Developments in quality improvement in Europe and the USA in the last 15 years

Although health care systems differ between countries, many quality and safety issues are similar. In this article the authors use previously published literature and the articles presented in this special issue, to review developments over recent years and to discuss emerging trends that they believe will be important in the years to come.

By: J. Øvretveit and B. van der Linden

John Øvretveit

Barbara van der Linden

In Europe and in the USA, quality improvement has been high on the health care agenda for the last 15 years. Before 1999 quality in health care was generally seen to be the responsibility of individual professionals. The reports *To Err is Human: Building a Safer Health System (2000)*[1] and *Crossing the Quality Chasm: A New Health System for the 21st Century* (2001)[2] drew our attention to shortcomings in quality and safety in health care. These reports are viewed as significant, also outside of the USA, in setting the agenda for quality improvement over the last decade. They both propose a systematic approach to quality improvement and consider the roles to be taken, not only by professionals, but also by policymakers, health care leaders, regulators, purchasers, and others. Since the publication of these two reports there has been much activity in developing instruments and strategies for quality improvement. Hospitals and medical specialist care appear to be in the lead, but similar developments are occurring in long term care.[3]

Although health care systems differ between countries, many quality and safety issues are similar. In this article we use previously published literature and the articles presented in this *KiZ* special issue, to review developments over recent years and to discuss emerging trends that we believe will be important in the years to come. In our study we identified eight important components of quality improvement, ranging from guideline development, investing in professionals skills, use of quality indicators, accreditation, financial incentives, focus on patient safety and integrated care and quality research which discuss. Examples of these from different countries are presented.

Guideline development

In all countries many professional guidelines have been developed. Guidelines are usually produced, at national or international levels, by medical associations or governmental bodies, such as the US Agency for Healthcare Research and Quality.[4] Local healthcare providers may produce their own set of protocols, or adapt them from existing top-level guidelines. Whilst guideline development was previously based on professional expert opinion, nowadays medical evidence is more important, informed by research. Guidelines are made available freely, usually through the internet.

The USA and other countries have established medical guideline clearinghouses. In the USA, the National Guideline Clearinghouse maintains a catalogue of high-quality guidelines, published by various organizations (mostly professional physician organizations).[5] In the United Kingdom, clinical practice guidelines are published primarily by the National Institute for Health and Clinical Excellence (NICE).[6] In the Netherlands, two bodies (CBO and NHG, respectively) publish specialist and primary care guidelines, and medical associations also

publish specialty-specific guidelines.[7] A new national quality institute is being created in order to improve coordination and rapidity in guideline development and implementation. In Germany, the German Agency for Quality in Medicine (ÄZQ) coordinates a national program for disease management guidelines.[8]
All these organisations are now members of the *Guidelines International Network* (GIN), an international network of organisations and individuals involved in clinical practice guidelines.[9] In addition to guidelines for medical specialties, some multidisciplinary guidelines are being developed. Some in the form of care pathways or cross-sectoral guidelines.
Having guidelines does not automatically mean that they are followed. Attention currently is being directed more towards guideline adherence and implementation.[10] More attention now is being given to developing and evaluating effective strategies for guideline implementation, though reports on successful guideline implementation strategies are scarce.[11]
There is a trend towards requiring or rewarding adherence and more rule-based prescriptive guidelines. Increasingly guidelines indicate what to do and what not to do in specific instances and circumstances. The UK NICE, for instance, produces 'do not do' information and includes checklists, as well as implementation and costing aspects in guidelines. New attention is being paid to rapid development and updating also using new ICT technologies like wiki (guidelines 2.0), living guidelines[12], and personalised guidelines.

Preparing the workforce

Lectures and reading professional literature may work for some, but generally they are not effective ways to enable clinical professionals or quality experts to use methods and leadership skills in their every day work. Trends in education and skill development include learning in the workplace, using simulation to practice teamwork and other skills, and also internet based education, sometimes in combination with local meetings of learners and tutors. For learning quality methods one of the most valuable resources is the USA Institute for Healthcare Improvement's open school[24] which has a variety of well tested and educationally effective learning modules, and a system for those overseas to form learning chapters in hospitals or regions.[13]
Enabling providers to make more appropriate use of a proven effective treatment, diagnostic method or care practice, is a question facing many countries who believe that putting proven effective interventions into practice quickly and on a wide scale is a cost-effective way to improve quality and contain costs. The most common methods for large scale implementation used in The Netherlands has been either the breakthrough collaborative method or guideline implementation strategies. The Netherlands has been leading in applying this method in clinical, long term care and integrated care programmes.[14] New thinking and new approaches to large scale dissemination of new methods are emerging, some from experience in scaling up proven models in the field of international health[15], including phased wave models.

