

# Indicators of Quality of Primary Care Used in Health Systems Performance Assessment

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**Abstract** - Health System Performance Assessment (HSPA) is an instrument many countries use to assess the degree of accomplishment of their health goals. Quality of care is one of the most widely used components in the conceptual frameworks for HSPA. It is composed of six core dimensions - effectiveness, safety, patient-centredness, access, appropriateness, and continuity of care – many of which include primary care quality indicators.

**Index Terms**-- Quality of health care, primary health care, HSPA, quality indicators.s for identifying appropriate keywords.

## I. INTRODUCTION

Health System Performance Assessment (HSPA) is an instrument through which countries assess and evaluate the degree of accomplishment of their health goals. HSPA is used for benchmarking among health systems as it helps countries to determine areas for progress in their health systems and those that need improvement (1). HSPA gives clarity about the essence of health systems, their organization, and their goals (2). The modern health care systems face various challenges leading to problems with their funding and organization (3,5). HSPA helps countries to overcome difficulties in health system performance and to accomplish their health goals.

A report by Murray and Frank from 2000 catalyzed the application of HSPA by various countries and organizations (6). In the last 20 years, different countries have presented their conceptual HSPA frameworks (7,8,17–26,9,27,10–16). The EU (28,29), OECD (30–33), the Commonwealth Fund (1,36), and the WHO (37,38) have presented reports including indicators and recommendations for better health systems performance.

HSPA conceptual frameworks comprise different areas in which health systems are evaluated depending on the

needs of the countries. Quality of care is the HSPA component used in all of the studied frameworks except of the framework of Turkey (17), which makes it a core component of HSPA (30,39). Some author such as Arah et al., go even further stating that HSPA is in fact an assessment of the quality of care (40). Measuring of the quality of care is an important process that identifies medical services or activities with poor quality and thus reduces and prevents the emergence of inappropriate providers in the health system (41).

The Institute of Medicine (IOM) defines quality of care as "the degree to which health care services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge" (39). According to the IOM, the quality of care is measured through six dimensions – safety, effectiveness, patient-centeredness, timeliness, efficiency, equity, which individually and together can lead to better performance of the health systems.

The definition of IOM is the most frequently used in the HSPA conceptual frameworks (1,8–10,12,13,24). Quality of care used in HSPA is measured through six core dimensions - effectiveness, safety, patient-centredness, access, appropriateness, and continuity of care. The indicators in these dimensions reflect the health care processes and outcomes . Primary care quality indicators are present in almost all of its dimensions - a sign of its leading role for the better performance of the health systems. Primary care is the first (entry) point of patients' contact to the health system (43,44) and plays a key role in achieving health system goals (45). The Expert Panel on Effective Ways of Investing in Health (EXPH) claims that well organized primary care helps for the better health system performance (46).

This study aims to research and systematize the most frequently used indicators for measuring the quality of

primary care used in the HSPA conceptual frameworks of various countries and organizations.

## II. MATERIAL AND METHODS

The HSPA conceptual frameworks of 15 countries and their evolution through the years have been studied. These include 23 documents from 15 countries: Belgium (6,7,18,20), The Netherlands (21), Croatia (44), Malta (23), New Zealand (24), Hungary (45), The United Kingdom (25), Portugal (26), Turkey (8), Australia (9–11), Canada (12–14,46), Estonia (15), Armenia (16), Latvia (17), and The Commonwealth Fund USA (1,33) and eight reports by OECD (29–32), WHO (34,35), EU (27,28). Two reports of the Agency for Healthcare Research and Quality (USA) have also been studied (47,48). The total number of quality indicators is 905, out of which 304 different by meaning, which means that most of the frameworks use one and the same indicators. The most frequently used primary care quality indicators were systematized in adjoining dimensions.

## III. RESULTS

Quality of primary care indicators are found in five of the six HSPA quality dimension: effectiveness, patient-centredness, access, appropriateness, and continuity of care (Table 1). Most primary care quality indicators fall into dimensions of effectiveness, patient-centredness, and continuity of care. No primary care quality indicators were found in the "safety" dimension .

The most of the indicators refer to ambulatory care sensitive conditions' outcomes, interpersonal aspects of health care, access-to-primary care issues, primary and hospital care coordination, and medical standards compliance monitoring.

