The role of the practice nurse in the management of chroni obstructive pulmonary disease (COPD

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ABSTRAC

Aim
To assess the range of activities performed by practice nurses i COPD management and their training for these tasks

Methods
A postal questionnaire was sent to the nurse with prim responsibility for respiratory care in 179 practices in Cornwall an Southwest Devon

Results
The response rate was 64%. Spirometers were available in 64% o practices (range 0-6 per practice). Of these, spirometry wa performed by nurses alone in 72%; in 44% spirometry wa performed less than once a week. Spirometry was used for diagnosi in 91%; monitoring in 87% and screening asymptomatic smokers i 45%. Reversibility testing was performed by 61% of the practices Formal training in spirometry had been undertaken by 52% informal training in 41% and none in 7%. They would like to se the development of one-stop COPD clinics, support from specialis nurses and pulmonary rehabilitation, preferably based in th community.

Conclusio
Nurses face many problems managing COPD in general practic including equipment, training and professional support

Keyword
Practice nurses, Primary Care, Questionnaire, Chronic Obstructiv Pulmonary Disease

Introductio

COPD is a common respiratory disease with hig morbidity and mortality [1] the direct health servic costs are enormous, estimated at over £300 million i 1996 with indirect costs estimated at £630 million [2] The disease affects 20% of smokers with relentles progression [3] damage to lung tissue is often sever with considerable debility, before medical advice i sought. Accurate diagnosis at an early stage with goo management of patients can prevent or reduce th lung damage [4]

Primary Care is well placed to deal with COPD give the scale of the disease burden, however it appear that COPD has been neglected in the past. With th publication of guidelines from the British Thoraci Societ [1] clearly outlining the optimum managemen of COPD, many practices are offering new services t their patients. What is not clear is how widely th recommendations for diagnosis and management o COPD are implemented in practice

Diagnosis of COPD can only be made wit spirometry [1] but many practices do not own spirometer [5,6] In those that do, it is often under use and training inadequate. There may be problems fo GPs and nurses interpreting the results. Reports an feedback on use of spirometers often come fro enthusiastic practices and may not reflect accuratel the general picture [7,8] Previous papers hav demonstrated problems with training and support fo staff using spirometry [6,9,10] Reversibility tests ar useful in excluding asthma from COPD and t establish if drug treatment is likely to be beneficial Data are lacking on the actual methods used i primary care to measure reversibility and th interpretation of the results.

Practice nurses are taking an increased role in chroni respiratory care [11] The aim of this survey is t examine their role in the diagnosis and managemen of COPD in South West Devon and Cornwall. We als sought to establish the problems nurses encounter i this role and the future developments they felt woul be most beneficial

Method

Subject
The practice nurse with prime responsibility fo respiratory management was identified by telephon calls to the receptionist or practice manager in ever practice in the South West Devon Health Authorit area, (including Plymouth and Torbay), and in th Cornwall and Isles of Scilly Health Authority Area This named individual (one per practice) was sent postal questionnaire.

The Questionnaire
The questionnaire was produced by th multidisciplinary research team in conjunction wit four consultants in respiratory medicine and include sections on the activities of the nurse in asthma COPD and spirometry. The survey was assessed an amended in two pilot studies outside the study are before it was approved for distribution
The questions included :

- If the practice owned a spirometer, who used it, how often and what training had the operator received?
- If and how reversibility testing was performed
- The nurse's knowledge and perceived usefulness of BTS guidelines1 in the care and management of patients in primary care
- The direction of future developments of services for COPD management that would be mos important to improve the levels of care
- A general comments section

Practices that did not respond to the questionnair were telephoned by the research practice nurse (KH

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and asked if 'in house' spirometry was offered. Th response rate for this question was therefore 100% Where other responses were unclear the nurse wa telephoned for clarification

Result

The postal response rate to the questionnaire was 64%

Access to Spirometr
The survey showed that 66% of the responding nurse had access to a spirometer. The non-responders wer telephoned and of these 61% had access to spirometer, this gave an overall percentage of 64% o all practices in the South west with at least on spirometer, with a range of zero to six per practice. wide range of spirometers were employed, th majority (89%) were able to produce a spirogram with 70% able to store and interpret electronic results.

Two practices had yet to use their spirometer and i 44% spirometry was performed less than once pe week, a further 33% had used it less than 50 times i total. Practices without in-house spirometry usuall referred patients to a hospital consultant, but only 5 had direct access to hospital spirometry

The Operator
Spirometry was performed within the practice by 72 of nurses alone, by GPs alone in 9%. Twenty-seve percent of the nurses had undergone formal training i the management of COPD, leading to a diploma o equivalent; the National Asthma Training Centr COPD course being most frequently attended, (80% o those with a qualification). Formal training i spirometry had been undertaken by 52% of respondin nurses, informal training by 41% and no training b 7%. Spirometers were used by staff with no forma training in 25% of practices.

