Healthcare Improvement Scotland

Rethinking Unscheduled Care Insights for Decision Makers

Causal link evidence summary

June 2025

NHS SCOTLAND

June 2025

www.healthcareimprovementscotland.scot

Introduction

We have seen decades of iterative changes within unscheduled care and reforming the access points and triage systems we have in place to divert people to the right place once they have reached out to unscheduled care. Despite these changes, our unscheduled care system is under pressure due to rising levels, the complexity of care needs and constrained financial and workforce resourcing.

Rethinking Unscheduled Care Design Investigation identified three main drivers for why people access unscheduled care:

1. sudden accident and illness
2. frailty, palliative and long-term conditions, and
3. multiple disadvantages.

Each of these reasons requires a different response to better meet people's needs and prevent escalation and crises. Considering change for these three groups helps decision-makers put in place changes that are more likely effective for each of the three drivers.

Rethinking Unscheduled Care Strategic Planning Considerations argued that national and local health and social care decision makers needed to look outside of unscheduled care to find a sustainable solution to the pressure faced by unscheduled care. It articulated that a key way to create long-term sustainability in unscheduled care is to better address demand drivers through investing well in services outside unscheduled care. This means how we arrange the services outside the box in Figure 1 drives the demand for unscheduled care services within the box.

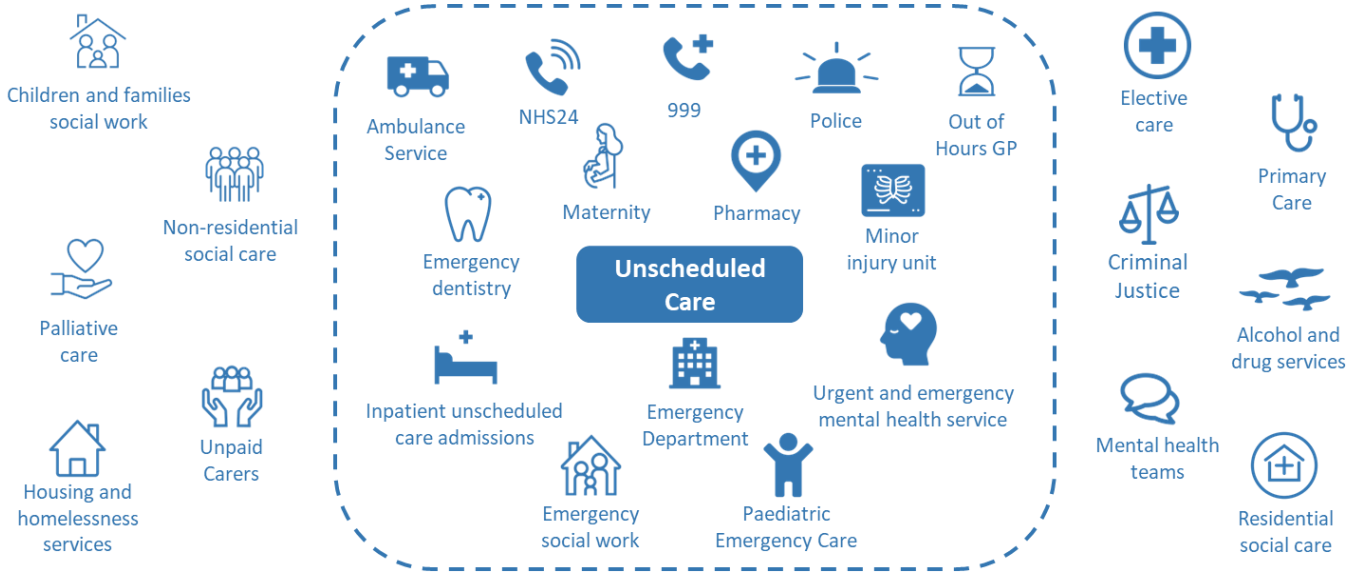

Figure 1

To do this, we need to provide decision makers with better information on the causal links between the care and support provided by services outside the box and the impact this has on demand for unscheduled care. Decision-making on unscheduled care still largely relies on output and throughput figures on various parts of the unscheduled care system. We need to see a shift to greater reliance on qualitative and quantitative insight within the national and local decision-making to see a change in how decisions are made.

This report is part of the follow-up work 'Rethinking Unscheduled Care – Insights for Decision Makers'. It was initiated in response to frustrations felt amongst decision makers that while they have a large amount

of throughput and output on the unscheduled care system, they were not able to connect this with the broader system data to inform a system wide approach (including all services in Figure 1) and move to a more preventative system.

Through our work at Healthcare Improvement Scotland (HIS), we are seeking to develop an alternative set of insights to inform decision-makers, made up of:

1. Quantitative data
2. Patient experience and their journeys
3. Staff insight
4. Evidence from the literature that can be applied locally.

This document gives us a head start on number four above. A series of information sheets on the evidence links the various services outside the box in Figure 1, with the demand for unscheduled care. This evidence has been drawn from available literature and research.

Local areas can use this evidence in combination with their local data and insights from people and staff to inform decisions around approaching unscheduled care differently.

We will also be utilising this evidence as we move forward in our work, including:

- We have interviewed a range of decision makers in unscheduled care to understand what drives decision making, what shift in insight they require to inform better decisions, and the gaps in insight that could be addressed to inform those decisions. This work was conducted between November 2024 and April 2025; a summary is published **here**.
- We are developing an alternative set of insights that can be given to unscheduled care decision makers, enabling them to make decisions across the services within and outwith the box in Figure 1. We will develop this through our local pathfinder work within the Scottish Approach to Change programme and plan to publish this in 2026.

There are 11 evidence sheets in this report

1. Planned care
2. General Practice
3. Other community health services
4. Social care
5. Unpaid carers
6. Frailty
7. Palliative and end-of-life care
8. Mental Health
9. Addictions
10. Housing and homelessness
11. Long-term conditions.

Overall, there is a gap in the evidence when quantifying the extent of the causal link. Many evidence sources link the provision of a particular kind of care with an increased or decreased use of unscheduled care, but few quantify that link. Where we have found literature that quantifies the link, we have included it within these evidence sheets. With further work, we plan to supplement the available evidence with available local data and information to quantify more causal links.

1 Planned care

The following covers key evidence on planned care and its interaction with unscheduled care. We have developed this summary to inform our future internal work but have published it so that those informing decision makers can draw from the available evidence in their work.

Growing waiting lists

In Scotland, while planned care activity has increased, demand has increased more, resulting in growing waiting lists.

- The UK and Scotland have insufficient acute tertiary capacity to deliver planned and unplanned care throughout the year. The Organization for Economic Cooperation and Development (OECD) comparison shows that, compared with peer nations, we have far fewer beds and diagnostic equipment.[1]
- The number of people with ongoing waits for outpatient care was 525,654 in the year ending September 2023, compared to 319,356 in the year ending September 2019.[2]
- The number of people waiting longer than 18 months for an inpatient/day case was 17,812 for the year up to September 2023, compared to 486 people for the year up to September 2019.[3]
- The number of people waiting more than 12 months for an outpatient appointment was 40,052 for the 12 months up to September 2023, compared to 3,594 before the year up to September 2019.[4]
- In 2022/23, a total of 24,773 (9.5%) planned operations were cancelled compared to 8.1% in 2021/22. Of those cancelled in 2022/23, 35% (8,715) were cancelled based on clinical reason by hospital and 24.3% (6,049) were cancelled based on capacity or non-clinical reason by hospital[5]
- Only three of the eight key waiting time standards were met in the last five years.[6]

Drivers of increases in wait times

The Health Foundation explains the rise in wait times for planned care as driven by “a decade of underinvestment in the NHS, a failure to address chronic staff shortages and the longstanding neglect of social care. The pandemic heaped further significant pressure on an already stressed system, but waiting lists grew long before COVID-19. Against this backdrop, industrial action has resulted in a small increase in the overall size of the waiting list, notwithstanding the wider disruption caused.”[7] In addition, the British Medical Association (BMA) estimate that the ‘hidden backlog’ is growing. This refers to individuals who “require care but have not yet presented to healthcare providers”.[8]

Inequality impact

Rising waitlists disproportionately affect more deprived areas, widening inequalities with people in more deprived areas “nearly twice as likely to wait over one year for treatment compared to the least deprived” based on analysis from the King's Fund. In England, the Clinical Commissioning Groups (CCGs) in the most deprived areas saw their waitlist increase by 55%, compared to the CCGs in the least deprived CCG areas, which saw an increase of 36%.[9]

Reducing access to planned care

General Practitioners (GPs) are reporting that more of their referrals to consultant-led outpatient services are being rejected. In England, "the number of GP referrals to consultant-led outpatient services that have been unsuccessful because there are no slots available has jumped from 238,859 in February 2020 to a staggering 401,115 in November 2021 (an 87% increase)."[10]

The link between waiting for planned care and demand for other services

"There is evidence of a difference in the healthcare utilisation of patients waiting over 18 weeks for treatment compared to matched controls. On average, patients waiting for treatment have more contacts with primary care, secondary care, helpline calls and prescriptions than those not waiting for treatment. The additional healthcare utilisation is more significant for primary care prescriptions, followed by secondary care."[11]

Lack of timely access to planned care is evidenced in the literature as a driver of demand for unscheduled care. While patients wait for planned care, they rely on primary care and unscheduled care to meet their care needs. [12] The additional strain placed on primary care has a further knock-on effect of increases in unscheduled care when people struggle to receive care from their GP practice.[13] In addition, more people waiting in hospital for planned care reduces the hospital capacity for unscheduled care admissions. This puts additional strain on the resources available to manage unscheduled care presentations effectively.

