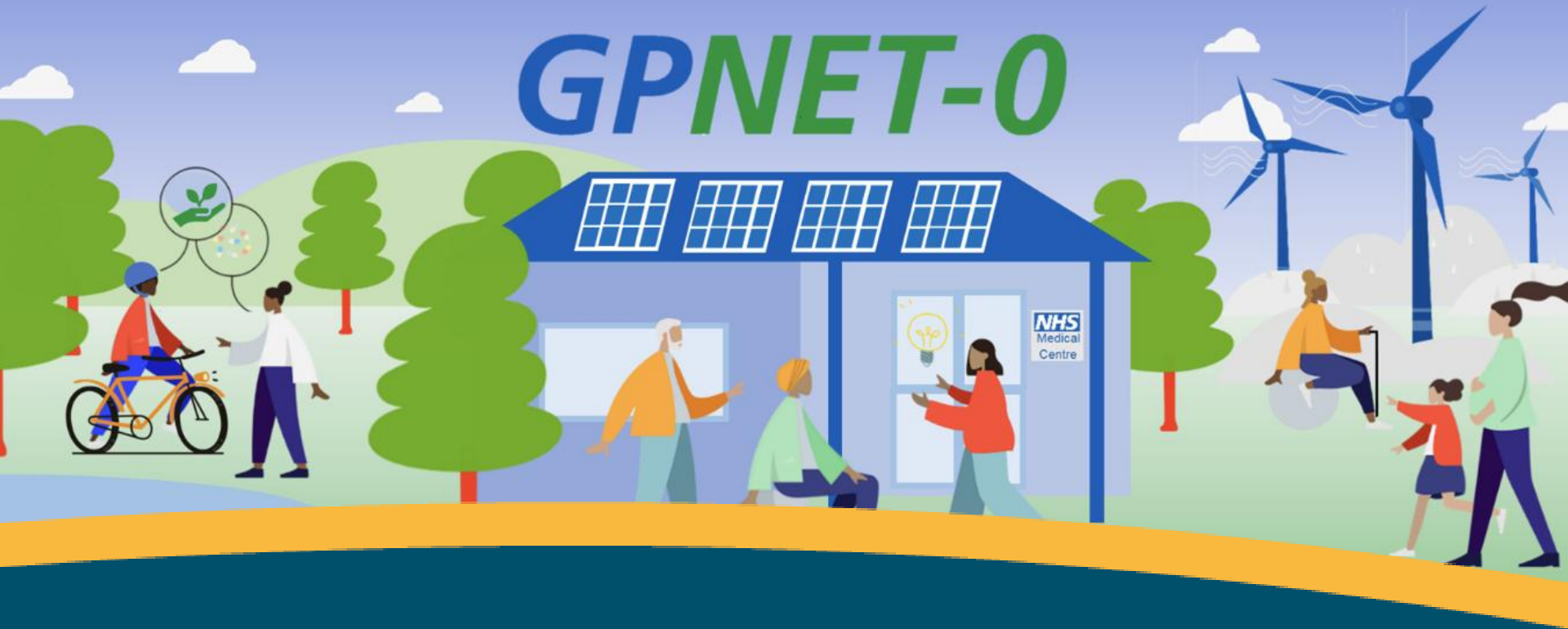


GPNET-0



GPNET-0

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Part 1: Information for all audiences



What is decarbonisation and NET-0?

- Global warming is a major, worsening threat to human health, causing increased mortality and illness through heatwaves, extreme weather, reduced air quality, and the spread of infectious diseases.
- The 2015 Paris Agreement aims for global temperature increase to be below 2 degrees centigrade, compared to pre-industrial levels. In response to this many governments and business leaders have set targets and made commitments to reduce carbon emissions.
- Decarbonisation is about reducing CO₂ (carbon dioxide) emissions that result from human activity, with the eventual goal of eliminating them.
- Net zero refers to achieving a balance between the amount of greenhouse gas emissions produced by human activity and the amount removed from the atmosphere.
- Healthcare in England is estimated to contribute between 4% and 5% of national emissions, and around 40% of all emissions generated by the public sector.
- Primary Care accounts for almost 25% of the NHS carbon footprint.
- In 2020 the NHS became the world's first health system to commit to reaching net zero by 2040, through the Health and Care Act 2022, for the emissions the NHS controls directly, and to take action to reduce the future impacts of climate change.

