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UNVEILING THE BOTTLENECKS: REVIEW OF COMMUNITY HEALTH CENTRES NOT MEETING THE NATIONAL QUALITY ASSURANCE STANDARDS REQUIREMENT, TAMIL NADU, 2022 TO 2023

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ABSTRACT

INTRODUCTION : Initiated by Government of India in 2013, the National Quality Assurance Standards (NQAS) program aims to elevate the quality of care provided in public health facilities nationwide. This study examines the performance of Community Health Centres (CHCs) in Tamil Nadu concerning the NQAS. Despite its significance, some CHCs fail to meet NQAS standards, prompting an exploration into the underlying factors contributing to this shortfall.

METHODS : Through a descriptive cross-sectional study, data from CHCs not recommended for certification were analysed to identify challenges and areas for improvement.

RESULTS : This study reveals significant shortcomings in quality management, support services, clinical care, and human resources. Results indicate that out of 423 CHCs, 30.7% participated in the NQAS assessment, with 7.7% failing to meet certification requirements.

CONCLUSION : Identified challenges include deficiencies in quality management, support services, and clinical care, along with potential human resource constraints. Recommendations include strengthening quality management systems, enhancing support services, prioritizing clinical care, addressing HR constraints and improving linkage services.

KEYWORDS : Poliomyelitis, Oral vaccine, Sabin vaccine, Mass vaccination, Primary care

INTRODUCTION

National Quality Assurance Standards (NQAS) program, initiated by the Government of India in 2013, aims to enhance the quality of care provided in public health facilities nationwide.¹ These standards are crucial for ensuring top-notch healthcare delivery in community settings, particularly in Community Health Centres (CHCs), which serve as the cornerstone of primary healthcare in India. In 2020, standards were also established for Ayushman Bharat Health and Wellness Centres and Sub-centres to ensure high-quality promotive, preventive, and primary healthcare services, early screening and identification of health issues, timely referrals, and regular follow-ups.

India's public health system operates across three tiers: primary, secondary, and tertiary. Primary care is delivered through sub-centres and primary health centres (PHCs), at the same time, CHCs are 30 bedded hospitals which serves as the First Referral Unit (FRU) for PHCs and sub-centres, offering essential services such as emergency obstetric care, blood storage, and new-born screening.² Tamil Nadu's health system operates on a three-tier structure: primary, secondary, and tertiary care. Primary healthcare services fall under the Directorate of Public Health and Preventive Medicine, which have 45 Health Unit Districts.

Each district is managed by a District Health Officer and includes 30 to 40 Primary Health Centers (PHCs). PHCs are established at a ratio of one per 30,000 people in plain areas and one per 20,000 in hilly regions. Each PHC generally oversees 5 to 6 Health Sub-Centers (HSCs), which are set up at a rate of one per 5,000 rural residents in plain areas and one per 3,000 in hilly areas.³

NQAS assessment is a vital initiative aimed at enhancing the quality of healthcare services in India, particularly within public health facilities. Developed by the National Health Mission, NQAS provides a comprehensive framework for evaluating healthcare delivery across various dimensions, including service provision, patient rights, clinical care, infection control, and facility management. The assessment process involves both self-evaluation by healthcare facilities and external validation by independent assessors. NQAS continues to align with global standards and has recently received accreditation from the International

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Society for Quality in Healthcare (ISQua). Research shows numerous benefits associated with NQAS accreditation for public health facilities, with many respondents viewing it as an effective mechanism for enhancing healthcare quality. By focusing on capacity building and training for healthcare personnel, NQAS aims to improve health outcomes and increase patient satisfaction. Ultimately, the implementation of NQAS in Tamil Nadu is a significant step toward ensuring that patients receive safe, effective, and compassionate care, thereby strengthening the overall public health system. Achieving equitable, accessible, and affordable primary healthcare of assured quality is essential to realizing the goal of 'Health for All.'

Not all CHCs comply with NQAS standards, some factors contribute to a CHC not meeting few recommendations. Understanding these reasons is crucial for developing targeted support systems to help CHCs bridge the gap and achieve NQAS certification.²

This study aims to provide a comprehensive analysis of Community Health Centres (CHCs) not meeting the requirement of NQAS, exploring the various reasons why they might fall short of meeting the criteria. This study describes the potential shortcomings in areas such as infrastructure, staffing, and service delivery processes and to identify the most common areas of non-compliance with NQAS standards and to explore the underlying factors contributing to these failures.

