Improving local compliance with standards for oxygen prescribing

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Think back to the last initiative that was rolled out in your organisation. Have the changes that were introduced been maintained long term or fallen by the wayside?

One of the biggest challenges for teams trying to implement organisational change is to embed new practices in the culture of the workplace so that the improvement is a lasting one. Here we describe the implementation of a new oxygen policy using Kotter’s eight steps for leading change.

The issue

Safety issues surrounding the use of oxygen in UK hospitals are well recognised. Between December 2004 and June 2009, the National Reporting and Learning Service received 281 reports of oxygen-related incidents: nine of the incidents appeared to have caused patient deaths and 35 may have contributed to patient deaths. These reports prompted the National Patient Safety Agency to issue the rapid response report “Oxygen safety in hospitals” in 2009.

Based on this report, and on guidance published by the British Thoracic Society in 2008, a point prevalence audit of oxygen prescribing was conducted at Wirral University Teaching Hospital NHS Foundation Trust in November 2009.

The audit revealed that oxygen had not been prescribed for 70% of patients who were using it. Of the prescriptions that had been written, most lacked the details recommended by the BTS (such as delivery system used and target oxygen saturation).

Action

In light of the audit results, a multidisciplinary working group (comprising two pharmacists, a consultant in respiratory medicine and a specialist respiratory nurse) was formed to produce and implement a trust-wide policy for prescribing, administering and monitoring oxygen therapy.

The first draft of the policy was reviewed by key stakeholders and a second draft was produced. This version was sent out for trust-wide consultation so all staff had an opportunity to comment. The working group reviewed these comments before a final version of the policy was written and submitted to the drug and therapeutics committee for approval.

During this process the working group identified several barriers that needed to be addressed before the policy could be implemented effectively.

Updating prescription charts

Although oxygen could already be prescribed using the trust’s electronic prescribing system (EPS), it was clear that the existing prescribing pathway was not fit for purpose (eg, there was no prompt to state a target oxygen saturation). The group liaised with the pharmacists responsible for the EPS so that safe and user-friendly prescribing pathways were set up.

Clinical areas that did not use the EPS (eg, critical care and the obstetrics and gynaecology unit) had their prescription charts updated to

To improve prescribing of oxygen at Wirral University Teaching Hospital NHS Foundation Trust a multidisciplinary team developed a new policy and embarked on a programme to embed the changes
include a specific section for oxygen prescribing. Stickers (designed to be attached to drug charts) were used for patients needing oxygen therapy in accident and emergency.

**Education and training**

The content of the policy represented a major cultural change in the way oxygen was managed within the trust, so a clear plan for addressing the training needs of medical, nursing and pharmacy staff was produced. Each member of the working group was responsible for delivering training to their own staff group.

Electronic copies of the educational presentations were made available on the trust intranet for staff who could not attend one of the training sessions. The main details of the policy were also included in the trust’s mandatory medicines management induction for new staff and in update sessions for existing staff.

**Communicating changes**

Staff were informed about the policy one month before it was due to be rolled out. Details of the new policy were publicised via the trust’s monthly brief (a report of key trust activities emailed to staff), the “Medicines matter” newsletter (issued every other month) and at a risk management study day for doctors. Notifications were also sent by email to all doctors (from the medical director), nurses (from the director of nursing) and pharmacists (from the director of pharmacy) before the implementation date.

The week before implementation, message alerts were placed on the login screen of the EPS. On the “go live” date, posters were placed on the trolleys holding the medical notes for each ward and in the staffrooms.

**Evaluation**

Two months before the policy was implemented, the EPS was set up to produce a monthly report detailing the number of patients prescribed oxygen. Figure 1 (p301) shows how the number of patients prescribed oxygen on the EPS was affected by the implementation of the policy (on 4 May 2010). Although the numbers subsequently declined after a remarkable rise in May (with a
BYDUREON: the first and only therapy to provide continuous glycaemic control with a single weekly injection.

Fig. 1: Number of hospital patients with oxygen prescriptions

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**BYDUREON**: exenatide twice daily (Byetta) and once weekly (Bydureon) has been reported in patients treated with Bydureon. Patients may develop anti-exenatide antibodies following treatment with Bydureon. These patients tend to have more injection site reactions (e.g., skin redness, itching). Acute pancreatitis and acute renal failure have been reported rarely and anaphylactic reaction has been reported very rarely in spontaneous post-marketing reports with exenatide.
implementation of the policy. The audit results are summarised in Box 1. Despite the fact that 100% compliance was not achieved for any of the performance indicators, an improvement can be seen for all of them, with the most substantial improvement being the prescribing of oxygen on the EPS.

The results of this point prevalence audit have been presented to pharmacy staff, shared with the respiratory consultants and summarised for inclusion in the “Medicines matter” newsletter.

Leading change

The production and implementation of the oxygen policy is an example of leading organisational change. Leading change in large organisations such as acute NHS hospitals is a complex task due to the range and diversity of stakeholders, complicated ownership and resourcing arrangements and the professional autonomy of many of the staff.7

The working group recognised that it would be a challenge to change the culture of the organisation to reflect that oxygen is a medicine and that it should be prescribed, administered and monitored in the same way as any other drug. Mindful of this, the group looked to Kotter’s eight steps for leading transformation in an organisation (see Figure 2).7

The first step is to establish a sense of urgency. Within the trust we were unaware of any serious patient harm occurring as a result of the poor management of oxygen; however, the publication of the BTS guidelines and the alert from the NPSA provided enough incentive for action.

With our working group formed (step 2), we embarked on step 3 — “creating the vision” — in the form of developing the trust-wide policy.

Step 4 of Kotter’s model involves communicating the vision. We were mindful to articulate the vision to each of the stakeholders in terms that were applicable to their areas of practice. Leaders of key areas were equipped with the necessary tools (prescription charts, stickers, presentations, handouts summarising the key points, etc) to facilitate the implementation of the policy within their area. These team leaders were then empowered to discuss any issues and field questions in team meetings (step 5). Obstacles did present at this stage and were dealt with before the “go live” date.

After roll-out it was important for any short-term benefits to be communicated to staff in a timely manner. This ensured that the merit of the change was understood and the high profile of the project maintained (step 6).

The policy was audited formally six months after its development and the improvements communicated across the trust. Although post-implementation audit results showed a vast improvement in oxygen prescribing compared with baseline data, 100% compliance was not achieved. Further work is needed to further consolidate this new practice into the culture of the organisation (step 7) and move to step 8 where the new culture has been truly embedded.

This final step is complicated by the constant turnover of staff within the hospital. Indeed, the practice of treating oxygen as a medicine needs to be embedded throughout the NHS — a goal beyond the remit of the working group, but one that is being championed by the NPSA, the BTS and the Department of Health (two oxygen safety incidents were added to the 2011/12 list of “never events”).

Lessons learnt

This process has demonstrated the importance of multidisciplinary working and the need to have a structured plan for implementing a policy that will affect all clinical staff working within a trust.

Change cannot be achieved simply by launching a new policy; it requires continuous engagement with staff and monitoring of performance. We would encourage those leading organisational change to follow Kotter’s eight steps.

References