Quality in Primary Care 2014;22:133–8

Quality improvement science

Individual practice and how to improve it

A Niroshan Siriwardena MMedSci PhD FRCGP
Professor of Primary and Prehospital Health Care, Community and Health Research Unit (CaHRU), University of Lincoln, UK

Steve Gillam MD FFPH FRCP FRCGP
Department of Public Health and Primary Care, Institute of Public Health, University of Cambridge, UK

ABSTRACT

Individual practice needs to be developed to improve effectiveness, safety and patient experience. Although good systems can support better individual performance, without personal development, individual practice can be a source of error. This, the final article in our series on the science of quality improvement, describes models of competence and practice and the causes of good or poor practice. We show how quality improvement techniques can be used to improve individual practice and how this can be incorporated into the appraisal process for doctors, nurses and other healthcare professionals.

Keywords: appraisal, general practice, performance, primary care, quality improvement, revalidation

Introduction

For many healthcare practitioners, it is their individual practice involving face-to-face contact with patients that is the main focus of their work. They are primarily concerned with how to improve the care they provide at a personal level.

In previous articles, we have considered how quality improvement efforts at a wider macro- (multi-organisational), meso- (organisational) and clinical micro-system affect individual practice, but in this article, we focus on how practitioners can personally improve the care that they provide.

Although systems can be designed to improve quality and safety, a disproportionately large number of errors and failures have been shown to be attributable to a small minority of healthcare workers, an example of the Pareto principle.[1]

From knowledge to practice

Improvement at an individual level is essentially based on learning, but this is not simply about acquiring knowledge. It also implies an ability to demonstrate the knowledge through the skill of applying it in practice and then the attitudes that lead to these skills being used consistently in day-to-day practice. This progression, from knowledge to its application and from demonstration of competence to performance, is neatly captured in Miller's pyramid (Figure 1).[2]

The scope of individual practice

The scope and nature of clinical practice is neatly summarised by Norfolk's 'RDM-p' model, which incorporates relationship, diagnostics, management and professionalism (Figure 2).[3]

Relationships with patients, relatives and carers, professionals and even members of the public are central to clinical work and depend on good communication skills, and other attributes such as empathy, which leads to trust.

'Diagnostics' refers to gathering, interpreting and prioritising information to decision making, which includes the clinical diagnostic process, but also more widely to decisions we make in day-to-day practice. Management is primarily about how we effectively tackle work processes from the cognitive processes that help us make decisions accurately and safely to scheduled tasks such as prescriptions, tests results and correspondence accurately, and from conducting a consultation efficiently to dealing with multiple

