Scottish Natural Heritage
Research Report No. 1212

Our Natural Health Service – Gathering the views of key individuals with an operational or strategic role in the Green Health Partnership Intervention

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RESEARCH REPORT

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RESEARCH REPORT

Summary

Our Natural Health Service - Gathering the views of key individuals with an operational or strategic role in the Green Health Partnership Intervention

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Keywords

green health; green exercise; health inequalities; public health; community development; physical activity; social prescribing

Background

Scottish Natural Heritage (SNH) is the lead organisation in the Our Natural Health Service (ONHS) programme, which aims to make better use of Scotland's natural environment as a resource to improve health and wellbeing and tackle health inequalities. The programme aims to encourage more people to enjoy and be active in the outdoors, to mainstream green exercise and green health[1] into health and social care policy and practice, and to build capacity and participation within communities. The Green Health Partnership (GHP) intervention is the centrepiece of the ONHS programme, with four partnerships established during 2018/19 to demonstrate how a whole system approach can help translate Scotland's public health priorities into practical action on the ground. Funded for three years, Green Health Partnerships are operating in different Scottish Health Board areas that include a range of geographies and public health issues.

The work of each Green Health Partnership is different and each is at a slightly different stage of development. In 2019, Scottish Natural Heritage commissioned Edinburgh Napier University to undertake a series of research interviews with those involved in Green Health Partnerships at an operational and strategic level to explore their experience of delivery to date and their thoughts on longer-term mainstreaming of the GHP approach.

Main findings

- Promoting the use of the natural environment is a good strategic fit with all six public health priorities and the Green Health Partnerships provide a strong powerful voice to raise the profile and awareness of the benefits of green health.

[1] 'Green exercise' and 'green health' are terms that encompass ways of using the outdoors and contact with nature to foster better health. Green exercise / green health activities include walking, cycling, gardening, volunteering, outdoor learning and play, as well as just enjoying being outdoors in green environments and nature.

- Employing Green Health Partnership project officers is pivotal to success as they provide focus, knowledge, and time to help develop green health.
- Green Health Partnerships identified a need to engage politicians and healthcare professionals at both a local and national level as green health champions.
- Stakeholders suggested that focusing on the mental health benefits of green health activities would increase strategic importance of the GHPs.
- Appropriate messaging and communication for green health activities, targeting both health and social care professionals, and the population, is a key area for future development.
- Green Health Partnerships should consider how to integrate green health referral pathways into social prescribing services.
- Stakeholders were concerned about the short-term nature of Green Health Partnership funding and about expectations for intervention delivery from third sector, community and voluntary organisations without sustainable and appropriate funding.
- Green Health Partnerships have focused on developing the green health referral pathways suggested in the third pillar of the ONHS approach. These are considered beneficial in targeting those with the largest health inequalities.

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1. INTRODUCTION

Scottish Natural Heritage (SNH) is the lead organisation in the Our Natural Health Service programme (ONHS), which aims to make better use of Scotland's natural environment as a resource to improve health and wellbeing and tackle health inequalities. The programme aims to encourage more people to enjoy and be active in the outdoors, to mainstream green exercise and green health[2] into health and social care policy and practice, and to build capacity and participation within communities.

The Green Health Partnership (GHP) intervention is the centrepiece of the ONHS programme, with four partnerships established during 2018/19 to demonstrate how a whole system approach can help translate Scotland's public health priorities into practical action on the ground. Established in different Scottish Health Board areas that include a range of geographies and public health issues, each GHP has been funded for a period of three years. The lead local partners are the local health boards and local authorities; other stakeholders include Community Planning Partnerships, leisure services, transport, education, academia, local communities and the voluntary sector.

Each GHP is working with local communities to:

- Raise awareness across key policy sectors of the benefits that can be gained from green exercise;
- Maximise the use and potential of local green assets and services;
- Encourage behaviour change (by, for example, raising awareness of local opportunities for outdoor recreation and active travel, developing the capacity of green health activity in local communities);
- Develop and strengthen links and referral pathways between health & social care providers and services, and green exercise / green health projects and providers;
- Increase support for local people to participate and change behaviours.

The work of each GHP is different and each is at a slightly different stage of development. In 2019, SNH commissioned Edinburgh Napier University to undertake a series of research interviews with those involved in the GHP intervention at an operational and strategic level to explore their experience of delivery and their thoughts on longer-term mainstreaming of the GHP approach.

1.1 Context

Globally, there are an increasing number of people living with non-communicable diseases, including heart disease, diabetes, cancer and mental health disorders (Beaglehole *et al*., 2011). Finding cost-effective and culturally acceptable community-based health interventions to address primary prevention of such conditions, and ways to maintain health for those with established disease is therefore a priority. The physical environment is a recognised determinant of health (Barton and Grant, 2006) and consequently, the use of the natural environment to promote good health is of increasing importance. At present, there are some issues with the consistency, robustness and reliability of the evidence-base for linkages between the natural environment and health outcomes, but understanding is increasing.

Increased exposure to green space is associated with a multitude of health benefits, including a 31% reduction in all-cause mortality, a 16% reduction in cardiovascular mortality, a 28%

[2] 'Green exercise' and 'green health' are terms that encompass ways of using the outdoors and contact with nature to foster better health. Green exercise / green health activities include walking, cycling, gardening, volunteering, outdoor learning and play, as well as just enjoying being outdoors in green environments and nature.

reduction in type 2 diabetes, and a 12% increase in self-reported good health (Twohig-Bennett and Jones, 2018). There is relatively strong evidence for mental health and wellbeing benefits resulting from exposure to natural environments, including reductions in psychological stress, fatigue, anxiety and depression (Hartig *et al*., 2014). One study found that individuals who reported spending ≥120 minutes in nature in a week had consistently higher levels of both health and well-being than those who reported no exposure. This pattern was consistent across key groups including older adults and those with long-term health issues. It did not matter how 120mins of contact a week was achieved (e.g. one long versus several shorter visits per week) (White *et al*., 2019). Importantly, socioeconomic inequality in mental well-being is narrower among those who report better access to green or recreational spaces (Hartig *et al*., 2014, Gascon *et al*., 2015, Mitchell and Popham, 2008). Although lower socio-economic groups may disproportionately benefit from natural environments, they often face the greatest barriers to use and the lowest levels of availability (Kabisch and Haase, 2014, Strohbach *et al*., 2009). There is therefore a need to ensure that high quality green space is available to those who live in more deprived areas, and that potential users perceive it to be safe, appealing and are aware of available green heath activities.

One mechanism through which being in the natural environment may help to improve health is the potential for users to be more active. Physical activity provides benefits for a range of medical conditions, including cardiovascular disease, type 2 diabetes, some cancers and mental health problems (World Health Organisation, 2010, Lee *et al*., 2012). Additional to health benefits, regular physical activity promotes social interactions and social equity (Hunter *et al*., 2015, Smith *et al*., 2019). Being physically active in natural environments may confer additional health benefits compared with those that would result from the equivalent activity in an urban/built or indoor environment. A recent systematic review highlighted that compared with indoor exercise, acute bouts of outdoor 'green' exercise may favourably influence enjoyment and intrinsic appeal of physical activity (Lahart *et al*., 2019). Evidence that good access to natural environments promotes physical activity is equivocal, however (Lachowycz and Jones, 2011, Hartig *et al*., 2014, van den Bosch and Sang, 2017). A review of 50 studies that objectively measured access to greenspace and physical activity reported positive associations in 20 studies, little support in 28 studies and negative associations in two studies (Lachowycz and Jones, 2011). The mainly cross-sectional design of studies may have prevented the identification of causal relationships between availability of natural environments and increased physical activity in local populations (Calogiuri and Chroni, 2014, Lee and Maheswaran, 2011). It is therefore unclear whether natural environments elicit increased physical activity, or whether those who are physically active choose to live in areas with more opportunities for physical activity.

1.1.1 The effectiveness of nature based interventions on health outcomes

There are three main types of intervention that aim to use the natural environment to improve health outcomes at an individual or population level. The first is the location, design and maintenance of the natural environment. The second is encouraging access, engagement and use of the natural environment and the third is targeted health interventions using or based in the natural environment (Lovell *et al*., 2018). There is mixed evidence about how the location, design or maintenance of natural environments enhances health (Ward Thompson *et al*., 2013, Droomers *et al*., 2016). Interventions to encourage access to, engagement with, or which have used the environment as a setting to promote health (preventative or therapeutic) have typically resulted in positive impacts to outcomes such as quality of life, walking behaviours and mental health (Hanson and Jones, 2015). Finally, there is a wealth of small-scale programme and project evaluations relating to health outcomes of targeted health interventions in the natural environment, some of which suggest positive outcomes. However, these are rarely peer-reviewed or brought together and synthesized using robust replicable methods such as systematic review (Annerstedt and Währborg, 2011, Lovell *et al*., 2015).

Given the emerging evidence for the potential of the natural environment to improve health and wellbeing, ONHS aims to encourage access and engagement with the natural environment by developing three types of nature-based activities that can deliver health outcomes: 1. encouraging everyday contact with nature, 2. nature-based health promotion initiatives and 3. nature-based interventions with a defined health or social outcome. By ensuring robust quantitative and qualitative evaluation of the Green Health Partnership initiative, it is hoped to provide more evidence about the health outcomes of nature-based interventions.

2. METHODS

This research study was a qualitative exploration of the views of key individuals with an operational or strategic role in the GHP intervention. The objective was to understand their experiences of the establishment of the GHPs, the first year of delivery (including lessons learned and the challenges ahead) and their thoughts on longer-term strategic mainstreaming of the GHP approach. The research findings will be used to help guide and plan future GHP activities, add to the evidence around what works and inform the evaluation of the Our Natural Health Service programme.

The research consisted of a series of group and telephone interviews with key individuals identified by SNH and the GHPs:

- A focus group discussion with GHP Project Officers plus one additional face-to-face semi-structured interview and one follow-up telephone interview.
- Four focus group discussions with members of the steering groups for each GHP area.
- Telephone interviews with 14 key senior strategic stakeholders from the four areas.

Edinburgh Napier University School of Health and Social Care ethics committee gave ethical approval for the study (REF: SHSC20003). This approval allows for the future submission to, and publication of, the research results in a peer-reviewed journal. This will contribute to the evidence base about the natural environment as a resource to improve health and wellbeing, and address social inequalities. It will allow for wider dissemination of good practice and lessons learned in the development of this type of programme. All participants gave written, signed consent to take part in the focus groups and telephone interviews. During preparation for publication, we will ensure participant anonymity by the use of participant identification numbers.

