Outlook

Research

Promoting evidence–based practice in emergency

By Joanne Collins, Provincial Director, NFLD

The term "evidence-based practice" has evolved over the past several years in scope and definition. In the early 1990s, when this term seems to have first appeared, it focused on the promotion of best evidence in medicine (termed evidence-based medicine). Since then, it has evolved from "expert opinion" for establishing guidelines to a more formal, quantitative and sophisticated research approach. Today, the term evidence-based practice is more widely used to incorporate a multidisciplinary approach in the provision of quality patient care.

Claiming to be "evidence-based" in today's world conveys a measure of credibility that is invaluable. Thus, it is important to be clear on what evidence-based practice really means. Fundamentally, it is important to realize that evidence-based practice begins and ends with the patient. It requires that decisions about health care are based on the best available current, valid and relevant evidence, and that these decisions are made by the patient, informed by those providing the care, within the context of available resources (Dawes et al., 2005). Ignoring research evidence risks benefit to the patient and may implicate potential harm.

"Evidence-based practice is a process of lifelong, problem-based learning which involves:

1. Converting information needs into a focused question.
2. Efficiently tracking down the best evidence with which to answer the question.
3. Critically appraising the evidence for validity and clinical usefulness.
4. Applying the results in clinical practice.
5. Evaluating performance of the evidence in clinical application". (Evidence Based Medicine Working Group: www.uic.edu)

With advancing information and technology, one would expect that through greater knowledge comes more effective patient care. This may not always be the case and, consequently, there may appear to be a gap between best evidence and practice. Providing care according to the principles of evidence-based practice is recognized as a vital skill for all health care professionals. In our current environment, we need to understand these principles and be able to recognize evidence-based practice in our clinical areas. Additionally, we must develop critical assessment and analysis of our own practice in relation to the evidence available to us. Without these skills, it will be extremely difficult for individuals and organizations to provide "best practice" (Dawes et al., 2005). Delivering evidence-based practice promotes individualization of patient care and assures quality health care now and in the future.

References available upon request.

Outlook

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The application of the Standardized Field Sobriety Test in the emergency department

By Zoe Schuler, RN, Burnaby, BC

Forensic sciences has become one of the hotter topics lately, thanks, in part, to television shows like **CSI** or **Law & Order**, but also due to more high-profile court cases. The O.J. Simpson case is a good example. And while the scientific aspect of forensic health care has received a lot of attention lately, I learned this past week that there are many aspects of health care and law enforcement that use forensic principles routinely and have been using these principles for many years. Sadly, these do not receive the same amount of attention, but are just as valuable, nonetheless.

One such area in law enforcement that was of particular interest to me was the police use of the Standardized Field Sobriety Test (SPST) to assist in the detection of drug- or alcohol-impaired drivers. Having had no personal experience with the SFST, my only knowledge of it was for comic fodder in television shows, or hearing someone else recount various urban legends or myths on how to beat the SFST. My perspective on the SFST was drastically changed following a presentation by Wayne Jeffrey, and I began to believe that this aspect of law enforcement could have many implications for nursing. In particular, I believe the emergency department, especially emergency-trained doctors and nurses who are on the front line of patient care, could benefit greatly from this knowledge. It is our duty to identify symptoms and chief complaints from our patients, and quickly determine whether these symptoms are medical, psychiatric, or possibly drug-induced in nature. The ability to more accurately and quickly identify which symptoms are related to illicit drug use has many possible benefits, which will be discussed later.

A standardized program to train Drug Recognition Experts (DRE) and a standardized test was developed in Los Angeles by the Los Angeles Police Department in the early 1980s, and came to Canada in 1995 (Department of Justice [DOJ], Canada, 2004). A DRE is typically a police officer with additional specialized training as well as supervised practical experience geared towards identifying seven different classes of illicit

drugs: depressants (including alcohol), inhalants, PCP, cannabis, stimulants, hallucinogens, and narcotics (DOJ, Canada, 2004). DRE testing consists of 12 steps:

1. A breath test to rule out alcohol.
2. An interview of the arresting officer to determine what symptoms were identified at the roadside.
3. A preliminary exam of the subject.
4. An eye examination to look for horizontal or vertical gaze nystagmus, as well as convergence testing and hippos.
5. A series of divided attention tasks, such as listening to instructions while maintaining a stance; maintain a stance with eyes closed; walk a straight line, turn in a prescribed way, and walk back; stand on one foot; touch the tip of the nose with one finger as instructed.
6. Vital signs are taken.
7. Pupillary exam in a dark room
8. A check of the muscle tone.
9. An exam for injection sites (track marks) on the person's body.
10. The rendering of the opinion of the DRE.
11. An interview with the subject
12. The provision of bodily fluid samples.

The above list was taken from the Canadian Department of Justice website (2004). It is a standardized test and is cited in many resources, too numerous to list here.

A quick review of the literature on the accuracy of the SFST turned up numbers ranging from 80% effective (DOJ, 2004) to 91% effective (Stuster & Burns, 1998). The SFST has been in use since the early 1980s in the United States and since 1995 in Canada, resulting in about 20 years of practical use. In my opinion, if the accuracy of this test has not been disproved in that amount of time, then it has proven itself a worthy tool for law enforcement officials. This leads me to discuss why the SFST would be a valuable tool for nurses and health care workers.

Two of the primary focuses of nursing care involve the general concepts of health promotion and illness prevention. Health promotion activities help clients maintain their present level of health or enhance it in the future. Illness prevention activities protect a client from actual or potential threats to health (Potter & Perry, 1989, p. 43). These two overlapping ideas represent the fundamental core of nursing care, particularly community health nursing. Since 47% of all traffic incidents in 2002 involved impaired driving (Statistics Canada, 2003), then anything that would strive to reduce that number would fall under the health promotion/illness prevention umbrella. Much is written about the morbidity and mortality rates of impaired driving. Unfortunately, that is beyond the scope of this paper.

