



Features

Chroniques

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Network helps hospitals develop own evidence-based medicine

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In brief

A RESEARCH NETWORK BASED IN LONDON, Ont., aims to improve hospital care by having hospitals share information. The research points out the ways some hospitals do things differently. Dr. William Sibbald, who heads the network, says that if hospitals overcome some of the variations between them, they may be “able to save money and become more efficient.”

En bref

UN RÉSEAU DE RECHERCHES DE LONDON (Ontario) veut améliorer les soins hospitaliers en amenant les hôpitaux à partager l'information. La recherche indique comment les hôpitaux s'y prennent différemment. Le D^r William Sibbald, qui dirige le réseau, affirme que si l'on élimine certains écarts entre les hôpitaux, ceux-ci pourront peut-être «éviter des dépenses et devenir plus efficaces».

In an era when hospitals are pursuing that elusive goal of providing “evidence-based” medical care, many of them simply don't know how well they are doing in terms of delivering certain services efficiently. Researchers in London, Ont., would like to change that.

Since 1993 a research network based at the London Health Science Centre's (LHSC) Victoria Campus has been trying to help hospitals determine where they stand in terms of delivering services and where they want to go. It also aims to help hospitals do this before they pursue management systems that may not work.

The Critical Care Research Network is headed by Dr. William Sibbald, chief of the Critical Care Trauma Unit at the Victoria Campus, and comprises 22 Ontario hospitals located from Windsor to Sudbury. Included in the list are teaching hospitals in London and Kingston.

Sibbald says the health care system is being challenged to save money while maintaining quality. “It struck me and some of my colleagues that there are 4 questions that make up the quality paradigm,” he says. “What are we doing? How well are we doing it? Can we do better? And how can we best achieve these improvements?”

Sibbald says many hospital workers, including doctors, are leery of evidence-based medicine, often because they have not been provided with the skills to conduct research in the literature, appraise the information and conduct meaningful evaluations of what goes on in their hospitals.

With the help of seed money from the Institute for Clinical and Evaluative Sciences in Ontario (ICES) and a London charitable foundation, the group tries to define where things now stand in hospitals and which direction they should head. It was initially decided to concentrate on intensive care units (ICUs), simply because of the resources they require. In the case of LHSC, for instance, the ICU accounts for just 4% of hospital beds but consumes 27% of the patient care budget.

All partner hospitals provide the research network with a “minimum data set,” which is a record of all ICU admissions. The data gathered range from the type of illness or patient condition and the organs involved to the place the patient re-



ceived care before arriving at the ICU. One crucial element within the data set is an APACHE (acute physiological and chronic health evaluation) score, which is a recognized measure of illness severity.

Partner hospitals receive feedback every quarter through an anonymous report card that allows them to see how well they are faring. They can compare themselves against their own past performances and they will be able to see how well they rank against other network partners, but they will not be able to compile a list of which hospitals are better or which one has the “best” ICU.

Hospitals can get a benchmark of their performance by comparing themselves against other hospitals, but Sibbald said it is equally important to be benchmarked against what has been documented in the literature. Besides the minimum data set, information ranging from the treatment of pressure ulcers to the use of mechanical ventilation and different feeding systems is being evaluated.

One example of how the research network uses all 4 points in the “how-are-we-doing-so-far?” paradigm involved 16 hospitals and looked at how ICU patients were fed. Information about timing, route of delivery (total parenteral nutrition versus enteral nutrition) and several other factors were recorded and a pattern of what Sibbald calls “small area variations” began to emerge.

“The whole concept of small area variation is not to say somebody else is doing it better than you, but that these variations between hospitals exist,” he says. “Maybe if we smooth out some of those variations and get hospitals doing things the same way we’ll be able to save money and become more efficient.”

For instance, once it was known that variations existed in the feeding of ICU patients, the next step was to develop evidence-based feeding guidelines and, once they had been written, to see whether they offered tangible benefits in terms of patient outcomes. A study to be launched this spring will compare outcomes between 8 hospitals that use the guidelines and 8 that do not.

“We’re not testing feeding practices alone — that’s

only part of the picture,” Sibbald said. “At the end of the year we want to see whether their utilization and their outcomes will be different, and perhaps more efficient, than the ones that [were not involved]. What we’re testing is whether we can help them develop, implement and evaluate their own evidence-based clinical guidelines.”

Another study to evaluate variations in the use of mechanical ventilators is also under way. “We have expertise in critical appraisal, so we can look at all the literature that’s out there, synthesize it for them and tell [individual hospitals] whether the literature is valid for what they’re trying to do. Now there are 3 ways they can compare themselves: against themselves, against other hospitals and against the literature.”

Just how effective the network is, or will be, depends on many factors. A major one is the impact massive hospital restructuring will have on Ontario’s hospitals. Many physicians are too worried about what the future holds and whether they will have jobs to wonder whether their practice guidelines are valid.

However, there does seem to be more than simple academic interest in the network. Besides its 22 established partners, another 50 hospitals are observing it and some have expressed interest in joining. As well, there is considerable industry interest. Last year the network attracted more than \$250 000 in research grants from outside the hospital.

Sibbald said it is unlikely that this exact system can be applied beyond the ICU, but the model might be used elsewhere following some modifications. He considers the research part of the expanding role of an academic health care facility to “pull this information together” for community hospitals, which the research network currently does without charge. He also said the network’s work does not conflict with any work being done by ICES. Although ICES has a mandate to “look at the big picture,” said Sibbald, the Critical Care Research Network’s function is to examine the small components of the big picture and determine whether they can be fine-tuned or revised. ?



Dr. William Sibbald: evidence-based information