METHODS

A descriptive cross-sectional study was conducted to analyse the reasons why few Community Health Centres (CHCs) are failing to meet the requirements for NQAS certification in external assessments. The study population comprised those CHCs identified as not complying with the certification standards. Data were collected from state program records, specifically utilizing the external NQAS assessment checklist. The final reports generated by external assessors served as the primary data source for this research, offering valuable insights into the performance and quality deficiencies of the selected health centres.

The primary variable in this study was the external assessment scores assigned to each Community Health Centre (CHC) under the National Quality Assurance Standards (NQAS) program. These scores reflect the level of compliance with the quality standards established by NQAS. The assessment process involves trained evaluators who examine various aspects of healthcare delivery, including service provision, patient safety, and adherence to clinical protocols.

Each CHC is evaluated using a comprehensive checklist that encompasses multiple domains, such as infrastructure, staffing, clinical practices, and patient feedback.

The following quality measurement and checklist for standards by the external assessment has been reviewed for this study.³ The Areas of Concern include broad area/themes for assessing different aspects of quality like service provision, patient rights, infection control. CHC focuses on 8 areas of concern and has 65 standards to meet. It includes 297 measurable elements that are assessed using a measurement system at the CHC level, which involves a checklist with 12 items.

Table 1 describes the Areas of Concern and the corresponding standards checklist for Community Health Centres (CHCs). Each area addresses specific aspects of healthcare quality and service delivery, providing a comprehensive framework for evaluation. The checklist for Areas of concern include: **a) Service Provision:** The service provision area assesses the availability of curative services at Community Health Centers (CHCs). It also evaluates the accessibility of RMNCH+A (Reproductive, Maternal, Newborn, Child, and Adolescent Health) services. Additionally, it includes diagnostic services and evaluates participation in national health programs. **b) Patients' Rights:** This area measures the availability of essential information to patients. It ensures physical access to healthcare facilities and services. Furthermore, it protects patient privacy and confidentiality while providing mandated free services and incentive schemes. **c) Inputs:** Inputs area evaluates the availability of necessary infrastructure for effective service delivery and also assesses physical safety within health facilities. Moreover, it reviews the availability of skilled human resources, drugs, consumables, equipment, and instruments. **d) Support Services:** This area focuses on processes for equipment maintenance and inventory management. It assesses auxiliary services such as laundry, diet, housekeeping, and power backup. Additionally, it includes standards for financial management, community monitoring, and human resource management. **e) Clinical Services:** This area measures quality in areas such as consultation, admission, and continuity of care. It assesses nursing care, medication safety, and services for high-risk and vulnerable patients. It also covers clinical processes related to antenatal, intranasal, postnatal, newborn, child, and adolescent health, along with family planning. **f) Infection Control:** It evaluates the availability of hand-washing facilities and personal protection equipment. Furthermore, it assesses instrument processing, environmental control, and biomedical waste management

practices. **g) Quality Management:** This area establishes standards for the formation and functioning of a quality team. It includes internal and external quality assurance processes. Additionally, it incorporates patient satisfaction surveys and the implementation of standard operating procedures.

h) Outcome: The outcome area measures the productivity and efficiency of CHCs in delivering care. It assesses the quality of clinical services provided to patients. Lastly, it evaluates overall performance in terms of health outcomes and service quality.

Table 1: Areas of concern and Standards for Community Health Centers (CHCs) under NQAS

Areas of Concern under NQAS	No. of Standards
A Service provision	6
B Patient rights	5
C Inputs	5
D Support services	10
E Clinical services	22
F Infection control	6
G Quality management	7
H Outcome	4
Total Standards	65

There are twelve checklists, namely – Accident and Emergency, Outpatient Department, Labour Room, Inpatient Department, Operation Theatre, Pharmacy, Laboratory, Radiology, Blood Storage, NBSU, and General Administration and Auxiliary Services, which are given in this study. Table 2 explains the criteria which a CHC should meet for award of certification.

