

Phase 1 - Shaping the Future of General Medical Services (GMS)

Full Synthesised Engagement Feedback Report: Output from a Large Language Model

May 2025

This document includes passages generated by a Large Language Model (Artificial Intelligence). Just like humans, artificial intelligence can make mistakes.

1. Introduction

The review of General Medical Services (GMS) is generating large quantities of qualitative data in the form of feedback from a wide range of stakeholders. A Large Language Model (LLM), a form of artificial intelligence (AI), has been used to support the timely and accurate analysis of this large volume of data.

LLMs are increasingly being used to synthesise and summarise qualitative data in research^{1,2}. However, this approach is new for Dumfries and Galloway Health and Social Care Partnership. This report details the method used and the steps taken to ensure accuracy, safety, and compliance with legislation; and the un-edited output from the LLM that has informed the development of the main paper “General Medical Services in Dumfries and Galloway: Update, Refined Scope and Next Steps”.

2. Method

2.1 Preparation for analysis

A Data Protection Impact Assessment (DPIA) on the use of an LLM to analyse responses to the review was completed in collaboration with information governance experts and authorised by NHS Dumfries and Galloway’s Medical Director. A manual analysis of the first 27 responses was carried out to identify emergent themes. This sample would be used to sense check the output from the LLM.

¹ Chelegeer et al. (2023) *Natural language processing (NLP) aided qualitative method in health research* Journal of Integrated Design and Process Science vol. 27 (1) pp.41-58

² Morgan DL. (2023) *Exploring the Use of Artificial Intelligence for Qualitative Data Analysis: The Case of ChatGPT* International Journal of Qualitative Methods vol. 22 Available at: <https://doi.org/10.1177/16094069231211248> (Accessed 17 February 2025)

2.2 The data

Feedback was gathered between January and April 2025 from 3 stakeholder groups (Table 1). In total there were 312 written responses.

All responses were reviewed by a team of the GMS Review staff supporting the review. In accordance with the DPIA, data was anonymised to remove any reference to individuals, GP practices, organisations (including NHS Dumfries and Galloway, Dumfries and Galloway Council, and Dumfries and Galloway Health and Social Care Partnership). To maintain ethical standards, responses were also reviewed to ensure no immediate action or duty of care was required.

Table 1: Stakeholder groups and number feedback responses

Stakeholder Group	Number of responses
Primary care practitioners	68
Practitioners from wider health and social care services	21
The public	223
Total responses	312

2.3 Analysis

The cleaned data was uploaded to the LLM (ChatGPT) and analysed in 3 separate sessions, one for each stakeholder group. Pre-identified prompts were used to query the data. These were:

Prompt 1 - This document is a set of survey responses. Please analyse these responses and identify the key emergent themes. How do these themes align with six categories of service delivery, workforce, digital, data, premises and quality? Please also highlight any new or distinct new or emerging themes

Prompt 2 - From the document, for each of the six themes, service delivery, workforce, digital, data, premises and quality, what are the links to equity, integration and sustainability. Provide example quotations that demonstrate these connections.

Prompt 3 - Again referring to the document, are there any strongly held views, tensions or commonly repeated concerns in the responses that do not neatly fit into the themes of service delivery, workforce, digital, data, premises and quality? Please summarise these issues and the potential implications.

Prompt 4 - Previous analysis has highlighted an emergent theme of the importance of balancing digital innovation with human connection and continuity in general practice. Please confirm whether this theme is reflected in the feedback in the document, and if so provide supporting quotations.

A further analysis was carried synthesising, comparing and contrasting the 3 outputs. The analysis was conducted in May 2025.

3. Results

Below is the unedited final output from the LLM. These results have been validated and sense-checked by staff involved in collecting and cleaning the feedback responses. These results have been used to inform the main paper “General Medical Services in Dumfries and Galloway: Update, Refined Scope and Next Steps”.

3.1 Output from Large Language Model

Executive Summary

This report provides a comprehensive synthesis of engagement feedback gathered during the General Medical Services (GMS) Review in Dumfries and Galloway. Feedback was collected from three key groups: general practitioners and practice teams, wider stakeholders and multidisciplinary teams, and members of the public (including via Community Councils, the Participation and Engagement Network, and a previous unpublished GMS survey). Each set of data was processed through a large language model (LLM) to extract key themes, insights, and tensions. This final output presents an amalgamated analysis structured around six key themes: Service Delivery, Workforce, Digital, Data, Premises, and Quality. These are further framed by the cross-cutting principles of Equity, Integration, and Sustainability.