BTS guideline
The BTS guidelines were very familiar to 62% of th

Table One- The way forward: nurses' views on the importance of som proposed future developments (percentage of responders in brackets

	Unnecessary	Not importan	Important	Essentia
Direct access to spirometry in a DG	23 (22%	30 (29%	40 (39%	9 (9%
Direct access to spirometr in the communit	12 (11%	18 (17%	45 (43%	31 (29%
One stop clinic in th district hospita	11 (10%	19 (18%	59 (56%	17 (16%
One stop clinic in th community	2 (2%	11 (10%	56 (52%	39 (36%
Respiratory specialist support nurs	0 (0%	9 (8%	50 (45%	51 (46%
Acute assessment uni for patients with exacerbation	1 (1%	3 (3%	43 (40%	60 (56%
Pulmonary rehab in the district hospita	4 (4%	14 (14%	52 (51%	32 (31%
Pulmonary rehab in the community	1 (1%	2 (2%	51 (48%	53 (49%

hurses responding, quite familiar to 23% and not at al familiar to 13% of nurses. The vast majority of thos who were familiar with the BTS guidelines foun them quite useful (61%), 36% very useful and 3% no at all useful

Application of Spirometr
Spirometry was used for diagnosis of respirator disease in 91%, monitoring in 87% and screenin asymptomatic smokers in 45%. However, only 61 used reversibility testing with a wide range of method being employed

The way forward
A range of proposals for future developments t improve services for patients was rated in importanc by the responding nurses (see table one). Of these community based options were preferred to Distric General Hospital (DGH) services. All of the option were considered to be important, particularl community based rehabilitation, 97% of nurses rated i essential or important with 96% rating an acut assessment unit for patients with acute exacerbation as essential or important

Feedback
A total of 47 written comments were received The main groups of comments are listed: (Frequenc of specific comments in brackets)

- Time limitations: nursing hours inadequate fo workload (4 times
- Frustration: unable to manage COPD effectively according to BTS guidelines (9 times)
- Spirometry not performed often enough to keep skills current. (4 times
- Lack of confidence in technique and results (times).
- Training often too limited, not relevant to primary care (twice)
- Relevant training and updates necessary for both nurses and GP's, this is dependent on time (twice) funding (twice) and area (3 times), rural practices may be at a disadvantage.
- Professional isolation (twice)
- Need more support from GP's (twice)
- Enthusiasm to provide the service in general practice (3 times)
- Used to excellent effect with smokers (4 times)
- Reduction of anxiety and travel for patients (times)
- COPD management was not nurse led in some practices (3 times)
- The development of open access spirometry, pulmonary rehabilitation with rehabilitation in th district general hospital for oxygen dependent patients (once)
- It appears that as COPD care is initiated in practices, nurses are developing their skills, ofte financing the training and in their own time (once)

Discussio

Response to the questionnaire was 64%, there is possibility of a response bias, as enthusiasti

respiratory nurses may be more likely to respond However, telephone enquiries showed that non responders had a similar rate of spirometer ownershi to responders indicating little evidence of respons bias

Spirometry has been encouraged in primary care as technique to clarify respiratory disorders, provid appropriate diagnosis and hence decide on treatmen and prognosis [2]. Successive surveys show that mor practices are purchasing spirometers: in 1998 Dowso reported 21% of 84 practices in North Staffordshir owned a spirometer [5] and in 1999 Rudolf reporte 62% ownership in a geographically representativ national sample [6]. However in practice they have bee employed with little planning.

Spirometry in primary care is uncoordinated an disorganised. The ownership of and access t spirometers in primary care practice appears extremel unbalanced with one third of practices without spirometer and others owning up to six. Those who d own one are mostly under using it, and there is no enough time or support for the nurses who are using it One nurse commented "COPD is a neglected area bot educationally and financially. Spirometry an management of COPD has been dumped in practic nurses' laps without providing any formal training o support". Thus hard earned resources are being waste on expensive spirometers.

Training is critical to reliable outcomes i spirometry [9], however staff without formal trainin often perform spirometry (25% in this study). A COPD care is initiated in practices, some nurses ar studying for additional qualifications in their own tim and are financing the training themselves. It wa apparent from the survey that some nurses wit appropriate training were still under confident due t lack of practice with new techniques and equipment Some, who have obtained training and ar enthusiastic, are unable to use their new skills becaus of practice priorities and become demoralised. On nurse said "I feel that I could be doing so much mor for my patients. Some of them have so man symptoms but seem to be on the maximum treatment I feel very frustrated".

There is little or no quality control on the accuracy o the results and real problems with interpretation. On important example is in making a diagnosis of COPD 91% of nurses stated that they used the spirometer fo diagnosis, only 61% were doing reversibility test which are essential for separating asthma from COPD.

As nurses take on new tasks it is obvious that withou extra hours and adequate funding being available, the are unable to offer a quality service. A nurse wrote " have the skills to diagnose and manage COPD patient but my time is completely filled with other practic duties. We do not have a spirometer at the momen and I feel there would be no point getting one a work-load is already at breaking point". As ne directives such as the National Service Framework fo coronary heart diseas [13] compete for already stretche nurse time, there is little room for optimism. Practice that do employ nurses for high quality COPD car may be at a disadvantage financially when practic staff allocations are rationed.

To address the practice nurses' problems in COP management, primary care trusts could provid respiratory specialist nurses to work with primary car and provide 'one stop' clinics. Where there ar enthusiastic, successful practices they should b nurtured and financially supported. Such a system wil provide expert nurses, with high quality equipmen and will support and educate both primary care staf and patients. All spirometry in primary care should b subjected to audit and quality control. ■

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Editors Note
This paper was peer reviewed for another journal hence the very short lead-time

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