Respiratory medicine 2020 – High Quality, Low Carbon

Richmond House, Department for Health. 23 March 2012

**Meeting Note**

**SECTION 1: PRIORITY AREAS IDENTIFIED FOR ACTION**

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| SUSTAINABLE HEALTHCARE PRINCIPLE | PRIORITY AREA | OPPORTUNITIES |
| Prevention | Smoking cessation | -Training programmes for hc professionals and non-hc groups;  -Frame smoking cessation as treatment (vs lifestyle intervention) |
| Prevention | Air quality | -Respiratory voice re climate change (affecting ground level ozone) and transport emissions  -Influence transport policy |
| Self care | Pulmonary rehabilitation: access & uptake | -Carbon cost-benefit analysis of pulmonary rehab;  -Increase awareness (primary care, patients)  -Increase capacity (commissioners) |
| Self care | Pulmonary rehabilitation: behaviour change support | -Develop case study (Cambridge);  -Engage patients: do they value sustainability agenda? |
| Lean systems | Discharge care bundles | -Sustainability cost-benefit analysis;  -Develop case study |
| Lean systems | Emergency department care | -Discharge bundles in ED  -Emergency packs for repeat exacerbations (equipment reuse)  -Respiratory team active in ED |
| Lean systems | Early detection | -Community-based physicians (health economic analysis)  -Primary care education |
| Lean systems | Use of inhaled steroids in mild disease |
| Lean systems | Improved targeting of specialist care |
| Lower carbon treatments / technologies | Dry powder inhalers (DPI) | -Raise awareness of CO2e impact of DPI vs MDI (engage patient groups early on)  -Change local formularies |
| Lower carbon treatments / technologies | Inhaler recycling | - Replicate Portsmouth recycling scheme, raise awareness |
| Lower carbon treatments / technologies | Oxygen | -Clarify carbon impact (including concentrators vs cylinders)  -Gauges to display how much left in cylinders |
| General | Carbon cost accounting | -Set up carbon analysis/retrofit service for innovations in care  -Publicise guide carbon costs for common Rx / bed-days etc |
| General | Incentives & culture | -Create green accreditation scheme for innovations in care  -Work with QOF/ commissioners  -Work with guideline groups around patient pathway |
| General | Communication | Vignettes/stories displayed along patient pathway |

**SECTION 2: NEXT STEPS**

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| ACTION | BY WHOM | By WHEN |
| Establish online network (CSH to sign up attendees, all to create own profiles, all to circulate link to interested contacts) | CSH | End March |
| Share ppts | CSH | End March |
| Agree Summit summary statement | All  (Frances) | April 17th  (draft April 10th) |
| Disseminate summary via own networks | All | asap |
| Feed back on priorities for this year | All | April 20th |
| Set up Advisory Group | CSH | April 20th |
| Advisory group first telephone meeting | CSH | May – date TBC |
| Prepare press release/article for BTS News and other channels | CSH (Toby and others) | 27 April (BTS News copy deadline) |
| Thorax article | Toby to coordinate | End May |
| Funding for 2013 & 2014? | All – CSH to coordinate | May 2012 for 2013 |
| Coordinate actions from list above | Rachel and Frances | End May |

**SECTION 3: ATTENDANCE**

**Present**

Angshu Bhowmik, Geraldine Cunningham, Robert Winter (Chair), Derek Chase, Noel Baxter, Lindsey Hayes, Toby Hillman, David Pencheon, Sarah Elkin, Nicholas Hopkinson, Jennifer Quint, Jonathan Fuld, Mark Rhodes, Marcel de Jong, Tim Harris, Lucy Bramwell, Mark Starr, Frances Mortimer, Deon Louw, Rachel Stancliffe.

