

Trusted voice: Sustainability and climate principles for healthcare

Executive summary

Climate change, described by *The Lancet* as the greatest global health threat of the 21st century, is already impacting health and the delivery of care.¹ These impacts are uneven, disproportionately affecting frail and disadvantaged populations.

The consequences of inaction are grave. Healthcare is a key contributor to climate change, with both direct and indirect environmental impacts, yet it also has a broader potential to improve health for the planet and its people.

SIGN, as Scotland's national guideline agency, has a duty to act according to the available evidence. This position statement introduces a set of concise, person-centred principles that can be applied across the planning, development and implementation of all aspects of healthcare.

A proportionate, evidence-informed response is required from health policymakers and providers. These principles support guideline developers, clinicians and service leaders to deliver high-value care with the least environmental harm and the greatest co-benefits, while keeping clinical effectiveness, safety and equity at the core.

Principles

Promote health, prevent illness
Empower people and share decisions
Explore alternatives
Use social prescribing
Appropriate medicines use
Reduce waste
Promote co-benefits
Consider environmental impact
Adapt

Sustainability and climate principles for healthcare

1. Promote health, prevent illness^{2,3}

- Act early on **modifiable risk factors**, using best available evidence.
- Use risk assessment tools only alongside **clinical judgement**, never as a substitute.

2. Empower people and share decisions⁴⁻⁷

- Use a structured shared decision-making approach (for example, BRAN: benefits, risks, alternatives, nothing).
- Where helpful, delay decisions and use decision aids or information resources, with follow-up. Recognise the role of continuity and trust.
- Offer control and choice; use positive risk management and safety-netting.

3. **Explore alternatives**^{5,6,8}
 - Consider all evidence-based options, not only drugs or surgery, aligned with what matters to the person.
 - Ask whether no active intervention (watchful waiting or self-care) is reasonable.
 - When combining therapies, weigh incremental benefit against resource use, polypharmacy and harm. Recognise and address expectations that may bias towards intervention.
4. **Use social prescribing**^{9,10}
 - Consider social prescribing (including blue-green or nature-based options) where evidence supports benefit.
 - Utilise knowledge of access and equity: local availability, transport, deprivation, language, disability, digital access.
 - Personalise: advise on changes likely to be sustainable and long-term for each person
5. **Appropriate medicines use**^{2,6}
 - Use an effective dose for an appropriate duration.
 - Systematically address drug interactions and polypharmacy (with deprescribing where appropriate).
 - Anticipate and mitigate problems with medicines concordance.
 - Appreciate how access, understanding and inequality affect how medicines are taken.
6. **Reduce waste**^{2,6,10,11}
 - Start small, review soon: initiate medicines in appropriate quantities until planned review. Confirm effectiveness, adverse effects and actual use before re-prescribing.
 - Utilise audit to improve correct use (concordance, dose, duration).
 - Reduce wasted encounters: where clinically appropriate, use alternatives to routine referral or follow-up (eg, patient-initiated follow-up, remote or self-directed pathways) with equity in mind.
7. **Promote co-benefits**
 - Consider the additional benefits of each intervention (health, financial, environmental, psychological, community or spiritual). Examples include the wider benefits of active travel and dietary change.
 - Use inclusive approaches so co-benefits are achievable across deprivation, disability, language and access barriers.
8. **Consider environmental impact**^{2,3,5,6,12-37}
 - Identify whether a proposed treatment or device causes environmental pollution (air, water, soil) or has high life-cycle impacts.
 - Where clinical effectiveness and safety are comparable, prefer lower-impact equivalents.
 - Consider impacts across research and development: manufacturing, distribution, use and disposal.
 - Use environmental framing to engage with people, not ration; retain clinical need and equity as first principles.

9. Adapt²⁹

- Anticipate change: economic, social, supply-chain and climate pressures will alter what is feasible; plan for this explicitly.
- Leverage constraints for innovation: use shortages and system limits to accelerate safe, lower-burden alternatives (care models, devices, pathways).
- Protect vulnerable groups: build equity safeguards into decisions and updates.
- Review over time: reassess treatments and recommendations as circumstances and evidence change (living mind-set).

Implementation

SIGN is committed to embedding sustainability into guideline development processes to support policy, planning and clinical practice in NHS Scotland. SIGN will publish a sustainability and climate framework and implementation plan.

Definitions

Sustainable healthcare

Sustainable healthcare is high-quality, evidence-based care. It delivers value, with outcomes that really matter to people. It provides a positive social impact and minimises environmental impact, both now and in the future.^{2,3,16}

Climate change

Climate change is a large-scale, long-term shift in the planet's weather patterns and average temperatures, mainly caused by human activity.^{38,39}

Planetary health

'Planetary health' is the health of humanity and the health of the natural systems on which it depends. It is the pursuit of the highest standard of health and wellbeing worldwide, and focuses on human systems (social, political, economic, technological, legal and more), alongside the world's natural systems. It defines limits to our impact on the environment so that all life on earth can flourish.^{8,40}

Social prescribing

An approach by which individuals are linked to resources and services within local communities to improve mental and physical health and wellbeing.¹⁰

Blue-green prescribing

A form of social prescribing that links people to nature to improve their physical or mental health or wellbeing, which may be water-based (blue) and nature-based, enhancing the natural environment (green). It is often proposed as an alternative to medication, limiting pharmaceutical pollution.⁹

Background and methods

SIGN has produced trusted, evidence-based guidelines for over 30 years. SIGN Council is a unique national, interdisciplinary forum, with membership from professional bodies and each of the Royal Colleges in Scotland.

Trusted Voice position statements are made to provide evidence-based, forward-looking perspectives on complex issues facing the health service, supporting clinicians, policymakers, and the wider public with authoritative advice.

Key steps of the development of the sustainability and climate principles for healthcare included:

1. **Evidence review and topic exploration:** keyword searches on guidelines and sustainability, climate and planetary health. A review of partner organisation publications for examples of best practice.
2. **Interdisciplinary engagement:** with the National Institute for Health and Care Excellence (NICE) and the Heidelberg Institute for Global Health (HIGH). Stakeholder presentations on pharmaceutical pollution, the Scottish Government sustainability strategy, health inequalities and access, and global collaboration opportunities.
3. **Group work:** principles drafted by a short-life working group; peer review (presentations at the Guidelines International Network annual conference, NHS Net Zero Conference)
4. **Governance and accountability.** robust declarations of interest process, transparent documentation of decisions, and public-partner involvement at key points, SIGN council sign-off.

Read the [methodology](#) for developing Trusted Voice position statements.

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