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Midwifery/Obstetrics & Gynecology Nursing I & II

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Nursing Knowledge Tree



Nursing Next Exam Prep Pvt. Ltd.

Edited by
Swati Mehra

Muthuvenkatachalam S
Ambili M Venugopal

TARGET HIGHTM Next NURSING DECODE

ONE NATION
BSc
BOOK

for BSc Nursing University Exams

4th
Year
BSc Nursing
Semesters VII & VIII

Muthuvenkatachalam Srinivasan

PhD (INC Consortium), MSc Nursing (AIIMS, New Delhi),
D Pharma RN (NMBA Australia)

Associate Professor

College of Nursing
All India Institute of Medical Sciences (AIIMS)
Mangalagiri, Andhra Pradesh

Ambili M Venugopal

MSc Pediatric Nursing (AIIMS), BSc (Hons) Nursing (AIIMS)

Tutor/Clinical Instructor

All India Institute of Medical Sciences (AIIMS)
Mangalagiri, Andhra Pradesh

Edited by

Swati Mehra

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The Team

About the Authors



Muthuvenkatachalam Srinivasan

PhD (INC Consortium), MSc Nursing (AIIMS, New Delhi), D Pharm, RN (NMBA, Australia)
Associate Professor
College of Nursing
All India Institute of Medical Sciences (AIIMS)
Mangalagiri, Andhra Pradesh

Muthuvenkatachalam Srinivasan, is currently serving as an Associate Professor at the College of Nursing, All India Institute of Medical Sciences (AIIMS), Mangalagiri, Andhra Pradesh. Previously, he held the position of Assistant Professor at the Institute of Human Behaviour and Allied Sciences (IHBAS), New Delhi. Earlier, he had served as an Associate Professor at the College of Nursing, AIIMS, New Delhi.



Ambili M Venugopal

MSc Pediatric Nursing (AIIMS), BSc (Hons) Nursing (AIIMS)
Tutor/Clinical Instructor
All India Institute of Medical Sciences (AIIMS)
Mangalagiri, Andhra Pradesh

Ambili M Venugopal, is an aspiring scholar pursuing a PhD in Pediatric Nursing through the National Consortium. Presently, she is serving as a Tutor at the College of Nursing, All India Institute of Medical Sciences in Mangalagiri, Andhra Pradesh, and contributing to the advancement of nursing education and practice.

About the Editor



Swati Mehra

BDS, MDS (Oral Pathology and Microbiology)
Senior Content Strategist
Nursing Next Live

Swati Mehra is a highly proficient healthcare expert with almost a decade of experience in publishing, editing and academics. She brings her expertise to her role as Senior Content Strategist at Nursing Next Live. Prior to this, she performed multiple roles of content strategist, senior dental associate, senior lecturer and many more. Her dedicated career path reflects a commitment to excellence and continuous growth in her field.

About the Contributors



G Grace Jebakani Sweety

BSc (N), MSc (N) (Community Health Nursing), MSc (Psy), PhD (N)
Professor
[Community Health Nursing]

G Grace Jebakani Sweety completed UG from Bishop's College of Nursing, Thanjavur, PG from Community Health Nursing College of Nursing, Madras Medical College, Chennai, MSc (Psychology) from Tamil Nadu Open University and PhD Nursing from Saveetha Institute of Medical and Technical Sciences, Chennai. She has published more than 21 articles in National and International Journals. She has been the resource person in National conferences and had published procedure manual of community health nursing under CBS Publishers. She is one of the editorial members of National and International Journals and working in the teaching profession for more than 14 years. She is the member of TNMMC, Chennai and TNAI.

Target High Next Nursing DECODE



Chitra Pandey

BSc (N), MSc (N) Child Health Nursing
Content Strategist
Nursing Next Live
(Nursing Research & Statistics)

Chitra Pandey completed her graduation and postgraduation in Nursing from the University of Delhi. Her specialization is Child Health Nursing. She has rich experience in teaching pediatrics and other nursing-related subjects. Teaching has always been her passion and apart from that she has an inclination toward public health research.

She cleared UGC-NET in Social Medicine and Community Health and has worked as a research fellow in a research project funded by the Government of India. She works as a content strategist for Nursing Next Live and is involved in content development and quality check. She is also involved in the development of various plans concerning nursing competitive examinations.



Mansi Singh

MBBS
Content Strategist
Nursing Next Live
(Obstetrics & Gynecological Nursing)

Mansi Singh has completed her MBBS from RD Gardi Medical College, Ujjain (MP). She is immensely passionate about scientific content writing. She has been working as a scientific content writer since her undergraduate days. She has worked as content writer and developer with many renowned national level medical faculties.

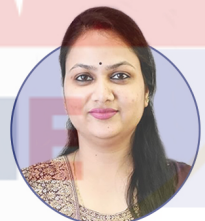
About the Reviewers



Priyadarshini Balan

BSc (N), MSc (N) Medical Surgical Nursing
Content Strategist
Nursing Next Live

Priyadarshini Balan is an accomplished Nursing Content Strategist with advanced qualifications in Medical-Surgical Nursing and super specialized in critical care nursing from Sri Balaji Vidyapeeth University. She began her professional journey as a clinical instructor at Sri Ramachandra Institute of Higher Education and Research. A distinguished patent holder and laureate of the All-India Outstanding Nurse Research Award, Priyadarshini is renowned for her innovative contributions and exceptional dedication to teaching and research. Currently, she is making significant strides in advancing and enhancing nursing education at Nursing Next Live.



Ms. Swati Shukla

BSc (N), MSc (N) Obstetrics and Gynecology
Content Strategist
Nursing Next Live

Swati Shukla, with a Master's degree in Obstetrics and Gynecology Nursing, brings extensive expertise in clinical practice and public health, combined with a deep passion for teaching. She graduated from KGMU Lucknow and pursued her postgraduation at MJPRU Bareilly. With over two years of clinical experience as a Senior Nursing Officer (SNO) and five years in public health. She has been dedicatedly mentoring and training healthcare professionals. She has been involved in various government programs, like LaQshya, Kayakalp, MUSKAN, and PMSMA Day, where she provided field support, ensured quality standards, and conducted district-level Quality Circle meetings, validation inspections (VI), and monthly review meetings with Chief Medical Officers (CMO). She is passionate about teaching the next generation of nurses, blending her clinical expertise with educational leadership. Being an expert in OSCE, She has facilitated multiple training programs. She is associated with NNL to disseminate her clinical knowledge with aspiring students to help them achieve their goal.



Sudhir Kumar Singh

MBBS, MCh Neurosurgery, Senior Resident
Senior Content Strategist
Nursing Next Live

Sudhir Kumar Singh, MBBS, MCh (Neurosurgery), AIIMS is a highly skilled and dedicated neurosurgeon. He is renowned for exceptional dedication to teaching and research and making significant strides in advancing and enhancing nursing education at Nursing Next Live.

Preface

Every student dreams about passing the exams with flying colors, but it's a fact that despite their relentless study, very few students achieve success and score well. How do you approach your examination becomes a deciding factor as far as your scores are concerned. Flurry of questions haunt a student's mind when he/she appears for an exam, like how to start writing the answer? What should be the length of answer and so on and so forth.

The above-mentioned issues have inspired us to design and conceive the idea of “**Target High Next Nursing DECODE**” Series for **Nursing Undergraduate students**.

In this book, our focus is on four subjects— Community Health Nursing-II, Nursing Research and Statistics and Midwifery/Obstetrics and Gynecology Nursing I & II.

The book provides conceptual clarity in the form of **conceptual theory**, **conceptual exercises** and **conceptual revision** leaving no aspect of learning untouched. **Conceptual theory** provides **comprehensive and concise summary** of important/highyield topics asked in university examinations with **important terminologies** providing rapid review of entire topic/chapter.

Conceptual exercises are the perfect blend of topic-wise important/high yield **Long Answer Questions**, **Short Notes** and **Short Answer Questions** asked in various university exams, like **Tamil Nadu Dr. M.G.R. Medical University**, **Delhi University**, **Kerala University of Health Sciences**, **Rajasthan University of Health Sciences**, **Madhya Pradesh Medical Science University** and **many more**. We have spent good amount of time in brainstorming session to make the answers authentic and accurate. The answers given here have been checked and cross-checked several times by the subject experts, and finally, reviewed and edited for the authenticity of content.

Apart from the solved questions of the last 10 years, **Multiple Choice Questions** and **Golden Points** under conceptual revision have been added to give a boost to revision and practice, and also to help students in self-evaluation before examination. Integration of **Nursing Care Plans** on important topics provides a 360-degree approach for enhancing the practical and clinical knowledge and skills.

Content is backed with various pedagogical features, like tables, images, flowcharts to help students understand the concepts and memorize the facts and figures with less time and effort. The flowcharts and line diagrams are easy to draw and reproduce. The images provide a real-time environment with easy and quick understanding of the concepts.

For quick revision, recall and practice, important and repeatedly asked topics/questions are highlighted adding an extra value to your last-minute preparation. A special section on **Pictorial Worksheet** for practice has been added for the diagram practice before examination. Integration of color plates related to important images, illustrations and flowcharts enhances the visualization and photomicrographic memory which is highly important for last-minute preparation as well. **Extra Edge** section covers the important content related to respective subject for quick glance.

Use this book very smartly and strategically to achieve your ultimate goal. We are pretty sure that this book will prove quite handy and very useful in developing your skills, approach and style of answer writing.

All the Best!

NNL ONE
Nursing Next *Live* Redefined

Director's Message

Dear Nursing Students/Future Nursing Officers,

First and foremost, I would like to congratulate all of you on choosing this noble career of Nursing. This is the first step toward service to mankind. After completing the 12th examination, the two most sought-after medical professions are of Doctors and Nurses. Both the professions are considered equally significant for strengthening any country's health system. A noble profession, like Nursing not only demands knowledge and skills but also empathy, compassion, and a strong commitment to the well-being of others. As future nurses, you have chosen a path that will allow you to make a significant impact on the lives of individuals and community as a whole.



Nursing is not just a job; it is a service beyond self-interest. The journey you are about to embark upon is both challenging and rewarding, and it is my privilege to guide you through this transformative experience.

Always remember, for every good work or big achievement, you need to follow certain principles and imbibe certain traits within you, like:

- You must love the profession you join
- You must be hardworking
- You must be sincere
- You must have faith in yourself

And, of course, you have all these traits; that's why you are here. It is just the beginning of your Nursing journey as you all have miles to go.

During the last three years, we have revolutionized digital education in Nursing across India. Our initiatives have been well recognized and accepted by Nursing Students preparing for Nursing competitive examinations, like NORCET and other Nursing Officers' examinations of national repute. And now we have introduced Digital Learning to graduates in the form of "Plan UG".

To complement Digital Learning along with preparation for university exams, we have designed and created comprehensive, concept-oriented and student-friendly study material specifically tailored for nursing undergraduates under the banner of most trusted study companion "Target High" with a goal to create an unparalleled source of flawless and complete information for students.

This book is a complete package of very carefully, clearly and concisely designed concepts along with a collection of solved exercises and revision exercises that will help you practice and apply your understanding. The meticulous selection of questions in the book coupled with their comprehensive explanations and solutions will help you grasp the underlying principles and reasoning.

With this invaluable resource, focus your energy on mastering the concepts and honing your critical thinking skills.

We believe in the saying, "One Day or Day One." If you believe that One Day will come, and then you will start the preparation for your university examination, that day will never come, so why not from Day One? Always remember, your success as a nursing professional begins with a solid foundation built during your undergraduate years.

We believe, no matter how good a book is, there is always a scope for improvement. And that is why we request you to keep sharing your valuable feedback on a regular basis so that we could provide you with the best possible content.

I wish you all the best in your studies and future endeavors as nurses. May you find fulfillment, purpose, and endless opportunities to make a difference in the lives of those you serve!

Bhupesh Aarora

Director

Nursing Next Live

Sr. Vice President – Health Sciences Division (Publishing & Marketing)

CBS Publishers and Distributors Pvt Ltd

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Number	Title	Pages	LAQs	SN	SAQs	MCQs	GP	
CHAPTER 1	Management of Common Conditions and Emergencies Including First Aid	27	3	4	5	120+	150+	3–36
CHAPTER 2	Reproductive, Maternal, Newborn, Child and Adolescent Health	29	3	3	5	120+	150+	37–72
CHAPTER 3	Demography, Surveillance and Interpretation of Data	12	1	5	5	120+	150+	73–90
CHAPTER 4	Population and its Control	10	3	9	5	120+	150+	91–109
CHAPTER 5	Occupational Health	5	2	3	5	120+	150+	110–120
CHAPTER 6	Geriatric Healthcare	7	1	2	5	120+	150+	121–131
CHAPTER 7	Mental Health Disorders	7	1	2	5	120+	150+	132–142
CHAPTER 8	Health Management Information System	5	–	2	4	120+	150+	143–150
CHAPTER 9	Management of Delivery of Community Health Services	14	1	3	5	120+	150+	151–169
CHAPTER 10	Leadership, Supervision and Monitoring	5	1	3	5	120+	150+	170–179
CHAPTER 11	Disaster Management	4	1	1	4	120+	150+	180–187
CHAPTER 12	Biomedical Waste Management	3	–	1	5	120+	150+	188–194
CHAPTER 13	Health Agencies	5	2	4	5	120+	150+	195–207
	Total	133	19	42	63	1560+	1950+	208

Abbreviations: GP, Golden Points; LAQs, Long Answer Questions; MCQs, Multiple Choice Questions; SAQs, Short Answer Questions; SN, Short Notes.

NURSING RESEARCH AND STATISTICS

CHAPTERS		CONCEPTUAL THEORY	CONCEPTUAL EXERCISES			CONCEPTUAL REVISION		PAGES
Number	Title	Pages	LAQs	SN	SAQs	MCQs	GP	
CHAPTER 1	Research and Research Process	4	2	4	5	80+	130+	211–220
CHAPTER 2	Research Problem/Question	3	–	5	5	80+	130+	221–228
CHAPTER 3	Review of Literature	3	1	3	5	80+	130+	229–236
CHAPTER 4	Research Approaches and Designs	4	2	8	5	80+	130+	237–249
CHAPTER 5	Sampling and Data Collection	7	4	6	5	80+	130+	250–267
CHAPTER 6	Analysis of Data	2	–	2	5	80+	130+	268–273
CHAPTER 7	Introduction to Statistics	6	6	12	8	80+	130+	274–289
CHAPTER 8	Communication and Utilization of Research	4	2	3	5	80+	130+	290–298
	Total	33	17	43	43	640+	1040+	90

MIDWIFERY/OBSTETRICS AND GYNECOLOGY NURSING-I

CHAPTERS		CONCEPTUAL THEORY	CONCEPTUAL EXERCISES			CONCEPTUAL REVISION		PAGES
Number	Title	Pages	LAQs	SN	SAQs	MCQs	GP	
CHAPTER 1	Introduction to Midwifery	10	1	2	7	120+	120+	301–316
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CHAPTER 3	Assessment and Management of Normal Pregnancy (Antenatal)	14	2	3	5	120+	120+	333–354

Contd...

CHAPTERS		CONCEPTUAL THEORY	CONCEPTUAL EXERCISES			CONCEPTUAL REVISION		PAGES
Number	Title	Pages	LAQs	SN	SAQs	MCQs	GP	
CHAPTER 4	Physiology, Management and Care During Labor	12	3	3	5	120+	120+	355–376
CHAPTER 5	Postpartum Care/Ongoing Care of Women	7	2	2	5	120+	120+	377–390
CHAPTER 6	Assessment and Ongoing Care of Normal Neonates	9	2	3	5	120+	120+	391–407
CHAPTER 7	Family Welfare Services	9	1	4	5	120+	120+	408–423
	Total	69	11	23	36	840+	840+	126

MIDWIFERY/OBSTETRICS AND GYNECOLOGY NURSING-II

CHAPTERS		CONCEPTUAL THEORY	CONCEPTUAL EXERCISES			CONCEPTUAL REVISION		PAGES
Number	Title	Pages	LAQs	SN	SAQs	MCQs	GP	
CHAPTER 1	Recognition and Management of Problems during Pregnancy	46	1	6	5	120+	120+	427–481
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CHAPTER 4	Assessment and Management of High-Risk Newborn	27	1	4	5	120+	120+	539–572
CHAPTER 5	Assessment and Management of Women with Gynecological Disorders	36	1	2	5	120+	120+	573–614
	Total	151	7	18	25	600+	600+	190

Subject-wise cum Topic-wise Content List

This content list will give a quick glance over the important topics; all the terms have been arranged alphabetically subject-wise

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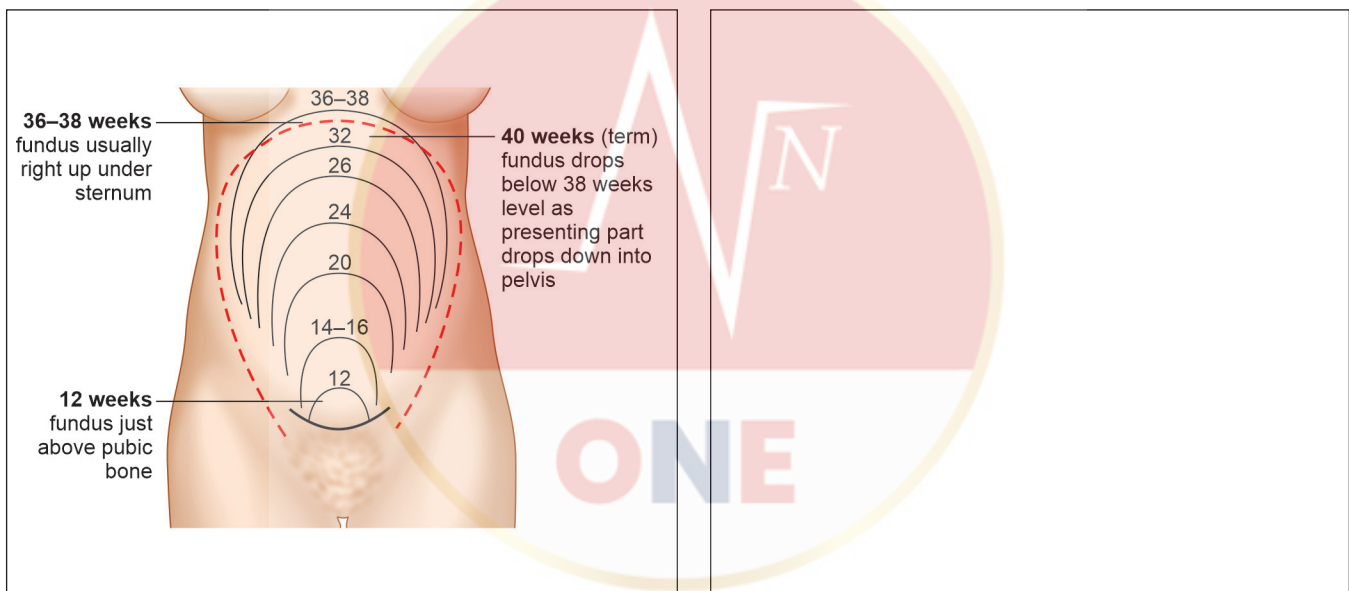
Pictorial Worksheets

These worksheets cover **30+ colored images, figures and flowcharts** related to Community Health Nursing-II, Nursing Research and Statistics and Midwifery/Obstetrics and Gynecology Nursing I & II. These illustrations are highly important which enhance the visualization and recall feature from the practice point of view. All the illustrations have been provided with vacant spaces for students to memorize and reproduce the same in the examination with ease.