The report reflects a strong collective call for urgent reform, renewed local autonomy, and systemic investment. A central narrative also emerged across all responses: the need to balance digital innovation with the preservation of human connection and relational continuity at the heart of general practice.

Introduction

The GMS Review aims to inform a new vision for general practice across Dumfries and Galloway. Recognising the pressures facing practices, clinicians, and patients alike, this engagement process was structured to gather rich qualitative insights from those most directly affected. Participants were invited to reflect on current challenges, propose changes, and identify what must be retained, changed, or improved in the future model. This report consolidates the views of over one hundred contributors from across professional and public domains. All responses were

analysed thematically, and findings were organised into the six agreed domains (key themes emergent of early feedback sample) of the review. The report offers a triangulated perspective that honours distinct insights while also drawing out shared concerns and aspirations.

Service Delivery

Feedback across all three engagement streams highlighted major concerns with how general medical services are currently delivered. There is broad agreement that the current system no longer meets the needs of either patients or professionals. Centralised access models - particularly the '8am phone line' system - were universally criticised as outdated, inequitable, and a source of significant frustration for patients and practice staff alike.

Many respondents spoke of rising patient expectations, increasing complexity of presentations, and unmanageable volumes. These pressures are resulting in shorter consultations, reduced continuity, and an increasing sense that general practice is reactive rather than proactive.

Public participants expressed a desire for services that feel 'human', are easier to navigate, and reduce the burden of repeating their stories to different professionals. There was strong interest in triage and multidisciplinary team (MDT) models - but only where these improve, rather than dilute, continuity and coordination.

A recurrent concern among GPs and wider stakeholders was the increasing deferral of care from secondary to primary services. This shift, without corresponding resource transfer or structural alignment, is undermining sustainability and quality. Professionals described general practice as 'the service of first resort for everything', contributing to burnout and a loss of core purpose.

Equity concerns were raised regarding transport, rurality, and digital exclusion - particularly by members of the public and professionals serving remote areas. Multiple comments noted that those unable to engage first thing in the morning or those without confidence in digital tools were increasingly disadvantaged.

Integration was widely described as insufficient. Lack of joined-up working between practices, community teams, hospitals, and social care, results in duplicated effort and fragmented patient journeys. Participants advocated for shared planning, clearer care pathways, and a joined-up IT infrastructure.

Sustainability was perhaps the dominant theme under service delivery. From professionals' perspectives, the system is stretched beyond its limits. From the public's point of view, accessing timely care has become too complex. Both called for a redesign of service pathways that balances demand, respects professional time, and meets patient needs.

Workforce

Workforce emerged as one of the most urgent and emotionally charged themes across all engagement streams. Responses from GPs, practice teams, and wider stakeholders consistently described a service under acute pressure, with burnout, low morale, and workforce attrition as growing risks. There was a deep concern that general practice is becoming less attractive as a profession, with some stating they no longer recommend it as a career.

Participants described the emotional toll of working within a pressurised, high-demand system that is under-resourced and often feels unrewarded. Clinicians, particularly GPs, reported feelings of moral injury - believing they are unable to deliver the standard of care they aspire to. Administrative staff, often at the frontline of patient frustration, also expressed distress and exhaustion.

Burnout was closely linked to unmanageable workload and an inability to disconnect from relentless operational pressures. There was a repeated call for protected time for rest, supervision, and professional development - none of which are consistently available under the current model. Many also raised the issue of unfilled vacancies, over-reliance on temporary staff, and long-term issues with recruitment.

A recurring theme was the mismatch between Health Board-employed and practice-employed staff. Inconsistent terms, inequity in pay, and perceptions of unequal treatment were seen to foster division and undermine team cohesion. This disconnect was especially highlighted by practice managers and GPs responsible for leading teams but without the authority to influence all elements of staffing.

Respondents were supportive of multidisciplinary team (MDT) models but highlighted significant challenges in implementation. MDT roles such as pharmacists, mental health practitioners, and physiotherapists were not always effectively integrated or strategically deployed. There were concerns that the value of these roles is diminished when they are remote from core team activity or not aligned with practice priorities.

Several respondents flagged issues around skill mix and workload sharing. While team-based care was broadly welcomed, professionals expressed frustration at the lack of clarity around roles, responsibilities, and communication across teams. Calls were made for national consistency in MDT planning and clearer governance structures to support effective working.

