

Funded by



In collaboration with



Telehealth-Mediated Medication Assisted Treatment and Online Engagement (TMAT-OLE)

Pilot Study on the Implementation of Telemedicine for Medication-Assisted
Opioid Use Disorder (TMOUD) in NHS Fife

March 2025

TMAT-OLE DigitAS St Andrews project team

Sophie Given

Susanna Galea-Singer

Joe Schofield

Alexander Baldacchino

Joseph Tay Wee Teck

Contents

1.Introduction.....	3
1.1 Background.....	3
1.2 Aim.....	3
1.3 Methods.....	3
1.4 Risk Management Domains.....	4
1.5 Approvals and Ethics.....	5
2.Results: Clinician Interviews.....	5
3.Conclusion: Clinician Interviews.....	8
4.Results: Observation of Consultations.....	9
4.1 Logistics and Technical.....	10
4.2 Consultation Environment and Communication.....	12
4.3 Clinical Workflow and Decision-Making.....	12
5.Discussion.....	14
5.1 Availability.....	14
5.2 Accessibility.....	15
5.3 Acceptability.....	15
5.4 Quality.....	16
5.5 Consistency with Current UK Telemedicine Research.....	16
5.6 Strengths and Limitations.....	17
6.Recommendations.....	18
7.References.....	19
8.Appendices.....	22
Appendix 1 – Near Me Instruction Guide.....	22
Appendix 2 – Near Me Consultation Observation Sheet.....	22
Appendix 3 – Table.....	22

1. Introduction

1.1 Background

Near Me is a video conferencing software used across NHS Scotland for providing virtual NHS appointments to patients. It has been successfully used in various clinical settings since the COVID-19 pandemic and has been effective in enhancing access to care, particularly for individuals facing geographical or mobility barriers (Scottish Government Technology Enabled Care Programme, 2024). Despite supporting literature advocating for the use of Telemedicine-delivered Medication for Opioid Use Disorder (TMOUD), implementation of this model has not been widely adopted across Scotland.

NHS Fife was selected for this study due to established partnerships with, and proximity to, the research team. The TMAT-OLE DigitAS project (TMAT-OLE Report to Funders, 2024) explored TMOUD within the Scottish context, to identify key clinical risks in implementing online addiction services and to understand how digital interventions can strengthen service offerings and delivery. This pilot study serves as an additional evaluation to support its implementation.

This study is not a full qualitative analysis of TMOUD, but rather an attempt to identify and describe key risk factors related to its implementation. Using Carroll's (2000) Healthcare Enterprise Risk Management Framework, we examined the strategic, operational, clinical, financial, human capital, legal, and technological challenges encountered in this initial adoption phase. The objective is to provide evidence-based recommendations to inform future scaling of TMOUD in Scotland.

1.2 Aim

The findings aim to supplement existing evidence, offering practical insights into the feasibility, challenges, and risk factors associated with adopting TMOUD via Near Me within NHS addiction services in Scotland.

1.3 Methods

A total of 23 Patients from NHS Fife Addiction Services were selected for Near Me consultations. Each patient had an established relationship with the addiction service and had previously attended in-person consultations to mitigate known risks. Patients were sent appointment letters, as per normal practice, two weeks before the appointment. The appointment letter contained a printout instruction guide, 'Attending your appointment by video', (Appendix 1). The letter informed the individual to contact the service if they had any issues or concerns regarding this appointment.

Each consultation was observed by a researcher who completed an observation sheet (Appendix 2) covering the following topics.

- Logistics and Technical: Preparation, appointment arrangement, timeliness, and technical issues.
- Consultation Environment and Communication: Physical environment, communication between patient and clinician.
- Clinical Workflow and Decision-Making: Prescription changes, documentation, and clinician reflection.

1.4 Risk Management Domains

Additionally, semi-structured interviews were conducted with prescribing clinicians from the same service, including three addiction specialty doctors, four non-medical prescribers (from nursing and pharmacy backgrounds), and a general practitioner. Using a multi-disciplinary approach, a broad range of views could be captured from the different staff groups likely to be involved TMOUD delivery. These interviews aimed to assess clinicians' understanding of Near Me, their perceptions of its efficacy, and perceived risks in implementing TMOUD within the clinical setting. Carroll's (2000) Healthcare Enterprise Risk Management Framework has been used to provide a structure for the analysis of the data from the semi structured interview. This has been adopted to ensure consistency in this review of feasibility as this is the same framework used withing the TMAT-OLE report to funders (2024).

Table 1. Risk management domains from TMAT-OLE report to funders (2024).