2.1 Recruitment of participants

SNH briefed the GHP leads, steering group members and project officers about the study. GHP leads, working with SNH, identified key stakeholders in their area and assessed their potential interest in participating. Invitation letters, participant information sheets and consent forms were forwarded to all participants via email. Participants returned consent forms to researchers in order to register for the study. GHP leads arranged the location and times for focus groups. Researchers contacted key stakeholders via telephone and/or email to arrange convenient times for individual telephone interviews.

2.2 Data collection

Prior to undertaking focus groups and interviews, researchers met with SNH commissioners to develop appropriate interview guides. Commissioners and researchers agreed final guides (Annex 1) via a process of iterative review over a two-week period. Focus groups took place during the first two weeks of December 2019 in each GHP area and telephone interviews took place between November 2019 and January 2020. Three researchers (CH, SM and AP) facilitated focus groups and two interviewers (SM and CH) conducted telephone interviews. We recorded all conversations from group and individual interviews using an encrypted digital recorder and an external agency transcribed recordings. We supplemented these recordings with extensive field notes made during and after individual / group discussions.

2.3 Data analysis

We combined all data (focus group and interview transcripts, and field notes) and thematically analysed them using robust, established academic methods (Braun and Clarke, 2006). We anonymised GHP areas and participants via numbering. Using NVivo12®, one researcher (CH) inductively created open codes during the analysis of the first six telephone interviews.

A second researcher (SM) independently analysed one transcript to check for consistency before open coding three more transcripts, including one focus group. At a team meeting, researchers discussed developing themes, compared these with field notes and developed a framework for analysis of other transcripts. One researcher (SM) then deductively coded all other transcripts using the established framework. Prior to final analysis, two researchers (CH and SM) reviewed the framework and agreed final themes.

3. RESULTS

In total, five GHP project officers were interviewed (one area had a change in staffing), 36 steering group members took part in focus groups and 14 strategic stakeholders were interviewed by telephone (Table 1). Median steering focus group duration was 92 minutes (range 84-114 minutes) and median duration of stakeholder telephone interviews was 47 minutes (range 31-78 minutes). The GHP project officer focus group duration was 105 minutes.

Table 1. Focus and telephone interviews

GHP area	Number of steering group members in focus group	Number of strategic stakeholders interviewed	GHP project officers contributed via:
Area 1	8	4	Focus group
Area 2	6	1	Semi-structured interview
Area 3	9	5	Focus group and telephone interview
Area 4	13	4	Focus group (2 staff members)

Two overarching themes developed: strategic and operational factors. We identified three main subthemes for strategic factors and a further three for operational factors. In addition, stakeholders consistently discussed sustainability and funding at both a strategic and operational level (Figure 1).

At a strategic level, sub-themes were 1) key partnerships, 2) change and 3) development strategies for green health. Key partners identified were the NHS (public health teams and healthcare professionals), local authorities (social care and environmental department), leisure providers, the environment sector and the voluntary and community sector. Change factors included organisational cultural change, speed of change and improvements to greenspace. Development strategies for green health included needs assessment and strategies for sustainability.

At an operational level, sub-themes were 1) the role of the GHP project officer, 2) intervention development and 3) evidence and evaluation. GHP project officers provided focus for developing green health initiatives and for facilitating partnerships. Stakeholders reported developing a range of interventions, with different approaches adopted in the four GHP areas. Successes included positive engagement with healthcare professionals, volunteers and partner organisations, while challenges included volunteer capacity and developing appropriate communication to promote green health activities. Addressing health inequalities via interventions and improvements to greenspace in deprived areas was an important consideration in the development of green health initiatives. Operational stakeholders considered providing robust evidence a challenge, as success was difficult to capture via quantitative measures and intervention deliverers lacked capacity for evaluation.

3.1 Strategic factors

Stakeholders perceived that an increased awareness of green health has permeated many organisations and, because of the work of the GHPs and other green health initiatives, staff from NHS, education, health and social care partnerships and the third sector, and the public have become more aware of the benefits of green health. This awareness has resulted in an enthusiasm to develop relationships and / or links to green health interventions, and the collective branding and validation of previously isolated activities under the banner of green health. Strategic factors identified during the study were 1) key partnerships, 2) requirements for change and 3) the development of strategies for green health.

3.1.1 Key partnerships

Key partners identified were the NHS (public health teams, hospitals, GP surgeries and healthcare professionals), local authorities (social care and environmental departments), leisure providers, the environment sector, and the voluntary and community sector. Education was an important partner in GHP Area 4, but education partnerships appeared to be limited in other areas. GHP Area 1 highlighted social care representation was missing from the steering group, and no area reported that health and social care was an active partner.

3.1.1.1 Strategic fit

Stakeholders reported that the natural environment could contribute to all six public health priorities, with stakeholders from public health highlighting that the GHP 'fitted' well with increased physical activity, healthy weight, healthy, safe places and communities, and emphasised the positive relationship between the outdoors and good mental wellbeing. GHP activities link with the strategic direction of stakeholder organisations, and stakeholders confirmed that green health activities could support statements around prevention, and the promotion of health and wellbeing. Two respondents reported that green health activities supported *"policy drivers for Realistic Medicine" (telephone interview participants 1 & 2).* Additionally, one stakeholder from public health emphasised the role that green health activities can play within a *"non-pharmacological pathway" (telephone interview participant 10).* However, stakeholders suggested the inclusion of green health within strategic pathways is at an early stage:

> *'I think it's key to them all (strategic pathways) but I don't think it's viewed in that way yet. I don't think we've got that narrative with the politicians within our community planning, within our council connect plan' (telephone interview participant 8).*

To improve prominence at strategic levels, GHP Area 3 and 4 focus groups discussed the need for 'targeting' one public health priority, and suggested that focussing GHP activities on good mental wellbeing would be beneficial. Senior stakeholders supported this view, with one respondent suggesting GHP activities may increase in strategic importance if directed towards *'things like the mental health issues … taking away the medical model from living with mental health issues' (telephone interview participant 10).*

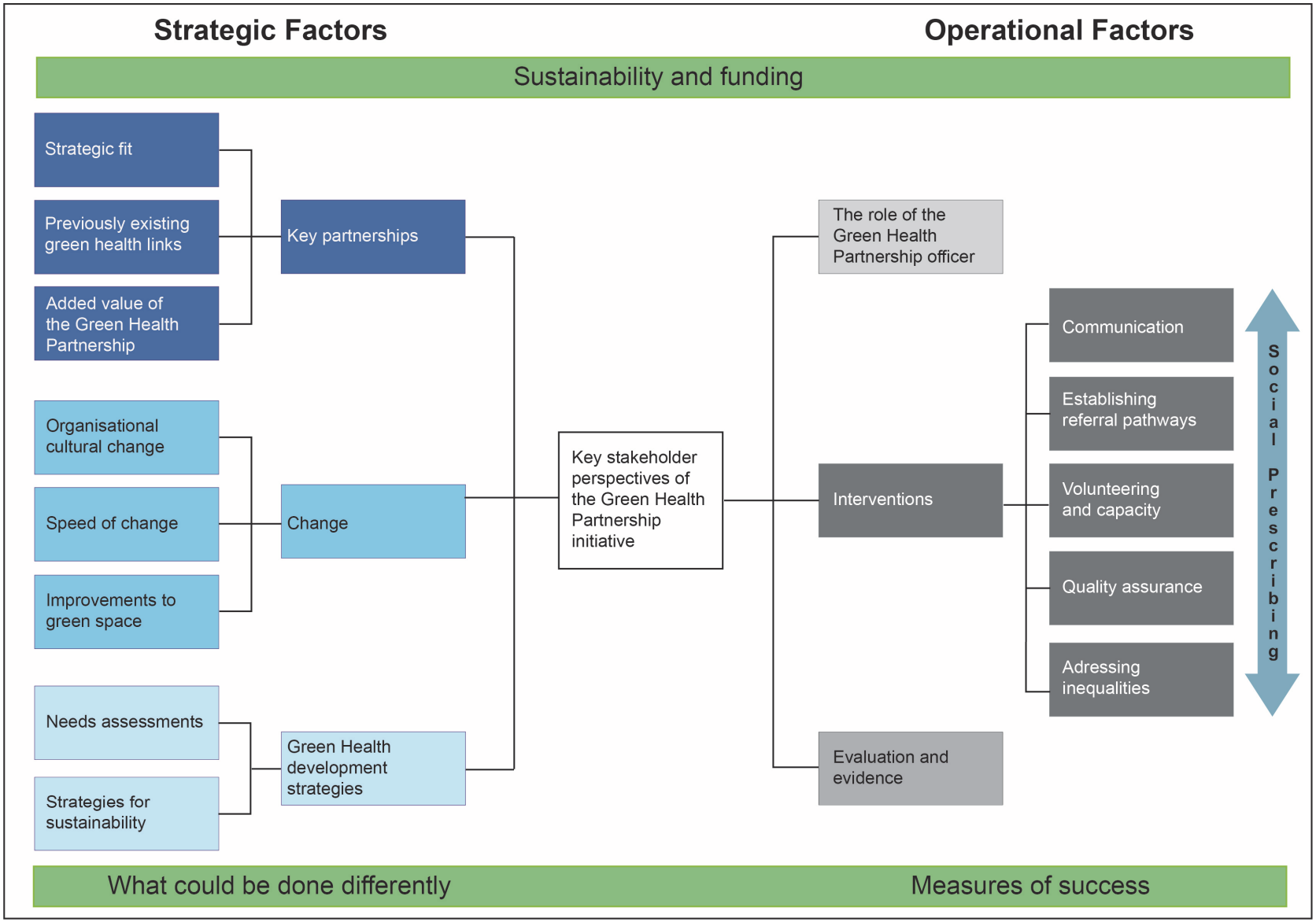

Figure 1. Key stakeholder perspectives of strategic and operational factors in the development of Green Health Partnership

3.1.1.2 Previously existing green health links

Stakeholders in all four GHP Areas reported that the Green Health Partnerships were *'pushing at an open door'* due to previous green health initiatives. Existing local partnerships provided knowledge of willing partners and a history of green health delivery. However, such partnerships lacked the formal structure provided by the GHP:

> *'It wasn't funded. It wasn't mandated for. It was a partnership that had really come about at a local level, through the kind of goodwill of partners to recognise the value of connecting, you know, with nature for health and well-being. So we'd obviously been working together for a number of years' (telephone interview participant 6).*

Those from public health and the third sector reported knowledge of previous interventions. In fact, some organisations reported being involved in greenspace / green health activities for a number of decades. Interventions mentioned included national programmes for active travel, community-based walking schemes, and other ONHS programmes such as NHS Greenspace. Additionally, stakeholders discussed the Green Exercise Partnership, which comprised SNH, Scottish Forestry, NHS Health Scotland and NHS National Services Scotland. Established in 2007, the Green Exercise Partnership aims to improve links between the environment and health, and the partners are part of the governance structure for the ONHS programme, which is led by SNH. Stakeholders attributed slow progress in the development of green health initiatives to a lack of time for focused work, meaning that ideas discussed at those earlier meetings did not have the opportunity to develop. The GHPs now provide this focus and additional capacity, and they have benefited from existing examples of success.

