

Review

Health management information system: a tool to gauge patient satisfaction and quality of care

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نظام معلومات الإدارة الصحية: وسيلة محتملة لقياس مدى رضا المريض وجودة الرعاية
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الخلاصة: يمثّل نظام معلومات الإدارة الصحية وسيلة يمكن استخدامها لتحسين مستوى رضا المريض عن الخدمات الصحية، وذلك من خلال تتبّع بعض أبعاد جودة الخدمات. ويمكن التحقق من الجودة بمقارنة وجهة النظر في الخدمات المقدّمة بالمعايير المتوقعة؛ بحيث يهدف نظام معلومات الإدارة الصحية إلى تسجيل المعلومات الخاصة بالأحداث الصحية، والتحقق من جودة الخدمات في مستويات الرعاية الصحية المختلفة. وتكمن أهمية التقييم من قِبَل المرضى في أنها تعدّ جزءاً من مفهوم إيلاء الاهتمام لآراء المرضى بُعْثَةً تحسّن جودة الخدمات الصحية. وتتضمّن الفوائد المرجوة تعزيز رضا المرضى من خلال تحسين التواصل، وزيادة حساسية مقدّم الخدمة تجاه المرضى؛ وإذكاء الوعي المجتمعي بشأن جودة الخدمات، والانتفاع بصورة أفضل من الخدمات في النظام الصحي.

ABSTRACT The health management information system (HMIS) is an instrument which could be used to improve patient satisfaction with health services by tracking certain dimensions of service quality. Quality can be checked by comparing perceptions of services delivered with the expected standards. The objective of the HMIS would be to record information on health events and check the quality of services at different levels of health care. The importance of patient assessment is a part of the concept of giving importance to patient's views in improving the quality of health services. Expected benefits include enhancing patient satisfaction through improved communication; greater provider sensitivity towards patients; enhanced community awareness about the quality of services; and overall better use of services in the health system.

Le système d'information pour la gestion sanitaire : un instrument potentiel pour mesurer la satisfaction des patients et la qualité des soins

RÉSUMÉ Le système d'information pour la gestion sanitaire est un instrument qui pourrait être utilisé pour améliorer la satisfaction des patients vis-à-vis des services de santé en suivant certaines dimensions de la qualité des services. On peut vérifier la qualité en comparant la perception des services fournis avec les niveaux attendus. L'objectif du système d'information pour la gestion sanitaire serait d'enregistrer des données sur certains événements de santé et de contrôler la qualité des services à différents niveaux de soins de santé. L'importance de l'évaluation par les patients s'inscrit dans un concept de prise en compte de l'opinion du patient pour l'amélioration de la qualité des services de santé. Les avantages escomptés comprennent une plus grande satisfaction des patients grâce à une meilleure communication, une sensibilité plus importante des prestataires à l'égard des patients, une sensibilisation communautaire accrue concernant la qualité des services et une meilleure utilisation des services dans le système de santé d'une manière générale.

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Introduction

Background

Assuring and promoting quality in health care services continues to be a priority for any health care system. Besides evaluation of health status through morbidity and mortality estimates, there has been equal emphasis on quality of care indicators in health systems research. The rising demand for assessment of quality in the health care system can be attributed to rising costs, constrained resources and evidence of variations in clinical practice [1]. The World Health Organization has also emphasized the importance of quality in the delivery of health care, defined by the criteria of effectiveness, cost and social acceptability [2]. A quality health system is a client-centred, integrated, responsive and cost-effective system that includes the continuum of care from health promotion and prevention. Such a system is based on a regular assessment of people's needs and wants, and monitors itself based on a philosophy of continuous quality improvement. Assessment of quality usually focuses on technical concerns: the "structural quality," which is the availability of a structure to provide health care [3] and the "process quality" through which care is delivered [4,5]. This assessment of quality is based on the application of professional standards integrating patients' views and their experiences [6]. The assessment of patient satisfaction may be represented as a comparative balance between their perceptions of the service delivered and the expected standard they had set for the service [7].

