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The UK Experience of COPD National Audit

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Compared with most European countries the UK has a relatively long tradition of participation in clinical audit following the publication in 1989 of a government document 'Working for Patients' [1], which recommended that audit be incorporated into routine clinical practice. This paper enshrined the following principles that embedded audit into clinical practice:

- every doctor should participate in regular systematic medical audit;
- the system should be medically led, with a local medical audit advisory committee chaired by a senior clinician;
- the overall form of audit should be agreed locally between profession and management, which itself needs to know that an effective system of medical audit is in place and that the work of each medical team is reviewed at regular and frequent intervals to be agreed locally.

Initially clinicians took up this call by running numerous local audits, which then, led by the Royal Colleges responsible for training and professional standards, developed into an embryonic national audit programme. Funding to the amount of GBP 220 million (EUR 277,393,000/PLN 1,124,521,000) was provided centrally from Government to cover local audit and now, via two regulatory bodies: the Health Quality Improvement Partnership (HQIP) and the National Advisory Group on Clinical Audit and Enquiries, also finances over 30 national audit programmes.

Respiratory physicians were in the forefront of developing the national audit programme, and the first attempt to establish a networked audit for hospital COPD care was launched in 1997 by the Roy-

al College of Physicians of London (RCP) with a clinician led audit of acute care in 42 hospitals that recruited 1420 clinical cases [2]. A mixture of process items and outcomes were recorded against a background of clinical resources available to treat COPD patients. This combination of clinical and resource measures provided interesting comparators which drove changes to future audits. Although there were national audit funds available at that time, COPD was not seen as a national priority and so funding was hard to find. Eventually the Academy of Colleges provided a grant of GBP 30,000 (EUR 37,700/PLN 153,300) to carry out a further pilot audit programme at 30 hospital sites, designed to explore different audit methods that would inform an application for a truly national scale audit programme for COPD. In this audit the data items were extended to ensure that those found to be easily and reliably collected were included whilst others were dropped from the data set. New items of organisation of care and resources were included to explore issues raised in the first audit, where size of hospital and staffing levels appeared to have some correlation with outcomes [3]. Patient recruitment was varied to include all patients admitted over a defined time period rather than capping numbers entered by each hospital. Definitions of COPD exacerbation were tightened and process measures mapped to the BTS COPD management guidelines published in 1997 [4]. Particular emphasis was placed on regular contact with auditors at local sites to learn more about the practicalities of data collection at each hospital. This pilot provided invaluable information about those practical auditing issues and

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led to a publication guide for participation in future programmes [5] and confirmed a link between resources available for care and both clinical processes and outcomes [6].

At this stage the exciting data collected and the experience of running larger scale audits combined with the understanding of local issues in data collection strengthened the case to bid for a national COPD audit. The RCP combined forces with the British Thoracic Society (BTS) and applied successfully to a pharmaceutical consortium for a grant, this time of GBP 168,000 (EUR 211,300/PLN 858,700). The audit data set again consisted of a cross sectional survey of resource and organisational items, e.g. number of specialists per 1,000 admissions, use of specialty triage, etc., coupled with a clinical audit of process of care items, e.g. was an arterial blood gas performed at admission and outcomes namely length of stay, mortality, and readmission rates for survivors. A major publicity campaign led by the RCP and BTS resulted in 238 hospitals (96% of all eligible sites) participating and collecting clinical data on 8013 admissions [7]. Reports on performance at individual hospital level were sent to participating clinicians and their hospital managers. Summary reports were published on the RCP web site and were open access [8]. Clinicians involved in the audit group leading the programme led presentations and discussions of data at regional meetings across the UK and presented at the European Respiratory Society and American Thoracic Society meetings. Key findings from this audit were the massive variations in clinical practice that existed between different hospitals against the national guidelines. There was particular concern about the poor outcomes for patients treated with NIV compared to the RCT evidence that provoked much debate [9].

