III. Practice

Adventures in the Evidence-Based Management Trade

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Abstract

I have spent more than a decade trying to get managers and those who study management to use an evidence-based process where interventions to improve performance are concerned. This chapter describes my experiences includes teaching a graduate capstone course, writing a text on evidence-based management in healthcare, decision-making as a board member of a large hospital, and my attempts to launch evidence-based management research with practitioners.

This chapter describes my experiences and interpretations of early efforts to promote and practice evidence-based management. It includes my personal experiences, tacit knowledge derived from those experiences, the experiences of others in similar situations, expert opinion, case studies and other relevant information.

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My Background

My careers in healthcare management, teaching and research were not planned in advance. Each choice opened and closed options for me. I pursued a Ph.D. because with my father’s death the family hospital business was no longer an option for me. Instead, my academic advisors urged me to pursue doctoral studies in management at government expense. One of the faculty members supervising my doctoral thesis subsequently became CEO of a hospital in New York City and I went to work for him as a manager. His successor fired me and I then was hired as a manager of a faculty group practice at another university. There I was also involved in starting a master’s program in healthcare management. When their choice to head that program accepted another position, I was selected as program director. After five years, I withdrew from seeking tenure at the university when I was told that I wouldn’t be approved. I then took a position as senior health consultant for a large industrial union. I next sought a position as rural hospital CEO, was fired, and sought a job as program director and faculty member in healthcare administration in my home city of New York. I have worked here for the last 30 years. Because of my work as a rural hospital administrator, I was chosen, while a professor, by a large foundation to be part-time national director of a large hospital demonstration program, a role that has continued with other foundations where I have run for example a demonstration program to train clinicians in management.
My Experiences in Evidence-Based Management

My interest in evidence-based management (EBMgt) began in 1999, 40 years after starting work as a healthcare manager. It was occasioned by reading about evidence-based medicine, and resulted in my writing an article with John Billings and Jeff Elton on “Transforming Health Management: An Evidence-Based Approach (Kovner, Elton & Billings, 2000). The gist of our article is that healthcare providers need to make quicker, riskier decisions in a competitive and regulated environment. Leaders tend to make these decisions upon the advice of management consultants. Nonetheless, these leaders generally lack adequate internal support to rigorously evaluate strategic interventions or consultant recommendations. In fact, healthcare providers generally under invest in management support, both in evaluating best practices within the organization and in learning from past strategic interventions. We observed that barriers to improving the quality of management decisions included:

- Little evidence on best practices
- Available evidence was not widely shared
- Healthcare organizations (HCOs) lacked sufficient size and critical mass to conduct and assess applied research
- HCO managers focused on operating margins and past budgets rather than on practical managerial questions that research could answer
- Managers lacked training and experience in use of EBMgt and incentives to practice it
Non-profit organizations like most hospitals tended to lack accountability for performance.

I find that not a great deal has changed over the past 10 years.

Our article suggested forming EBMgt cooperatives (EBMCs) that would bring together managers, consultants and researchers to improve management, databases and organizational performance. EBMCs would enhance managerial skills and capacity, improve the availability of information to support better-informed interventions, and lead to better understanding of factors affecting implementation and financing. Resources were required to fund staff and to specific research and demonstration projects. In start-up phase, we estimated that an EBMC would require $4-5 million over a four-year period to launch the initiative and provide core support. I spent years, with others, unsuccessfully trying to secure funds to launch this initiative. We were told by healthcare managers that the funding of management research was a government or foundation responsibility, and by government and foundation officials that they had other higher priorities. After numerous failed grant proposals, I split our plan into two parts: education and research.

Teaching Evidence-Based Management

NYU/Wagner is a graduate school of public service, one of the smallest of 13 schools at New York University, the nation’s largest private university. This school is similar to a school of public administration or public affairs. I am a member of both the School’s management and health services management
groups. Most students and faculty are in the School’s public-and non-profit management and policy group.

