

IMPROVING THE QUALITY OF HOSPITAL CARE FOR MOTHERS AND CHILDREN IN KYRGYZSTAN

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Context

Maternal, newborn and child mortality are still unnecessarily high in Kyrgyzstan. Despite some progress over the past decades, mortality rates are very high compared to the average in the WHO European Region [1]. Substandard quality of care often leads to poor health outcomes. It is estimated that 50% of maternal deaths and 58% of newborn deaths could be averted with improved quality of care [2]. National quality improvement approaches are often person-focused concentrating on supposed ‘correction of mistakes and errors’ by individual care providers. Hence, root causes of adverse events and system dysfunctions remain unaddressed. The hospital quality improvement project for maternal, newborn and child health in 11 hospitals of Kyrgyzstan was implemented from 2021 to 2024. The overall goal of the project was to strengthen the national health systems’ capacity to accelerate ending preventable maternal, newborn and child mortality by improving the quality of care.

Assessment and measurement of improvement

The baseline quality of care assessment in pilot hospitals was conducted in October 2021, using the adapted WHO assessment tools on Hospital care for children (2015) and Hospital care for mothers and newborn babies (2014) [3,4]. After two years of quality improvement interventions the endline assessment was carried out in November 2023 using the same methodology. The tools evaluated different aspects of health care, at different time points (from access, to case management, monitoring, case referral, discharge and follow up) and across the different services. Furthermore, the assessment tools served as a capacity building and motivating activity. International WHO standards and best practices were presented during the assessment exercise through a peer-to-peer approach to serve as models for improvement.

Box 1. Assessment scoring system

3	Care complies with international standards. No to minimal changes required for quality improvement
2	Need for some improvement to reach standards of care. Suboptimal care but no significant hazard to health
1	Need for substantial improvement to reach standard of care. Suboptimal care with significant health hazards
0	Need for very substantial improvement. Inadequate care and/or harmful practices with severe hazards

Box 2. Key figures of project implementation



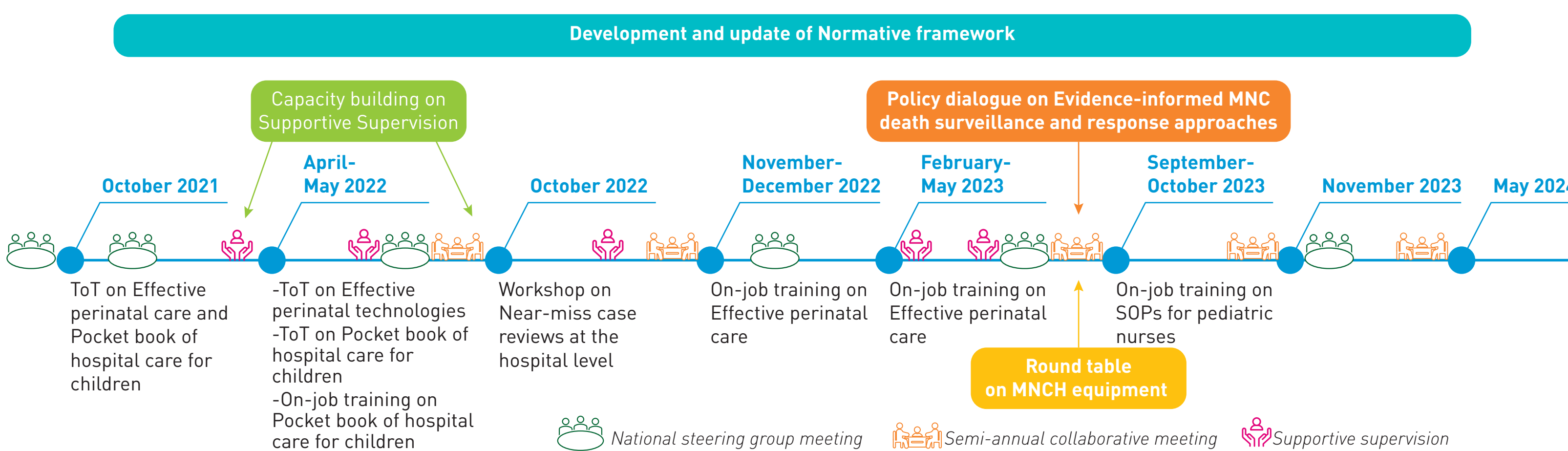
Picture 1. The pilot hospitals of the quality improvement project



Strategy for change and interventions

The baseline assessment was followed by a complex improvement process for two years including updating clinical guidelines, selected training activities in technical areas and quality improvement methods, supportive supervision and semi-annual collaborative improvement meetings between pilot hospitals. Core technical training activities focused on on-job capacity building on Effective perinatal care and Pocket book of hospital care for children. Participating hospitals have been developing their quality improvement plans based on the baseline assessment findings. Health facility improvement plans were further updated each time after supportive supervision visits and semi-annual collaborative improvement meetings.

