

Creating Sustainable Health and Social Care Pathways: From Research to Impact

Luis Loria-Rebolledo

Preference And ValuE Theme, Health Economics Research Unit, University of Aberdeen

Valuing and Managing the NHS Scotland Outdoor Estate

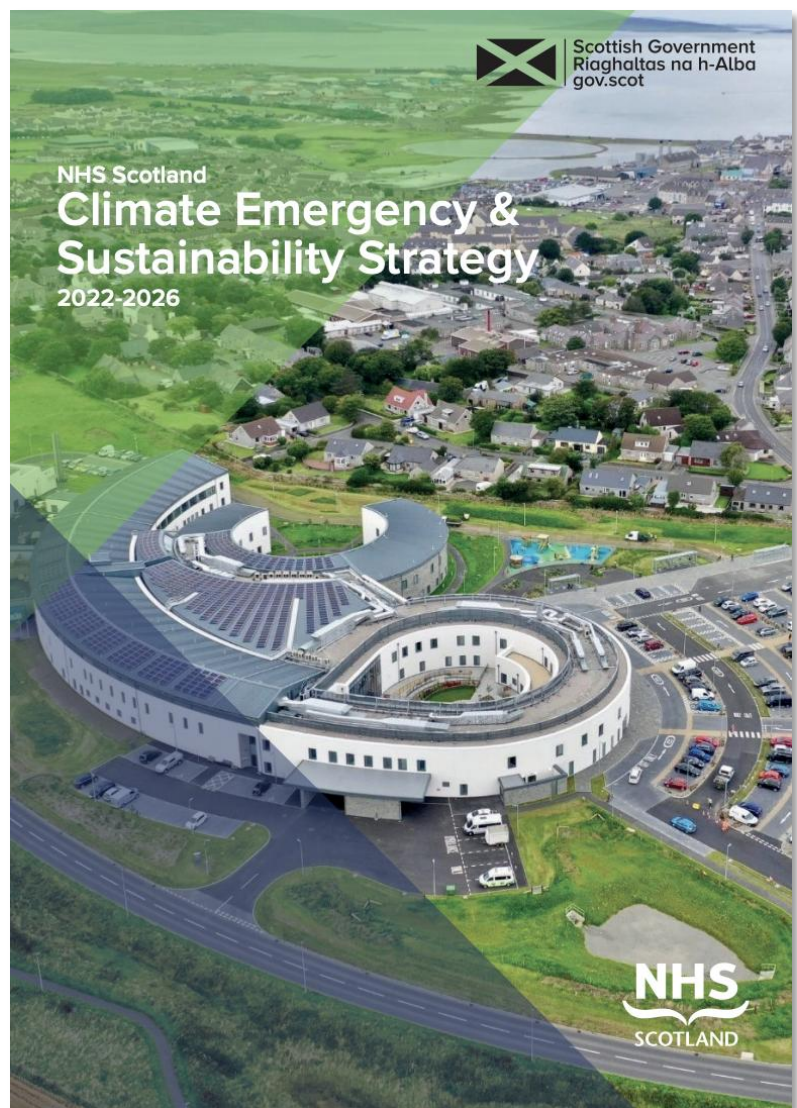


Why NHS Scotland (NHSS) open spaces (OS)?

Exposure to open (green, blue or open) spaces offers many **health and wellbeing benefits**. But not everyone uses (or can easily use) these spaces.

NHSS OS can contribute to these benefits. **Half** of NHSS estate (966 sites) is open space, covering **825 hectares** (twice the size of Loch Lomond Nature Reserve or about 1,500 football fields)...

But the use and value of this estate is **not fully understood**.

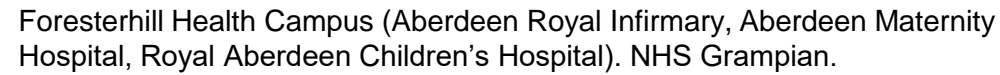


NHS Scotland is a custodian of significant areas of greenspace and we are committed to working with our local communities and other partners to develop and manage this public asset in a way which improves public health, reduces health inequalities and helps to address biodiversity loss and the climate emergency.