Competition for resources

There is competition between scheduled and unscheduled care for resources such as beds, diagnostics and clinical time. We have seen several proposals, including one by the Royal College of Surgeons, to develop dedicated Hot (for unscheduled care) and Cold (for scheduled care) sites. The division of tertiary care into planned and unplanned care sites has the potential to be an effective solution and has shown significant improvements in elective care in England.[14]

2 General Practice

The following covers key evidence on General Practice and its interaction with unscheduled care. We have developed this summary to inform our future internal work but have published it so that those informing decision makers can draw from the available evidence in their work. This section covers both General Practitioners and care that is provided by the wider staff team within General Practices.

Overall

GPs and their community teams are delivering more appointments and with longer opening hours since COVID-19 than at any time in the history of the NHS.[15]

However, rising demand and workforce challenges are making it challenging for people to access GP practices in primary care.

Poor access to primary care, including primary care that supports preventative action, are associated with higher risk of hospitalisation."[16] Pressures on general practice can lead to increased demand for hospital services as people reach out to unscheduled care after facing difficulties in obtaining an appointment with an appropriate member of the primary care team, or are unable to receive the level of care required from their GP to stay well and not become unwell enough that they need unscheduled care.[17] [18]

Direct spending on general practices decreased by 6% between 2021/22 and 2023/24.[19]

Access to appointments

50.2% of people in England reported "difficulties getting through to their practice on the phone", up from 31.9% in 2019. Nearly 30% of patients reported avoiding making an appointment with a GP when they needed one in the past year due to finding it too difficult to get an appointment.[20]

The biennial Health and Care Experience (HACE) Survey reported that 24% of respondents said it was 'not easy' to contact their general practice as they wanted to. This increased from 13% in 2017/18.[21]

General Practice Access Principles, published by Scottish Government (SG) in 2023, help to define what good and appropriate access looks like and can help set and manage expectations about access to general practice. However, a lack of measurement and monitoring against these principles makes it difficult to assess how well they have been implemented and whether they have improved patient access. Furthermore, they do not consider factors such as limited capacity, which also affects access. [22]

According to research by The Commonwealth Foundation, 42% of UK patients were seen the same or the next day. 53% of UK patients reported that they "' always' or 'often' receive an answer from their GP practice on the same day", down from 70% in 2013.[23]

NHS England's Emergency Department (ED) patient questionnaire reveals a key set of drivers of demand. In 2022/23, 12% said it was due to a lack of GP appointments.[24]

In a UK study to better understand avoidable ED attendances from the patient's perspective, it was found that 33% of respondents believed that their most recent ED attendance was avoidable and could

have been treated by a GP instead. 46.3% of respondents also stated that their symptoms had been going on for quite some time before their ED attendance.[25]

A survey carried out in 2022 found that 29% of respondents were unhappy with receptionists acting as care navigators – a view expressed prominently by people in deprived-urban areas and people living with multiple long-term conditions.[26]

Recruitment challenges

Rising demand and pressure on GP services result in growing numbers leaving general practice. Retention is a challenge for younger GPs with "record numbers of GPs aged under 40 leaving general practice in the 12 months to March 2023 – there are now fewer GPs in this age group than at any other point on record". [27]

In Scotland, the GP WTE has decreased by 3.3% between 2019 and 2022, and there has been a steady increase in the number of patients registered with GP practices, rising 6% between 2012 and 2022.[28]

In August 2017, there were around 1,620 patients per WTE GP, which rose to around 1,735 per WTE GP in March 2024. [29]

The impact of continuity of care

There is clear evidence that links continuity of care and reductions in both planned and emergency hospital admissions. Estimates suggest that if 1% of patients had greater access to their 'own doctor,' then we would look to save around £20,000 per year in healthcare, including through fewer stays and shorter stays in hospital. This is attributed to a greater sense of 'ownership' of the problems by specific staff, greater trust between staff and patients/carers, as well as more effective follow-up care after hospital stays, as consultants and GP both know the patient, so can make judgment calls easier and quicker together.[30] [31] [32] [33]

Studies have shown that demand on GPs creates and hides unmet needs in local populations. Policies have a simplified view of access, focusing on timeliness of appointments, which imposes reactive rules that essentially undermine continuity in favour of access speed. The general assumption that any 'doctor should do' creates frustration in those accessing care and can cause issues in doctors determining care suitability with minimal background knowledge. General practices do not have the capacity or capability to be either flexible or proactive, in part because of the rigid rules imposed to limit demand, for some of the most ill and at-risk people in the population. In a qualitative analysis, GPs noted that the current norm did not allow space to adequately provide proactive care for those with high health needs and address unmet needs.[34]

Changing nature of how we utilise GPs

With the move to the fixed appointment model, this trend towards a more transactional relationship between GPs and patients has been recognised by the Scottish Government and the British Medical Council. In the 2018 GP contract, both parties agreed that the unique role of GPs as care coordinators and generalist experts was something that needed to be re-established and protected going forward. To facilitate the contract, it was designed to improve the multidisciplinary teams in primary care to free up GP time.[35]

Out of hours GP access

A 17% increase in GP Out of Hours (OOH) consultations/attendances occurred between 2018/19 and 2023/24.[36]

The Commonwealth Foundation ranked the UK as one of the poorest performing countries for accessing healthcare on evenings and weekends with only 16% of UK patients reporting that it was "'very' or 'somewhat easy' to get medical care during the evening, on weekends or holidays without going to the A&E". [37]

GP routes into unscheduled care

The proportion of ED attendances that resulted from a GP referral has risen in Scotland from 5.5% in 2018/19 to 8.1% in 2023/24 (minor injury units included). The total number of GP referrals made to Type 1 core emergency departments in Scotland has risen from 85,793 in 2018/19 to 102,621 in 2023/24 - an increase of 19.61%.[38]

3 Other community health services

The following covers key evidence on other community health services and their interaction with unscheduled care. We have developed this summary to inform our future internal work but have published it so that those informing decision makers can draw from the available evidence in their work.

Wait times

National Health Service (NHS) England data estimates that nearly one million people, including children and adults, were waiting for community health services like community nursing and intermediate care.[39]

Waiting lists for diagnostic tests, appointments and treatments in secondary care are substantially larger, and waiting times are considerably longer. This increases pressure in general practices as GPs report providing additional support and care while patients wait for an appointment or treatment. In September 2024, 38,370 people reportedly waited over a year for inpatient or day case treatment. [40]

As of 31 March 2024, 4906 people were waiting for chronic pain and pain psychology services in Scotland. Of these, 35.1% had been waiting over 18 weeks for their first appointment, and 15.4% had been waiting over 30 weeks. This compares to 21.8% waiting over 18 weeks and 3% waiting over 30 weeks as of 31 March 2022. During 2023, there were, on average, 4,985 people referred to chronic pain clinics each quarter.[41]

In 2022, one-third of adults and 6% of children in Scotland were reported to have chronic pain, according to the Scottish Health Survey. The proportion of adults experiencing chronic pain was higher in most deprived areas (50%) compared to least deprived (29%). Most people with chronic pain reported receiving support from their GP (69% for adults, 66% for children).[42]

Interventions evidenced to reduce service demand

The potential impact on unscheduled care demand from better access to community health services is demonstrated by the effects of various new models and approaches to increasing the amount of care delivered in the community. Examples include:

- A study of a multi-disciplinary community care team established to provide more coordinated and effective care in the community concluded that:
    - They avoided more than 800 referrals to assessment units for over 75-year-olds across the 2,500 patients who were supported.
    - They reduced monthly emergency bed days per head of population by 17% in the areas where the multi-disciplinary team was working.
    - Patients supported by the multi-disciplinary team were 20% less likely to contact their GP.[43]

- Pharmacy First provides direct access to medication for illnesses such as urinary tract infections Urinary tract infections (UTIs) and Impetigo through local pharmacies. Public Health Scotland's (PHS) latest figures for the financial year 2021/2022 showed nearly 23% of the Scottish population used this service. This equates to significant time saved for GPs and Acute staff, with 86% of

patients seen and treated and only 4% requiring onward referral to another health provider. This model has the added benefit of supporting people not currently registered with a GP and with insecure housing, making it significantly easier to access than some primary care services. As a result, this service has seen a disproportionate utilisation by people in the most deprived decile with pharmacies being a key local asset in many deprived areas.[44]

- Recently, a multi-disciplinary team (MDT) approach has been implemented in general practices across Scotland. Occupational therapy is one of the disciplines included within primary care MDTs and a retrospective review carried out by NHS Lanarkshire has reported the following benefits in having Occupational Therapists providing support to people with chronic pain:
    - 65% of individuals who attended occupational therapy had improved quantifiable outcomes, including a reduction in pain medication and returning to work.
    - GP appointments were lowered by 22% (~156) for individuals following an OT intervention. Of those who demonstrated 'significant progress' a 47% reduction in GP appointments was recorded[45].

4 Social care

The following covers key evidence on social care and its interaction with unscheduled care. We have developed this summary to inform our future internal work but have published it so that those informing decision makers can draw from the available evidence in their work.

Social care capacity

Social care capacity remains a key sticking point within the flow of people across services and in supporting people in the community to avoid escalation of need and/or unnecessary care from unscheduled care. Audit Scotland reported the full-time equivalent vacancy rate for all social care services was 5.1% of the workforce in December 2020. 60% of housing support services, 59% of care at home services, 55% of care homes for older people and 48% of care homes for adults reported having vacancies as of December 2020.[46]

Assessing social care

In Scotland, it is estimated that 6,508 people were waiting for a social care assessment to enable them to live independently at home or in the community as of March 2025. A further 2,873 had been assessed but were still waiting for a care at home package.[47]

Impact on change programmes and service success

Many improvement programmes around unscheduled care have been unable to achieve the required impact, at least in part due to scarce social care capacity and placements. Increasing the social care workforce requires fairer working conditions and higher remuneration. Without this, social care remains unattractive.[48]

5 Unpaid carers

The following covers key evidence on unpaid care and its interaction with unscheduled care. We have developed this summary to inform our future internal work but have published it so that those informing decision makers can draw from the available evidence in their work.

