

global action plan

OUR LIVES. OUR PLANET.

Educating Islington health professionals for action on air pollution

Insights report – November 2022

Funded by DEFRA and the London Borough of Islington

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Executive Summary

The Educating Islington Health Professionals for Action on Air Pollution project demonstrated that General Practitioners (GPs) are effective emissaries for information on air pollution, both to their colleagues and members of the public, including patient groups vulnerable to the health harms of air pollution. The project was funded by the Department for Environment, Food and Rural Affairs (DEFRA), and the London Borough of Islington. The project was a collaboration between Global Action Plan (GAP) and the London Borough of Islington, running from April 2021 to December 2022.

The project provided online teaching on the causes and health impacts of air pollution to 17 healthcare practitioners (champions) across the borough working in GP practices. Co-design workshops with GPs and other health professionals provided insight into the structure, content and design of the teaching sessions and materials for patients. Physical and electronic copies of leaflets and other materials were sent to participants. These are freely available for download on the GAP website www.actionforcleanair.org.uk.

Champions shared teaching and materials with their colleagues and patients during an eight-month trial period. 'Core patients'¹ were interviewed outside practices on their understanding of air pollution prior to and towards the end of the trial period. This was supplemented by a borough-wide communications campaign, outlining the harms of air pollution.

Increasing air quality awareness and ultimately changing behaviour across core patient groups was a key objective and an important measure of success for the project. It demonstrates the crucial role that GPs and other health professionals can play in supporting often hard-to-reach patients that are vulnerable to the effects of air pollution. The borough-wide communications campaign was further effective in solidifying messages about air pollution.

The [Chief Medical Officer's 2022](#) report focused on air pollution, and (among other measures) called for *"the training of healthcare staff on the health effects of air pollution, including communication with patients."* This project demonstrates an appropriate avenue for educating patients about air pollution through health professionals, that can be mainstreamed across the country. Teaching primary care professionals in a context local to their workplace or including details that localise the information is key to making teaching sessions relevant.

¹ 'Core patient' groups were considered as carers of young children with health conditions that are exacerbated by air pollution and adults with health conditions that are exacerbated by air pollution.

Key achievements

- ***Core patient groups took action towards reducing their contribution or exposure to air pollution after seeing their healthcare professional.***
 - Half of all patients (52%) who received advice from the GP said that it made them want to understand more about air pollution and changed their behaviour. Ventilating while cooking or cleaning or walking more were the most popular actions.
 - Two fifths of patients reported that their visit to the GP made them want to find out more about air pollution.
 - Where patients had reported that they had seen information about air pollution in the wider community campaign they were **twice as likely to take action** compared to those who only received advice from their health professional.
- ***Trained 17 GPs, nurses and allied health professionals from 15 practices in the London Borough of Islington to become “air quality champions”, enabling them to deliver personalised advice to patients and cascade learning across their networks***
 - 100% of participants reported that the training had been useful in preparing them to talk to patients and colleagues about air pollution.
 - 100% reported that the training had helped them to talk to patients about outdoor air pollution with more confidence while 89% reported greater confidence talking to patients about indoor air pollution.
- ***Cascaded learning to 113 practice staff including GPs, nurses, pharmacists, and administration staff.***
- ***Learnings disseminated to learning groups throughout the borough. Materials developed were shared with national groups such as the Royal College of General Practitioners.***
- ***Community communication campaign reached one quarter of the patient population.***
- ***Co-developed appropriate tools and materials to engage patients in the topic of air pollution***
 - Leaflets suitable for children and adults in English and the three additional languages most commonly spoken in Islington.
 - Materials to help GPs share training to staff and patients, including recorded education sessions.

Recommendations

- Accelerate the adoption of air pollution training in national learning pathways for healthcare professionals by sharing results with local and national stakeholders.
- Until widespread training on air pollution is made available to all healthcare professionals, efforts to “mobilise primary care on air pollution” should be scaled-up and include every GP surgery across a Primary Care Network or Intergraded Care System region.
- In the absence of a public awareness campaign about the health harms of air pollution, future roll-out should be supplemented by a local or regional (depending on scope) communications campaign to help solidify messages about air pollution.
- Future efforts should take account of other health professions and health adjacent professionals - map the healthcare education sector.
- London Borough of Islington should continue to promote clean air.

Introduction

Air pollution is acknowledged by the UK Government as the largest environmental health risk to the UK public. Long-term exposure to air pollution can cause chronic health conditions and reduce life expectancy.² Air pollution negatively impacts every organ of the body, can inflame the lining of the lungs, enter the bloodstream passing to the heart and brain, cause lung disease, heart disease, dementia, strokes, and cancer.³

The associated health problems of air pollution have an economic cost too, with ill-health and premature death costing UK business and the health system £20 billion every year.⁴ On high pollution days there are more hospital admissions for heart and lung diseases and an increased risk of asthma attacks.^{5,6} In December 2020, air pollution was included as a contributing cause of death in the heart-breaking case of nine-year old Ella Kissi-Debrah whose hospital admittance and asthmas attacks aligned with spikes in air pollution. The 'Prevention of Future Deaths' report that followed the inquest into Ella's death called for more information about air pollution and its impact to be made available to the public and found 'the adverse effects of air pollution on health are not being sufficiently communicated to patients and their carers by medical and nursing professionals'.⁷

Islington in context

Islington is an inner-London borough, spanning between north and central London. Air pollution is a serious issue for the London borough of Islington, the entire borough is an air quality management area for particulate matter (PM_{2.5} and PM¹⁰) and nitrogen dioxide (NO₂). The borough has until very recently exceeded NO₂ objectives at most roadside sites and while it is currently meeting annual legal objectives for PM₁₀ it breaches WHO objectives in some locations. Air pollution has been improving in recent years, but there is still more work to be done.

