Critical pathways for smaller hospitals in rural areas

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Introduction

Critical pathways, developed for utilisation in the health sector, are tools that are increasingly being used to implement co-ordinated patient care. The introduction of critical pathways results in planned progress through an episode of care, whilst optimising health outcomes and minimising resource utilisation. The advantages of implementing critical pathways are increasingly evident, with reports of increased co-ordination of activities, minimum delays in the provision of care, enhanced interdisciplinary communication, enhanced communication with clients, improved discharge planning processes and the implementation of a continuous quality improvement process (Pearson et al, 1995, p941-948).

Hospitals in rural areas have not been excluded from the issue of providing quality care whilst containing costs. Distance, sparse population density and decreased resources intensify the need for co-ordinated care systems in rural areas. Co-ordinated care planning to date has centred on metropolitan, acute care hospitals, although interest in the design and implementation of critical pathways has been demonstrated by many health agencies in rural areas wanting to share in the advantages of implementing critical pathways (Spath, 1999, p45-48; Bertram, 1996 p54-66; Rawskey, 1996, p49-51; Ely, 1995, p66-64).

Literature Review

The introduction of critical pathways relating specifically to hospitals in rural areas is not widely documented. Questions have been raised about the suitability of critical pathways for smaller hospitals in rural areas (Spath, 1999, p45), however there is evidence of pathways being successfully implemented in these hospitals (Ham, 1999, p4; Spath, 1999, p45-48; Rawskey, 1996, p49-51; Ely, 1995, p64-66). During design and implementation some problems have been encountered that may be considered unique to hospitals in rural areas. Problems have included: a low frequency of patients in a mixture of diagnostic groups (Spath, 1994. P118); the high frequency of medical patients with complex problems and poorly defined outcomes of care (Pearson et al., 1995 p943; Parker et al., 1992, p55); limited financial and human resources (Bertram et al., 1996 p64, Spath 1994, p120); clinicians increasing workload and lack of time (Bertram et al., 1996, p54-66); difficulty in clinicians accessing appropriate education programs (Bertram et al., 1996, p55), and resistance from medical practitioners (Bertram et al., 1996, p63). Also identified as a problem is a delay in realising financial and quality benefits of introducing critical pathways due to the lower throughput of cases in smaller hospitals (Spath 1994, p117).

Innovative solutions have been sought to address the problems confronting smaller hospitals in rural areas wishing to implement critical pathways. Solutions have included, pooling of resources through interagency networks; the design of generic critical pathways; the integration of quality incentive projects running concurrently throughout the hospital, and effective marketing of the critical pathways so all disciplines (including the medical practitioners) can clearly identify the advantages for themselves and their clients

(Bertram et al., 1996, p65). Smaller hospitals have been warned to avoid small efforts when planning a critical pathways project as the results may be disappointing (Bertram, 1996, p64, 65). Hospitals that strategically plan a critical pathways project, over a reasonable time span, and provide ongoing support to the team members involved are more likely, in time, to reap and sustain the rewards of implementing critical pathways in their hospital (Spath, 1999, p48; Bertram, 1996, p54).

The Project

A project entitled, 'Critical Pathways for Hospitals in Rural Areas' was conducted by Bendigo Health Care Group (BHCG). The project resulted from a proposal prepared by the BHCG's Collaborative Health Education and Research Centre (CHERC) following several smaller hospitals in the Loddon Mallee region (LMR) seeking assistance to design and implement critical pathways in their hospitals. The LMR is located in the north-western corner of Victoria and covers a geographic area of 58,956 square miles - or approximately twenty-six per cent of the State.

The project received funding from the Department of Human Services, Victoria. It was conducted over a two-year period, commencing in January 1998 and completed in December 1999. A project facilitator, with experience in co-ordinated care projects, change management and rural health issues, was appointed by CHERC to a half-time position to co-ordinate the project.

The aims of the project were to develop a model for Co-ordinated Care for Acute Rural Hospitals (CARH) and to co-ordinate the implementation of CARH in hospitals in the Loddon Mallee region. Project objectives included: the promotion of involvement, support and commitment of senior management from participating hospitals; working with management and ward staff at individual hospitals to implement CARH; the presentation of education sessions at individual hospitals, and review and evaluation of the project progress and outcomes. The desired outcomes of the project were for critical pathways to be implemented in participating hospitals, and the design of a model of care planning suitable for other smaller acute care hospitals in rural areas.

