Performance of primary healthcare centres in Bengaluru urban district

Summary

This thesis is about improving the measurement of performance assessment for primary healthcare centres in a specific context, the Bengaluru Urban district, in Karnataka, India. Performance was explored from the perspective of the key stakeholder of the centres : the patients, providers and the middle level managers.

Chapter 1 provides a general introduction on the background of performance assessment in primary health care. Further, the standards in the field are addressed: the WHO aspects of performance assessment and the framework from the Primary Health Care Performance Initiative. The chapter also describes the structure of primary healthcare system in the Indian context. Further, the literature on the contribution of health care providers to performance and how performance is related to their involvement in their work, is addressed. Aim of this research was intended to fill the gap in the understanding of how to assess PHCs performance. The research questions included

1. How are PHCs being evaluated in developing countries? What measures of PHC performance have been utilised in empirical literature in developing countries?
2. What are PHC performance indicators from the perspectives of key stakeholders (patient, provider and mid-level healthcare manager) of the PHCs?
3. How can we assess PHC performance from multiple perspectives and what are the relationships between various perspectives of PHC performance assessment?
4. What criteria contribute to the existing health system performance frameworks?

Chapter 2 presents a narrative review of empirical literature on the performance of the primary healthcare centres in low- and middle- income countries (LMIC) to develop an understanding of the measures that are being used by researchers in assessing the PHC performance and compare it with the World Health Organization's (WHO's) framework for performance assessment that forms a comprehensive global standard to identify the gaps in assessment. The initial search yielded 4,359 articles of which fifteen articles met the specified inclusion and exclusion criteria. Nine articles used quantitative methods, one article used qualitative methods exclusively and five used mixed methods. Fourteen articles had a good description of the measurement properties. None of the articles presented validity tests of the measures but eleven articles presented measures that were well established. Mostly studies included components of personnel competencies (skilled/ un-skilled) and centre performance (patient satisfaction/cost/efficiency). The measures in the articles were limited in scope as they did not represent all service components of PHCs from the WHO framework. Hence, PHC performance assessment should include system components along with relevant measures of personnel performance beyond knowledge of protocols. It was concluded that existing measures for

PHC performance assessment in developing countries need to be validated and concise measures for neglected aspects need to be developed.

Chapter 3 describes PHC performance from the perspective of the patients. The aim of this study was to explore PHC performance from the patient's perspective and in relation to the WHO framework of performance assessment. 188 patients attending one of three PHCs in Bengaluru (India), were interviewed to identify nine themes that formed the areas of PHC assessment from patient's perspective, these themes included: the availability of rich and diverse services; the capability to carry out effective diagnoses; the cost and availability of medicines; the quality of the infrastructure; the cost of care; the behaviour and communication skills of staff; the effectiveness of care and how well it is organized; and the punctuality of staff. The criteria that are of primary importance to patients were varied and not only covering multiple aspects of WHO framework but also their local relevancy. It was concluded that the factors cut across various aspects of the WHO's model of PHC performance, rendering the assessment model more inclusive and indicative of the views of those receiving care and of the realities "on the ground". Such a holistic model would further ensure continuous improvement in service delivery leading to better utilization of preventive and promotive services provided by the PHCs.

Chapter 4 explores the perspective on performance of an important stakeholder group: the PHC healthcare providers. Including performance indicators based on the perspective of healthcare providers are expected to enable assessment of the actual functioning and effectiveness of urban PHCs. It was aimed to collect the providers' perspectives and compare them with the WHO aspects of performance assessment and with the framework of Primary Health Care Performance Initiative (PHCPI). Interviews with 36 providers at three PHCs provided the previously untapped first-hand information, stating that the following indicators were crucial to any PHC performance assessment: (1) efficient teamwork at PHCs; (2) the presence of opportunities for healthcare providers to enhance their skills and knowledge advancing their professional careers; (3) job satisfaction; (4) effective administration of PHCs in terms of safety and security, especially in dealing with potential violence; (5) good community relations developed from positive attitudes of healthcare professionals and patients. The study provided vital, and previously missing information on how PHC could be assessed from a more realistic grassroot level. It was concluded that these PHC performance indicators could be considered the 'missing link' in PHC assessment, since they are deemed important by providers and did not coincide with the WHO aspects and the PHCPI performance assessment framework.

