The nursing role in patient education regarding outpatient neurosurgical procedures

By Claudia Zanchetta and Mark Bernstein

Abstract
The shift towards patient-centred care is the priority in health care today. Providing quality care that is highly efficient and patient-friendly while also being cost-effective is a difficult, but not impossible task.

Since 1996, awake, image-guided day surgery for resection of brain tumors has been performed at Toronto Western Hospital in an attempt to combine the concept of patient-centred care with responsible resource allocation.

Nurses can play a vital role in facilitating a shift in outpatient neurosurgery towards a more patient-care focused environment. By providing information and education to patients and families, nurses have enormous potential to improve satisfaction and outcomes for patients undergoing these procedures. Thoroughly preparing patients for their surgery and helping them manage their care post-operatively are the keys to decreased complications and re-admission. This would undoubtedly improve cost-effectiveness for the system while simultaneously improving the patients’ quality of life.

Introduction
The popular idiom in health care lingo these days is “patient-focused care”. It is the topic of numerous articles, books and workshops, and the priority of every health care facility, the public, and all levels of government. Yet, many clinicians feel pressured to shift their focus away from the patient and towards fiscal issues; cutbacks and cost-savings are becoming an increasingly important issue. The recent reports by the Kirby and Romanow commissions (2002) confirm that the sustainability of universal care will require a significant paradigm shift in our delivery systems. By all indications, future health care professionals will see a significant move towards preventative medicine and an increase in community-based care of patients (Government of Canada – Senate, 2002; Government of Canada – Royal Commission, 2002; Keffer, 1997).

Such changes will undoubtedly correspond with a decrease in inpatient beds in acute care settings, making the safe and equitable allocation of resources ever more important (Government of Canada - Senate, 2002; Government of Canada – Royal Commission, 2002; Keffer, 1997). This means that health care providers must deliver quality care that is highly efficient and patient-friendly, while also being cost-effective – a tall order indeed. What will this mean for acute inpatient care providers, and what is the nurse’s role in facilitating these changes?

In response to the first question, this shift in the system coupled with advances in knowledge and technology, has led hospitals to increase the commonality of outpatient procedures (Bernstein, 2001; Government of Canada – Royal Commission, 2002). Most surgical disciplines have been moving toward this trend for many years in an effort to meet that challenge and combine the concept of patient-centred care with responsible resource allocation (Government of Canada – Royal Commission, 2002). For example, cardiac angioplasty, laparoscopic cholecystectomy, and laser eye procedures are just a few surgeries routinely performed on an outpatient basis.

L’éducation d’hospitalisé de rôle de soins concernant des procédures neurochirurgicales de patient

Abérégé
Le décalage vers le soin centré par patient est une priorité du jour dans le système de santé. Fournissant la qualité du soin qui est fortement efficace, patient-amical, et est également rentable, peut être difficile à réaliser, mais ce n’est pas impossible.

La chirurgie de journée réveillé avec image-guidé pour la résection des tumeurs de cerveau a été exécutée à l’hôpital de Toronto Western depuis 1996. Ceci a été une tentative de combiner le concept du soin patient-centré avec l’attribution des ressources responsable.

Les infirmières peuvent jouer un rôle essentiel en facilitant un décalage de la neurochirurgie de patient vers plus d’environnement soin-focalisé patient. Les infirmières ont l’énorme potentiel d’améliorer la satisfaction et les résultats pour des patients subissant ces procédures en fournissant l’information et l’éducation aux patients et aux familles.

La préparation complète des patients pour leur chirurgie et les aider de contrôler leur soin après les opérations est principale en réduire les complications et les réadmissions. Ceci améliorait certainement la rentabilité pour le système, tout en simultanément améliorant la qualité de la vie pour des patients.
Even neurosurgeons are jumping on the bandwagon – peripheral nerve surgery and microdiscectomies are becoming common day-surgery procedures, with the patient going home after a few hours of observation (Bernstein, 2001).

At the Toronto Western Hospital, awake, image-guided day surgery for resection of intra-axial neoplasms (by craniotomy) has been performed since 1996. You must be thinking “surely that last sentence is a misprint?” It is no mistake. Apparently, even open surgery on someone’s brain is amenable to an outpatient procedure. The surgeon who performs these procedures (MB) found that it was both “safe and effective” in a select group of patients, may minimize complications, and is “resource-friendly” (Bernstein, 2001).

