

CONTENTS

Contributors, vii
Foreword, xiv
Preface, xv
Acknowledgements, xviii

PART 1 The midwife in context

- 1 Global midwifery—an international perspective, 1
- 2 An introduction to midwifery history in the United Kingdom, 25
- 3 The regulation of midwives, 49
- 4 Clinical governance and the midwife, 65
- 5 Learning, being, and developing as a midwife, 77
- 6 Being a student midwife, 114
- 7 Evidence-based practice and research for practice, 122
- 8 Leadership and management in midwifery, 149
- 9 An introduction to ethics for midwifery practice, 168
- 10 Law and the midwife, 178
- 11 Pharmacology and the midwife, 200

PART 2 Childbirth in context

- 12 Sociocultural and spiritual context of childbearing, 225
- 13 Psychological context of childbirth, 238
- 14 Sex, gender, sexuality, and childbearing, 254
- 15 National Health Service policy and midwifery, 265
- 16 Maternity service provision, 284
- 17 Legal frameworks for the care of the child, 296

PART 3 Public health, health promotion and childbirth

- 18 Epidemiology, 313
- 19 Infection prevention and control in maternity care, 349
- 20 Nutrition for a healthy pregnancy, 366
- 21 Complementary therapies and natural remedies in pregnancy and birth, 378
- 22 Public health, health promotion, and education, 391
- 23 Preconception care, 411

- 24 Education for parenthood, 428
- 25 Physical preparation for childbirth and beyond, 444
- 26 Vulnerable women and families, 466

PART 4 The anatomy and physiology of fertility, conception and pregnancy

- 27 Anatomy of male and female reproduction, 483
- 28 Female reproductive physiology — cyclical changes in the ovaries, uterus, and mammary gland, across the infertile cycle, 505
- 29 Genetics and genomics, 527
- 30 Fertility and its control, 550
- 31 Infertility and assisted conception, 567
- 32 From fertilisation to foeto-placental development, 584
- 33 The fetal skull, 615

PART 5 Pregnancy

- 34 Maternal cardiovascular, respiratory, haemodynamic, uterine, and gastrointestinal-mammary adaptations to the fertile cycle, 633
- 35 Antenatal care, 652
- 36 Antenatal investigations, 680
- 37 The choice and personalisation agenda: place of birth and care, 693

PART 6 Labour and birth

- 38 Neuroendocrinology of parenting: from nocturnal uterine activation to suckling-lactation and emotional connectivity between parents and infant, 711
- 39 Care in the first stage of labour, 739
- 40 Care in the second stage of labour, 773
- 41 Supporting choices in reducing pain and fear during labour, 788
- 42 Care in the third stage of labour, 808
- 43 The pelvic floor, 831

PART 7 Postnatal care and the care of the newborn baby

- 44** Women and family-centred postnatal care, 867
- 45** Physiology, assessment, and care of the newborn, 883
- 46** Thermoregulation, 928
- 47** Infant feeding and relationship building, 948

PART 8 Women and babies with complex needs

- 48** The preterm baby and the small baby, 987
- 49** Respiratory and cardiac disorders in the neonate, 1011
- 50** Neonatal jaundice, 1037
- 51** Neonatal infection, 1059
- 52** Congenital anomalies and metabolic and endocrine disorders, 1073
- 53** Pregnancy loss and baby deaths, 1098
- 54** Nausea and vomiting, 1116
- 55** Bleeding in pregnancy, 1124
- 56** Hypertensive and medical disorders in pregnancy, 1148

- 57** Sexually transmitted infections, 1184
- 58** Abnormalities and anomalies of the genital tract, 1198
- 59** Multiple pregnancy and birth: implications for midwives, women, and their families, 1212
- 60** Preterm labour and birth, 1229
- 61** Induction of labour and post-term pregnancy, 1244
- 62** Presentation and prolapse of the umbilical cord, 1257
- 63** Rhythmic variations of labour, 1264
- 64** Malpositions and malpresentations, 1274
- 65** Obstructed labour and uterine rupture, 1307
- 66** Obstetric interventions, 1315
- 67** Shoulder dystocia, 1333
- 68** Complications related to the third stage of labour, 1349
- 69** Maternal morbidity following childbirth, 1368
- 70** Mental health and well being in pregnancy and childbirth, 1385
- 71** Pregnancy loss and the death of a baby: grief and bereavement care, 1406
- 72** Midwifery—practising in a complex world, 1433