3.1.1.3 The added value of the Green Health Partnerships

The GHPs have provided a powerful voice to raise the profile and awareness of the benefits of green health. This has led to a strengthening of green health networks and in particular given third sector organisations a 'place at the table' with health and local authority partners. Individuals reported greater knowledge and understanding of other community partners and locality plans. Partners felt they had better access to information about local interventions and gained the ability to signpost. Prior to the work of the GHP networks, some third sector and voluntary organisations, for example conservation and gardening groups, did not perceive themselves as a resource for improving health.

The GHPs have resulted in new initiatives to promote existing green health interventions, for example a website in GHP Area 1 that automatically updates from a range of online sources. In GHP Areas 3 and 4, the GHP has attracted match funding to support the delivery of green health activities, funded new interventions and financially supported the expansion of interventions that are working well. Additionally, the GHPs have raised the profile of green health among strategic partners and in GHP Areas 1 and 3 have influenced the development of strategies for greenspace. For example in GHP Area 3, the GHP had influenced local authority open space strategies:

> *'The local authorities are in the process of developing a new open space strategy… being in and around this group; … those documents will look quite different had they not been involved … More a focus on health and much more of a targeted approach to where … work on greenspace can have the biggest impact' (GHP Area 3 focus group participant).*

This GHP area had an existing focus on greenspace and this strategic development was not reported across all four GHPs.

Third sector partners also reported an unexpected benefit in that formalised green health interventions provided a pool of potential volunteers, an important resource in community-based organisations:

> *'But I don't know if we ever really imagined that… it would become its own pathway, … It's kind of grown so that people continue to be involved after they've stopped being in the hospital' (GHP Area 3 focus group participant).*

3.1.2 Change

3.1.2.1 Organisation cultural change

NHS partners perceived organisational culture change as particularly important. This included a shift towards understanding the need for prevention and the value of being outdoors, the provision of non-clinical interventions and an acceptance of the role of the third sector in providing low cost, informal activities. The requirement for cultural change applied to both healthcare professionals and patients / service users.

> *'Even just getting across the idea that, you might go into the doctor's for a physical ailment or mental health issue, and to get across the idea that being referred to a gardening group is okay. People go in with the expectation that they will receive some medical treatment, and given a prescription, or whatever. There is a whole cultural thing there that needs changing between the patients, and the wider community, and the doctors, and the OTs, and all the referral partners' (telephone interview participant 7)*

Some positive changes were evident. One healthcare professional explained that she could now complement previous lifestyle conversations with a green health prescription alongside a patient's treatment *(telephone interview participant 9)*. However, another respondent indicated that she did not *'hear an awful lot about how clinicians see that as part of their role specifically' (telephone interview participant 4).*

Cultural change related not only to healthcare professionals encouraging patients / service users to participate in green health opportunities, but also to wider NHS staff having greater awareness of, and the ability to have positive conversations about, green health. For example, upskilling GP surgery receptionists to have exploratory conversations with patients and ensure that they see the most appropriate professionals, such as a link worker to discuss social prescribing, or to be able to signpost to green health opportunities if appropriate *(telephone interview participants 4 and 9)*. The development of social prescribing and link worker services in Scotland is an opportunity for the promotion of green health, but more cohesion is required to ensure visibility.

Stakeholders reported the need to use greenspace within NHS sites for health related activities, such as encouraging psychiatric inpatients to take part in a gardening project in hospital grounds and integrating volunteers into the programme (GHP Area 3). As with positive conversations about green health, attitudes towards, and the use of, NHS greenspace were variable.

3.1.2.2 Speed of change

Both strategic and operational stakeholders highlighted that expecting cultural change within a three-year period in the NHS is unrealistically short.

> *'Expectations that a three-year programme will change the entire culture of being NHS and all the staff on the front line will be referring into green health options… This sort of change is generational (telephone interview participant 1)*

In addition, one participant suggested that the expectations did not take account of reduced NHS resources and staff asked to do more with less, both of which slowed the rate of change *(telephone interview participant 7)*. Stakeholders perceived that time was required to build staff trust and confidence in signposting and referring to the third sector. Additionally healthcare professionals needed reassurance that interventions were not short term and would not suddenly disappear overnight.

GHP project officers described trying to accomplish so much in such a short space of time as *'like using a sledgehammer to smash your way through' (GHP project officer focus group participant)* rather than the previous approach of *'chipping away'*. Stakeholders reported that healthcare professionals who were early adopters were interested to test the promotion of green health. By identifying willing healthcare professionals, GHPs have the opportunity to develop and implement pathways to promote green health activities. For those more resistant to change, providing robust evidence, examples of success (*GHP Area 4 steering group participant),* and exploring new ways to engage healthcare professionals in green health promotion were important *(telephone interview participant 5)*.

Those who had engaged with NHS estates staff discussed how the time required to build trust and convince them that the benefits of a green health intervention in NHS grounds far outweighed the perceived negatives. Perceived risk was an issue:

> *'[…] has been working tirelessly with NHS estates, who are a very cautious bunch, over a long period of time, to help them realise that it is actually possible for members of the public to come and walk around the estate, and they will not sue us if they fall over a tree branch' (telephone interview participant 3)*

3.1.2.3 Improvements to greenspace

Stakeholders considered the provision of quality greenspace important to encourage the population to utilise the outdoors. GHP project officers confirmed a focus on greenspace quality alongside the promotion of green health activities. Although improving greenspace is separate from the GHP intervention, GHPs in some but not all areas, reported added value via the connections made and having the partners around the table, spotting areas of common interest. For example, in GHP Area 3, partners being involved in the GHP facilitated the removal of a fence blocking a walking route.

However, a senior health stakeholder identified *'concerns about achieving changes in greenspace and related infrastructure because this is within the gift of local authorities, rather than health' (telephone interview participant 1).* Discussions during one focus group (GHP Area 3) revealed that local authority partners perceived that one benefit of GHPs might be the redirection of NHS and social care budgets to fund greenspace infrastructure improvements, which had not materialised. This was despite this GHP mapping the quality of greenspace to identify required improvements, with a particular focus on areas of deprivation. However, lack of budget acted as a mechanism to encourage smart partnership working to engage in small-scale projects that made a real difference. An example from GHP Area 4 was a successful community action project to improve a derelict piece of land near a school and housing estate. A local authority greenspace officer supported the successful pursuit of grants for green infrastructure improvements in this area (GHP Area 4). Stakeholders perceived that involving local volunteers in capital improvement projects encouraged community ownership.

In addition to physical access barriers related to poor quality greenspace, perceptual barriers to access were also an issue:

'There is endless research that tells us why people don't use greenspaces, because they feel unsafe, they don't feel welcoming. All those reasons we hear about time and time again (GHP Area 3 focus group participant)

In parallel with infrastructure improvements, GHP Area 3 identified initiatives to breakdown negative perceptions of greenspace. For example, workshops with primary and secondary schools to show young people constructive activities to do in greenspace.

Partners considered that improvements to greenspace was one of the big political challenges, with perceptions that there was not enough drive to utilise existing spaces fully and that the pressure to build houses threatened the preservation of greenspace *(telephone interview participant 8)*.

3.1.3 Green health development strategies

A national logic model to help plan the evaluation of GHPs' achievements mapped activities, and short, medium and long-term outcomes required to achieve the goals of 1) Public and voluntary health, social care and environmental organisations, plus local communities working together to deliver green health interventions to improve population health and wellbeing, and 2) Improved health and wellbeing for local populations contributing to reduced health inequalities.

GHPs aim to:

- Facilitate and support the provision of a range of green health interventions / opportunities
- Deliver local workforce development / capacity building for local communities and for practitioners from the health, social care and voluntary sectors
- Establish information systems to monitor referral and take-up of local green health interventions
- Raise public awareness of local green health interventions / opportunities
- Communicate the role and purpose of the GHP to local policy & decision makers and health & social care professionals
- Make the evidence base for green health accessible to local communities and practitioners in the health, social care and voluntary sectors
- Establish working relationships between Area Health Boards and local delivery partners

Early in their establishment, each GHP developed an action plan informed by local knowledge and research.

3.1.3.1 Needs assessments

Guided by the aims of the ONHS programme, GHPs developed their strategies to promote and embed green health, and to test local interventions. All areas carried out some mapping and network building activities prior to developing interventions.

In GHP Area 1, the GHP project officer built upon previously established networks to identify, understand and support nature-based activities, gathered information from NHS health professionals about possible gaps for green health activities, and completed focus groups with individuals who were participating in low levels of physical activity. The needs assessment identified that there was a lot happening *'but very isolated, no collaboration, a lack of awareness of some of the groups of each other' (GHP project officer, GHP Area 1).*

GHP Area 2 commissioned local third sector organisations to complete a mapping process across Community Planning Partnerships. This approach took advantage of local knowledge

and contacts, thus supporting local ownership and involvement. The resulting needs assessment of community organisations' confidence to offer opportunities for green referral / prescription activities informed the choice of three pilot areas to test referral ideas. Influencing the decision to adopt pilot areas was the *'extremely challenging geography'* and the opportunity to test green health interventions, taking into account:

> *'rural needs, some deprivation, but also something about what else was going on at the time and where there were some existing structures and partnerships that would enable us to get a bit of momentum going' (GHP Area 2 focus group participant).*

Identification of site locations took account of urban / rural setting, areas of social deprivation, existing green health activities, level of engagement within the local community partnership, and consideration of social prescribing developments in the areas chosen.