Enthusiasm for clinical audit amongst clinicians remained high, and using the data from the audit the RCP and BTS now linked with the main patient support group for COPD in the UK, the British Lung Foundation, to make a further financial bid this time to the Health Foundation for a second audit round including a change management intervention linking clinical teams in two different hospitals to share good practice and innovation in service delivery. The 2008 audit, like the audits of 2001 and 2003, was an iteration of the previous data collection rounds informed by practical issues and the challenges of the clinical findings. Greater emphasis was placed on auditing the clinical pathway for acidotic hypercapnic patients in an attempt to understand the findings of the 2003 audit. In recognition of the partnership with the BLF and the movement of care from hospitals into the community that was prevalent in the UK at that

time, a survey of the experience of patients admitted to hospital was also included in the audit as was a survey of general practitioners who were asked about the care of the same patients in the run up period to their admission. Data were now being collected across the patient pathway in a major extension of the previous audit programme. The findings were remarkable with confirmation of wide variations in clinical practice and high levels of mortality and readmission rates [10] despite the publication of a new set of national management guidelines [11]. Detailed analysis of NIV outcomes revealed widespread use beyond the criteria derived from international RCT evidence prompting the development of national guidelines for NIV [12].

In particular the audit highlighted;

1. A high percentage of patients meeting the criteria for NIV did not receive it.
2. NIV was the ceiling of treatment in many patients who died and did not receive IMV.
3. Many of the patients receiving NIV were very acidotic and beyond the inclusion criteria of the RCTs.
4. Some patients with a pure metabolic acidosis received NIV inappropriately.
5. Many patients were not treated in a ward area with well trained staff.
6. A few centres still did not offer NIV.
7. Many centres were unable to provide NIV to all patients who needed it.

As a result of these findings specific national guidelines for the management of acidotic hypercapnic respiratory failure in COPD patients were developed [13].

The results of the study at individual hospital level were again distributed to clinical participants and hospital chief executives with a brief summary of findings and action points. Summary reports of each of the separate audit elements, e.g. hospital clinical, patient experience, resources and organisation, etc., were written and posted on the three lead organisations' web sites [14]. A patient-friendly summary was distributed to patients, and reports were disseminated to senior government ministers and civil servants with responsibility for COPD care. An official launch of the reports was made at the Houses of Parliament with Minister of Health a key speaker. The Clinical Audit leads were granted meetings to discuss national results with the four Medical Directors of the devolved countries of the UK: England, Northern Ireland, Scotland, and Wales. Within a short time the headline results had challenged the Department of Health to act and a series of working parties were established to exa-

mine COPD care in England and Wales and separately in Northern Ireland and Scotland where responsibility for health care was devolved to local ministers. Regional meetings were arranged by the Department of Health where members of the audit team presented regional results highlighting variations across hospitals and the overall high mortality, length of stay, and readmissions whilst emphasising the really good clinical practice and service innovation that existed in some locations.

As a result of this gathering awareness of the importance of COPD in terms of its prevalence and impact on the health service resources and of course on the morbidity and mortality amongst patients concern and debate was translated into action. In 2010 the National Institute for Clinical Excellence (NICE) produced revised COPD management guidelines [15], and in 2011 NICE launched a series of COPD quality standards designed to translate the management guidelines into practical standards to be achieved at local level [16]. Later that year the Department of Health in England and Wales followed the strategies released by the Departments of Health in Northern Ireland and Scotland and produced the COPD and Asthma Clinical Strategy that outlined the strategic direction that care for COPD as a long-term condition should take [17]. In 2012 the Department produced a commissioning guide [18] to support those who contract for COPD services, in order to understand what type of service should be provided for COPD patients and what outcome measures should be used to monitor the success of those services. All of these documents widely reference the national COPD audit programme, citing evidence from the data collection to support the recommendations that define minimum standards and outcome measures. Whilst it is clear that the national audit programme alone cannot take all the credit for this major shift in government policy in placing huge emphasis on COPD care standards, there is no doubt that without the audit programme the impetus towards COPD would have been much weaker and undermined by the lack of credible clinical data upon which to base a policy.

To bring this account up to the current position the RCP/BTS/BLF has now joined with the Royal College of General Practitioners and was awarded a contract of GBP 3,000,000 (EUR 3,774,000/PLN 15,334,000) to deliver a COPD audit programme over 5 years that will now put greatest focus on care delivered in the community by general practice whilst continuing to collect data on patients admitted to hospital with exacerbations, and new for this round, data on the quality and outcomes of pulmonary rehabilitation programmes. Throughout all these elements of

audit will be an emphasis on the patient experience of health care. The task is enormous: to enrol over 90% of general practices with a longitudinal data collection of all COPD patients registered in those practices and to provide data on over 95% of all hospitals! Whilst we pale at the thought of the task ahead we can only marvel at the change in priority COPD now has when 15 years ago we were unable to source GBP 1 (EUR 1.26) from the government yet we now have a five-year programme fully funded and commissioned by those who oversee our national health service!

Conflict of interest

The author declares no conflict of interest.

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