Index, 1441

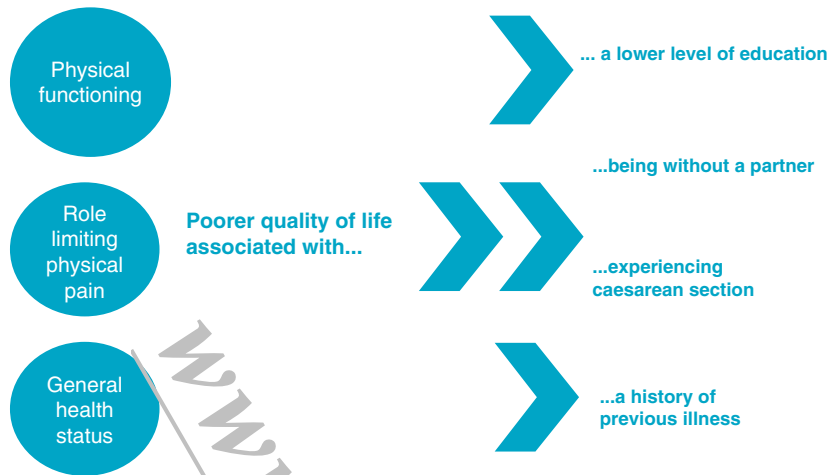


Figure 1.3 Women's perceptions of maternal morbidity (Derived from Angelini et al (2018))

BOX 1.10 Predisposition towards maternal morbidity

Possible leading factors associated with an increased risk of maternal morbidity

Pre-conception risks include:

- Maternal age >45 years
- Pre-existing cardiac or hypertensive disorders

Pregnancy-obstetrical risks include:

- Gestational hypertension, pre-eclampsia, and eclampsia
- Caesarean delivery, whether pre-term or term
- Operative vaginal delivery and birth
- Maternal sepsis
- The placenta accreta spectrum
- Antepartum or postpartum haemorrhage

Derived from Wilson (2020)

Wilson's attempts concur with Umar et al (2019) who maintain that early warning systems (EWS) are effective tools to predict severe morbidity across a 'general obstetric population' and to foresee mortality in critically ill obstetric patients. They also claim that EWS can contribute to improved quality of care, preventing progressive obstetric morbidity, and improving health outcomes. However, they admit that there is inadequate evidence of EWS being effective in reducing

maternal mortality across all settings (see online reflective activity 1.1).

PERINATAL MORTALITY

Perinatal mortality comprising stillbirths and deaths occurring in the first month of life (neonatal) along with child mortality remain matters of concern (See Boxes 1.1 and 1.12). If all countries reached the SDG child survival targets by 2030, 11 million children under five years of age would be saved—more than half of them in Sub-Saharan Africa (UNICEF 2020).

An overlooked tragedy is that of stillbirths. The every newborn action plan (ENAP) is designed to address this (UNICEF 2020). To help save babies, international organisations, governments, and partners must urgently ensure that every woman is supported through pregnancy and childbirth by skilled health personnel.

INEQUITIES ASSOCIATED WITH BEING A MOTHER

Inequalities of access to care, financial and social protection, information, prevention of diseases, and pregnancy complications disproportionately affect poor

BOX 1.11 Perinatal & child mortality

Some sobering facts about perinatal and ‘under-five’ mortality

Sustainable Development Goal (SDG) target for neonatal mortality—<12/1000 live births by 2030

SDG for stillbirths—12/1000 total births by 2030

In 2019:

- 6,700 deaths/day (75% in 1st week of life and 33% on 1st day)
- ±2.4 million deaths in 1st month of life
- Central and South Asia and Sub-Saharan Africa account for >80% of 5.2 million deaths in children under five years; Nigeria and India account for one-third of these

