CORE20 PLUS 5

NHS

Tackling fuel poverty to improve respiratory outcomes

Region and organisation: Health Innovation North West Coast, Cheshire and Merseyside ICB; North West

Focused on: Inclusion health

Want to know more?

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Addressing the Challenge

Fuel poverty is a major driver of winter pressures and poor respiratory outcomes. In 2022, OFGEN estimated that 450,000 households across Cheshire and Merseyside were affected, placing people with asthma and Chronic obstructive pulmonary disease (COPD) at particularly high risk of exacerbations, hospitalisation and long-term decline. Many vulnerable residents live in cold, damp environments without access to preventative support, increasing avoidable emergency activity. The project sought to use existing resources and intelligence to identify affected populations early and connect them with support, improving health and reducing the risk of severe winter-related deterioration among respiratory patients.

Project Focus

The project centred on using fuel poverty as a lens through which to address wider health inequalities in respiratory care. By utilising the CIPHA data platform, the team developed a dashboard to pinpoint individuals at greatest risk those living in cold homes with known respiratory vulnerabilities. The intent was not to create new services, but to use data-driven insights to strengthen coordination between existing pathways. This approach enabled the translation of complex datasets into practical, locality-based actions designed to improve respiratory outcomes and reduce avoidable demand on health and care services.

Target Audience

The primary focus was on people with severe COPD and young children with pre-school wheeze, both highly vulnerable to cold and damp housing conditions. These groups often have limited access to preventative interventions, spend long periods indoors and are disproportionately affected by winter pressures. Using CIPHA's Combined Intelligence for Public Health Action, the project identified individuals with these conditions who were also likely to be living in fuel-poor households. This allowed partners to target interventions where they would have the greatest impact, aligning with the PLUS element of Core20PLUS5.

Collaboration and Partners

The programme brought together system partners across health, local government and the voluntary sector. NHS teams, local authorities, community organisations, Graphnet and Optum UK collaborated to design and deliver coordinated support. Co-leadership from Health Innovation North West Coast and the ICB helped ensure alignment with population health priorities and the wider winter resilience plan. This multi-sector approach allowed partners to address respiratory need, fuel poverty and wider determinants simultaneously, ensuring that interventions were practical, person-centred and tailored to each locality.

Intervention and Activities

Partnership workshops enabled stakeholders to interrogate population data and co-design targeted care pathways. Interventions included medicines optimisation, occupational therapy referrals, smoking cessation, mental health support and social prescribing. Local schemes were activated to address fuel poverty, such as household support fund payments, £500 per household in St Helens alongside energy advice and home-environment improvements. Collaboration with the charity Energy Projects Plus allowed home visits, insulation work, boiler repair or replacement, damp and mould treatment, and applications for debt clearance. The intervention demonstrated how coordinated use of existing services can meaningfully improve respiratory health.

Outcomes and Impact

The project identified more than 900 residents for proactive support, placing them on targeted respiratory and fuel poverty pathways. Over 600 people received medicines optimisation reviews, and £458,601 in household support payments were facilitated. There were more than 600 referrals into affordable warmth schemes, 350 social prescribing referrals and 300 additions to energy providers' priority services register. Final evaluation indicates an almost 10% reduction in GP appointments following intervention. Within the scope of activity for Knowsley and St Helens, for the 254 patients analysed, this is estimated to have avoided approximately £14,800 from primary care in the first-year post intervention (based on indicative GP consultation costing £37, as seen on King's Fund reports). Scaled to 1000 patients, that would've avoided approximately 1,575 GP appointments or approximately £58,275. These outcomes demonstrate strong early impact, both clinically and financially.

Lessons Learned

A key learning was that innovation does not always require new services, significant progress came from connecting and sequencing existing ones. The dashboard provided clarity on where need was greatest, helping frontline staff feel more confident, empowered and engaged in addressing wider determinants. Partnership working also strengthened relationships between NHS teams, local authorities and voluntary organisations. Importantly, the approach proved scalable and adaptable across localities.

What's next

The next phase prioritises spread and adoption, with new projects initiated in Liverpool, Sefton and Wirral. Integration with annual QoF reviews is supporting primary care engagement, and the model is becoming embedded in routine practice. The ICS aims to broaden this proactive, data-informed fuel poverty approach across Cheshire and Merseyside to deliver sustainable, system-wide change.

Top 3 Recommendations

1. Leverage existing population health data to identify high-risk groups early.
2. Use multi-partner workshops to co-design practical, targeted pathways.
3. Connect existing services rather than creating new ones to maximise efficiency and impact.

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