GHP Area 3 described taking a whole systems approach. Initially there was a focus on setting up an implementation group for partners in the GHP network (leisure, voluntary sector, green health providers, health and social care). This led to the development of a logic model and an action plan around pathways, promotion, people and places to target. GIS mapping of greenspace quality complemented this. Strategic planning particularly focused on developing plans to work with those experiencing the largest health inequalities. Additionally a higher-level strategic group met twice a year, giving stronger governance. This group provided an opportunity for the GHP project officer to give updates of progress, and allow senior stakeholders to disseminate information and facilitate contacts for future work *(telephone interview participant 20)*.

GHP Area 4 initially aimed to build on relationships with existing project partners, with some also involved in a pre-existing community strategic partnership. Mapping of green health activity providers led to the set-up of a green health network. Initial strategies planned to maximise existing activities through the process of participatory budgeting.

3.1.3.2 Strategies for sustainability

All areas reported the time pressure involved in a three-year project, and the need to embed green health activities into core planning for health, local authority, social care and the third sector. Although there appeared to be strategic support for green health, and acknowledgement that it provided potentially low cost interventions, stakeholders expressed concerns about sustainability given a lack of obvious funding streams for this. Most partners considered health and social care budgets to be likely sources of future funding, but shifting money to preventative interventions remained an issue. There was some scepticism from third sector partners about the chance of long-term funding based on past initiatives failing to develop sustainable income streams.

To encourage the best chance of sustainability beyond the three-year GHP funding period, there was a focus on capacity building using existing networks and pathways, shaping existing services to target health inequalities, and building in mechanisms to support and connect community groups. Key to encouraging uptake of services was awareness raising and workforce development around green health, particularly within the NHS. Examples include:

- GHP Area 1 working with NHS partners and healthcare professionals to raise awareness of green health and create a pilot project targeting referrals from GP surgeries in Scottish Index of Multiple Deprivation (SIMD) 1 areas. Short-term funding employed a co-ordinator embedded in an existing voluntary sector-run telephone hotline.

- GHP Area 2 developing a green health logo, branding, website, catalogue of activities, newsletters, presentations, events, attracting match funding (Heritage Lottery Fund) and

identifying projects where applications for additional funds could help fund posts for green health activities. Feedback informed the need to have support from health professionals, although progress with this was not clear. Developing green health opportunities in areas with social prescribing link workers was a key strategy.

- GHP Area 3 embedding green health within some strategic plans and developed pathways to integrate with existing leisure pathways, including weight management structures and the social prescribing programme. Strategic interviews in this GHP Area confirmed a new plan with a vision that this is a place for active, healthy lives, and an action statement encouraging health and wellbeing of people through a range of cultural, social and leisure activities. A specific NHS promotional day was successful in raising awareness of green health opportunities.

- GHP Area 4 encouraging community involvement via a process of participatory budgeting, and allocating £30,000 of development funding to support 30 community groups to develop and deliver green health activities. The establishment of a green health network brought together community groups with the aim of promoting existing activities, and increasing delivery capacity by organising joint training, skills sharing and tools swaps. The initial strategy was to maximise existing activities, therefore working with specific groups of the population has been opportunistic and arisen from connections within the partnership, e.g., working with diabetes group, healthy weight programme etc., rather than a deliberate strategy to target specific groups.

Stakeholders suggested the need to engage politicians as green health champions at both a local and national level to parallel the established champions for physical activity, where there was clear evidence of benefit and impact of change *(telephone interview participants 4 and 8, GHP Area 1 and 3 focus groups and GHP focus group)*. Partners considered that this would raise the profile of green health and be a driver for change. Additionally, stakeholders highlighted the need to engage healthcare professional green health champions.

3.2 Operational factors

At an operational level, partners reported increased cohesion in working relationships resulting in the development of green health as a 'brand'. Intervention deliverers expressed concerns over the short-term nature of the GHP funding and the threat to sustainability caused by this.

Important operational factors identified during the study were 1) the role of the GHP project officer, 2) the development of interventions (including communication, referral pathways, volunteering, quality assurance and addressing inequalities) and 3) evaluation and evidence for green health.

3.2.1 The role of the GHP project officer

Stakeholders considered that the GHP project officers were a valuable resource who provided focus and co-ordination for green health development. Areas had different employment models for officers (one in the local authority, two in NHS public health teams and one in the third sector). A benefit of local authority hosting was the ease of connections to other council departments - parks and environment, roads and transportation, and planning and economic development. However, a challenge was to develop connections with primary and secondary care. Those hosted in NHS public health teams reported the benefits of knowledge of existing referral pathways, and easier access to healthcare professionals to promote and develop green health interventions. However, hosting the role within the NHS brought challenges for procurement and releasing funds. The GHP project officer employed in the third sector focused on developing and delivering green health activities. Steering group members perceived that this offered delivery flexibility, resilience and enabled creative approaches. In

this case, the steering group rather than a single organisation directed the work of the GHP project officer. One interviewee considered that the skills of the GHP project officer were more important than who hosted the post:

> *'It's about leadership and about being heard, I mean, to knock on any door and get permission to attend if you really want to. I don't think it really matters, especially in our integrated Scottish public service network. It might matter more in England' (telephone interview participant 10).*

The importance of the role played by the GHP project officers was a subject of much discussion, as was the threat to sustainability if the roles ceased after the three-year initial funding period. There were mixed views and approaches to this. For example, stakeholders in GHP Area 1 thought it unlikely that funding for the post would continue unless either the local authority or NHS were able to redesign a post that became vacant. In a 'no funded officer' scenario, partners considered that although the individual green health projects would continue, there was a danger that the healthcare professionals issuing green prescriptions would no longer engage. Stakeholders in GHP Area 3 were more positive about the continuation of the role (or the integration of some of the role duties into another post within the public health team). This may have been because the GHP project officer had become a substantive employee during the three-year period. Senior stakeholders in this area identified that the more senior level of GHP project officer role in this area:

> *'Means that this individual has the kind of autonomy, the experience and skills and competencies and also the experience of working both within the environmental and health sectors… Therefore has been able to connect, meet with people, sees the possibilities and just has been able to dedicate time to drive forward the programme and to ensure that partners are connected and working together' (telephone interview participant 1).*

In an alternate view from the same area, one interviewee indicated '*in theory if in five years' time a lot of the barriers have been broken down between NHS and green space services and third sector and a lot of those connections have been made we wouldn't need to be funding a project officer' (telephone interview participant 6)*. This was qualified with the statement that they could not see this being the case.

All GHP project officers reported receiving support from their host organisations, highlighting the positive role of line management during the development stages of the GHP. Passion for green health, the relevance of prior green health experience, and knowledge of people as strategic connections, was of primary importance to the initial work of the project officers:

> *'She's been doing it a long time, so she had all the connections and knew exactly who she needed to connect me with, so that was extremely beneficial' (GHP Project Officer, Area 1)*

One project officer from Area 4 reinforced the importance of support received from strategic partners within the steering group. They reported benefiting from access to strategic connections not previously available to the host organisation, and receiving direction for work as a result. After evaluating the GHP project officer's first year, Area 4 created a new, dedicated project post.

3.2.2 Interventions

The provision and marketing of green health interventions, the establishment of referral pathways to these interventions, workforce development (both for health and social care practitioners, and volunteers) to ensure that systems functioned, and the monitoring and

evaluation of activity were key elements of the GHP logic model. Setting up new interventions and pathways, or supporting and developing existing pathways was a key focus of the initial work of the GHPs following the completion of needs assessments.

Discussions centred on issues related to a) communication, b) establishing referral pathways, c) volunteering and capacity, d) quality assurance and e) addressing inequalities.

3.2.2.1 Communication

Stakeholders discussed several aspects of communication. First, the need to communicate the role and purpose of the GHP to local policy & decision makers and health & social care professionals and second the need to raise public awareness of local green health interventions / opportunities.

The GHP steering groups acted as one mechanism to engage with local policy and decision makers. Having the right people around the table was an important element. Many, but not all steering group members, were from an operational background but some were able to facilitate links with senior stakeholders. In GHP Area 3, a higher-level strategic group was an additional facilitator. Telephone interviews with senior stakeholders indicated a good level of knowledge about the role and purpose of the GHP, although this was not surprising given that respondents were selected on the basis that they would be able to comment on the GHPs at a strategic level. It is possible that other senior stakeholders within local authority, health, social care and the third sector will be less aware of the GHP.

GHPs have expended a great deal of effort on engaging with health and social care professionals. This has included personal visits to GP surgeries to establish and promote green health referral pathways, and engaging with health and social care professionals via targeted awareness raising events, for example:

> *'One of our big successes was a green health event that we organised […] we had over 170 health and social care professionals ranging from healthcare support workers to social workers to nursing staff to consultants. Just about a whole mixture of people that came out on that particular day. They could book into an morning or an afternoon session, and green health providers basically offered taster activities, and they went round each of the different activities to see what we meant by green health' (GHP Area 3 focus group participant).*

GHP Area 4 has addressed issues of the NHS having no imagery to promote green health, by providing a bank of about 250 photos through partners. These are good quality photos of landscapes and families and landscapes and teenagers and people of different ages and stages doing different activities, rather than stereotypical GORE-TEX booted people up a mountain *(telephone interview participant 11).*

GHPs have communicated green health intervention information via conference presentations, websites, posters, leaflets, magazine, letters, and verbally at an individual level. Partners considered that raising awareness and promoting green health to the public was a complex issue and expressed concerns about low levels of health literacy in Scotland. Solving the issue of health literacy was beyond the scope of the GHP but needed consideration in communications. One interviewee suggested using the Scottish Government health literacy plan 'Making it Easy' (NHS Scotland, 2014) to help ensure that people understand what is available in terms of green health opportunities, the benefits of engaging and how to use the opportunities that are there *(telephone interview participant 5)*. Further concerns about the language used about green health opportunities included medicalising access (health referral and prescription were deemed to be a potential barrier to third sector and volunteer providers and to potential participants), off-putting descriptions for those not engaged in sport (e.g.,

green gym), and using the term ‘volunteering’ as it implies a higher level of commitment than participation.

