

Critical Success Factors in Implementing Clinical Pathways/Case Management

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Abstract

With the advent of casemix reimbursement implementation, rapid technological changes, an ageing population and changing consumer behaviour, the Singapore health care industry is faced with the impetus to provide a cost-effective and efficient care delivery system. One ubiquitous tool used is the establishment of a clinical pathway/case management programme within the hospital. As the concept of clinical pathway for patient care is a relatively new concept in Singapore, several critical factors must be considered to ensure successful implementation of clinical pathway/case management programme. One key success factor lies in continued clinician support and acceptance. Other factors include top management leadership and support and a dedicated team of case managers, nurses and paramedical professionals.

Ann Acad Med Singapore 2001; 30(Suppl):17-21

Key words: Casemix, Patient education, Outcomes

Introduction

With the implementation of casemix reimbursement for all public sector hospitals and institutions in Singapore by October 1999,¹ health-care providers are now faced with an increasing pressure to ensure that the care delivered to patients are cost-effective, efficient and affordable. Health-care providers are experimenting with innovative tools to maximise the efficiency of the care delivery process and to achieve cost-effective and good patient outcomes. One ubiquitous tool that has been reported in the health care literature is the use of a clinical pathway/case management programme.² Clinical pathways and case management have been in use in the USA and other parts of the world since the mid 1980s. However, this tool is still relatively new in Singapore. This paper explores the critical success factors in implementing a hospital-wide clinical pathway/case management programme at Changi General Hospital.

Overview of the Development and Implementation of the Clinical Pathway Programme in Changi General Hospital (CGH)

The Medical Board in September 1996 approved the clinical pathway programme at CGH. Prior to its implementation, CGH sent its first Clinical Quality Manager to several hospitals in the United States to study the concept and practice of clinical pathways and case management. A Case Management Steering Committee (CMSC) was established to oversee the various phases of development and implementation of the clinical pathway programme. A

workgroup for planning, developing, implementing and evaluating the clinical pathway/case management programme was formed with representatives from the medical, nursing, case management and allied health professionals. The case managers from Case Management collected data of patients on the clinical pathway/case management programme.

Definition of a Clinical Pathway

A clinical pathway is defined as a "clear outline of the usual pattern of care for a group of patients with a given diagnosis or procedure performed. For each patient in the group, the staff can quickly see the expected time frame for delivery of care".³ This keeps the multi-disciplinary health care team focused on essential patient needs, thereby reducing clinical complications and costs.⁴ A clinical pathway is perceived to follow on where guidelines often leave off and it is invoked after the decision to apply a particular procedure or diagnosis has been made.⁵ Clinical pathways offer a tool for the successful implementation and integration of clinical guidelines into clinical practice.⁶ Categories in the clinical pathway comprise consults; test and procedures; treatment and medications; monitoring; nutrition; nursing activity and patient education.⁷

Definition of Case Management

Case Management is defined as a practice model which uses a systematic approach to identify specific patients and to manage patient care to ensure optimum outcomes.⁸ It is

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used for coordinating the services and care required by a group of patients, particularly those requiring community services.⁹

Objectives of a Clinical Pathway

A clinical pathway is a tool for managing and co-ordinating patient care amongst disciplines and sites of care and combine perspectives of all involved disciplines. It facilitates a closer examination of quality by measuring and documenting outcomes and demonstrates a relationship between quality (outcomes) and costs (tasks and framework).¹⁰

Research has proven that the use of a clinical pathway can eliminate prolonged length of stay arising from inefficiencies, promote better use of resources, reduce mistakes and duplication of efforts and omissions and improve quality of work for health care providers.¹¹ Consequently, patient care can be enhanced through improved communication with patients as to their expected course of treatment, identify and correct problems at the earliest opportunity and facilitate quality management and outcomes focus.¹²

Critical Success Factors in Implementing a Clinical Pathway/Case Management Programme

In implementing a clinical pathway/case management programme, one must identify the critical success factors involved to ensure a smooth implementation.

1. Integrate Clinical Pathways into the Organisational's Core Business Strategy

It is important that the organisation recognises the importance of using clinical pathways to improve outcomes of patients. Starting any clinical pathway/case management requires the involvement of the whole organisation.¹³ The incorporation of a clinical pathway programme into the organisation's core business would show the commitment of management to the programme. This can be achieved by carefully crafted business strategy that shows improvement approaches needed to achieve strategic goals.¹⁴ One such example is to draw short-term strategy for implementing clinical pathways within the organisation, for example, to develop five clinical pathways for the year. One reason for failure of clinical pathway implementation is the lack of administrative support. It is crucial for administrative staff to support clinical pathway/case management programme both philosophically and with resources.¹⁵

2. Establish a Case Management Steering Committee

The roles of a CMSC comprise:

- a. formulating a strategic plan for the implementation of case management systems,
- b. training and educating those involved in the process,

- c. selecting and prioritising the diagnoses and procedures for clinical pathway development, and
- d. providing support for the workgroup nominated to develop clinical pathway.

