Air Pollution Officers and Public health working together to improve Public’s Health

John Newington, Senior Air pollution Officer and Malti Varshney, Consultant in Public Health
Kent’s population
Commissioning Responsibilities

- Clinical Commissioning Groups
- National Commissioning Board (Local Area Teams)
- Public Health England
- Local Authority (Upper Tier)
- Role of Health and Wellbeing Board
- Role of Health Watch
Health Inequalities result from social inequalities.
Kent and Medway Air Quality Partnership

• Network formed in 1992 to help authorities meet their obligations under Environmental regulations.

• Maintain accessible database of robust measurements.

• Promote the improvement of air quality within the region.
Air Quality In Kent and Medway:

LAQM Situation

Particulates
• Some historic AQMAs but no current exceedences of PM10

NO$_2$:
• Extensive exceedences of Annual Air Quality Objective
• Increasing number of exceedence areas being declared
• Area wide AQMA declaration becoming more prevalent
• Several areas under investigation for exceeding hourly objective

Local Pressure on Air Quality function

• Reduction in monitoring stations
• Increased workloads on Environmental Health teams with limited extra resources
• Shared Service provision
• Two Tier status in Kent
Our Route to Partnership

• Engagement
• Open Discussion
• Data
• Future Planning
• Outputs – Products
• Communication
Health Sub Group:

Mission Statement

Seek to raise the awareness of the impacts of Air Quality on Health to both the general public and health professionals.

This will be delivered by developing supporting material and attending networking events in order to communicate both the health and financial benefits that improving air quality can deliver and influence beneficial change.
You May Know – But did you know

• Costs of alcohol misuse to society is estimated at £12-£18 billion per annum
  • Cost of poor air quality are comparable with the cost of alcohol misuse

• Cost of physical inactivity to society is estimated at £10.7 billion per annual
  • Cost of poor air quality to the UK is almost twice that of physical inactivity

• In 2007/2008 there were 74,000 emergency admission to hospital because of asthma & is estimated to cost society £2.3 billion per annum
  • Poor air quality exacerbates asthma in those already having the condition and has been shown to induce new cases of asthma amongst those living close to busy roads with a lot of lorry traffic.

• Air quality probably causes more mortality and morbidity than passive smoking, road traffic accidents or obesity.

Particulates & Kent:

- 1180 early deaths as a result of **just** PM$_{2.5}$ air pollution across Kent & Medway in 2010

- Estimate calculated using methodology set out in the Committee on the Medical Effects of Air Pollutants (COMEAP), ‘Estimating the mortality burden of particulate air pollution at the local level’.

![Early deaths in Kent & Medway from PM$_{2.5}$ pollution in 2010](attachment:chart.png)
Local Public Health challenges

- Kent is a big and diverse County, ageing population
- Life expectancy is 8.2 years lower for men and 4.5 years lower for women in the most deprived areas of Kent than in the least deprived areas.
- Levels of breast feeding initiation and smoking in pregnancy are worse than the England average.
- Estimated levels of adult 'healthy eating' and obesity are worse than the England average.
- The rate of hip fractures is worse than the England average.
Slope index for life expectancy in Kent & Medway, 2009-2011
Men and women

Life expectancy at birth

Percentage of population ranked from high to low deprivation

SII = 5.6 years

Decreasing deprivation
### Local Picture

<table>
<thead>
<tr>
<th>Clinical commissioning group</th>
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<tbody>
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<td>NHS Ashford CCG</td>
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<tr>
<td>NHS Canterbury CCG</td>
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<td>4.6</td>
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<tr>
<td>NHS Dartford, Gravesham and Swanley CCG</td>
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<td>5.8</td>
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<tr>
<td>NHS Medway CCG</td>
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<td>NHS Thanet CCG</td>
<td>79.4</td>
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<tr>
<td>NHS West Kent CCG</td>
<td>82.3</td>
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<tr>
<td><strong>NHS Kent &amp; Medway</strong></td>
<td><strong>81.1</strong></td>
<td><strong>5.6</strong></td>
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Findings from urgent care needs assessment