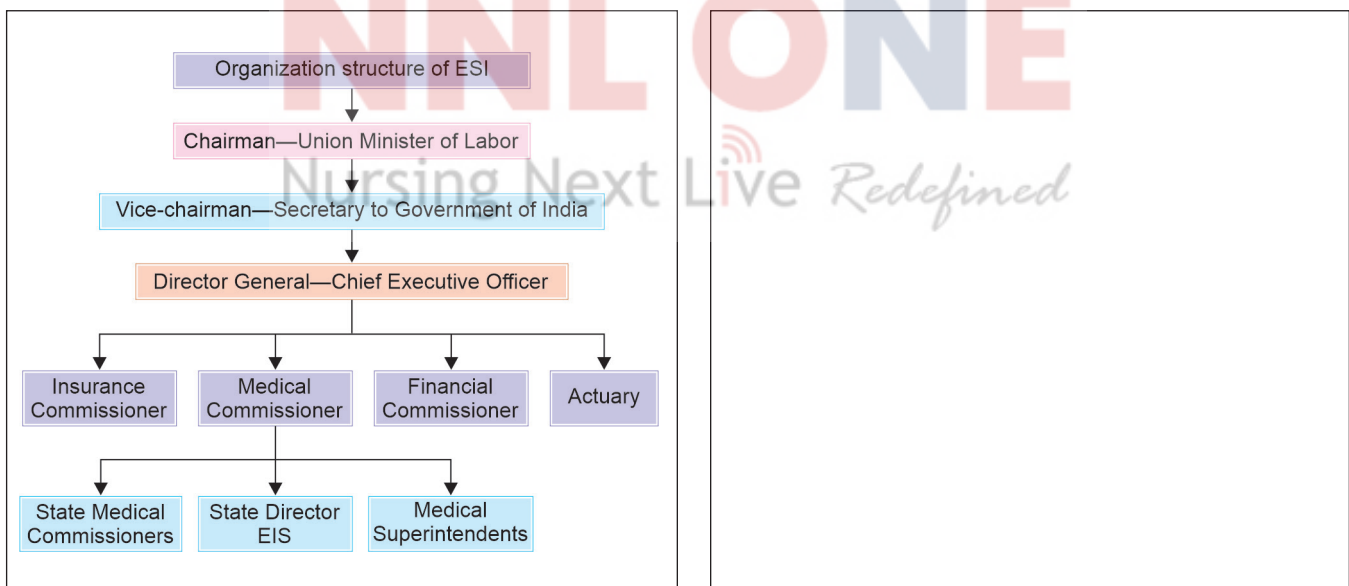
COMMUNITY HEALTH NURSING-II

Color Plates

Get Yourself Practice



Color Plate 1: Uterine fundal height at various stages of pregnancy



Color Plate 2: Organization structure of ESI

Extra Edges

COMMUNITY HEALTH NURSING-II

COMMON ABBREVIATIONS RELATED TO COMMUNITY HEALTH NURSING

AABY: Aam Aadmi Bima Yojana	CDR: Crude Death Rate
AB: Ayushman Bharat	CGA: Comprehensive Geriatric Assessment
AD: Alzheimer's Disease	CHC: Community Health Center
AIDS: Acquired Immunodeficiency Syndrome	CHO: Community Health Officer
AIWC: All India Women's Conference	CMO: Chief Medical Officer
AMG: Annual Maintenance Grant	COPD: Chronic Obstructive Pulmonary Disease
ANC: Antenatal Care	COTPA: Cigarettes and Other Tobacco Products Act
ANM: Auxiliary Nurse Midwife	CPD: Cephalopelvic Disproportion
APH: Antepartum hemorrhage	CPHC: Comprehensive Primary Health Care
ARSH: Adolescent Reproductive and Sexual Health	CPR: Couple Protection Rate
ASDR: Age-specific Mortality Rate	CRY: Child Rights and You
ASFR: Age-specific Fertility Rate	CSR: Corporate Social Responsibility
ASHA: Accredited Social Health Activist	CSWB: Central Social Welfare Board
ASMFR: Age-specific Marital Fertility Rates	DA: Data Assistant
ATR: Action Taken Report	DALY: Disability Adjusted Life Years
AWC: Anganwadi Center	DAM: District Accounts Manager
AWW: Anganwadi Worker	DANIDA: Danish international development agency
AYUSH: Ayurveda, Yoga and Naturopathy, Unani, Siddha And Homeopathy	DBCS: District blindness control society
BAM: Block Accounts Manager	DCM: District Community Manager
BCC: Behavior Change Communication	DDAP: Drug De-Addiction Program
BCHC: Block Community Health Center	DGHS: Director General of Health Services
BCM: Block Community Manager	DH: District Hospital
BHAP: Block Health Action Plan	DHAP: District Health Action Plan
BMI: Body Mass Index	DHF: Dengue Hemorrhagic Fever
BMO: Block Medical Officer	DHS: District Health Society
BP: Blood Pressure	DIC: Disseminated Intravascular Coagulopathy
BPHC: Block Primary Healthcare Center	DOTS: Directly Observed Therapy Short-Course
BPL: Below Poverty Line	DPM: District Program Manager
BPM: Block Program Manager	DPMU: District Program Management Unit
BRS: Bank Reconciliation Statement	DPT: Diphtheria, pertussis, and tetanus vaccine
BSE: Breast Self-examination	DT: Diphtheria-Tetanus Toxoid
BSS: Bharat Sevak Samaj	dtA: Diphtheria-tetanus adult type
CA: Chartered Accountant	EBP: Evidence-Based Practice
CARE: Cooperative for Assistance and Relief Everywhere	EDD: Expected Date of Delivery
CBR: Crude Birth Rate	EML: Essential Medicines List
CCT: Controlled Cord Traction	EMR: Electronic Medical Records
CDMO: Chief District Medical Officer	ESI: Employees' State Insurance
	ESI Act: Employees' State Insurance Act



This whole section is the compilation of the important content from Comprehensive Textbook of Community Health Nursing for BSc Nursing Students by Dr Shyamala D Manivannan.

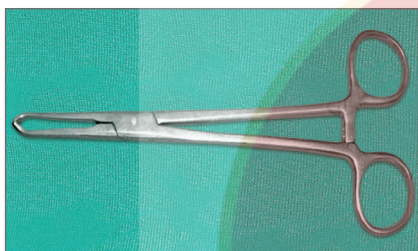
Instruments Used in Obstetrics and Gynecological Procedures



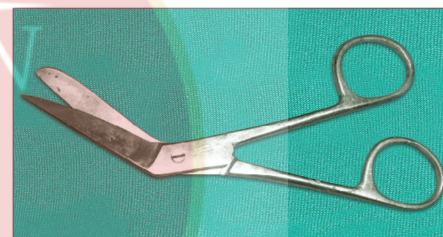
Color Plate 1: Artery forceps



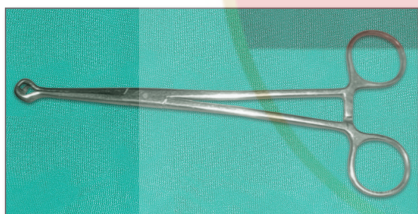
Color Plate 6: Mayo scissors



Color Plate 2: Allis forceps



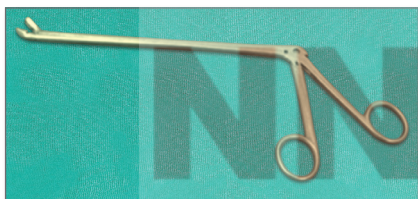
Color Plate 7: Episiotomy scissors/perineorrhaphy



Color Plate 3: Babcock forceps



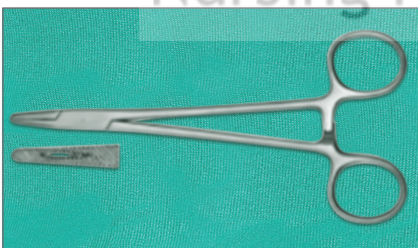
Color Plate 8: Ayre spatula



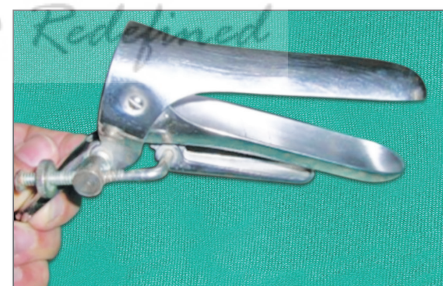
Color Plate 4: Punch biopsy forceps



Color Plate 9: Uterine curettage



Color Plate 5: Needle holder



Color Plate 10: Cusco's bivalve self-retaining vaginal speculum



This whole section is the compilation of the important content from Textbook of Midwifery/Obstetrics and Gynecology Nursing for BSc Nursing Students.



Community Health Nursing-II

SECTION OUTLINE

- | | | | |
|------------------|---|-------------------|---|
| CHAPTER 1 | Management of Common Conditions and Emergencies Including First Aid | CHAPTER 7 | Mental Health Disorders |
| CHAPTER 2 | Reproductive, Maternal, Newborn, Child and Adolescent Health | CHAPTER 8 | Health Management Information System |
| CHAPTER 3 | Demography, Surveillance and Interpretation of Data | CHAPTER 9 | Management of Delivery of Community Health Services |
| CHAPTER 4 | Population and its Control | CHAPTER 10 | Leadership, Supervision and Monitoring |
| CHAPTER 5 | Occupational Health | CHAPTER 11 | Disaster Management |
| CHAPTER 6 | Geriatric Healthcare | CHAPTER 12 | Biomedical Waste Management |
| | | CHAPTER 13 | Health Agencies |

Management of Common Conditions and Emergencies Including First Aid

CHAPTER

1

CONCEPTUAL THEORY

Terminology



100+ key *terminologies* for Quick Recall & Revision



Aphthous ulcers: Also known as canker sores, are painful, shallow lesions or sores that develop on the mucous membranes inside the mouth, typically on the inner cheeks, lips, tongue or throat.

Arrhythmia: Involves disruptions in heart's electrical impulses, leading to abnormal heart rates or rhythms, such as tachycardia, bradycardia, or irregular patterns.

Cardiopulmonary resuscitation: It is an emergency lifesaving procedure performed to manually support the circulation and breathing of a person who is in cardiac arrest or experiencing respiratory failure.

Emergency healthcare: It refers to the care given to critical medical situations promptly, with the primary goal of stabilizing the patients, preventing further deterioration of their condition and saving lives.

First Aid: It refers to the immediate assistance or treatment given to someone who has been injured or suddenly taken ill before full medical treatment can be provided.

Fracture: It is a break or crack in a bone that occurs due to fall, accident or direct blow to the bone or from conditions that weaken the bone, such as osteoporosis or certain medical conditions.

Primary care: It is a model of care that supports first-contact, accessible, continuous, comprehensive and coordinated person-focused care.

Screening: It is a preventive healthcare strategy involving the application of specific tests or assessments to asymptomatic individuals to identify early-stage disease or risk factors.

Standing order: An order for some form of treatment, medication or procedure to be carried out by a nurse in the absence of a doctor.

STANDING ORDER

Standing order is defined as an order for some form of treatment, medication or procedure to be carried out by a nurse in the absence of a doctor.

Uses

- It helps to ensure staff are appropriately trained to carry out the roles and responsibilities.
- It saves time and enhances coordination among health team.
- It helps the patients to have access to more efficient, timely services by permitting authorized staff to dispense or administer medication without reference to a medical practitioner.
- It enhances patient's satisfaction.
- It is useful in urgent or emergent scenarios in which immediate actions must be taken to support the patient.
- It permits the nursing staff to work at a higher level, gaining clinical independence in appropriate cases.



SCREENING, DIAGNOSING/ IDENTIFICATION, PRIMARY CARE AND REFERRAL

GASTROINTESTINAL SYSTEM

Abdominal Pain

Abdominal pain is a widely reported symptom in the community. The causes may include problems in the stomach (peptic ulcer), gallbladder stones (cholelithiasis), kidney stones (nephrolithiasis), pancreas (pancreatitis), appendicitis etc.

Sites of Pain in the Abdomen and Its Significance

- **Right hypochondriac region (upper right quadrant):**
 - **Liver:** Hepatitis, liver abscess or gallbladder diseases (e.g., cholecystitis, cholelithiasis).
 - **Gallbladder:** Cholecystitis or gallstones.
 - **Right kidney:** Kidney stones or infections.
- **Epigastric region (upper central region):**
 - **Stomach:** Gastritis, gastric ulcer, GERD (Gastroesophageal reflux disease) or pancreatitis.
 - **Pancreas:** Pancreatitis or pancreatic cancer.
- **Left hypochondriac region (upper left quadrant)**
 - **Spleen:** Splenic rupture, infection or enlargement.
 - **Stomach:** Gastritis, gastric ulcer, GERD.
 - **Left kidney:** Kidney stones or infections.
- **Right lumbar region (middle right quadrant):**
 - **Appendix:** Appendicitis.
 - **Right kidney:** Kidney stones or infections.
 - **Right colon:** Appendicitis, inflammation or obstruction.
- **Umbilical region (central region):**
 - **Small intestine:** Obstruction, inflammation (e.g., enteritis) or infections.
 - **Aorta:** Abdominal aortic aneurysm.
- **Left lumbar region (middle left quadrant):**
 - **Left kidney:** Kidney stones or infections.
 - **Left colon:** Diverticulitis, inflammation or obstruction.
- **Right iliac (inguinal) region (lower right quadrant):**
 - **Appendix:** Appendicitis.
 - **Right ovary and fallopian tube (in females):** Ovarian cysts, torsion or ectopic pregnancy.
- **Hypogastric (pubic) region (lower central region)**
 - **Bladder:** Urinary tract infections (UTIs), bladder stones or bladder cancer.
 - **Uterus and ovaries (in females):** Menstrual cramps, pelvic inflammatory disease (PID), ovarian cysts or ectopic pregnancy.

- **Small intestine:** Obstruction, inflammation or infections.
- **Left iliac (inguinal) region (lower left quadrant):**
 - **Left ovary and fallopian tube (in females):** Ovarian cysts, torsion or ectopic pregnancy.
 - **Left colon:** Diverticulitis, inflammation or obstruction.

Management of Pain

Management of pain depends upon the underlying condition. For severe episodic spasmodic pain, antispasmodics can be given.

- **Pharmacological management:**
 - **Nonsteroidal anti-inflammatory drugs (NSAIDs)**
 - ◆ Examples include ibuprofen, aspirin and naproxen.
 - ◆ Work by reducing inflammation and blocking pain signals.
 - ◆ Used for mild to moderate pain relief, including headaches, muscle aches and menstrual cramps.
 - **Acetaminophen (tylenol):**
 - ◆ Works as a pain reliever and fever reducer.
 - ◆ Less effective for inflammation but can be used for mild to moderate pain relief.
 - ◆ Often used for headaches, muscle aches and reducing fever.
 - **Opioids:**
 - ◆ Examples include codeine, morphine, oxycodone and hydrocodone.
 - ◆ Work by binding to opioid receptors in the brain, spinal cord and other areas to reduce pain perception.
 - ◆ Used for moderate to severe pain relief, such as post-surgical pain or cancer pain.
 - **Muscle relaxants:**
 - ◆ Examples include cyclobenzaprine and methocarbamol.
 - ◆ Used to relieve muscle spasms and associated pain.
 - ◆ Often prescribed for conditions like low back pain or neck pain.
 - **Antidepressants:**
 - ◆ Certain antidepressants, such as tricyclic antidepressants (e.g., amitriptyline) and serotonin-norepinephrine reuptake inhibitors (SNRIs) like duloxetine, can be used to manage chronic pain conditions.
 - ◆ Work by altering neurotransmitter levels in the brain and spinal cord, which can modulate pain perception.
 - ◆ Used for conditions like neuropathic pain, fibromyalgia or chronic low back pain.

- Remove any tight clothing or jewelry from around the bite site before swelling occurs.
- Gently clean the bite area with soap and water, but do not apply ice or attempt to suck out venom.
- Use a clean, sterile bandage to cover the bite site, applying firm pressure to help slow the spread of venom. The bandage should be fit but not too tight and it should cover the entire limb if possible.
- Call emergency services or transport the victim to the nearest medical facility as soon as possible. It is essential to receive proper medical treatment, including antivenom if necessary.

- Sudden increase in weight
- Palpitation
- Abdominal pain
- Confusion
- Repeated dry cough especially while lying down
- Blood in the cough.

4. Enlist the warning signals of heart failure.

Answer

Warning Signals of Heart Failure

- Breathlessness on exertion
- Pitting edema in ankle, feet and legs.