The definition of quality may also include a broader approach to satisfaction and a stronger role for patient judgements. This broader approach affirms patient

judgements as valued in themselves rather than as surrogate measures of other dimensions of quality [8]. Although arguments have been advanced that patients lack the expertise to evaluate medical care, several theoretical, practical and empirical arguments provide a strong rationale for assessing patient perceptions [9]. The assessment of patient satisfaction has various advantages. It is more sensitive in gauging various quality indicators across health care delivery systems, has been found to be less expensive [10] and is more reliable than other methods such as physician peer review [11–13]. The importance of patient assessment in the health services is a part of the concept of giving importance to patient views in improving the quality of health services, i.e. "democratizing" and "consumer sovereignty" [14,15]. Increased interest in patient satisfaction surveys is, therefore, evidence of the shift from traditional doctor–patient relationships to the provider–client attitude [16–18]. Moreover, such surveys are a form of health care evaluation independent of external pressures and bias [19–21].

Rationale

A health management information system (HMIS) is an essential tool for strengthening planning and management in the health facilities. Any conventional HMIS enables monitoring of service delivery in terms of access, coverage, expenditure, human resources, disease profiles and health outcomes. The use of an HMIS in support of health systems performance assessment and to address deficiencies and gaps in the services has often been recommended by researchers [22]. The question is whether use of a traditional HMIS to track quality of care dimensions would bring about improvement in patient satisfaction of health

facilities specifically and the quality of care provided in general.

This article is based on a literature review, not only from local journals but also from some regional and international ones. A few publications of the World Health Organization and the World Bank on quality of care and HMIS were also consulted. To review the best practices, articles from less-developed and developing countries were also included. Official policy documents of the Government of Pakistan were also taken into consideration to quote certain details.

Our aim is to ascertain the utility of an HMIS and its use as a tool to monitor quality of care along with its customary usage. The objective of the HMIS would then be not only to record information on health events, but also to check the quality of the services at different levels of health care.

Application of a health management information system

Dimensions of quality of service in the health care sector

It has been observed that people's own experience, since it influences their satisfaction with the care they receive, improves quality of service and in turn its utilization [23]. Various approaches have been outlined for measuring quality in health care such as availability, affordability, accommodation acceptability and physical accessibility [24]. Two studies, focused mainly on family planning services, show other elements of quality of care such as right of choice, right to information, technical competence of the provider, interpersonal communication, follow-up services and appropriate constellation of services in the same outlet [25,26].

Gauging quality of care with a health management information system

One approach to quality in service provision used extensively in the marketing and retailing world has been found interesting, and is compatible with determining quality of care in health service provision too. Adapted from the SERVQUAL tool [27], some important dimensions for service quality assessment are: reliability, responsiveness, assurance and empathy (Table 1). The aim is to improve the level of client satisfaction with the service by tracking these dimensions.

Each of the 15 items listed for the 5 quality of care dimensions carries an equal weight and could be categorized as satisfied, somewhat satisfied or dissatisfied. Assigning scores of 2, 1 and 0 respectively, based on patient responses, provides a method of measuring the level of quality. The maximum possible score would be 30 for a patient rating all 15 items as satisfactory. A cumulative score of 24 or above (80% or above) could be considered excellent satisfaction, 18–23 (60–79%) satisfaction and below 18 (< 60%) poor satisfaction with quality of services. Through a periodic use of this instrument incorporated in the HMIS, an analysis will help to show the variation in the satisfaction level and allow the management to plan accordingly. This analysis is simple and easy, and can be done by facility staff to monitor the quality of their services on a regular basis.

Expected benefits of adapting the health management information system

Benefits for the community

Enhanced community awareness will trigger an increase in the quality of health care,

Table 1 Dimensions of quality of service

Dimension	Element
Reliability	Seen according to expectations Solved the problem Given/received the required treatment
Responsiveness	Hospital staff gives prompt attention Hospital staff do not keep one waiting Hospital staff help according to the need
Assurance	Hospital is trustworthy Doctor is qualified Hospital staff are courteous
Empathy	Hospital staff are caring Give/get individual attention Doctor calls person by name
Tangible	Doctor's office is clean Hospital staff use standard instruments Doctor's prescription is easy to understand

resulting in increased patient satisfaction. This will in turn promote the appropriate use of the health services, which will be catering to the precise needs and aspirations of the community.

