

REVIEW ARTICLE

Updating First Referral Unit Guidelines in India: Addressing Contemporary Health System Needs

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ABSTRACT

India’s First Referral Units (FRUs) were established as critical links between primary care and higher-level hospitals, mandated to provide comprehensive emergency obstetric care, essential surgical services, and referral support. However, the operational guidelines for these facilities have not been revised since 2004, despite two decades of major shifts in India’s health landscape. Today, only a small fraction of FRUs function as intended, with persistent gaps in infrastructure, workforce, and service delivery. The rising burden of non-communicable diseases, trauma from road traffic accidents, and recurring public health emergencies has expanded the demands on secondary care. This position paper argues for the urgent revision of FRU guidelines to align with contemporary health needs. It highlights current gaps in service packages, infrastructure, technology, quality assurance, and workforce, and suggests broad directions for future standards. A timely, evidence-based update will allow FRUs to fulfill their intended role as effective bridges in India’s healthcare system.

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Introduction

Healthcare guidelines form the backbone of any robust health system, providing structured frameworks for service delivery, quality assurance, and standardized care protocols. In India's dynamic healthcare landscape, the periodic revision of clinical and operational guidelines has become an essential mechanism for adapting to evolving disease patterns, technological advances, and changing population health needs. Several key healthcare guidelines have undergone significant revisions in recent years, reflecting the government's commitment to evidence-based policy making and responsive healthcare delivery^{1,2,3}.

The Indian Public Health Standards (IPHS), last comprehensively revised in 2022 after more than a decade, exemplifies this adaptive approach to healthcare policy^{2,4,5}. Similarly, the Indian Pharmacopoeia was updated to its 9th edition in 2022, incorporating 92 new drug monograph additions and 412 monograph revisions to ensure quality medicine standards⁵. The National Health Policy 2017 proposed the creation of a multidisciplinary Public Cadre, subsequently operationalized in 2022.⁶ The Ayushman Bharat Health and Wellness Centre guidelines have been continuously updated to reflect the comprehensive primary healthcare delivery model launched in 2018.^{7,8,9} Additionally, the Emergency Obstetric Care (EmOC) and Life-Saving Anesthetic Skills (LSAS) training curricula were revised in 2024, updating 15-year-old protocols to address modern healthcare challenges¹⁰.

The COVID-19 pandemic has particularly highlighted the critical need for guideline revisions across healthcare systems. The pandemic exposed inadequacies in existing protocols and accelerated the development of new frameworks for infection control, telemedicine, and emergency preparedness^{11,12}. These experiences have underscored the importance of maintaining current, evidence-based guidelines that can respond effectively to emerging health challenges.

Among the healthcare guidelines requiring urgent attention are the First Referral Unit (FRU) operational guidelines, which have remained unchanged since their initial formulation in 2004. Despite significant transformations in India's healthcare

landscape over the past two decades, these critical guidelines governing secondary healthcare delivery have not been systematically updated to reflect contemporary realities. The 20-year gap since the formulation of FRU guidelines is exceptionally long in a rapidly changing health landscape. Timely revision is essential for aligning secondary care delivery with India’s commitment to SDG 3.8 (Universal Health Coverage).

The 20-year gap since the formulation of FRU guidelines is exceptionally long in a rapidly changing health landscape. Timely revision is essential for aligning secondary care delivery with India’s commitment to SDG 3.8 (Universal Health Coverage) and the Viksit Bharat 2047 vision. Internationally, secondary-level facilities are increasingly recognised as the backbone of resilient health systems, with the WHO Emergency Care System Framework and regional models in Sri Lanka and Thailand offering useful lessons. India’s FRU guidelines now require a similar update to remain aligned with global best practices while responding to national realities.

