

Evolution of quality in maternal health in India: Lessons and priorities

Abstract

Background: Quality of care is central to current efforts under National Rural Health Mission (NRHM) in India to sustain gains in utilization of institutional maternal and newborn care. For effective planning around institutionalizing quality improvement systems, it is important to critically evaluate India's maternal health policy and services in historical perspective. **Objectives:** The narrative review was conducted (i) to trace the evolution of concern with quality in maternal health in the context of health system development in India from independence (1947) to the present; and (ii) identify quality-related issues and areas for further action to improve maternal and infant survival outcomes. **Materials and Methods:** Peer reviewed scientific publications were identified through systematic searches of scientific databases, grey literature and policy documents. Altogether 174 documents were reviewed. Prospectively designed forms extracted data on (i) health system and quality development; (ii) service performance; (iii) health and safe delivery outcomes. **Results:** In the first four decades after independence, concerns with infrastructure expansion and vertical disease eradication programmes neglected quality of maternal healthcare in India. With growing concern for quality, strategies addressing this were incorporated in NRHM launched in 2005, including public health standards and quality assurance system in reproductive and child health services. **Conclusion:** Focus on quality in maternal health in India has increased in recent years, especially under NRHM, and this has helped accelerate progress in maternal and neonatal outcomes. Further action areas include the need to increase funding, match rising demand with quality services and enhance functioning of quality assurance system.

Key words: Evolution, health policy, healthcare system, India, maternal health, quality of care

Aradhana Srivastava¹,
Sanghita Bhattacharyya¹,
Christine Clar²,
Bilal I. Avan³

¹Public Health Foundation of India, New Delhi, India, ²Independent Consultant, Germany, ³Faculty of Infectious and Tropical Diseases, London School of Hygiene and Tropical Medicine, UK

Address for the Correspondence:

Dr. Bilal I. Avan,
London School of Hygiene and Tropical Medicine, Keppel Street,
London WC1E 7HT, UK.
E-mail: bilal.avan@lshtm.ac.uk

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INTRODUCTION

Universal access to good quality maternal and neonatal care services is pivotal to achieving the fourth and fifth Millennium Development Goals (MDGs) of improved maternal and child survival and health. Efforts towards this end require action on multiple fronts including improved access and quality of services, human resources, effective organization of delivery care and the effectiveness of social interventions to improve birthing practices.^[1] Quality is by far the most critical determinant of maternal outcomes, influencing the decision to seek care, the time taken to reach appropriate care and the ultimate outcome of care.^[2] Any analysis of the effectiveness of maternal health strategies therefore requires examining the quality of services in terms of how they influence the acceptability, access and uptake of services.

India has a rich history of maternal health initiatives, with more than two decades of dedicated safe motherhood programming. Yet, an estimated 56,000 maternal deaths take place in the country every year, which is 19 percent of annual maternal deaths taking place globally.^[3] India's progress towards achieving her maternal and child health goals is likely to have a significant impact on global outcomes. It is, therefore, important to understand her story.

Efforts under the National Rural Health Mission to expand access to emergency obstetric and newborn care in recent years have led to increased utilization with positive effect on outcomes, but the sustainability of such efforts is possible only through provision of quality services.

Health policies and programmes over the years have expanded service coverage and improved health outcomes in India. Infant mortality rate (IMR) has declined from an estimate of 148 per thousand live births in 1951 to 44 in 2012.^[4] Maternal mortality, estimated at 2000 per hundred thousand live births in British India, declined to 212 in 2007-09 [Figure 1]. Overall skilled attendance at birth was only 18.5 percent in 1981, which has now increased to 52.7 percent in 2007-08 [Figure 2].

These achievements need to be studied in the light of quality of care, which could provide critical input in planning for institutionalizing quality improvement in services. Quality of care encompasses both technical competence of service providers and patient satisfaction with treatment received.^[5] Six key dimensions of health systems functioning – safety, effectiveness, responsiveness or patient-centred care, timeliness, efficiency and equity – have been identified as critical priorities for quality improvement.^[6]

This paper examines quality of care in maternal health in India with two specific objectives: (i) to trace the evolution of concern with quality in maternal health in the context of health system development in India from independence (1947) to the present; and (ii) identify quality-related issues and areas for further action to improve maternal and infant survival outcomes.