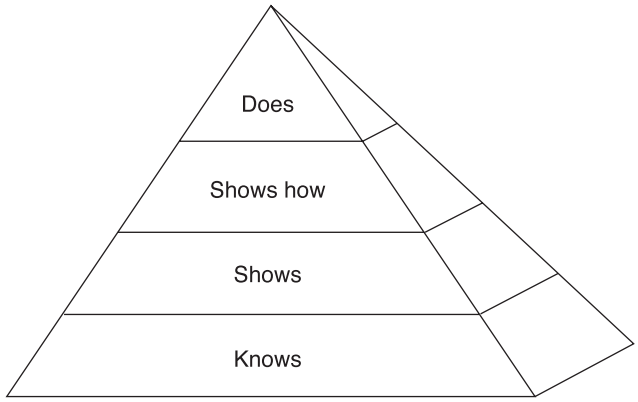

Figure 1 Miller's pyramid

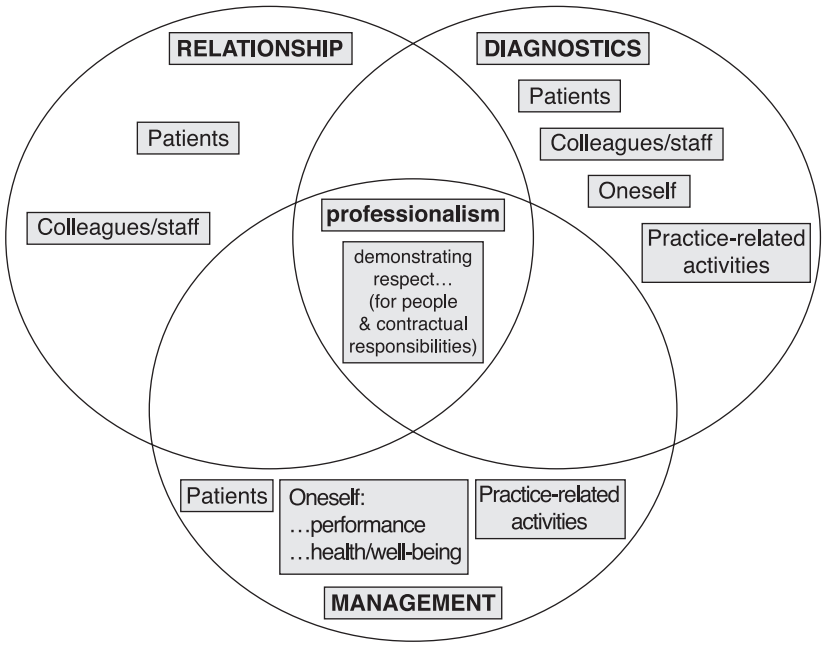

Figure 2 Relationship, Diagnostics, Management – professionalism (RDM-p). © Tim Norfolk[3]

(sometimes conflicting) priorities effectively. Management is also about monitoring ourselves effectively, maintaining both our performance and our health.

Finally, professionalism is the glue that binds relationships, diagnostics and management together. It defines our commitment to best practice, with an emphasis on showing respect for people, acting responsibly and demonstrating ethical and moral behaviour.

The causes of poor practice

The RDM-p model identifies the nature of clinical practice and where potential strengths or difficulties may arise, whereas the causes of good (or poor) practice are described in a further model developed by Norfolk through painstaking analysis of medical underperformance: the SKIPE model (skills, knowledge, internal, past and external factors).[4]

In the SKIPE model (Figure 3), skills and knowledge form the bedrock of competence, but their application can be affected by internal factors such as attitudes, personality and health, or external factors such as the work or non-work environment.

Improvement implies that we assess our strengths and weaknesses in a systematic way. These models enable us to consider our strengths and weaknesses more broadly and thus to build on our strengths and address our weaknesses.