Chapter 5 aims to identify PHC performance indicators and the various factors that affect performance, from the perspectives of mid-level healthcare managers. In-depth interviews with 8 managers from taluk/ block and district level in the Bengaluru urban district resulted in indicators for PHC performance assessment. Apart from output indicators of the centres, managers emphasised that PHC environment and rapport with patients should be considered as PHC performance indicators. The managers identified doctors as key persons for PHC performance. According to the managers, doctors not only contributed to the standard output indicators by delivering preventive and curative services at PHC, but also had multiple responsibilities as able leaders. The managers also specified the PHCs' dependence on the health system and the local political bodies to function in the socio-political atmosphere. The managers also identified themselves as PHC leaders but in a limited role in the overall PHC performance, as centre supervisors. Managers also emphasised that doctors were responsible for the overall harmonisation of all the mentioned components and dependencies of PHC functioning. They concluded that doctors at PHCs, as able leaders, played a significant role in PHC performance. It was concluded that in-depth interviews with mid-level managers in Bengaluru district showed that PHC performance indicators consisted of targets set by the department, good PHC environment, an established rapport with the patients, doctors' leadership, support from the health system and local politics, socio-political coordination and the supporting supervision role of managers. The managers conveyed that for them PHC performance was synonymous with good leadership by the doctors at the PHCs, plus the doctors' ability to balance between the health system and local politics. While placing the responsibility for PHC performance on doctors, the managers identified their own contribution as supportive supervisors and as change agents.

Chapter 6 explores the patterns in the performance of three PHCs with a low, medium and high number of deliveries regarding (1) the centre's availability of infrastructure and services; (2) providers' well-being (quality of life and work engagement); and (3) the patient view. To tap the patient view, a newly developed measure 'Questionnaire for Patient's Perspective on Performance of Primary Healthcare Centres' (Q4PHC) was used, based on the results from the study in Chapter 3. The Q4PHC consists of 41 items in 7 subscales and showed to have high overall reliability with Cronbach's alpha score of 0.938. The results of the study showed that the centre with the highest infrastructure and service availability had significantly less provider quality of life and work engagement ($p<0.000$). Further, the PHC with the least delivery had significantly higher PHC performance using the Q4PHC score in comparison with high and medium delivery PHCs ($p<0.000$). It was concluded that PHC performance as studied in the three urban PHCs seems to be a trade-off between the available infrastructure and the quantity of services delivered that could be achievable by maintaining adequate provider well-being with acceptable PHC performance from the patient's perspective. The new Q4PHC seems promising to measure patient perspective of PHC performance

in an Indian context. The seven scales not only provide an opportunity to assess but also to improve PHC service delivery. The PHC performance assessment from multiple perspectives offers a realistic view of the centre encompassing the local context, which is valid even though agreement on the various perspectives could not be obtained.

In **Chapter 7** a discussion is provided on the main findings of this thesis, along with the methodological considerations and implications of research and practice. This thesis contributes to the understanding of the measures of performance assessment, their interrelationship so as to create a realistic picture of a PH centre when assessing performance. We conclude that the concept of PHC performance entails views that vary differently by various stakeholders. There were some commonalities in the fact that all the stakeholders considered the doctor to be central to PHC performance, along with provision of appropriate resources and support from the health system, with positive synergistic local political circumstances. All the stakeholders laid a great emphasis on the doctor's ability in providing and organising services by way of good leadership skills in ensuring team work not only within the centre but between the centre and the local socio-political environment as well as with the health system.

This thesis emphasises the applicability of provider wellbeing as the quality of life and their work engagement in providing a clear vision on the local work context, its toll on the provider and may be how to work towards sustainable PHC performance. The strength of this thesis lies in including all the stakeholders at a PHC, because views on the same function differed among stakeholders, providing an internal and external perspective on various functionalities at the centre. The study utilised qualitative methods to get insights into the beliefs, claims, and concerns of various stakeholders involved in healthcare delivery, making it a holistic approach. Also, the quantitative comparison of PHCs by the indicators of PHC infrastructure, availability and service delivery, patients' evaluation of PHC performance, and providers' well-being, gave a multipronged approach to the PHC performance assessment.

We conclude that the concept of what PHC performance entails was viewed differently by various stakeholders assessing the centres. However, they mentioned all the components of the system: structure, process, output and outcome. There were some commonalities in the fact that all the stakeholders considered the doctor central to PHC performance, including appropriate resources and support from the health system, and local political circumstances. Assessing the centres based on the availability of infrastructure and services, provider well-being and patients' assessment of the PHC (Q4PHC) depicted a realistic evaluation offering a complete picture of the PHC.

In conclusion, the findings of this thesis have implications for future research and practice. Further research is indicated to enable the system to assess the centres from perspectives of key stakeholder to develop a realistic assessment, so as to offer centre-specific or even personal interventions to enhance performance, which would work towards sustainable PHC performance.