How are the NHS working towards NET-0?

- In 2021, NHS England provided guidance to support the NHS net zero carbon emissions goals.
- To achieve this, all 212 NHS trusts and 42 Integrated Care Boards in England were required to implement a green plan.
- Each system's green plan outlined how the Trusts and ICBs would reduce their emissions. Refreshed green plans were to be approved by the organisation's board or governing body, published in an accessible location on the organisation's website and shared with NHS England by 31 July 2025.

Health and Care Act 2022 <https://www.legislation.gov.uk/ukpga/2022/31/section/9>

Green Impact for Health Toolkit <https://www.rcgp.org.uk/blog/greener-practice-initiative>

Delivering a Net-0 NHS:

website: <https://www.england.nhs.uk/greenernhs/a-net-zero-nhs/>

pdf: <https://www.england.nhs.uk/greenernhs/wp-content/uploads/sites/51/2020/10/delivering-a-net-zero-national-health-service.pdf>

RCGP website: <https://www.rcgp.org.uk/blog/reduce-the-carbon-footprint> (9 suggestions 2022)

What is the **GPNET-0** Study?

The Warwick Medical School/ University of Warwick study team submitted a bid to the NIHR for funding of the GPNET-0 Study in 2022.

Healthwatch Warwickshire supported this bid and agreed to assist with sharing the purpose and findings of the study.

The study accepted:

- That the NHS is committed to reducing the carbon emissions linked with its activities.
- Research is needed to learn how this can be done.

The study's aims:

- To answer the question: 'How do institutional, organisational, professional, and patient factors influence the implementation and sustainability of actions to mitigate the greenhouse gas emissions associated with general practice?'
- To understand how general practice is implementing decarbonisation actions to help achieve a net zero NHS.
- To suggest actions to decarbonise general practice to help achieve a net zero NHS.

“Decarbonisation in general practice succeeds only when embedded into systems, funding, contracts and workflows”

Find out more about the study on the Warwick University website [here](#)

How was the **GPNET-0** study structured?

Work package 1: A review of 15 existing studies, aimed at understanding the behaviours, processes, and activities that support decarbonisation in general practice.

Work package 2: Focussed on understanding General Practice Team's views. The first part was an online survey. The second part was case studies with 12 case study practices in three ICB areas: Coventry and Warwickshire ICB, Birmingham and Solihull ICB, and South Yorkshire ICB.

Work package 3: Focused on understanding patients' views. The first part was an online patient survey, of randomly recruited patients from the 12 practices involved. The second part was in-depth interviews with patients.

Work package 4: The study team developed a Budget Impact Model (BIM) for each of the 12 participating case study practices. The BIM compared costs and resource usage for 'business as usual', with different interventions that could be undertaken.

Work package 5: Interviews with a range of key stakeholders, with a broad range of roles, in the field of decarbonisation in general practice.

Work package 6: Synthesising findings

Work package 7: Publications and impact

What are the **GPNET-0** study summary findings?

WP1: A review of 15 existing studies found limited evidence on sustainability actions in general practice, identifying strong leadership and institutional support as critical, with cost, time, and limited awareness as key barriers.

WP2: A survey of 328 staff across 163 practices and a 12-month longitudinal study of 12 practices found that actions aligned with existing workflows or delivering efficiency gains were most achievable, while systemic barriers, particularly lack of national policy direction, were the primary constraints.

WP3: Surveys (252 patients) and interviews (24 patients) found broad but conditional support for sustainability actions; patients prioritise care quality above all else, have low awareness of what their practice is doing environmentally, and accept sustainability changes most readily when framed as improving care.