Discussions about the best way to develop communication for hard to reach populations centred on the concept of ‘health by stealth’. This involves understanding a person’s motivation rather than ‘preaching’ about the health benefits of being more active in the outdoors e.g., having a bit of fun, spending time with family, getting out of the house. It does not involve promoting the UK physical activity guidelines to people who are so far removed from achieving them that they feel *‘well what’s the point, I'm never going to be able to do that, I'm never going to manage 30 minutes a day, or a brisk, or moderate, or what have you’ (telephone interview participant 4).* In addition to targeted interventions, some stakeholders considered that promoting more general community use of local parks and green spaces (e.g., picnics in parks with face painting and games) would achieve improved health.

3.2.2.2 Establishing referral pathways

All areas were creating new, or strengthening existing, pathways for green health referral. GHP project officers considered that this was a key element of their role and reported progress in most areas. (GHP Area 2 started later and was still in the planning process). This work was twofold. First, there was a need to ensure that appropriate interventions existed for referrals to access and second, health and social care professionals needed to engage in the referral process. To facilitate this work, GHP Area 1 had managed to attract other funding for short-term posts

An important issue during discussions was whether to create new pathways or whether existing exercise referral or developing social prescribing pathways were an appropriate mechanism for promoting green health referrals. GHP Area 2 was still in the process of setting up pilot areas (although a key criteria for selection was the presence of social prescribing link workers), but in other areas different approaches were tested.

GHP Area 1 identified issues in trying to integrate green health referrals with existing exercise referral. This area established a new pilot green prescription scheme, after presentations to the local health board and the GP subcommittees, which specifically targets people living in areas of high deprivation. The scheme gives telephone advice about green health opportunities via an information hotline. In its early stage of implementation, the GHP project officer reported that to date 120 prescribers from NHS and community services have referred, with 50% of prescriptions aimed at those living in SIMD 1 areas. A monitoring system to evaluate uptake and demographics is in place. There was an awareness of, but no integration with, developing social prescribing services in the area. Given the Scottish Government commitment to social prescribing, there was some discussion by stakeholders in all areas about the need to consider how to integrate the promotion of green health activities into the role of link workers.

GHP Areas 3 and 4 integrated green health referrals into existing pathways (social prescribing and exercise referral). In GHP Area 3, partners reported that green health referrals were now in place for walking / outdoor activity but that there had been few referrals:

> *It wasn't on our radar to do walking or any connection to outdoor activities... So it's only come fairly recently to us. Our referral form now has a category for walking / outdoor activity on it. I think it'll just take a little bit of time for us to see if there's any return on that. I think probably out of the last quarter, we were just sitting around about 1,978 [referrals], there was only 71 to walking’ (GHP Area 3 focus group).*

This highlights a need to raise awareness with referring healthcare professionals about what green health activities are available as part of the existing pathway.

As delivery of the green health intervention was outside the sphere of the referral co-ordinating organisation, there was no information available about uptake and adherence.

> *'… We don't [know how many took up the opportunity] because it's not within our sphere. They're not coming into one of our venues where we can track them' (GHP Area 3 focus group).*

Stakeholders identified onward monitoring as an issue when small voluntary and community sector organisations were the intervention providers.

GHP Area 4 partners reported that using the exercise referral programme as a conduit for green health referrals seemed like the most logical approach. However, in reality most participants chose to attend sessions run by the exercise referral provider. Where green health activities, such as walking, were offered by the provider, uptake was reported to be good. Exercise referral staff were reported to have some reservations about signposting referrals to other green health opportunities due to a lack of knowledge about whether sessions were of appropriate intensity and whether those supervising sessions had sufficient knowledge to deal with people considered higher risk. To mitigate these concerns and to increase the likelihood of green activity uptake, the exercise referral staff in GHP Area 4 visited some of the external green health interventions so that they felt more comfortable about suggesting these to participants. Divided opinions about the need for referral versus signposting were evident, with one interviewee stating *'we've all come to the conclusion that just focusing on that one referral route isn't going to be the solution (GHP Area 4 focus group participant).*

3.2.2.3 Volunteering and capacity issues

Delivery of green health interventions was mostly by third sector, voluntary and community organisations. These tended to be small groups reliant on volunteers to run the intervention. This created potential capacity issues, around both volunteer numbers and the responsibility they were willing to take on.

GHP Area 2, for example, considered recruiting volunteers an issue. This was age related, with young and retired people more likely to volunteer. Stakeholders suggested that the capacity issue was for those who were 'middle-aged' (juggling caring for children, older parents and full-time jobs). In rural areas distances travelled and the need for transport were also barriers. In addition, interviewees suggested that the idea of volunteering in a green health intervention was very different to traditional environmental volunteering, where a volunteer could turn up, meet a ranger and complete a directed outdoor task. Onerous paperwork, for example Protecting Vulnerable Groups checks, and specific regular times and duties were potentially off-putting. A further challenge was the added pressure on community groups and third sector organisations of taking responsibility for referrals from primary care. Concerns included how the formalisation of a referral pathway will affect volunteer skills requirements, and the need for extra paperwork such as increased insurance, health and safety, and monitoring.

> *'They maybe don't want to take official referrals […]. No, we're actually quite happy just ticking along as we are […]. We're not interested in doing, like, medical or health… official health based… we just, kind of, do what we want to do' (GHP Area 2 focus group participant).*

To counteract some of these issues, GHP Area 3 employed a green health volunteer development officer who co-ordinated the green health volunteer network and prepared a strategic framework for green health volunteering to help address identified issues. This approach required the GHP to attract external funding, which is short term and raises issues

of sustainability. Stakeholders in other areas expressed concerns about a general removal of public sector funding from community groups, while expecting such groups to accept health referrals and scale up interventions to meet demand. GHP Area 4 has developed a green health network that aims to bring together community groups, increase their capacity, maximise the amount of work delivered, and encourage skills sharing, joint training sessions, tool swaps etc.

In addition to requiring volunteers to deliver interventions, the majority of partners reported that some individuals needed support to access green health activities. GO Project volunteers in GHP Area 4 provided up to three visits with client / service users to access an intervention. The three-visit limit reflected a way to support clients in overcoming barriers without resulting in dependency. Similarly, in GHP Area 3, NHS estates have two members of staff who support volunteers in green health activities. Stakeholders suggested that the volunteers running the interventions were also a possible means of support for green referrals, but stated that if this was a formal part of the referral pathway, then the volunteers needed extra training to facilitate this. As with other volunteer support, there was an associated cost.

3.2.2.4 Quality assurance

GHP Area 2 suggested the development of kitemarking to help overcome a hesitancy by health professionals to refer or signpost to external organisations. The focus group acknowledged that SNH had commissioned a feasibility study which had concluded that this should not be a short term priority. Nevertheless, the focus group felt that the difficulties in developing and maintaining such a scheme would be outweighed by the benefits for healthcare professionals of a quality assurance system, and would mean that community groups and third sector organisations felt comfortable with the responsibility of taking patients from primary care and integrating them into activities.

> *'Can we create a much more light touch (system), which is still an effective version as a basic level of self-assessment around some key safety issues? Like do they have a risk assessment, is there any first aid, do they have contact numbers, these kind of things that would allow more organisations to be able to respond and be able to include people' (GHP Area 2 focus group participant).*

Respondents recognised that this type of kitemarking risks becoming too onerous for volunteer led organisations, but may be a straightforward route for private sector providers of green health activities (e.g., outdoor activity providers). Focus group members suggested that uptake of such a system would depend on individual organisations, with some being motivated by access to health related funding. Traditional environmental funding streams *'have dried up'*, but money was available for green health, in particular for interventions addressing mental health. Although only one GHP Area focus group discussed the idea of kitemarking, stakeholders felt that this should be a national initiative.

3.2.2.5 Addressing inequalities

Reducing health inequalities is a core goal of the GHP logic model. At a strategic level, one respondent reported that the health equity strategy for the area took a holistic view of health, taking into account alternatives to traditional healthcare and co-producing community programmes to do this *(telephone interview participant 5)*. This GHP has applied this approach to the development of green health interventions. At an operational level, all GHPs reported targeting people in areas of deprivation.

Focused work in GHP Area 1 included setting up Green Health Prescriptions with GP surgeries in areas of high deprivation and monitoring postcodes of referrals to monitor whether those referred were from these areas. Additionally, this GHP produced a green bus map and

health walk map, which they posted to 10,000 residents in deprived areas. Combined with social media and bus shelter advertising, these promotional campaigns encouraged people to walk and explained why it was good for them. Focus group members acknowledged that there was still a lot more to do. For example, hard to reach communities such as some Muslim women, needed a different approach.

GHP Area 2 highlighted how tackling health inequalities and general health promotion are two separate things. Interventions need to not only target particular groups, be it socioeconomic deprivation, those in poor health or with poor transport, but also need to demonstrate that the GHP reaches people who would not otherwise have been involved:

> *'Otherwise, it'll be all the young families, you know, with cars who say, oh brilliant, love those community woods, the forestry's done a brilliant job. Here, look at all these activities that the children adore, they come home with nice carved rabbits and whatever it is and, you know, it's wonderful and everyone talks it up and the TV cameras go along and show whatever it is that's going on. And you're thinking, do you know what; they would have done it anyway' (GHP Area 2 focus group participant).*

Indeed, interviews with stakeholders in GHP Area 4 highlighted how locating an intervention in a deprived area did not necessarily mean that participants lived in the area, revealing that half the participants of one intervention targeted in an area within the most deprived SIMD quintile were from outside the area.

All project areas mentioned challenges with greenspace assets and the need to improve accessibility and inclusivity for all. Issues with accessibility, included greenspace not being local and a lack of public transport to greenspace. General issues included a lack of toilet facilitates, cafes, facilities to support self-medicating, and benches. Both urban and rural areas reported issues with a lack of lighting, urban areas reported issues with perceptions of safety and, in relation to teenagers, access to Wi-Fi. GHP Area 3 attempted to address this by mapping quality of greenspace with poor health indicators to see if there were overlaps and were seeking improvements where possible.

