Sc. (N) IV Year, CCON, Bhopal

Introduction Gentamicin is a broadspectrum aminoglycoside antibiotic used to treat serious bacterial infections caused mainly by gramnegative organisms. It is commonly used in hospitals and emergency settings.

Definition

Gentamicin is an aminoglycoside antibiotic that inhibits bacterial protein synthesis and kills susceptible bacteria.

Classification

Drug group: Aminoglycoside antibiotic

Route: Injectable (IV/IM), eye drops, ear drops

Mechanism of Action

Gentamicin binds to the 30S ribosomal subunit of bacteria and prevents protein synthesis, leading to bacterial cell death.

Indications / Uses

- Septicemia
- Urinary tract infections
- Respiratory tract infections
- Intraabdominal infections
- Skin and soft tissue infections
- Bone and joint infections
- Neonatal infections
- Used with other antibiotics in severe infections

Dosage

Adults

Usually 3–5 mg/kg/day IV or IM in divided doses or once daily

Children

Dose depends on age and body weight

Contraindications

- Hypersensitivity to aminoglycosides
- Severe renal impairment (unless monitored carefully)
- Myasthenia gravis

Side Effects

- Nephrotoxicity (kidney damage)
- Ototoxicity (hearing loss)
- Dizziness
- Nausea and vomiting
- Injection site pain
- Neuromuscular blockade

Nursing Responsibilities

- Monitor renal function tests
- Assess hearing ability before and during therapy
- Monitor intake and output



- Administer drug slowly as prescribed
- Observe for signs of toxicity
- Ensure adequate hydration

Drug Interactions

- Increased toxicity with:
- Furosemide
- Vancomycin
- AmphotericinB
- Other nephrotoxic drugs

Patient Education

- Complete full course of therapy
- Report hearing changes or decreased urine output
- Avoid self medication
- Maintain adequate fluid intake
- Storage
- Store at room temperature away from light and moisture

Conclusion

Gentamicin is an effective antibiotic for serious bacterial infections. Proper monitoring and nursing care are essential to prevent complications such as kidney and ear toxicity.



SODIUM BICAARBONATE

Ms. Nandini Yadav, B.Sc. (N) IV Year, CCON, Bhopal

Introduction

Sodium bicarbonate is an alkalinizing agent used to neutralize excess acid in the body. It is commonly used in metabolic acidosis, cardiac emergencies, renal disorders, and as an antacid.

Generic Name

- Sodium Bicarbonate

Brand Names

- Sodibicarb
- Neut
- Bicitra (related alkalinizing preparation)
- Baking Soda (household form)

Drug Class

- Antacid
- Systemic alkalinizer
- Electrolyte replacement agent

Pharmacological Class

- Alkalinizing agent

Therapeutic Class

- Electrolyte modifier
- Acidbase balance agent

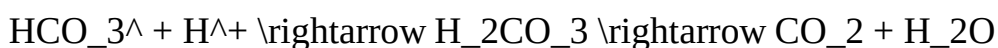
Drug Group

- Buffering agents

Mechanism of Action

Sodium bicarbonate dissociates into sodium and bicarbonate ions.

The bicarbonate ion neutralizes hydrogen ions and increases blood and urinary pH, correcting metabolic acidosis.



It also promotes movement of potassium into cells during hyperkalemia.

Indications

- Metabolic acidosis
- Severe diarrhea with bicarbonate loss
- Hyperkalemia
- Cardiac arrest
- Drug overdose (e.g., tricyclic antidepressant toxicity)
- Chronic kidney disease with acidosis
- Urinary alkalinization
- Heartburn and acid indigestion

Dosage and Administration

Adult Dose

Oral

Antacid: 325 mg–2 g orally 1–4 times/day

IV Injection

Metabolic acidosis:

50–150 mEq diluted IV as prescribed

Cardiac arrest:

1 mEq/kg IV initially

Administration Guidelines

**Administration Guidelines**

- Administer IV slowly
- Dilute before IV infusion
- Monitor ABG and electrolytes regularly
- Give oral preparation after meals with water

Contraindications

- Metabolic or respiratory alkalosis
- Hypocalcemia
- Hypernatremia
- Severe edema or heart failure
- Renal impairment with sodium retention
- Hypersensitivity to sodium bicarbonate

Side Effects

- Nausea
- Vomiting
- Flatulence
- Stomach cramps
- Increased thirst

Serious

- Metabolic alkalosis
- Hypernatremia
- Fluid overload
- Hypokalemia
- Tetany
- Pulmonary edema

Drug Interactions

- Decreases absorption of tetracyclines and iron preparations
- Increases effect of quinidine
- Alters excretion of salicylates
- Increased sodium retention with corticosteroids
- May reduce effectiveness of entericcoated drugs

Nursing Responsibilities**Assessment**

- Assess acidbase balance
- Monitor vital signs
- Check ABG, serum electrolytes, and pH
- Assess for signs of alkalosis:
 - confusion
 - irritability
 - muscle twitching

During Administration

- Dilute IV solution properly
- Administer slowly to avoid rapid alkalosis
- Ensure IV patency
- Monitor fluid balance and urine output

Patient Education

- Instruct patient not to exceed prescribed dose
- Avoid taking with milk or calciumrich products excessively



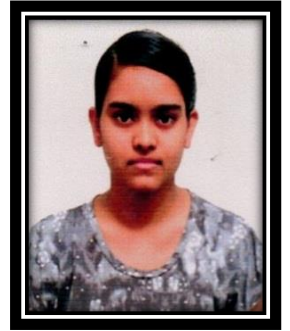
- Teach signs of electrolyte imbalance
- Encourage followup laboratory testing

Evaluation

- Improvement in acidbase status
- Relief from symptoms of acidosis or heartburn
- Stable electrolyte values and vital signs

**Drug Presentation: Adrenaline (Epinephrine)**

Ms. Khushi Choudhary, B.Sc. (N) IV Year, CCON, Bhopal

**Introduction**

Adrenaline is a life-saving emergency drug widely used in critical care settings. It is a naturally occurring catecholamine hormone and neurotransmitter secreted by the adrenal medulla.

Definition

Adrenaline (Epinephrine) is a sympathomimetic catecholamine drug that stimulates alpha and beta adrenergic receptors.

Generic Name

Epinephrine / Adrenaline

Brand Names

Adrenalin, EpiPen, Auvi-Q, Epiject

Drug Classification

Pharmacological Class: Catecholamine; Therapeutic Class: Vasopressor, Bronchodilator; Drug Group: Sympathomimetic drugs.

Molecular Profile

Chemical Name: Epinephrine

Molecular Formula: $C_9H_{13}NO_3$

Molecular Weight: 183.2 g/mol

Available Preparations

Injection 1 mg/mL (1:1000), Injection 0.1 mg/mL (1:10,000), Auto-injector 0.15 mg and 0.3 mg.

Historical Development

Adrenaline was first isolated in 1895 and purified by Jokichi Takamine in 1901.

Pharmacokinetics

Absorption: Rapid after IM/SC administration.

Distribution: Rapid distribution to tissues.

Metabolism: By MAO and COMT.

Excretion: Through urine.

Half-Life: 2–3 minutes.

Pharmacodynamics

Stimulates alpha and beta adrenergic receptors causing increased heart rate, bronchodilation, and vasoconstriction.

Mechanism of Action

Acts on alpha-1, beta-1, and beta-2 receptors to improve cardiovascular and respiratory function.

Indications

Cardiac arrest, anaphylaxis, severe asthma, hypotension, septic shock.

Dose Prescribed

Anaphylaxis: 0.3–0.5 mg IM

Cardiac arrest: 1 mg IV every 3–5 min.

Contraindications

Hypertension, hyperthyroidism, severe cardiac disease, glaucoma.

Drug Interactions

Interacts with beta blockers, MAO inhibitors, tricyclic antidepressants, digoxin.

Side Effects

Tachycardia, hypertension, tremors, anxiety, headache, arrhythmias.

