Clinical Pathways – A New Paradigm in Healthcare?

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No doctor practices his or her craft in a vacuum, isolated from external, non-clinical influences. As the practice of medicine becomes increasingly complex and subjected to economic and societal pressures, issues such as cost-containment and cost-effectiveness become prime considerations in the provision of quality healthcare for patients. The absence of a formal care planning system often leads to errors of omission and crucial steps in the care process may be forgotten or not followed through. A team approach may not be used, resulting in poor discharge planning and a lack of patient education.

Increased medical technology has its own set of accompanying problems. Procedures may cost more, inefficiencies may increase length of stay and in turn increase waiting lists. There is also the possibility of over utilisation of laboratory and radiological tests due to unreasonable patient expectations and the practice of defensive medicine. It seems that there is a growing disenchantment among patients and their families who are unaware of the plan of medical care. Hospital staff have also expressed unhappiness over unplanned discharges.

The challenge in healthcare today is to engineer the efficient use of shrinking resources while maintaining or even increasing quality outcomes in patient care. Hospitals should foster increased collaboration between disciplines to ensure continuity of care both during the period of hospitalisation and into the community. Clinical pathways or critical pathways or care paths is one such tool that has been developed to address these problems. This new innovation in clinical process management and documentation may be a new paradigm for healthcare provision in the 21st Century.

A clinical or critical pathway is an optimal sequencing and timing of interventions by clinicians, nurses and other healthcare professionals for a particular diagnosis or procedure, designed to minimise delays and resource utilisation and to maximise the quality of care[1]. Clinical pathways were first introduced in the USA in the early 1970s, but the environment for implementation was not receptive because hospitals had no financial incentive to optimise resource utilisation while doctors resisted any effort to restrict their clinical autonomy. However, in the 1980s, the growth of insurance-based managed care and the introduction of Diagnosis Related Groups (DRGs) stimulated renewed interest in clinical pathways and related subjects such as clinical practice guidelines and algorithms. Other factors included increasing evidence of unacceptable variation in clinical care and outcomes, a trend towards increasing input from multiple professionals in the decision making process for patient care and increasing malpractice costs.

A clinical pathway is essentially a plan of care that reflects best clinical practice and the expressed needs of the patient. It describes the pattern of care for the usual patient within the case-type or population. It represents the minimum standard of care and ensures that the essentials are not forgotten and are performed on time. Conventionally, pathways are written in the form of a grid (or matrix) which displays aspects of care on one axis and time intervals on another. The time intervals are typically in the form of a day by day clinical order and documentation sheet. However, this may vary, depending on the nature and progression of the illness or procedure being performed. Pathways designed for chronic conditions could have timelines in the form of weeks or months while those for hyperacute conditions such as the early phase of acute myocardial infarction may be in the form of minutes or hours.

Clinical pathways integrate medical treatment protocols, nursing care plans and the activities of allied healthcare professionals into a single care plan, which clearly defines the expected progress and outcomes of a patient through the health care organisation or system. Typically, pathways are developed for high-volume, high-risk and high-cost diagnoses and procedures. For ease of use, staff actions and interventions in the clinical pathway are organised into categories. Usually, the following processes are tracked: consults and assessments, tests and procedures, treatment and medication, nutrition, activity or safety, patient education and discharge planning[2]. Additional categories of intervention can be included depending on the nature of the diagnosis or procedure. Clinical outcomes can also be defined and tracked at specific points along the pathways. These outcomes can then be analysed and audited after the episode of care has been completed, thus providing a basis for continuous clinical quality improvement. Presently, clinical pathways often form an important part of

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the clinical documentation and integrates the clinician orders with nursing and paramedical documentation. Well-developed clinical pathways also identify patient problems and associated clinical interventions needed to avoid adverse effects of care (for example, wound infection), improve physiologic outcomes, reduce pathologic signs and symptoms and improve the patient's functional state and well-being.

It has been shown conclusively that the best clinical pathway programmes are those that are driven by practising clinicians. Clinicians directly participate and may initiate the development of clinical pathways. It has been shown that patients on the clinical pathways express higher levels of satisfaction. The mere presence of the pathway means that the ward staff are in a better position to provide explanation of the plan of care to the patient and relatives, thus facilitating better communication. Clinical pathways also increase the likelihood that patients will receive the care desired no matter where they are in the hospital. Clinical pathways keep all other healthcare professionals "in-sync" with the clinician's plan of care. The clinician retains control over the overall plan of care. At the institutional level, clinical pathways provide a vehicle for efficiently identifying systems issues that interfere with, rather than support, effective patient care. Teamwork becomes the organisational norm, and staff better understand clinical resource management, ie the allocation of staff, work processes, policies and organisational resources needed to produce clinical services.

By including desired clinical outcomes into the clinical pathway, the quality component is included in the process. This assures clinicians that patients are not being "rushed through the system" and discharged before they have reached the appropriate clinical status. Clinicians are more satisfied because care progresses more smoothly and patient outcomes improve. Nurses feel that their capabilities are better utilised and they feel ownership of the care process. Patients also enter the hospital with realistic expectations of their treatment and outcome.

In addition to the above, some other benefits that have been derived from the use of clinical pathways include the following:

a) There is improved consistency of patient care, ie patients can expect similar, consistent practices and treatments for similar, consistent conditions, whichever doctor is delivering that care. However, the exact treatment of the patient can be individualised on the pathway.

b) The recording, collection and analysis of variances provide continuous audit data on the care being delivered. Such audit information is specific to each case-type on the pathway being analysed. Analysis can highlight deficiencies in the care process due to problems arising from the hospital system, such as reasons for delayed discharges. Clinical pathways are also an ideal tool for outcome audit analysis because the documents can be retrieved and studied to ascertain whether or not the interventions resulted in the desired clinical outcomes as stated on the pathway.

c) Through the process of development and regular review of clinical pathways and guidelines, the entire care process is periodically and continually reviewed and revised to reflect the best possible standard of care. This is the essence of Continuous Quality Improvement (CQI) as applied to patient care. Standards are therefore monitored and reviewed. There is therefore a system of implementing CQI in patient care. Studies have shown that explicit guidelines do improve clinical practice when introduced in the context of rigorous evaluations[4].

Current trends indicate that the use and applications of clinical pathways will continue to expand as demands for higher quality healthcare increases in the face of shrinking resources and cost-containment. Hospitals and healthcare organisations will see a transition of the care process from a fragmented system to a collaborative multidisciplinary team approach. Clinical pathways may therefore be seen as a new paradigm in the provision of cost effective and efficient healthcare for patients in the near future.

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