**CHILDREN, CITIES AND CLIMATE PUBLIC ENGAGEMENT**

Sarah Sharpe, Robert Hughes, James Milner, Rachel Juel, Shunmay Yeung, Roberto Picetti, Paul Wilkinson. London School of Hygiene and Tropical Medicine

**Aims**

Children, Cities and Climate (CCC) is a study led by researchers at the London School of Hygiene & Tropical Medicine’s (LSHTM) Centre on Climate Change and Planetary Health (CCCPH) that aims to understand and communicate young people’s views of their cities and assess the health benefits of improving urban environments. In the run-up to COP26, two pieces of research were carried out: a global survey to understand young people’s views on their cities and air quality where they live, and an analysis modelling the child health co-benefits of radically cutting carbon emissions and air pollution in 16 global cities.

In line with the overall aims of the project, a range of public engagement activities were carried out to:
- Empower young people from diverse backgrounds to become spokespeople for the research
- Inform effective policymaking at national and global levels
- Disseminate research findings to mobilise evidence-based action and work with partners globally to raise awareness about the links between climate change, cities and child health

**Methods**

Public engagement activities carried out alongside the research included:
- The Art of Health Breathe In competition, in collaboration with the Zimbabwe-LSHTM research partnership, which asked young Zimbabweans to submit art/design/music entries on the theme ‘the air we breathe in Zimbabwe’s cities’ (figure 1)
- The air we breathe in our cities: Clean air, brighter futures – a video amplifying youth voices from around the world and featuring Art of Health entries (figure 2)
- An LSHTM Young Scientists Programme workshop on climate, urban air pollution and planetary health
- An event as part of All4Climate – Italy 2021, featuring youth panellists from around the world
- Publication of a preliminary report and distribution of a press release on key finding
- In person and online events and exhibitions at COY16 and COP26
- A social media influencer campaign on TikTok/Instagram to mark World Children’s Day
- A youth engagement campaign in Kenya and Tanzania, led by Shujaaz Inc., CCC’s media partner in East Africa

**Results**

24 articles were published (29 October-12 November), including by top tier international, national and trade media outlets.

Overall reach on social media through LSHTM’s/CCCPH’s Facebook, Instagram and Twitter; the TikTok/Instagram influencer campaign; and youth engagement campaign in East Africa, was over 1000K.

Findings helped inform the COY16 Global Youth Statement; a motion has been put forward in the Scottish Parliament welcoming preliminary findings from the research; and decision-makers have shown interest in using the findings to help inform policies.

**Conclusion**

Public engagement activities ensured that the research was not just about young people but with and for young people. The interest generated through these activities showed that young people feel strongly the issues being addressed. Young people used the scientific evidence to lend weight to their calls for action and shared nuanced views on the topic of climate, cities and health. Communication of research findings was also central to achieving the project’s goal of influencing effective policymaking and mobilising advocacy efforts.

This work has laid the foundations for deeper youth engagement and achieving even greater impact through future research phases.

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**Providing Assessment and Treatment for Children at Home (PATCH); Better for Patients and Better for the Planet**

Katy Rose, Joanna Turner, Natasha King, Megan Corey, Francesca Cleugh. Paediatric Emergency Department, Imperial College Healthcare NHS Trust

**Aims**

Our hospital started PATCH an innovative extension of a ‘hospital-at-home’ service in 2016. The team is made up of
experienced paediatric nurses and aims to reduce short stay admissions and re-attendance at the hospital for moderately unwell children by using phone call reviews and home visits. It also promotes education and confidence in parents to manage common childhood illnesses at home when safe to do so.

The team have gone from strength to strength since conception and acts as an inspiring model of care which is now being taken up by numerous other trusts.

This piece of work aimed to model how this innovative service model has captured the triple bottom line of sustainable quality improvement; improving care for patients (social costs), remaining economically cost efficient and reducing the environmental costs through carbon footprint reduction.1

**Methods** The PATCH service collects monitoring information across core domains to understand ‘what would happen if PATCH didn’t exist’ for each month.