Nurses Responsibility

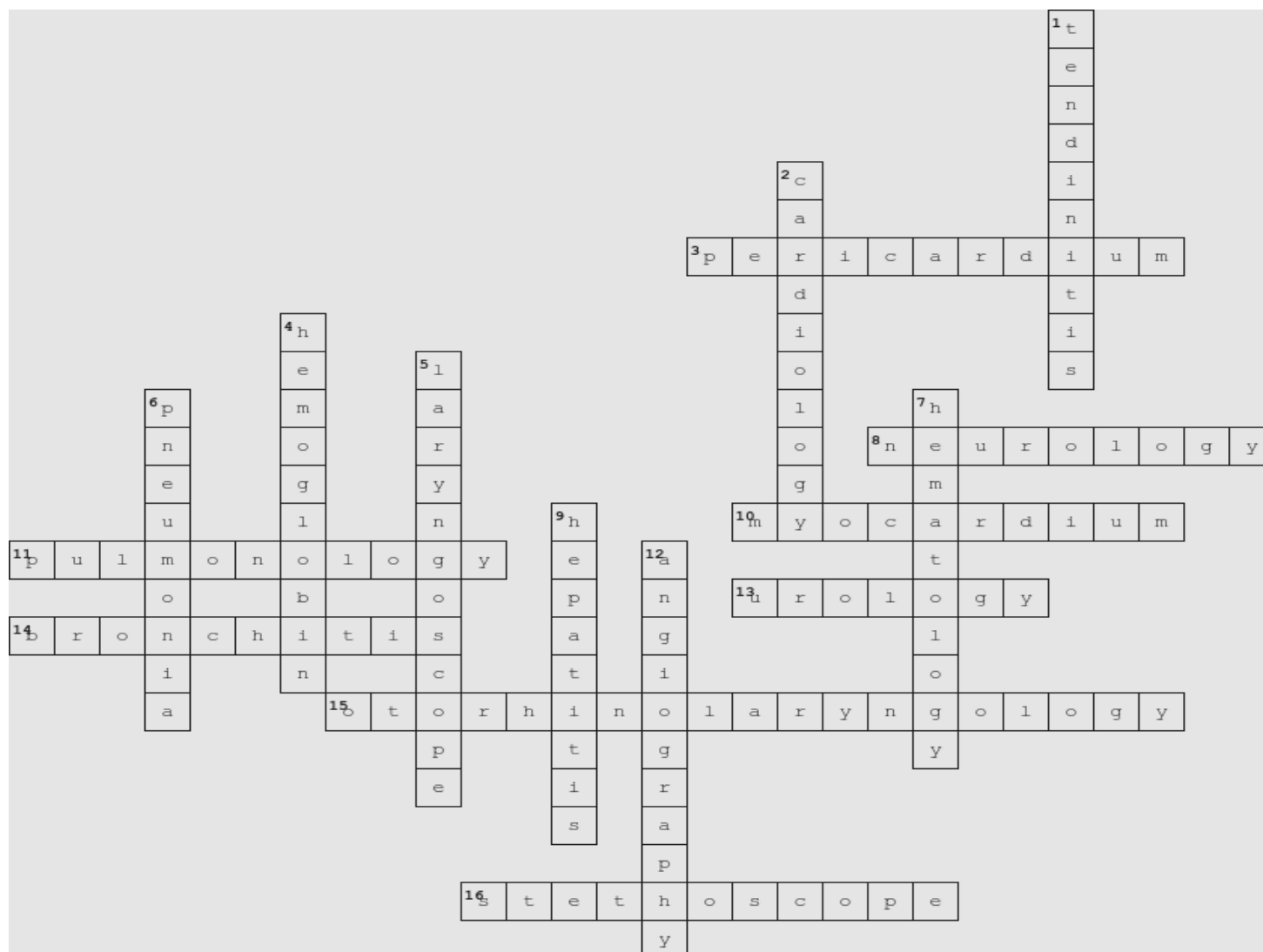
Monitor vital signs, ECG, therapeutic response, and educate patients regarding auto-injector use.

Conclusion

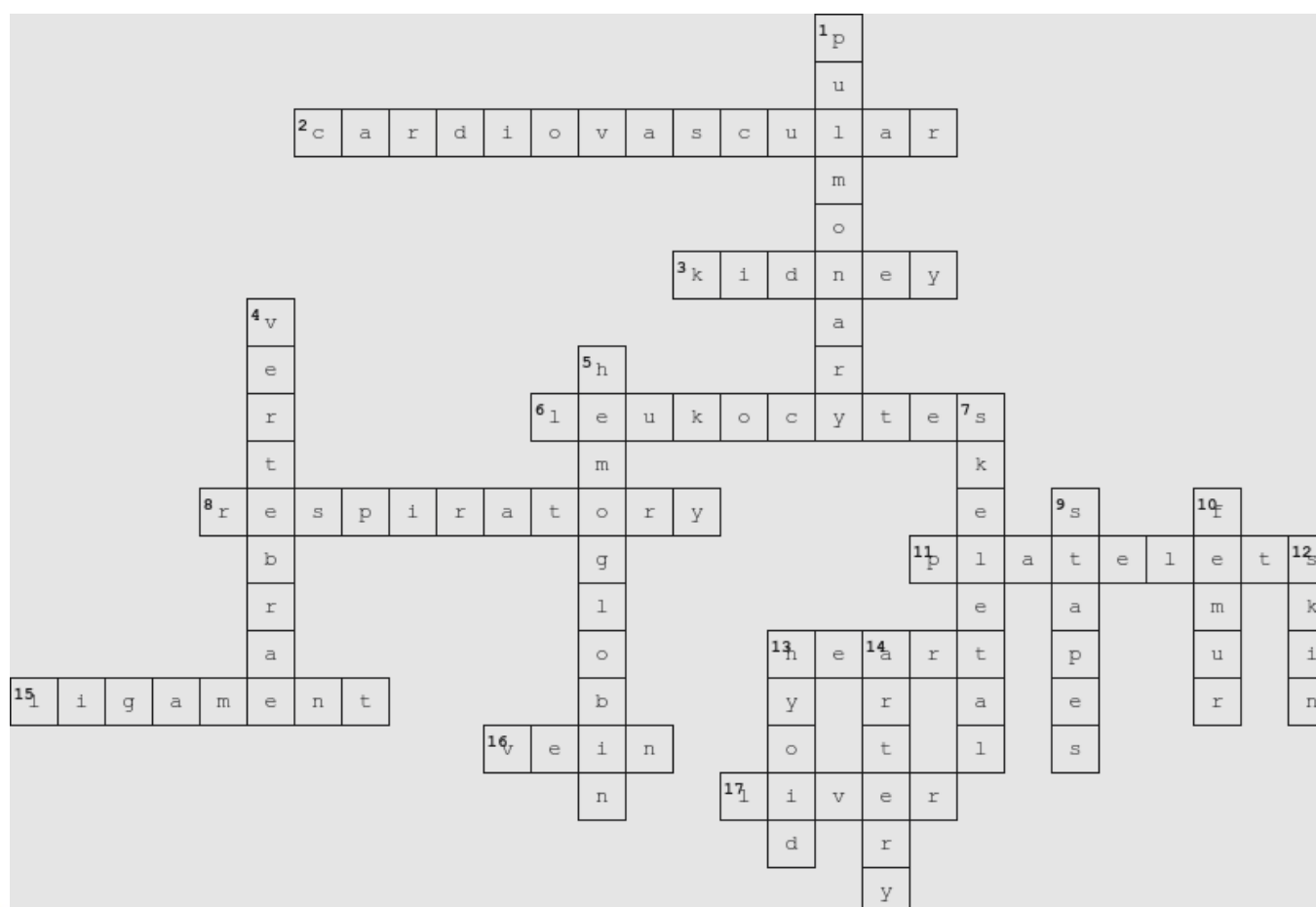
Adrenaline is an essential emergency medication used to manage life-threatening conditions effectively.