5. List the signs and symptoms of gastrointestinal bleeding.

Answer

Signs and Symptoms of Gastrointestinal Bleeding

- Hematemesis and/or melena
- Coffee ground gastric aspirate
- Pain
- Hypovolemic shock
- Tachycardia
- Hypotension

CONCEPTUAL REVISION

Golden Points



- A standing order must be signed by a doctor and applicable to a specific patient or situation.
- A standing order does not allow a person to generate a prescription and provide it to a patient to buy medicine.
- The common chief complaint in the community is abdominal pain or stomach pain which is managed by antispasmodics or analgesics.
- Stable patients with nausea and vomiting are given symptomatic management. Sick patients may need intravenous fluids.
- Constipation is a decrease in the frequency and liquidity of stool compared to the normal pattern in a particular individual which is managed by Tablet Bisacodyl.
- Jaundice patients who have fever, vomiting, altered sensorium or bleeding require specialized care.
- Causes of Gastrointestinal bleeding may include esophageal, gastric, duodenal ulcer, varices, tumors, vascular lesion etc.
- Upper respiratory tract infections include rhinitis, sinusitis, pharyngitis, laryngitis and tonsillitis.
- Lower respiratory tract infections include bronchitis, pneumonia and bronchial asthma.
- Urinary tract infections include a wide range of clinical entities including asymptomatic bacteriuria, cystitis, prostatitis and pyelonephritis.
- Eye, ear, nose and throat infections and problems are treated based on the cause and are managed with appropriate First Aid measures.
- Victims are transported immediately to the nearest healthcare facility for immediate attention and further management.



MULTIPLE CHOICE QUESTIONS



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1. Which of the following is NOT recommended as a first aid measure for someone experiencing diarrhea?

- Drinking plenty of clear fluids
- Consuming high-fiber foods
- Taking over-the-counter anti-diarrheal medication
- Resting and avoiding spicy or fatty foods

Ans. c. Taking over-the-counter anti-diarrheal medication

2. What is the recommended first aid measure for someone experiencing epistaxis?

- Tilting the head forward
- Tilting the head backward
- Pinching the nostrils together
- Applying ice packs to the forehead

Ans. c. Pinching the nostrils together

3. What are the common causes of urinary tract infections (UTIs) in children?

- Excessive water intake
- Poor hygiene practices
- Consumption of spicy foods
- Bacterial contamination from fecal matter

Ans. d. Bacterial contamination from fecal matter

4. Which of the following is NOT a common symptom of conjunctivitis?

- Redness of the eye
- Itching or irritation
- Blurred vision
- Discharge or crusting of the eyelids

Ans. c. Blurred vision

5. When is referral to a healthcare professional recommended for otitis media?

- If the earache lasts for <24 hours.
- If the ear discharge is clear and odorless.
- If symptoms persist or worsen after 48–72 hours of home care.
- If the child experiences mild fever without other symptoms.

Ans. c. If symptoms persist or worsen after 48–72 hours of home care

6. What is the primary First Aid measure for managing hypovolemic shock?

- Elevating the legs above the level of the heart.
- Administering pain medication.
- Providing oral fluids to the individual.
- Controlling external bleeding and maintaining body warmth.

Ans. d. Controlling external bleeding and maintaining body warmth

7. What is the recommended First Aid measure for treating a minor burn?

- Applying ice directly to the burn
- Popping any blisters that form
- Running cool water over the burn for 10–20 minutes
- Covering the burn with a tight bandage

Ans. c. Running cool water over the burn for 10–20 minutes

8. Which of the following is a common symptom of choking?

- Chest pain
- Persistent coughing
- Rapid breathing
- Profuse sweating

Ans. b. Persistent coughing

9. How deep should chest compressions be performed during CPR on an adult victim?

- At least 1 inch (2.5 centimeters)
- At least 2 inches (5 centimeters)
- At least 3 inches (7.5 centimeters)
- At least 4 inches (10 centimeters)

Ans. b. At least 2 inches (5 centimeters)

10. What is the immediate action to take when performing CPR on a drowning victim who is unresponsive and not breathing?

- Perform chest compressions immediately
- Administer rescue breaths immediately
- Perform abdominal thrusts to clear the airway
- Assess the pulse before initiating any CPR maneuvers

Ans. b. Administer rescue breaths immediately



Nursing Research and Statistics

SECTION OUTLINE

- CHAPTER 1** Research and Research Process
- CHAPTER 2** Research Problem/Question
- CHAPTER 3** Review of Literature
- CHAPTER 4** Research Approaches and Designs

- CHAPTER 5** Sampling and Data Collection
- CHAPTER 6** Analysis of Data
- CHAPTER 7** Introduction to Statistics
- CHAPTER 8** Communication and Utilization of Research

Research and Research Process

CONCEPTUAL THEORY

Terminology

Evidence-based practice (EBP): It is the conduct of healthcare according to the principle that all interventions should be based on the best currently available scientific evidence.

Nursing research: It is a systematic and scientific process of investigating questions and issues related to nursing practice, healthcare and the promotion of health.

Problem solving: It is a systematic approach to identify, analyze and resolve challenges by gathering information and providing solutions.

Research: It is a systematic process that involves a series of steps to collect and analyze data in order to answer research questions.

Scientific method: It is a systematic and structured approach to acquire and evaluate knowledge.



60+ key *terminologies* for Quick Recall & Revision



INTRODUCTION

Nursing is a profession which is constantly changing and developing. Therefore, research is one of the effective sources to acquire new knowledge and information. The latest evidence from research helps ensure quality of care for patients.

DEFINITIONS

Definition of Research and Nursing Research

- **Research:** The term research is made from two words “re” and “search” which means that research involves going back over existing information and knowledge to gain a deeper understanding.
- **Nursing Research:** Nursing research is a systematic and scientific process of investigating questions and issues related to nursing practice, healthcare and the promotion of health.

NEED FOR NURSING RESEARCH

The purposes of nursing research include:

- **Gaining new knowledge:** It is acquired by an organized and logical process of inquiry during which data are methodically collected, analyzed and interpreted.

- **Improving patient outcomes:** Nursing research provides information about effective interventions and treatments that can improve patient outcomes.
- **Addressing healthcare challenges:** It helps to address complex and challenging healthcare issues, such as patient safety, quality of care and patient satisfaction.
- **Evidence-based practice:** It provides evidence-based information that can be used to inform and improve clinical practice.
- **Advancing the nursing profession:** It helps to advance the nursing profession by providing new knowledge and insight into the practice of nursing.
- **Promoting interdisciplinary collaboration:** It promotes interdisciplinary collaboration and helps to bridge the gap between different healthcare professions.

STEPS OF SCIENTIFIC METHOD

Scientific method is a systematic and structured approach to acquire and evaluate knowledge. It is used in natural and social sciences including nursing. A scientific method is empirical, objective, hypothesis-driven, evidence-based, replicable, skeptical and progressive.

The steps of a scientific method include:

- Observing a phenomenon or problem.



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- Defining the objectives of the study.
- Reviewing the literature to gain insight about the problem.
- Define variables.
- Formulate a hypothesis to explain the phenomenon or problem.
- Designing and conducting experiments to test the hypothesis.
- Review for ethical considerations.
- Collecting the data.
- Analyzing and interpreting the data.
- Drawing conclusions based on the data and revising the hypothesis as needed.
- Communicating the results and conclusions for peer review and further testing.

CHARACTERISTICS OF GOOD RESEARCH



The characteristics of a good research are as follows:

- **Empirical:** The research is a systematic and critical investigation of a phenomenon of interest. It is based on measurements that can be accurately and precisely obtained. Quantitative research is based on numerical data and is easier to scientifically prove. Qualitative research is based on people's opinions and experiences, making it more susceptible to bias.
- **Credible:** The credibility in research requires a believable and trustworthy source of information and the use of best practices.
- **Analytical:** The research is conducted to find out answers to the pertinent questions and to solve the problems.
- **Critical:** A critical approach in research means being able to evaluate information objectively, using logical and systematic reasoning to assess its validity, reliability and significance.
- **Methodical:** The research is conducted methodically without any bias using logical methods and procedures. It involves identification of a problem to be investigated; carefully designing the measurements and procedures; collection and logical analysis of the data and formulation of conclusions regarding the problem being investigated.
- **Generalizable:** Generalizability refers to the ability of the results from a research study to be applied to a larger group of population.
- **Reliable:** It refers to the consistency of results from a research study, instrument, tool or procedure.
- **Expertise:** The researcher must be adequately prepared and trained to undertake the activity of research.

STEPS OF RESEARCH PROCESS



The research process involves a series of sequential steps that a researcher follows to collect, analyze and interpret data.

The research process involves the following steps depending on the type of research approach.

• **Phase I: Conceptual phase:**

- **Searching for a research topic:** The first step of conceptual phase involves finding an appropriate research topic which involves a strong conceptual thinking among the researchers.
- **Formulating the research problem statement:** It involves the identification of a general area of interest to the researcher and narrowing down the topic to a specific problem to be studied.
- **Formulating study objectives/research questions:** It refers to the specific steps taken to achieve the aims, illustrating how the research will accomplish its goals. A good research question must be clear to be answered by the investigator.
- **Review of literature:** The review of literature is done before selecting a topic, at the time of writing discussion or throughout the study.
- **Develop conceptual framework:** It involves the development of a visual or written representation of the concept related to the research problem or question.
- **Formulating hypothesis/assumptions:** A hypothesis is a statement that predicts the relationship between two or more variables that is testable through scientific research. Assumption in research refers to the underlying beliefs or viewpoints that the researcher holds about the research topic.

• **Phase II: Design and planning phase:**

- **Select the research approach and design:** Selecting an appropriate research design or a blueprint to carry out the research is essential. It helps in determining the type of data to be collected and the methods to be used to analyze the data.
- **Specify the population and sampling method:** This step involves identifying the population to be studied and selecting an appropriate sampling method. Designing an appropriate sampling method helps in determining the representative of the sample and generalizability of the findings.
- **Develop or select tools for data collection:** This step involves developing appropriate tools or selecting standardized tools to collect data.
- **Obtain ethical approval:** Ethical consideration involves a systematic inquiry into the principles of right or wrong conduct while conducting a research study.
- **Conduct a pilot study:** It is a small-scale version of the study, also known as a trial run, which helps in minimizing the problems in final data collection and obtaining reliable results.



- **Phase III: Empirical phase:**
 - **Select the sample:** Selecting a sample from the population is an important step in research.
 - **Collect data:** It involves collecting pieces of information during the study.
 - **Preparing data analysis:** This step involves analyzing the collected data by entering the values, coding and using an appropriate statistical package or application.
- **Phase IV: Analytic phase:**
 - **Analyze data using statistical methods:** It enables the researcher to draw conclusions of the collected data.
 - **Interpreting the results and draw conclusions:** The data is interpreted and conclusions are drawn after analyzing the data by using statistical methods.
- **Phase V: Dissemination phase:**
 - **Disseminate the research findings:** It refers to the process of sharing the research findings with the broader scientific community.

EVIDENCE-BASED PRACTICE

Concept

Evidence-based practice (EBP) is the conduct of healthcare according to the principle that all interventions should be based on the best currently available scientific evidence. It involves integrating clinical expertise, patient values and the best available research evidence to make decisions about patient care.

Need and Purpose of Evidence-Based Practice in Nursing

EBP in nursing is aimed at improving patient outcomes, enhancing the quality of care, increasing patient satisfaction, reducing healthcare costs and advancing the nursing profession. The purposes of EBP are as follows:

- **Improving patient outcomes:** EBP is designed to help nurses provide the most effective and appropriate care to their patients, based on the best available evidence.
- **Enhance quality of care:** EBP helps to ensure that nurses are providing the highest quality care possible by using the most up-to-date and accurate evidence to inform their clinical decisions.
- **Increase patient satisfaction:** EBP emphasizes the importance of patient-centered care, taking into account patient preferences, values and beliefs.
- **Reduce healthcare costs:** By using evidence-based interventions, nurses can optimize healthcare resources, reduce waste and minimize unnecessary treatments and procedures.

- **Advance the nursing profession:** EBP promotes the use of scientific evidence to guide nursing practice, which can enhance the credibility and legitimacy of the nursing profession.

Steps of Evidence-Based Practice Process



The EBP involves cultivating a spirit of inquiry essential for nurses to question and seek out best evidence to inform clinical decision-making. The steps of EBP are:

- **Step-I (Asking a clinical question):** It involves identifying a clinical problem or issue and formulating a focused and answerable question.
- **Step-II (Review of Literature):** The search for high-quality and high-level evidence is essential; therefore, a literature review is performed.
- **Step-III (Clinical appraisal of evidence):** This involves critically evaluating the evidence found in the literature search to determine their validity, reliability and applicability to the clinical question.
- **Step-IV (Combining the evidence with clinical expertise, patient preferences and values):** Once the evidence has been appraised and synthesized, the next step is to combine it with clinical expertise, patient preferences and values.
- **Step-V (Evaluating the outcome of the practice decision):** The last step is to evaluate the outcomes of the recommended treatment to determine its effectiveness.

Barriers

There are several barriers that hinder the implementation of EBP in nursing and other healthcare disciplines. It includes:

- **Lack of knowledge:** A lack of knowledge or understanding about the research methodologies, benefits of EBP, how to find and evaluate evidence and how to apply evidence to practice can be a significant barrier for nurses.
- **Resistance to change:** It is a common barrier in healthcare settings and can prevent nurses from adopting new practices or approaches, even when evidence supports their effectiveness.
- **Limited access to research:** It can make it difficult for nurses to find and evaluate the latest evidence-based practices. It is due to a lack of resources, including time and funding or limited access to relevant database and journals.
- **Lack of time:** It can make it difficult for nurses to incorporate EBP into practice. Nurses often have limited time for professional development to review and apply research findings to their practice due to their workload.
- **Limited continuing education program:** Limited availability or access to continuing education programs



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can prevent nurses from keeping up with the latest research and evidence-based practices.

- **Lack of resources:** A lack of resources, including staffing, technology and funding can hinder the implementation of EBP.

- **Organizational barriers:** It refers to factors within the healthcare system that may hinder the implementation of EBP. It includes lack of support from management, conflicting priorities and resistance to change.

CONCEPTUAL EXERCISES

LONG ANSWER QUESTIONS

1. Elaborate steps of nursing research process in detail with examples. (MGR, KUHS)

Answer

Nursing Research Process

Research is a systematic process that involves a series of steps to collect and analyze data in order to answer research questions. It involves a series of sequential steps that a researcher follows to collect, analyze and interpret data.

The research process involves the following steps depending on the type of research approach.

- **Phase I: Conceptual phase:**
 - **Searching for a research topic:** The first step of conceptual phase involves finding an appropriate research topic which involves a strong conceptual thinking of the researcher. It includes thinking, theorizing and making decisions. **For example**, if a researcher is interested in studying the effects of evidence based nursing practice, researcher need to focus on that area and since it is a vast again need to trim down the area of the interest. So based upon the area of interest a broad area will be selected to conduct the research activity.
 - **Formulating the research problem statement:** It involves identification of a general area of interest to the researcher and narrowing down the topic to a specific problem to be studied. The problem statement should be able to identify the key variables which can be measured, describe the nature of the population of interest and guide the reader and researcher throughout the study. Evidence-based nursing practice is a broad area, so researchers will select a more specific topic or trim down the area of interest to something more focused, such as 'The effect of evidence-based practice (EBP) training on

the development of critical thinking skills in Nursing Students.

- **Formulating study objectives/research questions:** It refers to the specific steps taken to achieve the aims, illustrating how the research will accomplish its goals. The objective should be specific, measurable, achievable, realistic and time bound. A good research question must be clear which will be answered by the investigator. They are written in PICOT format, i.e., Population, Intervention, Comparison, Outcome, Time, effect size and study design.

For example, the objectives for the previous example include:

- ◆ To evaluate the effect of EBP training on nursing students' ability to critically analyze clinical scenarios.
- ◆ To identify which components of EBP training most effectively enhance critical thinking skills.
- ◆ Research questions
- ◆ How does EBP training influence nursing students' critical thinking skills when analyzing clinical scenarios?
- ◆ Which aspects of EBP training are most effective in improving critical thinking abilities?
- **Review of literature:** The review of literature is done before selecting a topic, at the time of writing discussion or throughout the study. It helps in avoiding duplication of the previous studies and identifying strategies regarding measuring instruments that have been found productive and nonproductive. Review existing studies on the effectiveness of EBP training in nursing education, the impact of critical thinking skills on clinical practice, and previous research on educational interventions aimed at improving critical thinking.
- **Develop conceptual framework:** It involves the development of a visual or written representation of a concept related to the research problem or question. It is a tool to organize and clarify the researcher's understanding of the research problem. **For example**,



develop a framework that illustrates the relationship between EBP training (independent variable) and critical thinking skills (dependent variable), including mediators such as instructional methods and student engagement.

- **Formulating hypothesis/assumptions:** A hypothesis is a statement that predicts the relationship between two or more variables that is testable through scientific research. The formulation of a hypothesis requires careful consideration of existing knowledge, observation and theories. Assumption in research refers to the underlying beliefs or viewpoints that the researcher holds about the research topic.

For example, Nursing students who receive EBP training will demonstrate a statistically significant improvement in their critical thinking skills compared to those who do not receive the training.

- **Phase II: Design and planning phase**

- **Select the research approach and design:** Selecting an appropriate research design or a blueprint to carry out the research is essential. It helps in determining the type of data to be collected and the methods to be used to analyze the data. The research design is the sub-component of a research approach, i.e., quantitative or qualitative. The research approach refers to the general perspective or strategy used to conduct a research study.

For example, for a study titled The impact of evidence-based practice (EBP) training on nursing students' critical thinking skills.