My ambition was to integrate evidence-based management into the required curriculum. Along these lines I began by urged faculty to measure the skills and experience of students after admission and again prior to graduation to learn what difference their education made in relation to its cost (and then to improve the educational process if we were not satisfied with the results). EBMgt did not gain school priority either, although I recruited a few faculty converts. One told me “I am completely dedicated to EBMgt and use it as a basis for teaching managing public service organizations…I don’t know what the rest of the management faculty think about it—my hunch is that they don’t use it and may not even know what it is.” A second faculty member agreed, “I believe EBMgt offers a clear set of steps for practitioners to access and utilize research…it could be a boon to researchers as well, because it can act as a mechanisms to have their work actually inform practice.”

I decided to demonstrate the benefit of the EBMgt approach by using it in my capstone course. Capstone is one of the required courses at NYU/Wagner, and the School’s faculty currently teaches 44 sections. In 2008, I started a new M.S. program for nursing leaders in which the capstone was required. Based on what I learned in the first year my revised capstone for 1999-2000 was more focused on (1) the contract between sponsor and team to address on answerable research questions rather than management challenges (for example, focusing on the causes of emergency department waiting rather than on interventions to reduce
(2) carrying student projects through all aspects of the evidence-based management process from working with managers to identify a relevant practice question to helping to design evidence-based interventions, and (3) best practice and the literature in answering research questions rather than on recommendations and their justification. One feature that remained the same to the previous year’s capstone was spending sufficient time on documenting problems in current managerial and organizational processes and their causes.

My capstone has had three goals for students: (1) using an evidence-based approach in designing and carrying out management interventions, (2) managing relationships with an external client and various stakeholders, and (3) functioning as members of a client-oriented team. Students learned the following competencies:

- Identifying and carrying out data collection and analytical methods appropriate for a specific project,
- Situating findings in the broad related literature,
- Drawing conclusions warranted by the scientific and organizational data as well as local organizational culture and readiness to change,
- Communicating effectively orally and in writing, and
- Working cooperatively with team members on a client-focused project.

Examples of their capstone projects include improving acuity-based nurse staffing, improving the supply procurement process, improving the medication

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administration process, increasing nurse volunteering at a local school, and developing system-wide metrics for patient falls/restraints.

Students followed an evidence-based process that included framing the research question(s), finding sources of information, assessing the accuracy, applicability and actionability of the evidence; and, determining the extent to which management has adequate evidence to implement the intervention. This process has now been taken up more broadly at Wagner. One of the elective (now required) courses created for the nursing students was “Locating Evidence,” developed by NYU librarians, Susan Jacobs and Gretchen Gano. In this course, students frame answerable research questions, select specialized databases, develop effective search strategies, and critically appraise the literature about a management topic (Jacobs, Gano & Kovner, 2009). NYU/Wagner’s partner in developing the M.S. (now executive MPA) program for nurse leaders was New York Presbyterian Hospital and Health System (NY/P), one of the largest health systems in the United States. NY/Ps chief nursing officer, Wilhelmina Manzano, and her administrator for special projects, Rosemary Sullivan, assisted in teaching and syllabus preparation. They were available to orient and help involve senior managers at NY/P who sponsored capstones, facilitated development of these projects, and facilitated access and support for the student teams with the NY/P sponsors. Student feedback for the course was highly favorable. The course received 5.0 out of a possible 5.0 as to whether students recommended the course, and 4.9 out of 5.0 as to whether students recommended the instructor. Capstone sponsors were very satisfied with the students’ work and most proposed new
capstone projects for the next year as well. Sponsors praised the focusing of research questions, the gathering and assessment of evidence, and the quality of the recommendations informed by high quality evidence.

I have had some success in launching a variety of evidence-based executive education programs in local health systems. This has included the capstone courses for nurse leaders with New York Presbyterian Hospital and Health Systems, and executive education courses for managers at Montefiore and for nurse leaders at Memorial Sloan Kettering Cancer Center. I have also been heartened to see the launching of an executive doctoral program at the University of Alabama in Birmingham, where senior managers who are the program’s students translate management challenges into research questions. This executive doctoral program uses my book “Evidence-Based Management in Healthcare” as a text. Next I turn to that text and what we learned about EBMgt practice from writing it.