Levels of unpaid care

According to an OECD study in 2019, the UK has a higher level of informal care provided by friends and families when compared with other OECD countries.[49] They are often providing care that would need to be replaced by formal social care if they were unable or unwilling to provide care. In Scotland, there are an estimated 700,000 unpaid carers who 'provide most of the social care support in Scotland'.[50]

Impact on unpaid carers

The impact of caring responsibilities by unpaid carers is well documented. There is clear evidence that unpaid carers often work fewer hours or give up paid employment than they would if they did not have their caring responsibilities. Those providing unpaid care to younger adults (18 – 64-year-olds) are more likely to develop health conditions and experience financial difficulties due to their caring role than people providing unpaid care to people over 65. [51] We also know that NHS staff are more likely to be carers than the general population, with implications on the healthcare workforce in Scotland when not appropriately supported.[52]

Support for carers

A 2021 study by the Health Foundation concluded that only 8% of carers in England reached out to their local authorities for help, with only 25% of those Receiving direct support. It also concluded that "measuring how many carers receive indirect support is much more challenging, because detailed electronic records are needed to identify carers and match them with the people they care for".[53]

6 Frailty

The following covers key evidence on frailty and its interaction with unscheduled care. We have developed this summary to inform our future internal work but have published it so that those informing decision makers can draw from the available evidence in their work.

Overall

Our ageing population is placing additional demand on unscheduled care. Around 40% of the increase in emergency admissions in the UK can be explained by our ageing population.[54] With an older population comes an increase in frailty. We know that 10% of over 65s and 25 – 50% of over 85s live with frailty.[55]

The cost of frailty was analysed in 2018, and the data describes the average cost per annum of an unplanned admission. The cost identified for people in the following frailty categories: mild £1,119, moderate £3,175 and severe £5,800 per annum, as the severity of frailty increases, so can the associated costs.[56]

Additional demand from frailty

People with frailty utilise more services than their non-frail counterparts in each age category. Reducing frailty, therefore, reduces service demand. Those with frailty have:

- Additional primary care face-to-face appointments per year - 4.82 additional appointments for 65–84-year-olds and 3.5 for over 85s
- Additional primary care home visits per year - 0.39 additional home visits for 65–84-year-olds and 0.97 for over 85s
- Additional phone triage primary care appointments per year – 0.95 additional appointments for 65–84-year-olds and 1.21 for over 85s
- Additional prescriptions per year – 42.75 additional prescription items for 65–84-year-olds and 47.51 for over 85s
- Additional outpatient appointments per year – 2.08 additional appointments for 65–84-year-olds and 1.35 for over 85s
- Additional ED visits per year – 0.21 additional ED visits for 65–84-year-olds and 0.27 for over 85s
- Additional hospital admissions per year – 0.45 additional hospital admissions for 65–84-year-olds and 0.35 for over 85s.[57]

Managing frailty risk and demand for care

Public Health Wales argue that how we manage risk in the community has an impact on the demand for unscheduled care. For example, if nursing homes have a rule that anyone that falls out of bed needs to be seen by a doctor. It is designed to manage the risk around missing a hip fracture, lead to increased demand for out of hours services.[58]

Interventions evidenced to reduce service demand

Numerous studies link exercise with reductions in fall risks and frailty rates including: 23% reduction in falls from exercise[59], 24% fall reduction from balance and functional exercises[60], 28% reduction from multiple types of exercises[61], 32% reduced risk of falling from exercise intervention[62], 23% reduction in falls from Tai Chi[63], 15% reduction in number of people experiencing one or more falls[64], 29% reduction in falls from multiple components exercise[65], 57% reduction in frailty from physical activity[66], and 41% reduction in frailty from physical activity.[67]

Occupational Therapy assessments and home adaptations are proven to reduce fall risk, including home safety assessment and modification interventions, which reduce rate of falls by 19%[68], and home adaptations reduce number of falls by 26% for adults aged 60 and over.[69]

Effective case management for frailty is linked with reduction in service demand including reducing ED visits by 36%[70], outpatient appointments by 22%[71], hospital admissions by 26%[72], reduces nursing home admissions by 13%[73], and reduces falls by 10%.[74]

A combination of nutritional, cognitive and physical interventions is evidenced to reduce frailty rates from 14.7% to 32.6%.[75] [76] [77] [78]

Anticipatory care planning for frailty reduces admissions to hospital by 42.5%.[79]

Comprehensive Geriatric Assessments within acute settings has a proven impact on the demand for unscheduled care including 16% reduction in length of stay for patients admitted into hospital[80], and frailty reductions of between 14.7% to 21.4%. [81] [82]

7 Palliative, end of life care

The following covers key evidence on palliative or end of life care and its interaction with unscheduled care. We have developed this summary to inform our future internal work but have published it so that those informing decision makers can draw from the available evidence in their work.

Link with unscheduled care

The use for unscheduled care during palliative care and towards the end of someone's life is common – around 95% of people had at least one contact with unscheduled care in the last year of their lives, with 5% having 20 or more contacts with unscheduled care. [83]

People's demand for unscheduled care increases the nearer to the end of their live – around 35% of all demand in the last year occurred within the last month of life.[84]

Research report on public expenditure in the last year of life conducted in February 2025 reported that the Scottish governments spent in the region of £2.3 billion providing health care to people in their final year of life in 2022. This equates to £33,960 per person.

Among those over 75 with an admission in their last year of life, 34% spent more than four weeks in hospital. [85]

Reporting from quality outcome measure 10 by PHS shows 89% of last 6 month of life was spent in a community setting in 2023/24 which is an increase from 87% reported in 2014/15.[86]

Health care accounted for 58% of this expenditure (~£1.32 billion). Despite long standing policy goals to improve provision of end-of-life care in community settings and reduce deaths in hospitals, this research highlights the dominance of hospital care, in terms of expenditure, supporting people in their final year of life.

Of the £1.327 billion associated with health costs, 59% were attributed to emergency department visits and emergency admissions to hospital and a further 3.2% to ambulance and NHS 24 care. This equates to almost 63% of expenditure attributed to unplanned emergency care (~£830 M).

Comparing expenditure across all health care services, the research shows that the Scottish Government spent almost 5 times as much on supporting people in their last year of life as unplanned hospital inpatients (~£766 million) than providing them with primary, community and hospice care (~£156 million).[87]

Of all primary care provided in out-of-hours (NHS24, primary care out of hours, Scottish Ambulance Service, emergency departments and emergency hospital admissions), around 60% included a palliative care code within the care summary.[88]

Proactive care planning and integration with unscheduled care is usually only implemented in the last two weeks of life for palliative care patients. Those with cancer or living in care homes are most likely to be identified compared to those living at home with advanced organ failure.[89]

Of the 56,515 people who died in Scotland in 2016, 95% (~53,667) had unscheduled care (not specifically out of hours) contacts in the last 12 months of life.[90]

- Those with advanced organ failure accessed ambulance services and emergency departments most in comparison to those with frailty or cancer.[91]
- Those with frailty accessed NHS 24 and primary care out-of-hours most and those with cancer had a higher rate of hospital admissions compared to those with frailty and advanced organ failure.[92]
- The way people interact with out-of-hours services in crisis affects the likelihood of a hospital admission. Most out-of-hours contacts which began with NHS 24 (46,911 CUPs) were managed by telephone advice and/or primary care out-of-hours (73% ~ 34,245 CUPs). Contacts which began with an ambulance call (16,301 CUPs) usually led to secondary care with 60% (~9,781 CUPs) resulting in a hospital admission. [93]

Link with deprivation

Deprivation was closely linked to demand for unscheduled care near the end of someone's life. Those living in the most deprived communities in Scotland used almost double the level of unscheduled care as those in the least deprived areas. [94]

Care planning and demand for hospital care

Effective care planning impacts the use of hospital care at the end of someone's life. According to a study led by Marie Curie, 69% of people with an electronic summary care plan died in the community. Whereas only 31% of those who did not have one in place died in the community. Around 90% of those engaging with unscheduled care in their last year of life did not have their palliative care needs addressed reliably despite having "significant health concerns and terminal conditions".[95]

Projected need for palliative care

Studies have estimated that many more people will die in Scotland with palliative care needs by 2040 and that care complexity due to multimorbidity will increase. 42,816 people with palliative care needs died in Scotland in 2017 and this is projected to rise to 50,084 (~17% increase) by 2040. Deaths with cancer as the main underlying cause of death is projected to rise from 16,203 in 2017 to 19,535 in 2040 (~21% increase) and the number of deaths with dementia as the main underlying cause of death is projected to rise from 6,776 in 2017 to 19,284 in 2040 (~185% increase).[96]

Multimorbidity is prevalent in those with palliative care needs, adding to the complexity of care required from services. In 2017, 15,725 people in Scotland died from multimorbidity associated with palliative care and this is projected to increase to 28,629 (~32% increase) by 2024. Deaths from multimorbidity naturally rise steeply with age and projections estimate that 52% of those aged 85+ will die from two or more diseases associated with palliative care need by 2040.[97]

8 Mental health

The following covers key evidence on mental ill health and its interaction with unscheduled care. We have developed this summary to inform our future internal work but have published it so that those informing decision makers can draw from the available evidence in their work.

Rising incidence and level of mental ill health

Both prevalence and acuity of mental ill-health appear to be rising in Scotland (in terms of general mental wellbeing and self-reported anxiety, depression, self-harm and attempted suicide). [98]

There is an increasing awareness that those with mental disorders experience a heavy burden of physical ill-health[99]. A UK primary care cohort study published by the Lancet found that those with severe mental illness had an elevated risk of physical illness (most commonly chronic conditions such as asthma, hypertension and diabetes)[100]. In the 2022 inpatient census, 53% of adult patients self-reported at least one co-morbidity.

