evaluation. Furthermore, the authors report their observations from a project bound in time and place. The true test of safety indicators will require an ongoing initiative from a project to a program.[9] Only then will the impact of indicators, changes in practice, and patient outcomes be better addressed. To paraphrase and adapt one of Buddha's sayings: ''*Where you are today depends on where you were yesterday. Where you will be tomorrow depends on your goals today*.'' And today we still seem to be searching for our common goals regarding safety in health care.

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Readmission as quality indicator

Readmission to hospital: a measure of quality or outcome?

A Clarke

The value of readmission to hospital as a quality indicator is still debatable

Readmission to hospital has often been considered as a possible measure of quality of hospital care. Although its measurement is not always easy, the concept is beguilingly simple. An information manager in health services once described it like this: ''I take my car into the garage; if it needs to go back in a short time then that's obviously because they didn't do a good enough job!'' At the individual level, undoubtedly readmission can represent a failure or breakdown in plans of care for a particular patient, or the occurrence of an unexpected adverse outcome—for example, readmission for wound infection or deep venous thrombosis after surgery. However, as might be expected, health care is almost always more complicated than this.

A number of factors unrelated to the quality of hospital care can affect the likelihood of readmission.[1] Patient factors are important, such as the severity, predictability and chronicity of the underlying condition, or levels of comorbidity or social support. Many hospital factors are known to affect the likelihood of a hospital admission (and therefore the likelihood of *re*-admission) including the proximity of the hospital, the availability of hospital beds, and the availability of intermediate or ''step down facilities''. The planning of care pathways can also affect the likelihood of readmission. If the care plan for a particular patient includes an underlying awareness of frequent exacerbations for which hospital care is likely to be necessary, then a readmission may itself represent better quality of care. Patients may be receiving intermittent hospital care for a serious chronic or terminal underlying condition, and a pattern of care that includes frequent hospital admission and as much time as possible at home may be entirely appropriate to their needs. In this case, readmission may actually represent more appropriate care and higher quality care.[2] On the whole, however, readmission is not investigated in the context of improving the care of an individual patient or as a smaller scale ''look back'' or audit activity. Its appeal is that it appears to be reasonably easily accessible from routine data sources at the macro level in order to allow for large scale comparisons between different hospitals or health plans.

However, both the definition and the measurement of readmission for comparisons of the quality of care between institutions can be fraught with problems.[3] The most important issue is to be able to separate planned from unplanned readmissions and to identify the reason for readmission clearly so that planned or unavoidable readmissions are excluded from the comparison. Many healthcare databases do not allow for the tracking of patients from one hospital to another. So, for example, if a patient dissatisfied with the care in the hospital which provided the index admission attends a different hospital or care plan, he/she may not appear as a readmission. The usual timing for a definition of readmission is within 28 days of an index admission, but sometimes readmission within 1 year is also considered. At 1 year it is likely to be very hard to track a causal relationship between two hospital admissions in order to relate the reason for the second admission to the quality of care in the first.

Another problem with using readmissions as a measure of quality of care for large scale comparisons is in identifying the rate of readmission. Both the numerator (the number of readmissions within a given time period) and the denominator (the overall number of people admitted to hospital as an index admission and potentially able to be included in the numerator) need to be defined and measured carefully. If there are high levels of 30 day mortality, for example, then the denominator may

erroneously include people who have died who should not be included in the calculation of the readmission rate.

Research on the association between the quality of inpatient care and early readmission in 12 Veterans Affairs hospitals has shown, however, that readmissions, if carefully measured, may be useful for comparisons of quality of care. Ashton *et al*[4] used a large case control design to investigate 14 day unplanned readmissions in men discharged after an index admission for diabetes (n = 593), chronic obstructive lung disease (n = 1172), or heart failure (n = 748). Quality of care during the index stay was assessed by patient case note or chart review using quality criteria for the process of care developed by panels of expert physicians. The authors found that readmission was statistically more likely where quality criteria had not been complied with. They quantified the contribution of ''substandard care'' to the likelihood of readmission and found that one in seven readmissions in patients with diabetes, one in five in patients with heart failure, and one in 12 in patients with obstructive lung disease were attributable to substandard care. In a meta-analysis the same authors[5] estimated that the summary odds ratio for readmission at 31 days or less after the index admission in 16 homogeneous comparisons of substandard or normative versus normative or exceptional care was 1.55 (1.25–1.92). They concluded that ''early readmission is significantly associated with the process of inpatient care''.

This is the context for the paper by Luthi *et al*[6] on the value of readmission in predicting process indicators for patients admitted to hospital with heart failure published in this issue of *QSHC*. The authors investigated patients who had been readmitted to see the extent to which carefully selected process indicators (such as the use of certain diagnostic tests or prescription of various drugs) can be predicted by readmission. They found that readmission did not predict quality of care for patients with heart failure and suggested that there are limitations to the use of readmission as a quality indicator. Unfortunately, they were unable to exclude planned readmissions from their database of patients admitted after the index admission. However, their findings continue to cast doubt on the value of readmission as a quality indicator.

In the end, the main problem with the use of readmission as a measure of quality is that it is always going to be an unsatisfactory proxy for measuring either quality or outcome. Whether a patient is readmitted or not is surely less important than whether he or she has a satisfactory outcome of the index hospital stay, measured using valid and reliable indicators of health status or quality of life.[1] The time must come when we give up measuring unsatisfactory performance indicators simply because they are available and, instead, concentrate harder on allowing for known valid measures of the quality of care to be collected as a matter of routine.

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Quality improvement

Preserving moral quality in research, audit, and quality improvement

L Doyal

Most discussions about the ethics of healthcare research focus on the possible harm that could be done to participants. Sometimes such deliberations will highlight tensions between the clinical duty of care to protect the life and health of individual patients to the highest standard and the need to engage in the research that makes improvements in health care possible. Because of the potential risks, patients should not be involved in research unless they have given their informed consent. Equally, they should not be asked to participate unless the project itself has been passed through a process of independent review and its risks assessed. The moral principles for such reviews are summarised in the Declaration of Helsinki. This states, among other things, that consent is only valid if it is based on detailed and appropriate information, that risks should always be proportional to potential benefit, that confidentiality should be protected, and that the interests of individuals should never be compromised solely in order to further the interests of the public.

The ethical review of healthcare research is carried out by research ethics committees (RECs) designed to implement the Helsinki principles. Few now seriously question the moral importance of this work and its centrality for sustaining the trust of research participants. While there may be criticisms of the effectiveness and efficiency of RECs, these are usually arguments for their improvement rather than against their very existence. Some healthcare professionals will always be uncomfortable with any review process that may question the moral quality of their practice. However, such discomfort is a small price to pay for achieving the more important goal of respecting human rights and reinforcing the willingness of all the relevant parties to participate in research to improve health care.

However, research is not the only activity necessary for achieving medical progress. While this work contributes to the creation of new knowledge and skills, strategies for carrying out audit and quality improvement (AQI) are also essential if these innovations are to be delivered to patients in the most appropriate ways. AQI can take a variety of forms from regular reviews of the clinical results of individual practitioners to ongoing assessments of the successes and failures of particular delivery systems and the development