Developing Text

We decided to develop a textbook (Kovner, Fine & R. D’Aquila, 2009) for learning how to practice EBMgt in healthcare settings. My co-authors were two distinguished practitioners, Richard D’Aquila, Chief Operating Officer at Yale New Haven Hospital and David J Fine, Chief Executive Officer of St Luke’s Episcopal Health System in Houston Texas. Originally we wanted the book to serve both student and practitioner audiences. Upon the publisher’s advice we dropped the practitioner audience, since the publisher saw their primary market for the book to be graduate students in healthcare management.
We succeeded in producing a workable text for the capstone course, with these sections: Transformation to EBMgt, Theories and Definitions, Case Studies (which make up most of the text) and Lessons Learned. We also provided a guide to the EBMgt literature and a chapter on search on a particular management topic. (The text also has an instructor’s guide.) The Transformation section reviews our experience in organizations where EBMgt was or was not practiced, and the results of a research study on managers in health systems in several cities. Tom Rundall and his colleagues interviewed these managers as to why they did not use an evidence-based process in decision-making (Rundall et al., 2009). In Theories and Definitions, we reprinted the article by John Hsu and his colleagues on the six steps managers should consider when making a well-informed decision (Hsu et al., 2006). For each step, the authors reviewed background, key points, guides and checklists. Regarding the ten Case Studies, some followed each step of the EBMgt process, while others followed only some of the steps, or failed to report all steps. All the cases illustrated how the EBMgt process could be applied to a set of management challenges, and students can point out where the process was flawed or incomplete. For example, in one case study, an external consulting firm deemed a hospital’s palliative care unit unprofitable and strongly recommended that it be closed (White & Cassell, 2009). Their conclusion that the costs of caring for palliative patients significantly exceeded reimbursement turns out to have been based on a faulty assumption. Because the palliative care program was the last to “touch” these patients, the consultants had assigned the costs of the patients’ entire admission to the palliative unit. From the hospital data, White and
Cassell revealed that about half of the palliative care patients had received care on other inpatient units, where the vast majority of costs were incurred. In fact, the palliative care unit was actually running at a profit, and its closure was forestalled.

In Lessons Learned, I concluded that EBMgt was not more widely used because the business case for return on investment was not yet been reliably made. Moreover, widespread use of EBMgt could be seen as shifting power away from senior managers toward better skilled junior managers. Last, lack of regular critical review of the process of organizational decision-making by boards and managers meant that neither of these stakeholders was aware of how flawed their decision processes were (Kovner, 2009). The book has done well on the textbook market and has provided original research to inform the EBMgt movement.

**Hospital Board Decision-Making**

In 1971, when I started as an academic, my chair advised me to select a small topic and know more about it than anyone. The topic I chose was not-for-profit governance. (I hoped to be a hospital administrator some day, as did happen.). Several years later, I began 26 years as a member of the board of trustees of Lutheran Medical Center, a $2.0 billion health system in southwest Brooklyn, N.Y. Soon I was a board member of Augustana (Lutheran’s nursing home) and Health Plus (Lutheran’s health maintenance organization). I then served as chair of the hospital quality committee and vice-chair of the HMO board.

While a board member (and a professor at NYU) I carried out a research study of four non-profit hospitals in New York City (Kovner, 2001). I examined the information that boards regularly get to carry out their functions. Principal
findings were that boards get too little comparative data on performance of similar benchmarked hospitals and that they get too much operational data, that is to say, the same data that management gets. Key recommendations included: (1) the board must take greater responsibility for identifying the information that they get and how they wish to get it, (2) managers must ensure that measurable objectives are used against which organizational performance can be evaluated, (3) the board must get information that is targeted to and supports board functions, (4) managers must develop information sets for main service lines, such as heart and cancer, (5) and the board must get information on the expectations and satisfaction levels of key stakeholders. The study results were shared with Lutheran’s CEO and board chair. The only recommendation that was implemented was providing the board with less hospital operating data.

