TRANSPORT TO HEALTH: LITERATURE REVIEW

1. INTRODUCTION

1.1 The purpose of this report is to present to the Partnership Board the literature review of Transport to Health (TtH), which will precede a SEStran Transport to Health Strategy.

2. BACKGROUND

2.1 SEStran has considered Transport to Health for some time, with the 2005 Transport (Scotland) Act placing a duty on Regional Transport Partnerships (RTPs) to address access to healthcare in their Regional Transport Strategies. This was strengthened further in the 2019 Transport (Scotland) Act.

2.2 Accordingly, SEStran's most recent Regional Transport Strategy contains some baseline data for and a commitment to improve connectivity to healthcare. SEStran's regional bus strategy, which is still in development, will also consider the role of the bus in accessing healthcare services.

2.3 At a national level in Scotland, Transport to Health has achieved more attention in recent years following a report from the Mobility and Access Committee for Scotland (MACS) in 2019, which found that little progress had been made following an Audit Scotland report in 2011 recommending major improvements to the way older and disabled people accessed healthcare.

2.4 In late 2024, several years after the pandemic underscored the importance of accessible and reliable transport to healthcare services, the Scottish Government responded to the MACS report with its Transport to Health Delivery Plan. Among other things, the delivery plan strengthens calls on RTPs to meet with local NHS boards to discuss access to healthcare as well as developing regional plans for transport to healthcare. SEStran is well-placed to deliver these commitments, having established an informal learning network with the region's four health boards in early 2024. We continue to liaise with Transport Scotland and the Primary Care Directorate to highlight RTPs' role in driving change in TtH. Transport to Health is complex as it falls partially within the remit of many agencies and bodies, given the nature of health service delivery, not to mention the complexities of the transport sector. It is therefore often seen as 'someone else's duty', with no clear responsibility holder.

2.5 This low base of current provision but increasing political profile offers SEStran an opportune moment to develop a Transport to Health strategy for the south east of Scotland. It is necessary to understand what's happening, and not happening in our region, what we can learn from further from afield and engage our health boards and other key players in a shared vision.

2.6 From strengthening our network in this area, we have learnt that there is a lack of leadership and direction, leading to missed opportunities to collaborate, make efficiencies or cost savings, or call for better policy direction at a national level.

2.7 Before heading into a Case for Change for a strategy, we have undertaken a wide-ranging review of the existing academic research, policy landscape and data that already exists.

3. THE LITERATURE REVIEW

3.1 The website link to the literature review (Appendix 1 of this document) can be found here: https://sestran.gov.uk/wp-content/uploads/2025/04/Literature-Review-Final.pdf

3.2 The main findings of the review are:

Baseline data

- 2% of all journeys in the SEStran region are taken to access hospitals or other healthcare services. This works out at around 18-20 million journeys per year.
- Most journeys to GPs and hospitals in Scotland are by car. Bus is the most common public transport mode for accessing these services. There is a lack of data around how people access other types of healthcare such as pharmacies or dental practices.
- Transport is a frequently cited reason for people missing healthcare appointments. Around 130,000 hospital appointments are missed in the SEStran region each year, but it is difficult to say how many directly relate to poor transport options.

Challenges

- Transport connectivity. Many people do not have convenient transport options to reach healthcare, especially those without access to a car. The challenges are different for rural and urban areas.
- Cost of transport. While cost of transport is often cited as a barrier, there is not enough evidence for the SEStran region specifically.
- Additional barriers faced by disabled people. Extra challenges travelling to healthcare include lack of consistent information and support for carers, inaccessibility of vehicles and cost, amongst others.
- Organisational and policy-related barriers. There is insufficient attention and cooperation between agencies and bodies to coordinate Transport to Health. There is not a clear ‘responsibility holder’ for TtH amongst boards, authorities, third sector and public transport operators, creating coordination challenges.

Opportunities

- Policy changes. Increased political attention at a national level offers a chance to improve cooperation on delivering Transport to Health.
- Digital transport technologies. New technologies can be applied to improve services, such as setting appointment times based on the patient's journey time.
- Virtual provision of some services. By holding some appointments over the phone or by video call, some journeys to healthcare do not need to take place. However, the majority of patients still need in-person care.

3.3 The gaps in data identified by the review are:

- Transport mode share for different types of journeys to healthcare services in the SEStran region. The last Scottish Household Statistics *Transport and Travel* report to capture this information was in 2011 at a national scale, but even then, it does not appear to have been provided at the RTP or local authority level, potentially due to sample sizes.
- Car and public transport distances to other types of primary care. Analysis carried out using Scottish Index for Multiple Deprivation data has focused on access to GP services and hospitals in the SEStran region. While important, other types of healthcare are not captured by this analysis, such as pharmacies and dental practices.• Alternative modes of transport to healthcare sites. While the 2023 SHS asks how people get to the GP and asks people who always drive to the GP if they can use any other modes of transport, it does not ask about other types of healthcare service. It also does not provide a breakdown of the data for the SEStran region. Another insight missing from the data is how many people own a car but choose to take another mode of transport to healthcare.
- Quantifying the scale of the parking problem at hospital sites. At the moment there is plenty of anecdotal evidence around parking issues at NHS sites. Further research could attempt to quantify on a more rigorous basis how long patients spend trying to find parking and what implications this has.
- Transport cost barriers to accessing healthcare services. There is little research examining the cost of transport specifically, as opposed to transport more generally, as a barrier to accessing healthcare in a Scotland or UK context.
- Quantifying the cost to the NHS of transport-related missed appointments in the SEStran region. While the reasons for missing appointments are complex, if transport can be pinpointed as a reason for particular missed appointments, this could provide motivation for the NHS to fund transport services.
- People who avoid booking healthcare appointments altogether. Inherently a difficult phenomenon to capture, understanding how many people are put off by poor transport from booking appointments could provide further basis for a Transport to Health strategy.

4. NEXT STEPS

4.1 To continue this work, we plan two key actions; namely to solidify our Shared Learning Network with our Health Boards, Scottish Ambulance Service and NHS Scotland Assure by agreeing a Terms of Reference, and beginning a TtH strategy with this group as key stakeholders in this work.

5. RECOMMENDATIONS

5.1 The Partnership Board is asked to:

- Note the findings of the review
- Offer any suggestions on how to fill data gaps
- Share Transport to Health efforts with their networks
- Agree to SEStran continuing this work into a TtH Strategy in the coming years

Rachael Murphy
Strategy Manager

Appendix 1: Literature Review

Policy Implications	Progressing the strategy will deliver policies for the region in Transport to Health.
Financial Implications	This work is budgeted for within the SEStran project budget.
Equalities Implications	Improved and joined up regional direction for transport to health would have a positive impact for all. With that said, particular consideration will be needed to make sure strategy actions are appropriate for under-served groups like disabled people and those facing transport poverty. A thorough EqIA process will be needed here.
Climate Change Implications	More joined up transport to health, and a shift to sustainable modes will address climate change challenges

APPENDIX 1

Travelling to health appointments

A literature review

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Key points

This literature review provides an overview of the evidence and policy context relating to Transport to Health in the SEStran region. The review will feed into the intended development of a SEStran Transport to Health strategy Case for Change in 2025/26.