- ◆ **Research approach:** Quantitative
- ◆ **Research design:** Quasi-experimental design with a pretest and post-test control group.
- **Specify the population and sampling method:** This step involves identifying the population to be studied and selecting an appropriate sampling method. The population refers to the complete set of individuals that are of interest to the researcher. The sample is the subset of a population which is representative of it. Designing an appropriate sampling method helps in determining the representative of the sample and generalizability of the findings. For example, Population of interest is Nursing students and sampling method: Stratified random sampling to ensure representation across different levels of the nursing program.
- **Develop or select tools for data collection:** This step involves developing appropriate tools or selecting standardized tools to collect data. The existing tools can be used for collecting data or a new tool can be developed depending on the need of the research

study. **For example,** the data collection tools used for this quantitative study would be the use of a structured questionnaire.

- **Obtain ethical approval:** Ethical consideration involves a systematic inquiry into the principles of right or wrong conduct. An ethical permission should be taken from the concerned authorities or individuals before conducting a research study. Moreover, prior permission should be taken from the participants or subjects. If the study participants are minors so informed consent needs to be obtained from both participants and their parents.
- **Conduct a pilot study:** It is a small-scale version of the study, also known as trial run, which helps in minimizing the problems in final data collection and obtaining reliable results. **For example,** a small mini study can be conducted on less number of nursing students before conducting the original study. It will help in determining the accessibility of the participants and any other issues that may arise during the final study.

- **Phase III: Empirical phase:**

- **Select the sample:** Recruit a sample of nursing students from the identified population, ensuring to obtain consent and meet the study criteria.
- **Collect data:** It involves collecting pieces of information during the study. The steps involve contacting the subject, informing them about the study, obtaining signed consent, enrolling them in the study and collecting data. In the discussed previous example administer the tools developed (e.g., critical thinking assessment questionnaires and EBP training modules to the sample) collecting data before and after the training intervention.
- **Preparing data analysis:** This step involves analyzing the collected data by entering the values, coding and using an appropriate statistical package or application. **For example,** the researcher would plan the analysis of the collected data by coding it and segregating it.

- **Phase IV: Analytic phase:**

- **Analyze data using statistical methods:** It enables the researcher to draw conclusions from the collected data. It involves the use of descriptive and inferential statistics to summarize the data and test the hypothesis. **For example,** the researcher would use descriptive statistics and inferential statistics such as paired t-tests or ANCOVA to evaluate the change in critical thinking skills before and after the EBP training.
- **Interpreting the results and draw conclusions:** The data is interpreted and conclusions are drawn after



analyzing the data by using statistical methods. It involves analyzing data, identifying patterns and drawing conclusions based on the findings. **For example**, the researcher interpret the statistical findings to determine if there is a significant improvement in critical thinking skills due to EBP training. Discuss the implications for nursing education and practice.

• **Phase V: Dissemination phase:**

- **Disseminate the research findings:** It refers to the process of sharing the research findings with the broader scientific community. It involves publishing articles in journals, presenting papers and posters at conferences and participating in continuing education programs. **For example**, the researcher would present this study at a poster presentation event to communicate the research findings with the scientific community.

2. Define nursing research. Enumerate the need for nursing research and the characteristics of good research. (MGR, KUHS)

Answer

Nursing Research

Nursing research is a systematic and scientific process of investigating questions and issues related to nursing practice, healthcare and the promotion of health.

Need for Nursing Research

The purposes of nursing research include:

- **Gaining new knowledge:** It is acquired by an organized and logical process of inquiry during which data are methodically collected, analyzed and interpreted.
- **Improving patient outcomes:** Nursing research provides information about effective interventions and treatments that can improve patient outcomes.
- **Addressing healthcare challenges:** It helps to address complex and challenging healthcare issues, such as patient safety, quality of care and patient satisfaction.
- **Evidence-based practice:** It provides evidence-based information that can be used to inform and improve clinical practice.
- **Advancing the nursing profession:** It helps to advance the nursing profession by providing new knowledge and insight into the practice of nursing.

- **Promoting interdisciplinary collaboration:** It promotes interdisciplinary collaboration and helps to bridge the gap between different healthcare professions.
- **Enhance nursing education:** To improve teaching methods, curricula, and training programs by integrating research findings that address the needs of nursing students and professionals.
- **Influence health policy:** To inform and shape healthcare policies and regulations by providing evidence on the effectiveness of nursing interventions and the needs of patients.
- **Address healthcare challenges:** To investigate and address pressing issues in healthcare, such as chronic disease management, patient safety, and healthcare disparities.
- **Evaluate healthcare systems:** To assess the organization, delivery, and effectiveness of healthcare services and systems, leading to improvements in how care is provided.

Characteristics of Good Research

- **Empirical:** The research is a systematic and critical investigation of phenomenon of interest. It is based on measurements that can be accurately and precisely obtained. Quantitative research is based on numerical data and is easier to be scientifically proved. Qualitative research is based on people's opinions and experiences, making it more susceptible to bias.
- **Credible:** The credibility in research requires a believable and trustworthy source of information and the use of best practices.
- **Analytical:** The research is conducted to find out answers to the pertinent questions and to solve the problems.
- **Critical:** A critical approach in research means being able to evaluate information objectively, using logical and systematic reasoning to assess its validity, reliability and significance.
- **Methodical:** The research is conducted methodically without any bias using logical methods and procedures. It involves identification of a problem to be investigated, carefully designing the measurements and procedures, collection and logical analysis of the data and formulation of conclusions regarding the problem being investigated.
- **Generalizable:** Generalizability refers to the ability of the results from a research study to be applied to a larger group of population.
- **Reliable:** It refers to the consistency of results from a research study, instrument, tool or procedure.
- **Expertise:** The researcher must be adequately prepared and trained to undertake the activity of research.





SHORT NOTES

1. Write about the uses of research in nursing. (MGR, KUHS)

Answer

Uses of Research in Nursing

The research is used in nursing practice, education and administration. The scope of nursing research is extensive and encompasses various aspects of the nursing field. The use of nursing research in different areas of nursing is as follows:

- **Nursing practice:** The research is used in clinical nursing practice involving a wide range of topics and issues related to patient care and outcomes. The clinical nursing research explores the effectiveness of different nursing interventions and strategies for improving patient outcomes and impact of policies and procedures on patient care. Other goals of clinical nursing research involve enhancing the body of knowledge, and improving healthcare policies and practices.
- **Nursing education:** Nursing research in education aims to improve teaching and learning processes through evaluating the effectiveness of various teaching methods and technologies. The research helps in developing and implementing innovative models of nursing education. It ensures that the nursing profession continues to evolve and meet the changing demands of the society.
- **Nursing administration and management:** The areas of nursing research in nursing administration include:
 - **Quality improvement:** It focuses on improving the quality of care and patient care outcomes through the implementation of evidence-based practices, continuous quality improvement initiatives and data-driven decision-making.
 - **Staff management/workforce management:** It focuses on issues related to staffing, scheduling and productivity, including the recruitment and retention of nurses and other healthcare professionals.
 - **Financial management:** It focuses on financial management and cost containment, including issues related to budgeting, billing and reimbursement and the effective use of resources.
 - **Patient satisfaction:** It focuses on evaluating patient satisfaction with care and the healthcare experience.
 - **Health Information technology:** It focuses on the use of technology in nursing administration, including the implementation and use of electronic health records, telehealth and other digital health tools.
 - **Organizational culture:** It focuses on the culture of healthcare organizations, including issues related to leadership, teamwork and workplace culture.

- **Regulatory compliance:** It focuses on the compliance of healthcare organizations with regulatory requirements, including issues related to the privacy and confidentiality of the patients.

2. Discuss the importance of nursing research. (MGR, MPMSU)

Answer



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Importance of Nursing Research

The importance and significance of nursing research can be highlighted from the following facts:

- Knowledge acquisition is critical for the progress of any profession and nursing research is a reliable objective and systematic means of obtaining knowledge.
- It is an important constituent of the healthcare field which helps to recognize the recent advancements and trends in nursing practice.
- It gives credibility to the nursing profession by establishing a distinct body of knowledge.
- It aids in the implementation of new changes in patient care.
- It focuses on developing new interventions for the prevention and treatment of disease.
- It helps in developing standards and protocols, to provide quality care to the patients.
- It provides the best possible care based on the best available evidence.
- It can develop skills in advanced data analysis techniques in nursing research.
- It provides accountability to nursing practice.
- It enhances accountability in nursing practice as the public becomes more informed about their health interventions and has increased expectations of care from nurses.
- Effective nursing care based on research results can lead to shorter hospital stays, reducing healthcare costs.

3. What do you understand by evidence-based practice? (MGR)

Answer

Evidence-Based Practice

Evidence-based practice (EBP) is the conduct of healthcare according to the principle that all interventions should be based on the best currently available scientific evidence. It involves integrating clinical expertise, patient values and the best available research evidence to make decisions about



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patient care. It involves identifying solid research findings and implementing them in nursing practices. Evidence-based nursing is an integration of the best evidence available, nursing expertise and the values and preferences of the individuals, families and communities that are served.

Need and Purpose of Evidence-Based Practice in Nursing

EBP in nursing is aimed at improving patient outcomes, enhancing the quality of care, increasing patient satisfaction, reducing healthcare costs and advancing the nursing profession.

- **Improving patient outcomes:** EBP is designed to help nurses provide the most effective and appropriate care to their patients, based on the best available evidence.
- **Enhance quality of care:** EBP helps to ensure that nurses are providing the highest quality care possible by using the most up-to-date and accurate evidence to inform their clinical decisions.
- **Increase patient satisfaction:** EBP emphasizes on the importance of patient-centered care, taking into account patient preferences, values and beliefs.
- **Reduce healthcare costs:** By using evidence-based interventions, nurses can optimize healthcare resources, reduce waste and minimize unnecessary treatments and procedures.
- **Advance the nursing profession:** EBP promotes the use of scientific evidence to guide nursing practice, which can enhance the credibility and legitimacy of the nursing profession.

5. Write a note on barriers of evidence-based practice. (MGR)

Answer

Barriers of Evidence-Based Practice

There are several barriers that hinder the implementation of EBP in nursing and other healthcare disciplines. These barriers include:

- **Lack of knowledge:** Lack of knowledge or understanding about the research methodologies, benefits of EBP, finding and evaluating evidence and applying evidence to practice can be a significant barrier for nurses.
- **Resistance to change:** It is a common barrier in healthcare settings and can prevent nurses from adopting new practices or approaches, even when evidence supports their effectiveness.
- **Limited access to research:** It can make it difficult for nurses to find and evaluate the latest evidence-based practices. It is

due to the lack of resources, including time and funding or limited access to relevant database and journals.

- **Lack of time:** It can make it difficult for nurses to incorporate EBP into practice. Nurses often have limited time for professional development to review and apply research findings to their practice due to their workload.
- **Limited continuing education program:** Limited availability or access to continuing education programs can prevent nurses from keeping up with the latest research and evidence-based practices.
- **Lack of resources:** A lack of resources, including staff, technology and funding can hinder the implementation of EBP.
- **Organizational barriers:** It refers to the factors within the healthcare system that may hinder the implementation of EBP. It includes lack of support from management, conflicting priorities and resistance to change.

SHORT ANSWER QUESTIONS



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1. Define research.

Answer

- The term research is derived from the middle French “recherche”, which means to investigate thoroughly. Research is a systematic inquiry and examination of materials and sources, conducted with the aim of confirming established facts and deriving fresh insights or conclusions.
- Research is an orderly and systematic investigation into a subject to discover or revise facts, solve new or existing problems, or establish principles.

—Campbell and Creswell

2. Define nursing research. (MGR)

Answer

Nursing Research

- Nursing research is a systematic and scientific process of investigating questions and issues related to nursing practice, healthcare and the promotion of health. The goal of nursing research is to generate new knowledge, validate existing knowledge and provide evidence-based solutions to nursing problems that can improve the quality of patient care.



- Nursing research is a systematic inquiry designed to develop knowledge about issues of concern to nurses and the nursing profession.
—(Polit and Hungler)

3. What is a variable? (MGR)

Answer

Variable

- Variables are the basic units of the information studied and interpreted in research studies. Variables are operationally defined during the planning stage of a quantitative research study whereas in qualitative research, the researchers investigate, explore, describe and categorize the variables.
- Factors or characteristics that can vary and are measured, observed, or manipulated in research or experiments to study their impact on outcomes or phenomena.
- There are four types of variables that are enlisted below:
 - Research variables.
 - Extraneous and confounding variables.
 - Independent and dependent variables.
 - Demographic variables.

4. Enlist any five characteristics of good research. (MGR)

Answer

Certain characteristics have been attributed to nursing research. They are given below:

- Empirical:** It is based on measurements that can be accurately and precisely obtained.
- Credible:** Credibility in research requires a believable and trustworthy source of information, and the use of best practices.
- Analytical:** Research is conducted to find out answers to the pertinent questions and to solve the problems.
- Critical:** It means being able to evaluate information objectively, using logical and systematic reasoning to assess its validity, reliability, and significance.
- Methodical:** Research is conducted methodically without any bias using logical method and procedures.

5. Mention the purposes of EBP.

Answer

Evidence-Based Practice

Evidence-based practice is the “conscientious, explicit 7 judicious use of theory-derived, research-based information in making decisions about care delivery to individuals or groups of patients and in consideration of individual needs and preferences.”

—Ingersoll G, 2000

Purposes of EBP are:

- Improve patient outcomes
- Enhance quality of care
- Increase patient satisfaction
- Reduce healthcare costs
- Advance the nursing profession

CONCEPTUAL REVISION

Golden Points

- Nursing research has to be SMART—specific, measurable, attainable, realistic and time-bound.
- The process of sharing the research findings with the broader scientific community is known as dissemination.
- Quantitative research is based on numerical data and is easier to scientifically prove.
- Qualitative research is based on people’s opinions and experiences.
- The ability of the results from a research study to be applied to a larger group of population is called generalizability.
- Reliability is the consistency of results from a research study, instrument, tool or procedure.
- Organizational barrier hinders the implementation of evidence-based practice (EBP) such as lack of support from management, conflicting priorities, and resistance to change.



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MULTIPLE CHOICE QUESTIONS

1. Which of the following is an example of a primary source in a research study?

- A published commentary on the findings of another study.
- A doctoral dissertation that critiques all research in the area of attention deficit disorder.
- A textbook of medical-surgical nursing.
- Study reporting new findings from experiments or surveys

Ans. d. Study reporting new findings from experiments or surveys

2. How is evidence-based practice (EBP) defined?

- Practice based on patient preference
- Practice based on the best available research evidence
- Practice based on clinical expertise
- A process of clinical decision-making based on the best available literature, clinical expertise and patient preference

Ans. d. A process of clinical decision-making based on the best available literature, clinical expertise, and patient preference

3. The model of EBP collaboration has _____ levels.

- Four
- Five
- Three
- Seven

Ans. b. Five

4. The process of EBP does not include which of the following?

- Literature review
- Formulation of clear question
- Formulation of hypothesis
- Analyzing strengths and weaknesses of evidence

Ans. c. Formulation of hypothesis

5. Which of the following is not a purpose of EBP?

- To improve patient outcomes
- To obtain more research funds
- To eliminate unsound practices
- To provide high-quality care

Ans. b. To obtain more research funds



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6. What is the first step in the qualitative research process?

- Data analysis
- Sample
- Review of literature
- Study design

Ans. c. Review of literature

7. Which of the following is not a step of the quantitative research process?

- Formulation of a research problem
- Review of literature
- Formulation of hypothesis
- Meta-analysis of research study

Ans. d. Meta-analysis of research study

8. Florence Nightingale is most noted for which of the following contributions to nursing research?

- Case study approach to research
- Data collection and analysis
- Framework and model development
- Quasi-experimental study design

Ans. b. Data collection and analysis

9. Ultimate goal of EBP in nursing is to:

- Improve communication skills
- Provide better treatment
- Increase competence
- Provide the highest quality nursing care

Ans. d. Provide the highest quality nursing care

10. PICO model stands for:

- P: Predict, I: Intervention, C: Comparison, O: Observation
- P: Population, I: Intervention, C: Control, O: Outcome
- P: Population, I: Identification, C: Clinical question, O: Outcome
- P: Patient, I: Intervention, C: Control, O: Observation

Ans. b. P: Population, I: Intervention, C: Control, O: Outcome



Midwifery/Obstetrics and Gynecology Nursing-I

SECTION OUTLINE

- | | | | |
|------------------|---|------------------|--|
| CHAPTER 1 | Introduction to Midwifery | CHAPTER 4 | Physiology, Management and Care during Labor |
| CHAPTER 2 | Anatomy and Physiology of Human Reproductive System and Conception (Maternal, Fetal and Newborn Physiology) | CHAPTER 5 | Postpartum Care/Ongoing Care of Women |
| CHAPTER 3 | Assessment and Management of Normal Pregnancy (Antenatal) | CHAPTER 6 | Assessment and Ongoing Care of Normal Neonates |
| | | CHAPTER 7 | Family Welfare Services |

Introduction to Midwifery

CONCEPTUAL THEORY

Terminology



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Code of ethics: It is a set of principles or guidelines that govern the conduct and behavior of individuals or members of a particular profession.

Fertility rate: It refers to the average number of children born to women of childbearing age (usually defined as women aged 15–49) within a particular population during a specified period of time, typically expressed as births per 1,000 women.

Lotus birth: It is a practice in which the umbilical cord is not immediately cut after childbirth, allowing the placenta to remain attached to the newborn until it naturally separates, typically within a few days.

Maternal death audit: It is a process of systematically reviewing and analyzing the circumstances surrounding the death of a woman during pregnancy, child-birth, or within a defined period after delivery (usually up to 42 days postpartum).

Midwifery: It is a profession involving the care of women during pregnancy, childbirth, and the postpartum period.

Water birth: It is a method of childbirth in which water is used for labor and childbirth. The mother delivers her baby in a tub or pool of warm water.

HISTORY OF MIDWIFERY IN INDIA

- Traditionally, women were respected for their expertise in assisting with childbirth and providing maternal care.
- In ancient India, midwifery was often intertwined with Ayurveda, the traditional system of medicine. Ayurvedic texts dating back thousands of years contain detailed descriptions of childbirth practices and the role of midwives in ensuring safe deliveries.
- During the colonial period, western medical practices began to influence childbirth care in India. Formal training programs for midwives were introduced, and western medical techniques became more prevalent.
- In the post-independence era, government initiatives aimed to improve access to skilled birth attendants, including midwives, especially in rural areas where maternal and infant mortality rates were higher.
- In the modern era, midwifery in India continues to evolve. There's a growing recognition of the importance of midwifery care in promoting maternal and newborn health both in hospital and community settings.