² <https://www.gov.uk/government/publications/health-matters-air-pollution/health-matters-air-pollution>

³ <https://www.globalactionplan.org.uk/news/clean-air-day-2022air-pollution-impacts-every-organ-in-the-body>

⁴ <https://www.rcplondon.ac.uk/projects/outputs/every-breath-we-take-lifelong-impact-air-pollution>

⁵ <https://www.bmj.com/content/378/bmj.o1664>

⁶ [Air pollution is a public health emergency | The BMJ](#)

⁷ <https://www.judiciary.uk/publications/ella-kissi-debrah/>

There are 33 GP practices serving the 250,000 local residents. Each practice varies in size and in their makeup of staff, including partner GPs, long and short-term salaried GPs, nursing and administrative staff and possibly other professionals such as physiotherapists and pharmacists.

Project aims & objectives

This project seeks to improve the provision of air pollution information received by General Practitioners (GPs) across the London Borough of Islington. It builds on [Global Action Plan's Mobilising Health Professionals pilot studies](#) that worked with respiratory and paediatric health professionals, teaching them how to pass air pollution learning on to their patients.

A role for GPs

GPs are some of the most trusted health messengers in society and play a crucial role in protecting people's health and improving their quality of life. GPs regularly provide advice on lifestyle choices (smoking, exercise, and diet) but not, as far as we are aware, air pollution avoidance. There is little evidence that the health impacts of air pollution feature as part of standard medical training at undergraduate or postgraduate levels. The 2022 [Chief Medical Officer's](#) report focused on air pollution, and called for "the training of healthcare staff on the health effects of air pollution, including communication with patients."

Strategic objectives

- 1) To engage and train a subset of the borough's GPs to become "air quality champions", enabling them to deliver personalised advice to patients and cascade learning across their networks
- 2) To increase air quality awareness and ultimately change patient behaviour, particularly those in groups that are the most vulnerable to the impacts of pollution, by creating and disseminating a communications campaign across the borough
- 3) To learn from GPs, developing the most appropriate approach to engage patients, by monitoring and surveying the participating champions and wider GP surgeries and patients
- 4) To accelerate the adoption of air pollution training in national learning pathways for GPs by sharing results with local and national stakeholders

As trusted messengers, GPs are well placed to engage and inform patients on this issue by integrating information on air pollution at key points in the patient pathway.

The aim of the programme is to increase air quality awareness within GP surgeries in Islington and to encourage vulnerable patients across the borough to adopt certain behaviours to reduce exposure to air pollution and thereby protect their health.

Methods

To meet the strategic objectives, we worked with a steering group and health professions to create information to pass onto patients through a process of training, feedback, and support. This was supplemented by a borough-wide communication campaign.

Steering group

A project steering group was established consisting of healthcare staff, local health education leaders and staff from Islington Council. The steering group helped create and maintain good relationships between project stakeholders, guided project delivery and evaluated project risks.

Co-design workshop

The co-design workshop brought healthcare providers together to consider the content of the teaching sessions for Islington's healthcare professionals. They also discussed how air pollution learning could best be delivered to patients. Lastly the most relevant patient groups for receiving this learning were considered.

Champion recruitment and training

17 health professionals were recruited from 15 practices using a number of networks. This included more formalised education networks as well as networks of healthcare professionals between practices, e.g. a borough-wide Whatsapp group for nursing training.

Training took place online over approximately 4 weeks. Training sessions were one hour in length and covered the following:

- Introducing air pollution – the global, UK and Islington contexts
- The health implications
- The patient groups most impacted
- How best to pass clean air messaging on to patients
- Leaflets and materials to support this teaching
- Becoming a 'Clean Air Champion'

Champion support – resource packs

Following the training sessions, resource packs were sent to champions to support learning dissemination and patient outreach. Examples of materials made available to champions can be found in the appendix. Packs consisted of adult and paediatric paper leaflets and checklists. Electronic versions of the leaflets were also sent to practices alongside display-screen infographics and graphics suitable for social media. Each practice was also supplied with leaflets translated into Turkish, Somali and Bengali (being the most commonly spoken languages in the borough aside from English).

Communications campaign

To support champion outreach, a borough-wide communications campaign was implemented in Islington over several months. This included electronic kerbside screens, physical banners, nearly 300 council building screens and a social media campaign across several online platforms. Citizens Science videos involving GPs were created to support this campaign (see below). The appendix has example images involving Islington residents.

Evaluating project success

Approach

A combination of quantitative and qualitative data was gathered by Global Action Plan (GAP) and evaluation partner Opinium to evaluate progress against project outcomes.

Pre and post training surveys – GAP

The health professionals completed surveys before and after their training session to measure the improvements beyond their baseline knowledge and confidence with regards air pollution.

End-of-project survey

Towards the end of the project the healthcare professionals were asked to complete a survey that reflected on their experiences in the project, including the teaching sessions, their interactions with patients and passing the knowledge on to their colleagues.

Pre and post training patient surveys - Opinium

GAP paired up with the market research group Opinium to understand the impact of this project on patients. Opinium conducted face-to-face interviews with patients as they emerged from appointments at GP surgeries across Islington. The questions were designed by the project team and interviews were conducted by Opinium’s professional interviewers, outside 15 practices where healthcare practitioners were to be trained.

Figure 1 displays the dates of data collection.

Figure 1 - Dates of pre and post wave data collection

	Pre wave	Post wave
Dates of survey	28th February 2022	8th – 24th August 2022
Sample	186 face-to-face interviews	134 face-to-face interviews

‘Core patients’ were selected who have (or have children that have) health conditions that can be exacerbated by air pollution and were visiting their GP at the time of the interview.