Baseline data

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Challenges

- *Transport connectivity.* Many people do not have convenient transport options to reach healthcare, especially those without access to a car. The challenges are different for rural and urban areas.
- *Cost of transport.* While cost of transport is often cited as a barrier, there is not enough evidence for the SEStran region specifically.
- *Additional barriers faced by disabled people.* Extra challenges travelling to healthcare include lack of consistent information and support for carers.
- *Organisational and policy-related barriers.* There is insufficient attention and cooperation between agencies and bodies to coordinate Transport to Health.

Opportunities

- *Policy changes.* Increased political attention at a national level offers a chance to improve cooperation on delivering Transport to Health.
- *Digital transport technologies.* New technologies can be applied to improve services, such as setting appointment times based on the patient's journey time.
- *Virtual provision of some services.* By holding some appointments over the phone or by video call, some journeys to healthcare do not need to take place. However, the majority of patients still need in-person care.

Research gaps

The review identified several research gaps, including how people in the SEStran region (rather than Scotland overall) travel to healthcare services and what alternative modes of transport people could use.

Scope

For the purposes of this review, ‘Transport to Health’ refers to how non-emergency patients and service-users travel to primary and secondary healthcare services in line with the remit provided by the Scottish Government’s 2024 Transport to Health Delivery Plan.[1]

While this literature review is not formally part of the Scottish Transport Appraisal Guidance (STAG) process, it seeks to cover material that can be incorporated into the STAG process at a later stage. Accordingly, the focus will be on identifying transport-related barriers to accessing healthcare, and opportunities to improve the system.

The discussion of patients within this report should be taken to include carers accompanying the patient.

Methodology

A high-level literature review was carried out based on an initial reading list compiled by SEStran. Further literature was identified through citation searching of these documents and a separate search was carried out in Google Scholar using key words to identify relevant academic literature. A qualitative thematic analysis was applied to the literature to identify the key challenges and opportunities relating to Transport to Health. Additional quantitative analysis was undertaken using publicly available datasets to provide baseline data to contextualise the scale of these challenges and opportunities relating to Transport to Health in the SEStran region. Research gaps were identified through these qualitative and quantitative analyses.

Priority was given to using sources and literature that focused on the SEStran region. Where relevant, or where SEStran-specific data did not exist, evidence from out with the region was also examined, whether at a Scotland, England, UK or other geographical/political level.

Background

SEStran has considered Transport to Health for some time, with the 2005 Transport (Scotland) Act placing a duty on Regional Transport Partnerships (RTPs) to address access to healthcare in their Regional Transport Strategies.[2] This was strengthened further in the 2019 Transport (Scotland) Act. Accordingly, SEStran's most recent Regional Transport Strategy contains baseline data for and commitments to improve connectivity to healthcare.[3] SEStran's regional bus strategy, which is still in development, will also consider the role of the bus in accessing healthcare services.[4]

At a national level in Scotland, Transport to Health has achieved more attention in recent years following a damning report from the Mobility and Access Committee for Scotland (MACS) in 2019,[5] which found that little progress had been made following an Audit Scotland report in 2011 recommending major improvements to the way older and disabled people accessed healthcare.[6]

In late 2024, several years after the pandemic underscored the importance of accessible and reliable transport to healthcare services, the Scottish Government responded to the MACS report with its Transport to Health Delivery Plan.[7] Among other things, the delivery plan calls on RTPs to meet with local NHS boards to discuss access to healthcare as well as developing regional plans for transport to healthcare. SEStran is well-placed to deliver these commitments, having established an informal learning network with the region's four health boards in early 2024.

Transport to Health is complex as it falls partially within the remit of many agencies and bodies, given the nature of health service delivery, not to mention the complexities of the transport sector. It is therefore often seen as 'someone else's duty', with no clear responsibility-holder.

This low base of current provision but increasing political saliency offers SEStran an opportune moment to develop a Transport to Health strategy for the south east of Scotland. First and foremost, the focus should be on those who stand the most to gain: healthcare users. However, there are also major potential upsides for the wider NHS as a whole, as this review will discuss.


←Patient & Visitors Car Park
Drop Off & Ambulances Only
Hospital Main Entrance →
Minor Injuries Unit →
GP Out of Hours Service →
Recreation Hall ↑
Deliveries ↑

Literature review

The literature review is structured into four sections:

- Baseline data
- Challenges
- Opportunities
- Research gaps

It is followed by a discussion of potential next steps and recommendations.

Baseline data

Data relating to three categories have been explored to provide context for this literature review:

1. **Healthcare journeys:** quantifying the number of journeys to health that take place in the SEStran region
2. **Mode shares:** understanding what types of transport modes people use to access healthcare
3. **Missed appointments:** exploring the impact of transport and other factors on missed appointments

The SEStran region covers four NHS Scotland health boards: Borders, Fife, Forth Valley and Lothian. All except Forth Valley sit entirely within the SEStran region. NHS Forth Valley covers three local authority areas: Clackmannanshire, Falkirk and Stirling. Stirling is the only one of these three not within the SEStran region. While Stirling only accounts for 31% of the NHS Forth Valley population,[8] and most of NHS Forth Valley's hospital sites are located within Falkirk or Clackmannanshire, this caveat should be borne in mind when figures for the four health boards are presented below and elsewhere in this report.

1. Healthcare journeys

To understand the scale of Transport to Health in the SEStran region, and therefore implications of relevant literature, it is useful to first outline how many journeys are taken for health purposes. Two sources for estimating this, using existing data, are discussed below and are summarised in table 2.

Source 1: Scottish Household Survey – Transport and Travel statistics 2023

The latest Scottish Household Survey (SHS) found that 2% of all journeys in the SEStran region are taken to access a hospital or other healthcare services.[9] This is the same proportion as for Scotland as a whole. The SHS reports that Scottish adults in 2023 took an average of 1.59 journeys per day, of which 0.04 journeys were for visiting a hospital or other healthcare facility.[10] Extrapolated to the adult population of

the SEStran region, this implies 20,136,378 journeys annually are taken for healthcare purposes, out of a total of 800,421,041 annual journeys.[11]

The SHS only records journeys reported by adults. As under 16-year-olds are excluded from the survey, the 20 million figure is almost certainly an underestimate of the number of healthcare journeys, although some adult respondents to the survey may have included journeys escorting a child in their responses to the journey to healthcare category. There is a separate category in the SHS for 'Escorting someone else', which comprises a further 1.8% of journeys in Scotland (2% in the SEStran region), or an average of 0.03 journeys per day per Scottish adult. However, this figure will capture much more than just escorting children to healthcare locations.

Source 2: Combined NHS healthcare figures

Another approach is to examine different types of healthcare appointments in the region and extrapolate journey numbers from these figures. While it will not capture all journeys to healthcare, e.g. for private GP appointments, it can provide more nuance about what type of healthcare people are travelling to. Three types of primary care and one type of secondary care are explored below.