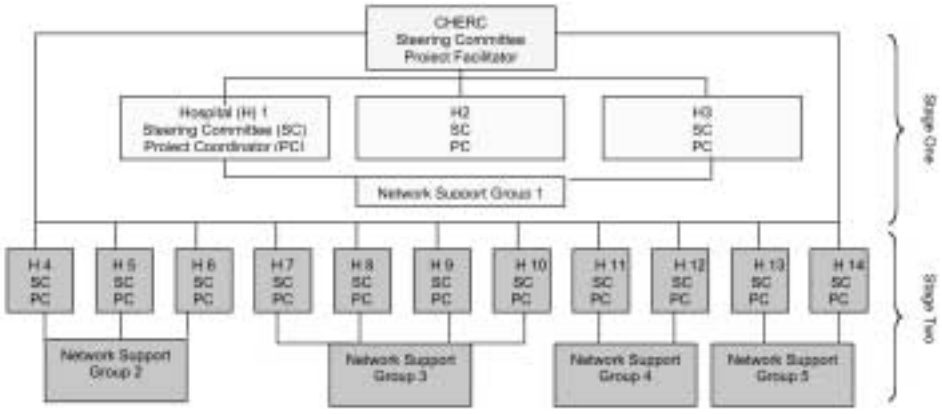
Fourteen of the eighteen acute health agencies in the LMR participated in the study. The two largest referral agencies were excluded from the study because their needs differed from the remaining agencies in the region. The two smallest agencies in the region elected not to participate in the study, citing their size as the reason for refusal. Both agencies have only five acute beds.

The size and characteristics of the participating agencies varied, the smallest agency having 368 separations per annum, and the largest 6,300 separations per annum. Ten of the agencies admitted medical and surgical cases, the remaining hospitals admitted only medical cases. All the participating agencies shared problems considered common when designing and implementing co-ordinated patient care in rural areas, the major problems being a scarcity of human and financial resources.

The introduction of critical pathways requires change to occur within an organisation and, based on change management theories (McGinty et al., 1993, p3), in managing the project the importance of involving those who are affected by the change was acknowledged. Management of the project encouraged local involvement with each hospital organising the design and implementation of critical pathways in their organisation. The management structure, as depicted in Figure 1, included a centrally located steering committee that monitored the overall progress of the project, and steering committees at each of the participating hospitals to monitor progress of the project at a local level. Project co-ordinators were appointed by each of the hospitals to co-ordinate the development of critical pathways in their organisation, and to be the key contact person for the project facilitator. The hospitals were divided into support networks of three or four similar sized hospitals. Periodic meetings of the networks were organised and provided a valuable forum for support and sharing of information and resources.

The implementation of critical pathways occurred in two stages. Stage one included a pilot study in which three agencies designed and implemented critical pathways. Based on observations and analysis of the process and outcomes of the pilot study, the project facilitator developed the CARH model for the design and implementation of critical pathways in acute health agencies in rural areas. Stage Two included the implementation of the CARH model in the remaining nine participating agencies.

Figure 1: Management Structure



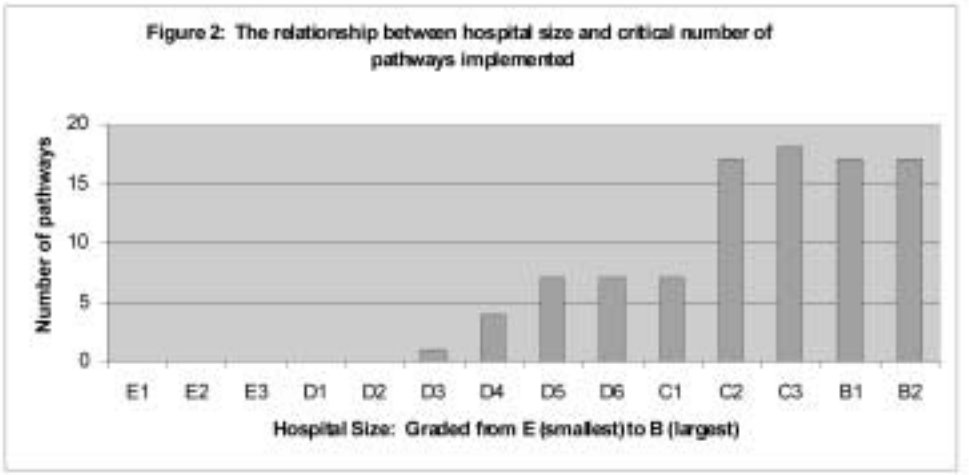
Project outcomes

The CARH model developed during the project is similar to the model that is often used when designing and implementing critical pathways in larger hospitals. The model includes:

