Action Sets
from BMJ

Improving the quality, safety and efficiency of care with actionable clinical protocols

> All leaders concerned with NHS healthcare should place quality of care and patient safety at the top of their priorities for investment, inquiry, improvement, regular reporting, encouragement and support.

Don Berwick,
former president of the US Institute for Healthcare Improvement
Presentation for *Improving the safety of patients in England*

Introduction

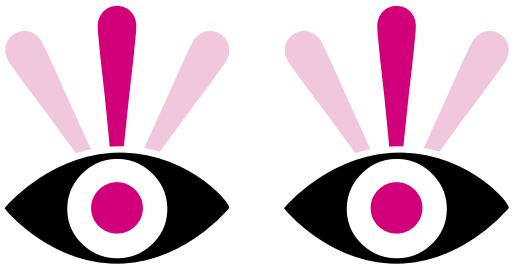
With growing emphasis on the prioritisation of the quality and safety of patient care, in the wake of the Francis report, and the increasing need for regulatory compliance, performance improvement is at the top of the agenda for many hospitals.

But changing clinical practice can take years, and research from around the world shows that simply providing clinicians with evidence of how to improve services and care pathways is not enough by itself.

To make a real difference, evidence based content needs to be consistently used as an integral part of clinicians' daily workflow, and the subsequent impact on service quality, tracked and analysed.

And as healthcare costs mount and demand rises, prompted by an ageing population and an increase in the prevalence of long term conditions, hospitals need to constantly improve their clinical and cost effectiveness and iron out unwarranted variations in care.

There is a growing body of evidence to show that hospitals using point of care evidence based clinical protocols can address these issues, resulting in better clinical outcomes, reduced costs and an improvement in the overall quality of care[1].



Renewed focus on quality and safety

When he launched his review of patient safety issues in England in August 2013, Professor Don Berwick emphasised that the NHS should strive for continual harm reduction.

Strong leadership, major cultural change, and investment in the lifelong capacity of staff to "learn, master, and apply modern methods for quality control, quality improvement, and quality planning," would be required, he said.

His comments echoed themes highlighted in the Robert Francis report into the serious failings of care at Mid Staffordshire NHS Foundation Trust, published six months earlier.

Among the report's raft of recommendations was that hospitals should provide demonstrable proof of how they are actively tackling poor quality care and improving patient safety—and complying with evidence based, measurable service standards in the process.

Francis recommends the provision of a clear set of quality and safety metrics which can be used to promptly pick up outliers and declining performance, as well as information systems offering real time performance data. All data can then be shared with commissioners and regulators.

The NHS is facing unprecedented fiscal restraint. Research published in *The BMJ* in 2010 [2] concluded that the most significant opportunities to improve efficiency in the NHS would come from focusing on clinical decision-making and reducing variations in clinical practice.

Did you know?

- 7% of patient safety incidents reported in England between October 2012 and March 2013 caused moderate or serious harm.
- Almost one in eight of the most commonly reported incidents involved implementation of care and ongoing monitoring.
- The latest *NHS Atlas of Variation in Diagnostic Services*, published by Public Health England, shows highly significant differences in how health conditions are investigated and monitored across England.

Case Study

Using an Action Set for the management of acute upper GI bleed[3]

The results of a pilot study at London's Royal Free Hospital indicated that using Action Sets from BMJ for upper gastrointestinal bleeds helped cut unnecessary admissions in this group of patients by 25%.

The same study showed that the proportion of patients inappropriately prescribed proton pump inhibitors before endoscopy fell from 74% to 33%, and afterwards, from 66% to 50%.

"One of the best features of the tool is its ability to capture the data, and hence, facilitate the auditing process. It time stamps each step of the patient's management. These steps can be traced back. Through this system, the process of auditing becomes automatic, simpler, and quicker."

Lead clinician: Royal Free Pilot

Cutting the costs of admissions

Health and Social Care Information Centre figures show that in 2012-13 15.1 million people were admitted to England's 161 acute trusts 4 million more than in 2000-01.

National Audit Office data show that 5.3 million of these were as emergencies, at a cost to the NHS of £12.5 billion. Almost half of these admissions lasted less than two days—a rise of 124% since 1997-8. Almost one in five (19%) emergency admissions were re-admissions within 30 days of discharge, for which hospitals are not reimbursed.

