



INVESTING IN NEWBORN HEALTH IN SOUTH ASIA Country Report – Afghanistan

The baseline neonatal mortality rate (NMR) for Afghanistan is 37/1,000 live births. To meet the Sustainable Development Goals (SDG) target of 12/1,000 live births, Afghanistan needs an annual rate of reduction (ARR) in NMR of 10.3%. This would be a substantial acceleration from its historical ARR of 2.7% (estimated for 2000-2018 by the Inter-agency Group for Child Mortality Estimation (IGME)), by which Afghanistan is not projected to meet the SDG goal for NMR by 2030.

Achieving the SDG target in Afghanistan would save 209,305 additional newborn lives, prevent 86,051 stillbirths and avert 16,071 maternal deaths, as compared to no change in coverage of the package of interventions. Additionally, 46,087 newborns would have significant lifelong disability averted. The additional cost over ten years, discounted at the standard 3% annual rate would be USD 1.8 billion. This investment will provide economic returns of USD 2 for every dollar spent.

Achieving the SDG targets for neonatal health in Afghanistan will mean



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Best-buy intervention package

To estimate the package of interventions, baseline values were established for all relevant interventions. Estimates for the following interventions were available from the most recent Afghanistan Health Survey (AHS) 2018: tetanus toxoid vaccination, iron supplementation during pregnancy, skilled birth attendance, facility level deliveries, clean postnatal practices and breastfeeding rates. Baseline crude coverage of facility deliveries was 56.3% in Afghanistan.

Since this is used as a proxy for all interventions around birth and immediate postnatal (for which actual data is unavailable), we adjusted the coverage of interventions at birth to their effective coverage values according to evidence available in studies documenting the use of evidence-based practices

during labour and birth (Ansari et al., 2019; Atiqzai et al., 2019). These studies were national level cross-sectional surveys conducted in 2016.

While in the short term Afghanistan may need to focus on ensuring service continuity during the COVID-19 pandemic, to meet the SDG targets for neonatal mortality it would need to improve coverage of almost all interventions that impact on neonatal mortality in the long term. Specifically:

- It would need to substantially scale up coverage of interventions delivered at birth and postnatally to between 85-95%, while focusing on improving the quality of care provided.
- It would also need to substantially scale up access to facility-based full supportive care for premature

newborns and newborns with sepsis and pneumonia to cover 92% of the newborns in need.

- Tetanus toxoid vaccination during pregnancy also requires scaling up from its current 40% to 95%, a coverage level achieved by several countries in the region.
- It would need to introduce and scale up (to 90-95%) nutritional interventions for women pre-conception or during pregnancy to reduce the risk of neonatal mortality. It should also introduce folic acid supplementation/fortification for women prior to conception. Given this is not currently part of the national programme, the delivery channel(s) and specific delivery strategies must be considered carefully in context. Afghanistan should introduce and scale up multiple micronutrient supplementation for

women during pregnancy (swap iron supplementation programmes with micronutrient supplementation) to reduce the risks of prematurity and low birth weight, as well as scaling up balanced energy supplementation.

- It will be necessary to scale up the use of chlorhexidine substantially, along with improving the coverage of clean postnatal care.
- Significant investments will be required in breastfeeding promotion for all mothers and pregnant women and coverage by insecticide-treated nets (ITNs) for populations in need.

Table 1 provides the package of interventions and the baseline and target coverage of interventions required to reach the SDG targets.

Table 1. Scale-up required to meet SDG targets: Afghanistan

Intervention	Quality-adjusted coverage at baseline (%)	2030 target coverage (%)
Preconception and antenatal interventions		
Folic acid supplementation/fortification	0	90
TT-Tetanus toxoid vaccination	40	95
Multiple micronutrient supplementation in pregnancy	47	95
Balanced energy supplementation	0	95
Interventions during labour and at birth		
Skilled birth attendance	59	95
Health facility delivery	56	95
Clean birth practices	53	95
Immediate assessment and stimulation	52	95
Labour and delivery management	31	95
Neonatal resuscitation	14	87
Antibiotics for pPRoM	17	87
MgSO management of eclampsia	17	87
Active management of third stage of labour (AMTSL)	31	87
Induction of labour for pregnancies lasting 41+ weeks	14	60
Postnatal care interventions		
Exclusive breastfeeding	58	69
Prevalence of early initiation of breastfeeding	64	83
Clean postnatal practices	9	95
Chlorhexidine	0	95
ITN/IRS - Households protected from malaria	26	90

Intervention	Quality-adjusted coverage at baseline (%)	2030 target coverage (%)
Postnatal care interventions		
Case management of premature babies ¹	18	92
• <i>Thermal care</i>	18	92
• <i>Kangaroo mother care</i>	0	92
• <i>Full supportive care for prematurity</i>	0	92
Case management of neonatal sepsis/pneumonia	23	92
• <i>Injectable antibiotics for neonatal sepsis/pneumonia</i>	23	92
• <i>Full supportive care for neonatal sepsis/pneumonia</i>	0	92
ORS - oral rehydration solution	46	90

N.B. Linear scale up assumed between 2020-2030.

