Twenty years ago, accumulated information on hospital utilization rates could be characterized as roomfuls of data untouched by human thought. Since then, increasing technical ability to analyse hospital utilization data has allowed variations in the rates of hospital procedures to be uncovered\(^1\) and stimulated much research on the appropriateness of hospital care.\(^2,3\) Such research has had a significant impact on the delivery of health care in hospitals. Increasing efficiency in hospital use in most countries with well-developed healthcare systems owes as much to an acceptance that at least some care provision is inappropriate as it does to considerations of cost. The results have been far-reaching and continue to be reflected in bed closures and the restructuring of hospital services.

The appropriateness of care has 2 separate elements: the appropriateness of the intervention itself, and the setting in which it is provided. How are these studied? First, the effectiveness of an intervention can be determined through clinical experience, randomized controlled trials and systematic reviews. In the absence of clear evidence, strategies such as the Delphi method, the nominal group technique and consensus conferences have been used to resolve disagreements and develop guidelines for clinical practice.\(^4\)

To determine whether care settings are appropriate, researchers can examine hospital utilization data. In general, elective surgical procedures and emergency admissions have been scrutinized most, because these are relatively discrete events and are thus comparatively easy to measure. One impact of such studies has been an increase in day surgery and a concomitant decrease in lengths of stay and surgical inpatients.

Little attention has been devoted to the appropriateness of hospital admissions for patients with medical diagnoses. Canadian studies have indicated that 24% to 90% of adult medical admissions and 27% to 66% of days in hospital are inappropriate.\(^5,6\) However, such studies have proven to be technically difficult and time consuming.

The study reported in this issue by Carolyn DeCoster and colleagues (page 889) is timely and thought provoking. They used a valid and reliable instrument to assess, with reference to the acuteness of the patient's condition, the appropriateness of the hospital admission and of each subsequent day in hospital. They
then linked these results with hospital utilization data to
determine the appropriateness of hospital stays for adult
medical patients. Finally, they identified which patient
groups were likely to be treated in hospital.

DeCoster and colleagues found that between 323 000
and 534 000 days of hospital care were inappropriate
and could have been allocated to alternative care, assum-
ing that alternatives were in place. DeCoster and col-
leagues suggest that audit activities focus on certain cate-
gories of patients, i.e., those with stays longer than 1
week, those with nervous system, circulatory, respiratory
or digestive diagnoses, elderly patients and those not ad-
mitted through the emergency department. They con-
clude that better targeting of utilization review could ul-
timately improve the allocation of health care resources.

There are limitations to the approach proposed. Four
preconditions are required: (1) a commitment to fund the
process, (2) the technical capacity to collect and analyse
hospital data, (3) the existence of alternative care settings
and (4) mechanisms to ensure that relevant action is
taken. Several questions remain unanswered. Who is go-
ing to be responsible for performing this activity? This
study was undertaken by an experienced and internation-
ally respected team of health services researchers with sta-
ble government funding. That a small general hospital
could undertake equivalent analyses in a timely and rele-
vant fashion seems unlikely. Those of us who have worked
with hospital utilization data do not underestimate the
technical problems in producing meaningful and useful
results. And that is only the beginning. The real chal-
lenge is to communicate those results to the people who
decide which patients should be treated in hospital.

Another limitation is that the data were collected in
1993–94: the many changes that have taken place since
then in the provision of hospital care may have already
overtaken DeCoster and colleagues’ results.

In spite of these limitations, the central message is
clear. A substantial proportion of adult medical patients
are unnecessarily receiving treatment in hospital. As the
authors point out, this often occurs for want of an alter-
native. When confronted with the choice of discharging
an elderly patient with a nonacute condition home with
no social support, most people would accept that their
stay in hospital was appropriate, regardless of guidelines
or targeted audit activities.

Although it seems likely that the detailed, routine audit
of hospital admissions data will become more and more
common, this process is not a simple one. It is resource
intensive and requires commitment. DeCoster and col-
leagues leave unanswered the question of who is ulti-
mately responsible for utilization review and fail to em-
phasize that it must be continuous. Canada, along with
the rest of the developed world, is currently making sig-
nificant reforms in health care provision. The measure-
ment of appropriate, effective care in hospital is not just
an academic exercise. It must include all of those who de-

deliver hospital care and must not lose sight of the humanity
of that care.

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