Two other poor decisions at Lutheran illustrate the consequences of not using an evidence-based approach. The first concerned the potential sale of the hospital-owned HMO in 2003. Lutheran needed money. The HMO (for Medicaid patients) had been contributing up to $10 million per year to the hospital’s bottom line, although this amount had recently decreased sharply. The primary reason for this decline was an increase in the state’s insurance reserve requirements. Hospital operating losses had resulted from poor operating decisions by the board and previous administration. Compounding its financial problems were rising malpractice premiums (the hospital was self-insured) and inadequate pension fund contributions. Lutheran’s top management recommended selling the HMO because, at that time, investor-owned companies were purchasing Medicaid
HMOs in other locations for relatively large sums. The board agreed to put the HMO on the market at a price of $300 million and would have accepted considerably less. Three years later, after hundreds of hours of board discussions with various consultant, bankers and lawyers, the HMO failed to sell. As such, the hospital continued losing money because of questionable management decisions and an unfavorable environment while the HMO was making money because of better management decisions and a favorable external environment. At the same time, the HMO was prevented from growing because a large share of its profits was siphoned off by the hospital. The hospital was buffered from facing its operating problems by the subsidies it was getting from the HMO. The board never acknowledged these facts. Nor was the matter ever discussed in terms of improving the health of the people of southwest Brooklyn, which was the mission of the hospital. The board and top management did no long range planning during a period of ten or fifteen years, although the main facility was obsolete and needed replacement. The CEO framed the management challenge as “how can we balance the budget?” He never raised the issue “how can we increase revenues in HMO operations?” or “how can we decrease hospital expenditures so that the board can either finance a new hospital or get out of the hospital business?”

A second example concerns presentation of the 2009 hospital budget to the board by the Chief Financial Officer. The budget was approved as customary with little discussion. I commented and raised some questions at the meeting and in a subsequent e-mail, as follows:
• “You made no report on last year’s results as related to what you had forecast.
• There was neither summary nor explanation of variance in the financials presented.
• What are the assumptions on which next year’s budget is based?
• How can we increase revenues?
• What are we doing to decrease re-hospitalizations?
• You don’t seem to be getting much help from the board on these matters. Is there a problem with the leadership of the Finance Committee?
• Where is the discussion of how Lutheran will meet its future capital needs?”

Two days later I received an e-mail reply from the CFO indicating: (1) the hospital was in the process of refinancing its housing complex and exploring moving funds from the HMO to the hospital, (2) assurance that the finance staff works very closely with management to figure out new ways to fund productive, high-quality programs, and concluding that “I will continue to work with the Finance Committee and the board to make our financial presentations more meaningful.”

In both decisions, the management challenge was framed as “how can we balance the budget?” In the matter of the board’s rubber stamp of the budget without due consideration of the evidence, the CFO did not examine performance in terms of comparisons with similar hospitals. He did not break the budget down
into main lines of business. He did not suggest alternative budgetary approaches, nor did he examine the benefits, costs and risks of alternative budgets based on evidence gleaned from the literature, best practice, or analysis of this hospital’s data.

**EB and Related Management Research**

I conducted a study designed to identify factors associated with knowledge transfer between researchers and managers in five large health systems (Kovner, 2005). I studied four topic areas: (1) indicators used to identify successful implementation of diabetes management programs, (2) the relationship between budgeting procedures and strategic priorities, (3) the design of managerial dashboards, and (4) the implementation of compensation systems to improve physician performance. Any of these managerial challenges can be translated into a set of research questions (e.g. what triggers changes made in managerial dashboards?), but this was not the purpose of the study. The study methodology included telephone interviews with 64 managers of health systems, 52 of whom were senior and middle managers of five large health systems, which sponsored the research. Another 12 interviews were conducted with senior and middle managers of non-sponsoring health systems.

In these interviews, managers said their health systems placed a high value on evidence-based decision-making. They did not mention any financial constraints to obtaining knowledge from external sources. Instead, they indicated that searching for evidence was difficult. Reported difficulties included time pressure, competing priorities, lack of relevant evidence, and difficulties in
translating journal findings so that they could be easily applied. Results indicated that few managers had received formal training in seeking and using evidence for decision-making. On the other hand, managers reported that external organizations increasingly provided benchmarks and performance targets for health systems. Ironically, managers described the results of these standards as not being sufficiently based on scientific evidence.