Picture 2. Key quality improvement interventions



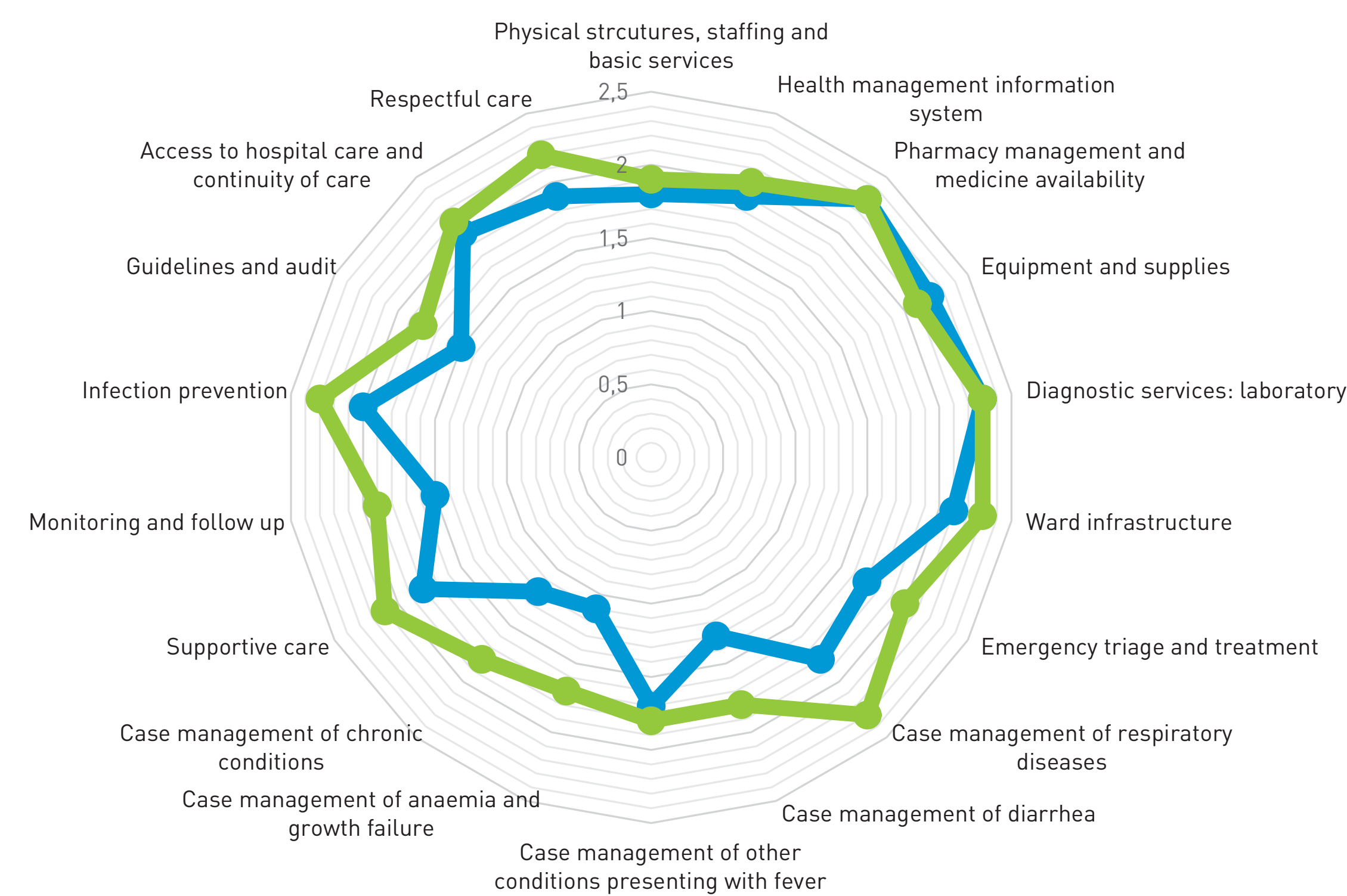
Picture 3. Case management in pilot hospitals pre- and post-intervention