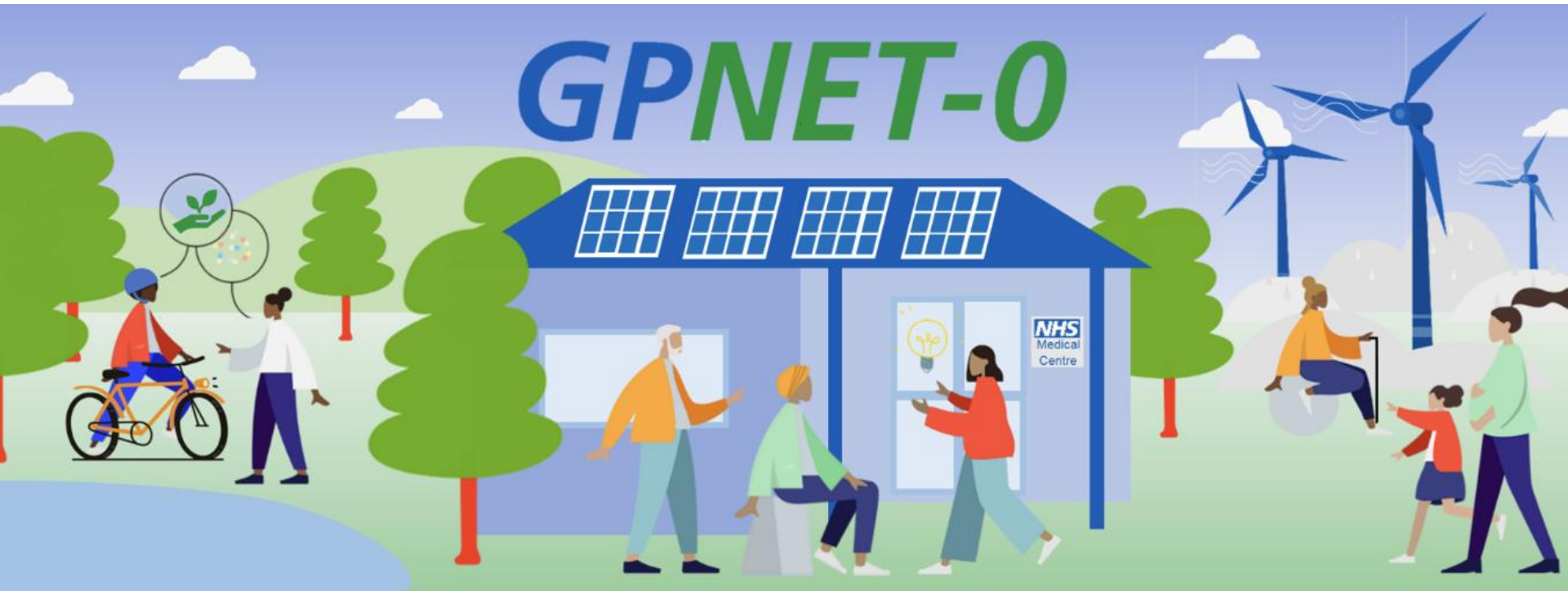
WP4: A Budget Impact Model was developed to help practices estimate the financial costs and potential savings of specific sustainability actions.

WP5: Interviews with 25 stakeholders across the UK identified three priorities: embedding sustainability into training and everyday workflows; enabling strategies including incentives, protected time, and peer networks; and clearer, consistent national policy direction tailored to primary care.

WP6: All study findings were brought together to explain the system conditions under which sustainability actions in general practice succeed or fail, concluding it is primarily a structural challenge requiring institutional embedding, not individual goodwill.

WP7: The study has produced peer-reviewed publications, policy briefs, factsheets, videos, conference presentations, and a newsletter, all available at the study website.

Part 2: Evidence for system leaders and commissioners



What are the detailed **GPNET-0** study findings?

Work package 1: Review of existing studies

A review of 15 existing studies found limited evidence on sustainability actions in general practice.

- Critical: strong leadership and institutional support
- Barriers: cost, time, limited awareness

More detail on next slide.

What are the detailed **GPNET-0** study findings?

Work package 1: Review of existing studies

Two reviewers looked at 15 existing academic studies on decarbonisation in general practice.

Results:

Sustainability actions taken by general practices included:

- resource reuse
- improved waste management
- energy-efficient systems
- preventive care to reduce overmedication

Strong leadership and institutional support were seen to be crucial for the success of these actions.

Barriers to success included:

- high costs, including staffing
- resource constraints, actions being seen as time consuming
- limited awareness among clinicians and patients

Needs identified included:

- enhanced communication
- patient centred approach
- education, understanding of behaviour change
- structured promotion of initiatives to improve patient and community engagement
- leadership involvement and influence.

Conclusions

There is limited evidence on the implementation of sustainability actions in general practice. Several factors affect how successful the actions are. It was suggested that future research focus on; understanding the part played by the GP practice, the relative success of the actions, and exploring patient and community involvement.