For primary care, in the four NHS health boards covering the SEStran region, there were just over 6.5 million in-person appointments with GPs and clinicians between October 2023 and September 2024.[12] Between April 2023 and March 2024, there were over 530,000 primary eye examinations.[13] In the two years up to the end of December 2024, nearly 1 million registered patients accessed NHS primary dental care.[14] The breakdown for each of these figures can be found in appendix items 1, 2 and 3.

As a proxy for secondary care, there were just under 1.5 million outpatient appointments at NHS hospitals in the four health boards between October 2023 and September 2024.[15] Just over 50% of these appointments were in NHS Lothian hospital facilities.[16] The breakdown for these figures can be found in appendix item 4.

There are various caveats to the calculations above, as discussed in the respective footnotes. However, they provide a basis for understanding how many journeys to different types of healthcare location occur within the SEStran region. Assuming each appointment (or in the case of dentistry, patient) represents one return journey between the patient's home and the healthcare location, the breakdown is shown in table 1.

Table 1: Different types of healthcare journeys annually in the SEStran region

Type of appointment	Number of journeys (rounded)
GP or other clinician	13 million
Hospital outpatients	3 million
NHS-funded eye exam	1 million
NHS dentistry	1 million
Total	**18 million**

Travelling to pharmacies is another type of transport to primary healthcare services. In 2024, there were over 32 million prescriptions dispensed across the four SEStran health boards.[17] This figure is excluded from the calculation of journeys above as many people pick up their prescription while visiting a hospital or immediately after seeing a GP or collect multiple prescriptions at the same time. However, it is worth noting that journeys to the pharmacy are likely to be an under-considered aspect of transport to health, especially as people are being encouraged to go to their pharmacist rather than GP for minor conditions.[18]

Table 2 summarises the two methods for estimating the number of healthcare journeys that take place within the SEStran region. It should be noted that both show 'snapshots' of recent time periods, rather than long-term averages. However, the fact the figures are close to each other suggests that 18-20 million is a reasonable benchmark for the number of transport to health journeys being taken annually in the SEStran region.

Table 2: Comparison of estimates of Transport to Health journeys annually in the SEStran region

Rounded figure	Source	Caveats
20 million journeys	Extrapolated from Scottish Household Survey Transport and Travel statistics 2023.	• Figure based on a national percentage applied to the population size of the SEStran region. • Only the adult population.
18 million journeys	Combined NHS figures for: • GP and clinician appointments • Hospital outpatients • Eye tests • Active dental patients	• Excludes private healthcare. • Some NHS Forth Valley figures are for people living outwith the SEStran region. • Excludes journeys to pharmacies.

2. Mode shares

The latest SHS Transport and Travel statistics do not provide a breakdown of mode used by those reporting journeys to healthcare services. However, the survey asks people how often they use a car for certain activities, one of which is seeing a GP. Across Scotland, 77% reported always or sometimes using a car when visiting their GP, as shown in table 3.[19] When those who always used a car were asked how easily they could see their GP without a car, 64% said that it would be very or fairly difficult, shown in table 4.[20]

Table 3: How often people use a car for certain activities, answers for 'To see GP' (SHS 2023)

How often do you use a car to see your GP? (n=2,030)	
Never make that type of journey	4%
Always use a car	57%
Sometimes use a car / sometimes use another means of transport e.g. walk or bus	20%
Never use a car / always use another means of transport e.g. walk or bus	19%

Table 4: How easily people can do certain activities without a car (those who always use a car), answers for 'To see GP' (SHS 2023)

How easy would it be to see your GP without a car? (n=470)[21]	
Very easy	4%
Fairly easy	20%
Neither easy nor difficult	11%
Fairly difficult	31%
Very difficult	33%

Older versions of the SHS looked at transport to health in more detail. Excerpts are shared in tables 5 and 6.[22,23] It should be noted that a number of relevant events and trends have occurred since these surveys took place, including the coronavirus pandemic, increasing car ownership and the closure or merging of local GP services.

Table 5: Access to services that respondents thought were very or fairly convenient, entries for 'Hospital outpatients' (SHS 2019)

Demographic category	**% convenience**
Large urban areas	60%
Other urban	66%
Small accessible towns	54%
Small remote towns	71%
Accessible rural	52%
Remote rural	46%
Holds full driving licence	63%
Does not hold full driving licence	55%
All (n=9,640)	*60.3%*

Table 6: Normal travel mode to a dentist/GP surgery/hospital outpatients dept. (SHS 2011)

Location	Walk	Car/van (drive)	Car/van (passenger)	Cycle	Bus	Rail	Other	Sample size
Dentist	31%	46%	8%	0%	11%	1%	2%	7,440
GP surgery	37%	41%	9%	0%	9%	0%	3%	8,106
Hospital outpatients	9%	48%	18%	0%	18%	1%	6%	3,984

The different SHS tables paint a picture of the car being the dominant transport mode for accessing healthcare services across Scotland and suggest that it has become more so in the past 15 years. This would reflect the increase in the number of car kilometres travelled on Scotland's roads over the same time, a trend highlighted by Audit Scotland's 2025 report noting the lack of progress towards Scotland's target of reducing car kilometres travelled by 20% by 2030.[24]

The SHS data presented in tables 3-6 is not broken down by local authority or region,[25] which represents a research gap for the purposes of SEStran's Transport to Health strategy. Nonetheless, ad hoc surveys carried out within the region match the national patterns. For example, a survey of patient journeys to Forth Valley Royal Hospital over three days in 2018 found that 87% of non-emergency patients arrived at the hospital by car (as a driver or passenger), followed by 9% by bus, 1% walking and 3% other.[26] Another survey of rural healthcare users in Fife also asked about how people access healthcare services. While the sample size was relatively small (around 100 people), over 80% of respondents reported getting to hospital appointments by car (as a driver or a passenger) and over 90% took the car to GP appointments.[27]

A 2024 survey interviewed bus users in the SEStran region and found that 6% of passengers were travelling to or from a medical or other appointment. The different journey purposes are shown in table 7.[28] When broken down into age groups, 18% of passengers over the age of 65 were travelling for medical or other appointments, with far fewer work journeys. Just 5% of 16-25s and 26–64-year-olds were travelling for healthcare purposes. A similar pattern can be observed for payment methods, with 13% of passengers travelling using a free bus pass stating that they were travelling to attend a medical or other appointment, compared to 3% of fare payers.