Indicator development, measurement and reporting

Where initially most quality improvement work concerned the development of structure and process indicators, gradually there has been a movement towards creating and reporting more outcome and clinical result measures, including safety indicators and minimal targets.[13]
The importance of reporting on patient satisfaction and experiences is agreed on in all countries.
The movement to *value based financing* (see below) is one influence, accelerating the development of indicators and reporting of quality performance. Valid measures are necessary if providers are to be paid for quality as well as for the number of procedures. Other influences are politicians in many countries wishing to ensure consumer choice and competition, and to ensure all information is available to patients and purchasers to make an informed choice.
Each country has different indicator measurement systems and different ways to report quality information, including public web sites allowing easy comparisons – notable examples are the US federal Medicare quality reporting system, the UK comparison system and that of Denmark.[18] Also there is an increase in benchmarking systems being used to compare the results of different health care organisations and/or individual professionals. Although each country is moving towards more transparency of performance data and public reporting, including use of the internet, public accessibility to performance data appears not to be as strong a driver for quality improvement as was expected.[19] Purchasers and professionals appear to be the main audience for performance data.[13] There is concern that reporting requirements may be leading to more bureaucracy, unjustifiably high costs, a culture of mistrust, and less time for direct contact with patients.[20, 23]

Accreditation

Accredition bodies have gained importance in quality improvement for institutions and for individual professionals. They also have shifted the focus from physical facilities and system requirements[23] to extensive systems with outcome indicators and measures of quality and safety, which they require their accredited organisations to contribute to, and which they use in accreditation assessments. Examples are Canada Accreditation, The Joint Commission and The Australian Council for Standards systems. Denmark has a mandatory accreditation programme for public hospitals.[18] Although not mandatory, the Netherlands has its HKZ-certification and NIAZ-accreditation systems for health care organisations.[16,17] Accreditation is increasingly becoming a more continuous process, instead of by inspection every three years.[13]

Aligning payment policies with quality improvement

Some countries are experimenting with ways to pay providers for quality as well as volume of care (value based purchasing). No pay for never events is one approach, started in the USA, and followed to a limited extent in other counties such as the UK and Sweden. Purchasers will not pay bills for certain procedures such as re-operation for retained objects, and some patient readmissions to hospital a short time after discharge.

Initially this may be symbolic, but it is part of a wider trend to buy *value* in healthcare and in health. Other such schemes involve paying providers slightly more per patient if they reach certain quality indicator levels, with the extra payments deducted from the payments which would have been made to those not meeting these quality indicators. In the UK GPs can boost their income by more than 25% if they meet a number of quality indicators. Besides a limited effect on quality improvement, these schemes appear to cause negative effects like less attention to other results than those included in the scheme and decreased motivation of professionals.[19]

In the Netherlands, insurers as buyers of care are increasingly developing selective purchasing: only when a certain volume of procedures are reached will the insurer contract with a specific hospital (e.g. breast cancer surgery), volume is seen as a measure for quality. Payment for quality also means paying for entire episodes of care, which is where the Netherlands is leading many countries in its bundled payment or integrated care approach (see below). There is also some interest in the UK in selecting for investments changes which both improve quality and reduce waste, and in estimating and tracking the return on investment of quality projects.[21] The Netherlands ZonMw is also working on this subject to meet the new more constrained financing environment.[22] Several authors expect that 'the business case for quality' will become more important in the coming years of increasing demand on health care and limited financial resources.[23]

Special attention to patient safety

In the UK, media reporting of harm to patient, hospital-acquired infections and abuse in older care homes has drawn the attention of politicians and managers to the need to support safety improvement. However few countries show the sustained programme funding which is needed for significant improvement over time, and for developing a systems approach to safety. In the Netherlands patient safety programmes are in the hands of medical professionals.