**Apologies**

Sue Hill, Helena Shovelton, Muir Gray, Steve Laitner, David Robinson, Kevin Holton, Steve Holmes, Sian Williams, Mike Ward, Patrick Flood, Irem Patel, Graham Burns, Vince Mak, Samantha Prigmore, Simon Bourne, Jonathan Shapiro, Chris Cates, James Smith, Ashley Woodcock, Catherine Max, David Long, Louise Restrick, Hannah Slack, Sarah Kearney, Sasha Wilson, Donna Caslin, Karen Ashton, Dr Craig Davidson, Gillian Lowrey, June Roberts

There is a full list of invitees with positions and contact details available from CSH. We will use the Sustainable Respiratory network to communicate as a group: <http://sustainablehealthcare.org.uk/sustainable-respiratory-care>

**SECTION 4: MINUTES**

SESSION 1: CONTEXT

**1. Welcome from Chair   
Dr Robert Winter, National Clinical Director for Respiratory Disease**

The task for the meeting is to set the vision for sustainable respiratory care. This is an exciting and fast-moving agenda. It is notable that forward moving organisations are now including sustainability in their business plans. In addition, there are very immediate links between respiratory health and air pollution, which is directly linked to climate change.

Our aim is to map out a future, to see how the respiratory agenda overlaps with the sustainable agenda – for example, providing care closer to home, creating integrated, patient-centred care pathways. We have an opportunity to model a paradigm of care for the 21st century, one which is better for patients and better for care.

Healthcare has a responsibility not to follow but to lead on carbon reduction; respiratory medicine should be at the forefront.

**2. Climate change and the low carbon future of healthcare  
Dr David Pencheon, Director, NHS Sustainable Development Unit (SDU)**

(Introduced the SDU as a policy unit, whose work is complemented by the clinical/implementation-based programmes of the Centre for Sustainable Healthcare, CSH).

Climate change is here, is now. Health must be seen to act - to live out the Hippocratic Oath on a huge scale. NHS care should be: high quality, financially and environmentally sustainable (the “triple bottom line”).

Opportunities for immediate benefits from acting now – to the individual, to health systems, to global/population health. It is not just a ‘nice’ thing to do – it is core business.

The SDU has shown how we can save money and do better for the environment at the same time.

We can learn from poorer countries – e.g. cataract operations for $30 in India. Why don’t we use digital cameras to provide 24 hour remote dermatology service? We don’t lack the technology or the information; we lack vision and courage.

Our goal for this group: develop the networks, clarify the uncertainty, do the research, improve patient care, improve sustainability – and go home knowing we have done our best!

**3. Sustainable specialties – the vision for Sustainable Care and how to achieve it  
Dr Frances Mortimer, Medical Director, Centre for Sustainable Healthcare**

Why work with specialty, not with a Trust? Carbon is due to clinical activity – 65% = procurement, particularly drugs.

What is sustainable clinical care?

1. Prevention
2. Self care
3. Lean service design
4. Low carbon treatments

How do we produce change? An example provided in the Green Nephrology Programme, working for sustainable kidney care. Elements include: SpR Fellowship, survey of local units, network of champions, case library, carbon footprint research. Clinical leadership has been very important.

**4. Sustainable COPD – outline of the programme shape and outputs  
Rachel Stancliffe, Director, Centre for Sustainable Healthcare**

One year’s funding provided by GSK. Initial work has commenced: mapping opportunity areas, scoping carbon footprinting research, engaging key people – including those in the room. Online network is set up and will enable ongoing collaboration. This meeting is to shape priorities for next phase.

**Group Discussion**

Robert Winter: telephone consultation following admission w asthma – Martin Partridge paper

Robert Winter – how to engage the first 15% (early adopters)? – Frances: align with clinical agendas, be practical

Jonathan Fuld – what are the opportunity areas in respiratory medicine, equivalent to dialysis? Need an early gain. (Smoking, MDIs, avoiding exacerbations?)

Noel Baxter – where is this visible/accessible to people? Should be on the QOF menu – little green tick, awards, visible rewards

David Pencheon – we are working to get this into lots of places – eg Tomorrows Doctors, CCGs, Getting people to appreciate that this is a dimension of quality.

Nick Hopkinson – one of the main problems is unmet need – if this is rectified it could lead to MORE carbon emissions

Robert – opportunity to really remap care, cut out steps that are no longer needed – around the country – Imperial, Whittington, Southend etc - respiratory consultants appointed out of hospital in the community – this is the future. This programme is a contributor to the complete redesign of our services. Need proper economic evaluation – eg LSE.

Mark Starr – common theme: need integration of sustainability into processes, including financial accounting.

Robert - Metered dose inhalers (MDIs) vs dry powder inhalders (DPIs) – MDIs use propellants which are potent greenhouse gases. Can we ask Pharma re relative uptake in UK vs abroad – treatment guidelines in the UK tend to push MDIs?