ANSWER KEY (CROSSWORD PUZZLES)

TERMINOLOGIES USED IN MEDICAL



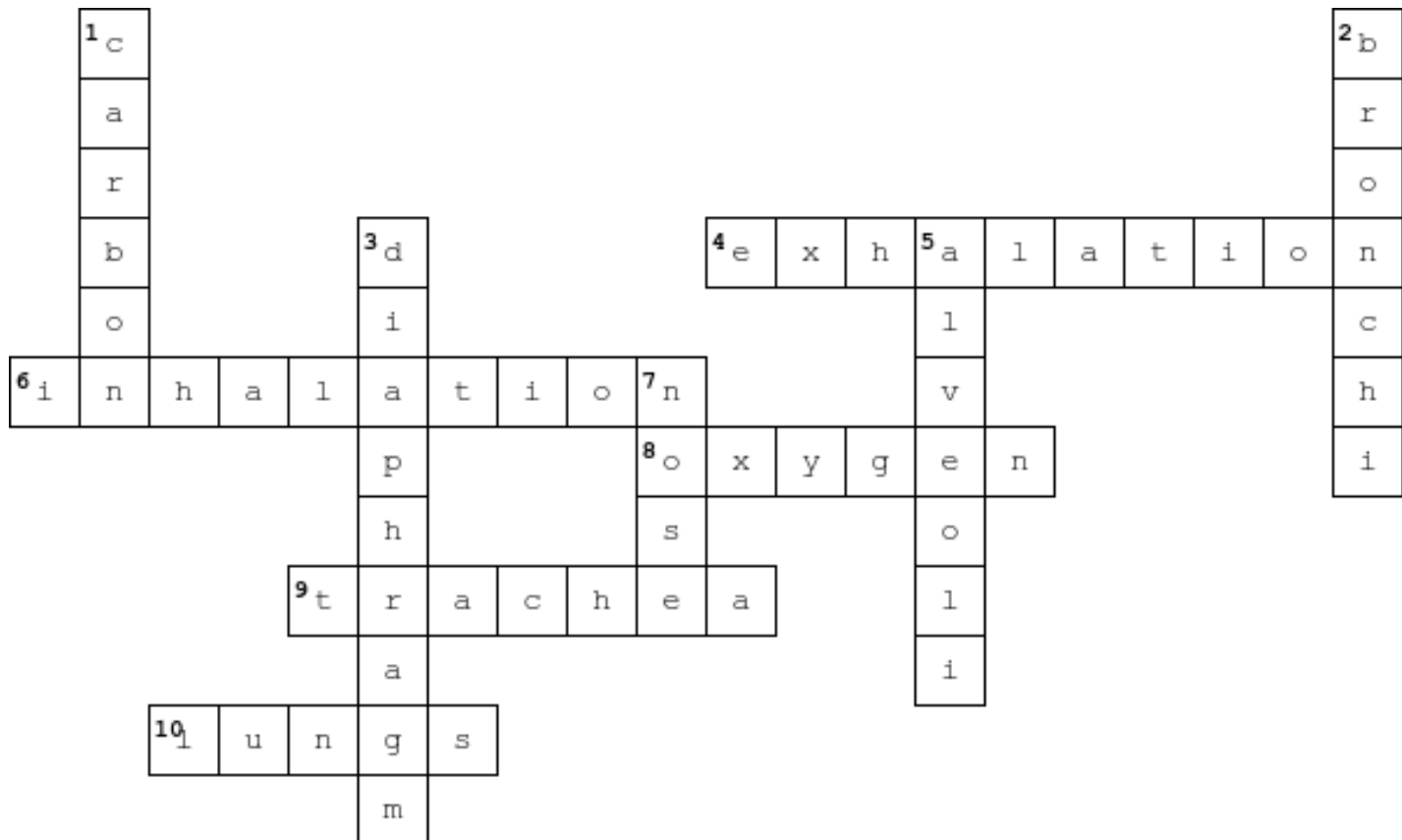
TERMINOLOGIES USED IN VASCULAR SYSTEM



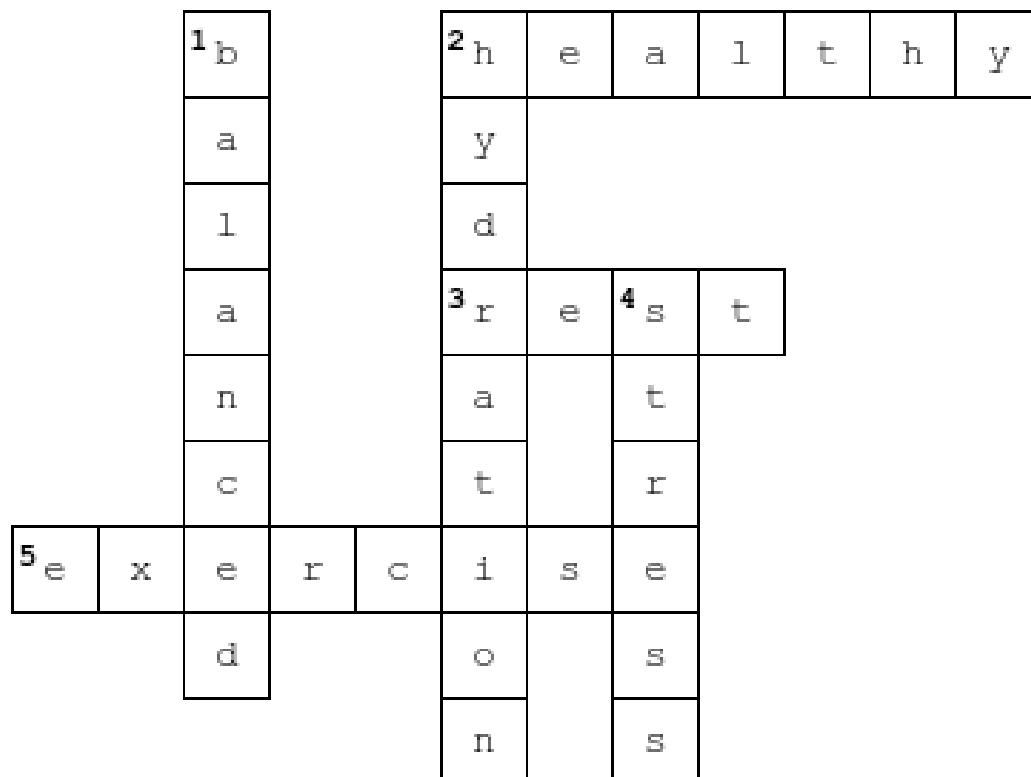


ANSWER KEY (CROSSWORD PUZZLES)

