

# Introductory Maternity Nursing

N. Jayne Klossner



LIPPINCOTT WILLIAMS & WILKINS

# Contents

## UNIT 1

### Overview of Maternal and Newborn Nursing Care 1

#### 1 The Nurse's Role in a Changing Maternal–Newborn Health Care Environment 3

Changing Concepts in Maternal–Newborn Health Care 4

Development of Maternity Care 4

Development of Newborn (Neonatal) Care 5

Current Trends in Maternal–Newborn Health Care 7

Family-Centered Care 7

Regionalized Care 7

Advances in Research 8

Bioethical Issues 8

Demographic Trends 9

Poverty 9

Cost Containment 9

Payment for Health Services 10

Private Insurance 10

Federally Funded Services 11

Special Supplemental Nutrition Program for Women, Infants, and Children 12

Maternal–Infant Health Today 12

Maternal–Infant Health Status 13

Addressing Maternal–Infant Health Status 14

The Nurse's Changing Role in Maternal–Newborn Health Care 15

Critical Thinking 17

The Nursing Process 17

Assessment 18

Nursing Diagnosis 18

Outcome Identification and Planning 18

Implementation 18

Evaluation 19

Documentation 19

#### 2 Family-Centered and Community-Based Maternal and Newborn Nursing 23

The Family as a Social Unit 24

Family Function 24

Family Structure 25

Family Factors That Influence Childbearing and Child Rearing 27

Health Care Shift: From Hospital to Community 29

Community-Based Nursing 29

Community Care Settings for the Maternity Client 30

Skills of the Community-Based Nurse 32

The Challenge of Community-Based Nursing 34

## UNIT 2

### Foundations of Maternity Nursing 39

#### 3 Structure and Function of the Reproductive System 41

Male Reproductive System 42

External Genitalia 42

Internal Reproductive Organs 44

Female Reproductive System 47

External Genitalia (Vulva) 47

Internal Reproductive Organs 49

Blood Supply for the Pelvic Organs 51

Reproductive Function 52

Puberty 52

Menstruation 53

Menstrual cycle 53

Cervical Mucus Changes 54

Menopause 55

Sexual Response Cycle 55

#### 4 Special Issues of Reproduction and Women's Health Care 58

WOMEN'S HEALTH ISSUES 59

Health Screening for Women 59

Breast Cancer Screening 59

Pelvic Examination and Pap Smear 60

Vulvar Self-Examination 60

Common Disorders of the Female Reproductive Tract 61

Menstrual Disturbances 61

Infectious Disorders 64

Disorders of the Uterus and Ovaries 65

Pelvic Support Disorders 66

REPRODUCTIVE LIFE CYCLE ISSUES 67

Family Planning 67

Planning Pregnancy 68

Nursing Care 68

Preventing Pregnancy 69

Nursing Process for Assisting the Couple to

Choose a Contraceptive Method 79

Induced Abortion 82

Infertility 82

Causes of Infertility 82

Initial Evaluation of Infertility	84
Comprehensive Evaluation and Diagnostic Testing	85
Management of Infertility	86
Psychological Aspects of Infertility	87
Nursing Care	87
Menopause	88
Clinical Manifestations	88
Treatment	88
Nursing Care	89

## UNIT 3

### Pregnancy 95

<b>5 Fetal Development</b>	<b>97</b>
Cellular Processes	98
Types of Cells	98
Cellular Division	98
Developmental Stages of Pregnancy	99
Pre-embryonic Stage	100
Embryonic Stage	101
Fetal Stage	103
Development of Supportive Structures	103
Fetal Membranes	103
Amniotic Fluid	105
Placenta	106
Umbilical Cord	107
Fetal and Placental Circulation	107
Fetal Circulation	107
Placental Circulation	108
Special Considerations of Fetal Development	108
Teratogens and the Fetus	108
Ectopic Pregnancy	111
Multifetal Pregnancy	111
<b>6 Maternal Adaptation During Pregnancy</b>	<b>116</b>
Signs of Pregnancy	117
Presumptive (Possible) Signs	117
Probable Signs	117
Positive Signs	118
Physiologic Adaptation to Pregnancy	118
Reproductive Changes	118
Endocrine Changes	120
Hematologic Changes	120
Cardiovascular Changes	121
Respiratory Changes	121
Musculoskeletal Changes	121
Gastrointestinal Changes	122
Urinary Changes	122
Integumentary Changes	123
Psychological Adaptation to Pregnancy	123
First Trimester Task: Accept the Pregnancy	123
Second Trimester Task: Accept the Baby	124
Third Trimester Task: Prepare for Parenthood	124
Changing Nutritional Requirements of Pregnancy	125
Energy Requirements and Weight Gain	125
Protein Requirements	125
Mineral Requirements	125
Vitamin Requirements	129
Dietary Supplementation During Pregnancy	129
Special Nutritional Considerations	130