Mark Rhodes:2/3 in UK on MDI and in EU 2/3 on DPI

Derek Chase – our service is going to switch cost-neutrally next year; clinically DPIs at least neutral

**Key themes emerging / top 5 activity areas:**

* inhaler technology;
* physical activity – Walking Deficiency Syndrome (Muir Gray) – both at population level and among COPD patients;
* smoking cessation;
* efficient treatment of exacerbations;
* oxygen;
* community based respiratory teams (can produce a 20% in bed-days);
* Deon – COPD repeat attenders: give everyone their own emergency pack with nebulisor and mask. Angshu – doing already in Hackney – number of bed days over winter reduced from 570 – 170…
* Early detection: opportunity to prevent progression using smoking cessation and exercise
* Rather than initiating new work, support people to map out the carbon footprint (people could bid to have their innovation evaluated for sustainability / receive green accreditation) – need to look for good examples already going on and provide evidence for them

BOC manage oxygen cylinders – managed badly – discarded with 25% left and then vented by BOC. Robert Winter - £120 million per year contract – reprocured – saved 25 – 30% on cost. Liquid vs gas vs concentrator – new tech for portable. Non-Exec of Health Enterprise East: gauges to give accurate information on how much left in cylinders. Mark Rhodes: Oxygen = bottled electricity

SESSION 2: THE FUTURE: HERE, JUST NOT EVENLY DISTRIBUTED. (RESPIRATORY   
MEDICINE 2020)

**5. Case study: Smoking Cessation  
Dr. Noel Baxter, London Respiratory Group**

COPD not measured in community – approx. 50% of estimated sufferers not registered.

From trial populations, >40% of COPD patients on treatment are still smoking. Perception that smoking addiction is intractable, no point in attempting to intervene. BUT evidence shows that smoking cessation intervention does work and is of high value (patient outcome/ resource input) [*Thorax* 2010, vol 65, 711-718]

Early detection offers opportunity to help patients stop smoking – as a TREATMENT. Change in attitude needed from everyone in contact with patients – support patients to quit. Training packages effective in North East.

Wasted medications due to patients receiving inappropriate treatment in primary care – inhaled steroids overprescribed and stockpiled by patients. No effective communication system back from Pharmacy to GP saying we have unused inhalers…

**6. Case study: discharge care bundles  
Dr. Nick Hopkinson**

Care bundles – group of evidence-based interventions

Pilot of discharge care bundles:

* Info/referral to pulmonary rehab (NNT = 4 pts to prevent one exacerbation)
* Inhaler training (inc staff training – mobile trolley on ward, pharmacist)
* Referral to smoking cessation support
* Patient self-care plan
* Discharge checklist
* Follow-up phonecall at 72 hours to identify those at risk of early readmission

Good multi-stakeholder engagement. Early results show reduction in emergency admissions

**7. Case study: behaviour change support  
Dr. Jonathan Fuld**

Patient self-management support is known to increase self efficacy, leading to self-management behaviours

What works? Motivational interviewing, telephone coaching, self goal-setting, group support

Pulmonary rehabilitation produces health benefits but these are not maintained beyond 1 year with pulmonary rehab alone. Cambridge case study: developed pulmonary rehabilitation programme with embedded behaviour change support. Personal health plan developed with patients.

NB: empowered patient does not necessarily lead to fewer healthcare resources – patients will choose excellent care. Patients will need to value the carbon agenda.

**Discussion:**

Telemedicine – caution re investing in technologies – benefit may come from simple phonecall

Breathe-easy and BLF – self mngt group

Robert – we know a lot about the disease but not nearly enough about the illness as it affects people

**8. How can research help to create more sustainable COPD services?  
Mark Starr, Research Director, CSH**

COPD care:

* Accounts for roughly 1.15% of NHS total CO2e emissions
* Average monetary cost of £2,065.03 per consultant episode
* Average CO2e emissions of 1133.70 kg per episode (over 1 tonne CO2e)
* Plus the hidden elephant:
  + Inhaler hydrofluorocarbons not included in NHS footprint are estimated at 1.744 million tonnes of CO2e (Smith & Tiner 2011)
  + Equivalent to 7% of NHS total