Data exists via the Greener NHS archived service the Sustainable development unit which ascribes a carbon footprint cost in kg to key NHS activities.2

The carbon footprint reduction was mapped to each unit of activity saved

The PATCH Team collect data around their transport activity; this was deducted from the carbon savings of activities avoided to try and provide a more balanced view.

**Results** The figures for this service in a single unit equate to a carbon saving of 2331kgCO₂e!

See table 1.

As the PATCH model expands across the 3 other large local trusts this could save the equivalent carbon of driving a small petrol car from London to Liverpool 126 times.3

### Conclusion

This model of care demonstrated has already proved to be cost effective and received excellent patient feedback4 but this demonstrates that there are also significant potential carbon savings. We must encourage quality improvement and service innovation strategies to embrace the triple bottom line model to ensure social and environmental sustainability is embedded into the NHS model.

### REFERENCES


**Abstract 635 Table 1**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Equivalent Emission (kg)</th>
<th>Carbon Saving (kgCO2e)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Admission to Clinical wards</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Admission to ward available†</td>
<td>27</td>
<td>10.8 CO2e/bed day</td>
</tr>
<tr>
<td>Inpatient ward available†</td>
<td>37</td>
<td>10.3 CO2e/bed day</td>
</tr>
<tr>
<td><strong>Accommodation circles</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accommodation circles available</td>
<td>25</td>
<td>7.3 CO2e/bed day</td>
</tr>
<tr>
<td><strong>Entertainment available</strong></td>
<td>27</td>
<td>10.3 CO2e/bed week</td>
</tr>
<tr>
<td><strong>Attendance available</strong></td>
<td>38</td>
<td>11.9 CO2e/attendee</td>
</tr>
</tbody>
</table>

**Total**

270.1 CO2e/year

**Carbon Saving**

759.8 2331kgCO₂e/year

**Conclusions**

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**REFERENCES**


**Abstracts**

**Aims** Inhalers are a vital treatment in Paediatrics but are also a carbon hotspot within the NHS, accounting for approximately 4% of total emissions.1 This is due to hydrofluorocarbon propellants in metered dose inhalers (MDIs), which are potent greenhouse gases, and the use of plastic materials.

**Methods** Responsible disposal methods include incineration, which avoids remaining propellant gas leaking into the atmosphere at the time the inhaler is disposed of. Recycling initiatives can further reduce the life-cycle impact of inhalers.

**Conclusions** For patients, our project aimed to survey patient and staff experiences in our department to gain a better understanding of how inhalers are currently being issued and disposed of. In our department, patients and staff were surveyed in October 2021 - January 2022. Questions focused on respondent’s knowledge of the environmental impact of inhalers, current disposal methods for spent inhalers and their interest in more responsible disposal practices. The survey was open to all health professionals in Paediatrics. The patient survey was aimed at parents/carers of children who use inhalers in both inpatient and outpatient settings. The surveys were accessed via QR code or link to a Google form. They were promoted using posters and an article on the Trust’s website and social media channels.

**Results** There were a total of 36 staff responses, and 60 responses to the patient survey.

Over 80% of staff respondents were doctors or nurses who regularly prescribed and/or administered inhalers. 61% of staff respondents felt they were not very well informed on the environmental impact of inhalers, and less than 20% said they advise patients on how to dispose of their inhalers. 36% of staff surveyed did not know of any methods for responsibly disposing of inhalers.

Results from the patient survey showed that 48.3% of respondents cared for a child who had been using inhalers for five or more years, but only 10% returned used inhalers to the pharmacy for incineration. Most parents/caregivers (68.3%) were disposing of inhalers in the general waste bin. However, most were open to receiving more information and parents/caregivers would value access to an inhaler recycling point. We plan to run education sessions for staff and update our patient leaflet on how to dispose of inhalers safely via incineration by returning to a pharmacy. We are in discussion with waste management and aim to install an inhaler recycle point in our department.

**REFERENCES**