Number of conditions experienced by band 1 patients with long term conditions in West Kent, 2010/11

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<th>Condition</th>
<th>0%</th>
<th>10%</th>
<th>20%</th>
<th>30%</th>
<th>40%</th>
<th>50%</th>
<th>60%</th>
<th>70%</th>
<th>80%</th>
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Percentage of patients with each condition who has other conditions

- Blue: This condition only
- Red: This condition + 1 other
- Green: This condition + 2 others
- Purple: This condition + 3 or more others
Michael Marmot’s Strategic Review of Health Inequalities in England post-2010 highlighted an unambiguous social gradient in health.
Kent Health and Wellbeing Strategy

• Four priorities
supported by

• Three
approaches
Aimed at delivering

• Five key
outcomes
Four Priorities

• Tackle areas where Kent is performing worse than the England average
• Tackle health inequalities
• Tackle the gaps in provision and quality
• Transform services to improve outcomes, patient experience and gain value for money
Three approaches

• Integrated Commissioning
• Integrated Provision
• Person centred
Five outcomes

• Every child has the best start in life
• People are taking greater responsibility for their health and wellbeing
• The quality of life for people with long term conditions is enhanced and they access to good quality care and support
• People with mental ill health issues are supported to live well
• People with dementia are assessed and treated earlier
Local Action

Working in partnership to develop action plan that will have co-benefit on health, climate change and the economy
Governance

Components of Health Inequalities Action Plan

Marmot Life-course approach

JSNA

Local strategies and Plans

Kent Health and Wellbeing Board

7 Local Health and Wellbeing Boards

Kent HI Action Plan

CCG HI Plans

District HI action plans

Kent Health and Wellbeing Board

Local Health and Wellbeing Boards

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Kent HI Action Plan

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District HI action plans
Public Health vs LAQM Drivers:

LAQM

• Work towards achieving limit values through LAQM with the main focus on No₂

• Local Strategic Action Plans

PHOF

• 3. 1 Fraction of annual all-cause adult mortality attributable to long-term exposure to current levels of anthropogenic particulate air pollution (measured as fine particulate matter, PM₂.₅)"

• 2.6 Excess weight in 4-5 year olds and 10-11 year olds

• 4.4 Mortality from all cardiovascular diseases (including heart disease and stroke)
K&MAQP role in this two tier authority partnership

1) Continued early engagement in County strategies and action plans.

2) Continued development of research and data collection projects to ensure network is fit for purpose now and into the near future.

3) Development of promotional toolkits/outputs – extend the groups sphere of influence: access to presentations, publication of posters, engagement with schools, engagement with business.

4) Co-ordination of grant applications:
   - KCC led electric vehicle grant application to OLEV
   - MBC, TMBC, KCC, Arriva & KCC Public Health Bus retrofit project to Defra
   - Life +
Governance

K&MAQP Interventions

Components of Health Inequalities Action Plan

Marmot Life-course approach

JSNA

Local strategies and Plans

7 Local Health and Wellbeing Boards

Kent Health and Wellbeing Board

Kent HI Action Plan

CCG HI Plans

District HI action plans
Health Sub group achievements to date

• Attendance at South East GP Sustainability Awards Nov 2012

• Presented at the Kent Environmental Health Managers Group (June 2013)

• Engaged directly with 5 out of the 8 CCG

• Presented at South Coast Health and Wellbeing Board

• Poster at Annual Public Health Conference (Sept 2013)

• Developed a strong and mutually beneficial working partnership.
References

- Mind the Gap, Building bridges to better health for all: Kent Public Health Observatory, [http://www.kmpho.nhs.uk](http://www.kmpho.nhs.uk)
- Kent Health and Wellbeing strategy, [www.kent.gov.uk](http://www.kent.gov.uk)
- Julian Barlow, Kent Public Health Observatory
Thank you and any Questions?

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