With the right assessment system in place, many emergency admissions could be avoided.

Lower rates of clinical errors could also help reduce the cost of clinical negligence claims. The NHS paid out more than £1 billion in settlements in 2012-13, following claims lodged by more than 16,000 patients and bereaved relatives. The number of claimants has risen 80% since 2008.

Reducing litigation costs by between 3% and 5% could cut the amount of insurance trusts pay to the Clinical Negligence Scheme. This could be as much as half a million for large trusts.

> Action Sets from BMJ could help acute trusts achieve average efficiency savings of up to £38 million a year depending on the number of Action Sets implemented, adding up to £1.07-£6.6 billion a year for the NHS.

Evidence in action

A growing body of evidence shows that hospitals which have opted to use point of care evidence based clinical protocols, such as Action Sets from BMJ, have better clinical outcomes.

These include:

- Lower death rates[4]
- Fewer complications[4]
- More appropriate prescribing[5]
- Significantly fewer drug errors—the third most common cause of medical error in the UK[6]
- Fewer unnecessary diagnostic tests—estimated to account for 40% of all hospital tests[7]
- Reduced length of stay[8]
- Fewer unscheduled readmissions[9]
- Better preventive care[10]

Did you know?

The use of evidence based clinical care protocols has been linked to:

- Appropriate use of antibiotics in surgical patients
- Better blood glucose control
- Better outcomes for patients with sepsis and heart failure
- Lower death rates in patients with pneumonia, heart attacks, coronary artery bypass grafts
- More effective deep vein thrombosis prevention
- Better end of life care
- Improved management of alcohol withdrawal

In its updated advice on the prevention of drug errors, issued In 2008, the American Academy of Orthopedic Surgeons cited point of care evidence based protocols as a key component in eliminating illegible handwriting and dosing/frequency/route errors and improving vital communication during the transfer of care[11].

The Academy said that the approach had the potential to save hospitals millions in more effective use of resources and reductions in unnecessary prescribing, test, and imaging costs.

Case Study

Tangible results in King's Lynn

At The Queen Elizabeth Hospital King's Lynn NHS Foundation Trust, more than 12 Action Sets have been adapted for use in care bundles as part of a systematic approach to improving the quality and safety of patient care.

Patients vote with their feet if they don't believe they will get good quality care, comments project lead, Dr Harith Altemimi, consultant physician in acute and intensive care medicine at the trust.

"We are always looking for ways to improve patient safety and to up our game. Now we have, and we've got the evidence to prove it," he enthuses, adding that the hospital's documented progress has impressed the regulators too.

From COPD and community acquired pneumonia, through falls among the elderly, to atrial fibrillation and heart failure, the improvements in assessment and testing have been "dramatic," he confirms.

An audit of Action Set care bundle for pneumonia shows that length of associated hospital stay has fallen from 8.5 to 7.5 days, with the number of same day discharges tripling.

The management of patients with acute coronary syndrome has produced similarly impressive results. The proportion of those appropriately investigated and recorded now tops 85% while those given the recommended drug combination has hit 90%.

The proportion of patients assessed with a GRACE score to determine optimal treatment has more than doubled from 36% to 78%, while those tested for blood glucose has risen from 20% to 78% since the adoption of Action Sets care bundles.

The approach has helped ease pressure on other pinch points in the system, explains Dr Altemimi.

"By following good evidence based practice, we have eased the pressure on the cardiology wards." "If we know that someone has a low GRACE score, we don't need to keep them in hospital, which will free the bed for other urgent cases,"

The proportion of patients tested has risen from:

42% to 71% for **blood cultures**
17% to 57% for **sputum cultures**
25% to 71% for **blood gases**
17% to 86% for **urine antigens**
17% to 63% for **atypical serology**

Case Study

Tackling poorly controlled diabetes in Australia

Action Sets from BMJ have been adapted to uncover undiagnosed and poorly controlled diabetes among the 60,000 patients admitted every year to three facilities run by Austin Health, a major provider of tertiary care services in the Melbourne area.

Implementation is still not complete, but it's already clear that starting routine blood glucose checks for inpatients given drugs on the vascular surgery and stroke wards has uncovered a large amount of poorly controlled diabetes.

"25% of acute patients are diabetic, and the numbers are rising, so we needed a way of tackling that in a more structured way. We only knew that a patient was diabetic when a nurse ordered a special meal," explains Professor Graeme Hart, clinical director of the Austin Centre for Applied Clinical Informatics.