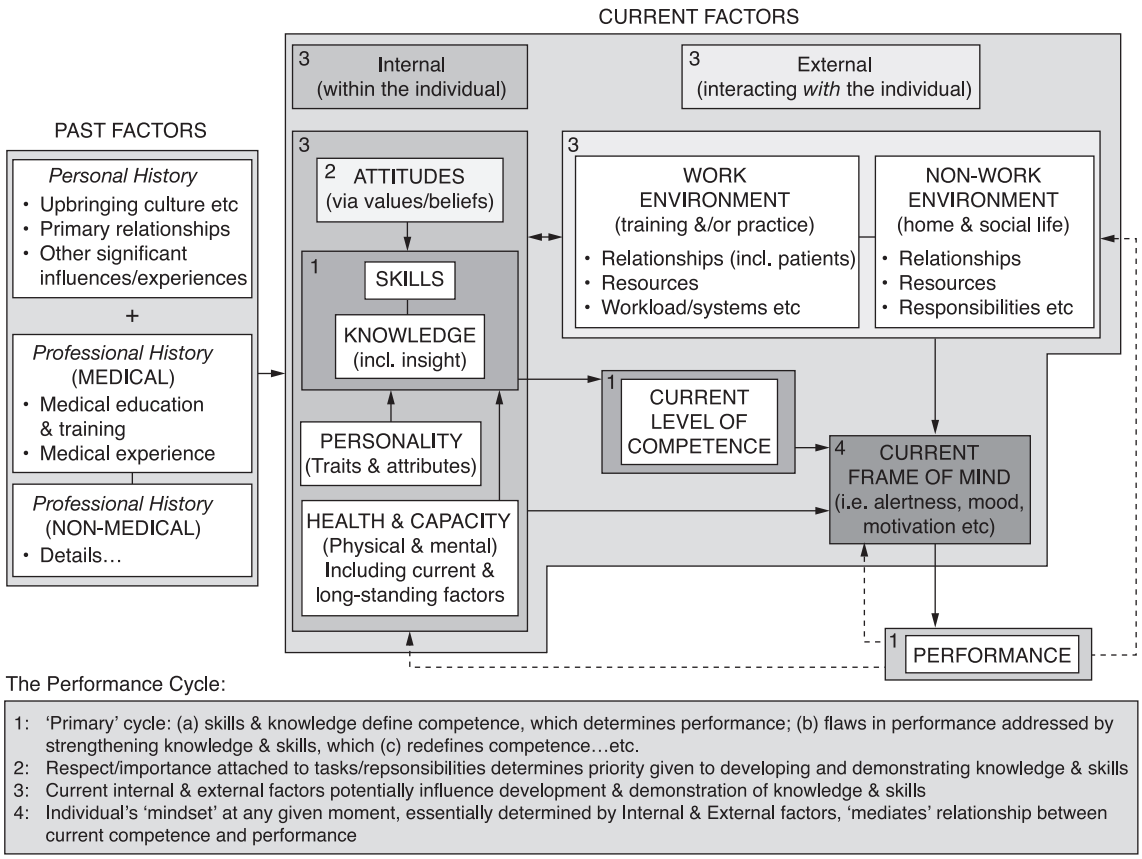

Figure 3 SKIPE model of causal factors potentially influencing medical performance. © Tim Norfolk[4]

Box 1 Aims of appraisal

The aims of appraisal are to:

- set out personal and professional development needs and agree plans for these to be met
- review regularly an individual's work and performance, using relevant and appropriate comparative operational data from local, regional and national sources
- consider the individual's contribution to the quality and improvement of services delivered locally
- optimise the use of skills and resources to achieve the delivery of general and personal medical services
- identify the resources needed to meet service objectives in the agreed job plan
- discuss and seek support for an individual's participation in activities for the wider NHS
- utilise the annual appraisal process and associated documentation to meet professional registration requirements, e.g. for GMC/NMC revalidation.

Appraisal and revalidation

Currently, the main focus for doctors thinking strategically about their own learning needs is through periodic, formalised appraisal. Appraisal is a process for constructive dialogue in which the health professional being appraised has a formal structured opportunity to reflect on his or her work and to consider how his or her effectiveness might be improved. It is an opportunity to give feedback on past performance, to chart continuing progress and to identify future development needs. The primary aim of appraisal is to help health professionals consolidate and improve on good performance. In doing so, it helps to identify areas where further development may be necessary or useful. It can help to identify problems of performance at an early stage; and also to recognise factors which may have led to poor performance, such as ill health (Box 1).

Appraisal underpins continuing professional development (CPD) and provides doctors and nurses with an opportunity to demonstrate the evidence required for revalidation. While appraisal is formative, revalidation is a summative process. Revalidation involves a judgement as to whether a doctor is fit to practise and

should remain on the medical register. The revalidation process informs the General Medical Council's (GMC) decision on whether to renew an individual's registration and this currently occurs every five years. The Nursing and Midwifery Council (NMC) is currently consulting on the corresponding processes for nurses.

How appraisal works

Appraisal is personal; its purpose is to support individual development.[5] The process should be developmental, rigorously conducted and well informed. That means adequate preparation time, both by appraiser and appraisee.[6] Its prime focus is on how patient care can be improved.

The content of medical appraisal was originally based on the core domains set out in the GMC's 'Good Medical Practice' document together with consideration of the doctor's contribution to meeting local patient needs (Box 2).

Being appraised – the process

Appraisees need to consider their priorities, reflect on practice over the previous year, choose appropriate tools/portfolios to help this review, and prepare a submission for the appraiser. At interview, progress is charted beginning with a review of last year's personal development plan (PDP). Personal learning needs are identified and an outline learning plan is generated. The appraiser should provide feedback that is honest, sensitive and encouraging.

Prompts to reflection include reviews of significant event logs, audits, complaints, case reviews, prescribing or other activity data. More personalised insights into the way you practice can stem from multidisciplinary peer review (multisource or '360 degree' feedback). Health professionals are strongly encouraged to measure their patients' satisfaction using validated questionnaires.

The key points of the discussion and outcome must be fully documented. Appraiser and appraisee must complete and sign the appraisal summary statement and send a copy, in confidence, to the relevant responsible officer. Electronic portfolios greatly facilitate this process. All records must be held on a secure basis compliant with the requirements of the Data Protection Act. If it becomes apparent, during the appraisal process, that there is a potentially serious performance issue which requires further action, the appraiser must refer the matter immediately to the senior appraiser/responsible officer. This may culminate in referral to other sources of support.

