

POLICY PAPER

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LOW BIRTH WEIGHT IN ALBANIA: A POLICY REVIEW OF MATERNAL, ANTENATAL, AND POSTNATAL HEALTH STRATEGIES

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Abstract

Low birth weight (LBW), defined as a birth weight below 2500 g, is associated with increased neonatal morbidity and mortality, impaired growth and development, and a higher risk of noncommunicable diseases in later life. In Albania, LBW prevalence was approximately 6% in 2020, and regional disparities and unequal access to healthcare persist. This review evaluated how Albanian maternal, antenatal, and postnatal health policies address the prevention and early management of LBW and identified key policy and implementation gaps. A descriptive policy review was conducted using official documents from the Albanian Ministry of Health and INSTAT. The Action Plan for Sexual and Reproductive Health 2022-2030 could not be obtained in full and was not analyzed; the expired 2017-2021 strategy was reviewed as a historical document only. WHO and UNICEF datasets were used to contextualize LBW trends, and a targeted PubMed and Google Scholar search identified established risk factors and outcomes. Albania's maternal, antenatal, and postnatal health policies are broadly aligned with WHO guidelines. Antenatal protocols recognize risk factors such as iron-deficiency anemia, poor maternal weight gain, maternal undernutrition, and short stature. However, although LBW and its risk factors are acknowledged in national strategies, LBW is not explicitly defined as a primary public health objective. Publicly available data indicate persistent urban-rural disparities, and limited human resources and gaps in publicly reported neonatal data may hinder effective prevention and early management. Although Albania has made progress in maternal and newborn care, LBW remains insufficiently prioritized within national health strategies. Strengthening monitoring, defining clear targets, and improving equitable resource allocation are essential to enhance prevention and early management.

Keywords: Low birth weight, maternal health policy, antenatal care, neonatal outcomes, health systems, Albania

1. Introduction

Low birth weight (LBW) is defined as a birth weight below 2500 g and serves as an indicator of maternal health, fetal growth, pregnancy duration, and the effectiveness of care across these stages [1,2]. LBW may result from preterm birth, restricted fetal growth, or both [3,4]. Not only is LBW important clinically to identify potential pathologies of the mother or child, but it also serves as an important epidemiological marker because it helps identify the current and future burden of disease [1]. LBW newborns are at increased risk of respiratory complications, neurodevelopmental difficulties, and neonatal death, with long-term implications including increased susceptibility to chronic diseases such as obesity and diabetes [2,5]. The global burden remains substantial. The United Nations Children's Fund and the World Health

Organization (WHO) estimate that in 2020, 19.8 million newborns, representing 14.7% of live births, were low birth weight [4]. Although the international target of reducing LBW by 30% from the 2012 baseline was set to be achieved by 2025, the global prevalence only declined from 15.0% to 14.7% between 2012 and 2020, pushing the target horizon towards 2030 [1,4]. Albania, in regard to global trends, had a lower LBW prevalence of approximately 6% in 2020 [2,4]. Nevertheless, this proportion represents a clinically vulnerable population and should not be interpreted as evidence that prevention is complete. National averages can obscure differences in socioeconomic status, geography, service availability, and the quality of antenatal and postnatal care [6]. From 2017 to 2018, the Albania Demographic and Health Survey documented high attendance and use of maternal health services; however, it also reported major inequalities between rural and urban areas [6]. Several factors affecting maternal health are discussed in national antenatal, maternal, and postnatal policies, with particular emphasis on maternal anemia [7,8]. Maternal anemia is associated with an increased risk of low birth weight, while inadequate nutritional intake, insufficient pregnancy weight gain, short maternal stature, pregnancy complications, and preterm birth are also recognized LBW risk factors [7,9,10]. However, the problem remains that LBW is not directly prioritized in the policies, therefore leaving no clear national target or dedicated management framework for it [11,12]. Effective policy, therefore, requires more than nominal service coverage. It requires early contact with antenatal services, standardized assessment of maternal nutrition and anemia, continuity of care, timely referral, skilled delivery, accurate birth-weight measurement, and risk-based postnatal follow-up [5,13]. Albania has developed clinical policies and national strategies based on WHO guidance covering antenatal care, postnatal care, sexual and reproductive health, and health-system development [7,8,11,12]. However, the issue lies with the application of these strategies to create a suitable framework for LBW prevention and early management. This review, therefore, evaluated how Albanian maternal, antenatal, and postnatal health policies address LBW; assessed the degree of alignment between risk-factor recognition, service delivery, monitoring, and equity; and identified priorities for strengthening implementation and accountability.