Table 2: Criteria for issuing certification under NQAS, based on external assessment:

I.	Criterion 1 Aggregate score of the health facility $\geq 70\%$
II.	Criterion 2 Score of each department of the health facility $\geq 70\%$
III.	Criterion 3 Segregated score in each Area of Concern (Service Provision, Patient's Right, Inputs, Support Services, Clinical Services, Infection Control, Quality Management, Outcome Indicator) $\geq 70\%$
IV.	Criterion 4 Score of Standard A2, Standard B5 and Standard D10 is $\geq 70\%$ in each applicable department. <ul style="list-style-type: none"> Standard A2 States "The facility provides RMNCHA services". Standard B5 states that "the facility ensures that there are no financial barriers to access, and that there is financial protection given from the cost of hospital services". Standard D10 states "the facility is compliant with all statutory and regulatory requirement imposed by local, state or central government."
V.	Criterion 5 Individual Standard wise score $\geq 50\%$
VI.	Criterion 6 Patient Satisfaction Score of 65% in the preceding Quarter or more (Satisfied & Highly Satisfied on Mera-Asptaal) or Score of 3.2 on Likert Scale

Data entered in Microsoft Excel and data analysis was done to identify patterns, trends, and areas needing improvement. This analysis included calculating descriptive statistics, such as averages and percentages, to summarize the performance of each CHC across various standards. By examining the relationships between different areas of

concern, the analysis aimed to highlight shortfalls within the healthcare facilities.

RESULTS

Out of the 423 Community Health Centres (CHCs) in Tamil Nadu, 130 (30.7%) participated in the National Quality Assurance Standards (NQAS) assessment including 40 CHCs in 2022 to 2023. Of these, 120 (92.3%) received certification, and 10 (out of 40 CHCs) 7.7% were not recommended (deferred) in 2022 to 2023 were not recommended (deferred). This means nearly 7% of the participating CHCs failed the assessment. Also, many CHCs are yet to participate in the NQAS assessment.

Table 3: Aggregate score of NQAS Assessment of the 10 deferred Community Health Centres (CHCs), Tamil Nadu, 2022 - 2023

S No	CHCs	Aggregate Score (%)
1	Kosavapatti CHC	70.5
2	Alangudi CHC	72.7
3	Vadagupatti CHC	73.5
4	Anchetti CHC	76.3
5	Kabisthalam CHC	78.2
6	Pandalkudi CHC	78.3
7	Kadayampatti CHC	79.8
8	Thayilpatti CHC	80.2
9	T.N.Palayam CHC	81.8
10	Vellakovil CHC	82.4

Table 3 displays the aggregate scores achieved by the Community Health Centres (CHCs) in the NQAS external assessment showing all health facilities scored above 70% but not meeting the required criteria for certification.

Table 4: Scores under each Area of Concern for 10 deferred Community Health Centres (CHCs), Tamil Nadu, 2022 - 2023

Area of concern	Kosavapatti CHC	Alangudi CHC	Vadagupatti CHC	Anchetti CHC	Kabisthalam CHC	Pandalkudi CHC	Kadayampatti CHC	Thayilpatti CHC	T.N.Palayam CHC	Vellakovil CHC
A. Service provision	69	72	71	65	72	79.4	85	78	77.3	83
B. Patient rights	73	81	82	80	89	87.5	90	84	88.1	93
C. Inputs	67	72	78	72	80	74.3	79	83	86.3	79
D. Support services	69	73	77	76	83	81.8	80	85	79.4	77
E. Clinical services	65	71	73	77	81	80.2	85	79	83.3	89
F. Infection control	86	78	78	85	86	80.7	86	83	90.2	90
G. Quality management	66	66	57	72	55	64.7	57	68	74.4	61
H. Outcome	74	71	70	80	74	87.6	79	77	80.6	98

Table 4 shows that Kosavapatti CHC scored below 70 in several areas, with service provision at 69 and inputs at 67, indicating significant room for improvement. Anchetti CHC also performed below 70 in service provision, scoring 65, while Kadayampatti CHC and Vadagupatti CHC both had lower scores in quality management, with 57 each. Five facilities scored which scored below 70 in the area of Quality Management - Kabisthalam CHC had the lowest score at

55, followed by Pandalkudi CHC with 64.7 and Thayilpatti CHC at 68. Additionally, Alangudi CHC scored 66, while Vellakovil CHC scored 61 in this critical area. Furthermore, approximately 8 out of 10 deferred CHCs failed specifically in the area of Quality Management.