Pediatric care																																				
Case management	1			2			3			4			5			6			7			8			9			10			Summary					
	Baseline	Endline	Difference	Baseline	Endline	Difference	Baseline	Endline	Difference	Baseline	Endline	Difference	Baseline	Endline	Difference	Baseline	Endline	Difference	Baseline	Endline	Difference	Baseline	Endline	Difference	Baseline	Endline	Difference	Baseline	Endline	Difference						
1 Emergency triage and treatment	1.4	1.8	↑	0.4	2.5	1.7	↓	-0.8	1.2	1.0	↓	-0.21	1.5	2.2	↑	0.7	1.7	2.0	↑	0.3	1.9	2.0	→	0.1	1.6	2.0	↑	0.4	1.7	2.1	↑	0.4	2.0	2.9	↑	0.9
2 Case management of respiratory diseases	2.1	2.2	→	0.1	2.5	2.7	→	0.2	1.5	1.8	↑	0.4	1.8	2.7	↑	1.0	1.6	2.2	↑	0.6	1.9	2.2	↑	0.4	2.0	2.1	→	0.1	1.5	2.3	↑	0.8	1.8	2.0	→	0.2
3 Case management of diarrhea	1.0	1.7	↑	0.7	1.0	1.5	↑	0.5					1.4				1.3	1.5	→	0.2	1.7	1.8	→	0.1	1.5	2.0	↑	0.5	1.4			1.0	2.1	↑	1.1	
4 Case management of other conditions presenting with fever	2.3	1.5	↓	-0.8	1.5	1.5	→	0.0	1.4	1.8	↑	0.4	1.8	1.7	→	-0.1	1.4	1.8	↑	0.4	1.7	1.4	↓	-0.3	2.0	2.1	→	0.1	2.0	2.3	↑	0.3	1.1	1.7	↑	0.6
5 Case management of anaemia and growth failure	0.8	1.1	↑	0.3	1.0	1.7	↑	0.7	0.1	1.5	↑	1.4	1.3	2.2	↑	1.0	1.3	1.5	↑	0.3	1.4	1.6	↑	0.23	1.3	1.9	↑	0.6	1.8	2.0	↑	0.3	1.4	1.6	→	0.2
6 Case management of chronic conditions	2.0	1.7	↓	-0.3	1.0	1.7	↑	0.7					1.6	2.0	↑	0.4	1.5	1.6	→	0.1	1.9				2.0	1.9	→	-0.1	2.0	2.1	→	0.1	1.5	1.8	↑	0.3
7 Supportive care	1.9	2.0	→	0.1	1.1	2.0	↑	0.9	1.5	1.4	→	-0.1	2.1	2.3	→	0.2	1.9	2.1	↑	0.23	2.3	2.3	→	0.0	1.8	2.4	↑	0.7	1.5	2.2	↑	0.7	1.8	2.2	↑	0.4
8 Monitoring and follow-up	1.0	2.3	↑	1.3	1.0	2.0	↑	1.0	1.2	1.8	↑	0.6	2.0	2.4	↑	0.4	1.5	1.8	↑	0.3	1.8	1.7	→	-0.1	1.3	1.7	↑	0.4	1.8	1.8	→	0.0	1.5	1.6	→	0.1