3.2.3 Evidence and evaluation

In 2017, an Evaluability Assessment (Craig and Mitchell, 2018) was undertaken to facilitate the development of a national evaluation framework for the ONHS programme and GHP intervention. The Evaluability Assessment acknowledged the existing evidence, which suggests that there are strong reasons to expect the health of individuals to be protected and improved by increased contact with nature. It also recognised that engagement is likely to be the strongest measure of effect the GHPs will have in the early stages, suggesting that the initial evaluation should focus mostly on process. An experimental approach, providing high quality evidence on impacts and cost-effectiveness, might be justified in future if the initial process evaluation showed promising results. This might take the form of a cluster-randomised controlled trial, or a stepped wedge design, in which partnerships are implemented sequentially in a random order.

To facilitate a process evaluation, each GHP area was asked to complete an evaluation spreadsheet recording activity undertaken from July-December 2019. This collected quantitative data about:

- number of interventions (delivery partners offering green health interventions, type of interventions, potential participant numbers and uptake of participant places)
- awareness raising and capacity building (number and type of activities, target audience and numbers engaged)

- referral pathways to green interventions (number and type of pathways, target groups, numbers referred and uptake of activities)
- public and professional-facing promotional campaigns and activities (number and type of campaigns, approach taken, and measures of impact)
- local plans and policies (number referencing green health)

Additionally, GHPs were asked to provide qualitative evidence of success (case studies, personal stories, practice exemplars and views on the integration of green health into policy and practice).

Despite pre-implementation consultation about this evaluation approach, some stakeholders expressed reservations that the process evaluation was not sufficiently outcome focused to provide high-level evidence:

> *'Very much a process evaluation… not looking at outcomes… we do accept the benefits of green health to a certain extent, but this is a golden opportunity to provide... This was the perfect opportunity to set up a decent cluster randomised trial of some description to do it. Okay, it costs but it would be valuable' (GHP Area 2 focus group).*

This GHP Area focus group considered that the key to securing health funding was to provide class A evidence that investing in green health is a cost-effective way to improve health. Without this, the funding standoff would continue. Telephone interviews with some senior stakeholders reflected similar concerns about a lack of hard outcomes.

> *'I am not really interested in boosting numbers of people contact with nature, it's the right people and the impact it's had… the financial benefit to the health practices' (telephone interview participant 11).*

Suggestions for future action were building evaluation into future funding and planning a pragmatic randomised controlled trial that could compare those referred by social prescribing link workers to green health activities with those who are not using an intention to treat analysis (i.e. the number of referrals needed for one person to benefit). In addition, stakeholders suggested comparing the role of the link worker with usual care (brief physical activity advice from a healthcare professional). At a more pragmatic level, stakeholders suggested using standardised quality of life measures (GHP Areas 2 and 3) or questions from the Scottish Health Survey (GHP Areas 2) to provide some outcome measures. Other suggestions included capturing reduction of medication, hospital re-admittance or re-offending rates for some specific populations (GHP Area 3).

At an operational level, respondents suggested that it was difficult to capture the influence on people's thinking and behaviour effectively, other than capturing attendance and adherence data *(GHP Area 3 focus group)*. GHP Area 4 suggested that collecting quantitative data about uptake and adherence was difficult due to the community and voluntary nature of the groups providing the interventions, who did not necessarily keep registers. Operational stakeholders considered case studies to provide a viable and valuable way to capture examples of success. There was little evidence reported of quantitative results during discussions. The exception to this was GHP Area 1, which reported early indications of 35% uptake of activities following referral via the newly established green health referral pathway.

In GHP Area 4, one stakeholder from an educational establishment highlighted *'a tsunami of mental health issues'* within the student population. The long wait for counselling has resulted in the use of other methods to promote positive mental health. One of these is the promotion of green health activities. The integration of data about the number of students taking part in green health activities with key performance indicators for student course adherence and

vicariously student employability could provide evidence of the benefit of green health activities in positive outcomes for students:

> *'Without that link to green health, they would not have done that (completed their course), they would have been a negative key performance indicator for us, then they would be a negative experience for society and for them, the community. So that's a real impact.' (GHP Area 4 focus group).*

In addition to the strategic and operational themes that we identified, we asked stakeholders to discuss what could be done differently and what they considered the key measures of success.

3.2.3.1 What could be done differently

Reflections about what could have been done differently varied across the four GHP areas. In some GHP areas, reflections focused on the initial GHP development stage. Two stakeholders felt the GHPs should have included a more political focus at an early stage, as opposed to being 'grass-roots' focused: *'I think it's probably about engaging with the political tier, local government and national government at a political level' (telephone interview participant 16).* Indeed, stakeholders in GHP Areas 1 and 3 suggested the need to engage politicians and healthcare professionals at both a local and national level as green health champions. In some areas, earlier / better identification of key stakeholders for inclusion in the GHP steering group would have saved time and allowed for quicker progression: *'I think we were quite slow at the beginning getting the right buy in from the NHS, getting the right people' (telephone interview participant 6).*

GHPs reported learning from the development of operational processes for green health referral interventions. In GHP Area 4, for example, four pilot projects offered a range of different activities, a walking group, a conservation group, a therapeutic horticulture group and a community garden. The GHP chose these initiatives because they were well-established groups, and managed by organisations with health and safety / safeguarding procedures in place. Partners considered that using this type of group would give referrers confidence that the intervention would not disappear shortly after referral. However, these activities were not easy to get to, making access difficult for those with the most challenging health and social circumstances. In future planning, stakeholders suggested that more focus should be on making programmes *'as physically easy to access as possible' (GHP Project Officer, Area 4).* Given that the leisure provider in this area managed referrals, partners also suggested that providing green health opportunities close to leisure centres might increase uptake. Several GHP areas highlighted the need to work with leisure providers who were managing referral hubs to ensure that that green health options had high visibility as an activity for participants. Additionally, GHPs need to ensure that leisure staff completing lifestyle consultations were sufficiently familiar with, and confident in, green activities so that they encourage clients to attend if this is their preferred option. To improve psychological accessibility, the Area 4 GHP project officer suggested the need for 'a connector' between green health opportunities and referrers.

Stakeholders in all areas discussed where GHPs should focus most energy. ONHS uses three pillars to describe types of nature-based activity, which can deliver health outcomes: 1. Everyday contact with nature, 2. Nature-based health promotion initiatives and 3. Nature-based interventions with a defined health or social outcome. As GHPs were shaped around local health priorities, including tackling health inequalities, initial work has tended to focus on developing nature-based initiatives and interventions. However, some stakeholders felt the focus on green health referral processes was a distraction from supporting the public health message*, 'I wonder whether … the balance could be a bit more towards the… wider public*

health message, rather than specific referrals' (telephone interview participant 7), and developing the wider everyday contact with nature:

> *'I wondered if the... view of it had been too closely linked with the NHS and health and social care whereas, you know, green health is for everybody and across all kind of walks of life' (telephone interview participant 15).*

Despite the 'local solution for local issues' approach to GHP development, stakeholders reported that clearer initial guidance about which was the most important pillar of the ONHS concept for GHPs may have led to more focused work. However, the availability of funding for implementation was an issue that has influenced focus. Due to limited budgets, GHP project officers sought external funding. For example, attracting funding for active travel initiatives (such as that used for a green prescription officer in GHP Area 1) contributed to increasing green health participation, without necessarily contributing to the GHP outcomes of targeting health inequalities. One GHP project officer reported *'we can make it work, but it's just a bit more difficult' (GHP project officers' focus group).* Active travel requires evaluation to include carbon savings and environmental impact, diverting attention away from health. Despite this, GHP project officers reported that if this was the only available funding, it could still provide a health focus in addition to an active travel focus.

All GHPs discussed the need to develop appropriate communication about green health for different groups, local policy & decision makers, health & social care professionals and for the wider population. This is an area where stakeholders suggested that a national approach may be of benefit, with GHPs working together to share learning and develop national branding. In particular, GHPs highlighted the need to consider health literacy in developing communication and messaging.

One other area that may have benefited from more focused initial guidance was evaluation. GHP project officers reported that they did not have the national evaluation documentation at the beginning of the project and so for some elements they needed to recall who had attended what meeting etc. Additionally, the GHP Area 2 project officer reported a lack of discrete funding for evaluation and reflected whether some elements were missing from initial data collection:

> *'Our partnership haven't built in any funding for evaluation, so that's a bit of a struggle… Although we have the monitoring framework nationally, personally I don't feel it meets our needs. So while they're monitoring participation numbers, what we're not really gathering is who they are (green health participants), what their conditions are, what the impact is and what the financial benefit to health practices might be, none of that's really captured in there' (GHP Project Officer, Area 2).*

3.2.3.2 Measures of success

At this early stage of development, the GHPs reported that it was difficult to demonstrate success in terms of number of participants taking up and adhering to green health activities. This was because the focus for the first year was to develop relationships between partners, conduct appropriate needs assessments and create / enhance referral pathways. Stakeholders viewed GHP project officers as integral to this; *'what's been key is having a dedicated manager to drive it forward. So much of what we didn't achieve in the old iteration, we've managed to achieve now because we have that capacity' (telephone interview, participant 1 & 2).* GHPs reported soft measures of success, which included the strength of the partnerships, the ability to access partner resources and success in raising the profile of green health activities. For example, in GHP Area 3, the GHP project officer, senior stakeholders and steering group participants referenced success as the strength of the steering group partners, and the combining of resources to organise a green health event

designed to increase knowledge of green health activities amongst health and social care staff. This area reported the successful development of an action plan, informed by GIS mapping of the quality of green spaces, with a particular focus on areas of greatest deprivation '*about the pathways, the promotion, the people and the places that we needed to look at' (GHP project officer focus group).*

Stakeholders reported early process measures of success as the number of interventions established or linked with referral pathways. For example, GHP Area 1 referenced success as a new model of green health prescriptions that referred patients / service users to nature based interventions. Of note, is that this intervention has integrated monitoring and evaluation into the delivery process, allowing for measures of uptake. The GHP Area 1 focus group attributed the success of this intervention to the process adopted to gain NHS agreement for green health prescriptions. This included engagement with research groups, community groups, delivery groups and health groups, and *'presenting to GP sub-committees' (GHP Area 1 focus group)*.

In GHP Area 4, the focus group measured success via the attraction of *'match funding and the additional money that we're bringing to the partnership' (GHP Area 4 focus group).* All areas reported success in attracting funding from other sources, for example the Heritage Lottery Fund in GHP Area 2. GHPs used funding to create additional posts to support the development and delivery of green health opportunities.

All GHP areas reported being in the process of completing the national process evaluation documents. These contain a great amount of detail and are likely to give more information about success measures than this study.