Understanding First Referral Units: The Critical Link in Healthcare Delivery

First Referral Units represent a pivotal component of India's healthcare architecture, serving as the essential bridge between primary healthcare services and tertiary medical facilities. Originally conceptualized as upgraded Community Health Centres (CHCs), FRUs were designed to provide comprehensive emergency obstetric care, basic surgical services, and specialized medical interventions that exceed the capacity of Primary Health Centres (PHCs)^{1][13][14}.

The 2004 FRU guidelines established foundational criteria encompassing infrastructure requirements, staffing norms, equipment specifications, service protocols, and management processes. These facilities were mandated to maintain 20-30 bed capacity with flexible arrangements for hard-to-reach areas, fully functional operation theatres, dedicated labor rooms, and 24/7 emergency services¹. The staffing model required specialized personnel including medical officers trained in Surgery, Obstetrics and Gynecology, Pediatrics, and anesthesia, supported by skilled nursing staff capable of delivering comprehensive emergency care¹.

Table 1: Comparison of FRU guidelines and IPHS norms

Component	FRU Guidelines 2004	IPHS 2022 CHC Norms	Gap/Need
Beds	20–30	30–50	Expansion required
Specialists	Surgeon, Physician, Obstetric & Gynecology, Paediatrician	Broader package of 12 services	Integration needed
Blood storage	Mandatory	Blood bank/linkage	Still weak
OT & Labour Room	Dedicated	Specified in detail	Functional gaps
Referral	PHC to FRU	HWCs to CHCs/SDH/DH	New linkages needed

A comparison of the 2004 FRU norms with the updated IPHS 2022 standards for Community Health Centres highlights the widening gap between original expectations and contemporary health system realities. Bed strength requirements have increased, the range of specialists has expanded, service packages now cover twelve areas, and referral linkages extend from Health and Wellness Centres upwards. These developments underscore that the 2004 framework is no longer adequate. FRUs must be re-envisioned in light of these changes, with guidelines that reflect current demands on secondary care facilities¹⁵.

The service mandate of FRUs encompasses emergency obstetric care including caesarean sections, newborn care, blood storage facilities, trauma management, and efficient referral mechanisms to higher-level facilities¹. These units serve as First Referral Units for Primary Health Centres and Health and Wellness Centres, providing direct specialized care through multidisciplinary teams of surgeons, obstetricians, gynecologists, physicians, and pediatricians¹.

However, the operational reality of FRUs reveals significant challenges in achieving these mandated standards. Recent assessments indicate that only 11-22% of designated FRUs are fully operational with all required elements available^{16,17} In Bihar, a

comprehensive analysis of 149 FRUs revealed that only 3.1% of institutional childbirths were delivered by caesarean section, far below the WHO recommended rate of 10-15%¹³. Critical infrastructure gaps persist, with 68% of facilities lacking blood storage units and 36% missing adequate operative facilities.^{16,17}

The workforce challenges are equally concerning, with only 58% of FRUs having obstetrician-gynecologists and 39% having anesthetists available¹³. This shortage of specialized personnel severely compromises the ability of FRUs to deliver life-saving emergency services, particularly comprehensive emergency obstetric care (CEmOC) that requires trained doctors in both caesarean section and anesthesia simultaneously.^{16,17}

The Evolving Healthcare Landscape: New Challenges and Opportunities

Since 2004, India's healthcare ecosystem has undergone profound transformations that necessitate comprehensive revision of FRU guidelines. The epidemiological transition has brought non-communicable diseases (NCDs) to the forefront of public health concerns, with diabetes prevalence reaching 17.9% and hypertension affecting significant portions of the population^{17,18,19}. This shift demands FRUs to develop enhanced capabilities for NCD management, screening, and long-term care coordination.

The road traffic accident epidemic has emerged as a major public health challenge, with over 1.5 lakh annual fatalities and enormous economic burden equivalent to 3.14% of India's GDP^{20,21}. This growing trauma burden requires FRUs to strengthen emergency trauma care capabilities, establish trauma protocols, and develop efficient referral mechanisms for complex cases requiring tertiary care.