To ensure consistency between the two waves, ‘soft quotas’ were applied to ensure that the post-wave data would better match the demographic breakdown of the pre-wave. This was done to ensure that any differences we see in the results would not be influenced by demographics but instead would be more attributable to effects from the training. Weighting was applied by age, gender, ethnicity group and reasons for visiting the GP; the post-wave results for these variables were made to match the pre-wave results for these variables. Again, this was done to ensure that results were not influenced by any demographic differences

GP interviews

To complement the quantitative survey findings, 1:1 qualitative interviews were conducted with a sub-set of three GPs after they completed the training and had time to put their learning into practice, allowing them to feedback on their experiences with patients.

GP Citizen Science

Citizen science videos were created to spread clean air messaging using the tool of individual wearable air pollution monitors. From the pool of healthcare practitioners involved in the main project, the River Place Group Practice volunteered to take part with five GP participants.

The practice was provided with five Plume ‘Flow 2’ monitors (loaned by the London Borough of Richmond upon Thames), along with guides for using the monitors and recording video footage. Participants were asked to use the monitors during their daily commute, before and after making a positive change.



Figure 2 - Frames from the GP citizen science videos. The image on the left states 'We Challenged Islington GPs to monitor the level of air pollution on their commute', floating over a picture of traffic on the left and a green parkland on the right. The image on the right shows a map of the GP's commute on different days with lower air pollution measured on the route that avoided the busy road.

The resulting air pollution data and video clips were used to produce videos which focussed the narrative on two participants. A one-minute video followed the story of Brigid as she changed her walking route from busy Holloway Road to quieter side streets. The three-minute video included Brigid's story but also had Sarah cycling along green routes and reflecting on all the physical and mental health benefits from active travel.

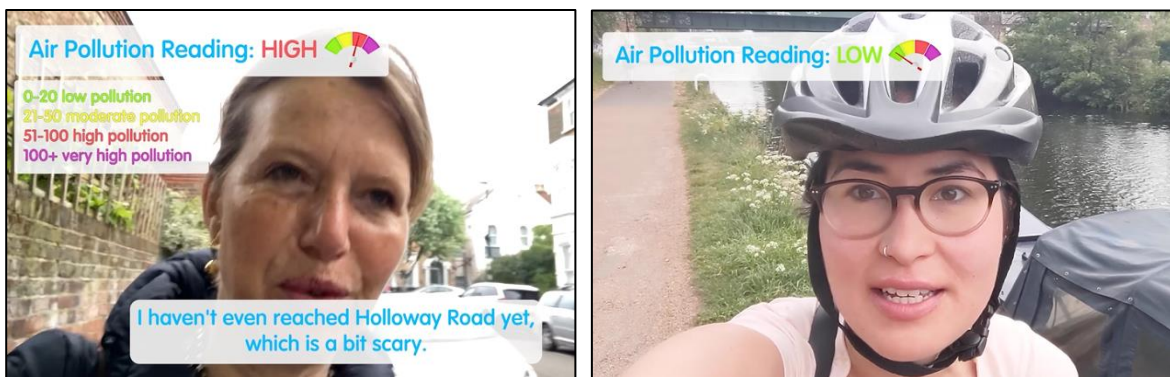


Figure 3 - Frame from the GP citizen science videos. The image on the left Shows one of GPs walking down a street with an air pollution monitor reading 'high'. The caption reads 'I haven't even reached Holloway Road yet, which is a bit scary.' The image of the right shows another GP with a cycle helmet on. She is recording the video on a cycle path along a canal. Her air pollution monitor reads 'low'.

The staff from the River Place Group Practice expressed surprise about the levels of air pollution they recorded, as well as pleasure at the positive changes that they can make to their commute. The practice linked the videos to their social media channels which appear to have generated many conversations around air pollution.

These impactful videos were used during the 2022 Clean Air Day campaign and as part of the wider communications campaign for the Islington project. In particular, the 1-minute video was shared via social media sites. The combined story video can be viewed on the [Action for Clean Air](#).

Evaluation results

Overview of results against the project's Key Performance Indicators

Figure 4 - Overview of project outcomes, indicators and results

Desired project outcomes	Indicators	Results
Air quality awareness increases among GPs leading to vulnerable patients receiving improved education on air pollution.	<p>Community campaign reaches at least 10% of patients</p> <p>70% of GPs participating in training report that they have successfully built air quality advice into their practice</p>	<p>26% of patients reported seeing the campaign.</p> <p>67% of participating health practitioners (HPs) reported speaking to patients about air pollution at least monthly, 55% more than monthly and 33% on a weekly basis</p>
A subset of GPs across the Borough of Islington are trained as air quality champions able to deliver personalised advice to patients and to cascade their learning to their home surgeries	<p>% of healthcare professionals who feel able and willing to provide air pollution avoidance advice to patients compared to pre-intervention baseline.</p> <p>% of trained healthcare professionals who have successfully built air quality advice into daily practice compared to pre-intervention baseline.</p> <p>Qualitative insights and case studies from GPs detailing the impacts their advice and the materials are having on their patients.</p>	<p>100% of HPs reported confidence (22% <i>somewhat confident</i>, 78% <i>very confident</i>) in talking to patients about outdoor air pollution.</p> <p>89% of HPs reported confidence (56% <i>somewhat confident</i>, 33% <i>very confident</i>) in talking to patients about indoor air pollution.</p> <p>100% of HPs found the training somewhat or very useful in preparing them to talk to patients and colleagues about air pollution</p> <p>67% of participating HPs reported speaking to</p>