PHYSIOLOGY OF RESPIRATORY SYSTEM



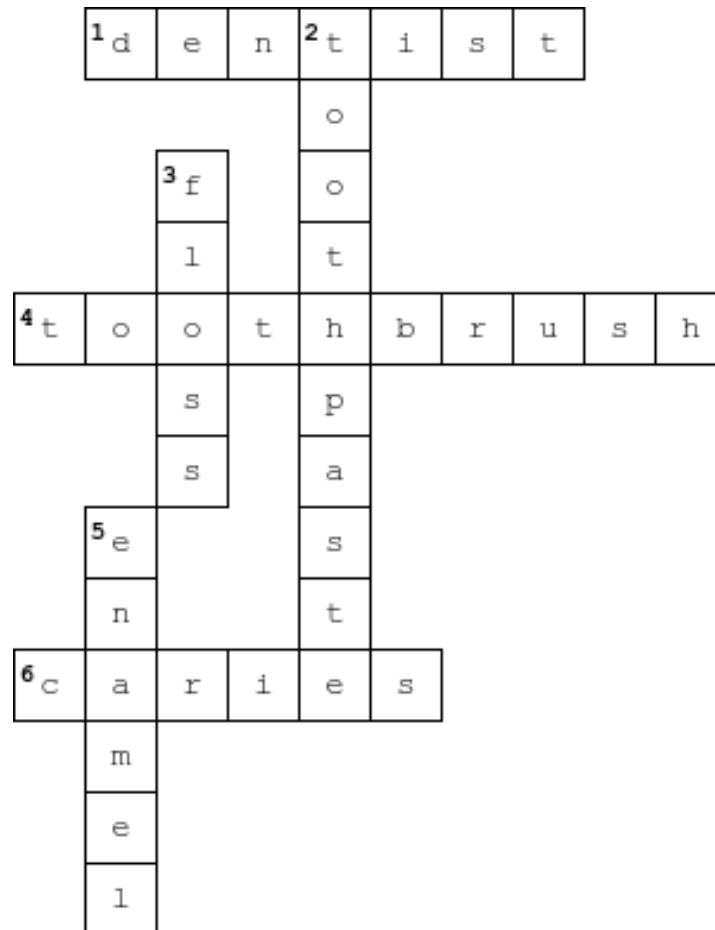
HEALTHY HABITS



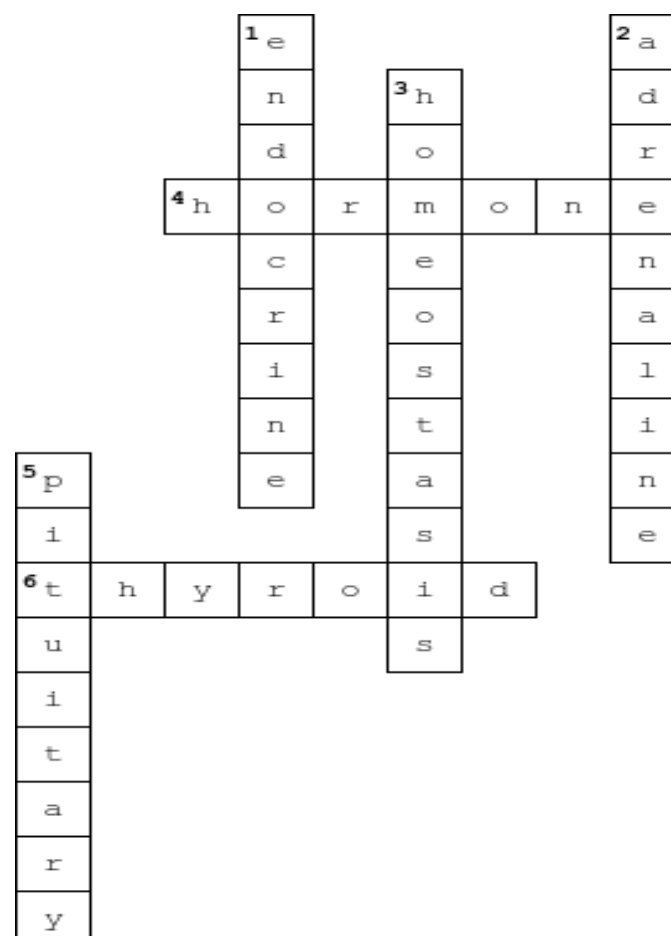


ANSWER KEY (CROSSWORD PUZZLES)

ORAL HEALTH



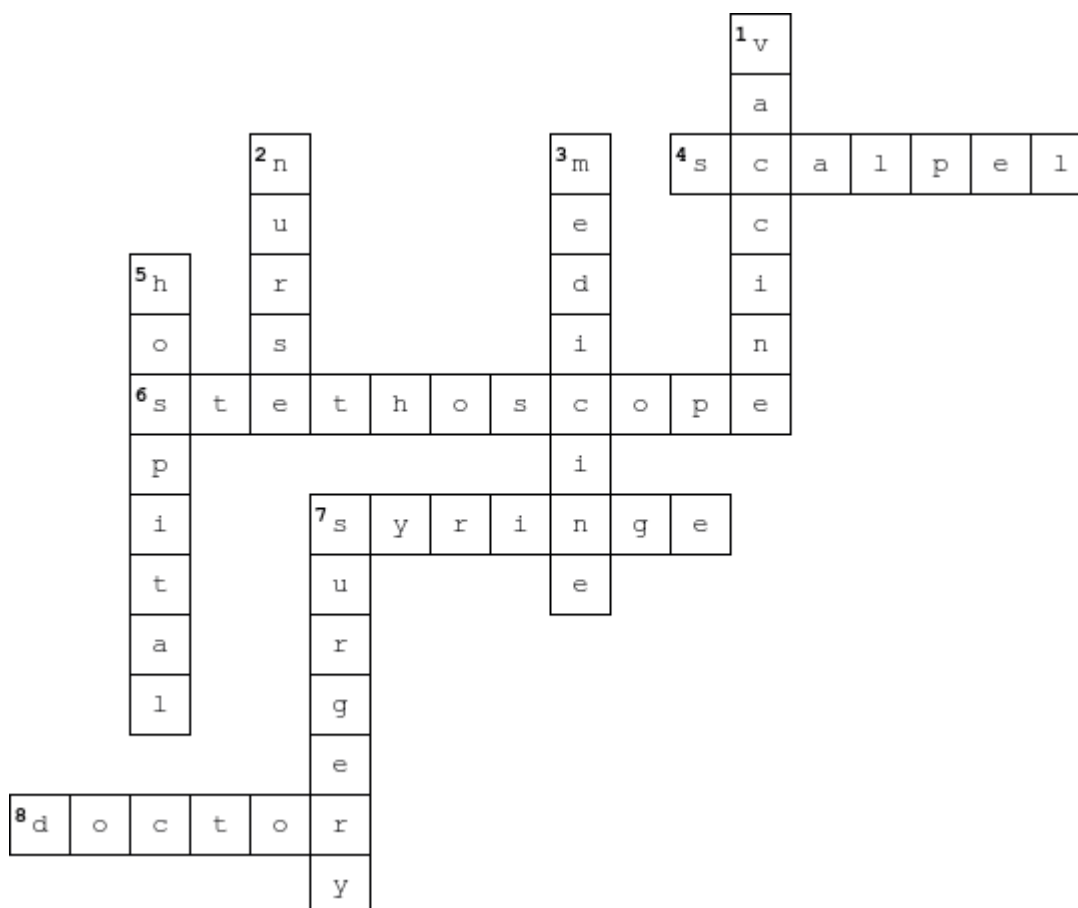
ENDOCRINE PUZZLE





ANSWER KEY (CROSSWORD PUZZLES)

MEDICAL AID SERVICES





ANSWER KEY (RIDDLES)

THE CLINICAL INTUITION

1. Assessment
2. Stethoscope
3. Infusion
4. Judgment
5. Experience
6. Anticipation
7. Monitoring
8. Advocacy
9. Autonomy
10. Deterioration

ESSENTIALS OF CARE

1. Nurse patient relationship
2. Hand sanitizer
3. Defibrillator
4. Sphygmomanometer
5. Dressing/bandage
6. Bedpan
7. Tourniquet
8. Syringe
9. Radiology
10. Discharge

LIFELINE OF SAFETY

1. Nurse
2. Night Nurse
3. Injection / Syringe
4. Pharmacist
5. Thermometer
6. Counsellor / Nurse
7. Staff Nurse
8. Emergency Nurse / Paramedic
9. Infection Control Nurse
10. Patient Monitor

CLINICAL SCRIBE

1. Sphygmomanometer
2. Diabetes Mellitus
3. Vital Signs Monitor
4. Nurse
5. Palliative Care Nurse
6. Medical Record Keeper / Nurse
7. Injection / Needle

BEDSIDE EDUCATOR

1. Nurse
2. Health Education
3. Sphygmomanometer
4. Intravenous (IV) Cannula
5. Electrocardiogram (ECG)
6. Vital Signs Monitor
7. Infection / Germs
8. Urinary Catheter
9. Nursing Documentation
10. Gloves

THE PRECISION DOSE

1. IV Infusion Set / Drip Regulator
2. Five Rights of Medication Administration
3. Pain Scale
4. Blood Pressure
5. Informed Consent
6. Drug Dosage Calculation
7. Injection / Vaccine
8. Patient Monitor
9. Intravenous (IV) Fluid



ANSWER KEY (RIDDLES)

BEDSIDE GUARDIAN

1. IV Infusion / Drip
2. Gloves
3. Hospital Bed
4. Cardiac Monitor
5. Dressing / Bandage
6. Timing / Medication Schedule
7. Blood Sample / Specimen
8. Night Nurse

THE HEALER'S ROUND

1. Hospital
2. Patient
3. Doctor
4. Nurse
5. Stethoscope
6. Vein
7. Fever

THE PROTECTIVE FRAMEWORK

1. Stethoscope
2. Tablet / Pill
3. Skull
4. Hospital Bed / Wheelchair
5. Pulse Oximeter
6. Injection / Syringe
7. Gloves
8. Electrocardiogram (ECG)
9. Symptom
10. IV Infusion Pump

THE SILENT PRECURSOR

1. Therapy
2. Stability
3. Competency
4. Technique
5. Vigilance
6. Pallor
7. Rapport
8. Practiced Skill
9. Ethics
10. Instability
11. Readiness

THE HOSPITAL'S PULSE

1. Stethoscope
2. Blood Pressure Cuff
3. Needle
4. Pulse Oximeter
5. Nursing Care Plan
6. Scrubs
7. Oxygen Saturation (SpO₂)
8. IV Cannula
9. Mitered Corner
10. Respiration Rate
11. Pulse

THE RHYTHMS OF LIFE

1. Electrocardiogram (ECG)
2. Vaccine
3. IV Drip / Infusion Set
4. Ventilator
5. Hand Hygiene
6. Diagnosis
7. Cystoscopy
8. Insulin
9. Anticoagulant
10. Heartbeat Sound
11. Pulse
12. Pain



ANSWER KEY (RIDDLES)

THE DIAGNOSTIC MIND

1. Cardiac Output
2. Cerebellum
3. Disinfectant
4. Endotracheal Tube
5. Tourniquet
6. Your Right Hand
7. Vitamin C
8. Electric Current