There was also a strong call for strategic workforce planning and greater local flexibility. Stakeholders argued that national frameworks must be adaptable to local needs and that sustainable workforce models will depend on collaborative planning between practices, Health Boards, and community partners. Workforce retention,

succession planning, and support for training and mentorship were cited as critical to the future of general practice.

Digital

Digital transformation was a prominent and polarising theme across all engagement streams. While digital tools were recognised as essential for modern service delivery, participants voiced concerns about the unintended consequences of over-reliance on technology, particularly where it erodes continuity and excludes vulnerable populations.

GPs and practice staff noted that digital consulting - such as telephone triage, online forms, and video calls - can be efficient for transactional tasks, but is often inappropriate for complex or sensitive issues. There was a clear preference for these tools to be optional and appropriately triaged, not the default model for all patient contact.

The public repeatedly raised concerns about access and equity in relation to digital systems. Older adults, people with disabilities, and those in rural or lower-income communities may lack the digital literacy or connectivity to engage effectively. Several comments called for offline alternatives to be preserved, particularly for initial access and sensitive conversations.

Stakeholders from all groups identified infrastructure problems that hinder the potential of digital innovation. Non-integrated IT systems, frequent outages, and difficulties with referrals and documentation across platforms were seen to compromise patient safety and frustrate staff. There were strong calls for interoperable systems that work across primary, secondary, and community services.

While there was broad support for electronic prescribing, SMS reminders, and patient portals, many professionals reported that poor design and lack of alignment between systems had increased workload rather than reduced it. Inconsistent rollouts and lack of staff training further undermined potential benefits.

Concerns were also raised about digital tools replacing, rather than enhancing, the therapeutic relationship. Several professionals warned against using digital innovation as a cost-saving exercise that diminishes human connection. This theme also appeared in public feedback, with calls for continuity and personalised care to remain central to the model.

Digital transformation was not opposed in principle - in fact, many respondents expressed hope and optimism about its future role - but they emphasised that it must be embedded thoughtfully, with inclusive design, ongoing user input, and a balanced approach that prioritises human connection as much as efficiency.

Data

Data was identified across all engagement streams as both a critical gap and a major opportunity. Participants consistently expressed frustration at the lack of timely, reliable, and meaningful data to inform service planning, workforce deployment, and quality improvement in general practice.

GPs and MDT clinicians reported being unable to access basic data on activity, demand, or capacity- particularly for newer roles such as pharmacists or physiotherapists. This absence of data inhibits the ability to measure impact, allocate resources effectively, or plan strategically for the future.

Administrative staff and practice managers noted that data reporting requirements are often time-consuming and poorly aligned to actual improvement efforts. There was strong interest in automation and smarter data tools, but this interest was tempered by past experiences of poorly supported implementation and a lack of feedback loops.

Wider stakeholders, including those in planning, quality, and social care roles, raised concerns that data is siloed and does not reflect the full patient journey. This fragmentation was seen to undermine joined-up working and makes it difficult to assess whole-system performance. Calls were made for shared data environments and more consistent metrics across services.

Public contributors, while less familiar with operational data systems, expressed clear interest in transparency and accountability. Several wanted to know whether their feedback would be used, and how decisions are made. This reinforces the importance of data not only for professionals but as a tool for public trust and shared decision-making.

Integration challenges were raised repeatedly, with stakeholders noting that primary and secondary care data systems remain largely incompatible. This leads to duplication, delays, and a lack of continuity. Many respondents argued for nationally mandated interoperability standards and local investment in systems that work in practice.

Sustainability was also viewed through a data lens. Without the ability to track patterns of demand, identify gaps, and monitor outcomes, practices are left to operate reactively. Respondents called for investment in dashboards, shared analytics platforms, and training for staff to make use of these tools confidently and effectively.

Premises

Premises was consistently raised as a major constraint on the ability to deliver high-quality, multidisciplinary general practice. Across all three engagement streams -

GPs and practice teams, wider stakeholders, and the public - concerns were voiced about the condition, capacity, and future readiness of physical infrastructure.

GPs and practice managers described buildings that are aging, inflexible, and often too small to accommodate expanding teams or modern service delivery models. Some practices reported using off-site facilities or operating out of non-clinical spaces to meet demand, which in turn reduces cohesion and increases stress.