		<p>patients about air pollution at least monthly, 55% more than monthly and 33% on a weekly basis</p> <p>Qualitative insights were gathered through interviews with GPs</p>
<p>GP patients across the borough have increased understanding of pollution impacts on health and adopt habits that reduce both their exposure and contribution to air pollution.</p> <p>Focusing on 1) Carers of young children with health conditions exacerbated by pollution; 2) Adults with health conditions exacerbated by pollution.</p>	<p>Core patient groups have increased awareness/understanding of pollution impacts on health compared to baseline survey.</p> <p>Increase in the % of core patients reporting behaviour change related to reducing air pollution compared to baseline survey. E.g. switching to walking/cycling over use of buses, reduced use of wood burners.</p>	<p>Core patients understanding of the health impacts of air pollution increased.</p> <p>Over two fifths reported that their visit to the GP practice made them want to find out more about air pollution.</p> <p>Half of all patients reported doing something to reduce their contribution or exposure to air pollution after visiting their practice.</p> <p>Ventilating while cooking, walking more or cleaner walking routes were the most popular actions.</p>
The most appropriate tools, materials and	Qualitative insights identify the tools, materials and	Pre and post training surveys, end-of-project

messages to engage GPs with air pollution information are identified.	messages that GPs are most receptive to.	surveys and co design workshops were conducted. Training pack, leaflets and videos were produced. "I think the training was really useful and I think the resources available were really useful"
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Results: Insights and Impacts

From the surveys and interviews, key insights and lessons learned through the programme were collated around five key themes, with recommendations for future work afterwards:

1. Impact on patients: understanding and action
2. Impact of training sessions on champions: confidence to advise and cascade information
3. Enablers for successfully educating patients on air pollution
4. Barriers to successfully educating patients on air pollution
5. Limitations
6. Project Recommendations

1. Impact of GP advice on patients

Through GP and champion advice, core patients increased their awareness and understanding of air pollution.

Core patients were considered as carers of young children with health conditions that are exacerbated by air pollution and adults with health conditions that are exacerbated by air pollution, including: asthma, emphysema, chronic obstructive pulmonary disease (COPD), chronic bronchitis, lung cancer, heart and circulatory disease, dementia, type 2 diabetes, pregnancy, and or other respiratory based illness.

One quarter of core patients received advice from their GP on air pollution, between May – August 2022. Among those that did not, 87% said they would find this information useful. Patients that reported receiving advice were told what do to do on high pollution days (64%), which health conditions air pollution causes / worsens (62%), and how to avoid air pollution (35%).

Understanding of the health conditions caused by air pollution increased in the post-wave surveys, with more awareness that it can cause lung disease (83% pre-wave to 96% post-wave) and heart disease (from 62% to 69%).

More generally, people's understanding of air pollution also increased, with more people recognising the presence of air pollution inside and outside the home (increasing from 80% in the pre-wave to 94% in the post-wave), understanding that fossil fuels are the biggest cause of air pollution (increasing from 66% to 76%), and more people recognising air pollution as a big issue in the UK (increasing from 43% to 50%).

Action

Patients receiving advice took action towards reducing their contribution or exposure to air pollution. This was most effective when coupled with the wider community campaign, with patients twice as likely to take action when they had received advice and seen the campaign.

Half of all patients (52%) who received advice from the GP said that it made them want to understand more about air pollution and changed their behaviour. 52% of core patients reported doing something to reduce their contribution or exposure to air pollution following advice from their GP. The key behaviours that patients had adopted included ventilating more while cooking and cleaning (24%), walking or cycling more (20%), using public transport more (16%) and using less polluted routes (15%).

Similar numbers of patients (45%) said that they are likely to continue these beneficial behaviours in the future, including (18%) taking the bus or walking or cycling for routine journeys, and (22%) avoiding main roads when going out for walks.

Champions reported that patients found 'ways to reduce their exposure' (to both indoor and outdoor air pollution) the most helpful piece of advice. Examples of this include:

- A young patient with bronchiectasis was very engaged after signing up to pollution alerts and subsequently avoided the Holloway Road as much as possible.
- A patient presenting with an asthma flare-up brought up air pollution as a trigger which led to a discussion about ways to mitigate exposure to pollution.

"I would find the information useful as I don't know too much... if there was anything that we could do to reduce pollution in the home that I haven't ever thought of – the only thing I can think of is cigarette smoke and I've never thought about anything else. There's dust, but I'm lost trying to think about anything else." Natasha | child has asthma and hay fever

“I’ve never received advice but I would have found it useful early on in my pregnancy... if they told me the indoor pollution stuff, if they told me about that in my first pregnancy it would have had more of an effect on me.” Stephanie | pregnant adult

Where patients had reported that they had seen information about air pollution in the wider communications campaign (as well as receiving advice from their HP) they were **twice as likely** to take action than those who only received advice from their health professional. *Wanting to find out more* increased from 25% with advice alone to 46% among those who received advice and reported having seen the wider community campaign, *thinking about changing their behaviour to reduce the impact of pollution* from 20% to 44%, and *finding out more about how they can avoid air pollution* from 13% to 21%.

Increasing air quality awareness and ultimately behaviour across core patient groups was a key strategic objective and important success of the project. It demonstrates the crucial role that GPs and other health professionals can play in supporting often hard to reach sub-groups vulnerable to the effects of air pollution. This proved most effective when coupled with the wider communications campaign.

2. Impact of training sessions on GPs

Champions gained confidence to share air pollution information with patients through training sessions with GAP. 11 GPs and six allied health professionals from 15 practices in the London Borough of Islington were trained to become “air quality champions”, enabling them to deliver personalised advice to patients and cascade learning across their surgery. There were large increases in champions self-reported understanding of the health impacts of air pollution and what patients can do to protect their health as well as in their confidence in talking to patients about indoor and outdoor air pollution.

Figure 5 - Results from participant surveys

Participant Survey Results	Before training (17 Responses)	Immediately after training (16 Responses)
On a scale of 1-10, how would you rate your understanding of the health impacts of air pollution? (1 is LOW, 10 is HIGH)	5.76 Average	8.38 Average

On a scale of 1-10, how would you rate your understanding of what patients can do to protect their health? (1 is LOW, 10 is HIGH)	4.29 Average	7.81 Average
On a scale of 1-10, how would you rate your confidence levels in talking to your patients about air pollution? (1 is LOW, 10 is HIGH)	3.59 Average	7.44 Average
On a scale of 1-10, how would you rate your confidence levels in giving your patients advice as to what they can do to reduce their exposure to air pollution. (1 is LOW, 10 is HIGH)	4 Average	7.63 Average

Champions found the most beneficial aspects of the training to be related to the local area of Islington, as well as messages that they could pass on directly to patients. Quotes from GPs:

“[It is] useful to know the pollution hotspots in Islington.”