In some centres, concerns over legal liability in the event that a patient deteriorates at home have led to a fear of instituting these types of procedures as standard practice for patients meeting the criteria. However, as more areas move to providing care on an outpatient basis, these issues will need to be addressed. The keys to success lie in better communication and coordination within the system, and in providing patients and families with the proper support and education to take responsibility for their own care. It is time to abandon our paternalistic attitudes and start thinking beyond our borders. The question remaining then is, “How can nurses facilitate a shift in outpatient neurosurgery towards a more patient-care focused environment?”

Review of the literature

The scant information in the literature that discusses outpatient neurosurgical procedures references only awake craniotomy procedures on inpatients, stereotactic biopsy, and outpatient microdiscectomies. As far as we are able to determine from published reports and collegial contacts of the neurosurgeon co-author, the Toronto Western Hospital (TWH) is the only hospital in the world currently performing cranial procedures routinely on an outpatient basis.

A search of the electronic databases (Medline, CINAHL) was done from the years 1970 to 2003. The following key words (in various combinations) were used in the literature search: resource allocation, neurosurgical procedures, ambulatory surgical procedures, safety of procedures, brain neoplasms, treatment outcomes, needs assessment, patient education, patient information needs. The reference lists of the articles found were also scanned for related articles that may not have been indexed on-line.

There were numerous commentaries by reviewers in response to the manuscripts on the outpatient cranial procedures being performed at TWH (Bernstein, 2001; Bhardwaj & Bernstein, 2002). The authors’ colleagues agreed with the overall analysis that the surgery was effective and efficient. However, several readers voiced concerns that the practice could not be put into general use, particularly in the more litigious environment in the United States. The respondents attributed their skepticism to the possibility that complications (namely hemorrhage) could arise at home that would not be identified and treated in a timely manner. These complications were considered too great a risk to the patient and not worth the cost-savings. However, there was no literature found which compared the risk of unidentified complications at home versus the risks in hospital, providing insufficient scientific foundation for their concerns.

Semple and McGowan (2002) feel that nurses play an “important role in providing information [about the patient’s illness and treatment], and have enormous potential to improve the quality of life for patients with cancer through the provision of timely and adequate information” (pp. 586). Their review of the literature found that effective communication of information to patients resulted in several positive outcomes, including: reduced length of stay, increased patient satisfaction, decreased depression, and reduction of anxiety. All of these factors contributed to patients’ improved quality of life and overall satisfaction when coping with their condition.

Finally, Hughes’s (2002) review of the literature on this subject reported decreased analgesia usage by patients with good preparation. Several of the studies highlighted the pre-operative period as the time when most patients experienced significant fear about their surgery, complications and level of recovery (Johansson et al., 2002; Nicklin, 2002; Semple & McGowan, 2002).

The outpatient surgical procedure

The patient arrives at the day surgery unit (DSU) early on the morning of their admission (Bernstein, 2001). The surgeon uses either a twist drill hole for stereotactic biopsy, or craniotomy for resection of the lesion. The patient is awake during the procedure, which is performed under local anesthetic. Once surgery is completed, the patient is taken to the post-anesthetic care unit (PACU) for four hours of monitoring. In the early evening, the neurosurgeon reviews and discharges the patient if they are neurologically well compared to pre-operative baseline. Pre-operative teaching about possible complications is reviewed with the patient and family, and they are given the surgeon’s pager and home phone number. A home care nurse visits the patient at 11:00 p.m. that evening and at 8:00 a.m. the following morning. A follow-up appointment in the surgeon’s office is arranged for five to seven days post-operatively. The surgeon then inquires about the patient’s overall satisfaction with care, and specifically with the outpatient procedure (Bernstein; Bhardwaj & Bernstein, 2002). Further details about the procedures are available in two previous publications (Bernstein; Bhardwaj & Bernstein).

Understanding the patients’ perspective

As noted above, there is a wealth of literature on what patients perceive as their needs both pre- and post-
The nursing role

Since the data to date supports the safety, efficiency, and patient-friendly nature of the procedure, the original question remains—How can nurses help to further ensure patient safety and satisfaction in their post-op care, once they leave the hospital environment?

