



Ideas At Work

Triage Through Technology: New Brunswick Tele-Care Service Reduces ER Visits

By Peter O' Hanley

SCENARIO 1

It is 12:24 A.M. A young mother enters your hospital's Emergency Room (ER) with her crying child. Her child has a fever. The mother is frightened, anxious, tired and alone. She speaks with the triage nurse, registers and is taken to a room where medications for fever are given to her child. They wait another 90 minutes for the doctor.

SCENARIO 2

It is 2:10 A.M. A 23 year-old, neatly-groomed man arrives in your hospital ER. It is his third visit this year. He speaks to the triage nurse, greeting her by name. He explains he has come "to see the doctor about this cough." The triage nurse establishes he has been coughing for three or four days, that he has not had a fever, chest pain or shortness of breath, does not smoke and has no prior medical illnesses. He has recently moved to your area and lives alone.

You can easily imagine multiple variations on these scenarios; they are common in most ERs. Indeed, conventional wisdom is that there is widespread over-utilization of the nation's ERs to provide primary care – care that could be given in substantially less expensive, but more appropriate venues¹ – and that the majority of the ER caseload is in the non-urgent categories.²

Yet, this begs the question, as yet unanswered in the medical literature, "Why do people go to ER?" The simplistic answers usually given can blind us to any imaginative response to this seeming mismatch of community resources and patients' self-defined needs.

However, if instead of the judgmental responses usually heard, we apply the concepts of uncertainty as outlined by Lazarus,³ we see the theme underlying nearly every non-acute visit to the ER. A person is confronted with a situation/symptom that creates uncertainty (Does this fever mean my baby is sick? If I don't get treatment, will I get worse?). Uncertainty will inevitably lead to anxiety that will force the individual to act to decrease his/her internal discomfort. If the chosen path of action

reduces anxiety, the individual is thus rewarded, and the coping mechanism will be repeated. And, if the chosen coping mechanism is felt to be successful, this behavior will be repeated.

There are many possible sources to reduce this anxiety level, all involving trust in the response of another to the individual's expression of anxiety. This is the crux of the physician-patient relationship. For those in a patient role, it may include written resources, friends, family or a healthcare worker.⁴ In Canada, it also includes the ER.

Modern life intrudes here. The loss of the extended family decreases exposure to the traditional sources of information on minor illnesses. Patients often tell staff that they have come to the ER because:

- They couldn't access their GP in a time frame they felt was appropriate to their assessment of the problem;
- They didn't want to see the unfamiliar MD "on call";
- It was more convenient for the working mother; or
- "Their specialist" works at the hospital, thus they believed that tests could be obtained and interpreted essentially "on demand" without the necessity of multiple trips.

Once discovered to be an adequate way of coping with the anxiety inherent in questions about health needs, the behavior is bound to be repeated. Thus each ER visit, whether truly an emergency or not, engenders more visits. In short, the current system has made the ER respond to "custom" needs and thus for many has become the only readily available "trusted source." Patients voted with their feet many years ago in favor of ER visits over calling their GPs, especially after business hours.

ACCESS TO INFORMATION REDUCES ANXIETY

What if a trusted source of information could be more easily accessed? Interpretation of symptoms by this trusted source would lead to decreased anxiety. As anxiety recedes, other options appear. It would no longer be necessary to go to the ER, rather, symptom containment could occur at home. Thus, the patient could receive the right care at the right place with minimal cost to the hospital system.

Yet, what is the most appropriate way to provide this trusted source? Many studies show that information given out by ER staff, when dealing with telephone inquiries, is at best spotty and at worst absolutely wrong and dangerous. Small wonder as the respondents were using their personal knowledge, their own verbal communication skills, were cut off from visual and tactile clues, and were untrained and unsupported in this role foisted on them simply by their availability.⁵⁻¹¹

In January 1995, Region 1 Hospital Corporations, working in partnership with the New Brunswick Department of Health & Community Services, formed a pilot project called Tele-Care. Tele-Care brought three new elements to the equation:

1. Dedicated RNs, experienced in ER work, trained in telephone assessment techniques.
2. A 24-hour 1-800 service.
3. Proprietary software protocols for symptom assessment shown to accurately and safely ascertain the need for further ER assessment. We chose the Centramax system from National Health Enhancement Systems Inc. (N.H.E.S.). It has been in use in the US since 1992 without successful litigation against these protocols.¹²⁻¹⁵ These algorithms were developed by a N.H.E.S. team of more than 300 MDs, and then were slightly modified to reflect Canadian realities.

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We put these together with the client-server hardware and ran it out of a tiny space at both regional hospital corporate sites. The pilot was run for two years with access restricted to those areas historically served by both hospitals. The project was launched with a small residential mail campaign as well as some radio advertising, and promotional posters which were given to local GPs and placed in all ERs in the region.

In the first two years of the pilot, the number of calls reached about 4000/month in a population of 186,000. We found highest rates of use among the rural populations, particularly in areas where the GPs traditionally offer no "on-call" service beyond a tape instructing patients to go to the ER. Levels of satisfaction were very high with 93% of callers surveyed stating they were "satisfied" or "very satisfied." On average, 40% of patients were referred to their GP – only 14% to the ER. Well over half of those asked, stated that without Tele-Care, they would have gone to the ER. Utilization of regional ERs for specific target discharge diagnoses were greatly decreased; sprains and strains down 45%, cold and flu symptoms down 22%.

After the two-year regional pilot, the province wanted to partner with a private corporation to expand the service to the entire province. Clinidata, headquartered in Montreal and a pioneer in medical informatics, was selected for the partnership. At present, Clinidata has contributed the infrastructure and personnel such that its people handle 10,000+ calls/month from a population of 762,000.

Our experience mirrors that of many other telephone triage

programs. These volumes assure us that Tele-Care is now a trusted source of information. This electronic version of symptom-based triage will match patient need to the appropriate system resource and thus reduce your ER's volume of non-emergency visits. It does this while maintaining very high patient satisfaction.¹⁶⁻²³

Further information can be obtained from the author at 1-506-867-3000 or the Executive Director of Hospital Services at the Department of Health and Community Services at 1-506-453-2283. 

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