“Passing messages onto patients its most practical information to have as a HCP.”

“[It was] useful to gain the knowledge. I’m empowered to start to make the changes and spread the word.”

Champions cascaded lessons learned to colleagues. The majority of project champions (88%) cascaded their learning from the training sessions to their colleagues (113 people in total), this included other GPs, nurses, pharmacists and administration staff. A handful of champions also found other ways to spread the message both formally, such as through their regional leadership portfolio role, education sessions to ‘Greener Practice’ (including a session to colleagues in South Yorkshire!) and informally with discussion with colleagues and friends.

The majority of project champions (88%) found the communications ‘very’ or ‘somewhat’ helpful in enabling them to integrate and share information about air pollution with their team.

Participants reported that their colleagues were very receptive to learning about air pollution. It was also highlighted that while most health professionals are aware of air pollution per se, there is a lack of knowledge of the extent to which air pollution can harm human health, the different groups of people that can be affected and the extent of the problem at a local level. A quote from one of the GPs demonstrates this:

“I think talking about [air pollution] and spreading the message. A lot of my colleagues, I think just weren't really aware of the full extent of the health impacts and kind of the local levels of air pollution and simple tools you can have to just mitigate your risk.”

3. Enablers for successfully educating patients on air pollution

- ***The wider communication campaign helped reinforce the message about air pollution.*** It proved effective not only for patients but also the champion's teams. The creation of video assets involving GPs working in the borough was an ongoing source of inspiration for having clean air conversations. They were displayed in the surgery involved and shared more widely on social media, both by the practice involved and colleagues elsewhere in the borough. This facilitated many conversations about air pollution and inspired action among colleagues, patients and friends.
- ***Communications materials helped champions engage patients on the topic of air pollution.*** Champions reported that the most useful communications materials for patients were the adult checklist and the child checklist. Health care professionals reported that the leaflets were helpful in enabling them to initiate or deepen conversations with patients. Paper leaflets were more frequently used than electronic leaflets (in most cases weekly, as opposed to monthly or not at all). Patients and GPs reported that the checklist was the most 'useful' asset provided to them in understanding and taking action on air pollution.
- ***Localised information about air pollution enables champions to engage patients and colleagues in air pollution.*** Islington council shared local information about air pollution with health professionals which they found helpful in engaging both patients and colleagues. Champions reported that the localised information helped 'bring the message about air pollution home', increasing its relevance and importance to people.
- ***Spike in visits to the 'Clean Air Hub'.*** Having a source of patient focused-information that is easily accessible and understandable is a valuable resource. The Clean Air Hub is a GAP website for this purpose. During the wider communications campaign, QR codes on posters and online graphics/posts led patients to this website as a place to find out more information. The patient leaflets (handed out by healthcare professionals) also directed patients there. There was a significant spike in traffic at the clean air hub as a result of these efforts.

In terms of tactics employed by champions to facilitate conversations about air pollution with patients the following were identified:

- **Targeting patient groups.** Champions reported that they found it easiest to initiate conversations about air pollution with patients with respiratory conditions, pregnant women and parents of young children. In general, the parents were more receptive to receiving information and advice on how to reduce exposure to harmful pollutants.
- **Going local.** GPs reported that bringing the air pollution issue to a 'local level' was a very good way for engaging with patients. Focusing on the situation most relevant to them, be it school commutes, workplace exposure, indoor vs. outdoor air pollution will make the topic more relevant. Many of the participants reported speaking to their patients about their walking routes now that they understood busier routes through the borough to be hotspots of air pollution. They could also look at where the patient lived and give encouragement to do their exercise in greener spaces nearby.
- **Framing the message positively.** When communicating information about air pollution to their patients, GPs talked about focusing particularly on the things that people could do something about, despite living in a polluted area or having a chronic health condition. For a patient with a chronic respiratory condition, it's important to point out areas that small changes can benefit their condition without being unrealistic about it revolutionising their health entirely.
- **Understanding the local policies.** Some patients may have negative views about local or regional political decisions. (e.g. Low Emission Zones) Health practitioners may be separate enough to steer the conversation around these topics, while keeping the patient on board and concentrating on the health benefits from other air pollution measures.
- **Tailoring messages.** Recognise that patients are individuals and for some patients with chronic conditions, overloading them with yet more behaviour change messaging may be too much. Instead, tailor the way you deliver air pollution information to the individual, for some it will be positive and lighter-touch and for others (e.g. parents below) they will be receptive to more detailed information on changing their behaviour.
- **Using prompts and drawing on personal experience-** A number of GPs talked about their own commute to work during the project, with staff at the River Place practice aiming to change to cycling or walking. The GPs making changes in their own lives are easy 'prompts', engaging patients and initiating conversations on active transport, health benefits and air pollution exposure reduction and own contribution.

Quotes from GPs:

“[I saw] a patient who was having an asthma flare and, yeah, it was very easy for me to raise air pollution. I think she might have sort of hinted at the fact that air pollution was a contributing factor. And so, so that opened the discussion from me to kind of contribute and raise awareness as well in in terms of controlling her asthma through reducing her exposure to air pollution”

“There was a dad who'd brought in his daughter with asthma, about 6 or 7 years old. And she'd been really struggling and been stepping up on her preventive therapy and had had a few exacerbations. And he actually brought the topic up with me about air pollution, saying he's really worried the way they were going to school was along Holloway road. And so we had a bit of a chat about different ways you can spend time with cleaner air. And around, you know the treatments also. I don't know which one of those actually made an improvement because it may have been that the treatment was changed as well. But I think from the way we discussed it with both the child and her father, I think both of them felt more empowered to go away with an understanding of what they could do to improve her, how she could manage her symptoms and improve her quality of life and be able to do things that she wanted to do.”