What are the detailed **GPNET-0** study findings?

Work package 2: General Practice Team's views

A survey of 328 staff across 163 practices and a 12-month study of 12 practices found;

- actions aligned with existing workflows or delivering efficiency gains were most achievable
- systemic barriers, particularly lack of national policy direction, were the primary constraints

More detail on next slide.

What are the detailed **GPNET-0** study findings?

Work package 2: General Practice Team's views

A survey of general practice staff received 328 responses from 163 practices

Survey results included:

General practice staff showed an overall willingness to undertake sustainability actions. Respondents showed a general lack of awareness of the resources currently available. Members of the same practice were sometimes unsure about who the lead on sustainability action was.

Follow up workshop:

A workshop was held with staff across 12 general practice case study sites in England. The workshop was designed to support the development of a Green Action Plan (GAP), to be acted on over the next 12-months. A video was viewed summarising currently available resources and provided examples of potential actions.

Facilitated discussion to support action planning:

Prioritising non-clinical over clinical carbon reduction was seen as being easier to implement. There was a wide staff awareness of the BTS/SIGN/NICE Joint Guideline on Asthma 2024 (NG245). Cost savings, financial incentives, and CQC compliance were deemed important by several practices. A practice's rural vs urban setting may impact patients' and staff capacity to use active modes of transportation. High recycling costs pose a barrier to practices' efforts to reduce their carbon footprint. Climate change champions can have a mixed effect on a practice's sustainability efforts. Time and administrative constraints were identified as key factors with an impact on sustainability actions.

Practice teams had two weeks to develop their GAP using a template provided by the study team. Each practice planned between three and eight sustainability actions. 'Managing waste' was the most frequently addressed area, appearing in 10 practice GAPs.

Conclusions

The educational workshop helped to develop structured GAPs with set timescales and intended outcomes. This study did not assess the implementation of planned actions.

What are the detailed **GPNET-0** study findings?

Work package 3: Patient's Views (Surveys and interviews)

252 patient surveys and 24 patient interviews found broad but conditional support for sustainability actions.

Patients;

- prioritise care quality above all else
- have low awareness of what their practice is doing environmentally
- accept sustainability changes most readily when framed as improving care

More detail on next two slides.

What are the detailed **GPNET-0** study findings?

Work package 3: Patient's Views: Surveys

Adult patients who had recently attended their general practice completed an online or paper survey assessing

- awareness of climate change and health,
- perceptions of general practice responsibility for reducing emissions,
- willingness to engage in sustainability-aligned behaviours if suggested by practice staff
- perceived barriers to action.

Results

A total of 252 patients responded (response rate 12%).

- 6% agreed that their general practice has a key role in reducing greenhouse gas (GHG) emissions
- 5% felt their general practices should take greater action.
- 3% of respondents believed that individuals should do more to reduce their personal carbon emissions.
- 25% reported willingness to engage in a medication review or increase active travel if suggested by practice staff.
- 82% disagreed that the government should do more to incentivise practice-level sustainability actions.
- 14% felt well informed about climate change
- 46% of respondents noted a lack of information
- 1% felt well informed about the health impacts of climate change
- 72% when asked "What might prevent you from taking actions?" responded "Concerns about how they might affect quality of healthcare"
- 32% felt they were already doing everything they can.

For a deeper understanding of the context of these statistics read the full study [here](#)'

Conclusions

Currently patients do not seem to have an expectation that practices are focussed on sustainability actions. Sustainability should be seen to support, rather than compete with, care quality. Decarbonisation may be more acceptable if it is part of routine service improvement.

What are the detailed **GPNET-0** study findings?

Work package 3: Patient's Views: Interviews

Twenty-four people were interviewed, representing a range of ages, backgrounds, and health statuses. Interviews explored patient's views on environmental initiatives in general practice. Interviews took place by telephone and were recorded.

Results

Four themes were identified:

- 1) patient care as the main priority
- 2) not being aware of environmental initiatives taking place, and unclear whose responsibility they are
- 3) believing general practice-level action has little impact
- 4) believing that; changing from paper to digital and keeping people healthier through lifestyle support so they need fewer medicines and appointments, which benefits both the patient and the environment, are appropriate environmental initiatives.