Benefits for health providers

One survey in Burkina Faso found that patients felt that services were geared more towards their needs after providers had received training on patient-friendly services [26]. Training vis-à-vis gender sensitization, interpersonal communication skills and confidence-building will enhance the provider's performance. Various tested and verified training curricula, designed to strengthen the skills of health workers, could be used to help providers deal with their own beliefs and biases. The providers could benefit from the information generated by an HMIS. It could help them re-orient their service by adopting a more empathetic client-centred approach, adjusting their attitude and introducing a convivial ambience

at health service outlets based on the feedback of their clients.

Benefits for policy-makers/local government

Such an HMIS could provide a model for decision-making, where the effective use of quality indicators is often limited [28]. The attention of the local government authorities could be drawn to improving the working and living conditions of health personnel and to designing capacity-building strategies for them in order to create a sense of motivation and spirit in serving the poor population. This will eventually complement the health system reforms already in place in Pakistan to refurbish the system in its entirety with the benchmarks of equity, accountability and good governance.

Benefits for health system development

Given the complex nature of the health care delivery system in Pakistan, it is essential for the various sectors to plan and work

together to improve the health status of the population. Data derived through such an information system will help towards understanding the perceptions of the population and the factors influencing health services utilization, and will eventually carry strong prospects for the development of a health system catering to the needs of the local population. Hence, improved coverage and quality of the services should be a desired outcome.

The health management information system in Pakistan

Given the large health infrastructure in Pakistan, both public and private, catering to a population of more than 140 million people, there had long been a need to develop and establish a national HMIS which would be able to collect, process, analyse and provide feedback on all health-related data, including information on input, process and output indicators. In Pakistan, this was developed in the early 1990s by the HMIS cell in the Ministry of Health. This system has now been implemented in a phased manner and more than 90% of primary health care facilities are using it [29].

Current situation in Pakistan

Despite a sound health infrastructure comprising basic health units, rural health centres, maternal and child health centres, maternity homes, dispensaries, etc. [22,30] in the public sector, the deficiency in quality has resulted in a general lack of confidence, with most people relying on private health care providers [31]. In private hospitals and outlets, the quality of services has often been compromised, and unfortunately, has seldom been assessed. The responsiveness of the provider in such for-profit facilities has been questionable too. Only a few studies have been identified in the region which have looked into evaluation of health care services from the consumer's

perspective [32,33]. The dissatisfaction with primary care services leads many people to go "health care shopping" or to jump to higher level hospitals for primary care, leading to considerable inefficiency and loss of control over efficacy and quality of services. Therefore, there is sufficient data to demonstrate the need to assess patient satisfaction with these public and private health facilities to bring about an overall improvement in quality of services delivered. The national health policy document of 2001 emphasized good governance to achieve quality health care [34], however, an authentic system of information has always been flawed throughout the health care system, and there is no mechanism in operation to check the quality of services. The majority of facility-based HMIS systems currently only track type and quantity of services and relate these to improvement in health status indicators.

Discussion

An exercise to track the quality of care delivered at the facility level ought to sensitize management and health providers to the aspirations of their patients. Any improvement in patient satisfaction and quality of services could be then demonstrated through the periodic use of an HMIS. Although it seems very much like any commercial marketing strategy, through regular tracking of these aspects of quality of care, health providers and hospitals would receive timely feedback on areas of deficiency and this will stimulate mechanisms to improve patient satisfaction. The mechanisms developed using an HMIS can be easily adopted in resource-constrained public and private health care settings, particularly in developing countries.

Providing good quality health care is of critical importance for the future economic

and social well-being of our country. Quality, however, has many dimensions. From an ethical standpoint, programme managers need to satisfy the client's right to obtain competent, compassionate, high quality care. Clients tend to value the appearance of the service setting, privacy, respectful treatment and convenience, while providers emphasize facility environment, programme infrastructure and workload

[4]. This gap needs to be bridged. This account illustrates that health providers can increase quality of care by reducing barriers to care through patient-friendly services. An HMIS providing information on quality of services will assist the newly formed district health systems in our country to develop and evaluate patient friendly policies and services with the ultimate aim of improving the quality of health care.

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