CURRENT SCENARIO: TRENDS OF MATERNITY CARE IN INDIA

- Increased institutional deliveries are facilitated by government schemes like Janani Suraksha Yojana (JSY) and Dr Muthulakshmi Reddy Maternity Benefit Scheme (MRMBS) aiming to reduce maternal and neonatal mortality by encouraging women to deliver in hospitals or healthcare facilities rather than at home.
- Antenatal care and neonatal care.
- Expansion of skilled birth attendants ensuring safer deliveries and timely interventions in case of emergencies.
- Telemedicine and mobile health (mHealth) applications implementation.
- Community health workers play a crucial role in promoting maternal health through education, awareness campaigns, and providing basic healthcare services at the grassroots level.
- Promotion of exclusive breastfeeding for the first six months of infancy.



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- Continuous quality improvement efforts are being made in healthcare facilities to enhance the quality of maternity care services, including infection control, adherence to clinical protocols, and patient-centered care.
- Policies and programs are being developed to improve the affordability and accessibility of maternal healthcare services, including financial assistance schemes for pregnant women and their families.

MIDWIFERY IN INDIA: TRANSFORMATIVE EDUCATION FOR RELATIONSHIP-BASED AND TRANSFORMATIVE MIDWIFERY PRACTICE IN INDIA



- Efforts are being made to enhance midwifery education and training programs in India like developing curricula.
- Training programs are designed to equip midwives with the necessary knowledge and skills to provide holistic care to women throughout the childbirth continuum.
- Empowerment of midwives.
- Relationship-based care prioritizes communication, empathy, and shared decision-making with the women.
- Promotion of evidence-based practice to provide high-quality, safe, and effective care to women and newborns.
- Community engagement and advocacy by midwives' involvement in community outreach programs, health education initiatives, and advocacy campaigns to address barriers to maternal health.
- Integration of maternal and child health services in general health services.
- Continuous professional development of the midwives by attending workshops, conferences, and online courses, as well as participating in peer learning and mentorship programs.

VITAL HEALTH INDICATORS

Maternal Mortality Ratio

Maternal mortality ratio refers to the number of maternal deaths per 100,000 live births that occur due to complications during pregnancy, childbirth, or within 42 days after termination of pregnancy, irrespective of the duration and site of the pregnancy.

Infant Mortality Rate

Infant mortality rate (IMR) is the number of deaths of infants under one year of age per 1,000 live births in a given population and time period.

Neonatal Mortality Rate

Neonatal mortality rate (NMR) refers to the number of deaths of infants within the first 28 days of life per 1,000 live births.

Perinatal Mortality Rate

Perinatal mortality rate (PMR) is the number of stillbirths and deaths of infants within the first week of life (usually up to 7 days after birth) per 1,000 total births (stillbirths plus live births).

Fertility Rates

General Fertility Rate

General fertility rate (GFR) is used to express the number of live births per 1,000 women of childbearing age (usually ages 15–49) in a given population during a specified time period.

Age-Specific Fertility Rate

Age-specific fertility rate is a measure to express the number of live births occurring to women in specific age groups within a population during a given time period. The ASFR is calculated for each age group separately.

Age-Specific Marital Fertility Rate

Age-specific marital fertility rate refers to the number of live births per 1,000 married women within a specific age group (usually in five-year intervals), typically expressed as a rate per 1,000 women of reproductive age within that marital status and age category.

Total Fertility Rate

Total fertility rate is the average number of children that would be born to a woman over her lifetime if she were to experience the exact current age-specific fertility rates throughout her reproductive lifespan.

Net Reproductive Rate

Net reproductive rate represents the average number of daughters that would be born to a woman over her lifetime if she passed through her childbearing years conforming to the age-specific fertility and mortality rates observed in a given year.

Pregnancy Rate

Pregnancy rate refers to the number of pregnancies (including live births, stillbirths, and abortions) occurring within a specific population during a given period, usually expressed per 1,000 women of reproductive age.



Abortion Ratio

Abortion rate represents the number of abortions per 1,000 live births within a specified population and time frame.

MATERNAL DEATH AUDIT

A maternal death audit is a systematic review process conducted by healthcare professionals to analyze the circumstances, causes, and contributing factors surrounding maternal deaths.

Objectives

To identify gaps in healthcare delivery, quality of care, and health system functioning to prevent future maternal death.

The following are reviewed during the maternal death audit:

- Review of cases of maternal deaths, including medical records, clinical notes, and any available information related to the pregnancy, childbirth, and postpartum period.
- Healthcare teams analyze various factors contributing to maternal deaths, including delays in seeking care, delays in reaching healthcare facilities, delays in receiving adequate care, and quality of care provided.
- The audit process highlights deficiencies in the healthcare system, such as inadequate access to prenatal care, shortages of skilled healthcare providers, insufficient medical supplies or equipment, and gaps in emergency obstetric care services.
- Recommendations for improvement include changes in clinical protocols, training of healthcare staff, strengthening of health infrastructure, and improving access to essential maternal healthcare services.

NATIONAL HEALTH PROGRAMS RELATED TO RMNCH+A (REPRODUCTIVE MATERNAL NEWBORN AND CHILD HEALTH+ ADOLESCENT HEALTH)

Reproductive and Child Health Approach

According to government of India people have ability to reproduce and regulate their fertility, women are able to go through pregnancy and childbirth safely, the outcome of pregnancy is successful in terms of maternal and infant survival and well-being, and couples are able to have sexual relations free of fear of pregnancy and of contracting disease.

Historical Development

- 1992: Child survival and safe motherhood program
- 1997: Reproductive and child health phase I

- 2005: Reproductive and child health phase II
- 2005: National rural health mission (NRHM)
- 2013: RMNCH+A strategy
- 2014: India newborn action plan (INAP)

Reproductive and Child Health (RCH) phase I

This program was launched in October 15, 1997, and incorporated family planning, CSSM, prevention and management of reproductive tract infections, sexually transmitted infections and acquired immunodeficiency syndrome (AIDS).

Components of RCH-I

- CSSM
- Family planning
- Prevention and management of RTIs/STDs/AIDS
- Client-oriented approach to healthcare

Objectives

- Improve maternal health, including reducing maternal mortality.
- Enhance child health, including reducing child mortality and improving immunization coverage.
- Increase access to family planning services and promote reproductive health and strengthen healthcare infrastructure.

Major Initiatives

- Essential obstetric care: Early registration of pregnant mothers, minimum of three antenatal checkups, provision of safe home delivery or institutional delivery and provision of three postnatal checkups.
- Emergency obstetric care
- 24-hour delivery services at PHCs/CHCs
- Medical termination of pregnancy (MTP)
- Control of reproductive tract infections and sexually transmitted infections
- Immunization
- Essential newborn care
- Diarrheal disease control (oral rehydration therapy, addition of zinc and deworming)
- Prevention and control of vitamin A deficiency in children (I dose- 100000 IU for 9 months, II dose- 200000 IU after 9 months and after that every 6 months till 5 years)
- Prevention and control of Anemia in children (from 6 months to 5 years- Liquid formulation of 20 mg of elemental iron and 100 mcg of folic acid per day per 100 days in a year; from 6 years to 10 years- Liquid formulation of 30 mg of



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elemental iron and 250 mcg of folic acid per day per 100 days in a year; children above 10 years as adult dose)

- Training of dais and introduction of Hepatitis B vaccine

Reproductive and Child Health (RCH) phase II

This phase was launched in April 2005

Objectives

- Consolidate and expand the achievements of RCH Phase I.
- Address emerging challenges and priorities in reproductive and child health.
- Focus on reaching underserved and vulnerable populations, including rural and remote areas, marginalized communities, and adolescent girls.
- Strengthen health systems and improve the quality of care for maternal and child health services.

Major Initiatives

- Essential obstetric care (Institutional delivery and skilled attendance at delivery)
- Emergency obstetric care (Operationalizing first referral units and community health centers to provide round the clock delivery services)
- 24 hours' delivery services including normal and assisted deliveries
- Surgical caesarean section
- Emergency care of sick children
- Family planning services
- Safe abortion services
- Treatment of STI/RTI
- Blood storage facility
- Essential laboratory services
- Referral services
- 24-hour electricity and water supply
- Waste disposal facilities
- Ambulance facility

Recent Initiatives

- Janani Suraksha Yojana
- Rashtriya Bal Swasthya Karyakram
- Rashtriya Kishore Swasthya Karyakram
- Weekly Iron Folic Acid Supplementation (WIFS) program
- RMNCH+A program

RMNCH+A Approach

RMNCH+A was launched in 2013 to address the major causes of mortality among women and children as well as the delay in accessing and utilizing healthcare and services.

Objectives

- Reduction of infant mortality rate to 25 per 1000 live births by 2017
- Reduction in maternal mortality ratio to 100 per 100,000 live births by 2017
- Reduction in total fertility rate to 2.1 by 2017

Concepts

The RMNCH+A strategy is built upon the continuum of care concept and is holistic in design, encompassing all interventions aimed at reproductive, maternal, newborn, child, and adolescent health under a broad umbrella, and focusing on the strategic lifecycle approach.

The RMNCH+A strategy promotes links between various interventions across thematic areas to enhance coverage throughout the lifecycle to improve child survival in India. The "plus" within the strategy focuses on:

- Inclusion of adolescence as a distinct life stage within the overall strategy.
- Linking maternal and child health to reproductive health and other components like family planning, adolescent health, HIV, gender, and preconception and prenatal diagnostic techniques.
- Linking home and community-based services to facility-based services.
- Ensuring linkages, referrals, and counter-referrals between and among various levels of healthcare system to create a continuous care pathway, and to bring an additive/synergistic effect in terms of overall outcomes and impact.

CURRENT TRENDS IN MIDWIFERY AND OBG NURSING

Respectful Maternity and Newborn Care (RMNC) refers to the provision of healthcare services for pregnant women, mothers, and newborns in a manner that upholds their dignity, autonomy, and rights. It emphasizes treating individuals with respect, kindness, and sensitivity throughout the pregnancy, childbirth, and postnatal periods.

Key Principles

- **Dignity and respect:** Ensuring that women and newborns are treated with dignity, respect, and compassion by healthcare providers at all times.
- **Autonomy:** Respecting the autonomy of pregnant women and new mothers by involving them in decision-making regarding their care, and ensuring their choices are honored.



5. Write about the aims of preconception care and enlist the elements of pre conception care.

Answer

Preconception

Preconception care refers to a series of measures designed to recognize and alter potential biomedical, behavioral, and social hazards to a woman's health or the outcome of her pregnancy by means of preventive and therapeutic actions.

Aim of Preconception

- Health education and promotion
- Risk assessment
- Intervention before pregnancy
- To reduce the chances of poor perinatal outcomes.

Elements of Preconception Care Package

- Optimizing health behaviors
- Addressing preexisting health conditions
- Achieving a healthy weight
- Optimizing reproductive health
- Optimizing mental health.

6. Define maternal mortality rate. (MGR)

Answer

Maternal Mortality Rate

- Maternal Mortality Rate (MMR) is a critical indicator in the field of Obstetrics and Gynecology, reflecting the number of maternal deaths per 100,000 live births during a specific time period.
- The maternal mortality ratio (MMR) is defined as the number of maternal deaths during a given time period per population of women who are of reproductive age group.
- MMR is calculated by dividing the number of maternal deaths by the number of live births, and then multiplying

the result by 100,000. This rate provides insights into the risk of maternal death associated with childbirth and pregnancy-related complications, i.e.,

$$\text{MMR} = \frac{\text{No. of Maternal deaths}}{\text{No. of live births}} \times 100000 \text{ (live births per year)}$$

7. Write four direct causes of maternal mortality in India. (MGR)

Answer

Four Direct Causes Contributing to Maternal Mortality

1. **Hemorrhage:** Excessive bleeding during childbirth, known as postpartum hemorrhage, is a leading cause of maternal mortality in India. Factors such as delayed access to healthcare, lack of skilled birth attendants, and inadequate facilities for emergency obstetric care contribute to this high-risk scenario.
2. **Hypertensive disorders:** Conditions like preeclampsia and eclampsia, characterized by high blood pressure during pregnancy, can lead to maternal mortality. Poor antenatal care, delayed detection, and limited access to healthcare services exacerbate the impact of hypertensive disorders on maternal health.
3. **Infection:** Infections, especially during childbirth or postpartum, contribute significantly to maternal mortality. Inadequate sanitation, unhygienic birthing practices, and limited availability of clean and safe healthcare facilities contribute to the risk of maternal infections.
4. **Obstructed labor:** Prolonged or obstructed labor without timely medical intervention can result in maternal mortality. Factors such as limited access to skilled birth attendants, delayed transportation to healthcare facilities, and cultural practices hinder seeking medical assistance during childbirth.

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- Increased institutional deliveries are facilitated by government schemes like Janani Suraksha Yojana (JSY) and Muthulakshmi Reddy Scheme aiming to reduce maternal and neonatal mortality.
- Vital health records related to midwifery are maternal mortality rate, infant mortality rate, neonatal mortality rate and perinatal mortality rate.
- Fertility rates related to midwifery are general fertility rate, age-specific fertility rate, age-specific marital fertility rate, total fertility rate, net reproductive rate, pregnancy rate and abortion ratio.
- Reproductive and Child Health Program I was launched in 1997 and II was launched in 2005.
- RMNCH+A was launched in 2013 to address the major causes of mortality among women and children as well as the delay in accessing and utilizing healthcare and services.
- Respectful Maternity and Newborn Care (RMNC) refers to the provision of healthcare services for pregnant women, mothers, and newborns in a manner that upholds their dignity, autonomy, and rights.
- Midwifery-Led Care Units (MLCU) are healthcare facilities where midwives primarily oversee the care of pregnant women, birthing mothers, and newborns.
- Physiologic birthing is an approach to childbirth that prioritizes the natural physiological processes of labor and delivery, emphasizing minimal medical intervention unless necessary.
- The demedicalization of birth refers to a movement that advocates for reducing the medicalization and intervention in the childbirth process, allowing it to be more natural and woman-centered.
- In India, the regulations governing midwifery practice primarily fall under the purview of the Ministry of Health and Family Welfare (MOHFW). These regulations aim to ensure safe and competent care for pregnant women, mothers, and newborn.
- The International Confederation of Midwives (ICM) outlines a code of ethics to guide the professional conduct of midwives worldwide.
- Adoption laws in India are governed primarily by the Hindu Adoption and Maintenance Act of 1956, the Juvenile Justice (Care and Protection of Children) Act of 2015, and the Guidelines Governing the Adoption of Children of 2015 issued by the Central Adoption Resource Authority (CARA), which is the apex body responsible for regulating adoption in India.
- Medical Termination of Pregnancy (MTP) is an act to provide for the termination of certain pregnancies by registered medical practitioners (1971).
- Pre-Conception and Pre-Natal Diagnostic Techniques (Regulation and Prevention of Misuse) (PCPNDT) Act was enacted in 2004 for the prevention and punishment of prenatal sex screening and female feticide.
- Surrogate mothers are women who carry a pregnancy for another person or couple who cannot conceive or carry a pregnancy themselves.

MULTIPLE CHOICE QUESTIONS



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1. Which of the following is in the scope of midwifery?

- Nurse researcher
- Nurse advocate
- Nurse educator
- All of these

Ans. d. All of these

2. The mortality of infants occurring during the period between 28 weeks of pregnancy and 7 days after birth per 1,000 total births is called:

- Maternal mortality rate
- Birth rate
- Perinatal mortality rate
- Case fatality rate

Ans. c. Perinatal mortality rate

3. A 5x5 matrix is:

- RCH II
- RMNCH+A
- National immunization schedule
- JSSK

Ans. b. RMNCH+A

4. Under the RMNCH+A strategy, which of the following does not apply to adolescent?

- Iron supplementation
- Pneumonia management
- School health examination
- Nutritional education

Ans. b. Pneumonia management

5. “Plus” in RMNCH+A strategy stands for:

- Reproductive health
- Adolescent health
- Vaccination
- Maternal health

Ans. b. Adolescent health

6. Current trends in midwifery care include which of the following?

- Family-centered care
- Epidural analgesia in labor
- Team midwifery practice
- All of the above

Ans. d. All of the above

7. For medical termination of pregnancy (MTP), consent should be obtained from?

- a. The male partner
- b. The male as well as the female partner
- c. The female partner
- d. Consent is not required

Ans. c. The female partner

8. The most suitable method for MTP in 3rd month of pregnancy is:

- Extra-amniotic ethacridine
- Hysterectomy
- Suction and evacuation
- None the above

Ans. c. Suction and evacuation

9. Legislation related to maternal health and welfare is:

- PNDT Act
- MTP Act
- National population policy
- All of the above

Ans. d. All of the above

10. Basic beliefs about values of right and wrong that provide a framework for decisions and actions are called:

- Ethics
- Norms
- Laws
- None of the above

Ans. a. Ethics

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Midwifery/Obstetrics and Gynecology Nursing-II

SECTION OUTLINE

- | | | | |
|------------------|---|------------------|---|
| CHAPTER 1 | Recognition and Management of Problems during Pregnancy | CHAPTER 4 | Assessment and Management of High-Risk Newborn (Review) |
| CHAPTER 2 | Recognition and Management of Abnormal Labor | CHAPTER 5 | Assessment and Management of Women with Gynecological Disorders |
| CHAPTER 3 | Recognition and Management of Postnatal Problems | | |

Recognition and Management of Problems during Pregnancy

CHAPTER

1

CONCEPTUAL THEORY

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Abortion: The termination of a pregnancy before the fetus is capable of surviving outside the womb.

Ectopic pregnancy: A pregnancy that occurs outside of the uterus, most commonly in the fallopian tube.

Elderly primi: Refers to a woman who is giving birth for the first time at an advanced maternal age, typically defined as 35 years or older.

Grand multipara: Women with a history of multiple pregnancies and deliveries.