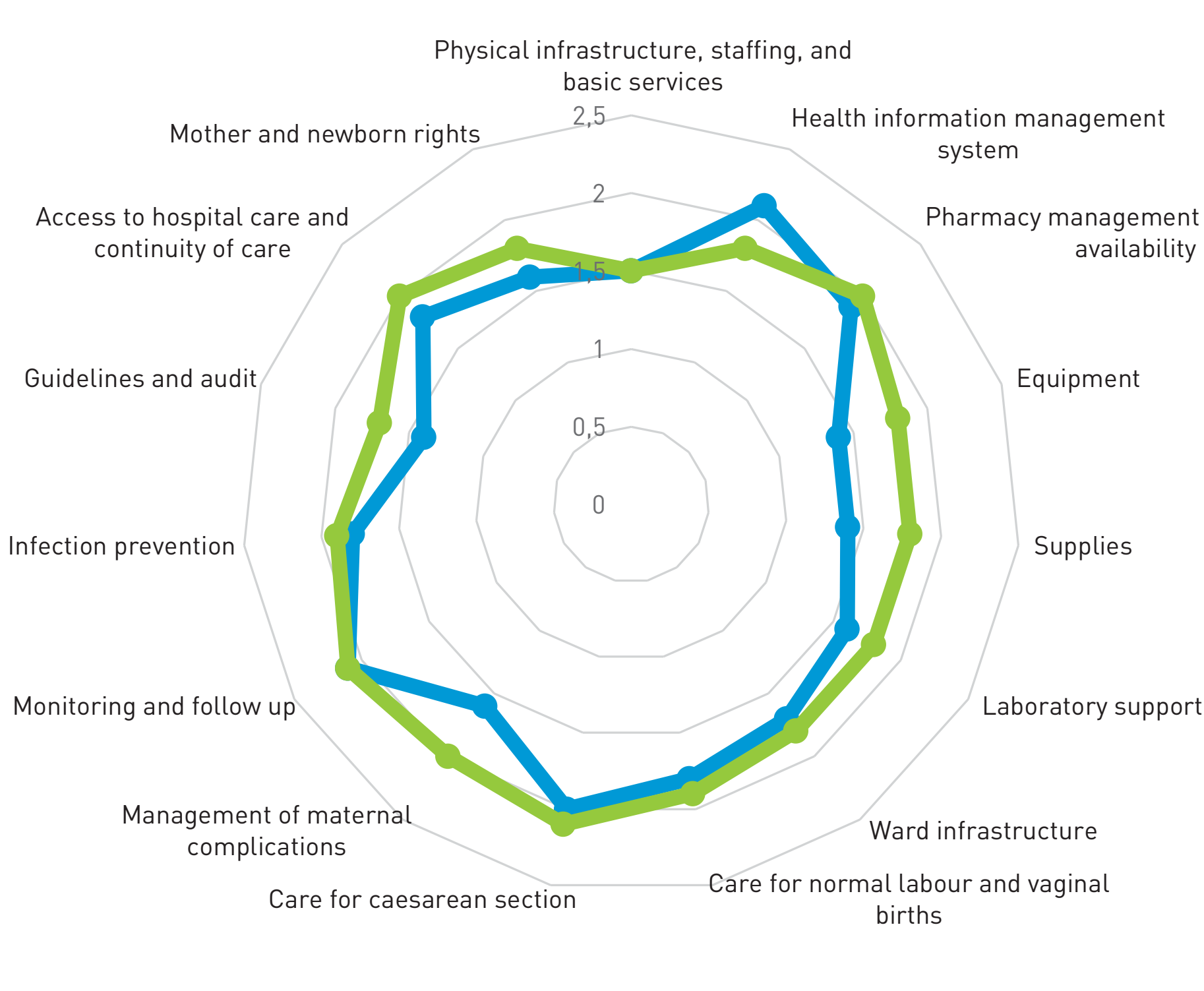
Maternal care																																							
Case management	1			2			3			4			5			6			7			8			9			10			Summary								
	Baseline	Endline	Difference	Baseline	Endline	Difference	Baseline	Endline	Difference	Baseline	Endline	Difference	Baseline	Endline	Difference	Baseline	Endline	Difference	Baseline	Endline	Difference	Baseline	Endline	Difference	Baseline	Endline	Difference	Baseline	Endline	Difference									
1 Care for normal labour and vaginal births	1.1	1.5	↑	0.4	1.2	1.6	↑	0.4	1.1	1.5	↑	0.4				2.4	2.0	↓	-0.4	2.6	2.2	↓	-0.4	2.2	2.1	→	-0.1	1.5	1.6	→	0.1	1.5	1.6	→	0.1	1.8	1.9	→	0.1
2 Care for caesarean section	1.9	1.9	→	0.0	2.1	2.1	→	0.0	2.0	1.5	↓	-0.5				1.9	2.0	→	0.1	1.9	2.4	↑	0.6	1.7	2.0	↑	0.3	1.9	2.1	↑	0.3	1.9	2.1	↑	0.3	2.0	2.1	→	0.2
3 Management of maternal complications	1.2	2.1	↑	0.9	1.6	2.0	↑	0.4	1.6	1.5	→	-0.1				1.7	2.1	↑	0.4	1.5	2.3	↑	0.7	1.5	1.7	→	0.2	1.5	2.1	↑	0.6	1.5	2.1	↑	0.6	1.6	2.0	↑	0.45
4 Monitoring and follow-up	1.7	1.8	→	0.1	2.2	2.0	→	-0.2	2.0	1.2	↓	-0.8				2.5	2.8	↑	0.3	2.3	2.5	↑	0.3	2.2	1.8	↓	-0.4	2.0	2.5	↑	0.5	2.0	2.5	↑	0.5	2.1	2.1	→	0.0