Table 5: Department wise score of the 10 deferred

Community Health Centres (CHCs), under NQAS, Tamil Nadu, 2022 - 2023

S.No	Departments	Kosavapatti CHC	Alangudi CHC	Vadapupatti CHC	Ancheti CHC	Kabishalam CHC	Pandalkudi CHC	Kadayampatti CHC	Thayilpatti CHC	T.N Palayam CHC	Vellakovil CHC
1	Accident& Emergency	48.2	82.13	60.6	70.4	89.65	82.2	89.3	83.3	84.6	86.06
2	Laboratory	88.3	69.6	78.2	75.2	75.6	83.6	76.2	86.5	78.4	78
3	OPD	82.6	86.89	75.7	78.5	85.73	87.8	88.4	76.8	90.3	89.09
4	Labour room	82.8	73.33	81	77.2	89.13	79.2	88.7	88.5	85.3	93.73
5	Pharmacy and store	76.5	75.74	83.9	78.5	90.59	79.2	82.6	85.1	67.3	71.28
6	IPD	65	80	67.3	80.6	88.02	77.1	74.5	84.3	85.3	87.46
7	Auxiliary	42.4	59.26	70.2	70.8	54.77	74.2	69.1	72.5	83.7	44.66
8	General administration	70.7	61.19	75.9	77.8	66.69	72.9	81.6	69.2	86.6	70.62
9	Operation Theatre	68.2	62.05	70.1	78.1	65.06	76.1	72.3	80	74.4	90.41
10	Blood Storage Unit	67.2		73.2			81.6	60.9			80.72

In Table 5, Kosavapatti CHC identified several departments that scored below 70. Specifically, the Accident & Emergency department received a low score of 48.2, and the Auxiliary services scored only 42.4. Additionally, the scores for IPD score 65, the Operation Theatre scored 68.2, and the Blood Storage Unit scored 67.2.

Alangudi CHC failed under lab services, Auxiliary services, general administration and Operation Theatre. Out of 10 CHC's deferred 5 of them failed in auxiliary services department. In total, CHCs have scored less than 70% in five out of ten departments.

Table 6: Proportion of deferred Community Health Centres (CHCs) failed to meet Standards under specific services under NQAS, Tamil Nadu, 2022 – 2023, N=10

Services	Standards	n (%) CHC's- not met the standards
Support Services	D6 - The facility has defined and established procedures for promoting public participation in management of hospital transparency and accountability	2 (20%)
	D10 - The facility has established procedure for monitoring the quality of outsourced services and adheres to contractual obligations	4 (40%)
Clinical Care	E12 - The facility has defined and established procedures for Blood Storage Management and Transfusion	6 (60%)
	E13 - The facility has established procedures for Anaesthetic Services	2 (20%)
Infection Control	F1 - The facility has Infection Control Programme, and there are procedures in place for prevention and measurement of Hospital Associated Infections	2 (20%)
Quality Management	G1 - The facility has established organizational framework for quality improvement	2 (20%)
	G5 - The facility has established system of periodic review as internal assessment, medical and death audit and prescription audit	2 (20%)
	G6 - The facility has defined and established Quality Policy and Quality Objectives	4 (40%)
	G7 - The facility seeks continual improvement by practicing Quality tool and method	3 (30%)

Table 6 presents the proportion of CHCs which had not met the standards for specific areas of concern -

Support Services, Clinical Care, Infection Control, and Quality Management, indicating failure. Notably, six facilities scored less than 50% in Standard E12 under Blood Storage Management and Transfusion, which falls under Clinical Care. Additionally, four facilities failed in Standards D10 and G6, which are related to Support Services and Quality Management, respectively. In this study, five standards of support services, four standards of clinical care, one standard of infection control and four standards of quality management were less than 50% and failed the criteria.⁵

DISCUSSION

This study examined the performance of Community Health Centres (CHCs) in Tamil Nadu which deferred in the National Quality Assurance Standards (NQAS) assessment. Around 40% of non-recommended CHCs failed in quality management standards related to policy, continuous improvement, and quality assurance. This indicates the need of for continuous monitoring and improvement mechanisms. Deficiencies in support services, such as equipment maintenance, pharmaceutical management, and public transparency, compromise patient care and resource efficiency. Notably, over 60% failed in blood storage management, underscoring a critical need for improved practices in this area. Short comings in essential services, like Operation Theatre and Blood Storage Units, suggest potential issues with HR constraints like inadequate staff and training.