Inequalities in mental health conditions are thought to result from the level of, frequency and duration of stressful experiences, and the availability of social and individual protective resources and support[101]. In 2010/2011, there were twice as many GP consultations for anxiety in areas of deprivation as in more affluent localities (62 vs. 28 consultations per 1,000 patients).[102]

Demand rising faster than provision

Demand for primary and secondary mental health services within community settings outstrips supply. Community Mental Health Teams are supporting more acutely unwell patients to stay well and avoid crisis, being crowded out by the high demand and limited resources. NHS Boards are struggling to meet the standards around waiting times for access to psychological therapies. Audit Scotland report that "accessing services remains slow and complicated for many people".[103]

A Freedom of Information (FOI) request placed with the Scottish Ambulance Service (SAS) showed that the number of psychiatric-related incidents in 2024 was 15,094. This was the highest number recorded in the last three years, however, still lower than the number of incidents recorded for 2019 - 2021 calendar years. Despite a decline in the number of psychiatric-related incidents, the proportional gap between incidents and attendances has been widening. In 2019, 71% of incidents were attended by SAS and this dropped to 54% in 2024[104]. Staffing pressure and increase in time on the scene for psychiatric incidents could be driving this decline. In 2024, there were 3,121 single crew shifts recorded in Scotland. Although this equates to a relatively small proportion of shifts this was a 33% increase from 2020, and it highlights that around 7 SAS staff had to crew a shift themselves per day in 2024.[105] Mental health emergencies are among the most time consuming and difficult cases for ambulance clinicians to attend, partly because they often involve referral to other services, which requires longer on-scene times[106]. Studies have shown on-scene times were 9.9 minutes longer for psychiatric incidents than medical incidents ($p = <0.001$, 95% CI [3.53, 16.29]) and 10minutes longer compared to trauma incidents ($p = 0.001$, 95% CI [4.37, 15.70])[107].

NHS24 does not routinely publish statistics relating to mental health-related calls. A Freedom of Information Act request made by Scottish Labour showed a 580% increase in mental health-related calls between 2019 (20,434) and 2022 (139,008). This should be interpreted carefully considering the influence of the COVID-19 pandemic on this rise. In 2019, just 645 of calls for mental health issues were categorised as 'abandoned' and now some 40,0836 calls were 'abandoned' in 2022.[108]

An estimated 41% of GP appointments relate to mental health. Audit Scotland concluded in their 2023 report on mental health that "increasing the availability of mental health and wellbeing services in primary care could help to prioritise prevention and early intervention and decrease pressure on specialist services. According to their analysis, 17% of GP practices have no access to a mental health workers, and 20% have no access to community link workers. [109]

Changing profile of inpatient beds

Available in-patient beds for mental health have decreased from 4,205 in 2017 to 3,366 in 2022[110], with reported occupancy remaining stable at around 85%. The number of psychiatric ward in-patient admissions has steadily declined since 1999.[111]

However, the opposite trend can be seen for non-psychiatric admissions for mental health, which have increased by 204.8% from 2009 to2019. So, although mental-health related admissions over the previous 20 years have remained relatively consistent, patients are being directed away from psychiatric wards towards non-psychiatric wards. The reasons behind this trend are likely to be multifactorial; influence of policy, reduction in psychiatric in-patient beds and increasing co-morbidity.[112]

Engagement with non-mental health services

A large proportion of those who die by suicide are engaging with health services other than mental health services in the lead up to their death.

In an analysis performed by PHS on data during the period 2011-2019, it was found that 77.3% of people who had died by suicide had contact with at least one of nine healthcare services in the 12 months before their death. These healthcare services included psychiatric inpatient care, psychiatric outpatient care, drug services, NHS24 and GP out of hours. Females were more likely to contact services (90%) compared to males (73%).[113]

However, the National Confidence Inquiry (NCI) reported that only one quarter of those who died by suicide in the UK had accessed psychiatric services in the 12 months before their death.[114]

The impact of comorbidities

Where mental health comorbidity is combined with long-term conditions, these are associated with even higher levels of unscheduled care for people with a long-term condition.[115] This is particularly found in evidence between depression and the use of unscheduled care for chronic obstructive pulmonary disease or coronary heart disease.[116]

Link between mental health and employment

There are well-evidenced links between mental health and employment, with employment generally improving someone's mental health. "Prolonged unemployment increases the incidence of psychological problems from 16% to 34%". One study found that "one in seven men develop clinical depression within six months of losing their job"[117]

9 Addictions

The following covers key evidence on drug and alcohol use and its interaction with unscheduled care. We have developed this summary to inform our future internal work, but have published it so that those informing decision makers can draw from the available evidence in their work.

Overall

Drug pattern usage across Scotland has changed in recent years, with polydrug use becoming more common and having more risks associated with the individual in terms of overall health, wellbeing and potential overdose. 81% of drug-related deaths in 2023 had more than one substance implicated.[118] We know from our work in improving pathways to residential rehabilitation for substance use that it is unclear whether models of care across Scotland are currently set up to support people with polydrug use and that polydrug use can cause a risky and complicated detox.[119]

The average age at which individuals first started using alcohol is reported to be 16, and the average age at which individuals first began using drugs is reported to be 17. The average age for 'problematic' alcohol use has been reported as 30. The average age for 'problematic' drug use has been recorded as 22.[120] For those seeking treatment for co-dependency, the average age of first alcohol use was reported as 15. The average age of first drug use was reported as 16. The average age for 'problematic' substance use for those with co-dependency was reported as 21 for alcohol and 25 for drugs.

The latest estimate for those in Scotland with problem drug use in 2015/16, aged 15-65 years old, was 57,300 or 1.62% of the population (opioids and benzodiazepines). This rises to 1.91% with the inclusion of cocaine and amphetamines and to 2.51% with the inclusion of cannabis[121]. This is a higher proportion than that of any country in Europe.[122] [123] [124]

Most drug-related deaths have more than one substance implicated, with opioids being most found.[125]

There is a significant population of those who are experiencing homelessness who have drug-related deaths.[126]

Most drug-related deaths are recorded as 'accidental poisoning' (89.3%, 2018-2023 data combined).[127]

Maternal drug use is most prevalent in the under 20s age group and is on an increasing trend, rising from 25.8 per 1,000 maternities in 2011/12 to 75.4 in 2023/24 .[128] [129]

Parental substance use can negatively impact children's well-being and development. Studies have shown that children with parents who use substances are at a higher risk of using substances in adolescence than other children. They are also at a higher risk of developing behavioural problems and exhibiting symptoms of anxiety and/or depression. An Irish study found that parental substance use increased the risk of adolescence substance use even after adjusting for other family problems and the adolescent's psychological characteristics.[130] [131] In 2023, almost 40% of child protection cases had a note of parental drug or alcohol use in Scotland.[132] Furthermore, 602 children were reported to have lost a parent or parental figure as a result of a drug related death in Scotland in 2020. [133]

Impact of deprivation on drug and alcohol use

There is a clear impact of poverty on alcohol and drug use. The most deprived areas have the highest:

- Alcohol-related hospital admissions (104% higher than Scotland as a whole).
- In 2023/24, the rate per 100,000 population for wholly attributable alcohol related hospital stays was almost 7 times higher in the most deprived decile (1,351) compared to the least deprived (201).
- In 2023/24, the EASR per 100,000 population for alcohol specific deaths was just over 6 times higher in the most deprived decile (54.4) compared to the least deprived (9.04).
- In 2023/24, the EASR per 100,000 population of drug-related hospital admissions was almost 12 times higher in the most deprived quintile (528.3) compared to the least deprived (44.21).
- In 2023/24, those residing in the two most deprived quintiles accounted for 72.2% of hospital admissions related to a drug overdose.
- Alcohol-specific deaths (99% higher than Scotland as a whole).
- Drug-related hospital admissions (146% higher than Scotland as a whole).
- Drug-related deaths (149% higher than Scotland as a whole).[134]

Demand for unscheduled care from addictions

Drug-related Emergency Department (ED) attendances have increased by 6.76% between 2022/23 and 2023/24.[135] Most drug-related admissions are held in general acute hospitals (~82%): proportionally very few are facilitated by psychiatric hospitals.[136]

From HIS engagement with people with lived and living experience, it has been reported that people often only receive interventions for their substance use only once they have reached a crisis point that requires support from unscheduled care. [137]

People find accessing drug and alcohol services difficult and feel like they are in a constant cycle of referral with long waits. As a result, disengagement with community-based recovery services is high and crisis can occur.[138]

In a qualitative study exploring repeat admissions to EDs for alcohol use in 2017, several 'push' factors for repeat ED attendances were identified by respondents. They reported inaccessible primary care services, dislike or lack of information about specialist addiction services, and difficulties travelling to services. In comparison, respondents reported that 'pull' factors for repeat attendances were that EDs offered immediate, sympathetic care and free transport by ambulance.[139]

Recent calculations estimate that health and social care costs associated with alcohol use are around £700m per year in Scotland. The costs associated with alcohol-related crime in Scotland is at least £1.0 billion per year with 4 in 10 (40%) of those in prison being under the influence of alcohol at the time of their offense and over half (56%) of young offenders being under the influence of alcohol at the time of their offense. 37% of all violent crime reported in Scotland is alcohol related.[140]

A study from the University of Stirling in 2021 highlighted that 86,780 ambulance callouts were alcohol related in Scotland during 2019. They report that one in six callouts are alcohol related, rising to one in four at weekends and out of hours (6pm-6am).[141] Qualitative data taken from ambulance workers have

highlighted that those with co-existing alcohol dependency and mental health problems tend to be repeat callers and very challenging.[142]

Most emergency acute services are not well equipped to address the complex needs of those who use substances, which can lead to unnecessary admissions if safety issues are identified (particularly in out of hours emergency acute services) and repeat emergency department attendances. [143]

Between 47% and 50% of people with a drug-related admission were categorised as 'new patients', meaning that this was their first drug-related admission to hospital in the last 10 years (2020/21 - 2023/24 data).[144]