VITALS & VERSES

1. Nurse
2. Nursing Documentation
3. Syringe
4. IV Infusion Pump
5. Sharps Container
6. Blood Pressure
7. Electrocardiogram (ECG)
8. Clinical Lab / Simulation Lab
9. Thermometer
10. Patient Monitor

THE CAREGIVERS CODE

1. Nurse
2. Medicine
3. Pulse
4. Electrocardiogram (ECG)
5. Blood
6. Epiglottis
7. Medical Record / Chart
8. Antiseptic
9. Oxygen
10. Air



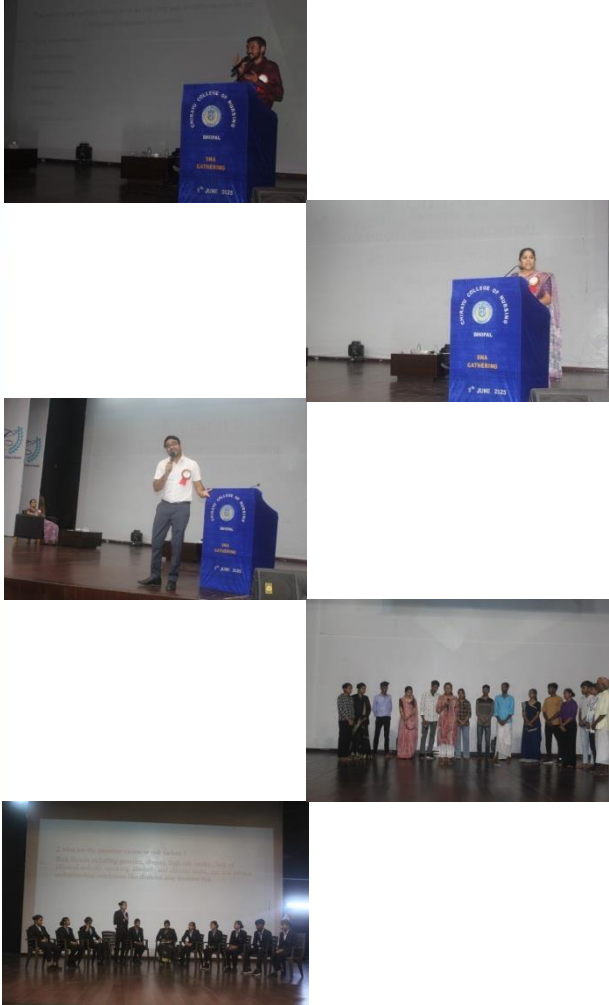
COLLEGE REPORT

Chirayu College of Nursing (CCON), a constituent college of Chirayu University, Bhopal, continues to uphold its commitment to excellence in nursing education, research, and community service. The institution strives to nurture competent, compassionate, and socially responsible nursing professionals capable of meeting the evolving challenges of modern healthcare. Under the visionary leadership of Prof. Dr. Pramilaa R., Principal, the academic year 2025–2026 was marked by numerous academic, professional, co-curricular, research, and community outreach activities. These initiatives were designed to strengthen clinical competence, leadership skills, ethical values, and research orientation among students. Throughout the year, the college organized workshops, seminars, awareness programs, competitions, community health initiatives, and cultural activities that provided students with opportunities for experiential learning and professional growth. The following report highlights the significant activities and achievements of Chirayu College of Nursing during the academic year.

The IV Year B.Sc. Nursing students (Batch of 106) conducted a comprehensive community health survey in the rural areas of Bakaniya and Rajiv Nagar from 1st January 2025 to 28th January 2025, and in the urban area of Khanugaon from 20th January 2025 to 15th February 2025, covering a total population of 1,910 in rural areas and 2,287 in the urban community. The survey aimed to assess health indicators, socio-economic conditions, and environmental factors influencing the health status of the population, and to identify community strengths as well as existing health challenges. Data were collected through household visits, interviews, and direct observation. Based on these findings, the students implemented various promotive, preventive, curative, and rehabilitative interventions, including health education on hygiene, nutrition, family planning, and disease prevention; screening activities such as blood pressure and hemoglobin checks for early detection; referral services for individuals requiring further treatment; and awareness programs to improve utilization of immunization and government health schemes. These efforts not only addressed immediate health concerns but also promoted community participation, healthy lifestyle practices, and long-term improvement in the overall health status of the population, while enhancing the students' practical skills and understanding of community health nursing.



The Annual Day, International Nurses Day Celebration & E-Souvenir Release of Chirayu College of Nursing was held on 9th May, 2025, at the Medical College Auditorium. The program began at 11:00 AM in the presence of distinguished dignitaries, including Dr. Ajay Goenka, Dr. Aniket Goenka, Dr. Sneha Goenka, and Dr. Pramilaa R. The event commenced with a prayer song and ceremonial lamp lighting, followed by a welcome address and program overview. The Prize Distribution Ceremony recognized achievements in academic, curricular, and extracurricular activities, with the Love Group declared overall champion. The 9th edition of the College E-Souvenir was also released. The release was celebrated with firecrackers and a photo session with dignitaries and the editorial committee. The theme of the e-souvenir was “Reconstruction of robust change: Perpetual process of a dynamic nurse”. Prof. Dr. Pramilaa R shared insights on the journey of creating the e-souvenir followed by addresses from the President. A felicitation ceremony and vote of thanks marked the formal proceedings. The celebration concluded with vibrant cultural performances by students, the National Anthem, and refreshments, making it a memorable occasion.



The academic year began with active Student Nurses Association (SNA) activities that played an important role in promoting professional awareness, leadership qualities, and active student participation. The SNA Gathering held on 09 June, 2025, commenced with a prayer song presented by B.Sc. Nursing III Year students and was graced by the presence of distinguished dignitaries Dr. Gyaneshwar Mishra, Senior Resident, Department of Orthopedics, and Dr. Chirag Patel, Assistant Professor, Department of Psychiatry, CMCH, Bhopal. The program included a PowerPoint presentation and panel discussion on Hypertension, a skit on No Tobacco Day, and expert sessions on Brain Health for All Ages and Elder Abuse. The Principal addressed the students and emphasized the importance of discipline, punctuality, and proper academic planning, encouraging them to make the best use of their learning opportunities. The program concluded with felicitation of the guests and a vote of thanks.



The International Day of Yoga was celebrated on 21 June, 2025, with great enthusiasm to promote physical, mental, and emotional well-being among students. The program began with a prayer song followed by a motivational address delivered by the Principal, who emphasized the importance of incorporating yoga into daily life for maintaining a healthy lifestyle. A practical yoga session was conducted by Mr. Vibhore Tiwari, Sports Officer, CMCH, who demonstrated various yoga postures and breathing techniques. Students actively participated in the session and gained valuable knowledge about the benefits of yoga in maintaining physical and mental balance.



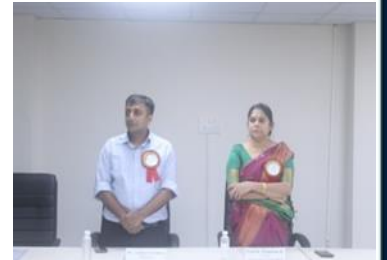
One of the most significant events of the academic year was the “12th Lamp Lighting and Oath Taking Ceremony” organized on 05 July, 2025, for the newly admitted B.Sc. Nursing and GNM first-year students. The ceremony symbolized the students’ formal entry into the noble nursing profession and reflected the ideals of Florence Nightingale. The ceremony included the lighting of the ceremonial lamp, passing of the light, and administration of the nursing oath, through which the students pledged to uphold the values of compassion, dedication, and professional ethics. The program also included inspiring addresses by dignitaries from the university and the medical college, who encouraged the novice nurses to remain committed to the values of service and patient care. The ceremony concluded with the National Anthem followed by a group photograph and lunch hosted by the management



In order to enhance clinical competency and promote skill-based learning, a National Workshop on Advanced Nursing Skills: Simulation was organized on 16 July, 2025. The workshop witnessed participation from 185 delegates across the country and served as an excellent platform for knowledge exchange and skill development. The program included expert lectures, demonstrations, and hands-on training sessions using high-fidelity AI mannequins. Important topics such as airway management, ECG interpretation, arrhythmia management, and emergency nursing interventions were covered during the workshop. The program received excellent feedback from participants and was accredited with one SNC credit hour and one INC CNE credit hour, highlighting its academic significance.