Neonatal care																																							
Case management	1			2			3			4			5			6			7			8			9			10			Summary								
	Baseline	Endline	Difference	Baseline	Endline	Difference	Baseline	Endline	Difference	Baseline	Endline	Difference	Baseline	Endline	Difference	Baseline	Endline	Difference	Baseline	Endline	Difference	Baseline	Endline	Difference	Baseline	Endline	Difference	Baseline	Endline	Difference									
1 Newborn infant care	1.1	1.9	↑	0.8	1.2	1.9	↑	0.7	1.2	1.9	↑	0.7				2.0	1.9	→	-0.1	1.5	2.2	↑	0.7	1.3	2.1	↑	0.7	2.0	1.7	↓	-0.3	1.7	2.2	↑	0.5	1.6	2.0	↑	0.4
2 Sick newborn care	1.2	1.8	↑	0.7	1.2	2.0	↑	0.9	1.2	2.0	↑	0.9				1.5	1.8	↑	0.3	1.6	1.9	↑	0.3	0.3	1.5	↑	1.2	1.4	1.1	↓	-0.3	1.3	2.4	↑	1.1	1.7	2.2	↑	0.5
3 Advanced newborn care	1.1	1.4	↑	0.3	0.8	1.7	↑	0.9	0.8	1.7	↑	0.9				1.8	1.7	→	-0.1																				
4 Monitoring and follow-up	1.2	1.5	↑	0.3	1.2	2.0	↑	0.8	1.2	2.0	↑	0.8				2.5	2.5	→	0.0	2.0	1.8	↓	-0.3	1.3	1.8	↑	0.5	1.5	2.0	↑	0.5	1.2	2.3	↑	1.1	1.4	1.6	↑	0.2

Quality of pediatric care in pilot hospitals pre- and post-intervention



Quality of maternal care in pilot hospitals pre- and post-intervention



Quality of newborn care in pilot hospitals pre- and post-intervention



Effects of changes

- 82% of hospitals achieved significant improvement in providing care for mothers, newborns and children. Considerable improvement across hospitals was observed in case management, policies and organization of services. However, the standards of care achieved after two years of interventions were still not according to international standards in most cases
- Improvement in case management of pediatric and newborn care was more considerable than in maternal care
- From little to no changes were observed in hospital support services (i.e. physical infrastructure, staffing, HMIS, equipment)
- Hospitals with frequent change in leadership and less support for the process showed generally less improvement. Hospitals where heads of Quality Committees systematically participated at Semi-annual collaborative meetings demonstrated better progress. Overall, ensuring quality of care was considered as a task of deputy directors (primarily heads of Quality Committees); thus, hospital directors showed less engagement in quality improvement processes
- No link was found between the size of hospitals, level of service provision, number of beds and/ or number of deliveries and quality improvement progress achieved in two years
- Supportive Supervisors visiting peer hospitals tend not to have a major impact on quality improvement in their own hospitals. Top performing hospitals, in fact, had no or limited number of National Supportive Supervisors. In contrary, hospitals with the highest number of Supportive Supervisors have not demonstrated greater progress over other participating hospitals

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References:

- [1] The Global Health Observatory 2024 (Indicator Details [who.int]). Data accessed on 10.03.2024
- [2] Quality of care. Fact sheet: Quality health services [who.int], accessed 10 March 2024
- [3] World Health Organization. Hospital care for children: quality assessment and improvement tool. A systematic standard based participatory approach. Second edition. 2015. Available at Hospital care for children: quality assessment and improvement tool [who.int]
- [4] World Health Organization. Hospital care for mother and newborn babies: quality assessment and improvement tool. A systematic standard based participatory approach. Second edition. 2014. Available at Hospital care for mothers and newborn babies: quality assessment and improvement tool [who.int]