Patients with substance use and psychiatric comorbidities have significantly higher rates of emergency department visits than those without psychiatric comorbidity. For those with psychiatric comorbidity, the average is 5.2 visits per year, compared to 2.5 visits per year for those without a psychiatric comorbidity. They are also more likely to be in the higher frequency visitor groups – anywhere from three times more likely to 5.6 times more likely to be attending an emergency department frequently (the studies analysed 4+, 8+, 12+, 16+ or 20+ visits throughout the study. [145]

Access to addiction support

Referrals to community-based drug and alcohol specialist services have decreased by 23%, comparing 2019/20 data to 2022/23 data. [146] [147]

There has been a steady decline in referrals to community-based drug specialist services between 2019/20 data and 2022/23 data, falling by almost 38%.[148] [149]

In 2022/23, 32% of referrals made to drug and alcohol specialist services were discharged before treatment started. Of the referrals that resulted in a discharge before treatment, almost 60% were due to the individual disengaging, unable to engage, with a small number passing away.[150]

Medically assisted treatment trends

A decreasing trend in the dispensing of Opioid Substitution Therapy (OST) drugs has been evident from 2014/15, with the number of daily defined doses (DDD) falling by over 11% between 2014/15 and 2023/24 and the number of paid OST items falling by over 21% over the same period.[151]

The prescribing pattern has changed across Scotland, with a significant reduction in the prescribing of methadone coupled with a significant increase in the prescribing of oral and injectable buprenorphine. Methadone decreased from 93% of all OST dispensing in 2014/15 to 80% in 2023/24. In 2013/14, oral buprenorphine accounted for approximately 6% of OST dispensing, increasing yearly to 19% in 2023/24. Injectable buprenorphine accounted for 1% of all OST dispensing in 2020/21 and increased to 8% in 2023/24. [152]

In 2023/24, OST was prescribed to a minimum of 28,537 people in Scotland. This was the lowest annual estimated recorded since 2014/15, despite 2023/24 having the highest proportion of OST prescriptions with a valid CHI number (85.8%).[153]

Earlier identification or intervention points

65% of people who died because of drugs in 2020 were in contact with a service with the potential to address their substance use or deliver harm reduction interventions in the six months leading to death.[154]

47% of those who died had previously experienced a non-fatal overdose. [155]

Analysis of Scottish drug-related deaths recorded in 2020 showed that 52% of people had a medical condition recorded in the six months prior to death with respiratory illness, blood-borne viruses and epilepsy being the most common.[156]

46% had a psychiatric condition recorded in the six months before death, with depression and anxiety being most common. [157]

Analysis carried out by Public Health England showed that 51% of alcohol related admissions were linked to a cardiovascular condition, 8% were linked to cancer(s), 5.1% were linked to epilepsy, and 5.4% were linked to liver disease.[158]

Evidence shows that hospital-based alcohol teams can reduce alcohol-related admissions and readmissions by 3% and alcohol related emergency department attendances by 43%. [159] [160]

Alcohol brief interventions (ABIs) in primary and secondary care can reduce the risk of alcohol-related ill health by 14%. [161] In Scotland, there has been a steady decline in the number of ABIs delivered, falling by almost 28% between 2013/14 and 2019/20.[162]

A cost-benefit analysis by the Department for Education reported that specialist intervention for young people's substance use results in a £4.3m health saving and £100m crime saving per year (UK-wide). The total health savings include £108,524 for inpatient activity. The analysis also made a predicted saving of between £49m-£159m from the lifetime societal benefit of treatment if just a 7-10% reduction was achieved in the number of young adults continuing their substance use into adulthood.[163]

The link between addictions and homelessness

Those who are experiencing homelessness have 10 times more assessments at drug treatment services than those living in the most deprived areas, who are not experiencing homelessness and 100 times more assessments than those living in the least deprived areas who are not experiencing homelessness.[164]

Over the last 7 years (2017-2023), 56% of estimated homeless deaths were as a direct result of substance use, and 65% were as a direct result of substance use or probably suicide combined. In addition, 14% were as a direct result of diseases of the circulatory system. This was relevant due to the link between substance use (for example, cocaine and methamphetamine) and the risk of atherosclerotic cardiovascular diseases, arrhythmias and heart failure. [165] [166]

2.10 Housing and homelessness

The following covers key evidence on housing and homelessness, and their interaction with unscheduled care. We have developed this summary to inform our future internal work but have published it so that those informing decision makers can draw from the available evidence in their work.

Overall

It has been reported that healthcare interactions (particularly unscheduled) increase in the years before becoming homeless and peak around the time of the first homelessness assessment. This increased activity is most clearly seen for health activity relating to mental health, drugs and alcohol - issues are likely to be risk factors for homelessness.[167]

Emergency department care instead of GP care

People experiencing homelessness are 40 times less likely to be registered with a GP. Despite multimorbidity, people experiencing homelessness underutilise primary care services due to a multitude of barriers. Therefore, they depend on unscheduled healthcare in hospital emergency departments in moments of predictable crises. [168]

More visits to emergency departments

People experiencing homelessness have a 20-fold increased use of emergency departments [169]

You are 60 times more likely to use the emergency department if you are homeless than general population, and you are more likely to die in the emergency department.[170]

Data from England show that people living with homelessness represent 41% of individuals presenting >12 times in ED per year. [171]

Higher hospital admission rates and longer hospital stays

People experiencing homelessness have an over 10-fold increased use of costly inpatient admissions than housed individuals. [172]

Hospital patients experiencing homelessness have high rates of emergency readmission that are not explained by health.[173]

The average admission length in hospital for people experiencing homelessness is four and a half days (IQR 2-14 days) and the readmission rate within one month is almost double when compared to control groups. [174]

Delays to discharge due to sourcing adequate housing are common for people living with homelessness. In a targeted study carried out by British Medical Journal they found that 19% of people in hospital who were experiencing homelessness faced delays in their hospital discharge due to sourcing adequate housing and 55% were discharged to unstable, temporary accommodation.[175]

People's experiences with secondary care in Scotland

A 2025 British Medical Journal article stated that we do not have research that explores the experiences in secondary care of people experiencing homelessness in Scotland.[176]

Workforce challenges

Audit Scotland reported that 60% of housing support services reported having vacancies as of December 2020.[177]

Link between health and homelessness

Poor health can be a cause of homelessness, as was found by recent research by Groundswell, which reports that 59% of women surveyed agreed that their health had contributed to them becoming homeless. [178]

More than one in five homes poses risks to those living in them. The needs of a rapidly ageing population (and the number of older people with disabilities, which is set to double by 2040 (Wittenberg et al, 2008)) present specific challenges Improving the public's health: A resource for local authorities.

Housing is a barrier to accessing addiction support. We know from our work in residential rehabilitation that housing has been reported as a primary barrier to access residential rehabilitation. People often must give up their tenancy to apply for a placement within residential rehabilitation. In a client survey conducted by PHS 4 in 10 respondents reported housing as a main barrier to access for the service.[179] From Healthcare Improvement Scotland's engagement with people with lived and living experience we also know that safe and secure housing is a key building block to achieve personal outcomes and lower the risk of relapse and overdose for those using substances.

Multiple needs

Within the population of those who experienced homelessness 38% of respondents reported that they have, or are in recovery from, a drug problem, with 29% of respondents reporting they have, or are in recovery from, an alcohol problem.[180] 76% of respondents reported that they smoke cigarettes, cigars or a pipe. This compared to a national figure of 13.8%. Of those who smoke, 50% (156) would like to give up, although 46% of respondents stated they had not been offered smoking cessation advice or help.[181]

2.11 Long-term conditions

The following covers key evidence on long-term conditions and their interaction with unscheduled care. We have developed this summary to inform our future internal work but have published it so that those informing decision makers can draw from the available evidence in their work.

Rising incidence of long-term conditions and multi-morbidity

Multiple co-existing long-term conditions are becoming more prevalent in Scotland, particularly for those over 65 years old and those living in deprived areas.

- The onset of multi-morbidity is 10-15 years earlier for people living in the most deprived areas, compared to those living in the least deprived areas. [182]
- In Scotland, a nationally representative study of almost 1.8 million individuals derived from primary care records found a multi-morbidity prevalence rate of 24%, with most people over the age of 65 having multimorbidity.[183]
- The proportion of people reporting a long term condition increased from 18.7% (~988,400) in 20211 to 21.4% (~1,163,500) in 2022.
- Proportion of people reporting a mental health condition increased from 4.4% (~232,900) in 20211 to 11.3% (~617,100) in 2022.
- The annual disease burden is forecast to increase by 21% by 2043, with two-thirds of the increase due to cardiovascular disease, cancers and neurological conditions. Many of these conditions are preventable.

Impact on demand for unscheduled care

There is a strong link in the evidence between long-term conditions and someone's use of unscheduled care.