<b>7 Prenatal Care</b>	<b>134</b>
Assessment of Maternal Well-Being During Pregnancy	135
First Prenatal Visit	135
Subsequent Prenatal Visits	139
Assessment of Fetal Well-Being During Pregnancy	140
Fetal Kick Counts	140
Ultrasonography	140
Doppler Flow Studies	142
Maternal Serum Alpha-fetoprotein Screening	142
Triple-Marker (or Multiple-Marker) Screening	142
Amniocentesis	142
Chorionic Villus Sampling	143
Percutaneous Umbilical Blood Sampling	144
Nonstress Test	144
Vibroacoustic Stimulation	145
Contraction Stress Test	145
Biophysical Profile	145
The Nursing Process for Prenatal Care	146

## UNIT 4

### Labor and Birth 167

<b>8 Labor Process</b>	<b>169</b>
The Four Essential Components of Labor	170
Passageway	170
Passenger	172
Powers	176
Psyche	177
The Process of Labor	177
The Onset of Labor	177
Mechanisms of a Spontaneous Vaginal Delivery	179
Stages and Duration of Labor	181
Maternal and Fetal Adaptation to Labor	182
Maternal Physiologic Adaptation	182
Maternal Psychological Adaptation	183
Fetal Adaptation to Labor	183
<b>9 Pain Management During Labor and Birth</b>	<b>188</b>
The Pain of Labor and Childbirth	189
Uniqueness of Labor and Birth Pain	189
Physiology and Characteristics of Labor Pain	189
Factors Influencing Labor Pain	189
Principles of Pain Relief During Labor	190
Pain Management Techniques	190
Nonpharmacologic Interventions	190
Pharmacologic Interventions	195
<b>10 Nursing Care During Labor and Birth</b>	<b>207</b>
<b>THE NURSE'S ROLE DURING ADMISSION</b>	<b>208</b>
Immediate Assessments	208
Birth Imminence	208
Fetal Status	209
Risk Assessment	210
Maternal Status	210
Additional Assessments	210
Maternal Health History and Physical Assessment	210
Labor Status	211
Labor and Birth Preferences	214
Performing Routine Admission Orders	214

## THE NURSE'S ROLE: ONGOING ASSESSMENT OF UTERINE CONTRACTIONS AND FHR 215

- Monitoring Uterine Contractions 215
  - External Methods 215
  - Internal Method 215
- Monitoring FHR 215
  - Intermittent Auscultation of FHR 217
  - Continuous EFM 217
  - Evaluating FHR Patterns 219
  - Measures Used to Clarify Nonreassuring FHR Patterns 223

## THE NURSE'S ROLE DURING EACH STAGE OF LABOR 224

- The Nursing Process During the First Stage of Labor (Dilation) 224
- The Nursing Process During the Second Stage of Labor: Expulsion of the Fetus 232
- The Nursing Process During the Third Stage of Labor: Delivery of Placenta 237
- The Nursing Process During the Fourth Stage of Labor 240

## 11 Assisted Delivery and Cesarean Birth 247

- Version 248
  - External Version 248
  - Internal Version 248
- Induction of Labor 249
  - Indications 249
  - Contraindications 249
  - Labor Readiness 249
  - Cervical Ripening 250
  - Artificial Rupture of Membranes 251
  - Oxytocin Induction 251
  - Nursing Care 251
- Amnioinfusion 252
  - Contraindications and Possible Complications 252
  - Nursing Care 252
- Assisted Delivery 252
  - Episiotomy 252
  - Vacuum-Assisted Delivery 253
  - Forceps-Assisted Delivery 254
  - Nursing Care 254
- Cesarean Birth 255
  - Indications 255
  - Incidence 255
  - Risks 255
  - Incision Types 256
  - Steps of a Cesarean Delivery 257
  - Nursing Care 260
- Vaginal Birth After Cesarean 264
  - Prerequisites 264
  - Contraindications 264
  - Procedure 264
  - Nursing Care 264

## UNIT 5

### Postpartum and Newborn 269

#### 2 The Postpartum Woman 271

- Maternal Adaptation During the Postpartum Period 272
  - Physiologic Adaptation 272
  - Psychological Adaptation 276