One development in which Australia leads the field is in policies encouraging doctors and nurses to tell patients of any errors – termed open disclosure.[26] Another is attention to the

health and well-being consequences for health providers of being involved in an adverse patient event – there are programmes in the USA to support such secondary victims and some research on the subject in Sweden. After a slow start, an increasing number of interventions have been developed to improve quality and safety for residential long term care clients, which may be more effective than those used in the Netherlands: examples are preventing pressure ulcers and falls.[27]

Special attention to integrated care

Many quality and safety problems arise in the in betweens: between work-shifts, between professions and between services and sectors. The Netherlands has been in the forefront of coordinated care and integration schemes, such as the Integrated Diabetes care programme with integrated financing of diabetes care and a specific disease management programme. Both the UK and Sweden have examples of integrated care organisations, some for specific groups such as integrated health or social care for older people[28], and comprehensive integrated systems[29] which show some evidence of higher quality. The USA is experimenting with different schemes of accountable care organisations[30], and has long established integrated health systems such as the integrated managed care consortium Kaiser Permanente, the Geisinger or the Henry Ford Health System. However, perhaps of most practical relevance are the various methods for improving communications and transitions in care. A system for checking patient medication at handover through medication reconciliation methods is now an accreditation requirement in the USA and is increasingly used in other countries. There are also different proven hospital discharge systems, which are now used especially where there are penalties for unplanned re-admissions.[31]

Developments in quality research

Quality research is not only what researchers do. In fact most quality research is carried out by practicing nurses, doctors and project leaders. Collecting and interpreting data to decide what to change and whether a change is an improvement requires some basic knowledge of and skills in research methodology. One trend for practicing quality improvers is to strengthen the validity of their assessments of quality projects using better methods for data collection and evaluation. More international quality conferences such as the ISQUA conferences are featuring local projects. In addition there are international quality project web sites, which invite and publish practical quality project experiences and findings; these can be searched by problem or by method. The two best examples are the USA AHRQ innovations exchange, and the USA IHI case studies data base.

A further international trend is research funding agencies financing more applied and practice-relevant quality and safety improvement research, using action research and collaborative research methods. Some of the findings from this type of research into implementation and dissemination methods is particularly relevant to the Netherlands.[4] Also in the Netherlands much work has been done in evaluating large scale improvement programmes and developing appropriate evaluation methods.[14]

Conclusions

In the last 15 years there has been much activity in the field of quality improvement in European countries like UK, Denmark, the Netherlands and the USA. There is not one country which is leading in all aspects. Each country has recognizable work being done in most of the areas. We see a growth of evidence based medicine, increased development and use of evidence based guidelines, quality indicator measurement and reporting and the culture of transparency which is emerging regarding results and mistakes.

Much has been invested in raising skills and competencies in quality improvement and carrying out designated improvement programmes. The UK has invested in target setting, financial incentives, and patient transparency; the USA is more prominent in indicator development and use of indicators in accreditation and in public comparisons. Denmark appears to be leading in working towards a national quality system, including indicator reporting, patient safety laws, and accreditation. The Netherlands has gained much experience with quality improvement programmes including those in long term care and integrated primary care.

Many instruments such as guidelines and indicators are freely available, often online. A number of links which can be accessed are included in this article. On the 'downside' we perceive a growing concern about evidence of what has been achieved generally in return for the resources invested, and in specific programmes.[23,32] Chassin describes pockets of excellence surrounded by great variation in performance across delivery systems. Different

authors from different countries question a heavy reporting burden and a culture of mistrust.[3, 18, 20, 23] Reporting requirement may decrease clinicians time with patients and create a distance in the patient-doctor or nurse relationship.

New opportunities appear to be arising where professionals can take the lead, and there is a call for more self-regulation instead of control. Other developments are towards high reliability organisations where leadership commitment is combined with a dedicated safety culture and robust process improvement. Also a move to more of a focus on quality of life measures, instead of only on specific clinical outcomes and patient satisfaction surveys.

Overall we view quality improvement as consisting of many separate components, which means a growing need for alignment between different components, and, if possible, simplification.

An important new trend is the new focus on combining quality improvement with waste and cost saving, not only using financial incentives to improve quality, but the 'whole' business case for quality: this will be necessary in the next years to maintain the momentum and perhaps accelerate the quality improvement movement.[23]