Risk domain	Description
Strategic	Strategic The focus and direction of the organisation. For the purposes of this project, this domain included consideration of national (Scottish Government, NHS Scotland) and local (Alcohol and Drug Partnership, Health Board, and addiction service) strategic priorities.
Operational	This domain is concerned with the business of healthcare delivery including internal processes and systems, documentation, internal controls, and management oversight.
Clinical / patient safety	Risks associated with the delivery of care to patients and other beneficiaries of healthcare. This includes consideration of evidence-based practice, safe prescribing, and avoidance of serious adverse events.
Financial	Decisions that affect the financial sustainability of the organisation. This includes utilisation of resources such as the number of staff, funded staff time, clinic capacity, and inefficiencies resulting from appointments where the patient did not attend.
Human capital	The organisation's workforce including employee retention, job satisfaction, staffing, absenteeism, productivity, fatigue, and compensation.
Legal / regulatory	Legislation and professional regulations governing the prescribing of medications in general and, in the context of addiction services, controlled drugs as MOUD.
Technological	Includes hardware and software involved in the delivery of healthcare, plus techniques, systems and methods of organising and transmitting

	information. Extends to include electronic health records and monitoring / reporting systems. Includes considerations of data protection and confidentiality of health data.
Hazard	Traditionally this domain includes hazards related to natural exposure and business interruption e.g. extreme weather, natural disasters, pandemics.

To validate the clinical risk framework (Tay Wee Teck et al, 2024) the observation questions (Appendix 2) were created to ensure that the main risks were being observed during the consultation. The lead clinician who conducted the consultations was knowledgeable of the risk framework and used this as a guide when selecting appropriate patients and having considerations of how this type of consultation differed from in person and what, if any, adjustments may need to be considered.

1.5 Approvals and Ethics

Ethics approval was sought from the NHS Fife Research, Innovation and Knowledge Department in the form of a Caldicott application. Two applications were submitted and approved for both the clinician and patient interviews. Prior to the interviews and consultations commencing, both patients and clinicians were reminded that participation was voluntary and so asked if they were happy to proceed.

2. Results: Clinician Interviews

Clinicians generally understood that Near Me was a video conferencing platform for clinical appointments which was introduced during the COVID-19 pandemic. The term telemedicine was not fully understood and instead staff were more familiar with telehealth. All clinicians reported using telephone as a means of conducting check ins with patients and appointments, however, only one clinician had previously used Near Me or video conferencing and none had experience of using it in routine practice.

Strategic Risks

Most clinicians identified that using telemedicine and Near Me could benefit patient access to services, but a variety of potential barriers were identified.

“Near me was introduced during the pandemic to allow safe consultation with patients, it remains an option to our service. It gets manned every day and talked about but never used in practice, as far as I am aware.”

Despite this staff member’s awareness, other clinicians were unaware that Near Me was available within the service, which accounts for its lack of use. Furthermore, this indicates a strategic risk whereby a system exists but is not fully understood or is utilised with minimal staff training. It was noted in the TMAT-OLE report to funders (2024) that the

absence of electronic prescribing was a barrier to TMOUD implementation. This was reiterated throughout the interviews and one clinician stated,

“The main barrier for us is that it is physical paper prescription. If I was doing this from home, I could not print or get to pharmacy and even if doing it from clinic they still need to come in for prescription, I therefore actively avoid remote consulting for prescriptions due to this.”

Without the introduction of electronic prescribing into the service, the strategic potential for successful uptake of telemedicine appears to be unlikely and this is one of the largest barriers to its success.

Operational Risks

Several clinicians raised concerns over the lack of guidance on the use of telemedicine within the addiction service and this was mostly a concern in terms of prescribing risk. Most clinicians said they would be open to using Near Me if clarity was provided, however, two clinicians raised it was not something they would consider at all.

Of the eight clinicians, four had used Near Me to engage with patients during the pandemic and only one had used the platform in their post-pandemic clinical practice. In this instance, the clinician had stated that this was fewer than 5 times in the last 3-6 months, and, it had been in general practice rather than the addiction service.

Clinical and Patient Safety Risks

Clinical and patient safety concerns were raised throughout the interviews and the main concerns were the inability to carry out a physical assessment of the patient, conduct drug testing, or to make a holistic assessment of patients using non-verbal information including appearance and odour of alcohol or other drugs.

“Limitations are not being able to drug test or see person and see everything about them to provide appropriate care and person centred.”

“Patients can present well over phone in terms of dress, but neglect is hidden as there is no ability to identify malodour. Is this self-neglect, housing problem? This is hidden.”

Most clinicians shared the same concerns and ruled out using TMOUD due to these limitations. Lastly, clinicians raised issues with rolling out TMOUD as they did not feel their current working environment was conducive to being able to conduct private video or phone calls.

“I work in an office with 15 other people—how would we all be able to do video calls? The environment isn’t suitable.”

Financial Risks

Telemedicine services can have a cost saving benefit to both patients and the service (TMAT-OLE Report to Funders, 2024). This was further evidenced during interviews where staff highlighted this as a key benefit.

“Time constraints are less, no travel to outlying clinics, west Fife is a large area to travel and is often affected by weather.”

Contradicting this, financial constraints of patients were also considered where one clinician stated that many of their patients do not have smartphones due to them being sold, lost, or numbers being changed. This was a concern also highlighted in the TMAT-OLE Report to Funders (2024). Therefore, introducing TMOUD could be seen as introducing a financial barrier to some individuals. Lastly, concerns were raised about the ongoing sustainability of telemedicine services in the absence of ongoing and structured funding support.

