HEALTH FACTSHEET
Socio-economic factors and COPD

Background
- Chronic Obstructive Pulmonary Disease (COPD) is a respiratory disease characterised by airway obstruction - causing patients breathing difficulties. It is progressive and not reversible.
- COPD patients are at risk of their symptoms becoming suddenly worse and thus needing admission to hospital.

What factors increase the risk of developing COPD?
- Smoking is the most important factor increasing the risk of developing COPD, but not all smokers develop COPD and there are many other factors.
- Factors relating to the individual include:
  1. airway hyper-responsiveness
  2. genes
  3. age
  4. gender
- Factors relating to the environment and exposure, other than smoking, include:
  1. occupational dusts and chemicals
  2. indoor and outdoor air pollution
  3. infections
  4. socio-economic status

How is COPD distributed in England?
- Postcode districts in southern England tend to have lower COPD admission rates than the north.
- Rural postcode districts tend to have lower COPD admission rates than urban.
- Postcode districts along the southern coast, with higher proportions of older people, have higher admission rates.

What are the socio-economic factors?
- Socio-economic status may be measured by occupation, education, income or other indices of social class. These are all related, but are independently associated with variation in risk of developing COPD.
- People in occupations that expose them to harmful particles are at a higher risk of COPD. Manual workers have a higher risk, independent of smoking habits.
- Lower educational level; lower social class, and household crowding are associated with higher rates of respiratory disease.
- Poor diet increases the risk of developing COPD. Consumption of fresh fruit and vegetables is associated with lower rates of respiratory disease in children and adults.

How the Met Office uses this information
- Work commissioned by the Met Office has confirmed that these factors do explain the distribution of COPD in England, but an index based on variables in the 2001 Census performed even better.
- The Met Office has developed a model to forecast the risk of COPD admission. We will use our understanding of socio-economic factors to predict the behaviour of different areas, and to target anticipatory care to reduce the risk of admission.

How you can use this information
- The NHS and the Met Office have jointly produced a leaflet on ‘Health forecasting for COPD’, with simple advice for COPD patients about how to avoid worsening symptoms. The leaflet is easily available from the Met Office.
- Stop smoking. Call the NHS Smoking Helpline on 0800 169 0169.
- Eat well and keep physically active.
- Be aware of air pollution, indoors and out. Contact your Health and Safety advisor at work, to check that you are not exposed to harmful particles.

Further information
Health Forecasting at the Met Office
www.metoffice.gov.uk/health

Contact the Met Office:
health@metoffice.gov.uk
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Distribution of COPD in postcode districts in England

Data sources: Hospital Episode Statistics; 2001 Census.