

Clinical Pathways: Identifying Development, Implementation and Evaluation Challenges

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Abstract. Clinical pathways are comprehensive methods of planning, delivering and monitoring different healthcare services provided to patients. The main goal of using a clinical pathway is to build clinical decisions on medical evidence specific to each individual patient in addition to standardizing care provided to patients throughout different departments and healthcare services. At King Faisal Specialist Hospital and Research Center, Saudi Arabia, much effort has been done over the last few years to develop, implement and evaluate different clinical pathways and for years these efforts achieved less than expected success. The Health Information Technology Affairs (HITA) decided to analyze the challenges that we faced and should overcome by working on identifying these challenges and classifying them into the three main stages. The information about these challenges were both gathered from relevant departments, services and staff members as well as validated against published literature and research work.

Keywords. Clinical Pathways, Development, Implementation, Evaluation.

Introduction

A clinical pathway is defined as a comprehensive method of planning, delivering, and monitoring different healthcare services provided to patients [1]. Clinical pathways are structured multidisciplinary care plans used by healthcare services to detail essential steps in the care of patients with specific clinical conditions, where the main objective is to link scientific evidence to medical practice and optimize clinical outcomes while maximizing efficiency [2]. Whilst clinical guidelines provide generic recommendations, clinical pathways detail the local structure, systems and time frames to address these recommendations [3]. As healthcare organizations continue to streamline the delivery of services, it is essential that quality and utilization management professionals do their job in a more effective and efficient way to improve outcomes while decreasing cost [4]. The use of clinical pathways, as a part of healthcare organizations' quality or utilization management departments, may be the answer to this great challenge [5]. Decision making in healthcare has evolved from being opinion or experience based into being based on valid and reliable medical evidence. This new concept is recognized as evidence based healthcare. The continuous publication of new medical evidence combined with the demands of daily practice makes it difficult for health

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professionals to keep up to date [6]. Clinical pathways aim at not only building clinical decisions on evidence but also at standardizing clinical practice. Clinical pathways have been implemented worldwide yet the evidence about their impact is still not clear [7]. Most studies evaluating the effects of using clinical pathways have proved that they could easily improve quality of clinical documentation and could, in many cases, improve patient outcomes in terms of mortality and complications while a few studies only could prove that certain clinical pathways could decrease the patient length of stay in hospitals [8, 9].

In most of the studies evaluating clinical pathways, barriers and challenges have been classified into three groups according to the three stages of a pathway life cycle. Development challenges are encountered during the initial stage of designing, developing or acquiring new pathways, where the problems are mainly related to resources and funds [10, 11]. Implementation challenges are usually encountered during the process of introducing pathways to users and practitioners and operating them, where the problems are mainly related to users' beliefs, attitudes and behaviors [12, 13]. Evaluation challenges are usually encountered during the process of studying the cost effectiveness and advantages of using pathways, where the problems are mainly related to availability of experience, evaluation methods and tools [14].

1. Methodology

At King Faisal Specialist Hospital and Research Center, Saudi Arabia, much effort has been done over the last few years to develop, implement and evaluate different clinical pathways throughout different departments and services. For years these efforts were achieving some success, which was still much less and slower than expected. The Health Information Technology Affairs (HITA) decided to analyze the challenges that we face and should overcome to achieve better development, implementing and evaluation of clinical pathways. The information about these challenges were gathered from relevant departments, services and staff members; including department heads and quality designee consultants and using quantitative survey methods, through conducting semi-structures interviews, to collect opinions, experiences and suggestions which were validated according to published literature and research work. The perceived challenges and recommended solutions were categorized and sorted into the main three phases; development, implementation and evaluation.

2. Results and Discussion

Findings of our study were largely consistent with the literature in classifying clinical pathways challenges into development, implementation and evaluation classes.

2.1. Development Challenges

Department heads indicated that insufficient staff and unavailability of dedicated staff who can take on responsibility of designing, developing or acquiring clinical pathways is one of the major challenges. Even with top level management commitment to developing and implementing clinical pathways, dedicated staff members are still

needed to achieve this task. Physicians indicated that when this task is added to the growing responsibilities of healthcare professionals, they usually put it into a second priority after their clinical roles. Most study participants indicated that the process of developing clinical pathways itself could be expensive due to the time and efforts that it takes and due to the need of dedicated staff members that should be paid for this task. The time constraints, trying to rush the development of multiple clinical pathways at the same time without giving enough time for practitioners to conceptualize the ways of how best can these pathways be utilized, is another challenge that might slow or decrease the development of new pathways [10]. Physicians indicated that the lack of active and early staff involvement in clinical pathways development process and the lack of awareness and familiarity of users with clinical pathways are major challenges that might lead to immediate failure or long term resistance by physicians and other users. The medical language should be unified throughout pathways related to different medical specialties. Department heads indicated that if the information provided by the clinical pathways is conflicting with other hospital information, such as policies and procedures, then users might ignore pathways for the sake of legal compliance with hospital rules. Some users might prefer autonomy and innovation in healthcare provision rather than following standards, this attitude should be changed [11].

2.2. Implementation Challenges

Most study participants indicated that bad or failed previous implementation of clinical pathways usually leads to an initial inertia, loss of motivation or interest and sometimes unintended resistance of users to new implementation projects, while the lack of users' involvement at the design, development or acquisition stages might lead to another type of active intended resistance of users who would consider that their right to participate and choose was denied. Negative beliefs, attitudes or behaviors towards clinical pathways, such as thoughts that they are useless or would waste users' time and efforts, might create a type of avoidance [12]. Physicians indicated that if users are not convinced with content or rationale of clinical pathways or if they feel overwhelmed with their guidance they will probably refuse to use these pathways. When users do not have a clue on the expected outcomes, fear to face more accountability, through discovered gaps between actual care delivered and recommended by pathways, being overloaded with work while having shortage of time, resources or supporting staff they will avoid using pathways. High staff turnover, poor training and lack of overtime reimbursement are among documented challenges [13].

2.3. Evaluation Challenges

Most study participants indicated that the same types of challenges which hindered the development or implementation of clinical pathways might also prevent their successful evaluation. Physicians indicated that time constraints, when we rush the evaluation process or decide to ignore evaluation for a while, and unavailability of enough and/or experienced resources, in evaluation, will always have a negative impact on the process and results of evaluation. Department heads indicated that high staff turnover might lead to a false negative result when evaluating the effectiveness of clinical pathways, since new staff will need more training, time and effort to get them ready. Lack of evaluation tools, feedback and reporting mechanisms and lack of response or support from other services might also be a barrier to evaluation [14].

3. Discussion

Clinical pathways need dedicated staff members and more financial resources [10]. Involving future users in developing and implementing new pathways is very essential in addition to proper orientation and training; providing enough protected time for staff to understand and learn using new clinical pathways [11]. Standardizing care across all services and removing conflict with hospital policies and procedures is very essential. Improving evaluation methods and feedback mechanisms is also crucial. Inpatient length of stay could be used to evaluate the effect of clinical pathways, the efficiency of discharge and discharge planning can also be evaluated [9]. Patient and user satisfaction both could be measured, in addition to financial efficiency criteria, such as cost per case and risk management [15]. Quality of care indicators should be utilized, such as clinical outcomes, mortality rates and complications, readmission rates, hospital acquired infections and effectiveness and efficiency of healthcare provision [7, 8]. The positive effects of pathways on improving teamwork should be invested [16].

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