Role of research:

1. Evaluate effectiveness of interventions. If not effective, not sustainable.
2. If effective, sustainability needs to be evaluated as part of bundle of care in local context

NHS move to service line accounting, patient level information and costing systems (PLICS)

* Last year: carbon footprint of COPD care (top down)
* This year: environmental cost accounting for COPD services (bottom up – patient level data)
* Next year: sustainability in the round – economic, environmental, social sustainability of COPD services

**9. Role of the Emergency Department  
Dr Deon Leow**

Emergency Department at centre COPD care pathway: currently acting just as a gate to inpatient care, but could apply discharge care bundles – patient information, smoking cessation support, emergency pack (re-use nebuliser mask). Possibility of respiratory nurse practitioner active in ED?

Close link of environment and health in COPD: therefore policy should be closely linked; sustainable healthcare is a TREATMENT for COPD

**Discussion:**

David – environmental pollution in the US always marketed as a health issue directly;

Importance of implementing existing research evidence vs new research

One of highest incidences of asthma is in nurses – a target area for sustainability? (staff wellbeing)

Lindsay – engaging is a challenge and therefore in terms of engaging everyone it is a long term goal

Visibility of carbon costs to decision-makers: clinicians, commissioners: Derek – put carbon cost of drugs alongside financial cost on GP screens

Angshu – should be more than drugs – should be everything we do/use (done in US and in India)

Nick – need to get better at measuring quality – to balance itemised costing, defend NHS

Tim Harris (Chiesi) – inhalers last for about a month – could they be recycled?

Renewing the message: “prevention is everybody’s business”

SESSION 3: THE FUTURE: NOT A DESTINATION BUT A JOURNEY

**10. Sustainable priorities for industry  
Mark Rhodes, GlaxoSmithKline**

Everything has to be based on numbers –

* Footprint of GSK 14 million tonnes – MDIs are 1/3 of that
* 98% of GSK UK portfolio is respiratory – about 600,000 tonnes
* Measure on a per dose basis
* Footprint of MDI (propellants) 18 times greater than DPI (plastic device and operations)
* Gas 134A used to purge cans
* 227 also used (about 2000 times more than CO2)
* GSK business plan: no new MDIs
* Lower shot weight valves – need to communicate carefully with patients
* Look at new propellants for MDIs
* Recycling inhaler programme also gives opportunity for medicines review with pharmacist – valuable to patient care
* MHRA regulate information on packaging – need to get them on board for sustainability

**DISCUSSION: Priorities / next steps for project (Chair: Toby Hillman)**

[Discussion summarised in SECTION 1: PRIORITY AREAS IDENTIFIED FOR ACTION]

Angshu – priorities quick win: recycle inhalers

Rachel: Can we study the co-benefit of advice given at the time of prescription and/or recycling?

Lobby BLF and BTS, op-ed article in *Thorax*, lead to position statement

BTS news – 27th April deadline for copy

We can help by showing footprint and publishing articles

Are footprints of interventions useful or is it more important to define templates and methodologies for local groups?

Derek Chase - Bringing groups together is very important. Create network of champions

Work with guidelines groups around patient pathway

Create stories (with nurses, patients) along the patient pathway

Tribalism – difficulties of transmitting good practice from one service to another

Use existing networks: Primary Care Respiratory Group, Impress, others

Resources – create easy online resources aimed at different audiences (inc GPs) Angshu

Derek – change prescribing formularies per area re MDIs/DPIs

Pulmonary rehab - Modelling carbon cost benefit

Jonathan Fuld: 10 new pulmonary rehab programmess in Cambridge – undersubscribed. PCTS obliged to commission, but patients not coming (because not diagnosed, not referred – need primary care awareness of COPD and appropriate treatment)

Need: Inhaler technique assessments, reduce wasted doses – more placebo devices, whistles, etc

GSK – providing simple animation videos online for DPI – and more placebo devices

Frances: should respiratory clinicians input into transport policy – effect on air quality (traffic management for Atlanta Olympics reduced asthma attendances: *JAMA*.2001;285:897–905); Example from liver disease – Ian Gilmore work on alcohol pricing policy which has changed public perceptions.

Kings College, John Eyres - air quality difficult because multi-disciplinary.

Policy Reunion smoking ban.

**END**