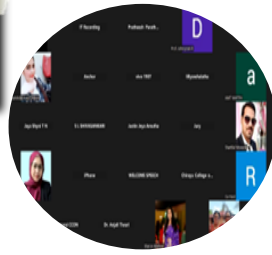


Another SNA gathering was conducted on 12 August, 2025, with a focus on health awareness and student engagement. The program included a presentation on World Hepatitis Day and an expert lecture on Lung Cancer delivered by Dr. Aniket Goenka. The event also featured prize distribution ceremonies for poster competitions organized on the occasion of World Hepatitis Day and World ORS Day. In addition, a Rangoli competition was conducted on the theme of Organ Donation Day to encourage creativity and awareness among students. During her address, the Principal guided students regarding attendance requirements, examinations, and clinical postings, motivating them to maintain academic discipline and dedication.



Chirayu College of Nursing, Bhopal, successfully conducted the first phase of University Examinations 15-20 March, 2025, for B.Sc. N I year Semester I (2024-2025) in accordance with the guidelines of Chirayu University, ensuring a smooth and disciplined process. The examinations were held in a well-organized manner under the supervision of the Principal, Prof. Dr. Pramila R., along with dedicated faculty members and examination committee staff. All necessary arrangements, including seating, invigilation, and adherence to examination protocols, were meticulously implemented to maintain transparency and fairness. Students from B.Sc. Nursing first year Semester-I, appeared for the examinations with sincerity and confidence. The institution maintained strict vigilance and discipline throughout the examination period, ensuring a conducive environment for students to perform to the best of their abilities. The cooperation of faculty and administrative staff played a vital role in the successful conduct of the examinations. The overall examination process was completed efficiently and without any discrepancies, reflecting the institution's commitment to academic excellence and integrity.





Another SNA gathering was conducted on 18 November, 2025, covering important themes such as World Heart Day, World Mental Health Day, and Antimicrobial Resistance Awareness. The program included informative sessions aimed at educating students about the importance of preventive health practices. Winners of the Global Hand washing Day poster competition were honoured during the event, and university toppers were felicitated for their academic excellence. The Principal addressed the students and emphasized the importance of academic performance, clinical skills, and active participation in professional activities.



In connection with Antimicrobial Resistance Awareness Week observed from 18 to 24 November, 2025, Chirayu College of Nursing organized a series of educational and awareness activities between 21 November and 24 November, 2025. The first session was conducted for housekeeping staff members of the institution by Mr. Shantilal Mewada, Assistant Professor, who explained the concept of antimicrobial resistance and highlighted the dangers of misuse and overuse of antibiotics. The session emphasized the importance of taking medications only with proper medical prescriptions and avoiding over-the-counter drug misuse. Another session was conducted for non-teaching staff by Mr. Raj Pradhan, Lecturer, who focused on preventive measures such as hand hygiene, proper sanitation, and rational drug usage. Demonstrations of proper handwashing techniques were also conducted.



On 22 November, 2025, educational lecture sessions were organized for nursing students. Mrs. Sherin Annie Varghese, Professor, delivered a lecture on the topic “AMR is a Social Responsibility, Not Just a Medical Issue,” highlighting the impact of antimicrobial resistance on global health and the importance of collective responsibility in preventing its spread. Another session was conducted by Mrs. Nisha Divakaran, Professor, on the topic “OTC Medication: Pros and Cons,” which created awareness among students regarding the responsible use of over-the-counter medications and the risks associated with self-medication. An interactive quiz competition for faculty members was also organized under the guidance of the Principal on the theme “One Health, One World, One Fight Against AMR,” which promoted teamwork and knowledge enhancement among faculty members. A poster competition for faculty members and a debate competition for students on the topic “Self-Medication is the Cause of AMR: Agree or Disagree” were also conducted, encouraging critical thinking and active participation in addressing the issue of antimicrobial resistance.



The Freshers’ Day Celebration held on 02 December, 2025, served as a warm welcome for the newly admitted students. The program included cultural performances presented by students, motivational speeches by dignitaries, and an inspiring address by the Principal, who highlighted the importance of discipline, attendance, and academic excellence. The event created a sense of belonging among the new students and motivated them to actively participate in the academic and cultural life of the institution.



Another SNA gathering was conducted on 10 December, 2025, with a focus on World AIDS Day and National Hand Washing Awareness Week. Expert sessions were delivered by faculty members from CMCH, followed by the announcement of SNA election results and prize distribution for the Rangoli competition. University toppers were also felicitated during the event. The program successfully reinforced the importance of preventive health practices and encouraged leadership development among nursing students.



To strengthen communication skills among nursing students, a role play program on “Communication: Application in Nursing” was conducted on 15 December, 2025, in the Fundamentals of Nursing Laboratory for B.Sc. Nursing and GNM first-year students. The program began with a prayer song followed by a welcome address delivered by a student representative. The role play demonstrated the communication process, effective nurse-patient interaction, teamwork among healthcare professionals, and the significance of clear and compassionate communication in nursing practice. The chief guest, Dr. Saurabh Jayant, Associate Professor, Department of Microbiology, CMCH, provided valuable feedback and highlighted the importance of effective communication in delivering quality patient-centered care. The Principal also addressed the gathering and motivated students to develop strong communication skills as an essential component of professional nursing practice.

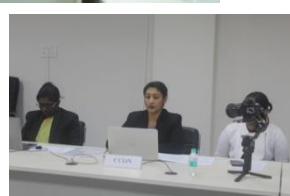
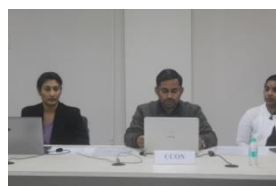


A community health survey was conducted by 88 students of B.Sc. Nursing IV Year from 9/02/2026 to 12/02/2026 in selected rural and urban areas, including Barkheda Salem and Bhauri (rural areas) and Malipura and Khanugaon (urban areas). The main purpose of the survey was to assess the health status of the community, identify health needs, and provides basic preventive, promotive, curative, and rehabilitative health services. The total population in the rural areas, Barkheda Salem had a population of 1692 and Bhauri had a population of 1778, with a total of 103 houses surveyed. The objectives of the survey were to assess the health indicators of the community, evaluate family health needs, and identify the morbidity and mortality rates prevailing in the selected areas. In addition, the students aimed to gain practical exposure by visiting Anganwadi centers and Rural Health Centers (RHCs) and to understand the delivery of health services at the grassroots level. The survey also focused on

providing comprehensive healthcare services, including preventive, promotive, curative, and rehabilitative care, to improve the overall well-being of the community. Based on the findings, several actions were taken by the students to address the identified health issues. Health education sessions were conducted on important topics such as prevention and management of diarrhea, awareness about diabetes and lifestyle modifications, dietary management for anemia, antenatal exercises for pregnant women, and prevention of jaundice. Students also provided basic health assessments, counseling, and guidance to individuals and families. In conclusion, the community survey provided a comprehensive understanding of the health status, needs, and problems of both rural and urban populations. It emphasized the importance of health education, early detection of diseases, and effective utilization of available healthcare services. The survey highlighted the need for continuous community-based interventions to improve health outcomes and promote healthy living practices among the population. The survey was highly beneficial for the students as it enhanced their communication and interpersonal skills and provided valuable practical exposure to community health nursing. It helped them develop competencies in data collection, analysis, and interpretation, and improved their ability to identify and address real-life health problems. Furthermore, it strengthened their understanding of preventive and promotive healthcare and prepared them to work effectively in community settings as future nursing professionals.



Continuing its efforts to promote creativity and professional awareness among students, Chirayu College of Nursing organized a National Level Mime Competition based on video preparation with the theme “Ethical Balance between Technology and Compassionate Human Care.” The results were announced through a virtual meeting on 20 January, 2026. A total of fourteen teams comprising 132 participants from various states including Madhya Pradesh, Tamil Nadu, and Karnataka, along with one international team from Saudi Arabia, participated in the competition. The winning team from CSI Lombard Memorial College of Nursing, Udupi was awarded a cash prize of ₹5000 along with e-certificates. The Vice Chancellor of Chirayu University congratulated the participants and encouraged them to continue expressing creative ideas through innovative platforms.



A Nutrition Practical Cookery Demonstration was conducted on 28 January, 2026, in the Nutrition Laboratory to provide students with practical knowledge regarding therapeutic diets. Students from B.Sc. Nursing II Semester, GNM First Year, and Post Basic B.Sc. Nursing were divided into groups and assigned various diet plans including diets for diarrhoea, anemia, hypertension, diabetes mellitus, pregnant women, lactating mothers, adolescents, and cardiovascular diseases. The students prepared the assigned diet plans and explained their nutritional value and therapeutic importance. The practical session was conducted under the supervision of faculty members and was evaluated by Dr. Tanu Rajput, Dietician from the Department of Obstetrics and Gynaecology, who appreciated the students' efforts and provided valuable suggestions.