107. To ensure the development and management of NHS greenspace in a way which supports staff, patients and local communities, improves public health and reduces health inequalities, and helps to address biodiversity loss and climate change we will:

- ✓ digitally map the extent, quality and accessibility of NHS greenspace
- ✓ develop and implement a strategic framework for greenspace at the local Health Board level
- ✓ use natural capital approaches to assess and value the contribution of NHS greenspace to delivering climate, sustainability and health outcomes, including carbon sequestration

ABERDEEN 2040



Open Space: 15.56 ha (33%)



Open Space: 0.34 ha (34%)

Then, a nationally representative survey...

- Design based on **Scotland's People and Nature Survey** (n = 2,449 adults):
 - Fielded October-November 2024.
- Gather **data on**:
 - Visits to NHS estate and its open spaces
 - General outdoor recreation
 - Respondent characteristics.
- Use **Office for National Statistics** and **The Green Book** methods for Natural Capital Accounting to quantify:
 - The **health benefit gain and value from exposure** to NHS open spaces
 - A **wider amenity value** of the spaces.

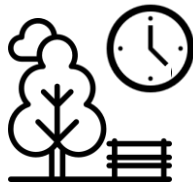
How are NHSS OS used...



53% of adults have spent time in an NHSS open space in the previous twelve months.



65.9% trip main reason was using NHS services



78% last less than one hour; **half** less than 30 minutes.