Maternal health indicators present a mixed picture of progress and persistent challenges. While 88.6% of births now occur in health facilities, representing significant improvement in institutional delivery rates, nearly half of all pregnancies are identified as high-risk according to NFHS-5 data^{19,22}. The maternal mortality ratio has declined from 412 to 103 per 100,000 live births between 1997-1998 and 2017-2019, yet substantial variations exist across regions and socioeconomic groups²².

The caesarean section delivery rates have increased to 21.5% nationally, with significant interstate variations and concerning patterns of unnecessary procedures in private facilities^{23,24}. This trend necessitates updated FRU protocols for appropriate cesarean section decision-making, quality improvement initiatives, and monitoring mechanisms to prevent overuse while ensuring access to life-saving procedures.

The Ayushman Bharat initiative launched in 2018 has fundamentally altered healthcare delivery patterns through the establishment of 150,000 Health and Wellness Centres providing comprehensive primary healthcare²⁵. This expansion of primary care services requires FRUs to redefine their referral relationships, develop new care coordination mechanisms, and enhance specialized services that complement the expanded primary care capacity.

Technological advances have revolutionized healthcare delivery possibilities, introducing telemedicine capabilities, digital health records, point-of-care diagnostics, and mobile health applications²⁶. The COVID-19 pandemic accelerated the adoption of these technologies, demonstrating their potential for improving healthcare access and quality in resource-constrained settings¹¹.

The workforce landscape has evolved with new cadres of healthcare providers including Community Health Officers, enhanced roles for mid-level healthcare providers, and task-sharing initiatives that allow trained medical officers to perform specialized procedures^{13,26}. These developments require updated FRU guidelines to incorporate new staffing models, training requirements, and supervision mechanisms.

Gaps in Current FRU Guidelines: Critical Areas Requiring Attention

The 2004 FRU guidelines exhibit several critical gaps when assessed against contemporary healthcare needs and evidence-based practices. The disease burden profile reflected in current guidelines predominantly focuses on maternal and child health conditions, with inadequate attention to the growing burden of NCDs, trauma, and mental health disorders that now constitute significant portions of FRU caseloads¹.

Infrastructure specifications in existing guidelines do not adequately address modern requirements for infection control, patient safety, accessibility for disabled individuals, or environmental sustainability. The COVID-19 pandemic highlighted the importance of adequate ventilation, isolation facilities, and infection prevention protocols that are not comprehensively addressed in current FRU standards¹¹.

Technology integration is minimally addressed in current guidelines, despite the proven benefits of electronic health records, telemedicine, diagnostic technologies, and quality monitoring systems. The rapid adoption of digital health solutions during the pandemic demonstrated the potential for technology to enhance FRU functionality and connectivity with other healthcare facilities¹.

Quality assurance mechanisms in existing guidelines lack comprehensive frameworks for continuous quality improvement, patient safety monitoring, clinical governance, and outcome measurement. Contemporary healthcare delivery demands robust quality assurance systems that can identify problems early and implement corrective measures systematically⁸.

Staffing models described in current guidelines do not reflect the evolution of healthcare workforce including new cadres of providers, task-sharing arrangements, and innovative staffing solutions that can address human resource constraints while maintaining quality of care^{13,26}.

Service integration between FRUs and other healthcare facilities is inadequately specified in current guidelines, despite the importance of seamless care coordination in modern healthcare systems. The expansion of Health and Wellness Centres and the emphasis on Universal Health Coverage require clearly defined referral pathways and communication mechanisms⁷.

Evidence-Based Recommendations for FRU Guideline Revision

Based on comprehensive analysis of current healthcare challenges and international best practices, several key recommendations emerge for updating FRU guidelines to meet contemporary needs effectively.

Comprehensive Service Package Expansion should incorporate evidence-based protocols for NCD management, emergency trauma care, mental health services, and preventive healthcare interventions. FRUs should be equipped to provide screening, treatment, and follow-up care for diabetes, hypertension, and other common NCDs that constitute growing portions of their patient populations^{17,18}.

