Can care be patient-centred and clinically efficient?

Dr Stephen Schoenbaum argues that designing clinical operations from the perspective of patients needs can save time and money for laboratories, as well as helping to improve patient care

Getting feedback from patients and clinicians can help laboratories ensure they are providing efficient and patient-centred care

Many people think that care and services that are patient-centred or responsive to patient needs are not compatible with efficient operations. I believe that is incorrect and, indeed, quite the contrary is true. If we design clinical operations from the perspective of patient needs, we are more likely to end up with less complex, less costly care.

Most definitions of patient-centred care include several components:

1 Having access to services when needed

2 Being treated with dignity and respect

3 Having information shared in a way that the can be understood

4 Participating in shared-decision making and

5 Receiving care that is coordinated (Gerteis M *et al*, 1993, Davis *et al*, 2005 & WHO, 2004).

The middle three components are primarily about communication between the physician, other clinical staff, and the patient. The first and last are primarily about how care processes are planned and executed.

Those responsible for clinical laboratory services may have only indirect contact with patients. Yet, they can play an important role in assuring that overall patient care is more patient-centred and more efficient by helping design care that is simpler and consists of fewer steps. In addition, they can help assure that the information patients receive about clinical testing and test results is understandable and facilitates shared decision-making.
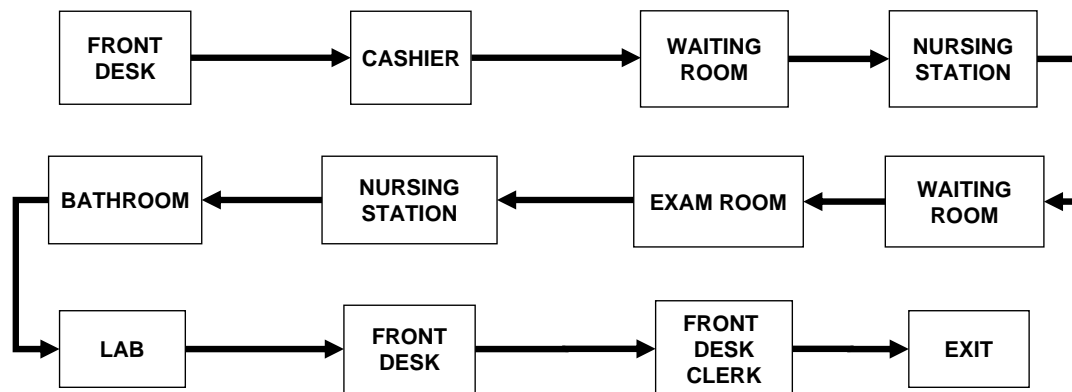
Let me illustrate process simplification with an example that involves patient visits. The Primary Care Development Corporation in New York has run quality improvement collaboratives for clinics to help them improve the care they deliver. One clinic reduced the time it took for a visit from the moment the patient came in to the moment the patient left, from an average of 148 minutes to 50 minutes. (Gordon & Chin, 2004). This involved cutting the number of locations a patient went to after reaching the front desk to reaching the exit from 11 to four (figure one) Instead of the patient having to move from place-to-place in sequence, many of the services were brought directly to the patient.

This simpler care, consisting of fewer steps and faster turn-around or cycle times, was definitely more patient-centred: when a patient can experience the same care in one-third the time, there is less time lost from the person's workday and less care time required. These represent added earnings or savings for the patient, for example, not having to go from location to location within the clinic is less confusing for the patient. This simpler process of care is also beneficial to the clinic. Because patients have a shorter clinical encounter, the clinic is able to increase its through-put with the same number of staff. It is able to handle more patients and overall revenues increase.

Since the clients or customers of the laboratory are both patients and their doctors, it makes sense to think about how to improve the efficiency and effectiveness of care for both. Building off the example just given, it is likely that patients and their doctors would prefer to receive laboratory tests results with as short a turn-around time as possible and would perceive efforts to improve turn-around time as more effective and patient- or client-centred. In a Commonwealth Fund international survey in 2005, 11 percent of adults in the UK who in the past two years had a hospitalisation, an A&E visit, or an active chronic condition, reported that they had been given an incorrect test result or experienced delays in notification about abnormal test

PCDC: Before Redesign
148 Minutes, 11 Steps

FRONT DESK → CASHIER → WAITING ROOM → NURSING STATION

BATHROOM ← NURSING STATION ← EXAM ROOM ← WAITING ROOM

LAB → FRONT DESK → FRONT DESK CLERK → EXIT

PCDC: After Redesign
50 Minutes, 4 Steps

FRONT DESK → CASHIER → WAITING ROOM → EXAM ROOM → EXIT

Source: Pamela Gordon and Matthew Chin, *Achieving a new standard in primary care for low-income populations: case study 1: redesigning the patient visit.* The Commonwealth Fund, August 2004.