Managers studied got most of their evidence from Web sites, trade journals, consultants, peer groups, professional meetings, and networking with colleagues, particularly in their own systems, rather than from researchers or research journals. Health systems did not regularly review deliberative processes for making strategic decisions before or after the fact. No manager in any of the participating sites was designated as being responsible and accountable for knowledge transfer or management research, nor were metrics used to assess the benefits of obtaining better evidence for management decision-making.

Managers did conduct their own studies, focus groups, and market assessments. But health systems lacked management specialists in knowledge transfer. In my final report, I recommended the following evidence-based management and related strategies for managers in large health systems:

- Fund evidence-based management increasingly out of the capital rather than the operating budget.
- Align incentives, such as performance appraisals, to reward evidence-based management.
- Assign responsibility for knowledge transfer.
• Develop metrics to assess the benefits of obtaining better evidence for management decision-making.

• Fix responsibility for review of deliberative processes as part of the regular process of strategic decision-making.

• Examine ways to increase the benefit/cost of current investments in and partnerships for management research.

• Consider new partnership options and funding opportunities for evidence-based management research.

• Develop a priority list of management research opportunities and consider how these may be funded.

• Invest in management research.

Since then, I have been unsuccessful in attempting to launch an evidence-based management research collaboration with a local large health system. The project would consist in: (1) selecting a management challenge that can be translated into a set of research questions, (2) learning what is known and not known in the literature and in best practice on these questions, (3) designing local research studies, as needed, to obtain needed evidence, and then (4) deliberating and choosing among alternative management interventions.

**Implications**

Arguments that I have read or listened to against using an EBMgt approach have largely focused on excessive time requirements for top managers to collaborate with universities or consultants in applying the EBMgt process. My limited experience also suggests that local health systems are not hastening to fund
My Answers to Recurrent Questions

Basic questions abound regarding evidence-based management. For example, what is the difference between “evidence-based” and “good” management? Aren’t effective managers already using an evidence-based approach although they don’t refer to it as such? I have observed that most managers do not routinely practice an evidence-based approach, particularly as this involves searching the literature and for best practice, initiating their own research and deliberatively including key stakeholders in decision-making.

A second set of issues involves whether methods for developing actionable evidence should be included within academic definitions of “research.” The evidence-based management process is surely not one of developing and testing hypotheses and staging randomized clinical trials. The EBMgt process is one of systematically collecting and analyzing data in ways that reveal trends, patterns and causal effects. EBMgt uses explicit procedures in a systematic way that enables the findings to be replicated. As Don Berwick (2008), founder of a leading global organization to improve care in hospitals, points out management interventions are about “leadership and emotion and changing environments and details of implementation and history. It is messy. Complex interventions experience inevitable, complex variation in the detail of its own mechanisms in local settings, that themselves are textured, varying and unstable.” As Berwick puts it, “evaluation should retain and share information on both mechanisms (i.e.
the ways in which specific social programs actually produce social changes, and contexts (i.e. local conditions that could have influenced the outcomes of interest.)” It is possible to rely on methods other than hypothesis testing without sacrificing rigor. Berwick (2008) argues that widespread use of randomized clinical trials for management interventions is largely infeasible for cost and other reasons:

“But the harm is equal if we treat a very complex world as if it were simple, if we treat each other as less than whole people and complex systems as simple and separate from us, and thereby reduce our capacity to learn, to converse, to grow.”

Making a Business Case for EBMgt

The elephant in the room is the difficulty of measuring the return on investment from a shift to more EBMgt-related practices. Tom Rundall (2009) takes exception to this notion, asking why should ROI be the standard used to evaluate the value of EBMgt? He goes on to say “what is the ROI for other types of decision-making used in hospitals? Is there a known positive ROI for hierarchical, top-down decision-making? For decision-making by reliance on anecdote and gut reactions?”

