A quality management intervention to improve clinical laboratory use in acute myocardial infarction

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To the Editor: The failure of total quality management (TQM) improvement strategies to be maintained after a 15-month intervention is disturbing,1 and suggests that ownership of the improvement program by hospital staff was not achieved. This is a quite common result of imposed top-down “improvements” on reluctant staff, although other causes are also possible.

It would be interesting to know what staff turnover has occurred in the Coronary Care Unit of Bankstown-Lidcombe Hospital in the three years since Issoud’s experiment in TQM. It would also be interesting to know if anyone was responsible for the apparently petty task of obtaining and supplying the pre-stamped pathology request forms, or were they simply provided by the experimenter himself, with no arrangements for continuity?

My experience over some years in manufacturing industry—was that overlooked gaps in procedures or failure to provide adequate training to new staff was more often the cause of apparent reversion to past practices than deliberate recidivism or sheer laziness. There is no doubt that “ownership” of the experiment is essential; TQM cannot be simply imposed top-down but must win the hearts and minds of the staff. Also, failure to acquaint staff of the gains achieved and the overall success of a project can have negative consequences, such as shown here.

Finally, was there no feedback loop established to ensure corrective action was part of the process? In a nutshell, what I am asking is whether there was adequate communication and sufficient engineering built into this most interesting and initially successful project to ensure its ongoing success after its “champion” had left the scene.

As a final comment, it is refreshing to see that Issoud was prepared to identify this negative longer-term outcome of his study. All too often this sort of information is hidden from view because it spoils the story, whether in manufacturing, in healthcare, or indeed in other human endeavours. Learning from what has gone before is the key to achieving another goal of quality management—the continuing improvement of processes and procedures.


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To the Editor: The article by Issoud1 and the accompanying editorial2 would suggest that the introduction of a total quality management (TQM) approach has improved the appropriateness of testing ordered in acute myocardial infarction. However, this is not so on closer scrutiny of the data presented.

Firstly, it appears that at least a third of tests ordered are for sodium, potassium, chloride and creatinine. It is among the numbers of these tests ordered where the greatest change has occurred during the period of the TQM intervention. Removal of the sodium, potassium, chloride and creatinine tests from the equation leaves the data looking much less impressive. Instead of a ratio of requested to indicated tests of 77.5% (pre-TQM) to 88.2% (TQM intervention period), after removal of the above tests the figures are 88.1% increasing to 91.3%, respectively, a mere three percentage point increase (possibly insignificant).

Secondly, of greater concern, the ratio of requested to indicated ordering of cholesterol and triglyceride tests fell from 95% (pre-TQM) to 86.6% (TQM intervention), a significant decrease (P<0.01). It seems that while the TQM team was concentrating on the number of day-to-day tests (sodium, potassium, chloride and creatinine), a test of more longer term impact fell significantly by nine percentage points. This outcome does not reflect well on quality management intervention as presented.

Moreover, the reduction in rate of ordering of tests that were not indicated in the experimental hospital is less impressive when allowance is made for the rate of ordering of inappropriate tests, which had started at a much higher level than in the control hospital.

Finally, the changes were achieved as follows: “Medical staff...were issued with pre-stamped pathology request forms.” Surely there must be a better way to educate medical staff in appropriate test ordering than by issuing them with pre-stamped request forms?


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To the Editor: Issoud’s article on the improvement in the rates of “appropriate” clinical laboratory tests for acute myocardial infarction (AMI) after the institution of total quality management methods is certainly thought-provoking. However, Issoud neglects to discuss a methodological issue central to the validity of his results—that of the masked assessment of outcome. In the Methods section of the article, test indication was determined in two ways: by comparison to a listing “in the AMI practice guidelines devised by the team” or, “if the tests were found to be justified”, by a medical records review carried out by one of the study’s hospital medical officers.

The second of these two procedures is open to substantial bias, because the records review was conducted by a member of the study team. Given the nature of the intervention, team members were directly involved with the process of improvement. In fact, Issoud maintains that “clinicians in