High-risk pregnancy: A pregnancy that presents a higher than usual risk of complications to the health of the mother, fetus, or both.

Hydramnios: A condition characterized by an excessive accumulation of amniotic fluid in the amniotic sac surrounding the fetus during pregnancy.

Hyperemesis gravidarum: A severe form of nausea and vomiting during pregnancy that can lead to dehydration, weight loss and electrolyte imbalances.

Multiple pregnancy: A pregnancy in which there are two or more fetus developing simultaneously in the womb, such as twins, triplets, or higher-order multiples.

Preeclampsia: A pregnancy complication characterized by high blood pressure and signs of damage to other organ systems, typically occurring after 20 weeks of gestation.

Thyrotoxicosis: A condition characterized by excess thyroid hormone in the bloodstream, often resulting from an overactive thyroid gland (hyperthyroidism).

HIGH-RISK PREGNANCY



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High-risk pregnancy (HRP) refers to a pregnancy in which some factors increase the risk of complications for the mother, the fetus, or both. These risks can be categorized based on factors present before pregnancy (pre-existing conditions), those that arise during pregnancy, physical risk factors and medical conditions that may lead to HRP. Here's a breakdown:

- **Before pregnancy HRP (Pre-existing conditions):**

- **Maternal age:** Women under 17 or over 35 years old.
- **Chronic medical conditions:** Pre-existing conditions such as hypertension, diabetes, kidney disease, or heart disease.
- **Previous pregnancy complications:** History of preterm birth, miscarriage, stillbirth, or cesarean delivery.

- **Reproductive history:** Multiple pregnancies (twins, triplets), history of infertility, or recurrent miscarriages.
- **Genetic conditions:** Pre-existing genetic disorders like sickle cell anemia or cystic fibrosis.
- **Lifestyle factors:** Smoking, alcohol use, drug abuse, or obesity.
- **Present HRP (Conditions arising during pregnancy):**
 - **Gestational hypertension:** High blood pressure that develops during pregnancy.
 - **Gestational diabetes:** Development of diabetes during pregnancy.
 - **Pre-eclampsia:** A serious condition characterized by high blood pressure and signs of damage to another organ system, often the kidneys.



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- **Infections:** Infections like urinary tract infections, HIV, or STDs can complicate pregnancy.
- **Placental issues:** Placenta previa (placenta covers the cervix), placental abruption (placenta detaches from the uterus).
- **Fetal growth restriction:** The baby is not growing at the expected rate during pregnancy.
- **Preterm labor:** Labor that begins before 37 weeks of pregnancy.
- **Physical risk factors:**
 - **Under age:** Age <15 years and >35 year
 - **Obesity:** Increases the risk of gestational diabetes, hypertension and complications during delivery.
 - **Underweight:** Increases the risk of preterm birth and low birth weight.
 - **Short interval between pregnancies:** <18 months between pregnancies can increase risks.
 - **Height:** Extremely short stature can be a risk factor for complications during delivery.
- **Physical Trauma:** Injury or accidents during pregnancy.
- **Medical HRP (Conditions during pregnancy):**
 - Severe Anemia
 - PIH
 - Epilepsy
 - HIV/HbsAg+ve
 - TORCH +VE
 - Thyroid disorders
 - Cardiac issues
 - Renal disease
 - Assessment and management

PROBLEMS DURING PREGNANCY

Hyperemesis Gravidarum

Hyperemesis gravidarum refers to intractable vomiting during pregnancy, leading to weight loss and volume depletion, resulting in ketonuria and/or ketonemia (Table. 1.1).

Management of hyperemesis gravidarum is depicted in Figure 1.1.



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Table 1.1: Hyperemesis gravidarum

Causes	<ul style="list-style-type: none"> • Young Age • First Pregnancy • Low body mass index (<18.5) • High level of hCG (Twin pregnancy and hydatidiform mole) • Past history of hyperemesis • Family history of hyperemesis gravidarum
Clinical manifestations	<ul style="list-style-type: none"> • Pernicious vomiting • Poor appetite and poor nutritional intake • Loss of >25% of body weight • Dehydration and electrolyte imbalance • Acidosis due to starvation • Jaundice develops in severe cases • Rapid pulse and low blood pressure • Hemoconcentration with rising blood urea nitrogen and falling serum levels of sodium, potassium and chloride.
Investigation	<ul style="list-style-type: none"> • Urinalysis: Reduced output, dark color, high specific gravity with the presence of acetone, protein, or bile pigments. • Biochemical/Circulatory changes: Changes in the levels of serum electrolyte • Ophthalmoscopic examination • ECG: Abnormal serum potassium level
Complications	<ul style="list-style-type: none"> • Circulatory changes • Jaundice due to liver involvement • Retinal hemorrhage • Wernicke's encephalopathy • Korsakoff's syndrome • Renal insufficiency and renal failure • Polyneuritis • Delirium, coma, death
Nursing interventions	<ul style="list-style-type: none"> • Administer parenteral IV fluids, vitamins and sedatives • Monitor intake, output and daily weight • Assess the state of hydration • Begin oral feeding slowly with fluids, progress to six small feedings a day • Encourage small, frequent meals/snacks to prevent an empty stomach. • Provide oral rehydration solutions or IV fluids if necessary to maintain hydration. • Obtain psychiatric consultation, if needed.

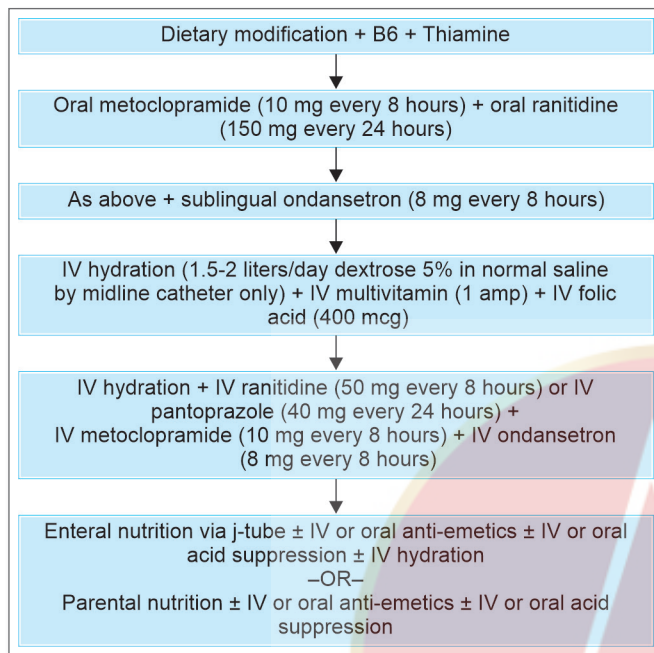


Figure 1.1: Management of hyperemesis gravidarum

ABORTION

Abortion: Termination of pregnancy before the fetus reaches the point of viability (usually considered around 20 weeks of gestation or when the fetal weight is less than 500 grams) (Fig. 1.2).

Classification

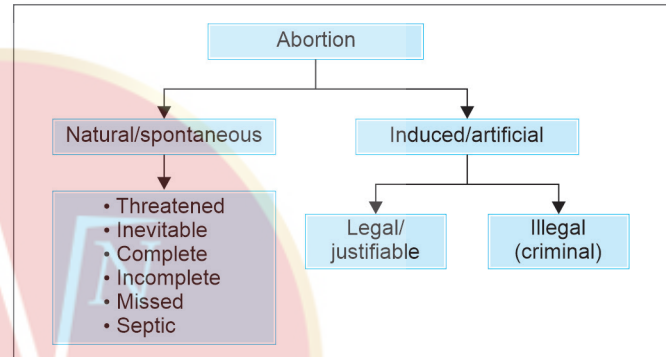


Figure 1.2: Abortion

Types (Table 1.2)

Table 1.2: Types of spontaneous abortion

Abortion classification	Characteristics	Cervical Os	Passage of fetal tissue
Threatened	Abdominal pain or bleeding in the first 20 weeks of gestation (reversible)	Closed	None
Inevitable	Abdominal pain or bleeding in the first 20 weeks of gestation (Irreversible)	Open	None
Incomplete	Abdominal pain or bleeding in the first 20 weeks of gestation	Open	Yes (some products of conception still remain in uterus)
Complete	Abdominal pain or bleeding in the first 20 weeks of gestation	Closed	<ul style="list-style-type: none"> Complete passage of fetal parts and placenta Uterus contracted
Septic	Infection of uterus during miscarriage, fever and chills. Usually due to <i>Staph. aureus</i>	<ul style="list-style-type: none"> Open with purulent cervical discharge Uterine tenderness 	None or may be incomplete

Threatened Abortion

Definition	Abortion process started but potentially reversible. May present with spotting per vagina (PV) and mild abdominal pain
Signs and symptoms	<ul style="list-style-type: none"> Bleeding per vagina Painless
Investigations	<ul style="list-style-type: none"> Blood test Urine test TVS Serum Progesterone, serum hCG values are helpful to assess fetal well-being.
Management	<p>Conservative management:</p> <ul style="list-style-type: none"> Rest: The patient should rest until bleeding stops. Advice patient to avoid heavy workload <p>Medical management:</p> <ul style="list-style-type: none"> Diazepam 5 mg tablet twice daily for relief of pain

**Inevitable Abortion**

Definition	The state of abortion from where continuation of pregnancy is impossible.
Signs and symptoms	<ul style="list-style-type: none"> Increased vaginal bleeding Lower abdominal pain: colicky in nature Dilated internal os
Management	<ul style="list-style-type: none"> Administration of methergine 0.2 mg is given to control bleeding. Start IV fluid therapy In severe cases blood transfusion is required. If gestation is <12 weeks, dilation and evacuation followed by curettage of the uterine cavity under general anesthesia. If gestation is after >12 weeks: <ul style="list-style-type: none"> Uterine contractions are accelerated by oxytocin drip (10 units in 500 mL of normal saline at 40-60 drops per minute.) If a fetus is expelled but the placenta is retained, then it is removed by ovum forceps. If not separated, then digital separation followed by its evacuation is done under general anesthesia.

Complete Miscarriage

Definition	When the products of conception are expelled, it is called complete abortion.
Clinical manifestations	<ul style="list-style-type: none"> History of expulsion of product of conception/fleshy mass per vagina. Uterus is smaller than a period of amenorrhea/gestation. On vaginal examination, cervical os is found to be closed. On examination fleshy mass is found intact.
Management	<ul style="list-style-type: none"> If there is doubt, complete expulsion of the products, transvaginal sonography, is helpful or uterine curettage should be done. The Rh –ve woman with gestation of >12 weeks, anti-D gamma globulin 50 mg or 100 mg IM with 72 hours of abortion.

Incomplete Abortion

Definition	When the complete product of conception is not expelled, instead some part remains inside the uterine cavity then it is called incomplete abortion.
Clinical features	<ul style="list-style-type: none"> Continuous, colicky lower abdominal pain. Persistent vaginal bleeding. Size of uterus <period of amenorrhea. Patulous cervical os admit the tip of the finger. Expelled product found to be incomplete abortion on abdominal examination.
Management	<ul style="list-style-type: none"> If the patient is in shock due to blood loss, she should be resuscitation before any active treatment is undertaken. Before 12 weeks, D and E under general anesthesia is to be done. After 12 weeks, uterus is evacuated under GA and product of conceptions are removed by ovum forceps or blunt curette. The removed products are subjected to a histological examination.

Missed Abortion

Definition	If the fetus is dead and remains inside the uterine cavity, then it is called a missed abortion.
Clinical manifestations	<ul style="list-style-type: none"> Persistence of brownish vaginal discharge then subsidence of pregnancy symptoms. Retrogression of breast changes. Uterus is smaller than period of amenorrhea. Absent fetal heart sound. Firm cervix. Immunological tests of pregnancy become negative.

Contd...

Complications	<ul style="list-style-type: none"> Psychological upset Infection Blood coagulation disorders such as DIC During labor: Uterine inertia, retained placenta and PPH.
Management	<p>Early Abortion: Suction evacuation under general anesthesia. Slow cervical dilatation + D and E under general anesthesia.</p> <p>Late Abortion: Oxytocin: Start 10-20 units in 500 mL saline at 30 drops/min, up to 200 mIU/min if needed. Prostaglandin E1 (Misoprostol): 200 µg tablet in posterior fornix every 4 hours, up to 5 doses. Alternatively, Carboprost: 250 µg IM every 3 hours, up to 10 doses.</p>

Septic Abortion

Definition	<p>Any abortion associated with clinical evidence of infection of the uterus and its contents is called septic abortion. It is characterized by:</p> <ul style="list-style-type: none"> Rise of temperature of at least 100.4°F for 24 hours or more. Offensive or purulent vaginal discharge. Evidence of pelvic infection such as lower abdominal pain and tenderness.
Clinical grading	<ul style="list-style-type: none"> Grade I: Infection is localized in the uterus. Grade II: Infection spreads beyond the uterus to the parametrium, tubes and ovaries or pelvic peritoneum. Grade III: Generalized peritonitis, endotoxic shock, jaundice or acute renal failure.
Investigations	<ul style="list-style-type: none"> Cervical or high vaginal swab for culture or sensitivity. Urine analysis. Blood test for hemoglobin, total and differential count of white cells, ABO and Rh grouping. Kidney and liver function test. Coagulation profile. Upright X-ray of abdomen and pelvis to detect uterine and gut perforation and peritonitis Pelvic imaging studies include pelvic ultrasound for retained products of conception, foreign body in uterus, pelvic abscess peritonitis with pyoperitoneum, CT scan and MRI are also helpful.
Complications	<p>Immediate Complications:</p> <ul style="list-style-type: none"> Hemorrhage Uterine or adjacent structure injury (e.g., bowel, bladder) Infection spread: generalized peritonitis, endotoxic shock, acute renal failure, thrombophlebitis <p>Remote Complications:</p> <ul style="list-style-type: none"> Chronic debility Chronic pelvic pain, backache Dyspareunia Ectopic pregnancy Secondary infertility (tubal blockage) Depression
Management	<ul style="list-style-type: none"> Stabilization: <ul style="list-style-type: none"> IV fluids for resuscitation. Broad-spectrum antibiotics (e.g., clindamycin + gentamicin). Monitor vitals closely. Evacuation: <ul style="list-style-type: none"> Perform uterine evacuation (e.g., DandC) after stabilization. Supportive care: <ul style="list-style-type: none"> Blood transfusion if needed. Manage any complications (e.g., shock, renal failure). Follow-Up: <ul style="list-style-type: none"> Monitor for signs of ongoing infection. Psychological support

Recurrent Abortion

Recurrent abortion is defined as a sequence of three or more spontaneous consecutive abortions.



Causes

- Genetic factors
- Endocrine and metabolic disorders
- Diabetic mother
- Thyroid disorder
- Luteal phase defect (LPD)
- Polycystic ovary syndrome (PCOs)
- Infection: Chlamydia, syphilis, mycoplasma.
- Inherited thrombophilia
- Immunological factors: Example Antiphospholipid antibodies,
- **Cervico-uterine factors:**
 - Cervical incompetence
 - Intrauterine synechiae
 - Myoma uterus
 - Bicornuate uterus
 - Didelphis uterus
 - Septate uterus

Investigations

- Blood glucose, VDRL, thyroid function test, ABO and Rh groupings, TORCH test
- Autoimmune screening: Lupus anticoagulant and anti-cardio lipid antibodies
- Serum LH on D2/D3 of cycle
- Ultrasonography to detect congenital malformation of uterus, polycystic ovaries, uterine fibroid
- Hysterosalpingography to detect cervical incompetence, uterine synechiae and uterine malformations
- Karyotyping (husband and wife)
- Endocervical swab to detect chlamydia, mycoplasma and bacterial vaginosis.

Management

- **Support:** Reassurance, counseling, rest and antenatal supervision.
- **Cause-specific treatment:**
- **Genetic:** Genetic counseling
- **Antiphospholipid antibody:**
 - Low: Aspirin 75 mg/day
 - High: Aspirin + Prednisolone + Heparin
- **Luteal phase defect:** Progesterone + hCG
- **Syphilis:** Benzathine penicillin; alternatives available
- **Cervical incompetence:** Cerclage (Shirodkar's/McDonald's)
- **Nursing responsibilities:**
 - Monitor vitals, bleeding and secretions.
 - Maintain aseptic technique and perineal care.

- Provide psychological support.
- Post-op: Check for bleeding, pain, IV flow and ensure hydration.

MEDICAL TERMINATION OF PREGNANCY

Medical termination of pregnancy (MTP) refers to a medical procedure used to terminate a pregnancy with the help of medications. Medical abortion (drug-induced) is an option for women from the 7th week of their pregnancies and up to the 24th week (it varies depending on various scenarios).

Provision for, MTP under MTP Act

- Continuation of pregnancy would involve serious risk of life or grave injury to the physical and mental health of the pregnant woman.
- There is a substantial risk of the child being born with serious physical and mental abnormalities to be handicapped in life.
- Pregnancy as a result of rape.
- Pregnancy is caused as a result of failure of contraceptive method (tubectomy or vasectomy).
- Where there are actual or reasonably foreseeable environments (social or economic) which could lead to risk of injury to the health of the mother.

Indications for MTP

Therapeutic	<ul style="list-style-type: none"> • Deteriorating health due to pulmonary tuberculosis. • Cardiac diseases grade III and IV with a history of decompensation. • Chronic glomerulonephritis. • Malignant hypertension. • Intractable hyperemesis gravidarum. • Cervical/breast malignancy. • Diabetes mellitus with retinopathy. • Psychiatric illness.
Social	<ul style="list-style-type: none"> • Parous woman having unplanned pregnancy with low socio-economic status. • Pregnancy caused by rape. • Pregnancy due to failure of contraceptive.
Eugenic	<p>Risk of baby being born with various physical and mental abnormalities and include:</p> <ul style="list-style-type: none"> • Inherited chromosomal and gene disorders. • Exposure to teratogenicity drugs or disorders. • Rubella infection in first trimester. • One or both parents being mentally defective. • Congenital malformations of siblings.