Table 7 Bus passenger journey purposes in the SEStran region (2024 Your Bus Journey survey)

Journey purpose	% of journeys (n=601)
Commuting for work	31%
Visiting friends or relatives	15%
Shopping trip	14%
Leisure trip	14%
Medical or other appointments	8%
Education commute	4%
Business travel	2%
Something else	13%

The dominance of car use to access healthcare services is mirrored by high levels of car ownership. 75% of households in the SEStran region have access to a private car, according to the SHS, slightly above the rate for Scotland as a whole.[29] The figure varies across council areas, from 86% and 85% in Midlothian and the Scottish Borders respectively, to City of Edinburgh at 63%. Table 8 shows the reported levels of car ownership across the eight councils.[30]

Table 8 Car ownership in the SEStran region

Council area	0 cars	1 car	2 cars	3+ cars
Clackmannanshire	17%	47%	28%	8%
East Lothian	17%	45%	29%	10%
City of Edinburgh	37%	44%	17%	2%
Falkirk	20%	45%	28%	8%
Fife	21%	46%	26%	7%
Midlothian	15%	50%	29%	7%
Scottish Borders	15%	46%	31%	8%
West Lothian	24%	40%	28%	8%
SEStran average	*25%*	*45%*	*24%*	*6%*
Scotland average	*27%*	*44%*	*24%*	*6%*

It should also be noted that there is a small but relevant cohort of people who are deemed to be trapped in 'forced car ownership'. These households, principally in urban areas, feel compelled to retain cars despite worsening financial circumstances. Authors of a 2018 study into forced car ownership in Glasgow concluded that "[a]ccessibility is not just about proximity, but also the quality, frequency and viability of the public transport and land use system to provide an alternative to car ownership".[31]

3. Missed appointments

As well as examining journeys to health that *do* take place, it is also relevant to consider Transport to Health journeys that *do not* take place due to lack of convenient transport provision. The reasons for missed healthcare appointments are complex and often involve multiple factors relating to the patient or the healthcare system. However, transport is frequently cited as a reason for missing or not attending healthcare appointments.[32] It is therefore useful to understand the scale of the problem within the SEStran region, as any reduction in missed appointments through better Transport to Health provision could result in improved outcomes for both patients and the NHS, as discussed later in this review.

Between October 2023 and September 2024, there were around 138,000 missed outpatient appointments at hospitals in the four health boards covering the SEStran region.[33] This equates to a missed appointment rate of 9%, against a national rate of 8%. A breakdown of outpatient numbers and non-attendances can be found in appendix item 4. There is a strong correlation between missed healthcare appointments, including those in a hospital setting, and worsened patient health outcomes.[34]

Non-attendance data is not routinely collated at a GP practice, eye-test or dentist level in Scotland. However, a large cohort study carried out using the practice records of over 800,000 patients registered at GPs in Scotland between 2013 and 2016 offers some insights. Researchers found that just over 12% of appointments were recorded as not attended during the three-year period, meaning over 1.6 million appointments

were missed.[35] By contrast, the NHS in England estimates that around one in 20 GP appointments are missed.[36] The Scottish cohort study also broke down missed appointment rates at a patient level for the time period examined, with 54% of patients missing no appointments and 46% missing one or more appointments. 19% of patients missed three or more appointments. Table 9 presents more relevant findings from some of the analyses carried out using the cohort dataset.

Table 9: Serial missed appointments in NHS primary care – Scottish cohort study

Demographic and practice factors relating to missed appointments[37]
• Patients who live in areas of high deprivation were more likely to miss appointments. • Patients aged 16-30 and over 90 were more likely to miss multiple appointments. • Practices in rural areas were less likely to experience missed appointments than practices in urban areas. • Urban practices in affluent areas appeared to be less well-equipped to support people who miss multiple appointments.
Missed appointments and mortality or morbidity[38]
• There was a strong correlation between missing appointments and having multiple long-term healthcare conditions, particularly for those with mental health conditions. • The risk of dying was significantly higher among patients that missed two or more appointments. For patients with only physical conditions, the risk of death was three times higher and for mental health conditions it was eight times higher.
Likelihood of missed GP appointments resulting in secondary care[39]
• Patients who missed GP appointments were more likely to miss hospital appointments. • Patients who missed GP appointments had higher levels of hospital outpatient and inpatient care. • Contrasting with other studies, patients who missed GP appointments were no less likely to require emergency treatment than patients who do not miss GP appointments.

The findings presented in Table 9 show the serious implications of missed appointments at a primary care level on patient outcomes. In another paper, the researchers who carried out the cohort study reflected on the reasons these appointments were missed. Transport was cited as a key reason for missing appointments, among other factors such as lack of flexibility offered to patients over appointment time, poor communication from GPs' surgeries and the complicated lives that many of these patients led, impacted by a lack of resources to overcome these barriers.[40] The authors urged a focus on each patient's needs to address these barriers, rather than a 'one size fits all' approach. The need to tailor support to help a patient overcome barriers to attending healthcare, including transport-related issues, is a common theme in academic research exploring missed healthcare appointments.[41]

There is little academic research examining the cost of transport specifically, as opposed to transport as a whole, as a barrier to accessing healthcare in a Scotland or UK context. A 2005 Transportation Research Board paper examined transport

interventions for patients suffering from one or more of 12 chronic or preventative medical conditions, ranging from heart disease and diabetes, to prenatal care and cancer screening.[42] The study found that while spending money on non-emergency patient transport would cause short-term expense for healthcare providers, it would be highly cost-effective in terms of improving patients' quality of life and life expectancy. As the study was not a longitudinal one, the authors could not definitively state the long-term savings to be expected by providing transport to mitigate barriers to accessing healthcare. However, they suggested that the cost savings could be significant by avoiding the need for more expensive care further down the line.

The TRB study showed the benefits of evaluating transport and healthcare on a condition-by-condition basis, while recognising that many patients suffer from multiple conditions. Such an approach could potentially be applied to NHS Scotland's own analysis of potentially preventable admissions to identify certain groups of healthcare users to target for Transport to Health support.[43]

It is clear that transport is one among a number of key factors that can impact whether or not people attend healthcare appointments. Transport-related challenges are discussed in the following sections, whether related to missed or successfully attended appointments.

Challenges:

Following the thematic analysis carried out for this literature review, four themes were identified as being challenges to accessing Transport to Health services:

- **Transport connectivity**
- **Cost of transport**
- **Additional barriers faced by disabled people**
- **Organisational and policy-related barriers**

Transport connectivity

Analysis of Scottish Index of Multiple Deprivation (SIMD) health deprivation data by Audit Scotland suggests that most of the population in the SEStran region is within a 30-minute drive of a GP surgery, and by public transport the journey times rise to a maximum of one hour. However, these averages mask large variations, with rural areas tending to have longer journey times.[44] The analysis does not include other types of primary healthcare, such as pharmacies or dental practices.