MATERIALS AND METHODS

Before undertaking the narrative review, we ruled out whether there was an existing or ongoing similar review by diligently examining the Cochrane database and DARE (Database of abstract of Reviews). The review included peer reviewed scientific publications as well as grey literature. Advanced searches in the databases of Pubmed; Cochrane Library; Popline; WorldCat, Google Scholar and Indmed were conducted to identify published literature. The search terms in the review utilized the theoretical framework domains including safety, effectiveness, timeliness, responsiveness, equity, physical and human resources. Outcome measures assessed included maternal and neonatal mortality.

‘Grey’ literature search included open source documents of Government of India and international organizations working in the health sector like World Health Organization (WHO), United

Nations Children’s Fund (UNICEF) and The World Bank. General use of ‘quality’ as a concept was considered in extensive manual and web search for health sector policy and evaluation documents. The focus was to cover policy documents as comprehensively as possible.

Studies were selected by one reviewer, supplemented by a second reviewer. A total of 174 documents were reviewed, comprising of 61 government policy and programme documents, 15 publications of external agencies and 98 published academic literatures.

Data extraction was carried out by using predesigned data extraction forms which captured information on background historical development, health system and quality development, service performance, perceived quality and health and safe delivery outcomes. Wherever possible, authors or agencies of the documents were contacted to provide missing or additional data. The second researcher independently checked the data extraction forms for accuracy and detail. The studies were considered for scientific integrity and robustness of evidence while interpreting the study findings and in recommendations.

For data synthesis, a narrative synthesis approach was adopted including tabulation, summary and explanation of the findings with emphasis on the consistency of the relationship between quality of health services and maternal and child health (MCH) outcomes in India. The results present (i) a narrative history of the concern with quality in MCH in India; and (ii) impact of quality improvement in health on MCH care and services.

RESULTS

Quality concerns in maternal health in India have been influenced by national political and economic developments as well as regional level and global trends in health and developmental priorities [Table 1].

Policy trends in maternal health development and concern with quality

Focus on improving equity and coverage (1947-77)

At independence from colonial rule (1947), India inherited a health system marred by inequity and poor coverage. Therefore, in the initial

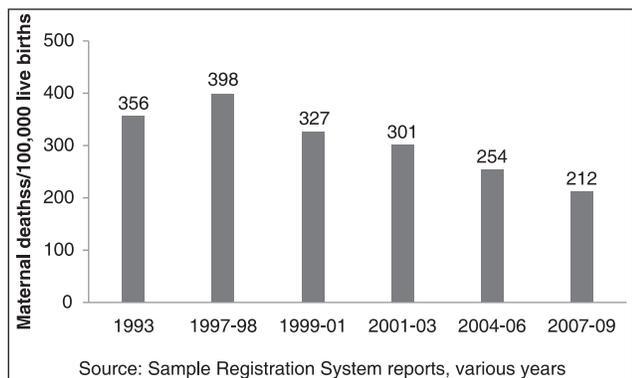


Figure 1: Maternal Mortality Ratio in India, 1990-2009

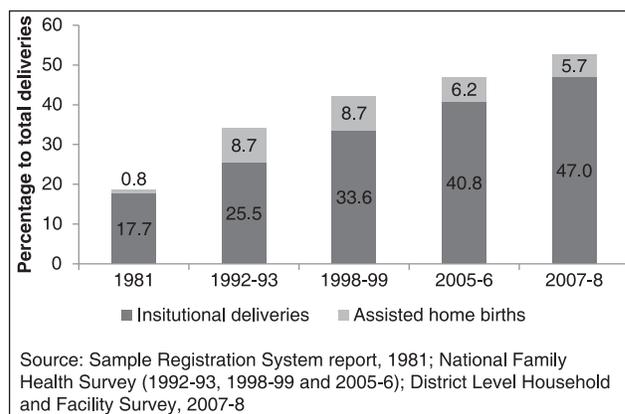


Figure 2: Growth in skilled attendance at birth in India

Table 1: Highlights of evolution of quality in maternal health in India (1947–present)