References

1 *To Err is Human: Building A Safer Health System,* IOM, 2000.
2 *Crossing the Quality Chasm: A New Health System for the 21st Century*, IOM, 2001.
3 H. Nies and K. Leichsenring, Nine European trends in quality management of long-term care for older people, *KiZ*, 3, juni 2012.
4 http://www.ahrq.gov.
5 http://www.guideline.gov.
6 www.nice.org.uk.
7 www.artsennet.nl.
8 http://www.aezq.de.
9 http://www.g-i-n.net.
10 L.I. Solberg, M.L. Brekke et al., Lessons from experienced guideline implementers: attend to many factors and use multiple strategies, *Joint Commission Journal on Quality Improvement*, 26, 2000/4, 171-88.
11 J. Burgers, M. Ouwens, P. van Splunteren and J. Øvretveit, *New perspectives on Effective Implementation of Guidelines*, IQ Healthcare, Nijmegen, 2011.
12 *Richtlijn voor Richtlijnen*, Regieraad, 2011.
13 J. Øvretveit, Interview on USA quality trends and issues with Robert Wachter, *KiZ*, 3, juni 2012.
14 J. Øvretveit and N. Klazinga, *Meta-evaluation of 10 national quality improvement programmes*, ZonMw, 2010, www.zonmw.nl.
15 J. Øvretveit, Widespread focused improvement: lessons from developing countries for scaling up specific improvements to health services, *International Journal for Quality in Health Care*, 23, 2011/3, 239-24610.
16 www.hkz.nl.
17 www.niaz.nl.
18 L. Panduro Jensen and B. Randrup Krog, Quality Improvement in Danish hospitals: Experiences in the last 10 years and current challenges, *KiZ,* 3, juni 2012.
19 M. Marshall, Quality Improvement in the English NHS, *KiZ*, 3, juni 2012.
20 B van der Linden, Quality Improvement from the perspective of the health care workfloor: an interview with 2 quality managers from the Netherlands and England, *KiZ*, 3, juni 2012.
21 J. Øvretveit, Do changes to patient-provider relationships improve quality and save money? Volume 2 *Full review of research,* The Health Foundation, London, 2012, www.health.org.uk Or http://public.me.com/johnovr.
22 *Quickscan Kwaliteit en kostenbesparing*, 2009, www.zonmw.nl.
23 R. Brook, The End of the Quality Improvement Movement, Long Live Improving Value*, JAMA*, 304, 2010/16,1831-1832.
24 IHI, *IHI open school*, http://www.ihi.org/offerings/IHIOpenSchool/Pages/default.aspx, accessed 17th April 2012.
25 C.M. Kilo, A framework for collaborative improvement: lessons from the Institute for Healthcare Improvement's Breakthrough Series, *Quality Management in Health Care,* 6, 1998/4, 1-13.
26 ACSQHC, *Open Disclosure Standard: A national standard for open communication in public and private hospitals, following an adverse event in healthcare*, July 2003.
27 *Joint commission journal on quality and patient safety special edition*, June 2011.
28 Ham et al 2011: www.kingsfund.org.uk/publications/articles/integrated_care_ham.html
29 J. Øvretveit, J. Hansson and M. Brommels, The creation of a comprehensive integrated health and social care organisation in Sweden, *Health Policy*, 97, 2010, 113-121.
30 S. Shortell, L. Casalino and L. Fisher, How The Center For Medicare And Medicaid Innovation Should Test Accountable Care Organizations, *Health Affairs*, 29, 2010/7, 1293-1298.
31 E.A. Coleman, C. Parry, S. Chalmers and S.J. Min, *The Care Transitions Intervention: Results of a Randomized Controlled Trial Archives of Internal Medicine*, 166, 2006,1822-8.
32 M. Chassin, M. and J. Loeb, The Ongoing Quality Improvement Journey: Next Stop, High Reliability, *Health Affairs,* 30, 2011/4, 559-568.

Samenvatting

Dit artikel beschrijft ontwikkelingen in kwaliteitsverbetering in de gezondheidszorg in een aantal Europese landen en in de VS sinds 1999. Kwaliteitsverbetering is in deze jaren een permanent onderdeel van gezondheidszorgbeleid en -praktijk geworden, met verschillende complementaire componenten. Richtlijnen, indicatoren, financiële prikkels en scholing van professionals zijn waarschijnlijk de belangrijkste. De uitdaging in de komende jaren is om de diverse onderdelen te integreren tot een geordend systeem, terwijl er tegelijk gewaakt wordt voor te hoge rapportagedruk en een toenemende kloof tussen professionals, managers en patiënten.

Information about the authors

John Øvretveit is Director of Research, Professor of Health Improvement, Implementation and Evaluation, Medical Management Centre, The Karolinska Institutet, Stockholm, Sweden.

Barbara van der Linden is a Stafmember Implementation and Innovation at ZonMw, The Netherlands.