Conclusions

The people interviewed broadly supported environmentally responsible healthcare. They expected that quality, access, and equity would be safeguarded. The people interviewed expected meaningful local action would depend on national leadership and adequate resources.

For patients to support changes in a surgery, those changes must put the patient first, be clearly explained, and work across the whole system.

What are the detailed **GPNET-0** study findings?

Work package 4: Budget Impact Model

A Budget Impact Model was developed to help practices estimate;

- financial costs
- potential savings

of specific sustainability actions, using a Green Actions Calculator.

More detail on next slide.

What are the detailed **GPNET-0** study findings?

Work package 4: Budget Impact Model

The health economic analysis focussed on the development of a Budget Impact Model (BIM) to show the potential financial implications of activities associated with practice GAPs that were developed by practices involved in the case study.

Practices shared their costs in categories including:

- energy consumption
- staff travel
- recycling
- waste disposal.

Prescribing behaviour using data from [Open Prescribing](#) was also analysed.

Costs were re-visited toward the end of the 12- months to look for changes, and the impact of their Green Action Plan.

Many practices, particularly those who don't own their own premises, were unable to give accurate cost information.

In consultation with GP practice managers, a Green Actions Calculator was developed to enable practices to estimate the potential costs and savings of various sustainability actions, using publicly available costing data. For example, it can provide estimated costs and savings of installing solar panels.

What are the detailed **GPNET-0** study findings?

Work package 5: Stakeholder's views

Interviews with 25 stakeholders across the UK identified three priorities;

- embedding sustainability into training and everyday workflows
- enabling strategies including incentives, protected time, and peer networks
- clearer, consistent national policy direction tailored to primary care.

More detail on next slide.

What are the detailed **GPNET-0** study findings?

Work package 5: Stakeholder's views

Twenty-five people from clinical, managerial, policy, and community roles took part. Interviews were conducted online. These stakeholders were identified as having influence to promote change at a local, regional or national level through their roles across the UK. During interviews, stakeholders were asked to reflect on the findings so far from the GPNET-0 study and how the actions to decarbonise general practice could be better supported.

Preliminary reflections highlighted; the term 'decarbonisation' does not fully describe what actions are needed, how the issues are framed is important, e.g., the importance of discussing patient care first, and the added benefit that changes to their care can make not only to their health but to the environment to help create a more positive message.

Results

Three themes were identified:

- 1) Sustainability should be integrated into; induction, appraisal, training and everyday work, supported by leadership and aligned with high quality care.
- 2) Enabling strategies should be used for practices, such as; incentives, protected time and access to peer networks.
- 3) The need for clear national direction, local adaptability, and sustainability to be in line with quality care and patient benefit. Participants highlighted the need for clearer guidance specific to primary care.

Conclusions

Decarbonising general practice requires coordinated action from the GP surgery, through local NHS leadership, to national government.

Embedding sustainability into routine practice is essential for sustained cultural and organisational change.

What are the detailed **GPNET-0** study findings?

Work package 6: Synthesising findings

Bringing together all the study's findings to explain why implementing sustainability actions in general practice succeeds or fails, and what needs to change at every level of the NHS to make it work.

The key finding from the synthesis is,

“Decarbonisation is primarily a structural and institutional challenge, not a matter of individual motivation.”

- Goodwill alone will not achieve it.
- It requires embedding sustainability into governance, funding, contracts, and routine workflows across all system levels.
- This reframes the ‘policy ask’ clearly and should be communicated as such.

What are the detailed **GPNET-0** study findings?