Figure one: office redesign can improve patient access to care

results (Schoen *et al*, 2005). In this six-country survey, only adults in Germany reported a lower rate of these experiences (9%), and in the US there was a much higher rate of reporting these experiences (23%). We might ask if it is possible to reduce these problems to virtually zero and what the role of the laboratory would be in making this happen?

The laboratory could play multiple roles: firstly, similar to the Primary Care Development Corporation example, we could explore efforts to improve turn-around time for tests and for more rapid reporting of results. Shortened cycle times might represent an opportunity either for increased revenue or for cutting back on staffing, depending on the financial model applying to the laboratory's operations.

The laboratory can also help to improve communication between the physician and the patient: Several years ago I worked as a doctor and manager in a large group practice. A survey of patients – the starting point for developing patient-centred care – revealed that only about 30% were routinely informed by their doctors about test results. Doctors commonly told patients that they would let them know if the results were abnormal but otherwise the patient could assume the results were normal. Many patients called the practice to find out their test results. Some doctors did routinely send patients a hand-written letter or make a copy of the results and put a note on it.

The group practice owned its own laboratory

and the laboratory director decided he could help the doctors report results back to their patients. The practice had an electronic medical record in which the results were stored. Using the computer's printouts, the laboratory created a duplicate copy of the test results with a mailing label with the patient's address printed on. The doctor only had to write a short explanatory note on the copy and then either the doctor or the practice assistant could affix the mailing label to an envelope. Routine reporting of laboratory results skyrocketed. A major benefit to the practice was realised when the volume of phone calls to the doctors' offices dropped, leaving the office assistants more time for other functions. Assistants began to realise that when a patient did call for test results there often was a problem that needed to be addressed – such as the test having been lost in processing or the result not having been returned correctly to the physician or record. Under the old system, many of these problems would have been missed and, in some instances, would have involved results that were abnormal which might have 'slipped through the cracks', creating a risk of legal liability, not to mention poorer care for the patient.

Laboratories can also help the doctor do what the patient needs and do it the 'right way'. In the same group practice, an audit determined that only 70% of women who had a positive cervical cytology got a follow-up within six months of the test result. It turned out that almost every conceivable

reason for lack of a follow-up was occurring: sometimes the test results didn't get back to the physician. Sometimes the physician made a mistake in reading the results on the report from the laboratory – in short, human error. Sometimes the doctor tried to reach the patient to initiate follow-up (generally not by post), wasn't able to reach the patient, and then failed to continue to make contact. Sometimes the contact was made but the patient didn't follow through with scheduling the next appointment or test or showing up for them.

The group practice, once it recognised this problem, was able to use its electronic medical record to develop an automated 'tickler system'. Each month, if the patient hadn't had a follow-up recorded, the physician was prompted to make sure that follow-up was initiated. That part of the solution did not involve the laboratory; but the laboratory took on the role of helping to ensure that the follow-up was appropriate. A group of doctors determined the appropriate follow-up for each type of abnormal cervical cytology result that the laboratory reported. The laboratory then re-programmed its results-reporting system. When the system reported a specific type of result, it also reminded the physician about the appropriate next step in follow-up of that type of abnormality (Schoenbaum & Gottlieb, 1990 & Murrey *et al*, 1992). Now, not only was the follow-up always occurring, but also the right follow-up was occurring.

If specimens are improperly collected or handled, it is neither good for the patient nor efficient. In the example just given, which goes back to the 1980s, it turned out that many of the cervical cytology tests being sent to the laboratory were not adequate for a thorough examination. The laboratory, in analysing its overall results, recognised this and helped work with the clinicians to ensure that specimens were collected properly. This led to a reduction in repeat visits for patients to obtain a specimen that could be analysed, a reduction in avoidable visits for doctors, and a reduction in cervical cytology screening tests sent to the laboratory per patient in the practice.

It is easy to see in these examples how the patient or referring physician might benefit, but how might the laboratory benefit? The most direct is that if laboratories help the physician with the clinical process surrounding laboratory tests – e.g. what to order when? what to do when a test result is abnormal? – that should generate more appropriate numbers of tests and more appropriate follow-up tests for the laboratory. More indirectly, laboratories should be able to make the argument that when they help, the sequence of care become more efficient for the patient and the physician, they should share in the savings or at least recognise revenue from the savings to offset any additional expenses in the laboratory.