There were repeated references to delays in progressing new premises developments, as well as difficulties in accessing capital investment for expansion or refurbishment. Several clinicians felt that estate planning had not kept pace with population growth or the wider shift toward integrated, community-based care.

Wider stakeholders - including those in planning, social care, and infrastructure roles - emphasised the importance of shared, multipurpose spaces that can flexibly support different teams. They argued that co-location of services not only improves communication and care continuity but also increases efficiency and access.

Members of the public expressed concerns about accessibility - especially for older adults, people with disabilities, and those living in rural areas. Comments highlighted poor disabled access, inadequate parking, and long travel times as barriers to care. There was strong support for more local, community-based clinics.

From an integration perspective, many respondents felt that the lack of shared space is a practical barrier to multidisciplinary working. MDT staff often lack designated rooms within practices, limiting their ability to contribute meaningfully to day-to-day patient care and undermining efforts to embed team-based models.

Sustainability was also a significant theme. Stakeholders called for future estate plans to prioritise energy efficiency, flexible use of space, and adaptability to changing service models. Many expressed a desire for premises that can grow with the needs of the population and support both digital and face-to-face care delivery.

Quality

Quality of care was a central concern across all engagement streams. Participants consistently expressed that the current system is limiting their ability to deliver holistic, relationship-based care. GPs and practice teams described the increasing pressure to prioritise access and volume over continuity, clinical depth, and patient-centred outcomes.

Many professionals described a sense of loss - of the therapeutic relationship, of job satisfaction, and of their ability to deliver meaningful, lasting care. Shorter appointments, a transactional focus, and system-imposed targets were said to reduce time for listening, empathy, and shared decision-making. There was a strong

desire to return to models that value depth and quality over quantity. Public contributors echoed this sentiment, sharing experiences of rushed appointments, difficulty seeing the same clinician, and frustration at having to retell their story multiple times. Many associated quality with continuity, clarity in communication, and a sense of being heard and understood.

Respondents expressed concern that current models of care have become fragmented. MDT roles, although valuable, were often poorly integrated - leading to gaps, duplicated work, or confusion over responsibility. There was a call for better coordination, clearer pathways, and shared standards for communication and clinical follow-up.

Equity issues were also raised in relation to quality. Respondents highlighted that those with more confidence or system knowledge are better able to navigate care and advocate for themselves. In contrast, individuals from marginalised or digitally excluded groups may receive less coordinated or lower-quality care due to systemic barriers.

Quality was also seen through a workforce lens. Professionals warned that staff under pressure cannot consistently provide the level of care they aspire to. Some described moral distress at feeling forced to 'cut corners' or adopt a checklist approach due to time constraints. This, in turn, impacts staff retention and patient satisfaction.

Sustainability of quality care was a recurrent theme. Participants argued that without investment in time, systems, and workforce support, it will not be possible to sustain high standards. Quality must be built into the design of services - through continuity, time for complex care, support for teams, and shared learning across the system.

Equity, Integration, and Sustainability

The underpinning principles of Equity, Integration, and Sustainability were woven throughout all engagement responses. These principles not only inform the six thematic domains but are also critical lenses through which transformation must be assessed.

Equity was a strong and consistent concern across all engagement streams. Participants described a 'postcode lottery' in terms of access, availability of services, and staff capacity. Individuals in rural areas, those with lower digital literacy, older adults, and people with disabilities were particularly vulnerable to inequitable service experiences. Public responses highlighted gaps in transport, technology access, and continuity. Professionals urged that reform must actively redress these disparities, with targeted strategies for vulnerable populations.

Integration was repeatedly cited as an unmet goal. Despite positive intentions and policy drivers, most respondents felt that services across general practice, community care, and hospitals remain siloed. There was frequent mention of

duplication, conflicting advice, and patient journeys that felt disjointed and inefficient. Stakeholders called for shared care pathways, interoperable digital systems, and stronger governance for team-based delivery. Successful integration, they argued, must move beyond co-location and address alignment in planning, decision-making, and accountability.

Sustainability was one of the most dominant cross-cutting concerns. From the perspective of general practice teams, the current model is unsustainable due to workforce shortages, rising demand, and increasing complexity of care. Stakeholders and members of the public echoed these concerns, pointing to delays, staff turnover, and inconsistent service quality. There was a shared understanding that sustainable services must be designed with workforce wellbeing, realistic demand management, flexible infrastructure, and long-term investment in mind.