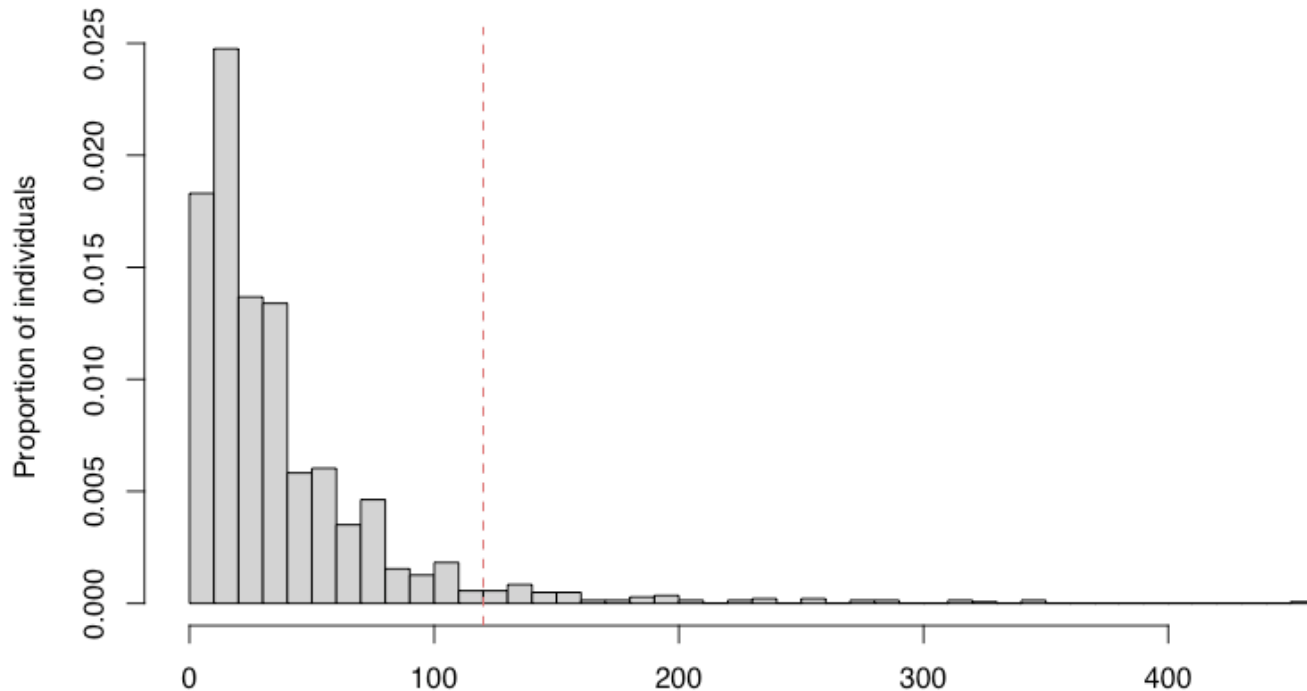


Walking & relaxing most common activities.



Helped destress, relax and unwind most agreed benefit

NHS sites generate a lot of exposure to open space...



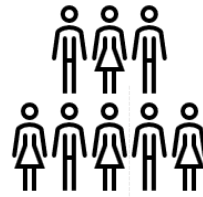
Weekly average exposure to NHSS open spaces, seasonally adjusted. Red bar indicates 120-minute threshold after which user is assumed to derive health benefits.

Est. 128 million visits NHSS open spaces.

- Most are to **smaller primary care sites** (GP Surgeries and Health Centres).

91 million hours spent annually in NHSS open spaces.

- At least 34% (est. 31 million) from sites with less than 0.85 hectares (1x football pitch)



Adult population



Quality Adjusted
Life Years



(in 2022 prices)

Direct health benefits
(NHSS visits in
isolation):

5.1% population
Est. 230,318

4,595

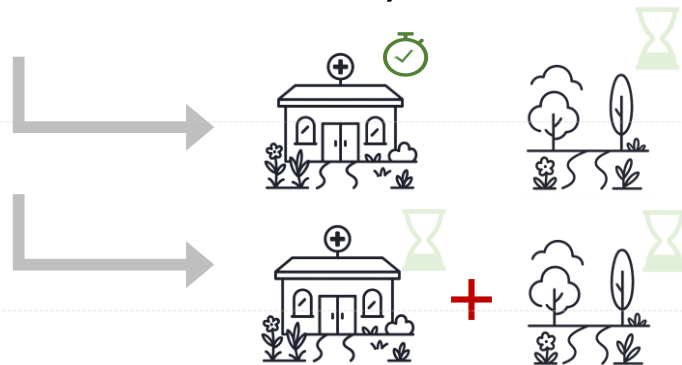
£82.0 million

Attributable health
benefits (combined with
other outdoor visits):

4.8% population
Est. 205,155

4,093

£73.0 million



2.6% population
Est. 111,270

2,219

£39.6 million

2.2% population
Est. 93,885

1,874

£33.4 million

Who is more likely to use the estate...

NHSS shares inequalities with other traditional open spaces



Male



Higher income



Younger age



Living with **at least one under-18**

NHSS facilitates exposure when not easily available



No private garden at home



> 1 mile

Living over **1 mile from nearest open space**



Living with **physical disability**



Living with **mental health condition**

Delivering Immediate Sequential Bilateral Cataract Surgery (ISBCS)

HERU
HEALTH ECONOMICS RESEARCH UNIT
Promoting Excellence in Health Economics

Centre for
Sustainable
Delivery



NHS
SCOTLAND

NHS
Tayside

Why Cataract Surgeries?

Cataract surgeries are **one of the top five** most common procedures and the **most common** surgery in Scotland...and demand is only going to **increase**.

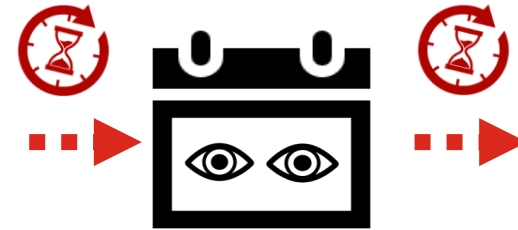
Relatively simple and quick (10-20 minutes) that can have a **significant positive impact on the quality of life of patients** (Javed et al., 2015). But there can be long waiting lists...