“There was a woman with COPD. She was no longer smoking, um, sorry ex-smoker, but...we did sort of find a relationship between where she lived near quite a busy junction, or where she'd hang around a busy junction - a coffee shop there that she used to visit, and we did discuss that and you know trying to avoid the busier junctions and the fact that that might improve or reduce her risk of exacerbation of COPD.”

4. Barriers to successfully educating patients on air pollution

The largest barrier to champions sharing information about air pollution with their patients was time. All of the champions reported 'time' as a barrier that hindered delivery of information to patients. No other reasons were identified as a barrier to giving information about air pollution to patients. A quote from a GP about barrier of time:

“With all consultations, the main barrier that comes up is time ... Unfortunately, you don't want to make the conversation too long and you're opening a whole other topic.”

Competing priorities. A GP consultation is typically a semi-structured conversation, with dozens of factors involved. There are many protocols and guidelines to consider on hundreds of subjects. They also need to document their interactions in specific ways to justify proper payment to the GP practice. Patients often have multiple health conditions that need addressing. Each GP will likely see upwards of 20 patients each day and still have to do non-clinical work relating to their personal development and potentially managing the practice. A quote from a GP about competing priorities and time:

“I think time is the number one and then I think sometimes It's like the practicalities of doing everything, which kind of comes into time, but you know, you have to write your notes and then you're texting them and then you're trying to find the template and you're going to do all these things at once.”

To alleviate these pressures, champions employed tactics as outlined above to maximise their impact: making use of leaflets and checklists, targeted patients they felt would benefit most etc.

5. Limitations

COVID-19, time delays and limitations

The steering group specifically asked the project team to delay the project by one month to accommodate the extreme pressure on GP services because of COVID-19 at the beginning of 2022. While the overall project timeline shifted, deliverables were not affected.

It was decided by the project team (and endorsed by the steering group) that to better accommodate the busy schedules of health care professionals, sessions would be limited to one hour. While the delivery team were confident that delivering the full range of topics and content was manageable in the hour, we also knew that absorbing this

information and adopting air pollution messages into their practice after the single hour of training was a big ask. It was a difficult balance. Participants were then provided with a plethora of supplementary teaching and project materials, as well as regular and ad-hoc email support.

It was suggested by some Champions that sessions could have benefited from being longer (despite logistical and scheduling difficulties) and including more opportunities to ask questions throughout. It was felt that more time and attention could have been given to how practitioners could advise patients, as well as opportunities to discuss this amongst the other participants and practice together. Quotes from Champions feeding back on the training sessions:

“In the [teaching] sessions you do cover kind of some coaching skills around how to have those conversations with patients, but perhaps that could be elaborated on more or, you know [having a] follow-up session just dedicated to that.”

“Giving more space for peer support or ways that we can have conversations amongst each other. Because I think so much of training and the training that I do in sustainability is you want to deliver content, but actually the way you get engagement is just really getting people to understand where people are coming from in different parts of the borough and that you would all learn from each other. And I think that shared learning was maybe what was missing a bit for me.”

Recruitment

Despite efforts to recruit 20 GPs, after considerable effort, 17 health care professionals were recruited. The steering group suggested widening the scope from GP to ‘health care professionals’. Despite this, reaching the target of 20 proved a challenge. The geographical scope of the project (bounded by the London Borough of Islington), in comparison to the similar national project, meant that there were fewer surgeries to engage and participate in the project – perhaps reflecting the challenges of implementation at a local level.

Response rate

The response rate of champions completing the follow-up survey (approx. 55%) is not fully representative of all the participants trained. It could be that respondents of the follow-up were more engaged and had more positive experiences which may be a source

of bias. Although we do not have any direct feedback from all the champions, we do know that air pollution advice was given in all the surgeries from the patient interviews.

Self-appointed groups

While patients taking part in the survey were screened for health-conditions they were a self-appointing group as participation was voluntary. This may have biased the sample somewhat towards individuals who had more time available (e.g., retired or non-working) or those who had more positive experiences in their health consultation.

Agency in the local setting

Quote from a GP about urban living and air pollution:

“People do live in an urban, highly polluted area, that's life, that's the thing and you can make choices about [measures like] walking away from the main roads, but it's quite hard.”

While there are clearly great benefits in healthcare professionals speaking to their patients about air pollution, our Champions understood that the individual only has so much power to change their local environment and circumstances. During the training sessions and in subsequent correspondence Champions would often discuss the need for more ambitious air pollution targets, as well as greater efforts in tackling the root causes at a local, regional and national level. GAP supports these calls for the greatest possible levels of ambition in tackling the health and ecological crisis of air pollution.

6. Project Recommendations

This project ran in parallel with a similar pilot project to mobilise primary care professionals at the national level. The Islington project had the benefit of being tightly geographically bound and supplemented with a borough-wide communications campaign which proved effective in motivating patients alongside GP advice. This project also benefitted from in-depth evaluation with patients themselves.

Accelerate the adoption of air pollution training in national learning pathways for healthcare by sharing results with local and national stakeholders. The [Chief Medical Officer's 2022](#) report on air pollution called for “the training of healthcare staff on the health effects of air pollution, including communication with patients”. This project demonstrates the opportunity and impact of educating patients through healthcare professionals and should be used as evidence to further progress the Chief medical officer's recommendation. The recommendations of the coroner's report following the death of Ella-Kissi Debrah included calling on the Royal Colleges to promote training on

the health impacts of air pollution to their members. The Royal College of GPs and the Royal College of Physicians have gladly received the educational materials developed during this (and the national) project. We will continue to encourage these institutions to maximise their efforts at integrating air pollution learning across undergraduate and postgraduate healthcare education. Given the learning point in this project, that other healthcare professionals are equally suitable to pass on air pollution learning to their patients, the health educational sector should reflect this.