2. Materials and Methods

2.1. Study design

A descriptive policy review was conducted to evaluate the treatment of LBW in Albanian maternal, antenatal, postnatal, and newborn health policies. The review involved an analysis of national policy documents and a review of the epidemiological and clinical literature. It was designed to identify policy content, internal coherence, measurable commitments, and implementation-relevant gaps rather than to estimate a pooled intervention effect.

2.2. Data sources and document selection

Publicly available documents were identified on the websites and in the archives of the Albanian Ministry of Health and Social Protection, the Institute of Statistics, the Institute of Public Health, the World Health Organization, and the United Nations Children's Fund. The principal national documents were the 2014 antenatal clinical practice protocols, the 2014 postnatal clinical practice protocols, the Strategic Document and Action Plan for Sexual and Reproductive Health 2017–2021, the Albania Demographic and Health Survey 2017–2018, and the National Health Strategy 2021–2030 [6–8,11,12]. International guidance and datasets were used to define the expected policy functions and to contextualize Albania's indicators [1,2,5,13]. The Strategic Document and Action Plan for Sexual and Reproductive Health 2017–2021 was reviewed as a historical policy document because its implementation period has ended; it is not presented

as current policy. A successor document, the Action Plan for Sexual and Reproductive Health 2022–2030 (approved by Ministerial Order No. 171 of 24 March 2023), was excluded from the analysis because its full text could not be obtained before the document search was finalized, so it could not be appraised with the common extraction framework in section 2.3. Findings relating to sexual and reproductive health policy therefore reflect the expired 2017–2021 strategy, which is presented as a historical document, and may not capture current commitments. Statements about the current policy framework are limited to the documents analyzed.

Documents were eligible when they addressed at least one of the following: maternal nutrition or anemia; antenatal service organization; pregnancy risk assessment; delivery and newborn care; postnatal follow-up; maternal or neonatal monitoring; health-system equity; or national targets relevant to birth outcomes. Documents limited to unrelated clinical specialties or containing no maternal or newborn component were excluded. The search and document synthesis were finalized in April 2026.

2.3. Analytical framework

Each document was reviewed using a common extraction framework comprising: (1) explicit recognition or definition of low birth weight; (2) recognition of maternal and pregnancy-related risk factors; (3) preventive actions during antenatal care; (4) procedures for identification, referral, and early postnatal management; (5) measurable targets or indicators; (6) attention to urban–rural and socioeconomic equity; (7) workforce and service-capacity requirements; and (8) data collection, surveillance, and accountability mechanisms. Findings were organized across the continuum from prevention to early management and compared with international recommendations.

2.4. Contextual evidence

A targeted search of PubMed and Google Scholar was undertaken using combinations of the terms “low birth weight,” “maternal anemia,” “maternal nutrition,” “antenatal care,” “risk factors,” “Albania,” and “health policy.” Priority was given to systematic analyses, systematic reviews, international guidelines, and studies supporting risk factors already identified in the national protocols [3,4,9,10]. The search was completed in April 2026, with no restriction on publication date. Four contextual studies, published between 2018 and 2024, were retained. We drew quantitative national service indicators from the Albania Demographic and Health Survey and global low-birth-weight estimates [2,4,6]. No meta-analysis or formal quality-scoring instrument was applied because the primary unit of analysis was policy content.

