



# ARCBITE

Brokering Innovation Through Evidence

## Community engagement in air quality actions: towards the development of local demonstration sites

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### Background

Exposure to air pollution has a detrimental effect on health. Long-term effects include heart disease, lung cancer and respiratory disease and in the short-term it can worsen conditions such as asthma. There is also evidence that people living in disadvantaged areas are disproportionately affected.

The Applied Research Collaboration North West Coast's (ARC-NWC) health equity focus argues that communities should have a real voice in decisions that affect their lives and early consultation with ARC-NWC Members, Public Advisers and residents identified air quality as an issue of concern. Our review of community engagement in NWC air quality plans and actions (further details can be found in another ARC NWC research bite) also suggested this is an area which could be further developed to enable wider involvement. So, we decided to review the literature to gain further insight about approaches that have been previously used in engaging communities in this topic.



### How did we involve people?

ARC-NWC is a partnership between organisations including universities, NHS, local authorities etc. and the public, undertaking applied research to improve health, wellbeing, quality of care and reduce health inequalities across the region. Public Advisers and colleagues from local authorities and a social enterprise and researchers came together to form the Air Quality Review Working Group which has been meeting on Microsoft Teams during 2020.



## What did we do?

We searched five academic literature databases to find papers where communities had been actively involved in air quality research or implementation projects. The capacity available meant that 'grey' literature (i.e. not commercially published) was not included. The 39 papers (covering 30 studies) selected for detailed examination were those where community engagement was the focus, that were written in or translated into English and were undertaken in developed economies.

## What did we find out?

Our initial analysis has identified different underlying approaches to community engagement in air quality initiatives including:

- Environmental health literacy (raising awareness about the way the environment affects health)
- Participatory democracy (citizen involvement in public policymaking)
- Social action (residents coming together to improve their lives and solve problems important to them).

The studies used a range of frameworks and methods such as:

- Citizen science e.g. air quality monitoring, modelling, smell reporting
- Education and training e.g. workshops, internships
- Environmental and health assessment e.g. surveys, screening, storytelling.
- Policy review or development e.g. workshops, on-line games.

Positive outcomes for individuals and the community:

- Increased knowledge and awareness
- Capacity building
- Empowerment
- Motivation to act
- Self-efficacy or greater feeling of control

And positive outcomes for statutory and other organisations:

- Networks extended
- New forum for resident involvement
- Policy changes
- New procedures or guidance
- Education programmes

## What next?

The longer-term aim of this work is to illustrate how residents and local organisations can work together to take action that will result in improved air quality. The review provided a range of inspiring examples which illustrate the possibilities of community engagement in this field, as well as enablers and barriers that will be important to consider as we move forward with residents, local authorities and other organisations in trying out new ways of working in our 'demonstration sites'.

## What is NIHR CLAHRC / ARC North West Coast?

The Applied Research Collaboration North West Coast (ARC NWC) superceded CLAHRC NWC in September 2019. It is a partnership between universities, NHS, public, etc.

Its mission is to undertake applied research to improve public health, wellbeing, quality of care & reduce health inequalities across the North West Coast region. <https://arc-nwc.nihr.ac.uk/>