The test results are incorporated into the discharge summary, with a referral to the patient's GP for follow up if the readings warrant it. The checks are now being extended to general admissions and the Action Sets approach is being applied to community acquired pneumonia in a bid to streamline care.

"Having a structured document which supports engaged clinicians to come together and go through the care pathway is incredibly powerful," comments Professor Hart. "If we had to start from scratch, we would be going round in circles and end up with 55 different versions."

He adds: "The whole patient journey is really important, because clinicians don't necessarily see all the other parts of the process, and it takes them away from a drugs based focus."

The approach has saved time and money and helped to standardise care, he says. And it has simplified prescribing and test ordering.

"If by virtue of the fact that we now have 100 new people on drugs and weight control who didn't even know they had diabetes, that has to be a good thing," he says.

Action Sets in practice

Action Sets can be used both within an electronic patient record or as standalone clinical protocols and offer a range of benefits.

Active support for busy clinicians from admission to outpatient clinic. Action Sets can be safely used by junior doctors and nurses, so easing the pressures on senior doctors' time.

Regular automatic reviews and annual updates of, which avoids the need to sift through the vast quantity of new material that is published daily, and makes it much easier for clinicians to follow evolving best practice without telling them what to do.

Flexible, tailored content that can easily be adapted to local policies and practice, and adjusted to fit individual patient profiles. Content draws on international evidence, but is UK focused and peer reviewed by Consultant level UK clinicians.

Ability to track progress, including CQUIN targets, friends and family test, VTE, and the NHS safety thermometer. Data from Action Sets can also be used to audit clinical practice and adherence to guidelines for the benefit of commissioners and regulators.

Guaranteed quality and reliability, with all protocols meticulously and rigorously developed, using BMJ's trusted expertise in clinical evidence synthesis and appraisal.

Comprehensive support package for trusts, which can be tailored to suit local need, and boost buy-in from clinicians.

Competitive pricing as, creating in-house protocols can take months, with no guarantee that the content will be evidence based and for 50 high-impact conditions could cost an acute trust around £350,000 (excluding updating and maintaining). Action Sets from BMJ are priced with consideration of the financial challenges of acute trusts in mind.

Did you know?

- There are more than 20 million citations in PubMed for biomedical articles
- 650,000 new entries are added every year
- The amount of medical information more than doubles every five years
- It can take an average of 17 years for research evidence to reach clinical practice

How do Action Sets from BMJ work?

Action Sets are written by clinicians for clinicians, to use at the point of care, to improve the standardisation, quality, and efficiency of care.

They contain pre-defined and structured lists of the most appropriate diagnostic tests, treatments, and therapeutics, in order of priority.

They cover a range of common, high impact, and long term conditions, including COPD, asthma, diabetes, stroke and sepsis, capturing all clinical activity from the moment a patient is seen and the protocol activated. Action Sets deal with the assessment, treatment, management and discharge of patients.

Additionally, content:

- Can be linked to the electronic patient record
- Links to drug databases
- Is specific to place of care-ie A&E, ward, or outpatient clinic
- Directly links to an Evidence Summary Page
- Can link to *BMJ Best Practice* and *BMJ Clinical Evidence*

And they include:

- Essential information about the condition
- Grading of Recommendations Assessment Development and Evaluation (GRADE) statements via direct links to *BMJ Clinical Evidence*
- National performance measures
- National and international guidelines
- Follow-up recommendations
- Suggested referrals to other specialists/ disciplines at each stage of care
- Patient information leaflets

Conclusion

Action Sets from BMJ enable clinicians at all levels to provide high quality, consistent care to their patients, knowing that their decisions are based on the best, evidence and practice. Having the relevant evidence and the rationale for recommendations available at the point of care can facilitate responsive and flexible personalised care.

Action Sets can help hospitals make the most efficient and cost effective use of resources, whilst boosting the quality and safety of care, improving clinical outcomes and enhancing patient experience.

Importantly, Action Sets can help hospitals deliver on the quality improvement aspirations and recommendations of the Francis and Berwick reports and track progress for the benefit of regulators, commissioners, staff and patients.

Most hospital trusts will already have the resource and infrastructure in place to successfully deploy them, added to which there is a comprehensive support package on which to draw for further assistance.

Contact

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