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PERSONAL VIEW

Seeking quality: some experiences in South Africa

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ABSTRACT

Although definitions of quality in healthcare may vary, it is accepted that there are standards towards which we should be aiming. Thus quality improvement is an important part of developing rural health services. At the same time rural settings provide unique challenges to this process. The quality improvement cycle provides a tool to assist rural practitioners wishing to work towards better quality health care. The cycle starts with identifying the problems that need to be addressed and thereafter forming a team to deal with the issues identified. The team together sets standards, which provide targets appropriate to the context and towards which the service should aim. They then gather data to assess how the healthcare service is currently performing in terms of those standards. On the basis of this information, an analysis is made of the problems and their causes, which then allows the team to develop a specific plan to address the important limiting factors in the context. Implementation of the plan continues on an ongoing basis, repeating the steps as needed, with evaluation occurring as part of each cycle to assess whether quality is indeed improving. The process is described as a cycle because it needs to be ongoing, in various ways, as part of continuous quality improvement. Examples of each of the stages of the cycle are given from the South African context as illustrations of the tasks inherent in quality improvement.

Key words: evaluation.quality cycle, quality improvement, South Africa, standards.

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Introduction

Quality in healthcare has received increasing attention in recent years[1,2] . Is quality an absolute concept? Many would argue that it is: a Volvo is a Volvo is a Volvo. That may be true, but is that quality appropriate, for example in rural South Africa or in the Australian outback? Personally, I believe that in terms of healthcare, the question is probably irrelevant.

Why? Perfection in healthcare is impossible. Error-free provision of medical care does not exist[3], and those who think it does are deluding themselves with false notions of god-like infallibility. If perfection does not exist, there is no reason to focus on mythical absolute quality standards.

Does that mean that quality does not matter? Of course not! If I need to use a 4-wheel-drive vehicle to get around the bush, I want one that is the best and most appropriate for that context. I do not mind what it looks like because it will be dirty within a few kilometres in any case, but it must not break down on me in spite of going through the most rugged conditions. Thus quality is relative to the needs and the context. The danger of course is that we have end up with first-rate, second-rate and third-rate health services – like we have the so-called first, second and third worlds. However, I believe the issue is one of appropriate excellence.

The most important thing is to work for a constant process of seeking to improve quality in healthcare. Thus the absolute standards are less relevant than the relative improvement that one should be striving for constantly[4] . That is what quality improvement is all about. This is possible anywhere, no matter what the context. We should thus never accept the provision of sub-standard care wherever we are, and always take pride in providing that care a little better today than we did yesterday.

What is quality improvement?

Quality is difficult to define although we all have an idea about what it means. We understand it to be about the goodness and value of something. In terms of health care, Black[5] describes four dimensions of quality, viz. effectiveness, equity, humanity and efficiency. Quality improvement then can be described as assessing the current level of performance in healthcare and efforts to improve the provision of that care[6].

How do we go about this? Many doctors working in rural hospitals and health services struggle with the lack of quality of care that they experience and are often a part of. Coombs[7] describes particular challenges in rural settings for improving quality. These include access to care for rural communities; lack of integration of services between rural and urban areas; lack of information management and system support; paucity of evidence-based guidelines which take into account the special challenges of rural settings; and failure of accreditation bodies to acknowledge the different needs of rural provides and institutions.

The quality improvement cycle, described below, is one useful tool in working toward improved quality.

The context

Let me sketch something of the context of healthcare in rural South Africa as a background to further discussion on quality improvement. The vast majority of the country's 42 million people are cared for by the public health service, which is where the minority of doctors are working. This is even more true in rural areas. The doctor to population ratio is as low as 1:7692 in some provinces on average[8], figures for rural areas within those provinces are much lower.

Healthcare for rural people is thus mainly provided by district, community hospitals and health centres as part of the public health service. The brunt of primary healthcare is borne by nurse practitioners. Together with these nurse practitioners, generalist doctors offer a full range of primary and secondary care, with a major focus on maternal and

child health. Usually they carry far greater responsibilities for far more people with far fewer resources than their counterparts in developed countries.

The huge burden of development needs amongst the poor in South Africa, after years of systematic exclusion and disadvantage under apartheid, is such that financial resources are limited. The lack of resources together with the lucrative possibilities in urban, private enterprise has led to a reality of inadequately trained and poorly motivated bureaucracies and poor morale amongst healthcare staff. There is thus a desperate need for better quality of care.

In the midst of all this there are many signs of hope. One such sign is some of the initiatives I have seen in rural areas around our country in relation to quality improvement. Many of the family medicine departments in our country, which run the family medicine or general practice training programs, now require their registrars to engage in quality improvement exercises, which have produced some exciting results. A number of nurse practitioner programs are also adopting this. In some faculties, where undergraduate medical students are sent out on clinical attachments to rural hospitals and clinics, they are required to complete such a quality improvement project during their attachment.