Period	Key events
1947-60	Focus on expansion of services in un-served areas Limited health sector funding Launch of vertical disease eradication programmes with first five year plan Maternal and child health priority area with expanded programming in first five year plan No evidence of effort on quality assurance - focus restricted to equity and human resources
1960-80	Adoption of target-based family planning approach; pressure for meeting targets damages community maternal and child health services Forced sterilizations during Emergency (1975-77) lead to neglect of maternal healthcare services Quality concerns restricted to equity and quality of human resources Alma Ata declaration (1978) renews focus on primary health and also inspires concern for quality in health care
1980-90	Vertical programmes on immunization and maternal health launched Quality scope limited to equity, human and physical resources and effectiveness; no action strategies
1990-2000	Structural Adjustment Programme leads to rise in private sector health investment in India Reproductive and Child Health programme introduces integrated maternal and child health, family planning and reproductive health services Quality concerns voiced increasingly but no action strategies formulated
2000-2010	National Population Policy (2000) outlines Reproductive and Child Health strategy and sets specific maternal and infant mortality reduction goals Quality focus in tenth and eleventh plans with strategies for quality assurance and appraisal National Rural Health Mission launched, leading to expanded funding and decentralized programme implementation Quality focus and action strategies in both programmes along with regular monitoring and feedback mechanisms Quality initiatives include Indian Public Health Standards for quality assurance in primary care; Quality Assurance Committees at district/State level and assistance to states by National Accreditation Board for Hospitals and Healthcare Providers (NABH) for quality certification

years following independence, India's health system development was guided by considerations of equity and expanding coverage; yet efforts were severely restricted owing to constrained resources.^[7,8]

Under the First Five Year Plan (1951-56), several vertical disease eradication programmes were initiated for various communicable diseases plaguing the country.^[9] MCH services were planned to be expanded with training of doctors, nurses and midwives. However, little progress was made in real terms and quality of infrastructure and human resources emerged as a concern.^[10]

Growing concern with population control led to introduction of the extension approach in family planning under the third five-year plan (1961-66), under which extension workers were given contraception targets.^[11] Pressure to meet these targets eclipsed community based MCH services, particularly during the Emergency (1975-77), a period of suspension of civil liberties, which saw forced sterilizations to meet targets.^[8] After the Emergency, backlash against the target approach led to its replacement by a broader family welfare approach in the late 1970s.^[11] The Alma Ata Declaration of 1978 brought back focus on primary health care based on the principles of universality, comprehensiveness and equity.^[12] During this phase policy concern and quality related recommendations were largely restricted to human resources in health.^[13-15] Several health committees made recommendations on improving quality of physical and human resources. But weak implementation and poor funding kept the health sector performance less satisfactory in this area.

Primary health approach (1978-1990)

The first national health policy in 1983, based on the 'health for all' concept emerging from the primary health approach, focused

on primary level MCH care with concrete goals of reducing IMR from 125 (1978) to below 60 by year 2000 and MMR from 4-5 to below two by year 2000. It stressed on maximizing coverage and strengthening referrals through the three-tier system of rural health centres in India (Sub-Centre, Primary Health Centre and Community Health Centre).

The Seventh plan (1985-90) gave priority to maternal health, focussing on prevention, promotion and educational aspects.^[16] Primary healthcare later on took the shape of vertically functioning programmes on selective aspects like immunization, oral rehydration, breastfeeding and anti-malarial drugs.^[17] In the Seventh plan document, for the first time, quality of care was explicitly articulated as a concern in health sector, especially supplies, training, management and supervision.^[16] No concrete strategy was, however, suggested to address these concerns.

Economic liberalization and global development priorities (1990-2000)

During the 1990s, economic liberalization under the Strategic Adjustment Programme led to rising private investment in secondary and tertiary care, enhancing access inequity in this phase.^[18] At the same time, global women's movements for reproductive rights led to the target-free approach in family welfare programming with focus on overall reproductive health. The shift to RCH approach expanded MCH programming. The World Bank supported Child Survival and Safe Motherhood programme was launched in 1992, adding Vitamin-A supplementation, training of traditional birth attendants, disposable delivery kits and First Referral Units (FRU) for emergency obstetric care (EmOC) in MCH services.^[11] The RCH Programme (RCH-I) was launched in 1997, aiming at integrated

implementation of reproductive, maternal, child, adolescent health and family planning services, through a participatory and decentralized “bottom-up” approach.^[11]

In the later years of the 90s, growing proliferation of private sector activities in the health sector led to the growth and expansion of public-private-partnerships (PPP), which has since become a well-established approach for financing and delivering healthcare.

Quality awareness increased substantially under influence of primary health advocacy and reproductive rights, finding greater articulation in the five-year plans.^[19,20] The perspective widened to include effectiveness and quality assurance, especially as the need was felt for service norms and standards for the expanding private sector.^[21] The World Bank's efforts in implementing quality improvement approaches through its India Population Project and Health System Development Project initiatives in several states were notable.

Focus on quality improvement (2000 onwards)

Voices for quality improvement in the health sector became increasingly forceful over time. The quality concerns in tenth and eleventh five-year plans were backed by strategies for quality assurance and appraisal.