Until widespread training on air pollution is made available to all healthcare professionals, efforts to “mobilise primary care on air pollution” should be scaled-up and include every GP surgery across a Primary Care Network or Intergraded Care System region. Given the successful delivery of this pilot programme, we believe that the model should now be scaled up with the wider population of GPs, as well as with other healthcare professionals, both in primary care and elsewhere. Once healthcare professionals are aware of the significant health impacts of air pollution, they are very keen that air pollution information be made more widely available. This means teaching both the healthcare sector and the wider public at significant scale. The champion model is effective at spreading knowledge between colleagues locally, but this needs to be widely implemented and supported from the top-down in a united manner, with all healthcare institutions recognising the importance of air pollution.

In the absence of a public awareness campaign about the health harms of air pollution, future roll-out should be supplemented by a local or regional (depending on scope) communications campaign to help solidify messages about air pollution. A well-funded, enduring public health campaign on air pollution is required, detailing the causes and dangers of air pollution. This would strongly support the efforts of healthcare professionals and make the population much more primed to hear air pollution health advice. In lieu of that, any future work with health care professionals should be supported as widely as possible at the local level through council collaboration and communication. GAP's [health care resources](#) are freely available for use.

Future efforts should take account of other health professions and health adjacent professionals - map the healthcare education sector. Medical education is a widespread and often disconnected series of institutions, from the undergraduate level, through the professional training years and beyond into work as a consultant. Training requirements are lifelong with CPD evidence required to maintain a license to practice. There are a great number of institutions that would require onboarding if even just the medical education sector is to understand and teach air pollution information in keeping with the health crisis it presents. Work to map them, determine their current level of air pollution teaching and then campaign for greater inclusion would put air pollution in the prominent place it deserves in understanding. This of course could be repeated across the range of healthcare professions and their respective education pathways. At the recommendation

of the project steering group this project expanded “beyond GPs” to include nurses and other non-medical staff in surgeries. Future projects could take this further with pharmacists, physios and other relevant health professionals.

London Borough of Islington should continue to promote clean air, clean air routes and anti-idling. This project found saw the benefit of wider borough communications on the subject, and LBI should seize any future opportunities to disseminate messages locally. Having local air pollution information available to GPs and champions enabled meaningful discussions with patients. The Council’s involvement in the project, supporting wider communication efforts at the local level helped embed the campaign and health messages.

Appendix

Example air pollution leaflet: adult health checklist (English)

Available at: <https://www.actionforcleanair.org.uk/health/knowledge-hub-health>

Air Pollution and you

Air pollution affects us all from our first breath to our last, causing many health effects throughout our lives. Air pollution can worsen many long-term health conditions and cause respiratory and heart disease. It is linked with high blood pressure, strokes and dementia. It can also impact pregnancy and make people more likely to suffer infections like bacterial pneumonia and possibly COVID-19. The actions below can help.

- 1. Discover the side streets**
Use quieter roads and paths to keep away from heavy polluting traffic.
- 2. Leave the car behind**
Encourage your whole family to walk, cycle and scoot more - air pollution can be higher inside a car than outside.
- 3. Turn the engine off**
If you do need to use a car, ask the driver to turn the engine off when the car isn't moving.
- 4. Check the pollution forecast**
Check air pollution levels in your local area at uk-air.defra.gov.uk - this site provides hourly measurements and forecasts. Remember that air pollution increases significantly near busy roads, especially during rush hour.
- 5. Keep the air clean inside too**
Use fragrance free and low-chemical cleaning products. Stop air pollution collecting in your home by using extractor fans and opening windows away from busy roads.

Air Pollution Checklist

Please check the actions you are going to do, when you can, to protect your health from air pollution.

Please tick off that apply	
Leave the car at home whenever I can	<input type="checkbox"/>
Walk and cycle more whenever I can	<input type="checkbox"/>
Use quieter routes to avoid roads with heavy traffic	<input type="checkbox"/>
Turn the engine off when the car is stationary and it is safe to do so	<input type="checkbox"/>
Use inhalers as prescribed by my GP or practice nurse	<input type="checkbox"/>
Buy fragrance-free, milder cleaning products and avoid plug-in fragrances	<input type="checkbox"/>
Turn on the extractor fan when cooking	<input type="checkbox"/>
Open the window when cooking and cleaning	<input type="checkbox"/>
Avoid home burning as much as possible (e.g. log burners, coal fires or candles)	<input type="checkbox"/>
When decorating, choose paint labelled "low VOC"	<input type="checkbox"/>
Ask people not to smoke in my home	<input type="checkbox"/>

For more information on how air pollution can affect you, and how you can protect your health visit

www.cleanairhub.org.uk

global action plan
Department for Environment Food & Rural Affairs

Example air pollution leaflet: adult health checklist (Somali, Turkish and Bengali)

Wasakhawga Hawada iyo Carruurta

Wasakhawga hawada waxay ka sii darrada colaamadaha neefka oo ay ku jiraan qulac, hiirnaag iyo neefkasho. Ficilada hoose ayaa ku caawin kara:

- 1. Soo ogow waddooyinka dhinac**
Isticmaal waddooyinka iyo jidadka xaaladiis aad uga fogaato gaadiidka culus ee hawada wasakhaysa.
- 2. Goorlaga gadaal laga tag**
Ku dhiri geli qaybsiga oo dhan inay socdaan, baaskii wadaan oo ay iskuur isticmaadaan - wasakhawga hawada waxay noqon kartaa miil ku saraysa gudaha baabuurka marka loo eego dibadda.
- 3. Haki saadasho wasakhawga**
Iska diwaan geli AirText.info si aad u hesho digniinta wasakhawga hawada lagu soo diro taleefankaaga.
- 4. Dami mishiinka**
Hadaf aad u baxsan tahay inaad isticmasho baabuur, weydi darawalka inuu damiyo matoorka marka aanu baabuurku socarin.
- 5. Iska hawo naaf ah gadaal adiga kale**
Isticmaal alaabta naafifinta ee aanu ku jiraan kharash iyo udgaan. Jaaji wasakhawga ku urursan gurigaga adiga oo isticmaalaya marawaxadaha hawada soo saara oo fur daapadaha ka fog waddooyinka mashquulka ah.