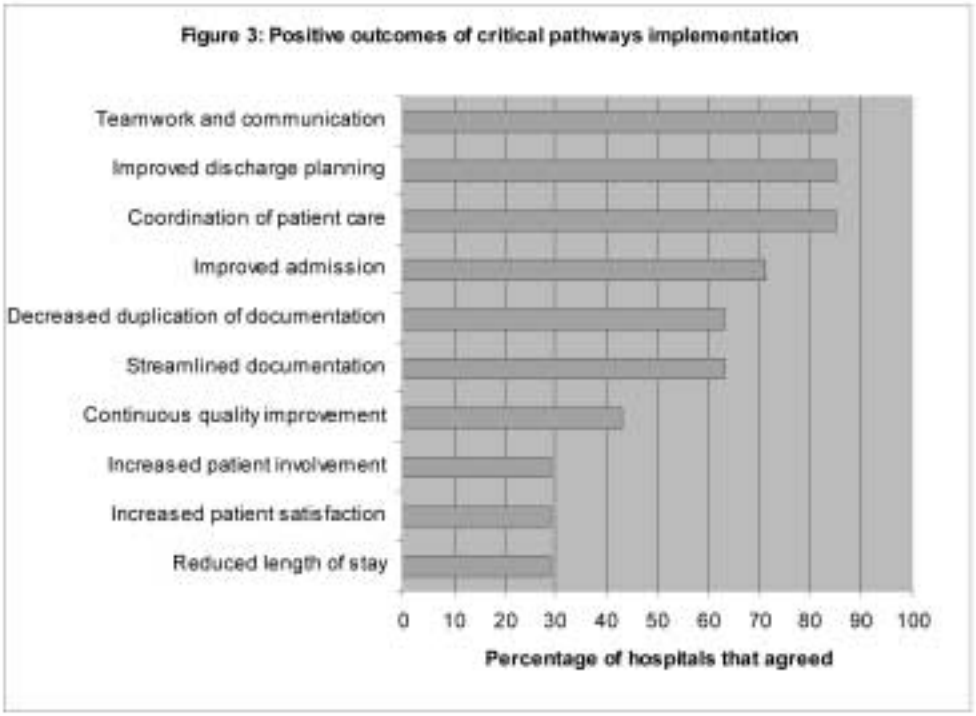
- pre-reading;
- the development of a local steering committee;
- the identification of aims, objectives and desired outcomes of the project
- the identification of a project co-ordinator;
- staff introductory education;
- a recommended design and implementation process: nine steps involved in the design and implementation of critical pathways;
- ongoing staff education program;
- a variance analysis process, and
- the development of regional networking groups for continued support.

Although the hospitals participating in the project had a comparatively low throughput of patients it became apparent that, to achieve desired project outcomes, it was necessary to work through a similar process to the larger hospitals. During the project any attempt to take "short cuts" in the process had negative results. The model highlighted the fact that the task of designing and implementing critical pathways is complex, multidimensional and resource intensive, and projects need to be carefully planned and monitored to achieve desired outcomes. The project should be planned over a considerable period of time and requires clearly defined boundaries. Ongoing support and leadership from management is necessary to maintain the enthusiasm necessary to achieve the aims of the project.

At the completion of the project a total of ninety-four critical pathways were implemented throughout the LMR, ninety of these being developed during the project. A majority of critical pathway development focused on surgical cases. A total of nine hospitals were successful in designing and implementing critical pathways during the project. It appears that the size of the hospital impacts on the achievement of critical pathway implementation. There was a correlation between hospital size and pathway development, the smaller more isolated agencies with fewer resources that admitted only medical patients did not make progress in the project, as depicted in Figure 2. This outcome indicates that the CARH model needs further refinement to make it suitable for smaller and remote hospitals admitting only medical cases.



Outcomes of the project demonstrated that smaller acute health agencies have much to gain from implementing critical pathways. At the completion of the project an impact evaluation survey was distributed to the nine hospitals that successfully implemented critical pathways, asking for evidence of improvements that may be attributed to the implementation of critical pathways. The results showed that the areas where a majority (85%) of agencies had witnessed improvement included: increased interdisciplinary teamwork and communication; improved discharge-planning processes, and increased co-ordination of patient care, including patient education. Figure 3 depicts the positive outcomes of critical pathway implementation.



The strength of a regional approach was realised during this project. The advantage of smaller, isolated hospitals planning projects as part of a larger regional program, having a central project co-ordinator and a network of hospitals of a similar size involved was demonstrated. Although it was important for individual agencies to develop pathways within their own hospital, networks offered support and shared valuable information and resources.

Management of the project included support from CHERC whilst promoting independence in each hospital. The importance of agencies gaining knowledge and confidence to proceed unassisted following the completion of the project was realised and it was pleasing to note that five of the agencies felt confident to proceed unassisted following the completion of the project. The remaining agencies, which for a variety of reasons had made slower progress, believed that they would benefit from further assistance. This finding indicates that external assistance is beneficial initially, and by encouraging internal involvement agencies should reach a stage where they feel confident to proceed unassisted.

Conclusion

The application and applicability of critical pathways in smaller acute care hospitals had been questioned, however this project demonstrated that the benefits of critical pathways could be shared by smaller acute health agencies in rural areas. The benefits of implementing critical pathways may be far reaching, providing the opportunity for agencies to review and improve many systems and processes to improve the co-ordination of patient care. The process of designing critical pathways successfully is similar in all acute health agencies, regardless of their size. Critical pathway development is multi dimensional, and resource intensive. To achieve desired outcomes project planning needs to be systematic and the lack of resources, in particular human resources, in smaller hospitals results in project planners needing to develop innovative ways to minimise resource utilisation. The benefits of a regional approach in solving complex health care problems, such as improved co-ordination of patient care, is evident in this project. The project provides an example of how to assist smaller hospitals with problem solving, whilst promoting local ownership in project planning and implementation.

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