Infrastructure Modernization Standards must address infection prevention and control requirements, patient safety features, accessibility compliance, environmental sustainability, and technology infrastructure necessary for modern healthcare delivery. The COVID-19 pandemic has demonstrated the critical importance of adequate infrastructure for managing infectious disease outbreaks¹¹.

Technology Integration Framework should establish requirements for electronic health records, telemedicine capabilities, digital diagnostic equipment, and data management systems that can enhance care quality and facilitate communication with other healthcare facilities¹. Quality Assurance and Clinical Governance mechanisms must include comprehensive frameworks for continuous quality improvement, patient safety monitoring, clinical audit systems, and outcome measurement that can drive systematic improvements in care quality⁸. Workforce Development and Training protocols should address the evolving healthcare workforce including Community Health Officers, mid-level healthcare providers, and task-sharing arrangements while ensuring

adequate supervision and quality maintenance.^{13,26} Care Coordination and Referral Systems must establish clear protocols for seamless patient transitions between healthcare levels, communication mechanisms with Health and Wellness Centres, and integration with district hospitals and tertiary care facilities⁷.

Emergency Preparedness and Response capabilities should be enhanced to address natural disasters, disease outbreaks, mass casualty events, and other public health emergencies that require coordinated response from secondary healthcare facilities¹¹.

Implementation Strategy and Stakeholder Engagement

Successful revision and implementation of updated FRU guidelines requires a systematic approach involving comprehensive stakeholder engagement, evidence synthesis, and phased implementation planning.

Stakeholder Consultation should include healthcare providers working in FRUs, state health department officials, medical professional associations, patient advocacy groups, and community representatives to ensure guidelines reflect ground realities and user needs.

Evidence Synthesis must incorporate systematic reviews of national and international best practices, analysis of current FRU performance data, assessment of technological innovations, and evaluation of workforce development models that have demonstrated effectiveness.

Guideline Development Process should follow established frameworks for clinical guideline development including systematic literature reviews, expert consensus methods, stakeholder consultation, and pilot testing in selected facilities before national rollout.

Figure- 1: Suggested phased Implementation



Implementation Support requires development of training materials, capacity building programs, monitoring and evaluation frameworks, and technical assistance mechanisms that can support states in implementing updated guidelines effectively.

Resource Mobilization and re-allocation strategies must be financially neutral, ensuring sustainable mechanisms for long-term maintenance.

Conclusion

The revision of First Referral Unit guidelines represents a critical imperative for strengthening India's healthcare system and achieving Universal Health Coverage goals. The 20-year gap since the last comprehensive guideline update has created significant disconnects between policy frameworks and contemporary healthcare realities.

Current evidence demonstrates substantial gaps in FRU functionality, with only a small fraction of designated facilities operating at full capacity and providing the comprehensive services envisioned in original guidelines. The evolving disease burden, technological advances, workforce changes, and lessons learned from the COVID-19 pandemic provide compelling justification for comprehensive guideline revision.

Updated FRU guidelines must address the growing burden of non-communicable diseases, trauma care requirements, quality assurance mechanisms, technology integration, and care coordination with expanded primary healthcare services under Ayushman Bharat. The guidelines should also incorporate contemporary approaches to workforce development, infection prevention, patient safety, and emergency preparedness.

The recommended approach involves systematic stakeholder engagement, evidence-based guideline development, comprehensive implementation support, and sustainable resource mobilization strategies. Success will require strong political commitment, adequate financial investment, and coordinated efforts across multiple levels of the healthcare system.

Timely revision of FRU guidelines will enable these critical healthcare facilities to fulfill their intended role as effective bridges between primary and tertiary care, ultimately contributing to improved health outcomes and progress toward Universal Health Coverage in India. The imperative for action is clear – the time for comprehensive FRU guideline revision is now.

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