- Evidence and data illustrate a link between long-term conditions and someone's risk of emergency admission (or emergency re-admission) to hospital in the next 12 months (Scottish Patients at Risk of Readmission and Admission score - SPARRA score). Data from Public Health Scotland shows that the mean SPARRA score increases when multiple long term conditions are recorded. The mean risk score for people living with one long-term condition is reported to be 13%, and this rises to 44% for people living with four or more long-term conditions. There are currently 35,071 people with a SPARRA score of 60% and above in Scotland (Those with a SPARRA risk score above 60% should already have an anticipatory care plan in place. Those between 40-60% would benefit from an anticipatory care plan). Most (59.7% or circa 20,952 people) live with three or more long-term conditions. This compares to only 3.35% for those with a SPARRA risk score between 1% and 59%.[184]
- Long-term conditions such as diabetes, asthma, epilepsy and Chronic Obstructive Pulmonary Disease (COPD) are also contributing to the potentially preventable admission rate across Scotland. These are admissions that are deemed avoidable with the application of public health measures and/or timely treatment by primary and community care.[185]
- Higher levels of multi-morbidity and greater severity of illness are associated with higher rates of emergency admission and re-admission following discharge.[186]

- 2010 UK data showed that long-term conditions account for 70% of inpatient bed days per year and 50% of general practice consultations [187]

In 2023/24, there were a total of

- 6,040 hospital admissions with type 1 or 2 diabetes recorded as primary diagnosis. This equated to 55,978 occupied bed days. (Average length of stay per admission = 9.3 days)
- 5,777 hospital admissions with asthma recorded as primary diagnosis. This equated to 17,760 occupied bed days. (Average length of stay per admission = 3.1 days)
- 14,981 hospital admissions with COPD recorded as primary diagnosis. This equated to 111,522 occupied bed days. (Average length of stay per admission = 7.4 days)
- 4,050 hospital admissions with Peripheral vascular disease recorded as primary diagnosis. This equated to 33,490 occupied bed days. (Average length of stay per admission = 8.3 days)[188]

In 2023/24, there were 1,148,179 admissions to hospitals across Scotland. The average length of stay of each admission was reported to be 4.1 days. People admitted to hospital with a long-term condition are in hospital 3.3-5.2 days longer than the average length of stay. The exception to this is asthma. [189]

Drivers of why people with long term conditions approach unscheduled care

Studies that explore why people with long-term conditions reach out to unscheduled care have found that

- "Patients view unscheduled care as one of several healthcare options available to them, and as complementing routine care.
- When patients use unscheduled care, it is usually due to a sense of pressing need for which they feel that they have no other option.
- Patients' belief in need for unscheduled care is shaped by previous experiences.
- From patients' perspective, use of unscheduled care can be an appropriate treatment choice that does not necessarily reflect failure of self-management or routine care."
- A consistent finding across the research was that patients used unscheduled care in response to exacerbations of their illness that felt intense and frightening. [190]
- People with long-term conditions often didn't see accessing unscheduled care as a failure to manage their illness, but they considered it an "acknowledgement of the limits of self-management and their control over the illness".[191]

Condition specific findings

Asthma

- A 2004 paper concluded that most emergency department attendances amongst a sample of asthmatic patients were clinically appropriate at the time of presentations. It also suggested that 11 of the 32 of the sample could have been prevented through improvements to the person's knowledge about their asthma and better access to "routine and specialist care and medication review".[192]

Diabetes

- "Structured Education Supporting individuals diagnosed with diabetes in developing their knowledge and skills to self-manage diabetes and reduce their chances of deterioration or exacerbation….Dose Adjustment For Normal Eating (DAFNE) is estimated to save ~£2,200 per patient treated discounted over 10 years and 64% lower emergency treatment costs for ketoacidosis and severe hypoglycaemia... Reducing the number of hospital admissions for diabetes patients" [193]
- "The NHS Diabetes Prevention Programme identifies people at risk of developing type 2 diabetes and refers them onto a nine-month, evidence-based lifestyle and behavioural change programme…An independent evaluation shows 37% relative reduction in incidence in completers and a 7% reduction in population level incidence of diabetes." [194]
- "Annual review and monitoring of key lifestyle and physiological measurements, with appropriate interventions where needed, to reduce the risk of complications associated with diabetes… all-cause hospital admission rates were lower among those who met HbA1c and cholesterol indicators. Meeting all nine care processes had significant associations with reductions in all types of emergency admissions by 22% to 26%."[195]

Respiratory illness

- "Targeted testing in primary care to identify and further explore reduced lung function, providing the opportunity for preventative and/or treatment. Reduction in emergency and acute admissions." [196]
- "Action to ensure appropriate medicines use, particularly inhalers, to reduce exacerbations and mortality…Regular use of inhaled corticosteroids, as part of a broader national focus on asthma, was effective in reducing costs associated with asthma in Finland, including hospital utilisation falling by 54% over a ten-year period." [197]
- "Pulmonary Rehabilitation (PR) for COPD support and exercises to improve lung function exacerbations of COPD…Approx. 2 million people have COPD in England and most will require PR. If the LTP objectives for PR are fully implemented this could prevent 500,000 exacerbations and 80,000 admissions…Completion reduces hospital admissions and primary care appointments"[198]

Cardiovascular

- “Regular monitoring within primary care for patients who have had a high-risk cardiovascular event to ensure they are on the right medication to reduce their risk of further acute illness... Lipid management in England must improve to drive better CVD outcomes – every 1 mmol/L reduction in LDL-C is tied to a 22% reduction in major vascular events after 1 year…Reduced non elective admissions, morbidity and mortality” [199]
- “Supporting patients with chronic or post-acute cardiovascular disease to lead an active life and reduce their risk of further acute illness…It has been estimated that it can reduce readmissions by 31% over 6-12 months” [200]

June 2025

You can read and download this document from our website.
We are happy to consider requests for other languages or formats.
Please contact our Equality and Diversity Advisor on 0141 225 6999
or email his.contactpublicinvolvement@nhs.scot

Healthcare Improvement Scotland

Edinburgh Office	Glasgow Office
Gyle Square	Delta House
1 South Gyle Crescent	50 West Nile Street
Edinburgh	Glasgow
EH12 9EB	G1 2NP
0131 623 4300	0141 225 6999

www.healthcareimprovementscotland.scot

References

[1] BMA 2023 - NHS diagnostics data analysis (bma.org.uk)

[2] Audit Scotland (2024) NHS in Scotland 2023 (audit.scot)

[3] Audit Scotland (2024) NHS in Scotland 2023 (audit.scot)

[4] Audit Scotland (2024) NHS in Scotland 2023 (audit.scot)

[5] 2025-04-01-cancellations.xlsx

[6] Audit Scotland (2024) NHS in Scotland 2023 (audit.scot)

[7] The NHS waiting list: when will it peak? (health.org.uk)

[8] NHS backlog data analysis (bma.org.uk)

[9] Health inequalities and the elective backlog—understanding the problem and how to resolve it | The BMJ

[10] NHS backlog data analysis (bma.org.uk)

[11] BMC Health Service Research: The cost of keeping patients waiting: retrospective treatment-control study of additional healthcare utilisation for UK patients awaiting elective treatment – available at: The cost of keeping patients waiting: retrospective treatment-control study of additional healthcare utilisation for UK patients awaiting elective treatment | BMC Health Services Research | Full Text

[12] NHS backlog data analysis (bma.org.uk)

[13] NHS pressures in England: Waiting times, demand, and capacity (parliament.uk)

[14] Royal College of Surgeons of England, 2024 - Elective surgical hubs for helping the recovery of elective services: a national survey in England | The Bulletin of the Royal College of Surgeons of England (rcseng.ac.uk)

[15] Performance Tracker 2023: General practice | Institute for Government

[16] Bindman *et al.* 1995, Hanania *et al.* 1997, Oster & Bindman 2003, Tsai *et al.* 2007

[17] NHS pressures in England: Waiting times, demand, and capacity (parliament.uk)

[18] Almost 1.5m emergency hospital admissions could have been avoided last year | The BMJ

[19] General practice: Progress since the 2018 General Medical Services contract

[20] Nine major challenges facing health and care in England - The Health Foundation

[21] Health and Care Experience Survey 2023/24: National Results - gov.scot

[22] General practice: Progress since the 2018 General Medical Services contract

[23] Feeling the pressure: what the 2023 Commonwealth Fund survey reveals about the state of the UK health system - The Health Foundation

[24] 20230725_uec22_type1_national-tables.ods (live.com)

[25] Avoidable visits to UK emergency departments from the patient perspective: A recursive bivariate probit approach - ScienceDirect

[26] General practice: Progress since the 2018 General Medical Services contract

[27] Performance Tracker 2023: General practice | Institute for Government

[28] General Practice - GP Workforce and practice list sizes 2012 - 2022 - General Practice - GP workforce and practice list sizes - Publications - Public Health Scotland

[29] General practice: Progress since the 2018 General Medical Services contract

[30] Microsoft Word - What Drives Demand for Unscheduled Care Services i (researchgate.net)

[31] Bankart MJG, Baker R, Rashid A et al. (2011) Characteristics of general practices associated with emergency admission rates to hospital: a cross sectional study. Emergency Medicine Journal 28:558–563.

[32] Chauhan M, Bankart JM, Labeit A, Baker R. (2012) Characteristics of general practices associated with numbers of elective admissions. Journal of Public Health 34(4): 584–90.

[33] Hill A, Freeman G. (2011) Promoting continuity of care in general practice. London: Royal College of General Practitioners.

[34] A paradox of problems in accessing general practice: a qualitative participatory case study - PMC

[35] The 2018 General Medical Services Contract In Scotland (www.gov.scot)

[36] Out of hours primary care services in Scotland - January 2017 to September 2024 - Out of hours primary care services in Scotland - Publications - Public Health Scotland

[37] Feeling the pressure: what the 2023 Commonwealth Fund survey reveals about the state of the UK health system - The Health Foundation

[38] Overview - Accident and emergency - Urgent and unscheduled care - Healthcare system - Public Health Scotland

[39] Nine major challenges facing health and care in England - The Health Foundation

[40] General practice: Progress since the 2018 General Medical Services contract

[41] Chronic pain waiting times - Quarter ending 31 March 2024 - Chronic pain waiting times - Publications - Public Health Scotland

[42] 5 Chronic Pain - The Scottish Health Survey 2022 – volume 1: main report - gov.scot

[43] A long way from Frome: improving connections between patients, local services and communities to reduce emergency admissions | BMC Primary Care | Full Text (biomedcentral.com)

[44] (PHS, 2023 -https://publichealthscotland.scot/publications/nhs-pharmacy-first-scotland/nhs-pharmacy-first-scotland/#:~:text=Main%20points.%20Between%201%20April%202021%20and%2031)

[45] Moving from "Painkillers" to Pain Management:
Practice-based Occupational Therapists improve patient outcomes and reduce need for GP appointments

[46] https://audit.scot/uploads/docs/report/2022/briefing_220127_social_care.pdf

[47] People requiring a social care assessment and care at home services 25 March 2025 - People requiring a social care assessment and care at home services - Publications - Public Health Scotland

[48] https://audit.scot/uploads/docs/report/2022/briefing_220127_social_care.pdf

[49] OECD. Health at a Glance 2019 – informal carers [webpage]. OECD; 2019 (www.oecd-ilibrary.org/sites/a80d9f62-en/index.html?itemId=/content/component/a80d9f62-en).