To ensure a multi-disciplinary approach, the Committee may comprise representatives from the medical, nursing, case management and allied health professionals to work on the framework and plan for implementation. Through discussions and meetings, each member of the team gained a better understanding of the care delivery process and workflow within the various areas of the hospital. This fostered greater professional relationships within the hospital, a known benefit of clinical pathways.¹⁶

3. Identify Clinician-Champion for Individual Clinical Pathway

When designing a clinical pathway, it is important that a clinician champion be identified to spearhead the clinical pathway development. Clinician ownership of the clinical pathway cannot be over-emphasised as the ultimate success of a clinical pathway/case management programme lies in the support of medical staff. The clinician champion is nominated by the respective clinical chief or head of department to lead a multi-disciplinary team to develop the clinical pathway. Clinician support is crucial to the success of the clinical pathway/case management programme.¹⁷

4. Create Clinical Pathways that would be Implemented and Used

Multi-disciplinary collaboration is needed to ensure that clinical pathways are implemented and used. Ownership of the clinical pathway by the respective personnel involved in designing the clinical pathway can enhance clinical pathways compliance. The overall goal is to achieve optimal quality of care while minimising delays and resource utilisation through the use of clinical pathways.¹⁸

5. Design of Clinical Pathway

To ensure user compliance, the design of a clinical pathway must be user-friendly and duplication of documentation avoided. Feedback on the form design and use must be elicited and the suggestions for improvements considered by the workgroup and implemented as appropriate. When clinical pathways are used as a documentation tool, health care providers report less time spent on charting and improved shift reports.¹⁹

6. Concentrate on Efforts with Most Potential for Improvement

It is of paramount importance that a pre-determined criterion is set for developing clinical pathway such as high volume and high cost case type, e.g. coronary artery bypass graft (CABG). The process of identification of patient

group differs from hospital to hospital depending on the patient profile, prevailing length of stay and system-wide issues to be managed.²⁰

7. Include Inclusion and Exclusion Criteria on the Clinical Pathway

Inclusion and exclusion criteria on the clinical pathways help the end-users to determine if a patient is eligible to be put on the clinical pathway or if discontinuation from the clinical pathway is appropriate.

8. Develop Clinical Pathways that Span the Continuum of Care

Clinical pathways can be developed to span the continuum of care through vertical integration with community hospitals or step-down units. This requires collaboration of key personnel between the acute hospital and community or step down units to ensure that the transfer of patient is seamless. This can be achieved through the use of a transfer checklist and communication amongst health care providers. With clinical pathways that span the continuum of care, a more integrated health care system could evolve. This enables tracking of patient outcomes longitudinally.²¹ It is essential to examine the total care process from the patient's point of view.

9. Conduct a Retrospective Study

Conducting a retrospective study of patients based on the identified diagnosis or procedure for clinical pathway development can assist the workgroup to identify the current processes and to modify these processes if needed. The patients in the retrospective study can be used as a comparison group to the patients on the clinical pathway. The results from the retrospective study can be used to evaluate the clinical pathway programme.

10. Use Clinical Pathway as a Tool to:

- a) *Support enhanced, consistent coordination of patient care:* Variations in patient care can be reduced through the use of a clinical pathway. Mapping patient care and identifying key activities on the clinical pathway can achieve consistent coordination of patient care.
- b) *Support movement towards outcomes in a consistent way:* Patient outcomes can be categorised into two, namely, clinical and non-clinical outcomes. Clinical outcomes describe the usual, desired condition of a patient at the point of discharge or at the end of the treatment. It reflects the response of the patient to the prescribed treatment. Patient-health outcomes are now used as a gold standard for measuring performance and good patient-health outcomes are the ultimate goal of all health care services. It is of paramount importance for doctors, nurses and allied health professionals to

identify the outcomes of patient care and to assist in developing goals to reflect efficacy of treatment and quality of patient care. Although processes and outcomes are generally discussed together, it does not necessary has a direct relationship. Completing a process is not a guarantee that the desired outcomes will be achieved, such as when a patient is bed-bound after a total hip replacement while his pre-morbid status is one of independence. Hence, the outcome of a patient is one way to measure the quality of patient care. It is necessary to assess whether the processes used are effective for patient outcomes and whether these processes need to be modified. Patient outcomes provide a means to bring the health care team together by serving a common goal and it is an excellent approach to structure communication between and among patient/family and the health care team. Good patient outcomes can provide a sense of pride and accomplishment to the health care team.²²

11. Incorporate Evidence-based Practices into Clinical Pathway Development

Before developing a clinical pathway, an extensive literature review must be carried out on relevant clinical pathways from other institutions or those in use in other countries, published clinical guidelines on the care of patients and readings from journals on the evidence on various treatment modalities. The literature review is essential in devising a clinical pathway that is evidence-based and reflecting best current practice.