Overall, laboratories should consider the following methods of achieving more patient-centred, efficient care:

1   Think about how to eliminate unnecessary or inappropriate tests that are being sent to the laboratory. These benefit neither the patient nor the laboratory. Their elimination may involve developing guidelines for clinicians and training clinicians.

2   Seek out sources of laboratory error beginning with the collection of the specimen, its handling, and the actual testing.

3   Facilitate appropriate follow-up by reducing cycle time and providing decision-support to the clinician and patient so that the appropriate next step occurs.

How might laboratories assure that they are participating in more patient-centred, client-oriented care and more efficient care? The most direct way is to obtain feedback from patients and clinicians and not just occasionally but routinely. It is also important to think about how you can build patients and clinicians into discussions of improving care processes involving the laboratory.

Finally, it is almost impossible to assure that all changes that you make save money for the laboratory or the health system. As you consider areas in which you might improve care processes for patients their doctors and specific ways of approaching those areas, you are likely to prioritise those that you think will achieve some efficiencies as well. Since you cannot know with certainty whether or where there will be savings, be sure to build an evaluation into your changes. That way you will learn if the changes truly are improvements in service to your customers and improvements in efficiency. You will then be in a much better position to achieve a better bottom-line for your laboratory.

Dr Stephen C Schoenbaum
Executive Vice President for Programs
The Commonwealth Fund

Email scs@cmwf.org

References

- Davis K, Schoenbaum SC, Audet A-M. A 2020 Vision of Patient-Centred Primary Care. *J Gen Intern Med.* 2005;20:953-957.

- Gerteis M, Edgman-Levitan S, Daley J, Delbanco TL (eds). *Through the Patient's Eyes: Understanding and Promoting Patient-Centred Care.* 1993. San Francisco: Jossey-Bass Publishers.

- Gordon P, Chin M. *Achieving a new standard in primary care for low-income populations: case studies of redesign and change through a learning collaborative. Case Study 1: Redesigning the patient visit program at the Jerome Belson Health Center (The Commonwealth Fund, publication #751).* 2004. www.cmwf.org/usr_doc/751_Gordon_achieving_new_standard_primary_CAS.pdf - accessed 23/03/07

- Murrey KO, Gottlieb LK, Schoenbaum SC. Implementing clinical guidelines: a quality management approach to reminder systems. *Quality Review Bulletin.* 1992;18:423-433.

- Schoen C, Osborn R, Huynh PT, Doty M, Zapert K, Peugh J, Davis K. Taking The Pulse Of Health Care Systems: Experiences Of Patients With Health Problems In Six Countries. *Health Affairs Web Exclusive.* 2005:w5-509-w5-525.

- Schoenbaum SC, Gottlieb LG. Algorithm based clinical quality improvement. *British Medical Journal.* 1990;301:1374 1376.

- World Health Organization. *General Principles of Good Chronic Care.* 2004. www.wpro.who.int/NR/rdonlyres/E0B89947-1AF7-4F3E-8488-814CEC80EC69/0/Generalprinciple-sofgoodchroniccare.pdf - accessed 23/03/07.

Lean thinking in the laboratory

Neil Westwood shows how Lean thinking has a long and successful pedigree of delivering sustainable results quickly and how it can improve pathology services

Lean thinking has been used to great effect in manufacturing and service sectors for decades. It has produced significant results and has improved quality, safety, productivity and reduced costs. Originally developed from Toyota in the 1930s this approach is used by multi-national companies such as Tesco, Qantas and JCB. Over the last five years Lean thinking has been successfully applied to healthcare processes across the world and more recently in the NHS, including pathology services at Hereford Hospitals NHS Trust, Bolton Hospitals NHS Trust, Worcestershire Acute Hospital NHS Trust and Royal Shrewsbury and Telford Hospitals NHS Trust. The Frontiers of Laboratory Medicine conference held in Bimingham in February 2007 showcased numerous Lean pathology examples from the NHS and the USA.

I have been working for the Service Transformation Team at the NHS Institute for Innovation and Improvement, working with pathology departments in the NHS to reduce turnaround times, reduce wasted time and effort, improve the quality of services provided, reduce staff frustration and also lower costs. Some of these practical examples and results are described in the following text. More pathology examples can be found in *Going Lean in the NHS* (2007).

What is Lean?

Lean is an approach that seeks to improve flow in patient journey, eliminating all forms of waste and identifying the least wasteful way to provide value to customers.

For pathology, this means looking at how we can improve the flow of specimens and information through the laboratory, so that decisions can be made quicker to improve the experience and outcomes for patients.

By improving the flow of specimens through pathology decisions can be made quicker in other parts of the hospital and also in primary care. In hospital, this will help improve the flow of patients through beds and will help create valuable beds space that can be utilised if needed.