As of now in Tamil Nadu, a total of 371 Primary Health Centres (PHCs) have undergone national assessment. Out of these, 325 PHCs (87.5%) were fully certified, 41 PHCs (11.0%) received certification with conditionality, and 5 PHCs (1.5%) were deferred. Compared to PHCs (Primary Health Centres), the deferred rate for CHCs is significantly higher.

Even though NQAS was started in the year 2013, Kerala was not able to accredit many institutions with NQAS because of certain check points in the NQAS check list which are not suitable for Kerala socio economic and health conditions. In Kerala, state took initiatives to customize the NQAS check list according to Kerala standards with the help of NHSRC and the checklist were customized according to Kerala conditions in November 2017. The checklist customization was done by removing some items irrelevant to Kerala conditions and by adding palliative care into the check list.²

Around the world, more and more countries, whether developed or developing, are adopting a healthcare

assessment system to achieve hospital accreditation (Greenfield and Braithwaite, 2008).⁵ Accreditation involves a thorough evaluation of healthcare facilities against established standards by an authorized body, either governmental or non-governmental. While accreditation primarily focuses on quality management, its impact on service improvement is debated. Some argue that accreditation standards help enhance healthcare quality and bolster patient safety⁶, and they are designed to promote ongoing quality improvement efforts within accredited institutions.⁷ The study which conducted in Kerala by Sindhu Joseph regarding impact assessment of accreditation in primary and secondary public Healthcare Institutions in the State of Kerala, showed that the accreditation has a positive impact on patient satisfaction and other quality dimensions, overarching structural and procedural quality in primary healthcare facilities under the public sector in Kerala. Conversely, accreditation has not improved the quality dimensions in secondary healthcare facilities and thereby, the satisfaction of patients.⁸

The study by Erlyn K. Macarayan et al., which assessed primary care quality across ten low- and middle-income countries, found gaps in measuring key outcomes like user experience, health outcomes, and confidence. It also highlighted deficiencies in processes such as timely action, provider choice, affordability, ease of use, dignity, privacy, non-discrimination, autonomy, and confidentiality. Additionally, there was no information available on care competence beyond maternal and child health.⁹

The additional information regarding the NQAS CHC checklist customized for FRU (First Referral Unit) CHCs highlights a gap in Tamil Nadu's CHCs. The lack of 24-hour emergency care with specialists like surgeons, obstetricians/gynecologists, anesthetists, and pediatricians significantly undermines FRU functionality. This aligns with the observation that many CHCs failed to meet Criteria 5, which likely encompasses FRU requirements.

CONCLUSION

This study highlights the importance of taking a multi-faceted approach to enhance CHC performance in Tamil Nadu. The NQAS assessment results identify areas for improvement in the state's CHCs while also offering valuable opportunities to strengthen the healthcare system. In comparison to Primary Health Centres (PHCs), the deferred rate for Community Health Centres (CHCs) is notably higher. Furthermore, a number of CHCs have yet to participate in the NQAS assessment. By implementing targeted interventions and addressing identified challenges positively, like Kerala

where they customized the check list after that they made tremendous progress in NQAS accreditation.²

RECOMMENDATIONS

By addressing these challenges, Tamil Nadu can significantly improve CHC performance in NQAS assessments and deliver better healthcare to communities. Strengthening Quality Management involves implementing robust quality improvement programs, establishing clear quality policies, and conducting regular internal and external audits. Enhancing Support Services requires a focus on improving equipment maintenance programs, streamlining pharmaceutical management, and actively encouraging public participation in hospital governance. Prioritizing Clinical Care entails ensuring adherence to standard treatment guidelines, strengthening emergency preparedness, and establishing adequate blood storage and transfusion practices. Addressing Human Resources constraints involves allocating adequate resources for staffing, prioritizing training programs for healthcare personnel, and exploring financial support options from stakeholders at the state and district levels. Bridging the FRU Gap requires advocating for policy changes and customizing CHC checklists, while improving Linkage Services involves strengthening referral networks and communication channels between CHCs and higher-level facilities to ensure seamless patient care pathways. These comprehensive steps will contribute to enhancing healthcare delivery and meeting NQAS standards across Tamil Nadu's CHCs.

DECLARATION OF INTEREST

The authors declare no conflict of interest.

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