4. DISCUSSION

4.1 Main findings

Stakeholders reported that promoting the use of the natural environment was a good strategic fit with all six public health priorities, particularly increasing physical activity, healthy weight, healthy, safe places and communities, and emphasised the positive relationship between the outdoors and good mental wellbeing. GHPs have provided a powerful voice to raise the profile and awareness of the benefits of green health, and built upon the work of previous green health initiatives. Key partners identified were the NHS (public health teams and healthcare professionals), local authorities (social care and environmental department), leisure providers, the environment sector and the voluntary and community sector. The GHPs have led to a strengthening of green health networks and in particular given third sector organisations a 'place at the table' with health and local authority partners. Stakeholders recommended that a focus on the mental health benefits of green health could increase the strategic importance of GHPs.

GHP project officers were fundamental in the development of GHPs, providing focus and co-ordination for green health development. The provision and marketing of green health interventions, the establishment of referral pathways to these interventions, workforce development (for health and social care practitioners, voluntary sector staff and volunteers delivering interventions) to ensure that systems functioned, and the monitoring and evaluation of activity were key elements of GHP development. Stakeholders reported developing a range of interventions, with different approaches adopted in the four GHP areas. Successes included positive engagement with healthcare professionals, volunteers and partner organisations, while challenges included volunteer capacity and developing appropriate communication to promote green health activities. Addressing health inequalities via interventions and improvements to greenspace in deprived areas was an important consideration in the development of green health initiatives. Operational stakeholders considered providing robust evidence a challenge, as success was difficult to capture via quantitative measures and intervention deliverers lacked capacity for data collection for evaluation.

Development strategies for green health included needs assessment and the need to discuss sustainability and funding at both a strategic and operational level. Stakeholders recognised the need for organisational cultural change to promote green health opportunities, but expressed concerns over speed of change being slow in relation to the length of the GHP project. Additionally, stakeholders reported the need to improve some greenspace to increase positive perceptions about appeal and safety.

4.2 Establishing a Green Health Partnership

The establishment of GHPs builds on the work of previous green health initiatives. A fundamental element in the success of the GHPs is the employment of project officers, who have provided focus and co-ordination for green health development. GHP project officers have successfully accessed existing local partnerships to identify willing partners and those with a history of green health delivery. If new GHPs are developed, they should include the NHS, social care, council environmental departments, leisure providers, third sector, voluntary and community organisations as important partners. Opportunities for engagement with educational partners were reported to be limited, but GHPs suggested that this was an area that could be developed in the future.

GHPs reported that good engagement in steering groups has strengthened partnerships, increased knowledge of other organisational agendas and increased understanding of synergy between organisations. Steering groups members were mainly operational, and steering group meetings lead to 'action on the ground' that would not have happened without

the GHP. One area highlighted that having a more senior level steering group, that met twice yearly, in addition to the operational steering group provided the opportunity for higher level discussions about green health. Stakeholders suggested that a key element of successfully establishing a GHP was gaining senior health sector and political support, and that engaging senior stakeholders as 'green health champions' would increase exposure. Although, suggested by respondents from several GHP areas, none reported being successful in gaining this type of ongoing support.

Each GHP area has taken a different approach to development, highlighting the need for local solutions to local circumstances. All areas conducted a needs assessment before producing a plan for development. The GHPs considered the successful implementation of pilot projects important to raise awareness of green health and demonstrate action. Consideration should be given to the collective branding and validation of previously isolated activities under the banner of green health.

Development was constrained by the cultural change required by NHS partners. GHPs considered that it was unrealistic to achieve large changes in the way that the NHS worked in the three-year period of the GHP funding.

4.3 The first year of delivery

GHPs were positive about progress achieved during the first year of delivery. Stakeholders perceived an increased awareness of green health and reported that staff from NHS, education, health and social care partnerships and the third sector, and the public have become more aware of the benefits of green health activity. GHPs reflected on the development of strong partnerships and new pathways for green health referrals, the creation of action plans following needs assessments and success in securing external funding through partner organisations.

An important element of first year delivery was targeting those suffering the greatest health inequalities through the establishment and marketing of referral pathways, and the provision of green health interventions. Each GHP developed pilot projects that they used to illustrate early success. GHPs tended to develop initiatives by working with established green health activity providers and / or organisations operating existing community-based referral pathways. Only one GHP area attempted to create a completely new green health prescription pathway. Where GHPs integrated green health referrals into existing exercise referral scheme mechanisms, there were low numbers of referrals for green health activities and for those referred, levels of uptake were unclear. To address low referral numbers, GHPs need to ensure that healthcare professionals and social prescribers understand what activities are available and that green health is an additional pathway to more traditional exercise referral delivered by leisure providers. GHP Area 3 demonstrated that it is possible to attract a large number of health and social care professionals to an event that highlights green health opportunities. To encourage better uptake, GHPs need to work with exercise referral providers to ensure that staff feel confident to recommend green health activities as an option during consultations. One challenge that needs consideration is how to monitor and evaluate those referred via this route, as although leisure providers have their own evaluation systems, once participants choose an external green health activity they pass out of exercise referral monitoring.

While GHP areas reported success in setting up referral pathways, stakeholders expressed concerns about the best way to demonstrate success. This was despite an agreed national evaluation framework and a clear statement that engagement is likely to be the strongest measure of effect the GHPs will have in the early stages, suggesting that the initial evaluation should focus mostly on process and that a cluster randomised controlled trial might be justified in future if the initial short-term evaluation looks promising (Craig and Mitchell,

2018).Stakeholders believed that the process evaluation framework may not capture important elements to measure success. Given the parallels to, and integration with, social prescribing it is helpful to understand the key contexts and mechanisms known to contribute to successful uptake and adherence in this area. These may inform future direction for the development of pathways and process evaluation over the remaining GHP period. Lovell *et al*. (2017) identified patient beliefs about suitable treatment options, presentation of the intervention and social prescribing process, accessibility of social prescribing (physically and psychologically), and supported uptake. Skilful and flexible intervention leadership and a change in the patient's condition were key contexts or mechanisms in maintaining adherence. These represent a challenging range of measures to capture in routine quantitative data collection and it may be possible to gain additional understanding by observation of successful interventions identified in quantitative monitoring, and by interviewing referrers, deliverers and participants (both adherers and non-adherers).

There was a focus on developing appropriate messaging to communicate the role and purpose of the GHP to local policy and decision makers, and health and social care professionals, and to raise public awareness of local green health interventions / opportunities. GHPs reported exemplars of engagement with healthcare professionals, such as a green health event attended by over 170 health and social care professionals with green health taster activities. Additionally, GHPs reported creating information sharing websites and gave examples of population messaging. One of the challenges in developing communication for green health activities is to understand what messages to convey. Most of the interventions that have become part of referral pathways were not set up as health interventions. The health benefits of being outside, such as mental wellbeing, increased physical activity, and / or increased socialisation may be incidental to the activity itself. The volunteers leading interventions may have no background in health and / or feel uncomfortable discussing health issues. This makes developing messaging complex. In addition, potential issues with health literacy require careful planning and the need to adhere to national health literacy guidelines to ensure that people understand what is available in terms of green health opportunities, the benefits of engaging and how to use the opportunities that are there. Stakeholders recommended the need to avoid communication that medicalises access, contains off-putting descriptions for those not engaged in sport, and uses the term 'volunteering' as it implies a higher level of commitment than participation.

Increased physical activity is only one benefit of green health participation, but considering the development of physical activity messaging is helpful as it is possible to apply the same principles to other health messaging. Physical activity messaging is a complex and multidimensional area, and there is a lack of understanding about what works. It is often unclear what proposed mechanism(s) will bring about changes in behaviour, or "how" they are expected to work. For example, should messaging increase knowledge and / or motivation? Should it be fear-based (if you are not physically active you are at risk of heart disease), stealth-based (have fun with your family in the park), or offer some reward (attend 12 sessions of our allotment initiative and receive free fruit and vegetables for a month)? Williamson *et al*. (2019) have developed a framework to help plan physical activity messaging (Figure 2).

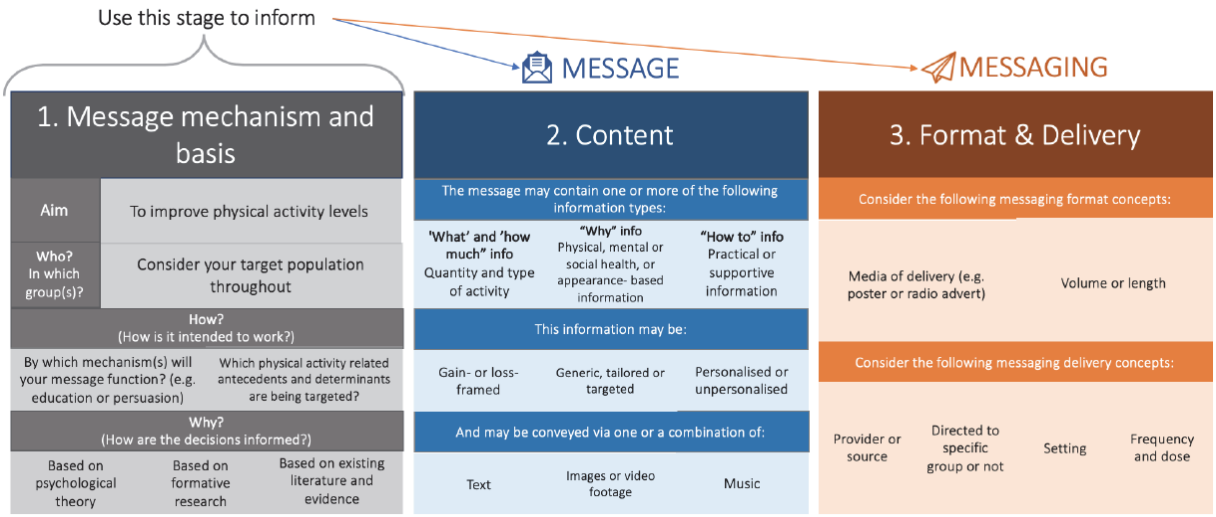

Figure 2: A conceptual framework of physical activity messaging reproduced from (Williamson et al., 2019)

It may be beneficial to consider this type of methodology to plan green health messaging and communication. This must be combined with appropriate language to address issues with health literacy.