Table 2 shows the lives saved and disability prevented by scaling up coverage, arranged in descending order from the biggest impact interventions for reducing newborn mortality. The largest gains in terms of neonatal lives saved come from scaling up coverage of:

- Case management of premature babies
- Labour and delivery management (this has dividends for stillbirths, maternal lives saved, and disability averted)
- Case management of neonatal sepsis/pneumonia

- Neonatal resuscitation
- Chlorhexidine

The additional cost over ten years, discounted at the standard 3% annual rate, would be USD 1.8 billion with a USD 206 million annualized value. To put this figure in perspective, we compare it against what would be the 2021 health expenditure if 2017 levels are indexed by inflation and population growth rates.

Table 2. Lives saved and disability averted: Afghanistan

Afghanistan	Totals 2021-2030			
	Intervention	Lives saved		
Neonatal		Stillbirths	Maternal	
Case management of premature babies	49,987			
Labour and delivery management	37,486	51,280	7,303	24,362
Case management of sepsis/pneumonia	26,941			
Neonatal resuscitation	18,142			13,355
Chlorhexidine	13,401			
Clean postnatal practices	11,923			
Micronutrient supplementation (iron and multiple micronutrients)	8,108	17,709	1,542	
Balanced energy supplementation	7,110	14,904		
Folic acid supplementation/fortification	6,929			5,890
TT - Tetanus toxoid vaccination	6,614		16	
Immediate assessment and stimulation	6,221			2,874
Clean birth practices	5,872		554	

[1] In LiST, 'case management of premature babies' collectively refers to the three levels of management of prematurely born infants in the neonatal period: thermal care, kangaroo mother care, and full supportive care for prematurity. Similarly, 'case management of neonatal sepsis/pneumonia' refers to the sum of the three levels of case management for severe infection in the neonatal period: oral antibiotics, injectable antibiotics, and full supportive care. As data is only available for thermal care, baseline data for case management is allocated to thermal care for prematurity and a proxy for injectable antibiotics for sepsis/pneumonia.

Afghanistan	Totals 2021-2030			
Intervention	Lives saved			Disability averted
	Neonatal	Stillbirths	Maternal	
ORS	1,991			
Age-appropriate breastfeeding practices	1,356			
ITN/IRS	902		64	
MgSO management of eclampsia			1,482	
Active management of third stage labour (AMTSL)			4,408	
Induction of labour for pregnancies 41 weeks +		2,158		

As shown in Table 3, the annualized investment would represent 8% of the estimated health expenditure.

Table 3. Costs of meeting the newborn SDG targets: Afghanistan

Present value of additional costs* (2021-2030) USD million	Annualized additional costs, USD million	Annualized additional cost as % of 2017 health expenditure levels indexed**
\$1,758	\$206	8%

* Estimated at a constant annual discount rate of 3%

**See note above

Returns on investment

We estimated a Value of Statistical Life (VSL) for the year 2021 amounting to USD 12,943 and calculated that each dollar invested in achieving the SDG targets for neonatal health will deliver USD 2 of return with total net economic benefits ranging from USD 1.2 billion to USD 1.7 billion. As shown in Table 4, the vast majority of economic benefits (60%) accrue from newborn lives saved, followed by stillbirths prevented (24%) and disability prevented in newborns (11%).

Other scenarios using alternative economic valuation approaches show significantly higher returns on investment, even after retaining the assumption of a protracted economic crisis. After a 50% increase in the cost of delivering neonatal health interventions due to the spillover of the COVID 19 crisis, even the most conservative scenario shows that each dollar invested will lead to economic returns of USD 1.3.

Table 4. Total economic benefits and costs – discount rate scenarios (2018 million USD): Afghanistan

Economic benefits and costs	Discount rates		
	3%	5%	10%
Newborn lives saved	\$2,075	\$1,859	\$1,439
Stillbirths prevented	\$846	\$755	\$580
Mothers lives saved	\$159	\$142	\$109
Newborns with disability prevented	\$369	\$329	\$253
Total benefits	\$3,448	\$3,085	\$2,380
Total costs	\$1,758	\$1,566	\$1,196
Benefit cost ratio	2	2	2
Net benefits	\$1,691	\$1,519	\$1,184