Asthma diagnosis in primary care and the need for change

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I come with ...
Reminders

- Overdiagnosis is not the main problem in asthma care
- Underdiagnosis and delayed diagnosis are also a problem
- There is much avoidable morbidity (suffering) due to asthma
- We still have avoidable asthma deaths
In 2015 ...

Asthma deaths in England and Wales hit highest peak for 10 years

The Office for National Statistics (ONS) has revealed new data today which shows an increase in the number of asthma related deaths in England and Wales in 2015.

The annual death rate statistics show that 1,302 asthma deaths were recorded, which is a 17% increase in the number of asthma related deaths since 2014. The figures also show the highest number of deaths due to asthma in over ten years.

The statistics are presented by sex, age and area of residence and show that women aged 65 or over make up nearly 56% of all asthma deaths registered in 2015.
Setting the scene

- Diagnosis and management of asthma takes place predominantly in primary care in the UK.

- Diagnosis of asthma is a complex process involving careful clinical assessment and reassessment, physiological tests of airways obstruction and reversibility of obstruction with time or treatment, assessment of symptomatic response to treatment.

- Other tests (eg FeNO, bronchial challenge testing) may be helpful but are not widely available in primary care.

- No single test can currently be relied on for asthma diagnosis.

- Asthma can and does resolve and recur, some times over long time periods.
Problems

- No gold standard test for asthma
- Variable quality of training of primary care clinicians in respiratory diagnosis
- Time pressures in primary care consultations (10 minute appointments) – a resource issue
- Rush to diagnosis
More problems

• Delegation of ongoing asthma management to non-physicians, not always with appropriate training – reducing likelihood of diagnostic review and step-down

• Under valuing of peak flow charting by clinicians and by guidelines

• Problems with availability of quality assured diagnostic spirometry and of timely access to specialist services

• Financial constraints on health care systems – currently acute in UK
What is the extent of misdiagnosis of asthma?

- Significant but (in the UK) unmeasured
- Intrinsically difficult to measure because of the difficulty in gold standard diagnosis
- Misdiagnosis more common in children under age 5 (viral associated wheeze et al.) and older adults (COPD et al.) – and misdiagnosis is not confined to primary care
What about Canada?

- Reevaluation of Diagnosis in Adults with Physician Diagnosed Asthma
- Aaron S.D et al JAMA 2017; 317(3):269-279
- Prospective multicentre cohort study 2012-2016, 613 adults (mean age 50) with physician diagnosed asthma in the last 5 years received careful diagnostic assessment and monitored withdrawal of treatment – 1 year follow up
- 32% of subjects judged eligible for the study did not take part
Key findings

- Asthma confirmed in 410/613 – mainly by positive bronchial provocation testing
- Asthma ruled out in 203 (33%)
- Asthma medications used daily by 49% of those with confirmed asthma and 35% of those in whom asthma was ruled out
- Of the 203 with asthma ruled out, 68% were diagnosed by family physician or ED, 31% by specialist physician
Take Home Messages?

- 33% of randomly recruited adults with an asthma diagnosis in the last 5 years in Canada had no evidence of active asthma on testing.

- 90% of these had medication safely withdrawn without recurrence over 1 year of follow up (35% had been taking daily treatment).

- Guideline advice to keep asthma diagnosis under review and step down treatment in the asymptomatic person is well founded.

- Significant resource wastage is attributable to misdiagnosis.
Adverse consequences of misdiagnosis

- Delay in access to effective treatment for asthma
- Delay in identification of less common and more serious respiratory conditions
- Resource wastage on and adverse effects of unnecessary treatment
- Inappropriate illness labelling – “overdiagnosis”
A definitive test for asthma..

- Have we got one? : no

- Will we get one? : possibly – over to you

- If a well trained and experienced clinician, after conscientious assessment over a period of time, says you have asthma, you very probably have asthma
What is to be done?

- Education: better undergraduate and postgraduate training of doctors and nurses in respiratory diagnosis (e.g., PCRS UK Diagnosis Campaign and Primary Care Respiratory Academy)
- Reminding clinicians of the key messages around diagnosis, review of diagnosis and step-down
What is to be done?

- Organisation of care: improving time available for clinicians, better resourcing of primary care, improvements in the clarity consistency and practicability of guidance, ready access to quality assured diagnostics and specialist assessment where needed.
What is to be done?

- Research: advances in the basic science of diagnostic tests and in the implementation science and health economic analysis of their role and sequencing
Thank you

• Questions?