Quality improvement strategies finally emerged with National Rural Health Mission (NRHM) which was launched in 2005 as India's flagship health programme to carry out fundamental reforms in the country's basic healthcare delivery system, integrating all existing programmes including RCH programme phase II (RCH II).^[22] The Indian Public Health Standards (IPHS) established norms for revamping primary health infrastructure and services. RCH-II quality assurance guidelines provided for establishment of Quality Assurance Committees at district and state level for continuous quality monitoring through periodic facility visits and feedback for corrective action. Institutions such as National Health Systems Resource Centre were set up for technical assistance and capacity building to enhance quality of services. Standard treatment protocols and training modules were developed to address critical gaps in skill sets, such as skilled birth attendance, emergency obstetric care, integrated management of neonatal and childhood illnesses and home-based newborn care for community health workers.^[22] Monitoring and evaluation mechanisms were strengthened, including community based monitoring for greater transparency and accountability.^[23-25] These included compulsory establishment of patient welfare committees at facility level which were also provided with untied funds to be able to address gaps in quality of care.^[22] Programme guidelines contained concrete provisions for quality monitoring, certification and improvement.^[26] Guidelines have also been issued for implementing maternal death reviews, a strategy articulated in RCH-II to improve the quality of obstetric care and reduce maternal morbidity and mortality.^[27] The Eleventh Five Year Plan (2007-12) provided for setting up of National Accreditation Board for Hospitals and Healthcare Providers (NABH) for accreditation of private and public health centres at secondary and tertiary

levels.^[25] The Bureau of Indian Standards (BIS) also developed ISO certification for healthcare quality management systems in hospitals.^[28]

Impact of quality improvement in health on MCH care and services

The literature reviewed also identified a number of critical issues relating to quality of MCH services and care in India. These are summarized below.

Research evidence on quality related issues in MCH care in India

Research on MCH care in India identified quality related concerns of poor access, infrastructure constraints, high costs, ineffective treatment and insensitive behaviour as major reasons for low utilization of public facilities.^[29-32] Maternal care particularly suffered because of lack of trained human resources, poor communication, and poor referral and blood bank linkages.^[33]

Studies on maternal satisfaction with care highlighted staff absenteeism, lack of medicines and long waiting time as key problems associated with public health centres in rural areas.^[34] An evaluation of Janani Suraksha Yojana found that good staff behaviour, cleanliness, and counselling about various aspects of newborn care helped increase satisfaction with the programme.^[35] A similar evaluation identified lack of cleanliness and hygiene, privacy, promptness of care and poor staff behaviour as some persistent quality related drawbacks in institutional delivery care.^[36]

Research evidence also linked improved utilization and outcomes with quality improvement measures. Facility renovation led to improved staff morale and increased patient inflow.^[37] Improvement in clinical and public health service quality also led to increased utilization and patient satisfaction, especially in primary and secondary level facilities.^[38]

Issues in implementation of quality improvement measures

Concurrent monitoring and evaluation reports of NRHM/RCH-II have highlighted several issues emerging on account of the rapid expansion of services and implementation of quality improvement measures since 2005. Regional health sector disparities have influenced utilization of expanded NRHM funding. States with better baselines like Kerala and Tamil Nadu have been able to make quicker use of decentralized funds and planning mechanisms to improve their services. Weaker states, on the other hand, are reporting large amounts of unspent funds, reflecting their inability to utilize them.^[39]

IPHS guidelines are being widely used as benchmark in improving facilities, with visible outcomes. Yet in some states progress is slow, possibly owing to legacy of weak health systems.^[40] Persisting deficiencies include interrupted and inappropriate supplies and poor logistics, reports of substantial out of pocket expenditures by the poor, poor infection control, lack of privacy and insensitive

providers.^[40-42] With respect to quality assurance, though quality assurance committees exist, their functionality is limited, and periodic quality assessment is not being implemented uniformly.^[40]

Another important issue is that of demand outpacing supply. Marginal improvements in infrastructure and incentive scheme for institutional deliveries have together contributed to surge in demand, as a result of which facility improvements have been outpaced by the rapid increase in utilization, especially the load of institutional deliveries. Where primary level facilities are not geared up, deliveries are reaching the secondary and higher levels, which face severe over-crowding and shortage of beds and are therefore often compelled to compromise quality of care.^[40,43,44] Mechanisms for quality monitoring are yet to be fully operational in all states, while institutions like Hospital Development Societies, set up for participatory management of facilities, need further orientation on their role in safeguarding equity, along with quality of services, besides other functions.^[43]

DISCUSSION

The historical trend shows that maternal and child health is one of the major components of public health programming in India since independence. However, concerns with expanding access and infrastructure invariably led to a neglect of focus on quality. In short, quality remained an implicit theme with no clear strategy on how it would be achieved. Growing public concern with quality of healthcare in the 1980s and 90s brought it back into focus, under influence of primary health and reproductive rights movements.