[50] https://audit.scot/uploads/docs/report/2022/briefing_220127_social_care.pdf

[51] Social care for adults aged 18–64 - The Health Foundation

[52] What proportion of NHS staff are carers? | Nuffield Trust

[53] Understanding unpaid carers and their access to support - The Health Foundation

[54] Who we are, what we do (ihub.scot)

[55] Introduction to Frailty | British Geriatrics Society (bgs.org.uk)

[56] Who we are, what we do (ihub.scot)

[57] Primary and secondary care service use and costs associated with frailty in an ageing population: longitudinal analysis of an English primary care cohort of adults aged 50 and over, 2006–2017 Carole Fogg , Tracey England , Shihua Zhu , Jeremy Jones , Simon de Lusignan , Simon D.S. Fraser , Paul Roderick , Andy Clegg , Scott Harris , Sally Brailsford , Abigail Barkham , Harnish P. Patel , Bronagh Walsh

[58] Microsoft Word - What Drives Demand for Unscheduled Care Services i (researchgate.net)

[59] Exercise for preventing falls in older people living in the community | Cochrane

[60] Evidence on physical activity and falls prevention for people aged 65+ years: systematic review to inform the WHO guidelines on physical activity and sedentary behaviour | International Journal of Behavioral Nutrition and Physical Activity | Full Text (biomedcentral.com)

[61] https://ijbnpa.biomedcentral.com/articles/10.1186/s12966-020-01041-3

[62] Effect of home-based exercise on falls in community-dwelling older adults: an umbrella review | Sport Sciences for Health

[63] Evidence on physical activity and falls prevention for people aged 65+ years: systematic review to inform the WHO guidelines on physical activity and sedentary behaviour | International Journal of Behavioral Nutrition and Physical Activity | Full Text (biomedcentral.com)

[64] Exercise for preventing falls in older people living in the community | Cochrane

[65] Interventions for preventing falls in older people living in the community - PubMed (nih.gov)

[66] Comparative effectiveness of non-pharmacological interventions for frailty: a systematic review and network meta-analysis - PubMed (nih.gov)
[67] https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD007146.pub3/full
[68] https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD007146.pub3/full
[69] https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD007146.pub3/full
[70] Randomised trial of impact of model of integrated care and case management for older people living in the community - PMC (nih.gov)
[71] Effects on healthcare utilization of case management for frail older people: a randomized controlled trial (RCT) - PubMed (nih.gov)
[72] Randomised trial of impact of model of integrated care and case management for older people living in the community - PMC (nih.gov)
[73] doi:10.1016/S0140-6736(08)60342-6 (thelancet.com)
[74] doi:10.1016/S0140-6736(08)60342-6 (thelancet.com)
[75] Nutritional, Physical, Cognitive, and Combination Interventions and Frailty Reversal Among Older Adults: A Randomized Controlled Trial - PubMed
[76] Economic evaluation of a multifactorial, interdisciplinary intervention versus usual care to reduce frailty in frail older people - PubMed A multifactorial interdisciplinary intervention reduces frailty in older people: randomized trial | BMC Medicine | Full Text
[77] Effects of a multifactorial intervention comprising resistance exercise, nutritional and psychosocial programs on frailty and functional health in community-dwelling older adults: A randomized, controlled, cross-over trial - PubMed
[78] The effects of a life goal-setting technique in a preventive care program for frail community-dwelling older people: a cluster nonrandomized controlled trial | BMC Geriatrics | Full Text
[79] Anticipatory care planning and integration: a primary care pilot study aimed at reducing unplanned hospitalisation | British Journal of General Practice
[80] https://academic.oup.com/ageing/article/46/6/925/3887243
[81] http://www.sgecm.org.tw/DB/ijge/21/460.pdf?Title=The%20Effectiveness%20of%20an%20Outpatient%20Personalized%20Multidisciplinary%20Intervention%20Model,%20Guided%20by%20Comprehensive%20Geriatric%20Assessment,%20for%20Pre-Frail%20and%20Frail%20Elderly&Keyword=frailty;%20geriatrics;%20outpatients;%20patient%20care%20team&v=1444
[82] https://bmcmedicine.biomedcentral.com/articles/10.1186/1741-7015-11-65
[83] marie-curie-uni-of-edinburgh-briefing-paper-unscheduled-care.pdf (mariecurie.org.uk)
[84] marie-curie-uni-of-edinburgh-briefing-paper-unscheduled-care.pdf (mariecurie.org.uk)
[85] Older people's hospital admissions in the last year of life - GOV.UK (www.gov.uk)
[86] Percentage of end of life spent at home or in a community setting - Financial years ending 31 March 2015 to 2024 - Percentage of end of life spent at home or in a community setting - Publications - Public Health Scotland
[87] Marie Curie (February 2025). Public expenditure in the last year of life research report.
[88] Integrating lived experiences of out-of-hours health services for people with palliative and end-of-life care needs with national datasets for people dying in Scotland in 2016: A mixed methods, multi-stage design - Bruce Mason, Emma Carduff, Sheonad Laidlaw, Marilyn Kendall, Scott A Murray, Anne Finucane, Sebastien Moine, Joannes Kerssens, Andrew Stoddart, Sian Tucker, Erna Haraldsdottir, Sir Lewis Ritchie, Marie Fallon, Jeremy Keen, Stella Macpherson, Lorna Moussa, Kirsty Boyd, 2022 (sagepub.com)

[89] Integrating lived experiences of out-of-hours health services for people with palliative and end-of-life care needs with national datasets for people dying in Scotland in 2016: A mixed methods, multi-stage design - Bruce Mason, Emma Carduff, Sheonad Laid

[90] Integrating lived experiences of out-of-hours health services for people with palliative and end-of-life care needs with national datasets for people dying in Scotland in 2016: A mixed methods, multi-stage design - Bruce Mason, Emma Carduff, Sheonad Laid

[91] Integrating lived experiences of out-of-hours health services for people with palliative and end-of-life care needs with national datasets for people dying in Scotland in 2016: A mixed methods, multi-stage design - Bruce Mason, Emma Carduff, Sheonad Laid

[92] Integrating lived experiences of out-of-hours health services for people with palliative and end-of-life care needs with national datasets for people dying in Scotland in 2016: A mixed methods, multi-stage design - Bruce Mason, Emma Carduff, Sheonad Laid

[93] Integrating lived experiences of out-of-hours health services for people with palliative and end-of-life care needs with national datasets for people dying in Scotland in 2016: A mixed methods, multi-stage design - Bruce Mason, Emma Carduff, Sheonad Laid

[94] marie-curie-uni-of-edinburgh-briefing-paper-unscheduled-care.pdf (mariecurie.org.uk)

[95] marie-curie-uni-of-edinburgh-briefing-paper-unscheduled-care.pdf (mariecurie.org.uk)

[96] How many people will need palliative care in Scotland by 2040? A mixed-method study of projected palliative care need and recommendations for service delivery - PubMed

[97] How many people will need palliative care in Scotland by 2040? A mixed-method study of projected palliative care need and recommendations for service delivery - PubMed

[98] Scottish Public Health Observatory. Symptoms of common mental health problems in past few weeks [online]. 2024 [cited 2024 March 28]; available from: https://scotland.shinyapps.io/ScotPHO_profiles_tool/ Scottish Public Health Observatory. Adults deliberately self-harming in past year [online]. 2024 [cited 2024 March 28]; available from: https://scotland.shinyapps.io/ScotPHO_profiles_tool/ Scottish Public Health Observatory. Anxiety symptoms in past week [online]. 2024 [cited 2024 March 28]; available from: https://scotland.shinyapps.io/ScotPHO_profiles_tool/

[99] Mather, B., Roche, M. and Duffield, C. (2014) 'Disparities in treatment of people with mental disorder in non-psychiatric hospitals: A review of the literature', *Archives of Psychiatric Nursing*, 28(2), pp. 80–86. doi:10.1016/j.apnu.2013.10.009.

[100] Launders, N. *et al.* (2022) 'The temporal relationship between severe mental illness diagnosis and chronic physical comorbidity: A UK primary care cohort study of disease burden over 10 years', *The Lancet Psychiatry*, 9(9), pp. 725–735. doi:10.1016/s2215-0366(22)00225-5.

[101] Hatzenbuehler, M.L., Phelan, J.C. and Link, B.G. (2013) 'Stigma as a fundamental cause of population health inequalities', *American Journal of Public Health*, 103(5), pp. 813–821. doi:10.2105/ajph.2012.301069.

