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Lessons from Evidence-Based Operating Room Management in Balancing the Needs for Efficient, Effective and Ethical Healthcare

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Abstract

Foglia et al. (in press) describe tension in two veteran's hospitals among managers, clinicians, and patients over allocating appropriate resources to support care and inefficiencies in care delivery. Ultimately ethical healthcare in a system which is committed to caring for an entire population of patients must use its limited resources effectively while not compromising patient safety. This discussion gives examples from operating room management in which systematic analyses of existing data can guide more efficient care delivery.

The VA Healthcare system is committed to serving an entire population of patients. This mission leads to ethical dilemmas around using limited funds to ensure that each patient who needs care receives it in a safe and timely manner. Focus groups conducted on managers, clinicians, ethics committee chairs, and patients/veterans in two VA medical centers revealed discrepancies in the ethical challenges they faced (Foglia et al, in press). Three of the groups described tension over allocating appropriate resources to support care. Managers felt resource allocation was often arbitrary and they were compelled to follow political pressures rather than clinical service needs. Clinicians felt tension between rendering high quality services in an institution with limited resources and where patients sometimes pressured them to render unnecessary care. Patients felt disrespect from clinicians because they endured long waits for care and sometimes came for appointments that were delayed to the point of cancellation. Ultimately ethical healthcare in a system which is committed to caring for an entire population of patients must use its resources effectively while not compromising patient safety. Asking stakeholders to take action to improve efficiency in care from a hospital perspective demands an evaluation of whether these actions actually move toward the intended system goals. Incorporating principles of evidence-based management enables a pragmatic approach to effective resource allocation and provides this evaluative process.

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Studies of operating room management provide examples of how analyzing a service delivery system as an integrated whole can improve management decisions and address many of the stakeholder's concerns. In this line of research, data from a health care system is studied in a manner that formally defines and prioritizes goals (e.g. protecting patient safety, limiting wasted resources, and reducing patient wait times) and integrates empirical results from multiple clinicians, patients, and costs/earnings. The results often lead to seemingly counterintuitive but more cost effective solutions. Much of this work is described in detail elsewhere (e.g. McIntosh, Dexter, & Epstein, 2006).

Often specific actions that appear to save money have downstream costs from consequences that are both unintended but predictable. For example, systems with fixed budgets like the VA may make decisions to save the cost of overtime pay, with the resultant cancellation of surgeries leading to a failure for the system overall to save money (Tessler, Kleiman, & Huberman, 1997). Staff are often pressured to reduce delays between surgeries (turnover) to improve the efficiency of use of the ORs; however, the most effective timing varies 10-fold among different OR's thus leading to obviously conflicting goals (McIntosh et al., 2006). An alternative, effective method of enabling the most feasible goals with respect to turnover time is to let each hospital use its own data to set these criteria (Dexter, Abouleish, Epstein, Whitten, & Lubarsky, 2003). In addition to saving money, risks to patient safety need to be factored into costs. There is much research on practices associated with these risks (Longo, Hewett, Bin, & Schubert, 2007). Reducing staffing and demanding longer hours from residents and new physicians can lead to medical errors (Gander, Purnell, Garden, & Woodward, 2007).

Although as expected cost cutting measures such as staff reductions or pay reductions may lead to dissatisfaction and failure to retain staff, sometimes unexpectedly clinicians (specifically physicians) will more naturally make decisions that increase efficiency (Masursky, Dexter, & Nussmeier, 2008). A study of letters of recognition for OR managers found that those who are in the natural position to improve OR efficiency focused minimally on operational efficiency and more on interpersonal sensitivity.

Moving beyond studying cost savings of individual clinicians to interactions with other specialties and among services is also highly informative. Any clinician might believe that in order for his or her service to be more productive, the clinician must individually see more patients. However, inefficient interactions with other specialties can lead to markedly reduced overall productivity, increased patient wait times, and situations contributing to clinician burnout. A study of time allocation of individual anesthesiologists demonstrated that even as their work per unit time increased, their efforts failed both to increase overall productivity and to reduce patient wait times. Furthermore, when they worked on nights and weekends, their individual efforts lead to increased patient and surgeon wait times (Dexter, Lee, Dow, & Lubarsky, 2007). Mutual dependencies among services can lead to changes in practice by one service affecting the efficiency of another. For example, effective management of the post-anesthesia care unit (PACU) can reduce time wasted the operating room (OR) since patients can not be transferred out of the OR until the PACU is ready to receive them (Dexter, Epstein, Marcon, & de Matta, 2005). If PACU's are filled to capacity with respect to nursing ratios or available beds, patients spend more time waiting in operating rooms with resultant diminished productivity on the part of surgeons. Tightly scheduling nursing based on the daily schedules of OR patients seems like it would make the PACU more efficient at receiving patients. However, empirical (epidemiological) analyses of OR and PACU data found that it is often more efficient to base nurse schedules on historical trends (Marcon & Dexter, 2007). This scheduling also enables more long term planning and thus spares nurses from unpredictable work schedules, a contributor to burn out (Epstein, Dexter, & Traub, 2002).

In studying and comparing the perspectives of multiple entities in the VA Healthcare System, Foglia et al. (in press) have highlighted the need for more empirical and theoretical management research on balancing each of their needs. VA hospitals have a great deal of computerized data available which can be studied to evaluate how efficiently care is delivered. The VA Healthcare system also has multiple mechanisms to implement this research and translate the results into practice. Foglia et al. point out that managers are in a good position to shape the institutional environment and thus provide the structure to improve the way care is delivered. Both clinicians and managers can benefit from knowledge gained from the systematic (evidence-based) study of whether their attempts to protect resources and support effective care actually accomplish these goals. The data gathered from these analyses can provide information for managers who seek to defend their clinicians against policies that waste resources.

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