The biggest role for the hospital-based nurse/nurse practitioner would seem to lie in the education of patients, families, and community health care providers. Bednar (1999) suggests that education significantly improves success rates of outpatient surgical procedures. We believe there is an important role for nurses and nurse practitioners in both the pre- and post-operative education of patients undergoing surgery for brain tumors, particularly in explaining, interpreting, and reinforcing information. The literature is beginning to corroborate what we have always intuitively known; pre-operative education significantly improves success rates by decreasing complications and re-admission (Bednar; Goodman, 1997; Hughes, 2002).

Several of the studies highlighted the pre-operative period as the time when most patients experienced significant fear about their surgery, complications and level of recovery (Hughes, 2002; Johansson et al., 2002; Semple & McGowan, 2002). At discharge, patients wanted to know about their medications, how to recognize complications, and what preventative measures they could take to avoid them. Communication of this type of information to patients at the appropriate times resulted in several positive outcomes, including: increased satisfaction, decreased depression, reduced anxiety, and decreased analgesia usage (Hughes, 2002).

Many of these concerns could be addressed by dedicating a nurse/nurse practitioner to do pre-operative teaching with all elective neurosurgical patients, particularly the outpatient group. The pre-operative session could focus on the surgical procedure, medications (before, during and after), and recovery (what to expect, timing, rehabilitation, etc.). Pre-operative links with the oncologist or cancer treatment facility can be established, when appropriate, so patients can talk to oncology specialists about the possible post-operative course. A second post-operative session could include reinforcement of pre-operative teaching, with the addition of prevention and monitoring of complications. Written materials should also be provided in order to reinforce verbal teaching, and should be standardized to provide consistency (Arthur, 2002). The additional help of social work could provide guidance in regards to the organization of accommodations for out-of-town patients.

In order to provide further support for patients upon discharge, clear links to after-hours support (ICU outreach program, emergency staff, neurosurgical resident on call, neurosurgical cancer support groups) should be established prior to the patient leaving the facility. Links to support...
groups (either live or on-line) are particularly helpful, so patients and families can converse with others who have had similar experiences.

Finally, education for the community care worker will be crucial to ensure monitoring for complications is done effectively and problems are identified and addressed in a timely fashion. Better links need to be established between hospital and home care nursing agencies in order to ensure a seamless transition from the inpatient to the outpatient environment.

The information being delivered is only one part of patient education, albeit an important one. An equally crucial aspect that has not been considered is the messenger bearing the information (RN versus CNS versus ACNP). In this respect, it would be appropriate to look at the wide body of literature currently available on previously established and validated methods used in outpatient settings.

Future implications
A literature search yielded no studies comparing the risk of unidentified complications at home versus the risks in hospital – whereby items such as nosocomial infections, thromboembolic events (DVT and PE), and medication errors must be added to the list. There is a need for studies to validate the role and impact of education on outcomes, and patient perspectives on how the experience could be improved. The latter suggestion could be achieved through proper satisfaction surveys to assess the perceived needs for outpatient brain tumor surgery to succeed and be universalizable.

Preparing patients for their surgery and helping them manage their care post-operatively are the keys to decreased complications and re-admission, which would undoubtedly improve cost-effectiveness for the system. There must be a more thorough examination of what provisions have to be put into place in the community to support the shift in care. In the final analysis, we must think outside the box and embrace new ideas if we are truly to provide patient-centred care with decreased resource utilization. Nurses have a huge role to play in this new health care paradigm.

About the authors
Claudia Zanchetta is an acute care nurse practitioner at the Toronto Western Hospital, University Health Network. She is a nursing instructor with Humber College in Toronto, and is a graduate of the University of Toronto. Claudia has been a neurosurgical nurse for eight years with a clinical interest in neurosurgical critical care, and a member of the Toronto Chapter of CANN since 2000.

Mark Bernstein is a neurosurgeon and former Head of the Division of Neurosurgery at Toronto Western Hospital, University Health Network. He is Professor of Surgery, University of Toronto. His main area of clinical interest is neuro-oncology and international neurosurgery. In 2003, he completed a Masters of Health Science in Bioethics.

Comments or requests for further information can be directed to Claudia Zanchetta, Division of Neurosurgery, Toronto Western Hospital, 399 Bathurst Street, 4 West, Toronto, Ontario M5T 2S8. Phone: (416) 603-5800 (Ext. 2470). E-mail: claudia.zanchetta@uhn.on.ca.

References