Stillbirths:

- 2 million a year (84% in low- and middle-income countries—75% in Sub-Saharan Africa)
- >40% occur at the onset of labour

UNICEF (2020, 2020a)

BOX 1.12 Causes of neonatal deaths

- Birth asphyxia
- Congenital abnormalities
- Low birthweight
- Prematurity
- Neonatal infections including tetanus
- Complications of labour
- Death of a mother during childbirth (babies of mothers who have died in childbirth are 3–10 times more likely to die than those with live mothers)

Derived from UNICEF (2020)

mothers and mothers from populations facing social exclusion, pushing motherhood to exacerbate existing inequalities (WHO 2020). SDG3 seeks to ensure healthy lives and promote wellbeing for all at all ages (WHO and World Bank 2017).

The Available, Accessible, Acceptable Quality (AAAQ) of services is an issue for women in many LMICs (Kemp et al 2021). The AAAQ human rights-based framework (WHO 2016) identifies the AAAQ of healthcare facilities, goods, and services as essential aspects of the right to health. The framework is useful for assessing effective coverage for sexual, reproductive, maternal and newborn health (SRMNH) services guided by the key human rights principles of participation, equality, nondiscrimination, and accountability (see Box 1.13).

The urban–rural, developed–developing, high- and low-income divides have their greatest disadvantaging effects on women and birthing people when they are mothers. Midwives should always remember and reinforce that healthcare is a human right and advocate for services expansion and promotion of more effective and efficient use of resources so that women are healthy, enabled, and empowered. Societies, families, and communities should be encouraged to value, compensate, count, and be accountable to women including midwives, who comprise 99% of the workforce and are both recipients and providers of care (see online reflective activity 1.2).

THE SIGNIFICANCE OF THE HUMAN DEVELOPMENT INDEX

The process of modernisation has long been linked with development. Development occurs at different rates across countries and is inextricably linked with numerous health issues. As countries develop, childbirth becomes safer. Progress to modernity tends to be inversely related to the lifetime risk of dying in childbirth. However, in some instances, medicalisation of birth and high rates of caesarean section can increase mortality and morbidity (Bauserman et al 2020). Through its development programme, the UN created the HDI based on identified human development indicators. The HDI is used to analyse regional and national trends in development and stresses that people and their capabilities should be the decisive measures when assessing the development of a country rather than economic growth (UNDP 2020). Table 1.1 demonstrates the connection between the level of development in a country and the most recent estimates of maternal mortality.

Another index assessing the fragility of a state, the *Fragile States Index* (2020), reported that five countries’ fragility had worsened and the fragility of another five had improved. Episodes of conflict, instability, and repression had prevented stability in some areas with economic and social inequality working against progress. Only time will reveal how the COVID-19 pandemic will have increased the fragility of many states and possibly thrown the index into a different order in the coming years. The MMR in the ten most fragile countries has varied considerably with the lifetime risk of dying varying from 1 in 15 to 1 in 1,000 (Table 1.5).

BOX 1.13 'AAAQ' WHO human rights framework/infographic**AVAILABILITY** Need to have sufficient quantity of functioning public health and healthcare facilities, goods and services, and programmes.

- Do you collect data disaggregated by different and multiple stratifiers—such as infant/adolescent/older persons, rural/urban, people with disabilities, ethnic groups, men/women/transgender—on the availability of health facilities, goods, services, and programmes for these populations?
- Are you looking at coverage gaps for populations that are not receiving a sufficient quantity of facilities, goods, services, and programmes?
- Do you monitor the ratio of skilled health workers to the population's needs?

ACCESSIBILITY Health facilities, goods and services have to be accessible (physically accessible, affordable, and accessible information) to everyone within the jurisdiction of the State party without discrimination.

- Have you identified barriers to safe physical accessibility to facilities, goods, services, and programmes for different vulnerable or marginalised groups?
- Have you provided norms and standards that seek to overcome barriers to physical accessibility?
- Have you identified financial barriers to services for different vulnerable or marginalised groups?
- Do you monitor the extent to which health-related information is made available at country/district level for different vulnerable or marginalised groups including people with disabilities?