Research by Stantec for the Case for Change document for SEStran's Regional Transport Strategy (RTS) found that 16% of the region's population live in areas where there is a strong correlation between areas of high health deprivation according to the SIMD, and areas with poor public transport connectivity to hospitals. This equates to almost 260,000 people. 15% of the population live in areas with some correlation between these metrics, and 69% of the population are not classed as having a correlation between high health deprivation and poor health connectivity. The RTS analysis is summarised in table 10.[45]

Table 10: SEStran population categorised by correlation between health deprivation (SIMD) and access to hospitals using public transport (SEStran RTS Case for Change)

Transport connectivity	Population	%
Tier 1 (low correlation)	1,105,299	69%
Tier 2 (medium correlation)	246,600	15%
Tier 3 (high correlation)	257,171	16%
Total	**1,609,070**	

Of the people living in places deemed to have a high correlation between health deprivation and poor public transport connectivity, the vast majority lived in urban areas, as shown in table 11.[46]

Table 11: Land classification for people living in areas where a high correlation between health deprivation (SIMD) and access to hospitals using public transport was identified (SEStran RTS Case for Change)

Land classification	Population	%[47]
Large Urban Area	91,252	35%
Other Urban Area	114,994	45%
Small Town	23,937	9%
Rural	26,988	10%
Total	**257,171**	

Large urban areas and other urban areas respectively comprise 35% and 45% of the tier 3 areas where there is poor public transport connectivity to hospitals, slightly more than the proportions of the population that these types of area account for in the total population of the SEStran region: 33% for large urban areas and 43% for urban areas. The slightly higher proportion of people in tier 3 areas challenges the perception that better public transport provision in urban areas would lead to improved connectivity to hospitals. Conversely, people living in small towns and rural areas make up 12% of the SEStran population, but only 9% and 10% of the tier 3 population respectively. The postcodes these households live in are shown on figure 1, which is reproduced from the Case for Change document.[48]

While based on a very different population sample and research parameters, a 2005 report for the Transportation Research Board found that 80% of people in the US who missed healthcare appointments due to being 'transportation disadvantaged' lived in urban areas, with the remained living in rural areas.[49] This partly reflects the proportion of people living in urban areas, but as with SEStran, points to a need to understand the different challenges people living in rural and urban areas face in taking journeys to access healthcare.

Figure 1: Connectivity to Healthcare map (SEStran RTS Case for Change)

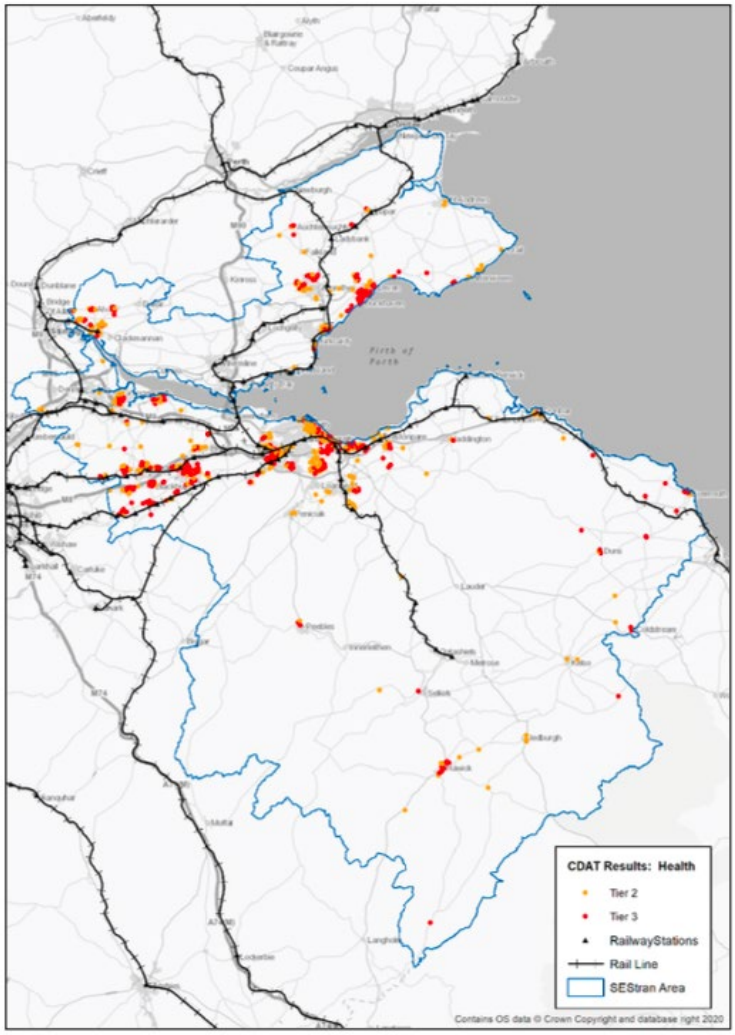

Figure 2.16 CDAT Connectivity to Healthcare

With car being the dominant mode for Transport to Health journeys, parking is an important consideration. Primary care facilities are often located within mixed urban environments, for example local high streets. Accordingly, parking will not always be within the control of the healthcare provider. At a secondary care level, parking is free at NHS hospitals in Scotland.[50] This has had unintended consequences, such as non-hospital users treating car parks as park and ride sites, and some hospitals now employ car parking attendants to try to monitor usage.[51] The head of UrbanTide, an Edinburgh-based business that carried out a pilot to improve rural patient transport, spoke of patients in Fife leaving two hours earlier than they would normally do to try and secure parking.[52]

Given the issues with parking at hospitals there could be much to be gained from encouraging those who are able to use other modes of transport. While it is unclear how many people in the SEStran region have no alternative but to drive to hospital, a survey carried out in 2024 for NHS in England found that around 62% of patients who had driven to the hospital in the past year thought that there was an alternative mode of transport they could have used, with bus being the most-selected alternative.[53] It is

also unclear how many people own a car but choose to take another mode of transport, and if so, why.

For the 25% of households in the SEStran region without a private car, non-car options for Transport to Health are essential. Households in the most-deprived areas of Scotland are more likely to have multiple and complex health needs and yet are least likely to own a car.[54,55] With bus being a major public transport mode for most people across the region, it has a key role to play in increasing access to healthcare, whether primary or secondary. The Case for Change for SEStran's Bus Strategy found that 96% of the region had a bus stop within easy walking distance, although this figure is just 15% in the Scottish Borders council area.[56]

Analysis from the RTS showed that many urban areas or small towns in the SEStran region have very poor connectivity, with long journey times either caused by having to change or congestion.[57] Edinburgh is the natural starting and ending point for many journeys that take place across the region. However, the lack of orbital routes bypassing Edinburgh can make it challenging, including for those trying to access healthcare services that are not located in Edinburgh city centre. The lack of convenient bus options means that even those who have free bus passes may find the services they are entitled to use for free are not convenient.

Cost of transport

Many initiatives around tackling transport-related barriers to accessing healthcare attempt to address the costs of Transport to Health. For example, in England, where parking at NHS hospitals is not typically free, some pilot programmes found that offering free parking or reserving parking spaces for households deemed at risk of missing appointments was an effective way of reducing missed appointment rates.[58] A similar result was found when those without a car were offered free public transport or taxis to the hospital. These pilots were aimed at cohorts deemed to be at higher risk of missing appointments, such as parents accompanying children, and those from low-income households. With hospital parking in Scotland being free, car-based Transport to Health costs are unlikely to be perceived to be a major barrier to accessing healthcare, at least for hospital appointments. While car ownership is not free, it is often not taken into account by the user, as it is a 'sunk cost' compared to public transport or parking costs, which are taken at face value.[59]

NHS boards typically only reimburse travel costs for those in receipt of certain benefits for journeys to hospital, and not for journeys to GP surgeries or other healthcare sites. The 2019 MACS report criticised the reimbursement process for being complex and requiring patients to pay for the costs up front and then be paid back.[60] It also noted that many healthcare professionals are unable to point patients in the direction of suitable advice around accessing transport to health.