Among the quality elements addressed initially, equity of access was addressed by expansion of facilities, especially in backward areas. Strengthening of physical and human resources discreetly addressed effectiveness and safety. In the last decade, NRHM was path breaking in the sense that it directly addressed all elements of quality. It laid down public health standards and focused on strengthening infrastructure, referral linkages and health management systems. IPHS also contain guidelines for ensuring patient privacy, though provider behaviour is an issue that remains to be addressed effectively. There is clear focus on better quality of maternal care services, its effect visible in accelerated improvement in maternal outcomes in terms of reduced maternal mortality [Figure 2].

The road to quality maternal care in India, however, yet remains a long and winding one. Decades of neglect have led to an immense gap that needs to be covered in terms of quality improvement as per standards. Programme reviews have consistently highlighted quality gaps, further accentuated by increased patient loads on account of demand stimulation through incentive schemes as well as infrastructure upgrading.^[40,43,44] Moreover, there is significant regional imbalance in health system development across states. Maternal mortality within the country varies from 81 in Kerala to 359 in Uttar Pradesh.^[45] Less developed states like Uttar Pradesh, Bihar and Orissa are struggling with absence of basic infrastructure and human resources which need to be addressed before quality improvement systems can be functionalized. On the other hand,

progressive states like Kerala and Tamil Nadu have been able to effectively capitalize on the opportunity provided by NRHM to appreciably improve quality of services.

Areas for future action – strengthening management for improved outcomes

Lessons learnt from issues highlighted in the findings lead to actionable points for the future, essential to enhance the quality of services and thereby utilization and outcomes.

A crucial lesson that has emerged from India's experience with NRHM is that expanded financing and improved fund utilization is crucial for impacting quality of care at the facilities. Though public health expenditure has increased under NRHM, it is clearly insufficient, standing at only 1.3 percent of GDP.^[46] There is enormous scope therefore to increase financing in healthcare for substantial quality improvement in the system.

Another important lesson is that in spite of accelerated efforts, the inability of the system to expand supply sufficiently to match rising demand has invariably affected the existing quality. This is indicated by reports of overcrowding and deficient services, especially in institutional deliveries.^[40] While efforts are on to tackle this, there is need to ensure that they are not slackened.

Another realization is that setting up quality assurance systems is only half the job done – unless they are functional, they will not be effective in ensuring quality. Quality assurance system under RCH-II is weak in several states, with non-functional QACs and scope and membership not broadened to include all aspects of the programme.^[44] Clear directives need to be issued to prioritize their functionalizing as per programme guidelines.

Experience under NRHM has also brought to light the lesson that community awareness is essential to promote an overall culture of quality of care. For the future therefore there is a need to expand efforts towards enhancing community awareness on quality of care and the avenues of community engagement to improve facilities and ensure transparency and accountability of services.

Findings from research studies have shown that improving infrastructure may not improve utilization unless patient dignity and staff behaviour are also addressed.^[31,32] This is perhaps one of the most important lessons that have emerged from the experience of quality improvement efforts under NRHM and RCH-II, which have relatively greater focus on supply-side factors. In the future it is critical to ensure that unless behavioural aspects like staff sensitivity and improved communication with patients are not addressed effectively, utilization of public facilities will continue to remain dissatisfactory.

Another critical lesson especially true for the Indian scenario is that low benchmarks can restrict progress. There is a fear that the baseline of quality of care is so low in India that there is a danger of fixing benchmarks which are quite low. Additional efforts are therefore needed for continuous quality assessment and review of benchmarks to ensure progressive enhancement of services and standards.

CONCLUSION

To conclude, the review shows that quality of care has come a long way in India, from being an underlying implicit theme in the early decades following independence to a well-articulated strategy under NRHM. Changing focus on quality could also be a critical factor influencing health outcomes in India, with years of neglect reflected in slow progress until the last decade, when increased focus on quality helped accelerate positive maternal outcomes. India's experience has also brought forth a number of critical lessons which highlight the future direction which quality enhancement in India's health system needs to take, especially in terms of increased funding, improved services and functional quality assurance systems. Persistent efforts to institutionalize quality assurance processes in this direction will be crucial for the gains to continue beyond the Mission period.

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