

An 'ecological' approach to Total Quality Management - a case study from NHS Outpatient Clinics

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Introduction

A prominent part of recent British government policy has been the construction and promulgation of a series of 'Charters' (of which the best known is *'The Citizen's Charter'*) in order to secure better 'value for money' in the provision of public services. Such Charters prescribe standards of service and may even entitle consumers to compensation if services do not reach an agreed standard. The Charter which particularly applies to the NHS (*'The Patient's Charter'*) stipulates the maximum time that patients should spend waiting in outpatient clinics by indicating that *'you will be given an appointment time and be seen within 30 minutes of that time'*. This paper uses a case study of the implementation of a statistical monitoring system in a District General Hospital which had the practical effect of greatly improving typical waiting times. Whether such improvements have increased the overall 'quality' of out-patient clinic organisation is a moot point and an argument will be developed which extends the normal statistical approaches to quality measurement.

Total Quality Management in the National Health Service

Attempts to import classic precepts of TQM into a service sector such as the NHS may be fraught with difficulty. For example, in the commercial world, it is normally not difficult to discern the 'purchaser' of a product or service but the same is not true in the modern NHS. Whilst the 'consumer' of an operation might be a patient, the actual 'purchaser' of that hospital service could be the patient, his or her relatives, the local community, an insurance company, the local District Health Authority, a purchasing consortium, a charitable concern and so on. The terms 'consumer' and 'purchaser' are sometimes used interchangeably in the TQM literature. However, making 'quality measurements' may be problematic in the light of the 'consumer'/'purchaser' dichotomy as what is regarded as a quality outcome for the actual consumer of a service may be to the financial disadvantage of the purchaser. Øvretveit reinforces the point that TQM methods have failed to take into account the differences between public healthcare and other commercial services.¹

There may, in addition, be a very indeterminate relationship between processes and outcomes, as recognised by both Øvretveit² and the Audit Commission³. It is quite possible that adherence to the best available 'process' leads to a poor 'outcome' (the patient dies!) and even the reverse (despite poor treatment, the patient improves!). At best, we might hope that there is some type of relationship between a higher quality of process and a higher quality of output in the long run. It is dangerous to assume, however, that the relationship is a mechanical one or even a very direct one.

The Leicester Case Study

In Autumn, 1991, Leicester General Hospital conducted a pilot study to determine a benchmark for waiting times in outpatient clinics. A statistical monitoring and quality improvement programme was then introduced and the results were measured monthly. By March, 1992, the percentage of patients seen within 30 minutes had risen from **47.7%** ($n=220$) to **82.8%** ($n=291$).

Both the methodology and findings have been more fully reported elsewhere^{4,5}. Some of the improvements are due directly to the statistical monitoring itself e.g. better information on the amount of consultation time with 'New' rather than 'Continuing' patients enabled managers and clinicians to better schedule appointments. But the major impact upon the improvements noted came from the fact that managements and clinicians, armed with the monthly statistical monitoring reports, worked collaboratively to instigate better clinic procedures in order to meet the '*Patient's Charter*' standards.

Has 'Quality' been improved?

It is undoubtedly true that both Hospital Managements in particular and the Government in general could point to statistics such as these and claim that real improvements have been generated in the system. There is, however, the evident danger of confusing the measure itself with the nature of the reality it purports to describe. It is quite possible, and indeed even probable, that real improvements have been effected in outpatient care. Patients may be more 'satisfied' as one of the well-documented sources of dissatisfaction - long waiting times - has been all but removed, the median waiting time now being of the order of 15 minutes. However, it is logically possible that the overall quality of patient care has diminished. Consultants could be 'rushing' through their appointments and giving less careful consideration to their patients in order to adhere to the 'quality' standards. The mere act of being observed can itself alter consultant behaviour (the well-known 'Hawthorne' effect). There is always the danger that strategies could be evolved to give the appearance of good quality care whilst actually delivering the reverse (e.g. a consultant could re-arrange many of the appointments when he knew he was being monitored in order that the reduced number of patients can be

seen with the minimum of delay.) Hospital managements themselves could succumb to the temptation to report only favourable results or to develop selective amnesia when it came to monitoring those clinics whose results could prejudice any improvements in the average. Faced with this dilemma, it is necessary to evolve more sensitive techniques of quality measurements than those derived from conventional statistical measures.

Ecological validity

The term '*ecological validity*' has been used by Bracht and Glass⁶ to refer to one particular sub-type of external validity (the other being population validity or the ability to generalise from samples to populations). The term is used to refer to the level of generalisability of a concept or indicator once it has been removed from the 'naturalistic' setting in which it was located. In particular, it is important that the level of abstraction does not destroy the 'integrity of the phenomenon' i.e. it is important that measurement systems retain a deep level of congruence with the settings which are being investigated.

To define ecological validity as a subset of external validity seems unduly restrictive and it is proposed to redefine the concept of ecological validity in the following way. In so doing, it is important to recognise that the nature of the phenomenon under investigation may be fundamentally misrepresented if abstracted too far from the conditions under which it arises. A prosaic example would be that a scientific study of a 'bluebell', however experimentally exact, would be incomplete without a study of the ecological niche (including relevant factors such as relationships to other plants and organisms, amount of light and shade etc.) in which the bluebell flourishes.

In the context of the discussion of quality, I would argue that ecological validity is only preserved if investigators take into account the conceptions of 'quality' that are carried round in the heads of the participants. To study 'quality processes' at work in a clinic, one needs to observe not only processes and outcomes within a clinic but also the perceptions of the nature of the interactions in the minds of the participants themselves. What is being suggested here is *not* as simple as the administration of patient satisfaction surveys. Rather, it is important to derive a matrix of measures which collectively can give a fuller and more rounded picture of the processes at work than can be conveyed by a global statistic such as an average waiting time.

One way to develop such an 'ecological' approach to quality would be to tap into the expectations of the actors in the situation. Factors structuring such expectations are likely to be time (reference to past, similar experiences), reference groups (knowledge of how relevant others have been treated) and some concept of an ideal standard (how one would like to be treated, in an 'ideal' world). We could then gather the views of various key participants (patients, clinical staff, clinic management staff, observers) and record their observations in a matrix structure. In this way, it may be possible to

build a model of quality in which the situation as perceived by the 'key players' is allied to the traditional methods of analysis which may make use of statistical monitoring.

The marriage of traditional and statistical approaches to TQM

One difficulty which presents itself straight away is that the 'consumers' of a service are not in a position to evaluate the quality of the service that they have experienced. It is possible that certain 'domestic' arrangements (provision of comfortable and restful seating arrangements, current reading matter, nature of interactions with clinic management staff) may be evaluated as more important than the nature of the treatment processes themselves.

There is some circumstantial evidence quoted in the literature which suggests that policy makers may be tempted to measure the measurable rather than the significant. In the context of waiting times, it could well be that even long waiting times are not considered irksome if the patient feels reassured by the outcome of the consultation.⁷

There are also particular difficulties associated with the nature of the client group. Patients attending outpatients clinic are more likely than not to be elderly and in an anxious frame of mind before their actual consultation. To try and gather data after a consultation is not an easy task either, as patients are eager to return home and not to be troubled by 'quality researchers'.

The nature of the political process is such that government ministers and policy makers often lay down overly simplified statistical outcomes that may at best be irrelevant or at worst positively harmful to the processes that they purport to measure. The role of the statistical consultant is therefore to help to educate policy makers and their political masters to the effect that unsophisticated measurement systems may be worse than no measurement systems at all. The approach to TQM advocated here may give more rounded, if more subtle and therefore more complex, measures by which the quality of our public services may be evaluated.

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