Around 48% of SEStran's population is eligible for age-related free bus travel.[61] The key concessionary groups are people aged under 22, above 60, and some disabled people. Any cost barriers for those using public transport to travel to healthcare appointments are therefore more likely to be felt by the other 52% of the population who are not eligible for age-related free bus travel. There are also people who have not taken up their free bus bass. The SEStran region has the highest rates of the RTPs

in Scotland for uptake of over 60s bus passes.[62] The rate for under-22s is more variable, which possibly reflects the scheme only having been introduced in 2022.[63]

Data from the 2024 Your Bus Journey survey for the SEStran region suggest that free bus pass holders are much more likely to be travelling by bus to attend a healthcare appointment, at 13% of passengers, compared to 3% of paying passengers.[64] Because the survey only interviewed bus users, it is not clear whether cost of bus travel is a factor for those who decide not to travel by bus.

Costs will also be borne by those using rail to travel to healthcare, as it is not covered by the same concessionary schemes, although far fewer people in the SEStran region travel by train than by bus.[65] Journey costs will compound significantly for anyone taking multi-modal journeys involving rail and bus, due to the lack of easy to use inter-modal or smart ticketing systems in Scotland.

Additional barriers faced by disabled people

The MACS report drew attention to the additional barriers faced by disabled people in accessing transport to health and social care. These include many of the barriers mentioned above, particularly around connectivity, as well as further recommendations around door-to-door access to healthcare services.[66] The report highlighted inconsistencies with patient escort rules in transport services, including those delivered by the Scottish Ambulance Service and community transport providers.[67] It pointed out that not providing free transport for a carer to accompany the patient can be a false economy, leading to greater costs for the healthcare service. The report emphasises that many of the problems experienced by disabled people are also experienced by older people.[68]

The report was particularly scathing about the lack of consultation with disabled people's organisations, and the lack of subsequent action once consultation had taken place:

> *"…it has been noted that the views of people with direct lived experience are often used to illustrate a point, rather than to shape agendas, explain or increase understanding of the key issues relating to public transport and service provision failures. It is not always clear what impact involving people with direct lived experience has on policy and practice."*[69]

A further point that the report made was that many disabled people have blue badges to allow them to park their car within a convenient distance of hospital entrances. However, blue badge spaces are often not monitored, or they are oversubscribed.[70]

Several of the points made in the MACS report are echoed in a 2025 meta-review of international evidence relating to disability, travel and inequalities.[71] The review finds that disabled people are less likely to be independent and more likely to be unemployed, partly due to transport difficulties. The study also found that a higher proportion of disabled people's trips are to healthcare compared to the wider

population, as barriers mean that disabled people make far fewer trips for recreation and to cultural activities.

Organisational and policy-related barriers

A common theme throughout the literature is the lack of cooperation around Transport to Health. This criticism extends to health bodies, public authorities and transport operators. A review of the Department for Transport (DfT)-funded Total Transport pilot projects to improve transport to health and social care services in a number of locations in England found that lack of senior buy-in was a recurring reason for projects not achieving their goals.[72] A related barrier identified in the Total Transport projects was not knowing who to contact in each organisation, given the complexity of health service delivery in England.

In the Scottish context, HITRANS, the RTP for the Highlands and Islands, commissioned a scoping exercise in 2024 in advance of developing a health and transport strategy. The consultant's draft report recommended only proceeding with developing the strategy where there was sufficient senior level buy-in from health boards.[73] This echoes the difficulties that a project funded by the UK DfT to improve rural transport to access healthcare had in Fife, which found that despite significant potential cost savings to the NHS from the project, and benefits to patients, there was a "lack of a problem owner within the NHS to action the new intelligence created".[74]

The lack of ownership is echoed at the national policymaking level. None of the cabinet secretaries or ministers for transport or health has a function listed within their portfolio that clearly relates to Transport to Health. This does not mean that the issue is not being taken seriously, as the 2024 Transport to Health Delivery Plan indicates. However, it does suggest that the interconnected nature of Transport to Health means that it is at risk of being seen as 'someone else's problem' at multiple levels of decision-making.

A further challenge related to the delivery of Transport to Health is the lack of powers public bodies have over bus routes. Operators are largely free to set routes in line with what they deem to be their commercial interest, bar a handful of subsidised routes.[75] This can result in operators reducing services to healthcare locations. A recent example outwith the SEStran region was Stagecoach changing the calling points and frequency of a popular bus route linking Perth Royal Infirmary to Ninewells hospital in Dundee.[76]

The spatial planning system is another policy-related challenge to the delivery of Transport to Health, with increasing numbers of car-dependent new developments being built without public amenities.[77] This means that many people have no option but to use a car to access healthcare services, even at the primary level.


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Opportunities

Three main themes were identified through the literature review as being opportunities for improving Transport to Health services:

- **Policy changes**
- **Digital transport technologies**
- **Virtual provision of some services**

Policy changes

The Scottish Government's 2024 Transport to Health delivery plan provides a clear mandate to SEStran and other RTPs to develop their own transport to health strategy, while taking care not to duplicate existing efforts. Commitment 19 states: "The Scottish Government will support Regional Transport Partnerships to develop their own plans around Transport to Health".[78]

The only sustained example in Scotland of a regional strategy encompassing Transport to Health has been the Health and Transport Action Plan (HTAP) for the NHS Grampian area. NHS Grampian covers three local authority areas: Aberdeen City, Aberdeenshire and Moray. Nestrans, the RTP for north east Scotland, and NHS Grampian first developed the HTAP in 2007 and 2008, with the latest version covering 2024-2029.[79] Tactran, the RTP for Stirling, Perth & Kinross, Angus and Dundee developed an HTAP in 2011.[80] However, a search of current strategy documents suggests that Tactran's HTAP is no longer a current strategy, at least in a standalone format.

Nestrans' HTAP takes a broad view of transport and public health, dividing its strategy into two themes, transport and public health and access to health and social care. The former includes travel as a means to improve health (e.g. active travel), as well as avoiding harm from transport (e.g. road safety, air pollution). The latter addresses patient, and to a lesser extent, visitor travel to healthcare. The latest version of the strategy considers staff travel more than previous versions did.[81] The different aspects covered are summarised in table 12 and compared with SEStran's plans.