Box 2 General Medical Council core headings

- Good clinical care
- Maintaining good medical practice
- Relationships with patients
- Working with colleagues
- Teaching and training
- Probity
- Management activity
- Research
- Health

Improving individual performance

In previous articles, we have described how performance can be improved at organisational or multiorganisational levels using quality improvement and change management techniques and skills.[7–12] Quality improvement projects can also be effectively used to improve individual performance and can be used as part of the appraisal process (Box 3).[13]

The models described above enable us to assess individual practice, identify and address problems, and improve individual practice through the use of quality improvement techniques, which can provide evidence for appraisal and revalidation. An example of a quality improvement project is shown in Box 4.

Conclusion

In this series of articles, we have attempted to provide readers with an introduction and primer to the science of quality improvement and implementation.[14] We have included articles on quality improvement tools and techniques, the foundations of which are improvement frameworks and models,[7] which led to a discussion of processes, their measurement,[15] managing change through leadership,[12] spreading improvement using the features of healthcare systems,[16] and evaluating improvement initiatives.[17]

We have also examined the fundamental importance of patient perspectives on quality,[10] and also contextual levers for improvement such as commissioning[18] and regulation.[19]

Finally, we have examined evidence-based healthcare, addressing gaps in translation of evidence into practice and, in this article, how to apply improvement science to personal improvement.

Quality improvement, safety and implementation science are rapidly becoming essential knowledge for healthcare staff in medicine, nursing and allied health professions. We hope this series of articles has provided an introduction and whetted your appetite to learn more.

Box 3 Quality improvement projects

Description of a quality improvement programme (QIP) should include:

- title of the QIP
- reason for the choice of topic and statement of the problem
- process under consideration (process mapping)
- priorities for improvement and the measurements adopted
- techniques used to improve the processes
- baseline data collection, analysis and presentation
- quality improvement objectives
- intervention and the maintenance of successful changes
- quality improvement achieved and reflections on the process in terms of:
  - knowledge skills and performance
  - safety and quality
  - communication, partnership and teamwork
  - maintaining trust.

Box 4 Example of an individual quality improvement project

Title: Improving individual referral letter accuracy, timeliness and completion
Date completed: 1 May 2010

Description: A quality improvement project focusing on improving the accuracy, timeliness and completion of specialist referral letters.

Reason for the choice of topic and statement of the problem: The project was triggered by a significant event involving a delayed referral letter for a patient. Fortunately, the patient did not come to any harm but it became apparent to me that my processes for completing referral letters needed to be safe, effective and efficient and there was no room for error or delay.

Process under consideration (process mapping): Current processes for referral letters were reviewed. This involved producing a list of referrals when they were indicated; dictating the letter on a tape after each surgery or dictating the letter directly to a secretary if the doctor was available and particularly for urgent letters; leaving the tape for the secretary to type and initiating an electronic booking with the specialist unit; and then signing the letter when next in the surgery or sometimes on the same day if an urgent referral was required. There were delays and potential for waste or error in this process, many of which had previously been experienced. For example, dictation machines and tapes or secretaries were not always available, batteries were sometimes missing from machines and tapes were sometimes damaged. Secretaries were not always able to understand what he had said on a tape, either because it was damaged or because technical language was used which they did not understand. If a secretary was on leave or unwell there was a delay in the letter being typed. Inaccuracies in letters had to be corrected necessitating retyping, and leading to further delays. In the worst case, a tape might get lost or recorded over and there was no evidence that a letter had been dictated.

Priorities for improvement and the measurements adopted: The aim of this quality improvement project was to improve the timeliness, accuracy and completion of referral letters. The steps required in the process and the potential for waste or error in the process were measured.

Baseline data collection, analysis and presentation: The baseline analysis was the process map of the steps involved in producing a referral letter and any risks or threats to a letter being sent described above.

Quality improvement objectives: The objective was to reduce the steps required to generate a referral letter and to minimise the potential for waste or error in the process.

Techniques used to improve the process: A process map and two plan–do–study–act (PDSA) cycles were used to improve the process of generating and sending referral letters. This was discussed with the secretaries and administrators. In the first PDSA, referral letters were typed directly onto the computer system after a surgery and the typed letter sent to the secretary as a computerised task (similar to an internal email on the clinical computer system). Letters were retyped on headed notepaper and a referral booking actioned by the secretary.

Box 4 Continued

In the second PDSA, letters were typed while the patient was in the room or just after they had left. This reduced the number of steps further and meant that there was less to remember when generating a letter – sometimes the patient could be asked for salient information to include, prompted by the process of writing the letter.