12. Include a Disclaimer in the Clinical Pathway

As responsible clinicians, they often make individual judgements, and are hence concerned that adherence to clinical pathways may limit clinical reasoning and practice.²³ This concern can be addressed by incorporation of a disclaimer stating that the clinical pathway is only a guideline and patient's problems and interventions may be changed and individualised according to the patient's condition, and assessment data must be incorporated into the clinical pathway. The disclaimer should include the clause that the clinical pathway is not to be used as a substitute or replacement for independent clinical assessment and management.

13. Include Clinical Pathway Documentation as a Part of Medical Record Notes

The use of the clinical pathway as part of medical records documentation eliminates the use of the treatment and diet sheet. As a documentation system, the clinical pathway reduces redundancy and duplicate documentation. The use of colour codes for clinical pathways based on disciplines, for example green for urology, facilitates ease of

identification and retrieval of clinical pathway from the case notes.

14. Staff Education and Feedback

Before implementing a clinical pathway/case management programme, conduct road shows to introduce staff to the clinical pathway/case management concepts and announce the organisation's support for the programme. Organising clinical pathway/case management workshops helps to educate and train existing staff in the use and documentation of the pathway. Continuing education through workshops for newly recruited staff must be implemented. Effective pathway education requires forethought, planning, resource commitment and administrative support. Staff education is one of the critical keys to the successful implementation of clinical pathway/case management programme.²⁴

15. Pilot Run of Clinical Pathway

Developed clinical pathway is piloted for a defined period of time or specified number of patient caseload. The pilot run of clinical pathway enables tracking of variances and revisions made to the pilot clinical pathway.

16. Variance Management

Critical to the success of clinical pathway/case management programme is the consistent identification and analysis of variances within the clinical pathway.¹⁵ The case manager-in-charge collects data on the indices specified by the clinician-in-charge such as, demographic profile of the patients, pre-existing co-morbidities, clinical and non-clinical outcomes, financial and resource utilisation indicators. It is important to identify key indices prior to commencement of the clinical pathway to ensure that data collected are beneficial to the clinical pathway programme. Computerisation of variances can assist the case manager in identifying variances within the clinical pathway/case management process and outcomes. Variances to the clinical pathway are tracked to achieve optimal clinical outcomes.²⁵

17. Clinical Pathway Evaluation

Annual clinical pathway evaluation helps to monitor and analyse data pertaining to quality issues with a view to improve care delivery system and patient outcomes. Based on clinical management strategies, the clinical pathway is revised accordingly. In practice, a clinical pathway is evaluated six months after its pilot implementation and thereafter annually to ensure that the contents are relevant and updated.²⁶

18. Linking Clinical Pathway to Case Management

Clinical pathway is an effective tool for case management in particular for patients who are likely to be outliers. The

main functions of case management are patient identification, assessment, service planning, resource identification, linking patient to needed services, service implementation and coordination, monitoring, advocacy and evaluation of services rendered.²⁷ One way is through the introduction of a discharge planning protocol for hip fracture patients to identify and address any issues or needs regarding discharge plans. Discharge planning can be facilitated on the first two days of admission and appropriate referrals initiated, such as referral to community hospital or nursing home to ensure a smooth transition from the hospital to the community. Other measures include referral to the occupational therapist for home assessment and home modifications made as needed. The respective case manager conducts weekly ward round with the medical, nursing and allied health care professionals to identify patients who need to be case managed and coordinate the care of the patient as appropriate. Case management is usually needed for 20% of the patients on the clinical pathway.

19. Linking Clinical Pathway to Patient Education Pathway

Patient education pathway can be developed based on the contents in the clinical pathway. This enables the patient to know the plan of care from the time a diagnosis is made or a procedure is planned. Acquisition of knowledge from patient education pathway results in lesser patient's complaints and queries.²⁸

20. Overcoming Resistance to Clinical Pathway/Case Management Programme

Resistance to the clinical pathway/case management implementation may result from a misconception of its use. Some doctors view a clinical pathway programme as a tool for cost containment²⁹ and are concerned that clinicians may develop inappropriate clinical pathways with inadequate insight into practice or by administrators who favour cost control over quality.²³ Nurses may view clinical pathway as an additional clinical documentation exercise. These resistances may be due to a lack of staff knowledge and experience in clinical pathway/case management. The resistance can be partly overcome with the appointment of a clinician champion for each clinical pathway coupled with tons of patience, continuous feedback and dialogue with doctors, nurses and allied health care professionals to surmount this resistance.

Conclusion

This paper has shown that the keys to a successful clinical pathway/case management programme lie in continued clinician support and acceptance, top management leadership and support, and a dedicated team

of doctors, nurses and allied health professionals. These critical success factors must be recognised before launching a clinical pathway/case management programme within the organisation. The use of a clinical pathway/case management programme can provide a means for operationalising continuous quality improvement. Continuous quality improvement is a hallmark of all health care providers aiming to achieve positive patient outcomes.

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