The SNA gathering held on 17 February, 2026, included presentations on World Cancer Day and International Epilepsy Day. An expert lecture was delivered by Dr. Shraddha Shrivastava, Consultant Neurologist, CMCH, who explained the difference between seizures and epilepsy and highlighted preventive measures and management strategies. During the event, results of competitions such as Pulse Art and Patient Education Pamphlet were announced, and winners were awarded certificates and appreciated for their creativity and participation.



The 13th Lamp Lighting and Oath Taking Ceremony was conducted on 20 February, 2026, in the Medical College Auditorium with great enthusiasm and dignity. The ceremony was graced by eminent dignitaries including Dr. Ajay Goenka, President of Chirayu Charitable Foundation; Mrs. Neelam Goenka, Chancellor of Chirayu University; Dr. Sudesh Kumar Sohani, Vice Chancellor; Dr. Narendra K. Lariya, Registrar; Dr. Ashutosh Mangalgiri, Medical Superintendent; and Prof. C. Gomathi, Principal of Bhabha University. The ceremony included the solemn procession of novice nurses, lighting of the ceremonial lamp, passing of the light, and administration of the nursing oath. The dignitaries addressed the students and emphasized the values of professionalism, compassion, lifelong learning, and dedication to patient care. Academic excellence was also recognized during the ceremony, and meritorious students were felicitated.





The academic year concluded with a Farewell Celebration organized on 26 February, 2026, in honor of the outgoing students of the B.Sc. Nursing and GNM programs. The program began with a prayer song and lighting of the ceremonial lamp by distinguished dignitaries including Dr. Ajay Goenka, Mrs. Neelam Goenka, Dr. Sudesh Kumar Sohani, Dr. Prabhakar A. Hiwarkar, Dr. Ulka Shrivastava, Dr. Ashutosh Mangalgiri, and Prof. Dr. Pramilaa R. During the event, graduating students were presented with mementos as a token of appreciation and remembrance. The Graduation Oath was administered, and faculty members and students shared their experiences and memories of the academic journey. The Principal addressed the graduating students and emphasized the importance of dedication, punctuality, compassion, and lifelong learning in their professional careers. The Vice Chancellor and President of the Chirayu Charitable Foundation also extended their blessings and words of encouragement. The celebration concluded with vibrant cultural performances presented by junior students, followed by the National Anthem.



The Chirayu College of Nursing, Bhopal, successfully conducted the second phase of University Examinations 16-24 March, 2026, for B.Sc. Nursing I year Semester II, M.Sc. Nursing I year, and Post Basic B.Sc. Nursing (P.B.B.Sc.) I year programs. The examinations were organized in a systematic and disciplined manner under the guidance of the Principal, Prof. Dr. Pramilaa R., along with the dedicated efforts of the faculty and examination committee. All necessary arrangements were made to ensure the smooth conduct of examinations, including proper seating, strict invigilation, and adherence to university norms and protocols. Students appeared for the examinations with sincerity and preparedness, and a environment was maintained throughout the examination period. The active cooperation of teaching and non-teaching staff contributed significantly to the efficient management of the process. The successful completion of the second phase of examinations reflects the institution's commitment to maintaining high academic standards, transparency, and integrity in all its academic activities.





The Extra-Curricular Event 2026 of Chirayu College of Nursing was held from 6th to 7th April 2026 on the college campus with the aim of promoting students' talents, creativity, and sportsmanship. The event commenced on 6th April at 10:00 AM with an inaugural ceremony graced by dignitaries including Dr. Ajay Goenka, Mrs. Neelam Goenka, Dr. Sudesh Kumar Sohani, Dr. Narendra K. Lariya, Dr. Ashutosh Mangalgiri, and Prof. Dr. Pramilaa R. The program featured welcome and inaugural addresses, torch lighting, and a march past.

Subsequently, Faculty members were given responsibility for each activity and judges were allotted for the same. The first day included various cultural and indoor competitions such as solo song and dance, rangoli, poster making, PowerPoint presentation, mehendi, and indoor games, which were judged by Dr. M.P. Singh, Dr. Rashmi Jaiswal, Dr. Manal, Dr. Ravi Singh Pippal, Dr. Farah, Dr. Shivangi Dubey, Dr. Manishi Singh, and Mr. Rakesh Kumar. The second day began at 9:00 AM and included outdoor sports events such as running, cricket, badminton, tug of war, kho-kho, kabaddi, and other athletic activities conducted on the college and medical grounds. The event created a festive atmosphere and provided students with opportunities to enhance their physical fitness, creativity, confidence, teamwork, and leadership skills. It encouraged healthy competition and overall personality development. The program concluded successfully, leaving students motivated and enthusiastic, with winners to be honoured during the Annual Day celebration.





The Third Phase of Examination 16-21 April, 2026, at Chirayu College of Nursing was conducted successfully for the B.Sc.N I Semester I, academic session 2025–2026, marking an important stage in assessing students' academic competencies. The examination process was organized systematically under the supervision of the examination committee, ensuring adherence to institutional guidelines and maintaining discipline throughout. Students appeared for both theoretical and practical assessments, demonstrating their knowledge, skills, and preparedness for professional responsibilities. Necessary arrangements, including examination halls, invigilation, and evaluation procedures, were efficiently managed. Overall, the third phase examinations were completed smoothly, reflecting the college's commitment to academic excellence and quality nursing education.

The announcement of B.Sc. Nursing examination results marks an important academic milestone for aspiring healthcare professionals. Recently, Chirayu University declared the results for B.Sc. Nursing First Year Semester I and Semester II results April 2026. , reflecting students' performance in both theoretical and practical components. The results enable successful students to progress to the second year of their program. Similarly, Madhya Pradesh Medical Science University released the B.Sc. Nursing Iyr, B.Sc N II yr, M.Sc. N I & II yr results for the academic session 2021–2022 & 2022- 2023. These result announcements play a crucial role in assessing academic progress, strengthening professional competence, and motivating students to advance in their nursing careers, ultimately contributing to the development of skilled and compassionate healthcare providers.

In conclusion, the academic year 2025–2026 was a highly productive and enriching period for Chirayu College of Nursing, Bhopal. Through a wide range of academic, research, professional, cultural, and community-oriented activities, the institution successfully fulfilled its mission of nurturing competent, compassionate, and socially responsible nursing professionals. The continuous support of the management, the dedication of faculty members, and the enthusiasm of students played a vital role in the successful organization of these initiatives. Under the dynamic leadership of Prof. Dr. Pramila R., the college continues to strive for excellence in nursing education, research, and service, preparing future nurses to contribute meaningfully to the healthcare system and serve humanity with dedication and integrity. The institution looks forward to continuing its journey of growth and excellence in the years to come.