2.5. Ethical approval

Ethical approval was not required because the study analyzed publicly available policy documents, guidelines, and aggregated population-level indicators. No human participants, patient records, biological samples, or identifiable personal data were involved.

3. Results

3.1. National burden and maternal-care indicators

The estimated percentage of LBW in Albania was approximately 6% in 2020, in comparison to the global prevalence of 14.7% [2,4]. Even though Albania has a lower estimate, the data do not necessarily take into account differences between cities, socioeconomic status, gestational age, or fetal-growth status [6]. This limits the ability to determine whether specific populations carry a disproportionate burden or whether low birth weight predominantly reflects prematurity, fetal growth restriction, or both [3,4].

The services provided for maternal health showed substantial coverage; however, they were accompanied by important quality and equality gaps. In the 2017–2018 Albania Demographic and Health Survey, 78% of women with a recent live birth reported at least four antenatal visits, an increase from 67% in 2008–2009, and 82% initiated antenatal care during the first trimester [6]. Although most women reported regular check-ups and testing, such as blood and urine testing, only 67% reported purchasing or receiving iron tablets or syrup [6]. Additionally, blood pressure measurement was reported by 97% of women living in urban areas and 89% of women living in rural areas [6]. These findings suggest that contact with services does not consistently ensure receipt of all recommended components of care. Postnatal contact was also common but unequally distributed. Overall, 88% of women received a postnatal check within two days of delivery, while 6% reported no postnatal check [6].

A postnatal check within 4 hours of delivery was more frequent in urban areas, with 81% of women receiving this care, compared with 70% in rural areas [6]. The data also show large disparities between socioeconomic groups, with 67% of women in the low-wealth group receiving the postnatal check-up compared to 85% in the high-wealth group [6]. Because early postnatal assessment is critical for feeding support, thermal care, clinical observation, and referral of small newborns, these differences have direct relevance to LBW management [5].

3.2. Policy strengths across the continuum of care

The reviewed documents demonstrated broad alignment with international maternal and newborn health principles [5,13]. The antenatal protocols identify several determinants that are directly relevant to fetal growth and pregnancy duration, including iron-deficiency anemia, inadequate weight gain, maternal undernutrition, and short stature [7]. This recognition is important because it provides a clinical basis for nutritional assessment, laboratory screening, counselling, supplementation, follow-up, and referral within primary care. The protocols therefore contain several of the core preventive components required for LBW reduction, even when LBW is not presented as the organizing outcome [7,13].

The postnatal protocols provide a more explicit operational approach to small newborns. They distinguish newborns weighing 1500 to less than 2500 g from those weighing below 1500 g and emphasize observation of feeding, weight gain, temperature, and respiration, together with referral when danger signs or inadequate progress are present [8]. The protocols also recommend early contact after birth and additional follow-up during the neonatal period. This establishes an appropriate clinical pathway for early identification and management, provided that birth weight is measured accurately and follow-up is completed [5,8].

At the strategic level, the Strategic Document and Action Plan for Sexual and Reproductive Health 2017–2021, a historical policy document whose implementation period has ended, established ambitious service-coverage goals, including high prenatal-care coverage, at least seven basic antenatal visits for most pregnant women, skilled attendance at birth, and postnatal assessment. It also recognized the need to improve access in rural areas and update clinical protocols [11]. The National Health Strategy 2021–2030 continues the emphasis on maternal, child, and reproductive health, stronger primary care, maternal and neonatal surveillance, early childhood development, and reduction of inequity [12]. Collectively, these documents provide a foundation for prevention and management across pregnancy, delivery, and the postnatal period [11,12].

3.3. Policy and implementation gaps

The principal policy gap, within the documents analyzed, was the absence of a clearly defined, outcome-oriented LBW objective. Low birth weight and its determinants were addressed indirectly through clinical risk assessment and broader maternal and newborn priorities, but the reviewed strategic targets did not establish a dedicated national reduction target, a time-bound trajectory, or an accountable set of indicators for prevention and early management [11,12]. The 2022-2030 Action Plan for Sexual and Reproductive Health was not appraised and may contain provisions that this review did not capture. This contrasts with the international nutrition target, which frames LBW reduction as a measurable population outcome [1].