Nevertheless, I think the use of the SFST could have greater implications outside of law enforcement or community health nursing. Specifically, I think that it would have much greater use in the emergency department, as it is well documented that there is a correlation between illicit drug use and emergency department use as the primary source of health care (McGeary, 2000). I would like to clarify that a registered nurse using principles of the SFST in her practice would have a much different focus than a police officer using the SFST in the field. For police officers, the primary goal when using the SFST is to determine which drivers are too impaired to continue driving and are therefore a threat to public safety. The officer, after conducting the SFST and concluding the driver shows signs of impairment, can then pursue various legal options. On the other hand, the focus of a nurse conducting a similar exam would be more health-oriented, and not specifically about law-related issues.

In reading the 12-step process done by the DRE to assess a client, I found it interesting that much of it overlapped with an assessment done by most nurses. However, I don't think that most nurses do this assessment with a forensic eye, so to speak. Vital signs are done routinely, usually several times per day, or several times per visit to the emergency room. Pupils are often checked, particularly with a patient who has an altered level of consciousness. Balance, muscle tone, or gait is often subconsciously checked but, generally, no mention is made of these unless there is an observed problem or abnormality.

Given that so many of the patients who come to the emergency may be legally impaired by a substance, whether it is alcohol or illicit drugs, it would stand to reason that learning how to identify drug use would be a valuable tool for emergency nurses. I believe that some of the SFST used by DREs could be used to assist nurses to narrow a patient's drug use down to a specific category, thereby ensuring a more thorough assessment. For example, vital signs are always taken on every patient in emergency and, while applying a blood pressure cuff, the nurse could check for track marks. A pupillary exam that ordinarily includes the pupil size, shape and reactivity to light could easily be extended to include an assessment of horizontal or vertical gaze nystagmus, convergence, hippus or rebound dilatation. Assessment of grip strengths, a normal part of a neuro vital sign exam, could be extended to include appraisal of muscle tone. A general assessment of the patient's gait could be easily performed, and include mention of balance (i.e., staggering) or unusual gait pattern (i.e., moon walking in ecstasy use). Divided attention tasks could be easily accomplished in an ER setting. In my experience, patients who admit to being mildly intoxicated will need frequent redirection to perform simple tasks. For example, "Take this cup, follow the blue line to the bathroom, pee in it, bring the sample back to your bedside, and change into the gown" has required more that one reminder to accomplish both goals. This would be a beneficial observation to document in the nurse's notes. Finally, in my experience, asking a patient a specific question like, "How much alcohol/marijuana have you used today?" will elicit a much more truthful answer than a more open question like, "Have you ingested any illicit substances today?" Using the DRE tool will help the nurse to narrow a patient's drug use down to a certain class of drugs, thereby allowing for a more specific line of questioning and, hopefully, more truthful answers.

Being able to more quickly and accurately determine drug use has far-reaching implications for health care workers. By using a newly acquired set of skills such as the SFST, health care

personnel will be able to either confirm or rule out drug use more efficiently. In effect, the diagnostic process in its entirety can be sped up, and the patient will be able to obtain more appropriate treatment. An example that comes to mind is with psychiatric cases; it is frequently difficult to determine whether psychotic-like symptoms are a result of the disease, or of illicit drug ingestion. A proper physical exam with special attention to drug-related symptomology could be of great use, particularly if the patient is not forthcoming with information. Another example involves a young adolescent who demonstrates an altered level of consciousness. If witnesses are able to give a good history about the patient's behaviour prior to presenting to the hospital, emergency staff may be able to pinpoint illicit drug use.

If the patient has ingested a drug with known side effects, such as ecstasy, ER staff who note that the patient feels thirsty, has excessive water consumption and subsequent water intoxication, could narrow down possible drugs to ecstasy as the possible reason for the altered behaviour. Further procedures may be undertaken to confirm this supposition. In this way, the patient has received timely, appropriate medical treatment.

Lastly, I would like to briefly discuss the issue of medical documentation and illicit drug detection. In my personal experience, I have found that I lacked the proper terminology that would describe an impaired patient's behaviour in an objective fashion while under my care. These symptoms can be fleeting, meaning once the drug has worn off, the specific symptoms disappear. Standardized terminology that is used for specific behaviour, often directly related to certain types of drug use, is necessary for providing accurate and objective observation and charting. Many times, patients are brought into the ER by law enforcement officers. Terminology that is used by both ER staff and officers would reduce the incident of miscommunication and increase the speed of accurate assessment. In regard to my own charting of patients in the ED, I feel much more confident in my documentation skills after learning the SFST systematic way of assessing patients for illicit drug use and the standardized, descriptive terms used to document the associated symptoms. Should I be called upon to testify in court, I feel secure that my documentation is thorough and descriptive enough to rule out any ambiguity.

A systematic assessment model with standardized, objective descriptive terminology is an invaluable resource tool for health care professionals to assist in the care of illicit drug-using individuals. I find it interesting that such a tool has been used in law enforcement for many years, but has not yet made the leap for use in health care given how closely law enforcement officers and ER staff work together. Nurses can have a strong role in advocating the use of a modified SFST as we are often the first person to assess patients upon their arrival in the emergency department. We could greatly influence the timeliness and appropriateness of the care our patients receive, and advocate for a better outcome for all involved. I believe that the burgeoning field of forensic nursing will play a larger role in this issue as the specialty continues to evolve and grow in Canada.

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