Nursing Process for the Early Postpartum Period 278

Nursing Process for Postpartum Care After Cesarean Birth 286

Nursing Process for Preparing the Postpartum Woman for Discharge 289

## 13 Nursing Assessment of Newborn Transition 297

- Physiologic Adaptation 298
  - Respiratory Adaptation 298
  - Cardiovascular Adaptation 299
  - Thermoregulatory Adaptation 299
  - Metabolic Adaptation 300
  - Hepatic Adaptation 300
  - Behavioral and Social Adaptation 301
- Nursing Assessment of the Normal Newborn 301
  - General Body Proportions and Posture 302
  - Vital Signs 302
  - Physical Measurements 302
  - Head-to-Toe Assessment 304
  - Neurologic Assessment 311
  - Behavioral Assessment 313
  - Gestational Age Assessment 313

## 14 Newborn Nutrition 317

- Choosing a Feeding Method 318
  - Culture 318
  - Age and Education 318
  - Past Experience 318
  - Intent to Return to Work or School 318
- Breast-feeding 319
  - Advantages and Disadvantages of Breast-feeding 319
  - Physiology of Breast-feeding 320
  - Composition of Breast Milk 321
  - Nutritional Needs of the Breast-feeding Woman 321
  - Nursing Care of the Breast-feeding Woman 322
- Formula Feeding 328
  - Advantages and Disadvantages of Formula Feeding 328
  - Composition of Formula 329
  - Nursing Care of the Formula Feeding Woman 329

## 15 The Normal Newborn 337

- The Nursing Process in Immediate Stabilization and Transition of the Newborn 338
- The Nursing Process in Providing Care to the Normal Newborn 345
- The Nursing Process in Preparing the Newborn for Discharge 350