The quality improvement cycle

Classically, the quality improvement process involves the following elements:

1. Identify an issue/problem
2. Form a team
3. Set standards
4. Gather data
5. Assess current practice
6. Develop and implement a plan
7. Evaluate

It is described as a cycle because one re-enters the process at the appropriate point after the evaluation. (There are various other formulations of this cycle, such as the clinical effectiveness cycle[9] and the plan-do-study-act cycle[4]). I will now illustrate each of the elements of the cycle with examples from my experience.

Identify an issue: This process is not as easy as it may seem. It is not simply a matter of noticing a problem, but going further and seeking to identify the key issues within the problem, or which contribute to the problem. If one fails to get this right, the solutions will be the wrong ones.

A simple example illustrates this. Manguzi Hospital, where I used to work, supported 9 primary healthcare clinics run by nurses and visited weekly by doctors. They ordered their medications according to an essential drugs list, and received their supplies from the hospital pharmacy once per month. Visiting the clinics, doctors identified a problem of shortages of drugs. Obviously the nurses were not ordering enough we decided. No, the clinic nurses said, they do not get supplied enough. Sure enough, checking the records showed the pharmacy always cut down on the numbers supplied. The problem said the pharmacy staff, is that the clinics always order too much – more than they use – so we cut it down; we would exhaust our stocks if we gave the full amount. Back to the clinics: why do you order so much? Because the order has to last a whole month and we never know what crisis might happen, like a lack of transport, and we know they will cut down on our order, so we try to get more. And so we went round in this circle. Ultimately the problem came down to the frequency of ordering, the insecurity of nurses that they would actually get what they needed and lack of communication between the clinics and the pharmacy. We had to deal with all of these, not just one of them; in other words the issue was broader than we first thought.

Form a team: Quality improvement must be a team effort. You cannot do it alone unless you work for yourself with no support staff – but even then you have patients in your practice who can be part of the team. It is debatable which should come first: ideally the team should be part of identifying the problem, but the team you form should be related to the issue you want to tackle. So often they go hand in hand: the broad problem is identified, a team is formed,

and then the key issues are identified and refined by the team.

To be effective in a team you need to be a team player, not the solo long distance runner. Teams are wrecked by people with their own personal agendas that they want to see dealt with at all costs. This is something we as doctors often find difficult. In one nursing education project I was involved with, we were seeking to improve the quality of education of the nursing staff. Part of that was getting them into the community. I felt a caravan was a great idea for getting students out to remote clinics, and persuaded the whole team to agree, though I think they thought I was mad – the team was not wrecked, but they were proved right, because 10 years down the road the caravan has never been used, at least not for that purpose.

At the same time the individual's agenda must be heard, otherwise team members will feel ignored and thus become disloyal to the team. In the same project a nurse educator was convinced a manikin was needed to teach bed making, turning of patients etc; I felt that there were enough real patients around who could be used, but I realised that if she did not get the manikin her heart was set on, she would lose interest in the whole project. We bought a manikin, and it has been used much more than my caravan!

Patients, or clients, are an important part of teams – the focus of quality improvement is, after all, better healthcare for patients. In a project where we wanted to improve the quality of care in our outpatients department (OPD), we were ready to restructure things to ensure that continuity of care, which I passionately believe in, would be maintained, even if this meant a slightly longer wait. The patient representatives made it clear that decreasing the waiting time was much more important to them than continuity of care – they said patients would rather see a different doctor more quickly than wait for the same one. A subsequent survey proved them to be right.

Set standards: Standards set down what one is aiming towards – not perfection, but appropriate targets for the context. It is not a matter of simply inventing a set of standards as a team, but rather of looking at the available literature to ascertain what standards already exist that have been implemented and evaluated in similar contexts elsewhere. These can then be adapted to the particular context. In some instances, there is no objective evidence of what standards are appropriate, or no literature on the topic, and the team will have to define its own standards by extrapolation or inductive reasoning.

We identified a problem of anaemia in antenatal patients at Manguzi. This was due to a high prevalence of parasites - intestinal worms and urinary schistosomiasis. Iron supplementation was not making any difference. The literature told us that albendazole and praziquantel were not known to be safe in pregnancy. However, the potential negative consequences of anaemia are devastating, and the recommendations in the literature indicated that many of our patients had dangerous levels of haemoglobin for safe deliveries, haemorrhage being the commonest cause of maternal death. Laboratory facilities were badly stretched, and the majority of women attended antenatal care in clinics where it was difficult to get lab investigations. Thus we agreed on our own standard: every woman attending antenatal clinic would get albendazole and praziquantel during the second trimester of pregnancy. This standard was met and substantially reduced the amount of anaemia and the number of complications.

Gather data: This involves finding out what is going on at present, in order to measure present practice against the standards that have been set. How data is gathered will vary according to the topic that is chosen. Any of the well-known research methods may be used, whether quantitative or qualitative or a combination.

At Manguzi hospital we identified over-prescribing in the OPD as a problem. The standards we set included the following, with our targets:

- 80% of patients should have less than 3 items prescribed

- 95% of prescriptions should be generic
- 100% of patients should understand how their medication should be taken

In order to find out what was happening at that moment in the OPD, we used visiting medical students to interview each patient leaving the dispensary over 1 week, and to record every prescription that was issued. These results showed us that:

- 60% of patients had 3 or more items prescribed
- Only 20% of prescriptions were generic
- About 15% of patients had a full understanding of the way to take their medication, with the degree of understanding being inversely proportional to the number of items.