Table 12: Health and transport themes covered by Nestrans' HTAP and SEStran's proposed Transport to Health (TtH) strategy

	Transport and public health		**Access to healthcare sites**	
	Transport as a means to better health	Avoiding transport-related harms	Patient (and visitor) travel	Staff travel
Nestrans HTAP 2024-2029	X	X	X	X
SEStran TtH strategy (proposed)			X	

Broadening the scope of SEStran's Transport to Health strategy to include some of the other aspects of transport and health mentioned in table 12, particularly staff travel, could be tempting, given that many staff and patients will travel to healthcare locations using the same modes of transport. However, there are key differences, notably that for most patients, healthcare is occasional, and the journey is derived from the need to treat a healthcare issue that they are suffering from. Conversely many staff will be travelling on a daily or very regular basis, with their journey derived from their employment at that site.

HITRANS' draft report on health and transport stated that as staff travel to work is largely within the control of NHS bodies, there was less interest from potential stakeholders in including this as part of a HITRANS HTAP.[82] Many NHS boards already take staff travel seriously as they seek to reduce scope 3 carbon emissions from their operations. Scope 3 carbon emissions do not include patients travelling 'under their own steam' to healthcare sites, although some NHS organisations elsewhere in the UK do this voluntarily.[83] It is also easier for NHS bodies to promote non-public schemes to staff, such as carpooling or tax-related cycle to work schemes, which are not applicable to the general public.

Given the clear direction from the Scottish Government's delivery plan, which does not reference staff travel explicitly, and the scale of the existing challenges as outlined in this literature review, there is more than enough for a SEStran Transport to Health strategy to address, without broadening its remit any further. However, there is no reason why future editions of the strategy could not be expanded to incorporate further transport and health considerations, as the evolution of the NHS Grampian HTAP shows.

A further policy-related opportunity that could benefit a regional Transport to Health strategy is the development of SEStran's Regional Bus Strategy.[84] The Bus Strategy is at its Case for Change stage and offers the chance to reconsider how the dominant public transport mode is delivered in the region, including bus as means of Transport to Health. The Bus Strategy presents a chance to address some of the challenges identified earlier in this report, including long journey times, multi-modal ticketing and fare costs.

Digital transport technologies

Improvements in digital technologies for transport open up a range of potential tools to improve Transport to Health. Table 13 summarises three recent pilots or research projects that have been delivered in the SEStran region and the potential technological opportunities demonstrated.

Table 13: Recent digital transport technology pilots and research projects in the SEStran region

GoSEStran MaaS pilot, 2022-2024
Mobility as a Service (MaaS) brings together multi-modal journey planning and payment in one digital system. Typically accessed through a phone app, MaaS aims to present users with options for 'door-to-door' sustainable transport journeys. Funded by Transport Scotland's MaaS Investment Fund, SEStran's pilot ran from 2022 until 2023, and was extended until 2024 with further funding through Smarter Choices, Smarter Places. Alongside other MaaS pilots taking place elsewhere in Scotland at the same time, the SEStran pilot aimed to address rural transport poverty and MaaS integration with digital demand responsive transport (DDRT) services.[85] The evaluation report for GoSEStran notes that the length of the pilot was not long enough to evidence long-term behaviour change, given the need to deliver an app and the complexities of transport procurement.[86] There was not an explicit Transport to Health focus for the GoSEStran MaaS pilot. However, with sufficient investment and political will, the technology explored could be applied to patient transport, including for those whose journeys are being paid for by the NHS, to ensure more reliable transport connections to healthcare services.
Scottish Borders bus network review, 2022-2024
In 2022, the Scottish Borders council commissioned a bus network review through the Workforce Mobility Project, funded by the Edinburgh and South East Scotland City Region Deal. The project incorporated existing and new datasets to analyse transport demand patterns, with Borders General Hospital being a key trip generator for the region.[87] A DDRT pilot ran at the same time and fed into the review.[88] The findings of the review led to changes to the bus network in the Scottish Borders to better match patterns of demand. The use of novel insights, such as mobile phone data to map travel patterns, and DDRT journey data, could be applied to other healthcare sites within the SEStran region, to optimise the provision of Transport to Health services.
UrbanTide rural transport accelerator trial, 2024-2025
One of the projects funded by the DfT as part of its 2024-2025 Rural Transport Accelerator Fund was led by UrbanTide, an Edinburgh-based company. UrbanTide's adapted its uMove technology to build a prototype tool for NHS patient travel in Fife, incorporating over 150 datasets, including travel times, NHS service availability, journey options, accessibility and highlighting appointment availability to suit the journeys.[89] While the window to deliver the pilot was short, the trial identified some key barriers to overcoming the deployment of this sort of technology to improve Transport to Health in a rural setting. The pilot allowed the company to develop its product to be ready to be rolled out in a real-world healthcare setting. The company estimates that a health board adopting uMove would pay for itself within 12-24 months, due to cost savings associated with missed appointments no longer occurring.[90]

The examples in table 13 all show the potential for digital technologies to improve the delivery of Transport to Health in a SEStran setting. While some of the technology is in its infancy, it opens up the possibility to tailor Transport to Health to the needs of patients, particularly those with additional support needs.

Other technological advances tested elsewhere could also offer opportunities. For example, a trial using machine learning at Imperial College Hospital in London identified the characteristics of patients most likely to miss appointments. It found that targeting the top 10% of the patient population who are identified as likely to miss an appointment could address as much as 29% of missed appointments in certain departments.[91] Such an approach could allow for personalised support, including transport measures, to be offered to patients identified as most at risk of missing appointments.

Virtual provision of some services

In line with the 'Avoid-Shift-Improve' framework for reducing carbon emissions from transport,[92] it is reasonable to consider whether the need for some Transport to Health journeys could be averted altogether. In some cases, particularly at a primary care level, services can be provided virtually, either over the phone or via video call.

Across the four SEStran health boards in October 2023-September 2024, almost 2 million GP or other clinician appointments were held virtually, accounting for 23% of the total.[93] NHS Lothian had the highest proportion of virtual appointments, at 25%, compared to the lowest, NHS Borders, at 15%. The proportion also varied according to who the appointment was with, with 31% of GP appointments being done virtually across the four health boards, compared to 11% of appointments with other types of clinicians. The breakdown for these figures is included in appendix item 1.[94]

It should be noted that the virtual provision of services will not be appropriate for many patients. A 2023 paper found that remote triage services, as tested in primary care settings in England, could benefit some patients, such as those who struggle to attend appointments due to travel times or work commitments.[95] However, the authors cautioned that a blanket move towards using remote triage could exacerbate healthcare inequalities for other groups that struggle to access care, including those unable to afford reliable phone or internet connections, or older patients.