U hel macluumaadka hawada naafka ah ee Islington iyo shaqada kharashka gadaal adiga si wax kaga qabto wasakhawga hawada: www.islington.gov.uk/airquality

Hava Kirililigi ve Çocuklar

Hava kirililigi öksürük, hırıltı solunum ve nefes darlığı gibi astım belirtilerini kötüleştirir. Aşağıdaki şu eylemler yardımcı olabilir:

- 1. Yan yolları keşfedin**
Yoğun kirletici trafikten uzak durmak için daha sakin yolları ve patikaları kullanın.
- 2. Arabayı bırakın**
Tüm ailenizi daha fazla yürümeye, bisiklete binmeye ve mobilite sürmeye teşvik edin - bir arabanın içindeki hava kirililigi dışarıdan daha çok olabilir.
- 3. Hava kirililigi tahmini kontrol edin**
Telefonunuza gönderilen hava kirililigi uyarılarını almak için AirText.info'ya kaydolun.
- 4. Kontağı kapatın**
Bir araba kullanmaya ihtiyacınız varsa, şoförden araba hareketsiz haldeyken kontağı kapatmasını isteyin.
- 5. İçerideki havayı da temiz tutun**
Kokusuz ve düşük kimyasal temizlik ürünleri kullanın. Aspiratörleri kullanarak ve yoğun yollardan uzaktaki pencereleri açarak evinizde biriken hava kirililigi durdurun.

Islington için Temiz Hava Bilgilerini ve belediyenin hava kirililigi ile mücadelede konusunda yaptığı çalışmalarında bulun: www.islington.gov.uk/airquality

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Air pollution training video for primary health care professionals - talking to patients about air pollution

Available at: <https://www.actionforcleanair.org.uk/health/knowledge-hub-health>

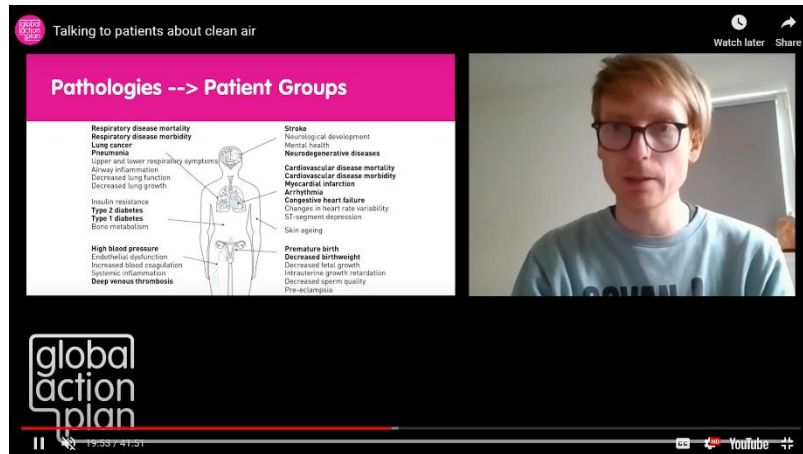
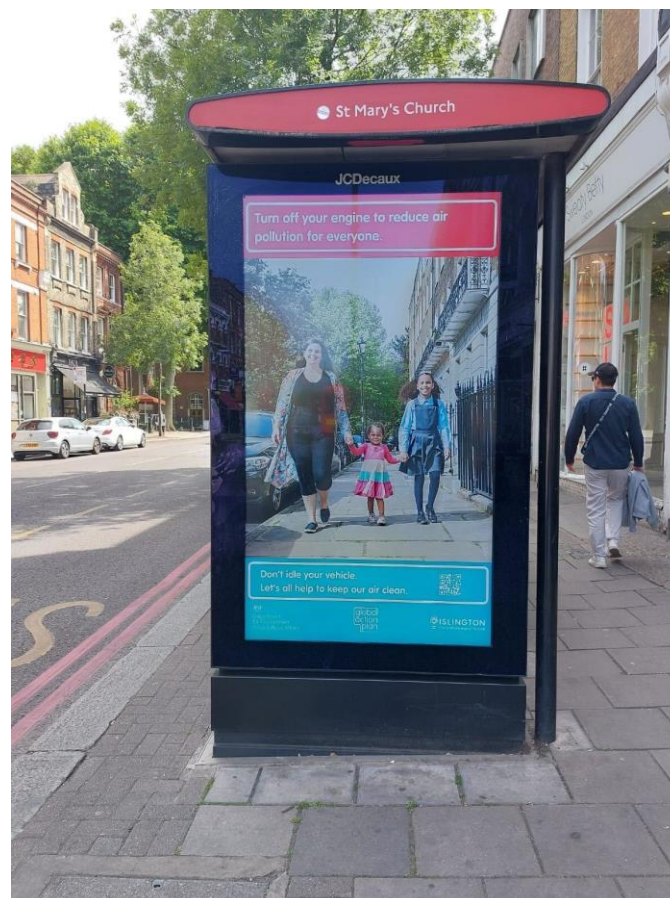


Image shows a freeze-frame from the air pollution training video for primary care professionals - 'Talking to patients about air pollution'

Borough-wide communication campaign





global
action
plan

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