BATCHES 2026



M.Sc. (N) I & II Year & P.B.B.Sc II Year



GNM I & II Year





BATCHES 2026



B.Sc (N) IV Year



B.Sc (N) II Semester



BATCHES 2026

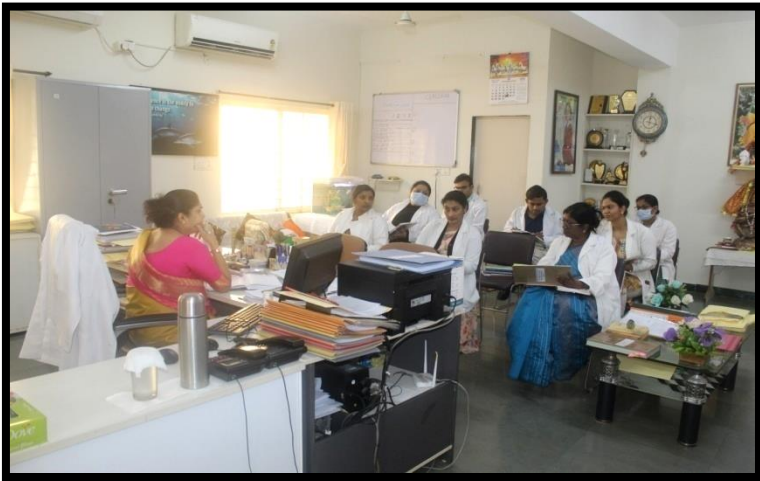


B.Sc (N) I Semester

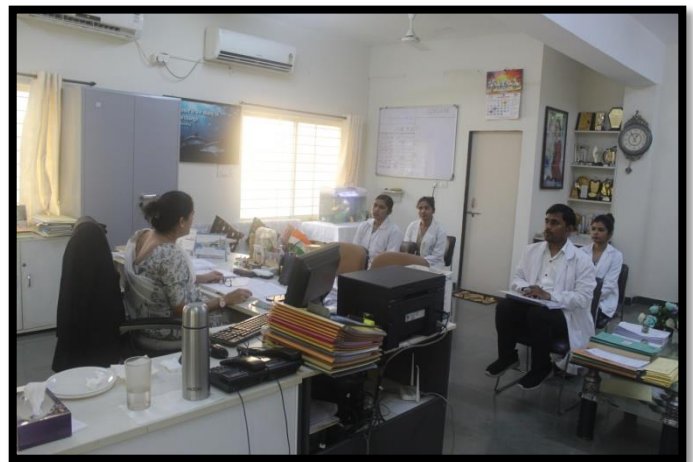




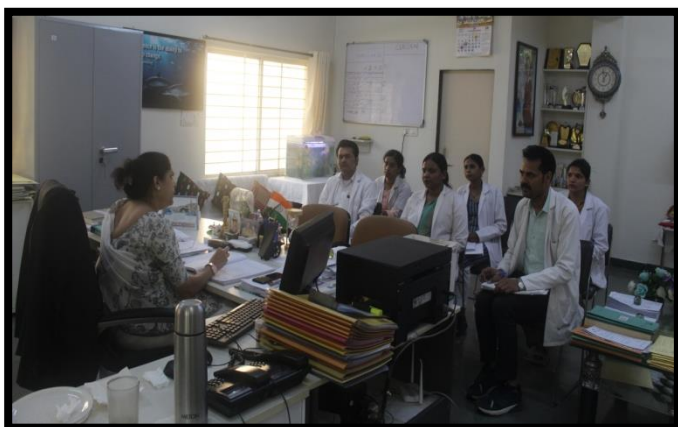
Various committees are formed annually for better functioning of academic Activities of the college. Every committee is given committee in charge and Members and each committee meeting is held every month which is chaired By principal except extra curricular and library committee which meet once in three months.



CURRICULUM COMMITTEE



HOSTEL & MESS COMMITTEE



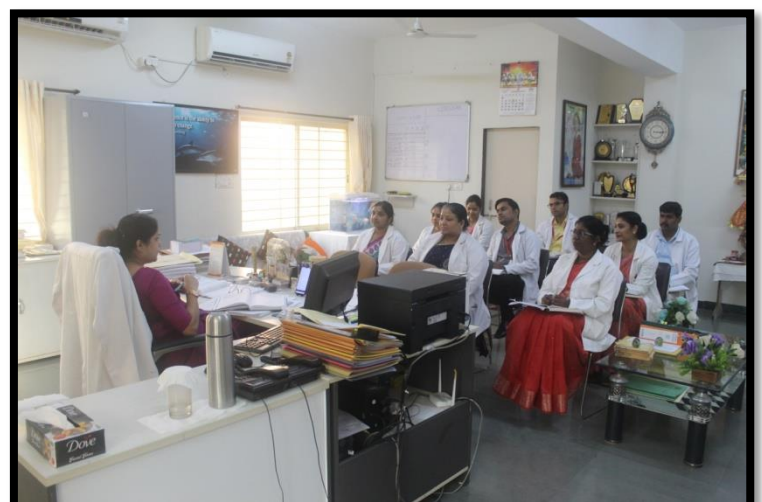
HEALTH COMMITTEE



GUIDANCE & COUNSELLING COMMITTEE



EDITORIAL COMMITTEE



ANTIRAGGING COMMITTEE



PRINCIPAL WITH TEACHING FACULTY



PRINCIPAL WITH NON - TEACHING FACULTY





The college ensures the wellbeing of students through class coordinators meeting which is conducted every month chaired by principal



The college ensures the clinical expertise of students through clinical coordinators meeting which is conducted before every clinical posting chaired by principal





Proper check of each faculty members responsibilities and to appreciate their work faculty meeting is held monthly





LIST OF TOPPERS



Mr. Roshan Pathak
B.Sc. (N) I Year Semester I
Batch 2024 - 25



Ms. Archana Sahu
B.Sc. (N) I Year Semester II
Batch 2024 - 25



Ms. Khushi Baghel
B.Sc. (N) I Year Semester I
Batch 2025 - 26





Chirayu
University

चिरायु विश्वविद्यालय, भोपाल
CHIRAYU UNIVERSITY, BHOPAL
www.chirayuuniversity.ac.in

**NEW DREAMS
NEWER HORIZONS!**

ADMISSIONS OPEN 2024-25
FILL-OUT **ONLINE FORM** FOR
ADMISSIONS PRE-REGISTRATION
www.chirayuuniversity.ac.in



CHIRAYU MEDICAL COLLEGE AND HOSPITAL

MBBS (5.5 Year)

M.D. (3 Year)

[Anatomy/ Physiology/ Biochemistry/ Pathology/
Pharmacology/ Microbiology/ Community Medicine/
General Medicine/ Dermatology, Venereology and Leprosy/
Paediatrics/ Psychiatry/ Anaesthesiology/ Radio-Diagnosis/
Radiation Oncology/ Emergency Medicine]

M.S. (3 Year)

[Obstetrics and Gynaecology/ General Surgery/
Orthopaedics/ Otorhinolaryngology/ Ophthalmology]

M.Sc. (3 Year)

[Medical Anatomy/ Medical Physiology/ Medical
Pharmacology/ Medical Biochemistry/ Medical
Microbiology]

PhD (Medicine)

CHIRAYU SCHOOL OF MANAGEMENT AND RESEARCH

BBA (3 Year) (Bachelor of Business Administration)

MBA (2 Year) (Master of Business Administration)

MHA (2 Year) (Master of Hospital Administration)

PhD (Management)

For "PhD **ADMISSIONS NOTIFICATION and
DETAILS**" and for Prescribed Application Form, please refer to
the University Website - www.chirayuuniversity.ac.in

CHIRAYU PARAMEDICAL COLLEGE

BPT (4.5 Year) (Bachelor of
Physiotherapy)

BHN (3 Year) (Bachelor in
Human Nutrition)

BOT (4.5 Year) (Bachelor
of Occupational Therapy)

BXRT (3 Year) (Bachelor of
X-Ray Radiographer
Technology)

BMLT (3 Year) (Bachelor of
Medical Laboratory Technology)

MMLT (2 Year) (Master in
Medical Laboratory Technology)
(Haematology/ Histopathology/
Microbiology/ Biochemistry)

DCLT (2 Year) (Diploma in
Cath Lab Technician)

DMLT (2 Year) (Diploma in
Medical Laboratory Technician)

DXRT (2 Year) (Diploma in
X-Ray Radiographer Technician)

DAT (2 Year) (Diploma in
Anaesthesia Technician)

DOR (2 Year) (Diploma in
Optometry and Refraction)

DDT (2 Year) (Diploma in
Dialysis Technician)

DPT (2 Year) (PG Diploma in
Perfusion Technician)

OT (1 Year) (OT Technician)

CT MRI (1 Year) (CT MRI
Technician)

CHIRAYU COLLEGE OF NURSING

B.Sc. (Nursing) (4 Year)

M.Sc. (Nursing) (2 Year)
[Paediatric Nursing/ Medical
Surgical Nursing/ Community
Health Nursing/ Obstetric &
Gynaecological Nursing/
Psychiatric Nursing]

P.B. B.Sc. Nursing (2 Year)

GNM (General Nursing and
Midwifery) (3 Year)

PhD (Nursing)

SALIENT FEATURES

Highly-Qualified &
Proficient Faculties

Ambient &
Well-furnished Hostels

State-of-the-Art
Infrastructure & Green Campus

Hands-on learning through
Industrial Training & Internships

Experiential and
Group-based Pedagogy

Career Guidance Cell
for Placement Assistance

CCTV Surveillance
for 24x7 Security

International Learning Exposure
through Partner Global Faculties

CHIRAYU UNIVERSITY CAMPUS

Bhopal-Indore Highway, Near Bairagarh, Bhopal, MP 462030 India
info@chirayuuniversity.ac.in | Phones: 0755-2709611, 2709612