A second gap was the predominance of coverage indicators over indicators of service content and effectiveness. Counts of antenatal visits, skilled attendance, and postnatal contacts are essential, but they do not establish whether women were screened for anemia, received and adhered to iron and folic acid supplementation, had nutritional and weight-gain assessment, received management of pregnancy complications, or completed referral [6,13]. The survey findings on iron supplementation and urban-rural differences illustrate the potential separation between service contact and complete care [6].

A third gap concerned equity and implementation capacity. National strategies acknowledge rural and disadvantaged populations, yet the available indicators show persistent differences by residence, prefecture, and wealth [6,12]. Limited human resources, variable primary-care capacity, travel and referral barriers, and inconsistent continuity between maternity facilities and community services may reduce the effectiveness of appropriate protocols [14,15]. The policy framework specifies what should occur, but publicly available evidence is insufficient to determine the consistency of implementation across municipalities and facilities.

Finally, the publicly available reporting reviewed did not provide sufficiently timely and disaggregated LBW data for policy monitoring. A useful national system would record birth weight for all live births, measurement timing and completeness, gestational age, sex, plurality, maternal residence, facility, referral, survival, and follow-up [4,5]. Without these variables, national prevalence cannot be readily linked to prematurity, fetal growth restriction, geographic inequity, or quality-improvement activity [3,4].

4. Discussion

This review found that Albania has a substantial policy foundation for addressing low birth weight, but the framework is fragmented across clinical protocols, service-coverage targets, and broad health-system objectives [7,8,11,12]. The strongest elements are the recognition of key maternal risk factors in antenatal protocols, an operational postnatal pathway for small newborns, and strategic commitments to universal maternal care, primary care, and equity [7,8,12]. The principal weakness is that these elements are not integrated around a dedicated, measurable LBW outcome with a clear national baseline, reduction target, implementation indicators, and accountability cycle. Because the 2022-2030 Action Plan was not appraised, this finding applies to the documents analyzed and is provisional with respect to the current framework. Independent monitoring of the National Health Strategy has similarly emphasized the need for more concrete and measurable maternal and child health indicators [15].

The distinction between policy presence and policy performance is central. Antenatal attendance is relatively high, but effective prevention depends on what occurs during each contact [6,13]. International guidance emphasizes a positive pregnancy experience, nutritional assessment, iron and folic acid supplementation, detection and treatment of maternal conditions, and timely referral [13]. The

association between maternal anemia and low birth weight is supported by systematic evidence, with a meta-analysis reporting increased odds among anemic mothers [9]. Albania's protocols recognize this relationship, but the reported 67% coverage of iron tablets or syrup suggests room for improvement in access, counselling, prescription, adherence, or recording [6,7].

The estimated Albanian prevalence of approximately 6% in 2020 is lower than the global estimate, but policy significance should be judged by preventability, severity, and distribution rather than rank alone [2,4]. Even a relatively low national rate can coexist with concentrated risk among rural, poorer, adolescent, nutritionally vulnerable, or medically complicated pregnancies [6,10]. Furthermore, a stable national percentage can mask changes in the underlying composition of LBW, such as a shift between preterm birth and fetal growth restriction [3,4]. This supports moving from a single national percentage towards stratified surveillance and local quality improvement.

Equity is a recurring concern. The urban–rural and wealth-related differences in components of antenatal and postnatal care indicate that universal entitlement may not automatically produce uniform service delivery [6]. Strengthening family medicine and primary care is therefore directly relevant to LBW prevention [12,14]. Primary-care teams are positioned to identify anemia and undernutrition, support supplementation and healthy weight gain, coordinate high-risk referral, and conduct postnatal follow-up [5,13]. However, these functions require sufficient staffing, clear responsibilities, supplies, transport and referral pathways, and interoperable information systems [14,15]. National policy should therefore link maternal and newborn outcome targets to district- and facility-level implementation capacity.

