

1. Introduction

1.1 Background

Preterm infants have a gestational age below 37 weeks at birth and low-birth-weight (LBW) infants have a birth weight below 2.5 kg (1-3). Global estimates of prematurity and LBW range from 15% to 20%. In 2015, an estimated 20.5 million live births were LBW, with 91% of those being from low- and middle-income countries (LMICs), mainly in southern Asia (48%) and sub-Saharan Africa (24%) (1-3).

Approximately 45% of all children under the age of five who die are newborns (2.7 out of 5.9 million in 2014), and 60-80% of those newborns who die are premature and/or small for gestational age (4). Preterm and LBW infants have a 2- to 10-fold higher risk of mortality than infants born at term (at least 37 weeks' gestation) and with normal birth weight (at least 2.5 kg), and are particularly vulnerable to impaired respiration, difficulty feeding, growth failure,

poor body temperature regulation, and infection (5-7). Preterm and LBW infants have a higher risk of developmental disabilities, including cerebral palsy and retinopathy of prematurity, and long-term adult-onset chronic conditions such as cardiovascular disease (8,9).

The survival, health, growth and neurodevelopment of preterm and LBW infants remains concerning in many countries and the pace of improvement has been slow (10-13). Reasons include the complexities of caring for these vulnerable infants and preventing complications. A review of 203 studies from low-, middle- and high-income settings, about "what matters" to families about the care of preterm or LBW infants reported that families want a positive outcome for their baby, to be involved in providing care for their baby, and to take an active role in deciding what interventions are given to their baby (see values and preferences listed in Table 1.1) (14).

Table 1.1 Family values and preferences about the care of their preterm or low-birth-weight infant

Domain	Descriptor
Positive outcome	Positive outcome for the child
Active involvement in care	Delivering care
	Fathers and partners involved
	Opportunities for parenting
	Shared decision-making and consent
Coping at home	Accessing support in a crisis
	Autonomy
	Extended family support and community resources
	Health professional expertise in the community
	Preparation for discharge
	Transition arrangements
Emotional support for family	Support for all parents
	Additional support for mothers and fathers, acknowledging that they may have different emotional support needs
	Support from the wider family
	Support from other parents in similar situations

Domain	Descriptor
Health-care environment	Access to babies
	Orientation and familiarity with the neonatal intensive care unit (NICU)
	Balance between privacy and monitoring
	Staffing and equipment levels
Information needs met	Information about the baby
	Frequent updates
	How information is given
	Matching needs with information
Logistical support	Accommodation (comfort and facilities)
	Broader family support and impact
	Costs of treatment
	Parental leave
Positive relationships with staff	Compassion and sensitivity
	Consistency in care and communication
	Health professional expertise and care
	Respect, collaboration and trust

Source: Hurt et al., 2022 (14).

The care of the preterm and LBW infant is a global priority and a component of the United Nations *Every Woman Every Child* (EWEC) *Global Strategy for Women's, Children's and Adolescents' Health 2016–2030* (4), the United Nations Children's Fund (UNICEF) *Every Child Alive* campaign (15), the World Health Organization (WHO) 2025 global nutrition targets (16), and the joint WHO-UNICEF *Every Newborn Action Plan* (ENAP) to end preventable deaths (17,18).

The WHO Departments of Maternal, Newborn, Child and Adolescent Health and Ageing (MCA) and Sexual and Reproductive Health and Research (SRH) have previously developed three guidelines for the care of preterm or LBW infants:

- *Guidelines on optimal feeding of low-birth-weight infants in low- and middle-income countries*, 2011 (19);
- *WHO recommendations on interventions to improve preterm birth outcomes*, 2015 (20); and
- *Recommendations for management of common childhood conditions*, 2012 (21).

However, new evidence has emerged in many areas since the development of those guidelines.

1.2 Target audience

The recommendations in this guideline are intended to inform the development of national and subnational health policies, clinical protocols and programmatic guides. Therefore, the target audience includes national and subnational public health policy-makers, implementers and managers of maternal, newborn and child health programmes, health-care facility managers, supervisors/instructors for in-service training, health workers (including midwives, auxiliary nurse-midwives, nurses, paediatricians, neonatologists, general medical practitioners and community health workers), nongovernmental organizations, professional societies involved in the planning and management of maternal, newborn and child health services, academic staff involved in research and in the pre-service education and training of health workers, and those involved in the education of parents.

1.3 Scope of the guideline

The recommendations cover the care of the preterm or LBW infant in any health-care facility or community setting from birth to 24 months of age unless otherwise indicated (see Table 1.2 and Figure 1.1). There are 25 recommendations and 1 good practice statement. They are summarized in Table 1 in the executive summary and presented in detail in Chapter 3. Of the recommendations, 11 are new and 14 are updated. There are 11 strong recommendations for all preterm or LBW infants and 14 recommendations that are conditional on particular contexts or conditions. Sixteen recommendations are for preventive and promotive

care (section A of Chapter 3), six are for care for complications (section B) and three are for family involvement and support (section C). A good practice statement was made for parental leave and entitlements because the GDG determined that these have obvious benefits, although there was little evidence available.

Other recommendations for care of the preterm or LBW infant (i.e. the items in Figure 1.1 that are in italics, not bold) are covered elsewhere, or will be included in a future update (see Annex 1). The recommendations presented here are also complementary to existing WHO guidelines for antenatal, intrapartum and postnatal care (20,22-24).

Table 1.2. Framework for the WHO recommendations for care of the preterm or low-birth-weight infant

Target population (P)	Preterm (<37 weeks' gestation) or low-birth-weight (LBW) (<2.5 kg) infants
Interventions (I)	A. Preventive and promotive care B. Care for complications C. Family involvement and support
Intervention period	From birth to 24 months of age
Comparators (C)	Usual care or no intervention
Comparator period	From birth to 24 months of age
Outcomes (O)	<ul style="list-style-type: none"> • Critical outcomes: infant all-cause mortality, morbidity, growth, neurodevelopment at latest follow-up • Other outcomes: other infant outcomes that are specific for the intervention at latest follow-up
Outcome period	Unrestricted
Setting	Health-care facility or home, in any country or setting
Subgroups	<ul style="list-style-type: none"> • Very preterm (< 32 weeks' gestation) or very LBW (< 1.5 kg) • Other, specific for the intervention

Figure 1.1 Scope of WHO recommendations for care of the preterm or low-birth-weight infant