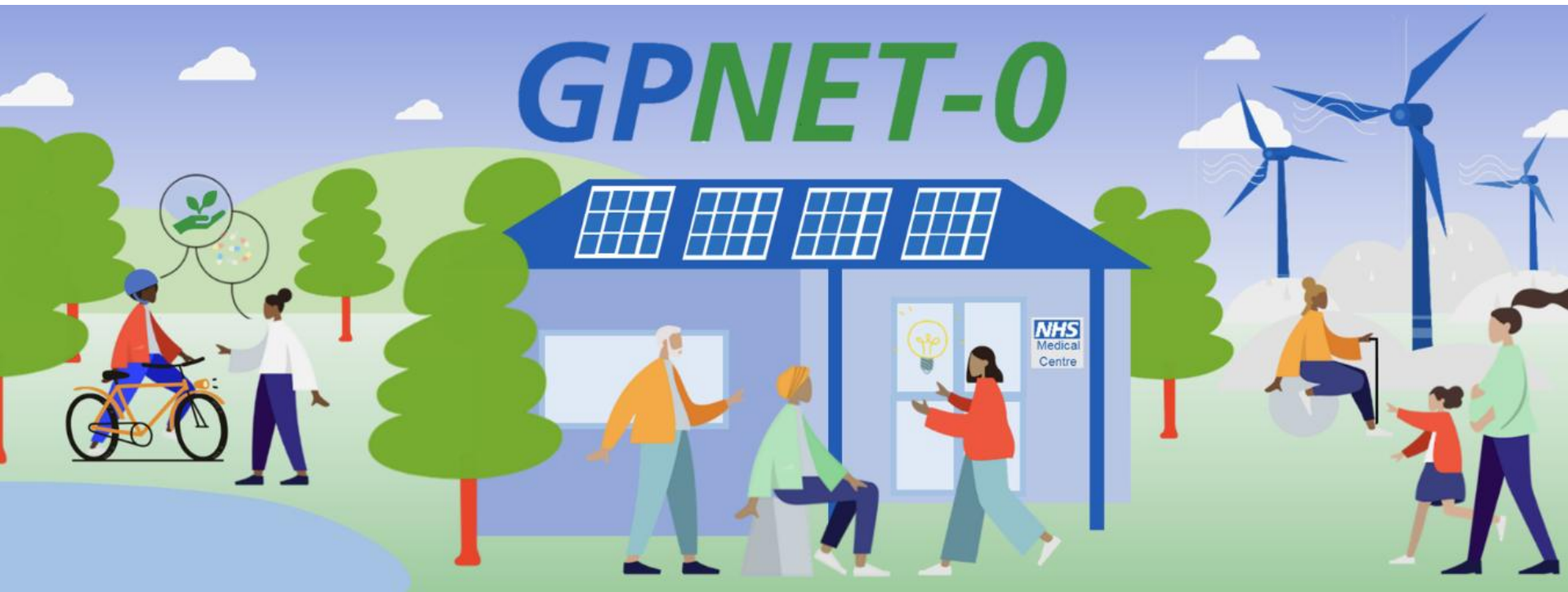
Work package 7: Publications and Impact

Material published by the study team throughout the study includes:

- Publications
- Presentations
- Policy briefs
- Factsheets
- Videos

All published material can be found on the study website [here](#)

Part 3: Practical applications for practices and patients



What actions can be taken to meet NET-0 targets?

Commissioners and critical friends

- Ask local commissioning bodies what primary care-specific sustainability support and direction it is currently providing to practices; the study evidence shows regional variation in support is a key driver of uneven progress.
- Advocate for sustainability to be embedded in GP contractual frameworks and quality schemes, not left to voluntary effort.

GP Practices

- Prioritise actions that deliver efficiency gains and integrate into existing workflows; the 12-month longitudinal study confirms these are most likely to be sustained.
- Focus on quick wins early to build momentum and confidence across the team.
- Avoid over-relying on a single enthusiast; distribute sustainability responsibility across the team including GP partners, who the study identifies as critical to real progress.
- Use the Budget Impact Model developed to assess costs and savings of specific actions.
- Connect with Greener Practice peer networks to share learning and reduce duplication.

Patients and public

- Return unused medication to your pharmacy; (already recognised by 38.5% of survey patients and one of the lowest-friction actions available).
- Use electronic communications with your practice: text, email, online consultations; where these are clinically appropriate for your needs.
- Ask your GP about a medication review to check whether all your current medicines are still needed; (the study found this was the action patients were most willing to consider when suggested by a clinician).
- If you have asthma, ask your GP about lower-carbon inhaler options; this is now supported by the 2024 national asthma guidelines, not just a green initiative.
- Ask your practice what their Green Action Plan includes and how sustainability improvements are protecting, not compromising, your care.

What does this study highlight?

When aiming for NET-0 in GP Surgeries:

What works?

- Clear, consistent national policy direction tailored to primary care
- Strong leadership
- Institutional support
- Aligning actions with existing workflows
- Embedding sustainability actions into training
- Strategies including incentives, protected time, and peer networks
- Delivering efficiency gains
- Prioritising care quality
- Framing sustainability changes in terms of improving care

What does not work?