Prerequisites for MTP

- Only a registered medical practitioner having experience in gynecology and obstetrics is required to perform an abortion where the length of pregnancy does not exceed 12 weeks. If pregnancy is >20 weeks, the opinion of two registered medical practitioners is necessary.
- The procedure can only be performed in hospitals established or maintained by the government or places approved by the government for MTP.
- Pregnancy can be terminated only with the written consent of a woman.
- In case of minor pregnancy, consent taken from guardian
- Each and every MTP has to be reported to the directorate of health services of the state.
- Methods of pregnancy termination are given in Table 1.3.

Table 1.3: Methods of termination of pregnancy (13–20 weeks)

First trimester (up to 12 weeks)	Second trimester (13–20 weeks)
Medical <ul style="list-style-type: none"> Mifepristone Mifepristone and misoprostol Methotrexate and misoprostol Tamoxifen and misoprostol 	<ul style="list-style-type: none"> Prostaglandins: PGE1 (misoprostol) 15 methyl (carboprost) PGE2 (dinoprostone) and their analogs' (used —intravaginally, intramuscularly or intra- amniotically) Dilatation and evacuation
Surgical <ul style="list-style-type: none"> Menstrual regulation Vacuum aspiration Suction evacuation/curettage Dilatation and evacuation <ul style="list-style-type: none"> Rapid method Slow method 	<ul style="list-style-type: none"> Intrauterine instillation of hypersmotic solutions <ul style="list-style-type: none"> Extra-amniotic — ethacridine lactate, prostaglandins Extra-amniotic saline infusion (isotonic) with a transcervical catheter balloon Intraamniotic hypertonic urea (30%) saline (20%) Oxytocin infusion: High dose used along with either of the above two methods. Hysterotomy (abdominal) less commonly done.

ECTOPIC PREGNANCY

Ectopic pregnancy occurs when a fertilized ovum implants outside the uterine cavity, most commonly in the fallopian tube. (Fig. 1.3).

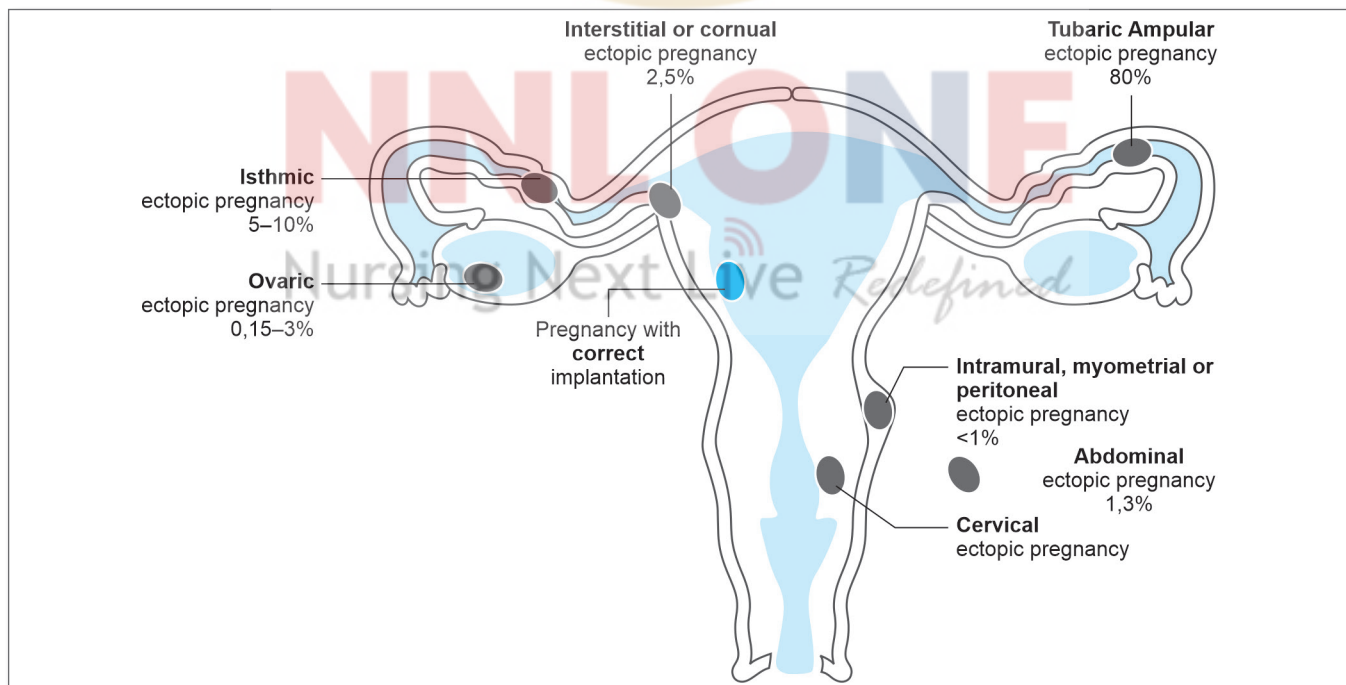


Figure 1.3: Various types of ectopic pregnancy



- Continuous fetal monitoring is essential because of the possibility of cord compression or placental insufficiency and resultant hypoxia. There are chances of development of constriction ring or membranes may adhere to the fetus.
- Aspiration of amniotic fluid (more concentrated with meconium), may add danger to an asphyxiated baby when born.

Nursing Intervention in Oligohydramnios

Oligohydramnios, which refers to a low amniotic fluid level, can pose risks to both the mother and the fetus during pregnancy. Nursing interventions aim to manage these risks and support the well-being of both. Here are some key interventions:

Monitoring and Assessment

- **Fetal heart rate:** Regularly monitor the fetal heart rate to detect any signs of distress.
- **Ultrasound:** Assist with ultrasound exams to assess amniotic fluid levels and fetal well-being.
- **Maternal vital signs:** Monitor maternal blood pressure, temperature and pulse to identify any complications.
- **Kick counts:** Educate the mother on how to perform fetal kick counts to ensure the fetus is moving adequately.

Hydration

IV Fluids: Administer intravenous fluids as prescribed to potentially increase amniotic fluid levels and improve fetal perfusion.

Patient Education

- **Signs of complications:** Educate the mother about signs of preterm labor, uterine contractions and decreased fetal movement.

- **Importance of follow-up:** Stress the importance of regular prenatal visits and adherence to the treatment plan.

Labor and Delivery Preparation

- **Readiness for preterm labor:** Be prepared for potential preterm labor and have protocols in place for such events.
- **Delivery planning:** Collaborate with the healthcare team to determine the best delivery plan, which may include induction or cesarean section if necessary.

Emotional Support

Counseling: Provide emotional support and counseling to help the mother cope with the stress and anxiety associated with oligohydramnios.

Interdisciplinary Collaboration

- **Consultation:** Work closely with obstetricians, perinatologists and other specialists to ensure comprehensive care and decision-making.
- Each intervention should be tailored to the individual patient's condition and needs, always in collaboration with the healthcare team.

Rh INCOMPATIBILITY



Rhesus (Rh) incompatibility refers to the discordant pairing of maternal and fetal Rh types. It is associated with the development of maternal Rh sensitization and hemolytic disease of the neonate (HDN) (Fig. 1.11).

An individual can be classified as Rh-positive if their erythrocytes express the Rh D antigen; individuals without the Rh D antigen are classified as Rh-negative.

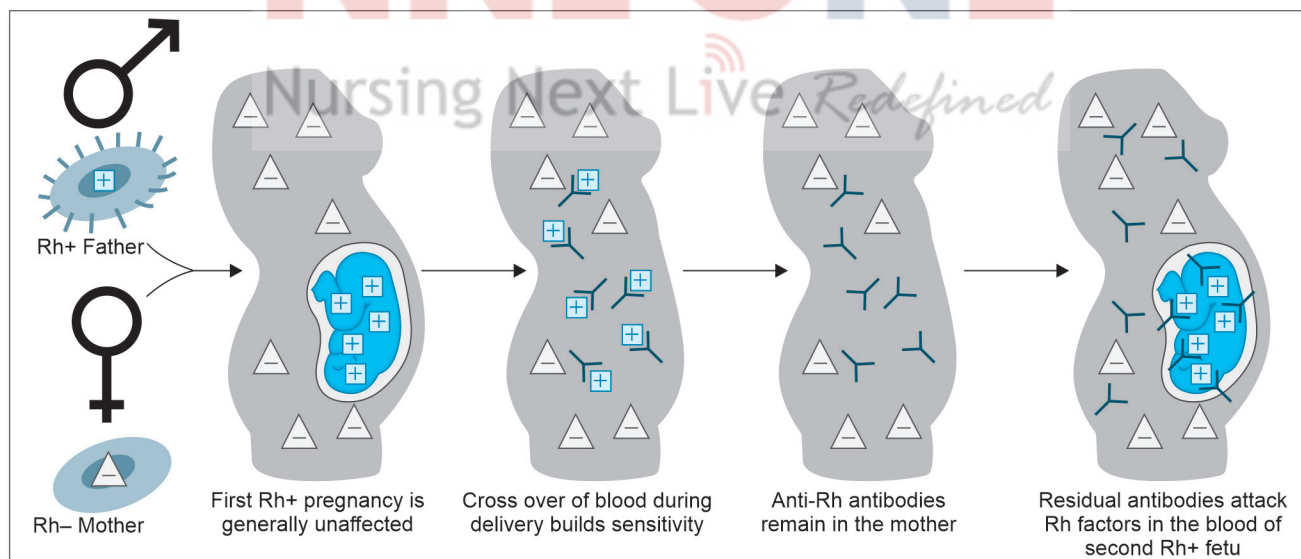


Figure 1.11: Rh-incompatibility

Clinical Features

- **Hydrops fetalis:** Hydrops fetalis or hydrops fetalis is a condition in the fetus characterized by an accumulation of fluid, or edema, in at least two fetal compartments.
- **Icterus gravis neonatorum:** Hemolytic anemia of the fetus or newborn infant, caused by the transplacental transmission of maternally formed antibody, usually secondary to an incompatibility between the blood group of the mother and that of her offspring.
- Congenital anemia of the newborn may be defined as a hyperchromic anemia of unknown etiology that appears at birth or within the first few weeks of life.

Investigations

- **Blood test:** Blood testing for Rh and Rho grouping must be done at 1st antenatal visit. Based on the results further evaluations should be done accordingly.
- **Obstetric history:** If woman is a primigravida with no previous history of blood transfusion, she is less likely to suffer.
- In a parous woman, a detailed obstetric history has to be taken. Example: history of stillbirth neonatal death due to jaundice, etc. Also, enquire about the administration of anti-D immunoglobulin following delivery or abortion.

- **Antibody detection:** In all cases of Rh-negative women irrespective of blood grouping and parity, antibody is detected by indirect coombs test. Quantitative estimation of IgG antibody should be done at weekly interval. If there is a sudden rise in the titer from 1:8 to 1:256, it is very much suggestive of fetal affection. Some centers consider the titer of 1:16 or antibodies level of >10 IU/mL. As a critical titer means, an anti-D antibody level that causes hydrops fetalis.
- **Doppler ultrasound:** Serial Doppler study of middle cerebral artery peak systolic velocity and; main predictor for fetal anemia. A value >1.5 multiples of the median (MOMs) for the corresponding gestational age, predicts moderate to severe fetal anemia.
- **Amniocentesis:** Amniocentesis and estimation of bilirubin in the amniotic fluid by spectrophotometer gives the prediction of severity of fetal hemolysis.

Prevention and Management

- Management of Rh-negative woman is depicted in Figure 1.12.
- IM to the mother during pregnancy or within 72 hours following delivery or abortion.
- Use precautions during cesarean section

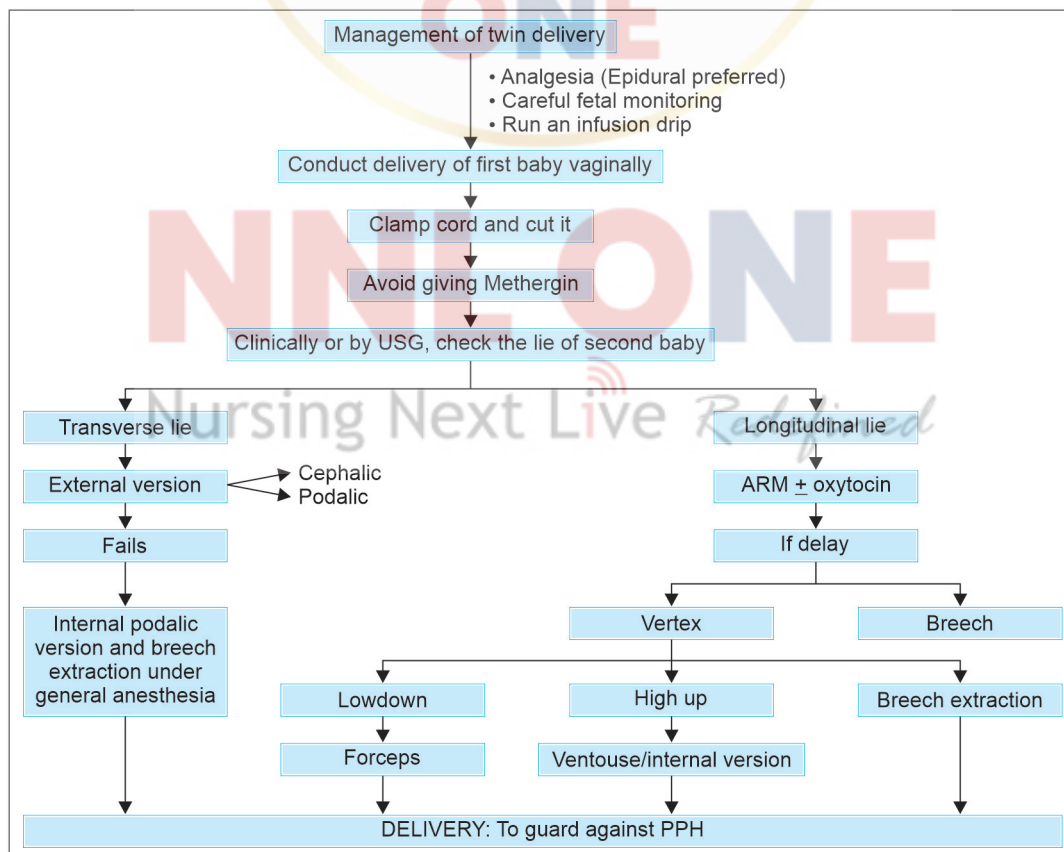


Figure 1.12: Management of Rh-negative woman



Risk Factors

- Prior history of disorder
- Trauma
- Pregnancy/birth complications/miscarriage
- STD and HIV
- Extremes of age
- Social status
- Substance abuse

Types of Mental Disorders

There are five types of mental disorders.

1. Anxiety disorders
 - Phobia
 - Generalized anxiety disorder
 - Social anxiety disorder
 - Panic disorder
 - Agoraphobia
 - Obsessive-compulsive disorder
 - Post-traumatic stress disorder.
2. Mood and bipolar disorders
 - Major depressive disorders
 - Dysthymia
 - Bipolar disorders
3. Personality disorders
4. Psychotic disorders
 - Schizophrenia
 - Delusional disorder
 - Schizoaffective disorder
 - Schizotypy
5. Eating disorders
 - Anorexia nervosa
 - Bulimia nervosa

Depression

- A mental disorder characterized by episodes of all-encompassing low mood accompanied by low self-esteem and loss of interest or pleasure in a normally enjoyable activity.
- Depression that is left untreated in pregnancy, either because symptoms are not recognized or because of concerns regarding the effects of medications, can lead to a host of negative consequences, including lack of compliance with Prenatal care recommendations, poor nutrition and self-care, self-medication, alcohol and drug use, suicidal thoughts and thoughts of harming the fetus and the development of postpartum depression after the baby is born.

Contd...

- If history of mild or moderate depression:
 - Gradual withdrawal of antidepressants
 - Switch to psychological therapy (CBT, IPT)
- If history of severe depressive episodes or new moderate/severe episodes:
 - Structured psychological treatment
 - Antidepressant treatment
- Combination treatment if no response
- In treatment-resistant patients; consider different single drugs or ECT before considering combination drug treatment.

Panic disorder

- It is an anxiety disorder characterized by recurring severe panic attacks.
- The course of panic disorder during pregnancy is variable and remains unclear.
- While case reports of pregnant woman with preexisting panic disorder have suggested a decrease in symptoms during pregnancy, large scale studies have reported that there is no decrease in symptoms for woman with pre-existing panic disorder.
- First onset panic disorder during pregnancy is reported.
- The possible effects of anxiety and panic on the course of the pregnancy and the health of the fetus are not well-understood.
- One study showed a correlation between increased anxiety and increased resistance in uterine artery blood flow.
- Thyroid screening should be performed.
- Nonpharmacological therapies (CBT, supportive psychotherapy, relaxation techniques, sleep hygiene and dietary counseling) should be considered before pharmacological therapies (benzodiazepines, antidepressants).
- If new episodes of panic disorder; paroxetine should not be started and a safer drug should be considered.

Generalized anxiety disorder

- No data on the prevalence or course of generalized anxiety disorder (GAD) through pregnancy.
- Difficult to differentiate from normal anxiety during pregnancy.
- If already on treatment for GAD, switching to CBT should be considered.

Obsessive compulsive disorder

- It is an anxiety disorder characterized by thoughts that cannot be controlled (obsessions) and repetitive behaviors or rituals that cannot be controlled (compulsions) in response to these thoughts.
- Symptoms of the disorder include excessive washing or cleaning; repeated checking; extreme hoarding.

Contd...