## UNIT 6

### Childbearing at Risk 363

#### 16 Pregnancy at Risk: Conditions That Complicate Pregnancy 365

- Pregnancy Complicated by Medical Conditions 366
  - Diabetes Mellitus 366

## Nursing Process for the Pregnant Woman With DM 370

Cardiovascular Disease 373

Anemia 375

Asthma 377

Epilepsy 378

Infectious Diseases 379

## Nursing Process for the Pregnant Woman With an STI 386

## Pregnancy Complicated by Intimate Partner Violence 388

Clinical Manifestations and Diagnosis 389

Treatment 390

Nursing Care 391

## Pregnancy Complicated by Age-Related Concerns 392

Adolescent Pregnancy 392

Pregnancy in Later Life 394

# 17 Pregnancy at Risk: Pregnancy-Related Complications 400

## Hyperemesis Gravidarum 401

Clinical Presentation 401

Treatment 401

Nursing Care 402

## Bleeding Disorders 402

Ectopic Pregnancy 402

Early Pregnancy Loss 404

Incompetent Cervix 407

Hydatidiform Mole 407

Placenta Previa 409

Abruptio Placentae 410

## Nursing Process for the Woman With a Bleeding Disorder 412

## Hypertensive Disorders in Pregnancy 414

Gestational Hypertension 414

Preeclampsia/Eclampsia 414

Chronic Hypertension and Preeclampsia Superimposed on Chronic Hypertension 422

## Multiple Gestation 423

Clinical Presentation 424

Treatment 424

Nursing Care 424

## Blood Incompatibilities 424

Rh Incompatibility 424

ABO Incompatibility 425

# 18 Labor at Risk 430

## Dysfunctional Labor (Dystocia) 431

Complications 431

Clinical Manifestations and Diagnosis 431

Causes of Labor Dysfunction 431

Treatment 432

Nursing Care 433

## Premature Rupture of Membranes 433

Clinical Manifestations and Diagnosis 434

Treatment 434

Nursing Care 434

## Preterm Labor 435

Clinical Manifestations and Diagnosis 435

Treatment 435

## Nursing Process for the Woman With Preterm Labor 437

## Post-term Pregnancy and Labor 438

Clinical Manifestations and Diagnosis 438

Treatment 439

Nursing Care 439

## Intrauterine Fetal Death 439

Clinical Manifestations and Diagnosis 439

Treatment 439

Nursing Care 439

## Emergencies Associated With Labor and Birth 440

Amniotic Fluid Embolism 440

Shoulder Dystocia 440

Umbilical Cord Prolapse 442

Uterine Rupture 442

Placental and Umbilical Cord Abnormalities 444

# 19 Postpartum Woman At Risk 448

## Postpartum Hemorrhage 449

Early Postpartum Hemorrhage 449

## Nursing Process for the Woman With Early Postpartum Hemorrhage 451

Late Postpartum Hemorrhage 455

## Postpartum Infection 456

Endometritis 456

Wound Infection 458

Mastitis 459

Urinary Tract Infection 460

## Thromboembolic Disorders 465

Risk Factors 465

Superficial and Deep Vein Thrombophlebitis 471

Pulmonary Embolism 465

## Postpartum Psychiatric Disorders 468

Postpartum Depression 468

Postpartum Psychosis 469

## Special Postpartum Situations 470

Grief in the Postpartal Period 470

Malattachment in the Postpartal Period 471

# 20 The Newborn at Risk: Gestational and Acquired Disorders 476

## VARIATIONS IN SIZE AND GESTATIONAL AGE 477

### Gestational Age Assessment 477

Physical Maturity 477

Neuromuscular Maturity 477

### The Small-for-Gestational-Age Newborn 478

Contributing Factors 480

Characteristics of the SGA Newborn 480

Potential Complications 480

Nursing Care 481

### The Large-for-Gestational Age Newborn 481

Contributing Factors 481

Characteristics of the LGA Newborn 482

Potential Complications 482

Nursing Care 482

### The Preterm Newborn 482

Contributing Factors 483

Characteristics of the Preterm Newborn 483

Complications of the Preterm Newborn 483

### Nursing Process for the Preterm Newborn 486

### The Post-term Newborn 493

Contributing Factors 493

Characteristics of the Post-term Newborn 493

Potential Complications 493

Nursing Care 494

## ACQUIRED DISORDERS 494

Respiratory Disorders 494

<i>Transient Tachypnea of the Newborn</i>	494
<i>Meconium Aspiration Syndrome</i>	495
<i>Sudden Infant Death Syndrome</i>	495
<b>Hemolytic Disease of the Newborn</b>	<b>497</b>
<i>Rh Incompatibility</i>	497
<i>ABO Incompatibility</i>	497
<i>Prevention</i>	497
<i>Clinical Manifestations</i>	498
<i>Treatment and Nursing Care</i>	498
<b>Newborn of a Diabetic Mother</b>	<b>499</b>
<b>Newborn of a Chemically Dependent Mother</b>	<b>500</b>
<i>Fetal Alcohol Syndrome</i>	500
<i>Newborn With Withdrawal Symptoms</i>	500
<b>Newborn With a Congenitally Acquired Infection</b>	<b>501</b>

<i>Hypospadias and Epispadias</i>	534
<i>Exstrophy of the Bladder</i>	534
<i>Ambiguous Genitalia</i>	537
<b>Inborn Errors of Metabolism</b>	<b>537</b>
<i>Phenylketonuria</i>	537
<i>Galactosemia</i>	538
<i>Congenital Hypothyroidism</i>	538
<i>Maple Syrup Urine Disease</i>	539
<b>Chromosomal Abnormalities</b>	<b>539</b>
<i>Down Syndrome</i>	539
<i>Turner Syndrome</i>	540
<i>Klinefelter Syndrome</i>	541

## **Glossary 545**

## **English-Spanish Glossary 555**

## **Answers to Workbook Questions 557**

## **Appendix A: Standard and Transmission-Based Precautions 577**

## **Appendix B: NANDA-Approved Nursing Diagnoses 580**

## **Appendix C: JCAHO "Do Not Use" List of Abbreviations 582**

## **Appendix D: Good Sources of Essential Nutrients 583**

## **Appendix E: Breast-feeding and Medication Use 584**

## **Appendix F: Cervical Dilation Chart 586**

## **Appendix G: Temperature and Weight Conversion Charts 587**

## **Index 591**

## **21 The Newborn At Risk: Congenital Disorders 506**

<b>Congenital Malformations</b>	<b>507</b>
<i>Cleft Lip and Palate</i>	508
<b>Nursing Process in Caring for the Newborn With Cleft Lip and Palate</b>	<b>509</b>
<i>Esophageal Atresia</i>	514
<i>Imperforate Anus</i>	515
<i>Hernias</i>	515
<i>Spina Bifida</i>	517
<b>Nursing Process in Caring for the Newborn With Myelomeningocele</b>	<b>519</b>
<i>Hydrocephalus</i>	520
<b>Nursing Process in Caring for the Postoperative Newborn With Hydrocephalus</b>	<b>522</b>
<i>Development of the Heart</i>	524
<i>Common Types of Congenital Heart Defects</i>	524
<i>Risk Factors</i>	528
<i>Clinical Presentation</i>	528
<i>Treatment and Nursing Care</i>	529
<i>Congenital Talipes Equinovarus</i>	530
<i>Congenital Hip Dysplasia</i>	531
<b>Nursing Process in Caring for the Newborn in an Orthopedic Device or Cast</b>	<b>532</b>