- Lack of national policy direction
- Costly and time-consuming activities
- Relying on the goodwill of staff or patients
- Patients having limited awareness of what actions their practice are taking



Responses

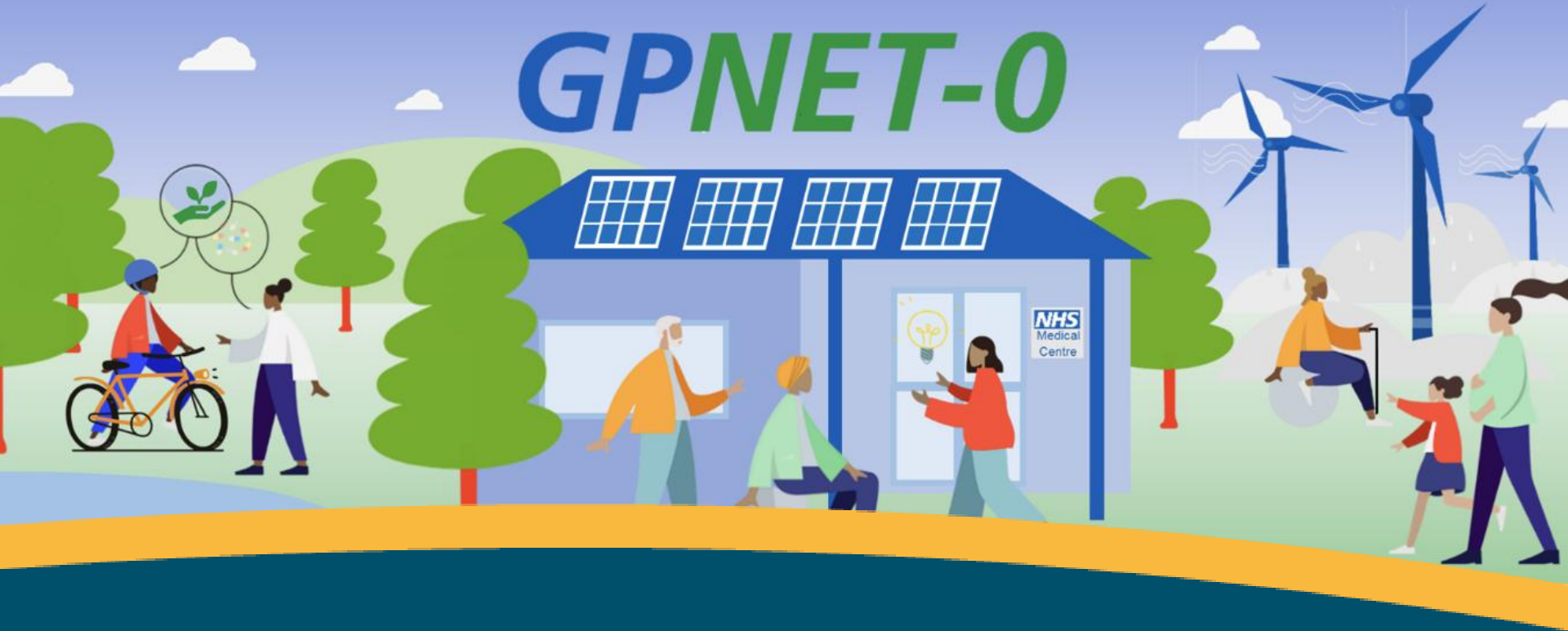
“ Healthwatch Warwickshire would like to thank the GP Net-0 Study Team for their work.

Healthwatch Warwickshire will be sharing this presentation with local, regional and national stakeholders. We look forward to seeing what practical impacts the GP NET-0 Study findings have on measures to attain the NHS Net zero target.”

“The GPNET-0 Study Team extends its sincere appreciation to Healthwatch Warwickshire for their collaboration throughout the study. As we move into the dissemination phase, their role has been instrumental in ensuring that the findings are communicated in ways that are meaningful, accessible, and relevant to public, patient, and community audiences. Their contribution has helped strengthen the translation of evidence into insights that can inform policy and practice.”



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For more information:

University of Warwick GP NET-0 webpage:

<https://warwick.ac.uk/fac/sci/med/research/warwick-applied-health/apc/qualityandsafety/gpnet-0/>

Let's stay connected:

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