I have not been able to make the business case for an investment say of $100,000 in an evidence-based process, in terms of predictable return on investment, certainly not within one year. I believe that benefits from most evidence-based management studies should be included within the capital rather
than operating budgets. I made this case because benefits may be unlikely to show up in 1-2 years’ time even as the costs are expended in the first year. Conducting an evidence-based process is certainly not cheap, though I suggest is might be considerably less expensive and more valuable than hiring large consulting firms who don’t engage in evidence-based practice.

Rundall (2009) suggests additional criteria need to be used to evaluate modes of decision-making. These would include comprehensiveness of alternative actions reviewed, extent of confidence among decision-makers that their decision will produce intended results, extent of awareness of possible unintended consequences, acceptable results from most decisions, extent of understanding of why some decisions failed to produce expected results, and sense of accountability among the management team for decisions. Rundall argues that EBMgt outperforms all other decision-making modes on all of these criteria.

The Need for Change

Working primarily with larger hospitals, I understand that changing fundamental aspects of manager behavior is difficult, but so much really does need to change. I am not alone in this observation. Toussaint (2009, p. 28) writes, “in our traditional healthcare management world, managers are rewarded for telling their superiors that dysfunctional systems are really fine.”

An important reason for implementing EBMgt is the flawed judgments managers make by virtue of the limited information processing capability of human beings. Managers need to reflect upon the biases they bring to the table in
seeking and weighing evidence. Groopman (2007) suggests that physicians can easily be led astray by seeing a set of circumstances from only one perspective. He lists the following types of bias:

- “Attribution error -- discrediting data from a “tainted” source.
- Availability error -- basing a decision on the most recent experience.
- Search satisfaction error -- stopping the search for an answer as soon as a satisfactory solution is found.
- Confirmation bias -- selecting only the parts of the information that confirm an initial judgment
- Diagnostic momentum -- being unable to change one’s mind about a diagnosis despite considerable uncertainty.
- Commission bias -- doing something rather than nothing, even if the evidence says sit tight.

Managers are subject to the same biases.

Healthcare managers are too comfortable with the way they view the world. If you aren’t critical about your own judgment it is difficult to recognize the need for evidence or additional perspectives. I’ve learned that healthcare managers typically do not research management issues nor do they use research evidence in decision-making. Healthcare managers do not generally voice a need for management research in improving hospital and health system performance. Hospital and health systems managers, particularly in academic environments, should be more receptive to evidence-based management than their business
counterparts who organizations lack an academic mission. On the other hand, as contrasted with large business organizations, particularly in high-tech industries, academic medical centers have never invested much in management development nor in management research,

**My Recommendations**

I recommend managers apply the six step EBMgt approach of Hsu and his colleagues (2006, see Briner & Denyer, this volume): (1) formulate the research question, (2) acquire the relevant research findings and other types of evidence, (3) assess the validity, quality and applicability of the evidence, (4) present the evidence in a way that will make its use in the decision process more likely, (5) apply the evidence in decision-making, and (6) then evaluate the results. Although this model appears to move neatly from step to step, this isn’t necessarily true in practice. The steps provide a framework for analyzing a proposed management intervention or designing an evaluation. In reality, these steps overlap as managers may have to return to earlier steps or work on several steps simultaneously as the question-answering work unfolds. Flexibility is important. Information gathering occurs in all steps, from framing the question to recommending an intervention. New information may force a manager to reframe the question. Proposed recommendations may prove to be unworkable, requiring decision-makers to identify new ones. The EBMgt process is usually not linear. Under certain circumstances, some steps may be combined or abbreviated. EBMgt leaves plenty of room for managerial judgment during and after the process.
A manager reviewing our work said, “I like what you wrote, and I like the idea of EBMgt,” but then asked “how much of this should I implement, in what ways, in my organization?” (Rundall & Kovner, 2009). I can not precisely answer this question other than to suggest that managers spend more time reflecting on the strategic decision-making processes of their organization, developing structures that establish transparent accountability for these processes, building a questioning culture, and improving the training of the managerial work force.
References