A practical policy response would contain five linked components. First, Albania should adopt an explicit national LBW objective aligned with the international direction of travel, supported by annual milestones rather than a distant endpoint alone [1]. Second, the health information system should require complete birth-weight recording and linkage with gestational age, maternal residence, plurality, facility, neonatal outcome, and follow-up [4,5]. Third, antenatal quality indicators should extend beyond visit counts to include timely entry, anemia screening and treatment, iron and folic acid coverage, maternal nutritional and weight-gain assessment, blood-pressure monitoring, management of comorbidities, and referral completion [6,13]. Fourth, implementation resources should be targeted to areas with poorer maternal-care indicators, particularly rural and lower-income populations [6,12]. Fifth, small newborns should be enrolled automatically in a documented postnatal pathway that includes feeding assessment, thermal care, weight monitoring, danger-sign education, and referral when required [5,8].

These recommendations would also improve the interpretability of the national target. Better linkage between birth weight and gestational age would distinguish preterm newborns from those who are small for gestational age, permitting more specific prevention strategies [3,4]. Facility dashboards and periodic maternal–perinatal review could identify missed opportunities, such as untreated anemia, late antenatal entry, inadequate fetal-growth surveillance, failed referral, or absence of postnatal contact [5,13]. Public reporting should present national and subnational trends while protecting confidentiality.

The findings should be interpreted in light of several limitations. This was a descriptive review rather than a formal systematic review, and it was limited to publicly accessible documents and aggregate data. Policy wording does not prove implementation, and the review did not include interviews with policymakers, clinicians, midwives, primary-care personnel, or mothers. The latest nationally representative maternal-service survey predates the current health strategy, limiting assessment of recent progress [6,12]. In addition, the review could not calculate the contribution of specific risk factors to Albania's LBW burden or determine causal effects. The successor Action Plan for Sexual and Reproductive Health 2022–2030 was

excluded because its full text could not be obtained and verified; the assessment of reproductive health policy therefore reflects the expired 2017-2021 strategy, and any statement that LBW lacks a dedicated national target or indicator applies only to the documents analyzed. Appraisal of the 2022-2030 plan is a priority for future work. Its strength lies in the structured comparison of clinical protocols, strategic commitments, service indicators, and international expectations across the full continuum of care.

Future research should combine routine birth-registry analysis with facility audits and qualitative implementation research. A national or multicenter study could examine completeness and accuracy of birth-weight and gestational-age recording, regional variation in LBW, antenatal risk-factor management, referral completion, and neonatal follow-up [4,5]. Such evidence would allow Albania to move from broad policy alignment towards demonstrable outcome improvement.

5. Conclusions

Albania's maternal, antenatal, and postnatal policy framework contains many of the clinical and organizational elements needed to prevent and manage low birth weight [7,8,11,12]. Antenatal protocols recognize important maternal risk factors, postnatal protocols provide a pathway for small newborns, and national strategies promote maternal-service coverage, primary care, and equity [7,8,12]. However, low birth weight remains insufficiently consolidated as a distinct, measurable public health priority. In the documents analyzed, the absence of a dedicated national target and outcome-linked quality indicators, together with the lack of sufficiently timely and disaggregated LBW data in the publicly available reporting reviewed, may limit accountability and obscure local inequalities. A stronger national approach should combine an explicit reduction objective with complete birth-weight and gestational-age recording, indicators of antenatal care content, targeted investment in underserved areas, and structured follow-up of affected newborns [1,5,13]. Because the 2022-2030 Action Plan for Sexual and Reproductive Health was not appraised, these conclusions about the current policy framework are provisional. These measures would convert broad policy alignment into a more coherent prevention and early-management system and provide a stronger evidence base for future maternal and neonatal health planning.

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Data Availability: No new data were generated or analysed in this study. All policy documents, survey reports, and datasets reviewed are publicly available and are cited in the reference list.

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Conflict of Interest: The authors declare no conflicts of interest.

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