We were shocked! But it showed us where to start.

Assess current practice: The team analyses the data that has been gathered and compares it to the standards that have been set, in order to ascertain the gap between current practice and the desired outcomes. Often it is difficult to understand why there is the gap between reality and ideals, and problem-analysis techniques are needed in order to analyse clearly what the reasons are. Such techniques include brainstorming, fish-bone analysis, tree diagrams, and others. (For more information on these, go to http://www.qaproject.org)

In the example of prescribing, we assumed that the nurse practitioners were the biggest culprits, because of lack of training, but further analysis showed this was not true. In any case, the nurses tended to follow the example of the doctors.

One project done by medical students in a health centre looked at the number of Pap smears amongst women attending the antenatal clinic. Very few had results recorded, despite the fact that it was supposedly routine to take a Pap smear. The obvious answer seemed to be that they were simply not being done. This was partly true. But also, as they analysed this, the following additional problems were found:

- The clerks did not check through the results so many that were done were simply not recorded in the patients' files.
- The nurses doing the Pap smears often did not record these in the register so there was no proof for follow up.
- The transport often did not arrive at the proper times to collect the smears and slides got lost in the meanwhile.
- The smears were not recorded on arrival in the lab at the district hospital so they could not be traced there.
- Many of the lab forms were not completed correctly so the lab did not know which clinic they came from.
- The district hospital sent the smears on to the teaching hospital for cytological analysis, with more opportunities for loss. Sometimes they were not clearly marked as to which hospital they came from.
- When the district lab sent out the results to the clinic they did not keep a copy so if the report was lost, they could not provide a duplicate
- Finally, the results were given arbitrarily to anyone visiting the clinic and could easily be mislaid.

In the end, it was a miracle when any patients actually got their Pap smear result! As a result of all this, the nurses became demoralised and thought it was no use doing Pap smears.

Develop and implement a plan: Here the team sets down what needs to happen in order to move towards the standards set and then seeks to make it happen. If the gap between the standards and the reality is wide, it is not realistic to try to achieve the set standards in a single cycle; it is better to aim for an incremental improvement in quality, making a plan that has a reasonable chance of success. Thus the team sets specific objectives, or performance targets, for themselves, with a practical action plan linked to each objective, and proceeds to implement them. (Grol[10] provides a useful model for implementing changes.)

Here follow the plans of two very simple projects implemented by final year medical students. One group found that the NGO clinic they were in did not have an adequate waste disposal system. Their standard was safe disposal of all hazardous material from the clinic. The district hospital was no longer collecting waste from the clinic, because they are not a government clinic, and in any case there were problems with the hospital's own disposal system. The two students, with the support of the nurse-manager of the clinic, phoned a number of waste disposal companies, got them to visit and make a quote on site for their services (this was important because it was a rural clinic), and ultimately facilitated the signing of a contract with one company - all this in an area where there had never been such an involvement of private enterprise before.

Coincidentally, two students in a government clinic, meeting with the local staff, identified the gloomy atmosphere of the clinic with its peeling walls as a problem. There was no budget for painting – neither for paint nor for labour. One student managed to get paint donated through a friend of her father. How would the painting be done? They discovered there was a local project for unemployed youth which included skills training. Linking with this project, they got the youth to paint the clinic with the donated paint. Apart from the boost to the clinic staff and to the local youth involved, imagine the sense of achievement and pride the students felt. I am sure they are sold on the concept of quality improvement; nothing breeds success more than success.

Evaluate: The team needs to review whether there has been any improvement in the quality of the aspect of healthcare being addressed. In order to do that, a new set of data needs to be gathered, and compared both to the previous data as well as to the set standards. On the basis of this further plans are made and implemented, and the cycle continues.

Taung District Hospital realised that they needed a different approach in the management of their TB patients. They decided to use the biopsychosocial assessment as a tool for a holistic, patient-centred approach. They introduced training for nurses and doctors in this approach, and developed guidelines for patient-centred care in the context of their TB patients. On evaluating this they found the following regarding their patients (Dr Tanka Bulajic. Pers. comm.):

- they feel they are taken into full consideration
- they understand properly what is going on with them and what is planned
- they are part of the management plans
- they see the family member/s becoming part of the health team as supporter/s

Continuation

One last issue is important with regard to quality improvement. It is a cycle: it continues. This means it continues in a number of ways:

- There is continuous improvement in terms of the issue or problem being addressed
- Teams can continue to tackle other problems together
- Team members can form new teams to tackle other problems
- Successes are communicated to the rest of the heathcare team so that they are also encouraged to be involved in quality improvement.

In Taung District Hospital, mentioned above, at one stage there were eight separate functional teams working on quality improvement in different areas of their healthcare service (Dr Lino di Mattia. Pers. comm.).

Conclusion

I hope this has provided some practical ideas from a South African context to inspire rural health workers wherever they may be working to try out the quality improvement process. Starting to implement ideas such as these can lead us on a continuous journey towards quality. It will be good to hear about some of these through this journal in the future.

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