Intervention and the maintenance of successful changes: The new process of typing referral letters with the patient present or just after they had left the room and sending them directly to the secretary as a computer task was implemented. This system has been maintained with benefits for the patient primarily but also for the doctor, secretaries and administrative staff.

Quality improvement achieved and reflections on the process in terms of knowledge, skills and performance; safety and quality; communication, partnership and teamwork; maintaining trust: This quality improvement project enabled the doctor to refine the process of generating referral letters. Letters are now generated with the patient present or just after the consultation. Patients are pleased that referral letters are sent immediately and when they have an opportunity to be involved in the content of the letter. Secretaries have fewer difficulties interpreting damaged tapes or difficult jargon and are more confident with the new process. The new process saves time, reduces errors and minimises waste or rework (having to do things twice or several times).

ACKNOWLEDGEMENTS

We would like to thank Tim Norfolk for his comments and use of the RDM-p and SKIPE figures.

REFERENCES

1 Bismark MM, Spittal MJ, Gurrin LC, Ward M and Studdert DM. Identification of doctors at risk of recurrent complaints: a national study of healthcare complaints in Australia. *BMJ Quality & Safety* 2013;22:532–40.
2 Miller GE. The assessment of clinical skills/competence/performance. *Academic Medicine* 1990;65:S63–7.
3 Norfolk T and Siriwardena AN. A unifying theory of clinical practice: Relationship, Diagnostics, Management and professionalism (RDM-p). *Quality in Primary Care* 2009;17:37–47.
4 Norfolk T and Siriwardena AN. A comprehensive model for diagnosing the causes of individual medical performance problems: skills, knowledge, internal, past and external factors (SKIPE). *Quality in Primary Care* 2013;21:315–23.
5 Middlemass J and Siriwardena AN. General practitioners, revalidation and appraisal: a cross sectional survey of attitudes, beliefs and concerns in Lincolnshire. *Medical Education* 2003;37:778–85.
6 Chambers R, Wakley G, Field S, Ellis S and Graham D. *Appraisal for the Apprehensive: a guide for doctors*. Radcliffe: Abingdon, 2003.
7 Gillam S and Siriwardena AN. Frameworks for improvement: clinical audit, the plan–do–study–act cycle and significant event audit. *Quality in Primary Care* 2013;21:123–30.
8 Siriwardena AN and Gillam S. Understanding processes and how to improve them. *Quality in Primary Care* 2013;21:179–85.
9 Siriwardena AN and Gillam S. Systems and spread. *Quality in Primary Care* 2014;22:7–10.
10 Siriwardena AN and Gillam S. Patient perspectives on quality. *Quality in Primary Care* 2014;22:11–15.
11 Siriwardena AN and Gillam S. Measuring for improvement. *Quality in Primary Care* 2013;21:293–301.
12 Gillam S and Siriwardena AN. Leadership and management for quality. *Quality in Primary Care* 2013;21:253–9.
13 Siriwardena AN. Quality improvement projects for appraisal and revalidation of general practitioners. *Quality in Primary Care* 2011;19:205–9.
14 Gillam S and Siriwardena AN. A primer for quality improvement in primary care. *Quality in Primary Care* 2013;21:1–4.
15 Siriwardena AN and Gillam S. Understanding processes and how to improve them. *Quality in Primary Care* 2013;21:179–85.
16 Siriwardena AN and Gillam S. Systems and spread. *Quality in Primary Care* 2014;22:7–10.
17 Siriwardena AN and Gillam S. Evaluating improvement. *Quality in Primary Care* 2014;22:63–70.
18 Gillam S and Siriwardena AN. Commissioning for quality improvement. *Quality in Primary Care* 2013;21:339–43.
19 Gillam S and Siriwardena AN. Regulation in primary care. *Quality in Primary Care* 2014;22:57–61.

PEER REVIEW

Commissioned; not externally peer reviewed.

CONFLICTS OF INTEREST

None.

ADDRESS FOR CORRESPONDENCE

Professor A Niroshan Siriwardena, Community and Health Research Unit (CaHRU), Faculty of Health and Social Sciences, University of Lincoln, Brayford Pool, Lincoln LN6 7TS, UK. Email: nsiriwardena@lincoln.ac.uk

Received 14 March 2014
Accepted 24 March 2014