[102] Mental Health by Numbers - centred

[103] Adult mental health (audit.scot)

[104] FOI 25-149 Mental Health CallsFOI 25-149 Mental Health Calls

[105] FOI 24-529 Single Crews 2019 - 2024

[106] Mental health emergencies attended by ambulances in the United Kingdom and the implications for health service delivery: A cross-sectional study - Harriet Elizabeth Moore, Aloysius Niroshan Siriwardena, Mark Gussy, Robert Spaight, 2023

[107] PP30 Comparing on-scene times and conveyance rates in medical, traumatic and psychiatric presentations to the ambulance service | Emergency Medicine Journal

[108] 580% rise in mental health calls

[109] Adult mental health (audit.scot)

[110] Trend Data - Mental health inpatient activity - 23 November 2021 - Mental health inpatient activity - Publications - Public Health Scotland

[111] 1. Overview of patients being treated in NHS Scotland facilities - Inpatient census 2022: parts one and two - gov.scot
[112] PHS Inpatient admissions over time (Scotland), any speciality, psychiatric and non-psychiatric
[113] Public Health Scotland. Healthcare Contact Pathways od the ScotSID Cohort [online]. 2024 May 7; available https://publichealthscotland.scot/media/26817/scotsid-report-final-draft.pdf
[114] NCISH | The University of Manchester
[115] Egede et al. 2002, McKellar et al. 2004, Mikkelsen et al. 2004, Opolski & Wilson 2005, Almagro et al. 2006, Gudmundsson et al. 2006, Xu et al. 2008
[116] Frasure-Smith et al. 2000, Shiotani et al. 2002, Lauzon et al. 2003, Almagro et al. 2006, Kurdyak et al. 2008, Xu et al. 2008
[117] Improving the public's health: A resource for local authorities
[118] Drug-related deaths in Scotland in 2023 - National Records of Scotland (NRS)
[119] A finding of the Healthcare Improvement Scotland lived experience engagement through our Redesigning Pathways to Residential Rehabilitation programme.
[120] Drug and alcohol information system (DAISy) overview of initial assessments for specialist drug and alcohol treatment 2023/24 - Drug and alcohol information system (DAISy) - Publications - Public Health Scotland
[121] Prevalence of problem drug use in Scotland: 2015/16 Estimates - A review of definitions and statistical methods - Prevalence of problem drug use in Scotland: 2015/16 Estimates - Publications - Public Health Scotland
[122] Blog: Poverty is the root of Scotland's fatal drug overdose crisis - The Poverty Alliance
[123] Drug and drink deaths in Scotland still among Europe's worst despite new funding
[124] Drug-related deaths in Scotland in 2023 - National Records of Scotland (NRS)
[125] Drug-related deaths in Scotland in 2023 - National Records of Scotland (NRS)
[126] Homeless Deaths 2023 - National Records of Scotland (NRS)
[127] Drug-related deaths in Scotland in 2023 - National Records of Scotland (NRS)
[128] Health harm - ScotPHO
[129] births_in_scottish_hospitals_2023-24.xlsx
[130] The association between parental and adolescent substance misuse: findings from the Irish CASE study | Irish Journal of Psychological Medicine | Cambridge Core
[131] Impact_of_parents_substance_misuse_on_children_An.pdf
[132] ScotPHO profiles
[133] Analysis reveals families and communities impacted by drug-related deaths in Scotland - News - Public Health Scotland
[134] Scottish Public Health Observatory. Alcohol-specific deaths [online]. 2024 [cited 2024 March 28]; available from: https://scotland.shinyapps.io/ScotPHO_profiles_tool/ Scottish Public Health Observatory. Drug related deaths [online]. 2024 [cited 2024 March 28]; available from: https://scotland.shinyapps.io/ScotPHO_profiles_tool/
[135] About this release - Rapid Action Drug Alerts and Response (RADAR) quarterly report - April 2025 - Rapid Action Drug Alerts and Response (RADAR) quarterly report - Publications - Public Health Scotland
[136] Drug-Related Hospital Statistics
[137] A finding of the Healthcare Improvement Scotland lived experience engagement through our Redesigning Pathways to Residential Rehabilitation programme.
[138] A finding of the Healthcare Improvement Scotland lived experience engagement through our Redesigning Pathways to Residential Rehabilitation programme.
[139] Qualitative exploration of why people repeatedly attend emergency departments for alcohol-related reasons | BMC Health Services Research | Full Text
[140] Facts and figures | Alcohol Focus Scotland
[141] Alcohol burden on ambulance service in Scotland three times higher than previous estimates | About | University of Stirling
[142] CSO_Template_Alt_Cover

[143] Full article: Tackling hospital service burden of alcohol dependence in England: a service evaluation of alcohol care teams (ACTs) and care pathways for integrated care
[144] Data explorer - Drug-related hospital statistics - Scotland 2023 to 2024 - Drug-related hospital statistics - Publications - Public Health Scotland
[145] The association of psychiatric comorbidity and use of the emergency department among persons with substance use disorders: an observational cohort study | BMC Emergency Medicine
[146] National drug and alcohol treatment waiting times - 1 January 2023 to 31 March 2023 - National drug and alcohol treatment waiting times - Publications - Public Health Scotland
[147] National drug and alcohol treatment waiting times - 1 April 2022 to 30 June 2022 - National drug and alcohol treatment waiting times - Publications - Public Health Scotland
[148] National drug and alcohol treatment waiting times - 1 January 2023 to 31 March 2023 - National drug and alcohol treatment waiting times - Publications - Public Health Scotland
[149] National drug and alcohol treatment waiting times - 1 April 2022 to 30 June 2022 - National drug and alcohol treatment waiting times - Publications - Public Health Scotland
[150] National drug and alcohol treatment waiting times - 1 January 2023 to 31 March 2023 - National drug and alcohol treatment waiting times - Publications - Public Health Scotland
[151] Prescribing for drug use - ScotPHO
[152] Prescribing for drug use - ScotPHO
[153] Prescribing for drug use - ScotPHO
[154] The National Drug-Related Deaths Database (Scotland) Report: Analysis of Deaths Registered in 2019 and 2020 - National drug related death database (Scotland) - Publications - Public Health Scotland
[155] The National Drug-Related Deaths Database (Scotland) Report: Analysis of Deaths Registered in 2019 and 2020 - National drug related death database (Scotland) - Publications - Public Health Scotland
[156] The National Drug-Related Deaths Database (Scotland) Report: Analysis of Deaths Registered in 2019 and 2020 - National drug related death database (Scotland) - Publications - Public Health Scotland
[157] The National Drug-Related Deaths Database (Scotland) Report: Analysis of Deaths Registered in 2019 and 2020 - National drug related death database (Scotland) - Publications - Public Health Scotland
[158] Alcohol and drug prevention, treatment and recovery: why invest? - GOV.UK
[159] Alcohol and drug prevention, treatment and recovery: why invest? - GOV.UK
[160] Local health and care planning menu of preventative interventions
[161] Alcohol and drug prevention, treatment and recovery: why invest? - GOV.UK
[162] Alcohol Brief Interventions Dashboard - Alcohol brief interventions - 2019/20 - Alcohol brief interventions - Publications - Public Health Scotland
[163] Specialist drug and alcohol services for young people- cost benefit analysis
[164] Health and homelessness in Scotland: research - gov.scot
[165] homeless-deaths-2023-data.xlsx
[166] Young at heart? Drugs of abuse cause early onset cardiovascular disease in the young - PMC
[167] Chapter 8: Scottish Drugs Misuse Database - Health and homelessness in Scotland: research - gov.scot
[168] Secondary care for people experiencing homelessness in Scotland: a retrospective cohort study | BMJ Public Health
[169] Secondary care for people experiencing homelessness in Scotland: a retrospective cohort study | BMJ Public Health
[170] Multimorbidity and emergency department visits by a homeless population: a database study in specialist general practice - PMC (nih.gov)
[171] Multimorbidity and emergency department visits by a homeless population: a database study in specialist general practice - PMC (nih.gov)
[172] Secondary care for people experiencing homelessness in Scotland: a retrospective cohort study | BMJ Public Health
[173] jech-2020-215204.full_.pdf
[174] Secondary care for people experiencing homelessness in Scotland: a retrospective cohort study | BMJ Public Health

[175] Secondary care for people experiencing homelessness in Scotland: a retrospective cohort study | BMJ Public Health
[176] Secondary care for people experiencing homelessness in Scotland: a retrospective cohort study | BMJ Public Health
[177] https://audit.scot/uploads/docs/report/2022/briefing_220127_social_care.pdf
[178] Homeless_Health_Needs_Audit_Report.pdf (kxcdn.com)
[179] Epidemiology of multimorbidity and implications for health care, research, and medical education: a cross-sectional study - The Lancet
[180] Homeless_Health_Needs_Audit_Report.pdf (kxcdn.com)
[181] Homeless_Health_Needs_Audit_Report.pdf (kxcdn.com)
[182] Epidemiology of multimorbidity and implications for health care, research, and medical education: a cross-sectional study - The Lancet
[183] Epidemiology of multimorbidity and implications for health care, research, and medical education: a cross-sectional study - The Lancet
[184] SPARRA data visualisation dashboard
[185] HSCP Profile
[186]
Condelius *et al.* 2001, Eisner *et al.* 2001, Lauzon *et al.* 2003, Almagro *et al.* 2006, Ng *et al.* 2007, Tsai *et al.* 2007, Glynn *et al.* 2011
[187] Department of Health 2010
[188] Acute hospital activity and NHS beds information (annual) - year ending 31 March 2024 - Acute hospital activity and NHS beds information (annual) - Publications - Public Health Scotland
[189] Acute hospital activity and NHS beds information (annual) - year ending 31 March 2024 - Acute hospital activity and NHS beds information (annual) - Publications - Public Health Scotland
[190] Why do patients with long-term conditions use unscheduled care? A qualitative literature review - Langer - 2013 - Health & Social Care in the Community - Wiley Online Library
[191] Becker *et al.* 1993, Griffiths *et al.* 2001, Goeman *et al.* 2002, 2004, Aroni *et al.* 2004, Douglass *et al.* 2004, Donald *et al.* 2005, Tumiel-Berhalter & Zayas 2006, Gately *et al.* 2007, Jones *et al.* 2008
[192] Goeman *et al.* 2004
[193] NHS England » Diabetes high impact interventions
[194] NHS England » Diabetes high impact interventions
[195] NHS England » Diabetes high impact interventions
[196] B1590-respiratory-high-impact-interventions.pdf
[197] B1590-respiratory-high-impact-interventions.pdf
[198] B1590-respiratory-high-impact-interventions.pdf
[199] B1590-cvd-high-impact-interventions.pdf
[200] B1590-cvd-high-impact-interventions.pdf