**Table 1. Indicators for measuring quality of primary care used for HSPA**

Dimension	Indicators
Effectiveness	Asthma hospital admissions for adults
	COPD hospital admissions (adults)

	Complication of diabetes hospital admissions in adults
	Influenza vaccination rate ( % of persons aged 65 +)
	Rate of children who receive recommended vaccines
Patient-centredness	Doctor providing an easy-to-understand explanation
	Doctor allowing asking questions or raising concerns
	Doctor involving patients in decisions about care and/or treatments
	Doctor spending enough time with patients during the consultation
Access	Financial barriers
	Physical access to primary care
Acceptability	Rate of prescribing antibiotics
	Appropriate follow up of adult diabetic patients (%)
Continuity of care	Coverage of global medical record
	Usual Provider Continuity Index
	GP encounter within 7 days after hospital discharge (% patients 65 +)
	The proportion of adult diabetic (under insulin or receiving only glucose-lowering drugs) with convention, pass/pre-care trajectory, or a care trajectory

Source: (1,6,7,9,10,12,18,20–24,26,29,31,32,49,50)

#### IV. DISCUSSION

The HSPA primary care quality indicators are found in almost all HSPA quality dimensions. Most of the indicators refer effectiveness, patient-centredness, and continuity of care. Dimension "effectiveness" investigates the degree of achievement of the desired health outcomes (37). As Batalden states "Every system is perfectly designed to get the results it gets" (51). Health outcomes indicate the degree to which health services have improved the patient's condition and health system goals are being achieved (52,53). Blumenthal and colleagues argued that monitoring health outcomes is very important for better health system performance (54). In the studied HSPA conceptual frameworks, the effectiveness dimension consists of indicators that show the degree of achieving the desired outcomes of ambulatory care sensitive conditions (ACSCs). ACSCs are defined as "Conditions for which hospitalizations can be avoided by timely and effective care in ambulatory settings" (42). The primary care quality indicators for measuring effectiveness cover ACSCs outcomes such as vaccine-preventable conditions (influenza, Mellitus, Hepatitis B, etc.) and complications of chronic conditions like diabetes, asthma, and COPD (Table 1). ACSCs outcomes indicators can be used as key primary care quality indicators because qualitative primary care can prevent complications and reduce hospital admission due to various chronic conditions (18,32,42).

Other dimensions focus on the process of health service provision. According to Mant, monitoring data is a direct measure of quality, because of its sensitivity to the changes in quality (55). He argued that unlike the results, process provides information that is more reliable and easier to interpret.

Patient-centredness is the dimension which examines patient's experience with health care. The exploration of patient-centredness is essential for the better performance of health systems (56,57) and improvement of the quality of health services (58). According to Berwick "Person-centredness is not just one of the dimensions of health care quality, it is the doorway to all qualities." (57). The HSPA patient-centredness indicators investigate clinician-patient relationship. The most frequently used indicators indicate the degree to which patients are involved in decisions about care (Table 1). According to some authors, patients who share a positive experience of care are more committed to their treatment (53) which reduces ACSCs complications (59).

The access dimension explores difficulties that patients encounter in need of health care. The HSPA access indicators are focused on financial and physical barriers that patients face in primary care. Financial barriers are linked to

impossibilities patients have to receive medical care, drugs, follow-up tests or treatment they need due to the cost. Physical barriers indicators examine issues concerning geographical access to primary health services. Access to primary care is critical for timely treatment, prevention of chronic disease progression, and reduction of avoidable hospitalization (59).

Acceptability is defined as "the degree to which provided health care is relevant to the clinical needs, given the current best evidence" (30). This dimension indicates the extent to which clinical guidelines and medical standards are applied by clinicians. The most frequently used acceptability indicators study prescribing antibiotics in primary care and the presence of follow-up for patients with diabetes. The focus on these issues is associated with their widespread negative impact on health (60,61) and the need to reduce it.

Continuity of care is a dimension which shows the degree of coherence between primary and hospital care. Devos et. al., conceptualize continuity of care in four aspects: informational continuity (the availability and use of data from prior events during current patient encounters), relational continuity (an ongoing relationship between patients and one or more providers), management continuity (the coherent delivery of care by different providers across different care settings) and coordination of care (the connection between different health providers over time to achieve a common objective) (18). Continuity of care indicators show the availability of a health information system in the countries and the degree to which primary care physicians can adequately take care of patients with chronic conditions like diabetes. This dimension is the least common among the studied frameworks (7–10,20,21,31,50). This might be because the continuity of care is frequently used as a part of the patient-centredness dimension (30).

There were no primary care quality indicators in the "safety" dimension. Indicators in the safety dimension are focused on the hospital care processes since they are related with adverse events, which are most likely to accrue in hospitals.

#### V. CONCLUSION

Primary care quality indicators research the health care processes and outcomes and cover mainly ACSCs. Most of indicators are repeated which indicate the coincidence in primary health care goals to the different countries. The widespread use of primary care quality indicators in HSPA confirms the key role of primary care providers for better health system performance assessment.

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