These principles also intersect with each other. Respondents warned that pursuing efficiency without equity risks exacerbating inequalities, and that integration without sustainability will result in burnout and service fragility. Equally, efforts to make care more sustainable must not come at the cost of relationship-based medicine or human connection.

Many called for these principles to be more than abstract goals. They urged that equity, integration, and sustainability be embedded into every decision, and used as criteria to evaluate proposed changes. The principles should guide how services are planned, how success is measured, and how unintended consequences are addressed.

In conclusion, the principles of equity, integration, and sustainability are not just philosophical. They are essential to creating a general practice model that is resilient, inclusive, and capable of meeting future health and social care challenges.

Overall Summary

This engagement process has brought together the voices of general practitioners, multidisciplinary teams, system stakeholders, and members of the public in a shared conversation about the future of general medical services in Dumfries and Galloway. The triangulated feedback reflects not only the operational challenges facing general practice, but also a collective vision for reform grounded in person-centred care, team-based delivery, and system integration.

Across all themes, contributors highlighted a tension between aspiration and reality. There is a strong desire to provide holistic, accessible, and equitable care, but this is frequently compromised by infrastructure limitations, workload pressures, fragmented systems, and inconsistent support. Despite these barriers, the tone of the feedback was hopeful: participants want to be part of the solution and are willing to contribute to service redesign that is meaningful and well-supported.

There is widespread agreement that the current model is unsustainable without significant investment, leadership, and structural change. Stakeholders called for better data, modern premises, integrated IT systems, and investment in people - especially time, training, and career pathways. They also stressed the need for clarity, accountability, and authentic engagement in how decisions are made.

A strong cross-cutting theme was the need to preserve the human elements of general practice - relationships, trust, and personalised care - while embracing innovation. The use of digital tools, MDT working, and demand management strategies must be carefully balanced against the risks of depersonalisation, inequity, and professional burnout.

Public feedback strongly reinforced the themes raised by professionals. People want timely access, clear communication, and joined-up care that feels local and familiar. They value the GP role but are frustrated by inconsistency, complexity, and lack of continuity. At the same time, there is empathy for the pressures faced by staff and a willingness to engage constructively.

This summary of engagement sets a powerful foundation for the next stage of the GMS review. It confirms the relevance of the six thematic domains and the underpinning principles of equity, integration, and sustainability. The feedback provides both insight and mandate to move forward confidently with a planning phase rooted in shared values and grounded in lived experience.

It also offers a unifying narrative that can guide further conversations. Whether working with practices, communities, or system partners, this synthesis ensures that future planning starts with a deep understanding of the reality on the ground - and a shared ambition to do better together.

Conclusion and Strategic Implications

The findings of this engagement exercise reinforce both the urgency and the opportunity for reform within general medical services. The collective insight from professionals and the public presents a compelling case for change, supported by lived experience, professional expertise, and a shared desire to build something better.

Strategically, the feedback highlights six core areas for priority action: redesigning service delivery models for equity and continuity; supporting the workforce through improved conditions and sustainable career paths; embedding digital tools that enhance rather than replace relationships; investing in data and interoperability to drive improvement; modernising premises to meet demand and enable collaboration; and re-establishing quality as a core value within time-pressured systems.

The underpinning principles of equity, integration, and sustainability are not optional. They are essential if new models are to succeed. Participants were clear that without

addressing inequity, fragmentation, and over-stretch, efforts to transform general practice risk replicating the very challenges they aim to resolve.

This review does not begin with a blank slate - it begins with the knowledge and concerns of those living and working within the current system. By anchoring the planning phase in this engagement feedback, Dumfries and Galloway can design future models that are more inclusive, more resilient, and more connected to what matters to people.

It is also evident that any strategic reform must be supported by meaningful engagement, transparent decision-making, and honest reflection on what is and isn't working. Many contributors called for continued involvement throughout the review process - not just as informants but as partners in change.

There is strong appetite for innovation, collaboration, and local autonomy. What stakeholders want is a system that allows them to care well - for their patients, for their teams, and for themselves. The review must therefore be bold in its vision but grounded in practical, co-produced solutions that acknowledge complexity and support implementation.

In conclusion, the engagement findings offer more than insight - they provide direction. They chart a path forward that is ambitious, values-led, and rooted in the realities of general practice. The challenge now is to use this knowledge well - to guide the next stage of the review and to shape a future for general practice that is fit for purpose and worthy of the trust people place in it.