	<ul style="list-style-type: none"> • Preoccupation with sexual, violent or religious thoughts; relationship-related obsessions; aversion to particular numbers; and nervous rituals, such as opening and closing a door a certain number of times before entering or leaving a room. • Several reports suggest that woman may be at an increased risk for the onset of OCD during pregnancy and the postpartum period. • Should be treated normally, as usually on psychological therapy, • Avoid combination of more than one antidepressant.
Eating disorders	<ul style="list-style-type: none"> • Woman with bulimia nervosa are more prone to unplanned pregnancy. • Consider psychological treatment rather than antidepressants. • Advise against breastfeeding if on fluoxetine.
Psychoses in pregnancy	<ul style="list-style-type: none"> • Woman with psychoses are less fertile, partly as a result of hyperprolactinemia, secondary to antipsychotic drugs; the newer atypical drugs such as clozapine and olanzapine, don't have this effect. • It is clear from a number of systematic reviews that women with psychotic disorders are at increased risk of obstetric complications and stillbirth. • The most common manifestations being bipolar illness, followed by psychotic depression and schizophrenia.
Bipolar mood disorder	<ul style="list-style-type: none"> • A psychiatric diagnosis for a mood disorder; usually of alternating episodes of mania and depression. • Risk of relapse is the same in pregnancy as at any other time. • Abrupt stoppage of treatment in unplanned pregnancy increases the risk. • Pregnant women, who are stable on antipsychotics, should be maintained on antipsychotics with monitoring of weight gain and diabetes. • If lithium is stopped as a prophylactic treatment, consider antipsychotics. • If a new episode occurs while on medication consider an increase of dose or change to another antipsychotic.
Schizophrenia	<ul style="list-style-type: none"> • It is a mental disorder characterized by a breakdown of thought processes and by a deficit of typical. • Common symptoms include auditory hallucinations, paranoid or bizarre delusions or disorganized emotional responses.

Contd...

	<ul style="list-style-type: none"> • Psychosis during pregnancy can have devastating consequences for both mother and her fetus, including speech and thinking and it is accompanied by significant social or occupational dysfunctional and failure to obtain proper prenatal care, negative pregnancy outcomes such as low birth weight and prematurity and neonaticide or suicide. • Should be treated according to guidelines. • Woman with schizophrenia who are breastfeeding should be treated according to guidelines except the switch from atypical to typical antipsychotics should be considered. Those woman receiving depot medication should be advised that their infants may show extra pyramidal symptoms.
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Pharmacological, Medications

Antidepressants	<ul style="list-style-type: none"> • Most tricyclics have a higher fetal toxicity index than selective serotonin reuptake inhibitors (SSRI'S) • Fluoxetine is the SSRI with the lowest known risk during pregnancy. • Imipramine, nortriptyline and sertraline are present in breast milk at relatively low levels (unlike fluoxetine). • SSRI's after 20 weeks' gestation may be associated with an increased risk of persistent pulmonary hypertension in the neonate. • Paroxetine taken in the first trimester may be associated with fetal heart rate defects, antidepressants carry the risk of withdrawal or toxicity in neonates, in most of the cases the effects are self-limiting.
Benzodiazepines	<ul style="list-style-type: none"> • Should not be routinely prescribed for pregnant women, except for short-term treatment of extreme anxiety and agitation. • Risk to fetus → Cleft palate • Risk to neonate → Floppy baby syndrome
Valproate	<ul style="list-style-type: none"> • Risk of neural tube defects. • If possible convert to another drug (E.g., for bipolar disorder convert to antipsychotic). • If no alternative limit to maximum 1 g/day undivided doses in slow release format (administer 5 mg/day folic acid)

Contd...

Antipsychotic	<ul style="list-style-type: none"> • Clozapine should not be routinely prescribed for women who are pregnant. • Theoretical risk of fetal agranulocytosis in infants. • Olanzapine-risk factors for gestational diabetes should be taken into account • Depot antipsychotics and anticholinergic drugs should not be routinely prescribed to pregnant woman because may show extrapyramidal symptoms.
Carbamazepine and Lamotrigine	<ul style="list-style-type: none"> • Carbamazepine increases the risk of neural tube defects (6–20 per 1000), also the risk of gastrointestinal tract problems and cardiac abnormalities. • Lamotrigine carries risk of cleft lip/cleft palate (9 per 1000 exposed fetuses). • Stop if possible.
Lithium	<ul style="list-style-type: none"> • Increases risk of fetal heart abnormalities (8 per 1000 increased to 60 per 1000). • Avoid in the first trimester and during breastfeeding. • Stop if not at high-risk of relapse-gradual withdrawal over 4 weeks. • Consider stopping for first then restarting in the second trimester if not planning to breastfeed. • Consider converting to antipsychotic. • Continuous check levels every 4 weeks from 36 weeks onwards and within 24 hrs of childbirth • Monitor lithium toxicity • May be necessary to check the lithium levels.
Electroconvulsive therapy (ECT)	<ul style="list-style-type: none"> • No evidence available on the risk of harm to the fetus. • Psychological therapy is superior to pharmacological therapy during pregnancy and breastfeeding.

Elderly Primigravida

The elderly primigravida is defined as a woman who goes into pregnancy for the first time at the age of 35 years or older. Progressively, this has become more common in our contemporary society and traditionally such pregnancy is regarded as high-risk.

It can be of 2 types:

Patients with high fecundity	<ul style="list-style-type: none"> • Married late but conceived soon after marriage
Patients with low fecundity	<ul style="list-style-type: none"> • Married early but conceived long after marriage

Complications

Maternal complications		Fetal complications
During pregnancy	During labor	
<ul style="list-style-type: none"> • Abortion • Preeclampsia • Abruptio placenta • Uterine fibroid • PIH, gestational diabetes, organic heart lesions, etc. • Post-maturity chances increases • IUGR. 	<ul style="list-style-type: none"> • Preterm labor • Prolonged labor • Maternal distress • Retained placenta • Increased chances of cesarean section. 	<ul style="list-style-type: none"> • Prematurity • Increased chances of congenital malformations • Operative interference increases • Increased perinatal morbidity/mortality.

Management

- Periconceptional counseling should be done.
- Patient is considered as 'high-risk'. So all steps followed for high-risk mother, should be kept in mind while giving care at each step.
- The patient requires meticulous antenatal supervision and should have a mandatory hospital delivery.
- Vaginal delivery is possible in this case but if the induction score is unsatisfactory, cesarean section should be done.

GRAND MULTIPARA *Nursing Next Live Redefined*

Grand multipara is a term coined for a pregnant mother who has four or more viable children.

Complications

Maternal Complications

During pregnancy	During labor	During puerperium
<ul style="list-style-type: none"> • Obstetric hazards as malpresentation, multiple pregnancy, placenta previa • Abortion • Medical disorders (Anemia, HIV, preeclampsia, cardiac disease) • Prematurity 	<ul style="list-style-type: none"> • Cephalo- pelvic disproportion (due to advancing age of mother and large sized baby) • Cord prolapse • Obstructed labor • Rupture uterus • Shock • Operative interference 	<ul style="list-style-type: none"> • Increased morbidity due to sepsis, intranasal hazards • Subinvolution • Lactation failure • Postpartum hemorrhage



- Dehydration and electrolyte imbalance
- Acidosis due to starvation
- Alkalosis resulting from loss of HCL in vomitus
- Jaundice develops in severe cases
- Low urine output
- Rapid pulse and low blood pressure

Risk Factors Associated with Development of Hyperemesis Gravidarum

- **Advanced placenta mass:**
 - Multiple gestation
 - Molar pregnancy
- **Genetics:**
 - Family history of hyperemesis gravidarum
 - Prior history of hyperemesis gravidarum in prior pregnancy
- Female gestations
- Hyperthyroidism
- Nulliparity
- Young age

- History of migraine headaches
- History of motion sickness

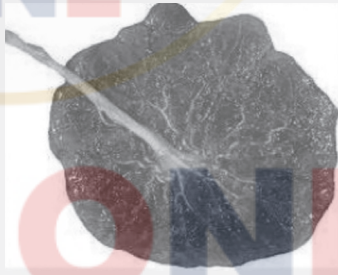
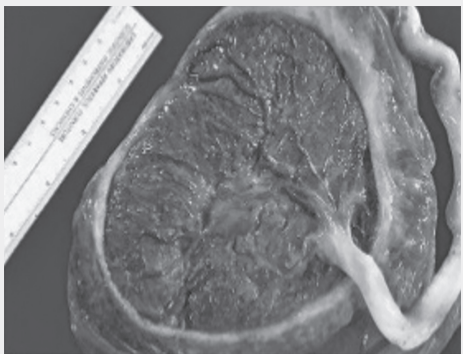
Management

- Women with hyperemesis gravidarum are admitted to hospital.
- Nothing is provided through mouth initially.
- To manage the condition, enteral nutrition through a nasogastric tube is provided.
- Rest to the mother is encouraged.
- Provided supportive psychotherapy and counseling
- To treat nausea and vomiting, antiemetic is administered.

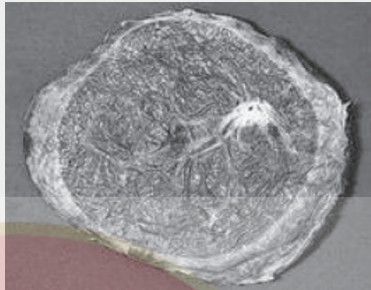

2. Write a note on abnormalities of placenta. (MGR)

Answer

Abnormalities of the placenta refer to marked variations in the morphology including size, shape and weight of the placenta. Some of them are enlisted below:

Abnormalities	
Placenta succenturiate	<p>A small part of the placenta separates from the main placenta but remains connected with blood vessels.</p> 
Extrachorial placenta	<p>A rare type of placenta where the chorionic vascular plate is smaller than the villous tissue, which gets uncovered in the periphery.</p> <ul style="list-style-type: none"> • Circumvallate placenta: A form of extrachorial placenta, with a raised placental margin in an annular shape. The ring is situated at variable distance between the margin and center of the placenta. The chorionic plate is smaller than the basal plate and misalignment between them causes hematoma retention in the placental margin. 

Contd...

Abnormalities	
	<ul style="list-style-type: none"> • Placenta Marginata: The ring is located at the edge or margin of the placenta and is raised by the presence of degenerated decidua and fibrin. 
Placenta bilobate	<p>When 2 equal parts of placenta are separated from each other but remain connected by blood vessel.</p> 
Placenta membranacea	<p>The placenta is unduly large and thin. Placenta does not form from chorion frondosum.</p>
Large and heavier placenta	<p>It is seen in large-sized fetuses, fetal syphilis and erythroblastosis.</p>
Smaller and lighter placenta	<p>It may occur with general systemic diseases or local uterine conditions that cause undernourishment of placenta and may lead to intrauterine growth retardation.</p>
Tumor formation	<p>It is majorly associated with prematurity and polyhydramnios.</p>
Infarct of cotyledons	<p>Eclampsia that reduces placental circulation may lead to IUGR and eventually lead to fetal death due to the maternal hypertension.</p>
Edematous placenta	<p>It is mushy, thick and pale. Fluid can be extracted from this type of placenta.</p>

3. Write a note on hydatidiform mole. (MGR)

Answer

Hydatidiform Mole

Hydatidiform mole refers to the abnormal condition of the placenta where partly degenerative and partly proliferative changes occur in the young chorionic villi.

Clinical Features

Symptoms

- Vaginal bleeding
- Lower Abdominal pain

- Constitutional symptoms:
 - Patient becomes sick without apparent reason
 - Vomiting
 - Breathlessness
 - Thyrotoxic features
- Expulsion of grape-like vesicles per vaginam
- History of quickening is absent

Signs

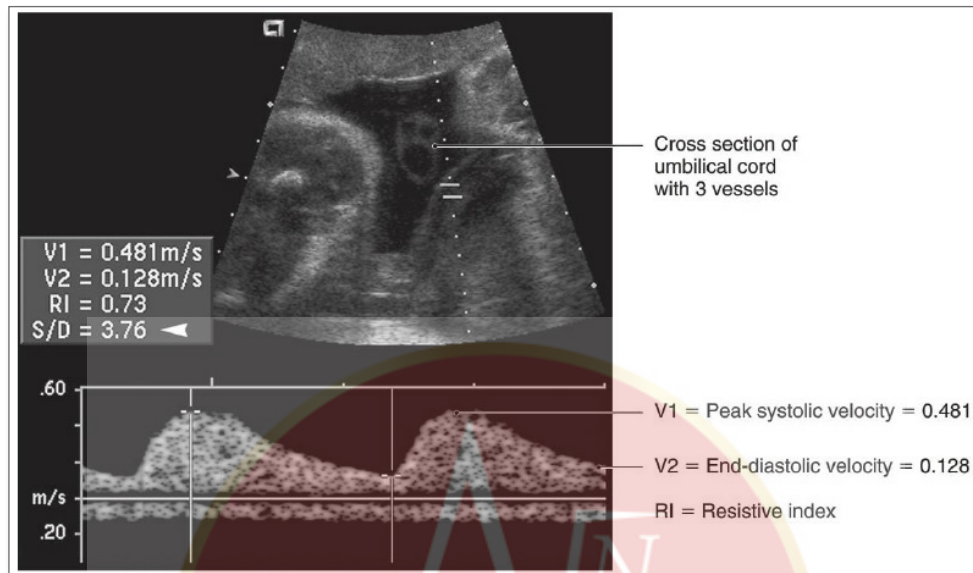
- Patient looks more ill
- Pallor
- Fetal parts are not felt
- Absence of fetal heart sound





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- Spontaneous abortion often occurs due to genetic abnormalities, hormonal imbalances, or maternal health conditions.
- Induced abortion can be performed surgically (such as dilation and curettage) or medically (using medications like mifepristone and misoprostol).
- Anemia is common during pregnancy due to increased blood volume and the body's demand for iron to support fetal growth. Untreated anemia in pregnancy can lead to complications such as preterm birth, low birth weight and maternal fatigue.
- Various pathogens can affect pregnancy, including Group B Streptococcus, herpes simplex virus, Toxoplasma gondii, Candida spp. and others. Management varies depending on the specific infection and its severity.
- Urinary Tract Infection is common during pregnancy due to hormonal changes and urinary stasis. It can lead to complications like preterm labor and pyelonephritis if untreated.
- Pregnant women are more susceptible to malaria due to immunological changes. Malaria in pregnancy can lead to maternal anemia, low birth weight and other adverse outcomes.
- Acute abdomen can result from various causes such as ectopic pregnancy, ovarian cyst torsion, or bowel obstruction. Prompt evaluation and management are crucial to avoid maternal and fetal complications.
- Management of Covid-19 during pregnancy may include supportive care, oxygen therapy and consideration of antiviral medications.
- Placenta previa, placental abruption and umbilical cord abnormalities can lead to significant maternal and fetal complications.
- Intrauterine Growth Retardation can result in low birth weight and neonatal complications. Management involves close monitoring, fetal surveillance and sometimes early delivery.
- Depression, anxiety and other mental health disorders can affect pregnant individuals and impact maternal and fetal well-being.
- Pregnancies in older individuals (elderly primigravida) and those with multiple previous pregnancies (grand multiparity) carry increased risks of complications such as preeclampsia, gestational diabetes and cesarean delivery.
- Guidelines and protocols established by the Government of India (GoI) provide a framework for the management of various pregnancy-related conditions. These protocols ensure standardized care and improve outcomes.
- Referral pathways should be established to ensure timely access to specialized care for pregnant individuals with complications beyond the scope of primary care facilities.

MULTIPLE CHOICE QUESTIONS



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1. Which of the following is not a high-risk pregnancy?

- a. Previous history of manual removal of placenta
- b. Anemia
- c. Diabetes
- d. Obesity

Ans. a. Previous history of manual removal of placenta

2. Vaginal bleeding occurring before 28th week of gestation indicates:

- a. Inevitable abortion
- b. Threatened abortion
- c. Incomplete abortion
- d. Missed abortion

Ans. b. Threatened abortion

3. All of the following are known causes of recurrent abortion; except:

- a. TORCH infections
- b. SLE
- c. Rh incompatibility
- d. Syphilis

Ans. a. TORCH infections

4. The most life-threatening complication of septic abortion includes:

- a. Peritonitis
- b. Renal failure
- c. Respiratory distress syndrome
- d. Septicemia

Ans. c. Respiratory distress syndrome

5. The hormone responsible for decidual reaction and Arias Stella reaction in ectopic pregnancy is:

- a. Estrogen
- b. Progesterone
- c. hCG
- d. HPL

Ans. b. Progesterone

6. The most common manifestation of ectopic pregnancy is:

- a. Vomiting
- b. Bleeding
- c. Pain in abdomen
- d. Shock

Ans. c. Pain in abdomen

7. Which of the following is false about partial mole?

- a. Caused by triploidy
- b. Can be diagnosed very early by USG
- c. Can present as missed abortion
- d. Rarely causes persistent GTD

Ans. b. Can be diagnosed very early by USG

8. Hydatidiform mole is principally a disease of:

- a. Amnion
- b. Chorion
- c. Uterus
- d. Decidua

Ans. b. Chorion

9. The second most common cause of anemia in pregnancy is:

- a. Anemia associated with chronic disease
- b. Sickle cell disease
- c. Iron deficiency anemia
- d. Megaloblastic anemia

Ans. a. Anemia associated with chronic disease

10. All of the following may be used in pregnancy-associated hypertension; except:

- a. Nifedipine
- b. Captopril
- c. Methyldopa
- d. Hydralazine

Ans. b. Captopril

11. Antidote of $MgSO_4$ during treatment of eclampsia is:

- a. Calcium gluconate
- b. Potassium chloride
- c. Protamine sulfate
- d. Naloxone

Ans. a. Calcium gluconate

12. The most common congenital anomaly seen in pregnancy with diabetes mellitus is:

- a. Multicystic kidneys
- b. Esophageal atresia
- c. Neural tube defect
- d. Duodenal atresia

Ans. c. Neural tube defect

13. All of the following are true about bacterial vaginosis; except:

- a. Gray and white discharge
- b. Intense pruritus
- c. Wet mount showing clue cells
- d. Oral metronidazole is the drug of choice

Ans. b. Intense pruritus

14. Hydramnios is a condition where there is an excess volume of:

- a. Amniotic fluid
- b. Pleural fluid
- c. Peritoneal fluid
- d. Pericardial fluid

Ans. a. Amniotic fluid

15. The most common type of twin pregnancy is:

- a. Vertex + transverse
- b. Both vertex
- c. Vertex + breech
- d. Both breech

Ans. b. Both vertex