- Do your technical documents provide accurate and understandable information about your health area for all groups?

ACCEPTABILITY: The social and cultural distance between health systems and their users determine acceptability. All health facilities, goods, and services must be respectful of medical ethics, culturally appropriate, and sensitive to gender and age. They must also be designed to respect confidentiality and improve the health status of those concerned.

- Do you ensure that health facilities, goods, services, and programmes are people-centred and cater to the specific needs of different populations?
- Are WHO programmes acceptable to diverse groups?
- Do you ensure that goods, facilities, services, and programmes are realised in accordance with international standards of medical ethics for confidentiality and informed consent?

QUALITY: Health facilities, goods, and services must be scientifically and medically approved and of good quality.

- Have you established or ensured norms and standards of quality for
 - Health services?
 - Health facilities?
 - Health professionals?
 - Essential medicines and equipment?
 - Determinants of health?

Source: World Health Organization (WHO): *Gender, equity and human rights. Availability, accessibility, acceptability, quality infographic* (website). <https://www.who.int/gender-equity-rights/knowledge/aaaq-infographic/en>. 2016.

It is also important to recognise the differing concepts that various people groups may hold depending on the level of modernisation and development in their country of origin (Table 1.4).

During the process of development, cultural variations unique to each country are thought to arise from variation in the route through which national development has advanced and are entrenched in historical forces (Beugelsdijk and Welze 2018:31). Colonisation inevitably has an effect on this route. The concept of time can also be very variable, and this, along with other cultural issues, needs to be understood by those who would attempt to cross cultures (Kemp et al 2021).

COVERAGE AND SKILLED ATTENDANCE AT BIRTH

During the twenty-first century, as stated earlier, emphasis has increasingly shifted from reducing maternal and neonatal mortality, morbidity, and stillbirth to achieving safe and satisfying birthing experiences and wellbeing. The Global Health Agenda (2016–30) focuses on ensuring that everyone everywhere, as a human right, has access to basic healthcare at a cost that does not leave the individual impoverished. Poverty, environmental vulnerability, hunger, conflict, discrimination, and violence are still barriers (WHO and World Bank 2017). Initiatives like the

TABLE 1.4 Situations leading to inequities associated with being a mother

Situation	How it leads to inequity	Impact
Woman's position in the family	Financial deprivation Lack of freedom of movement Lack of decision-making power	Difficult for her to prepare for unexpected needs during pregnancy, may lead to delay in intrapartum transfer during an emergency
Having a newborn baby	Determines whether the woman can work for gain or outside the home	Woman unable to empower herself economically
Genetic makeup and gender issues	Gender not always considered during pandemics and epidemics	Women more susceptible to exposure and infections, and many could also be mothers
Women and girls more likely to be less or uneducated	In some societies, female children are not always afforded an opportunity to go to school Inability to read and write leaves the woman unable to find out information for herself and her family	Predisposes to difficulties for women and birthing people during and after pregnancy that predispose them to maternal and neonatal deaths or stillbirths (Lavender et al 2020)
Power relations in the family	Influences women's degree of agency	Lack of decision-making power predisposes women to maternal and neonatal deaths
Natural and man-made disasters	Compromises survival of women, putting them in extremely precarious situations, especially in conflict-ridden and politically fragile countries	Health services are inaccessible, inadequate, or nonexistent, leading to glaring disparities between mothers from high- and low-income countries (Table 1.1), and increases mental health issues

TABLE 1.5 Living in the world's most fragile states

COMPARISONS OF MATERNAL MORTALITY RATIOS (MMRS) IN THE WORLD'S MOST FRAGILE STATES			
Country	Position in Fragile State Index (2020)	MMR (2017)	Lifetime risk of dying due to pregnancy/birth
Yemen	1	109	1 in 150
Somalia	2	305	1 in 20
South Sudan	3	785	1 in 18
Syria	4	20	1 in 1000
Democratic Republic of the Congo	5	341	1 in 34
Central African Republic	6	829	1 in 25
Chad	7	1140	1 in 15
Sudan	8	207	1 in 75
Afghanistan	9	638	1 in 33
Zimbabwe	10	360	1 in 55

Sources: Fragile States Index (2020); WHO (2019)

Universal Health Coverage (UHC) and EWEC address these inequalities and provide specific focus on SDGs 3.8, 3.8.1, and 3.8.2, which cover women and newborns (see [Box 1.14](#)).

