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Ambulatory surgery: effects on education of surgical housestaff and medical students in Canada

Factors governing trend to ambulatory surgery

In Canada, there has been a strong move toward short stay and ambulatory surgery. The prime motivation for this trend has been financial. Canadian hospitals are financed by global budgets, based on a flat dollar amount allocated by the provincial governments. Spending of this budget is mostly determined by the hospital itself. Decreasing global hospital budgets have led to bed closures and a strong impetus for increased efficiency. As a result, waiting lists have grown and elective procedures have at times been cancelled at the last minute.

Costs of health care delivery are to a great extent related to salaries of employees in the hospital, and the costs of providing 'hotel services' such as room and board not directly influencing patient outcome. Furthermore, inpatients have their usual medications provided at no cost to them, financed out of the hospital global budget. Inpatients, particularly in a teaching hospital, tend to have more tests done than outpatients, again consuming a portion of the hospital global budget.

Ambulatory surgery patients do not require nurses for evening and night shift, make fewer demands on housekeeping and laundry staff, have much of the testing done outside of the hospital, and have no medication provided once they are beyond the recovery room. All these issues result in lowering the cost for patient care by shifting the costs away from the hospital to the private sector.

At the same time, less invasive surgical procedures have resulted in more rapid patient recovery and less need for intensive nursing care after surgery. These procedures allow the patient to care for him or herself, without nursing supervision in the majority of cases.

Procedures done in ambulatory surgery

Currently a multitude of general surgical procedures are performed in an ambulatory surgery setting. Some of these have always been done in such an environment, while others have moved to ambulatory surgery with the evolution of less invasive techniques and better patient education. Such procedures include: endoscopy (diagnostic and therapeutic); skin (melanoma, basal and squamous carcinoma, benign lesions); breast (biopsy, partial or modified radical mastectomy, axillary node dissection); hernia (open or laparoscopic); lumps and bumps (lipomas, sebaceous cysts, abscesses); diagnostic laparoscopy; gall bladder (laparoscopic, mini-cholecystectomy); gastrostomy (PEG); vascular access; lymph node biopsy; pilonidal sinus; anorectal (haemorrhoids, abscess, fissure, fistulas, polyps); oropharyngeal tumours; minor amputations.

Potential problems

As a result of the increasing trend to day surgery, several problems have been identified, with an impact on training of residents and medical students in surgery. There is a conflict between activities in the main operating room (OR) with those in day surgery, often scheduled simultaneously. Usually ambulatory procedures are considered less exciting and residents gravitate to the main OR.

Residents often arrive in day surgery with no knowledge of the patient. The preop work-up is usually done by someone else. The residents are there to do a technical procedure in isolation from pre- and postoperative care. This is 'the itinerant surgeon' of the residency programme. They have been excluded from the preoperative process of making a diagnosis, evaluation of the patient's risk for surgery, selection of the appropriate surgical procedure, selection of the best environment for the operation (inpatient vs. outpatient), and education of the patient about the procedure about to be performed. Furthermore, there is a shift in the role of the housestaff from direct care of the patient to onlooker-assistant. This results in loss of patient-physician interaction. Postoperatively, the resident is usually excluded from patient care. The process of evaluation of patient complaints, the wound healing process, evaluation of postoperative fever, diagnosis and treatment of wound infection, appreciation of normal postoperative pain and its treatment are missed. The result is a surgeon who will be inexperienced in the most common areas of general surgery when he/she goes out in practice.

The medical student has less teaching material in hospital, performs fewer physical examinations to appreciate normal findings (e.g. rectal exams, breast exams,

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hernias, etc.) and has less opportunity to be exposed to abnormal physical findings in the preop patient. There is less time for discussion of the patient and the patient's clinical problem in the setting of rounds on a clinical teaching unit. Failure to be exposed to the postoperative patient implies that the student will be less familiar with the appearance of the healing wound and with the normal postoperative course.

Advantages

There are definite advantages to ambulatory surgery from the point of view of residents and students. The number of operative procedures will increase. The operating room will not be held hostage to bed unavailability, and patients requiring major surgical procedures will have easier access to hospital. As a result there will be fewer routine cases in hospital, making rounds more expedient and hospitals/wards more efficient. The housestaff will be asked to do less 'SCUT' work and perhaps more time will be available for reading and educational activities. Being involved with ambulatory surgery will give housestaff a glimpse of common surgical practice. Residents might have an opportunity to learn to do their own anaesthesia, since many of these procedures are done under local or regional anaesthesia, blocks, or intravenous sedation, administered by the surgeon.

As a bonus, hospitals will save money which may then be better channelled to purchasing new equipment, upgrading facilities, purchasing teaching aids for medical students, or perhaps hiring ancillary help to lighten the workload of the residents.

Answers

After appreciating the problems and potential benefits resulting from an inevitable move to increasing ambulatory surgery, we must develop an approach that will maximize the educational benefits to residents and medical students. We can establish ambulatory surgery clinics which involve residents/students in performing the history and physical examination, the diagnostic work-up, and operative decisions made prior to surgery. Ambulatory surgery clinics would be an excellent environment for demonstration of physical signs to students.

It is possible to have designated 'staff' patients with residents as the primary surgeon involved in their care, much as is done with inpatients. The resident would be responsible, under the supervision of the attending surgeon, for preparation of the patient for surgery, for patient education and obtaining informed consent, and for being available to the patient for any problems that arise after surgery. The patients would be asked to return to the same clinic postoperatively, where their course can be monitored. Junior residents should have an important role in these clinics and in the day surgery procedures, while senior residents would have primary responsibility for inpatient care. Ambulatory surgery would allow an improved caseload for junior residents. The increased operative experience and responsibility will undoubtedly result in improved morale among junior residents.

Ambulatory surgery may be taught as a separate rotation rather than within the setting of a traditional rotation through a surgical clinical teaching unit. In that way ambulatory surgery clinics and duties would not compete for the residents' time with demands imposed by inpatient care. This rotation might be particularly attractive to junior residents, and perhaps residents rotating through surgery from family medicine.

In summary, ambulatory surgery is increasing, driven by financial and social pressures. We have the opportunity to anticipate potential problems and develop a plan that will improve education of residents and students and ultimately turn out surgeons better qualified to deal with the realities of future surgical practice, in a programme where the morale and enthusiasm of residents will be high.

Gerald M Fried
Associate Professor,
Department of Surgery,
McGill Univeristy,
Montreal, Quebec,
Canada