Chapter 6.10
How Can Human Technology Improve the Scheduling of Unplanned Surgical Cases?

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INTRODUCTION

Human technology in health care includes managerial knowledge required to marshal a health care workforce, operate hospitals and equipment, obtain and administer funds, and, increasingly, identify and establish markets. In this article, the authors focus on human technology and improvement of decision-making processes in the context of operating theatre scheduling of unplanned surgical cases.

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Unplanned surgery refers to unscheduled and unexpected surgical procedures in distinction to planned, *elective* surgery. The management of unplanned surgery is a strategic function in hospitals with potential clinical, administrative, economical, social, and political implications. Making health care management decisions is complex due to the multidisciplinary and the multifocussed nature of decision-making processes. The complexity of multidisciplinary and multifocussed decision-making is further exacerbated by perceived professional identity differences.

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This article presents findings from interviews with doctors and nurses about the scheduling of unplanned surgical cases. The interviews focused on current decision-making determinants, the acceptability of using a model to guide decision-making, and enablers and barriers to implementing the model. The key finding was the limited practicality of a model to guide the scheduling of unplanned surgery. While it could guide decisions around clinical determinants, logistical determinants, and ideal timeframes, it would have difficulty reshaping inter- and intra-professional dynamics.

LITERATURE REVIEW

The scheduling of unplanned surgery typically involves negotiating (and renegotiating) established surgery lists, whereby patients requiring nonelective surgery are attended to before those requiring elective surgery (Gabel, Kulli, Lee, Spratt, & Ward, 1999). However, delayed patient access to unplanned surgery can inflate economic costs (Jestin, Nilsson, Heurgren, Påhlman, Glimelius, & Gunnarsson, 2005; Pollicino, Haywood, & Hall, 2002). Poor patient health necessitates more health care services, including prolonged hospital stays, ongoing access to health care professionals, and medication. The tension between *health care cost containment* and the *high cost of surgical operations* is a powerful incentive for health care organisations to improve the management of the surgical suite (Gabel et al., 1999). Thus, an investigation of current scheduling practices of unplanned surgical cases is well-justified.

Empirical research on the scheduling of unplanned surgery is limited. This is somewhat reflected in the *ad hoc* practices found in some operating rooms when organising surgical queues (Fitzgerald, Lum, & Kippist, 2004). In Canada for instance, it was found that the waiting times for elective surgery were not only determined by the number of patients on the waiting list, or by how urgently they required treatment, but also by the *management* of the waiting list (Western Canada Waiting List Project, 2001). To ensure consistent practice, criteria were developed to guide decision-making processes. However, clinicians who managed the waiting lists were somewhat reluctant to change their management practices, preferring to adhere to less-standardised, conventional methods (Martin & Singer, 2003).

In the United Kingdom, surgical lists are typically compiled in an unplanned manner, and the negotiations and modifications that follow are also extemporised (Hadley & Forster, 1993). Even when theatre lists *are* established, they are seldom observed, often because of the need to accommodate patients who require unplanned surgery (Ferrera, Colucciello, Marx, Verdile, & Gibbs, 2001). This gives rise to extended surgery delays. Given such inconsistencies, the National Health Strategy (NHS) Executive circulated a national directive to guide good practice (Churchill, 1994). The directive emphasised the significance of operating room services, the prominence of patient care, the effective management and supervision of operating room use, staff morale, and communication, efficient transportation for patients, and dependable activity and cost information.

A standardised approach to manage operating room lists is also lacking in New South Wales (NSW), Australia (NSW Health, 2002a). This is not to suggest that NSW public hospitals lack direction for scheduling unplanned cases. Many have adopted priority codes to guide these decisions (NSW Health, 2002b). These help health care professionals to classify patients from highest to lowest priority based clinical need and/or timeframes.

However, research in NSW suggests that, in addition to clinical determinants, other factors influence the scheduling of unplanned surgery (Fitzgerald et al., 2004; King, Kerridge, & Cansdell, 2004); notably, logistics and inter- and intra-professional dynamics between staff involved in the process. Current policies for scheduling

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