Each generates roughly **100 kilograms of CO₂ equivalent** (van-Hove et al., 2024). And inconvenience for patients as they need to travel.

Implementing IBSCS



Delayed sequential bilateral cataract surgery



Immediate sequential bilateral cataract surgery

NHS Tayside has increased capacity from 12–14 to **24–32 cataract surgeries per day**.

The **national Centre for Sustainable Delivery** estimates that implementing IBSCS can save up to **146 KiloTonnes of CO₂ equivalent** from reduced patient travel (equivalent to the carbon sequestered by 2.4 million tree seedlings over 10 years).

ISBCS uptake...

Studies and data have shown they are safe and have high levels of uptake, but some **hesitancy remains**.

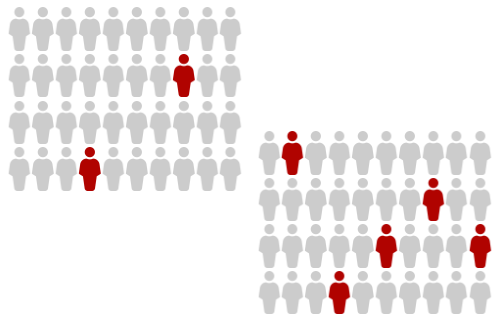
Reasons are poorly understood, but most cited is the perceived cross-contamination infection risk that could lead to permanent vision loss.

But **it's a complex picture**: patients may also have **different contexts and concerns...**

- Those with limited support networks?
- Aversion to the recovery period following an IBSCS.

Incorporating preferences...

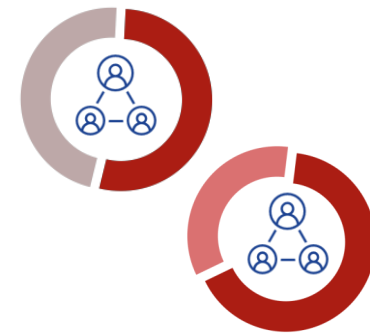
Using a national survey in Scotland, we will use economic methods (Discrete Choice Experiments) to understand what people care and derive the **trade-offs for different patients:**



Benefit-risk
uptake matrix



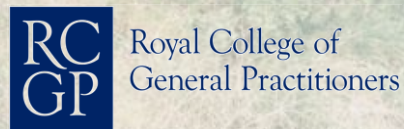
Maximum
Willingness to
travel



Predicted
Uptake based on
context

Inform a **prediction model** to understand the real impact on waiting lists, increased societal health and wellbeing and environmental benefits.

The One Health System Net Zero Hub



A UK-wide approach, Scotland-led

Decarbonising health and social care pathways: a UK research hub that will work with patients to design-out carbon from care pathways.

Funded by UKRI and NIHR, includes a specific work program to re-imagine the patient journey for those living with anxiety and depression, using **Scotland as case study.**

£42m funding to ensure health is central to net zero strategies



3 March 2025

Seven new transdisciplinary research hubs will explore ways to ensure the UK's transition to net zero also protects and promotes physical and mental health.

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Reimagining health care pathways:

Drawing on the lessons of social prescribing, we will:

1. **Map** the sources of emissions in the different patient journeys.
2. **Co-create** emission reduction plans which are low emission and non-clinically based.
3. **Implement** and **adapt** the plan, with NHS Tayside (Dundee) as case study.
4. **Monitor** and **evaluate** the health, social and economic outcomes.

A call to action: **we need all the help we can get!**

Thank you.

Contact Information:

Luis Loria-Rebolledo: luis.loria@abdn.ac.uk

Health Economics Research Unit: abdn.ac.uk/heru

NHS Scotland Outdoor Estate Report Link: <https://doi.org/10.57064/2164/25>



Collaborating with the One Health Hub Contact:
UKHub_OneHealthSystems@exeter.ac.uk@abdn.ac.uk