Research gaps

The literature review has identified a number of research gaps relating to Transport to Health in the SEStran region. Undertaking further work to address these areas could provide useful insights for the development of a Transport to Health strategy for the south east of Scotland. Research gaps are discussed in turn below:

- **Transport mode share for different types of journeys to healthcare services in the SEStran region.** The last SHS Transport and Travel report to capture this information was in 2011 at a national scale, but even then, it does not appear to have been provided at the RTP or local authority level, potentially due to sample sizes.
- **Car and public transport distances to other types of primary care.** Analysis carried out using SIMD data has focused on access to GP services and hospitals in the SEStran region. While important, other types of healthcare are not captured by this analysis, such as pharmacies and dental practices.
- **Alternative modes of transport to healthcare sites.** While the 2023 SHS asks how people get to the GP and asks people who always drive to the GP if they can use any other modes of transport, it does not ask about other types of healthcare service. It also does not provide a breakdown of the data for the SEStran region. Another insight missing from the data is how many people own a car but choose to take another mode of transport to healthcare.
- **Quantifying the scale of the parking problem at hospital sites.** At the moment there is plenty of anecdotal evidence around parking issues at NHS sites. Further research could attempt to quantify on a more rigorous basis how long patients spend trying to find parking and what implications this has.
- **Transport cost barriers to accessing healthcare services.** There is little research examining the cost of transport specifically, as opposed to transport more generally, as a barrier to accessing healthcare in a Scotland or UK context.
- **Quantifying the cost to the NHS of transport-related missed appointments in the SEStran region.** While the reasons for missing appointments are complex, if transport can be pinpointed as a reason for particular missed appointments, this could provide motivation for the NHS to fund transport services.
- **People who avoid booking healthcare appointments altogether.** Inherently a difficult phenomenon to capture, understanding how many people are put off by poor transport from booking appointments could provide further basis for a Transport to Health strategy.

Next steps and recommendations

This literature review has summarised some of the key baseline data, challenges and opportunities relating to Transport to Health in the SEStran region and, where relevant, beyond. It has also discussed some of the research gaps that could be addressed to provide further evidence for the development of a SEStran Transport to Health strategy.

In line with the STAG process, it is expected that SEStran will undertake the development of a formal Case for Change for a regional Transport to Health strategy in 2025/26, including engagement with organisational and public stakeholders. The issues outlined in this report can provide SEStran with a basis for shaping the avenues of inquiry for the stakeholder engagement process. In particular, this is an opportunity for SEStran to address some of the research gaps identified above.

This review can also act as a body of evidence by which to assess whether barriers and opportunities identified by stakeholders in the engagement process are perceived or actual, as recommended by the STAG process.[96]

Appendices

Appendix item 1: GP and clinician appointments, October 2023 – September 2024

Geography	HCPGroup	Total	In-person	Virtual	% Physical	% Virtual
NHS Borders	GPs	319,022	244,347	74,675	76.6%	23.4%
NHS Borders	Other Clinicians	315,990	295,619	20,371	93.6%	6.4%
NHS Borders	**Total**	**635,012**	**539,966**	**95,046**	**85.0%**	**15.0%**
NHS Fife	GPs	1,040,927	769,257	271,670	73.9%	26.1%
NHS Fife	Other Clinicians	755,269	674,302	80,967	89.3%	10.7%
NHS Fife	**Total**	**1,796,196**	**1,443,559**	**352,637**	**80.4%**	**19.6%**
NHS Forth Valley	GPs	743,876	539,158	204,718	72.5%	27.5%
NHS Forth Valley	Other Clinicians	510,597	423,086	87,511	82.9%	17.1%
NHS Forth Valley	**Total**	**1,254,473**	**962,244**	**292,229**	**76.7%**	**23.3%**
NHS Lothian	GPs	3,107,147	2,064,912	1,042,235	66.5%	33.5%
NHS Lothian	Other Clinicians	1,692,056	1,523,436	168,620	90.0%	10.0%
NHS Lothian	**Total**	**4,799,203**	**3,588,348**	**1,210,855**	**74.8%**	**25.2%**
SEStran	GPs	5,210,972	3,617,674	1,593,298	69.4%	30.6%
SEStran	Other clinicians	3,273,912	2,916,443	357,469	89.1%	10.9%
SEStran	**Total**	**8,484,884**	**6,534,117**	**1,950,767**	**77.0%**	**23.0%**
Scotland	GPs	17,431,959	12,454,165	4,977,794	71.4%	28.6%
Scotland	Other Clinicians	12,142,030	10,775,800	1,366,230	88.7%	11.3%
Scotland	**Total**	**29,573,989**	**23,229,965**	**6,344,024**	**78.5%**	**21.5%**

Source: PHS: General Practice In-hours Activity Visualisation As at 31 January 2025

Appendix item 2: NHS-funded primary eye examinations, April 2023 – March 2024

NHS board	Number of patients examined
Borders	34,477
Fife	122,426
Forth Valley	98,599
Lothian	278,893
Total	**534,395**

Source: PHS: Ophthalmic workload statistics as at year ending 31 March 2024

Appendix item 3: Registered patients accessing NHS dental care, January 2022 – December 2024

NHS board	Number of patients
Borders	70,638
Fife	201,791
Forth Valley	191,506
Lothian	515,648
Total	**979,583***

*To gain a figure for one year, this two-year total was divided in half.

Source: PHS: NHS dental data monitoring report Quarter Ending December 2024

Appendix item 4: NHS hospital outpatients, October 2023 – September 2024

Location	Type of activity	Stays/ Attendances	Missed appointments	Missed appnt. rate
NHS Borders	All outpatients	104,206	9,766	9%
NHS Fife	All outpatients	341,535	29,171	8%
NHS Forth Valley	All outpatients	286,033	31,145	10%
NHS Lothian	All outpatients	735,596	68,071	8%
SEStran health boards	*All outpatients*	*1,467,370*	*138,153*	*9%*
Scotland	**All outpatients**	**4,075,084**	**378,455**	**8%**

Source: PHS: Acute hospital activity and NHS beds information (quarterly) Quarter ending 30 September 2024

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[11] Daily figure is based on a seven-day weighting (SHS 2023: Methodology and fieldwork outcomes). To obtain an annual figure, the daily figure is multiplied by 365 and by the population aged 16 and above of the eight local authorities that make up the SEStran region. Population figures are mid-2023 estimates (NRS: Mid-2023 population estimates).
[12] The true number is likely to be greater, as this figure excludes other appointments, such as administrative interactions or appointments with students. It should also be noted that some people may schedule an appointment with both a GP and another type of clinician at the same visit. PHS: General Practice In-hours Activity Visualisation As at 31 January 2025, Physical versus virtual appointments
[13] PHS: Ophthalmic workload statistics as at year ending 31 March 2024, Figure 1c: Percentage of population examined by health board, Table
[14] The figure for two years is halved to give a figure for one year. The figure is likely to be less than the actual total as it does not include non-registered patients. PHS: NHS dental data monitoring report Quarter Ending December 2024, Data tables, Table 10
[15] As with the figures for primary care, this is likely to be an underestimate of the number of planned hospital journeys as only the number of outpatients has been used; there will be further planned interactions such as inpatients admitted for scheduled surgery. PHS: Acute hospital activity and NHS beds information (quarterly) Quarter ending 30 September 2024, Time trend (location comparison)
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[96] Perceived barriers can still be a form of barrier as experienced by passengers (in this case patients), but it is useful to understand why these perceived barriers exist. See Scottish Transport Appraisal Guidance - Managers Guide section 3.2

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