The WHO and partners redefined the term *skilled birth attendant* (SBA) to *skilled health personnel* ([Box 1.15](#)) to refer exclusively to an accredited health professional ([WHO 2018](#)).

Traditional birth attendants (TBAs) are *not* included. The revised definition obliged LMICs to revise curricula and revisit and adapt international standards of education and practice of their MNH care providers as defined by the ICM. Coverage is a challenge in LMICs, 73 of which account for 96% of the world's annual maternal deaths, 91% of all stillbirths, and 93% of all newborn deaths, and yet they have fewer than 42% of the world's midwives, nurses, and physicians (Kemp et al 2021) (see [Figure 1.4](#)).

SOCIOECONOMIC FACTORS AFFECTING COVERAGE OF MIDWIFERY CARE

Socioeconomic status and demographic indicators between and within countries also affect the likelihood that women will receive skilled care during childbirth. Only 56% of women in the world's poorest countries have skilled health personnel at birth, compared to 94%

BOX 1.14 Sustainable Development Goal (SDG) targets 3.8, 3.8.1, and 3.8.2

SDG target 3.8: Achieve universal health coverage, including financial risk protection, access to quality essential healthcare services and access to safe, effective, quality, and affordable essential medicines and vaccines for all.

SDG indicator 3.8.1: Coverage of essential health services (defined as the average coverage of essential services based on tracer interventions that include reproductive, maternal, newborn, and child health; infectious diseases; noncommunicable diseases; and service capacity and access; among the general and the most disadvantaged population).

SDG indicator 3.8.2: Proportion of population with large household expenditures on health as a share of total household expenditure or income.

World Bank, World Health Organization (WHO): *Tracking universal health coverage: 2017 Global Monitoring Report*, Geneva, WHO, 2017

BOX 1.15 Definition of skilled health personnel

Skilled health personnel are competent maternal and newborn health (MNH) professionals educated, trained, and regulated to national and international standards. They are competent to:

1. Provide and promote evidence-based, human rights –based, quality, socioculturally sensitive, and dignified care to women and newborns
2. Facilitate physiological processes during labour and delivery to ensure a clean and positive childbirth experience
3. Identify and manage or refer women and/or newborns with complications

In addition, as part of an integrated team of MNH professionals (including midwives, nurses, obstetricians, paediatricians, and anaesthetists), they perform all signal functions of emergency maternal and newborn care to optimise the health and wellbeing of women and newborns. Within an enabling environment, midwives trained to International Confederation of Midwives standards can provide nearly all of the essential care needed for women and newborns.

*In different countries, these competencies are held by professionals with varying occupational titles.

World Health Organization (WHO): *Definition of skilled health personnel providing care during childbirth: the 2018 joint statement by WHO, UNFPA, UNICEF, ICM, ICN, FIGO and IPA*, Geneva, WHO, 2018

in the richest countries. Women in the richest 20% of their population are almost twice as likely to have skilled health personnel at birth. Ironically, wealth does not always guarantee high-quality care; growing medicalisation of childbirth becomes a burgeoning problem as countries become wealthier ([McDougal et al 2016](#)).

Socioeconomic factors impact both women and midwives. Midwives may not be paid a living wage, or not be paid at all, necessitating them to take other jobs or tempting them to demand unauthorised payments from clients; they may have inadequate or unsafe accommodation or be at risk of violence; they may be forced to migrate because of conflict or climate change; they may themselves be substance abusers ([WHO 2016](#); [Kemp et al 2021](#); [Pezaro et al 2020](#)). Midwives may be ill regarded because of their gender, their ethnicity, or perceptions of the profession by others; this limits midwives' voices and their ability to transform societies ([Kemp et al 2021](#)).