Delivery of green health interventions is mostly by third sector, voluntary and community organisations. These tend to be small groups reliant on volunteers to run the intervention. Interviewees suggested that volunteering in a green health intervention was very different to traditional environmental, task directed, volunteering. Stakeholders expressed concerns about volunteer numbers required to scale up intervention delivery (e.g. volunteer health walk leaders) and the responsibility they were willing to take on. The GHPs suggested that the employment of paid co-ordinators for green health volunteer networks within organisations such as TCV and Green Gym was a positive way to support green health volunteers appropriately. Programme co-ordinators can be central to volunteers' successful experience of volunteering. They can provide support by setting safe boundaries for volunteers, allowing volunteers to discuss client wellbeing and other issues, resolve disputes and arrange ongoing training (Wilson, 2012). The provision of training was considered particularly important, due to concerns that the formalisation of referral pathways affected volunteer skills requirements.

4.4 Longer term developments and sustainability

Stakeholders reported that to ensure longer-term sustainability there was a need for the integration of green health into high-level strategic plans. A challenge with this is that no one department or sector has 'ownership' or responsibility for ensuring that the health value of natural environments is realised. Cross-departmental (and potentially cross-governmental) activity is likely to be necessary to realise the potential benefits offered by the effective use of natural environments (Lovell *et al*., 2018). To achieve this, GHPs need to engage senior politicians, healthcare professionals and policy makers. This was an area highlighted for development by stakeholders.

Foremost among discussions about sustainability was the short-term nature of GHP funding and expectations for intervention delivery from third sector, community and voluntary organisations without sustainable and appropriate funding. Partners reported that to date, there was little evidence that health and social care budgets were being redirected to community-based delivery of green health activities. While there was some disappointment about this, operational stakeholders reported an increased ability to work together on projects,

despite a lack of funding. All GHPs discussed links with social prescribing. Since the provision of social prescribing and increasing the number of community link workers are Scottish Government priorities, GHPs should consider how to integrate the development of green health interventions and referral pathways into the core offer of social prescribing. The Scottish Parliament Health and Sport Committee (2019) report 'Social Prescribing: physical activity is an investment, not a cost' recommended that social prescriptions are treated on an equal basis to medical prescriptions, when issued by health and social care professionals. As such, this committee highlighted the commitment of the Scottish Government that by 2021-22 over half of NHS spending will be in community settings. In addition to making funding available, the report highlighted the need to remove some of the tangible barriers that exist around longevity and sustainability of current funding cycles, procurement practices, commissioning processes and the involvement of third sector organisations in the provision of service. Finally, it recommended that upstream funding for infrastructure, utilisation of community spaces and support for organisations to deliver prevention activities highlighted in this report is required.

The need to provide robust and convincing evidence for health and social care to invest in green health interventions in the future was perhaps considered the other most pressing concern by GHP stakeholders. At an operational level, there was some confusion about the best way to provide evidence and concerns that it would be difficult to measure process outcomes because of the community and voluntary nature of many providers of green health activities. At a strategic level, particularly for health partners, there were concerns about the type of evidence that would be required to attract health sector funding. Although a considerable amount of work had been done prior the establishment of the GHPs (Craig and Mitchell, 2018), stakeholders remained uncertain of the best approach. Increasing understanding of the current evaluation approach would be beneficial in the short term, and senior stakeholders suggested that in the longer term the GHP evaluation approach should provide evidence of effectiveness and cost-effectiveness.

5. CONCLUSION

Promoting the use of the natural environment is a good strategic fit with all six public health priorities and the GHPs provide a strong powerful voice to raise the profile and awareness of the benefits of green health. The GHP project officers are pivotal to success as they provide focus, knowledge, and time to help develop green health. This has allowed good progress in developing working partnerships between health, social care, the community, voluntary and third sector, and leisure providers. In the first year, there was an emphasis on creating local solutions for local issues and the four GHP areas have trialled different approaches. GHPs stressed the importance of targeting health inequalities. As a result, GHPs have focused on developing the green health referral pathways suggested in the third pillar of the ONHS approach. As the projects develop over the next two years, evaluation of what works well, for whom and in what circumstances will result in learning to help the development of green health in other areas.

GHPs identified five key areas for development in the next year. First, the need to engage politicians and healthcare professionals at both a local and national level as green health champions. Second, stakeholders suggested that focusing on the mental health benefits of green health activities would increase strategic importance of the GHPs. Third, a national approach to developing appropriate messaging and communication for green health activities, targeting both health and social care professionals, and the population. Fourth, GHPs need to consider how to integrate green health referral pathways into social prescribing services. Finally, stakeholders were concerned about the short-term nature of GHP funding and about expectations for intervention delivery from third sector, community and voluntary organisations without sustainable and appropriate funding. This is perhaps the biggest challenge, and GHPs must demonstrate value through robust evaluation and developing political support.

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ANNEX 1: FOCUS GROUP AND TELEPHONE INTERVIEW GUIDES

GHP Project Officers	
Question	Prompts
Tell us a bit about the progress of the GHPs since you came into post	Warm up question
What support have you had in developing the project	What partnerships have been important in developing the project? How does your role fit into the organisation that you are based in? What support have you had from your line manager? How has your host organisation been supportive? What model has your GHP used in developing the partnership? How this helped to support development of the project?
What has worked well?	Please give one example of success. Who has the project worked well for? What circumstances have been important in influencing success?
What challenges have there been?	What has not worked so well? Who has the project not worked so well for? What partnerships have been difficult? What circumstances have made it difficult to develop the project?
How do you think the GHPs have added value?	Where has the GHP had real influence so far? What new audiences have become involved in green exercise opportunities / nature based interventions as a result of the project? How has the GHP contributed to embedding prevention, early intervention and person-centred care into health and social care? What gaps still need to be filled? How has the GHP improved opportunities for (and actual) volunteering?
How important has addressing health inequalities been in the project to date?	What steps have you taken to ensure that the GHP does not widen inequalities? Who are your targeting? Where are you targeting? To what extent have the communities that you are targeting been involved in the design and delivery of the project? How are you promoting the initiative?
What would you do differently if you were starting the project again?	What lessons have you learned? How would you do things differently?
What are the future challenges for the GHPs?	How do you think that the GHP's can be embedded in your area? What organisations or people are key to this? What might prevent future development?
Is there anything else about the GHPs that you would like to share with us before we finish?	

GHP Steering groups	
Question	Prompt
Tell us about the progress of the GHP to date.	Warm up question
What has worked well?	Please give one example of success? Who has the project worked well for? What circumstances have been important in influencing success?
What challenges have there been?	What has not worked so well? Who has the project not worked so well for? What partnerships have been difficult? What circumstances have made it difficult to develop the project?
How do you think the GHPs have added value?	Where has the GHP had real influence so far? What new audiences have become involved in green exercise opportunities / nature based interventions as a result of the project? How has the GHP contributed to embedding prevention, early intervention and person-centred care into health and social care? What gaps still need to be filled? How has the GHP improved opportunities for (and actual) volunteering?
How has being involved in the GHP benefitted your organisation?	How can the GHP contribute to your objectives? What are you doing differently now because of the GHP? What might you do differently in the future because of the GHP?
What difference has this made to health and social care services in your area?	What partnerships have been important in developing the project? How have these partnerships helped? Who or what else has been important? How has the GHP contributed to embedding prevention, early intervention and person-centred care into health and social care? (possibly) Looking forward, what difference could it make?
What circumstances have prompted action for addressing health inequalities via the GHP in your area?	What steps have you taken to ensure that the GHP does not widen inequalities? Who are your targeting? Where are you targeting? How are you promoting the initiative?
If you were beginning the project again, what would you do differently?	What lessons have you learned? How would you do things differently?
What are the future challenges for the GHPs?	What might prevent future development? How can the GHP's be embedded in your area? How will this work with existing structures? What organisations or people are key to this?
At the end of the three years, what do you think the legacy of the GHP intervention will be?	How will awareness of green health interventions changed?

	What will be different about how people access green health interventions? (Referral and total numbers participating?) How will green health interventions be embedded into the health and social care sector?
Is there anything else about the GHPs that you would like to share with us before we finish?	

Individual interviews	
Question	Prompt
Tell us what you know about the GHP project in your area.	Warm up question
How does the GHP fit with the strategic direction of your organisation?	How can green health be positioned to play a role in the strategy of your organisation? What progress has been made so far with this? What challenges still exist in integrating green health to be a better strategic fit for your organisation? How might these challenges be addressed?
How would you describe attitudes within the (health, social care and environmental sectors) *(we will insert the relevant sector into this question depending on the interviewee)* in your area towards the use of green health activities in models of health promotion, recovery and care?	To what extent is the role of green health activities recognised? What previous experience of cross-sector collaboration between environment and health existed in your area? How have attitudes changed in recent years? How has this been achieved? What barriers are there to collaborations with the environmental sector? What still needs to be done? How might this be achieved?
How has what we have already discussed impacted on the development of the GHP in your area?	What factors have been important in driving the establishment of the GHP in your area? What have the barriers been? What partnerships have been difficult? What circumstances have made it difficult to develop the project?
Thinking about Scotland's six public health priorities and your own local priorities, where do you feel the contribution of the natural environment could be particularly significant?	How has or how could the GHP contribute to healthy and safe places and communities? How has or how could the GHP contribute to good mental wellbeing? How has or how could the GHP contribute to the reduction of alcohol, tobacco and other drugs? How has or how could the GHP contribute to a sustainable, inclusive economy and reduce health inequalities?

	How has or how could the GHP contribute- to increased physical activity, better eating and healthy weight for the population?
How can the GHP contribute to addressing health inequalities in your area?	How could this develop? How could this benefit groups with heath conditions? What is the importance of the natural environment in addressing mental health and wellbeing? Which groups is this particularly important for? What is the importance of the natural environment in addressing low levels of PA? Which groups is this particularly important for?
With the benefit of hindsight, what would you do differently to help the development of the GHP?	What lessons have you learned? How would you do things differently?
What are the future challenges for the GHPs?	How positive do you feel about the future of the GHP approach (or, more generally, the contribution of green health)? Based on your experience to date, how straightforward do you think it will be to upscale and mainstream this approach? What are the main opportunities for mainstreaming? What organisations or people are key to this?
At the end of three years, what do you think the legacy of the GHP intervention will be?	We will not probe for the answers with this group
Is there anything else about the GHPs that you would like to share with us before we finish?	

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