“If telehealth is not currently used, and the funding goes, then there’s no real incentive to try and expand it when face-to-face remains the standard.”

Human Capital Risks

One documented benefit of telemedicine is that it can reduce administrative workload and workforce challenges. One clinician raised that they routinely use telemedicine (phone calls) to contact patients, noting that this is done during administration time and is additional to routine appointments and therefore increases workload. Concerns were also raised around impacts to staff morale from doing back-to-back calls and losing the human interaction of in-person consultations. There is also risk to staff satisfaction due to the absence of electronic prescribing. The current work-around relies on administrative or nursing staff taking paper prescriptions to local pharmacies or delivering them to patients when there has been a change to prescriptions following a telephone or video consultation. This was viewed as a task with little value and a way of ensuring continuity of care without addressing the underlying problem that limits the implementation of TMOUD.

Legal and Regulatory Risks

The main concerns regarding legal and regulatory risk primarily focused on prescribing regulations. There was clinician’s risk adversity and cautious approach amongst prescribers, further indicating a reason for limited uptake. One clinician stated, “Prescribing remotely is an issue—without a urine sample, we cannot confirm whether they have drugs in their system. Seeing a new patient is even more risky.”

Technological Risks

All respondents identified strengths in using Near Me. Half of the clinicians detailed the key strengths of using the technology was making services more accessible for those in rural areas, those who have mobility issues and individuals that experience anxiety. However, most clinicians also stated concerns in terms of accessibility of the technology and this creating a further barrier for individuals accessing services.

“A lot of patients do not have phones, lose them, break them, sell them, change numbers and so this is just not possible.”

The main themes identified in relation to challenges of using the technology were, a lack of appropriate technology, training and privacy concerns. Furthermore, challenges with interoperability between current clinical digital systems was noted, especially, the introduction of new systems causing confusion and an unmet need for training.

“Scotland’s electronic health systems are very poor, this overall needs to be addressed and more important things needing addressed. Near Me is only one small system in amongst lots of others. Electronic prescribing is the biggest barrier to this being successful.” This perceived inefficiency and added to the clinician’s hesitancy in uptake of TMOUD.

Hazard Risks

Despite limited uptake of Near Me within the service, most clinicians reported frequent use of the phone to reach patients when barriers existed. Some of these barriers included mobility issues, geography, and the impact of the COVID-19 pandemic." This highlights that TMOUD can be an important communication tool, especially when there are new challenges introduced. The clinical setting has good quality internet and reliable phone lines. There is also a business continuity plan for power failure. Therefore, no other further hazard risks were discussed and/or considered by the clinicians.

3. Conclusion: Clinician Interviews

Whilst most clinicians knew what Near Me was, their knowledge was mostly gained from experiences as a patient and in other clinical settings, rather than through their roles as clinicians of addiction services. Awareness of the risk framework was poor, which may have contributed to concerns regarding prescribing risks and the belief that in-person consultations were the only safe and effective approach within the addiction service. A lack of training and understanding of the platform further caused concerns, both from the clinicians’ perspective and in terms of perceived challenges and risks for patients.

The greatest barrier to adoption was the inability to recognise the benefits of implementation for both patients and clinicians, which was mostly attributed by the absence of electronic prescribing in Scotland. Enhancing platform usability, providing

comprehensive training for both staff and patients, and addressing communication barriers could significantly improve clinicians’ willingness to use Near Me or other telemedicine/telehealth solutions.

4. Results: Observation of Consultations

Findings from the 23 consultations are presented under the following headings to enhance understanding of the main themes.

- **Logistics and Technical:** Preparation, appointment arrangement, timeliness, and technical issues.
- **Consultation Environment and Communication:** Physical environment, communication between patient and clinician.
- **Clinical Workflow and Decision-Making:** Prescription changes, documentation, and clinician reflection.

Table 2 presents demographic information for the individuals attending the Near Me consultations. Most participants were male (74%), with an average age of 46 years old. All but two of the participants came from Northeast Fife. Most (74%) were attending NHS Fife Addiction Services for help with a diagnosis of opioid use disorder even though poly-drug use was involved in most of these cases. Amongst the six patient participants without opioid use disorder three had alcohol dependency only, while three were dependent on benzodiazepines. These demographics align with the wider patient profile seen within NHS Fife’s Addiction Services.

Table 2. Patient Demographics and appointment reason

Pt	Age	Gender	Locality in Fife	Psychiatric Diagnosis	Drug Dependency/Use Disorder	Reason for clinical appointment
1	40-49	F	Northeast	Acute Stress Disorder	Opioid	Follow up after changes to prescription
2	40-49	F	Northeast	Depression	Opioid Cocaine Cannabis Benzodiazepine	Follow up after changes to prescription
3	50-59	M	Northeast	Depression	Alcohol Opioid	Mental health/treatment check in
4	40-49	M	Northeast	Depression	Alcohol	Mental health/treatment check in
5	40-49	M	Northeast	Depression PTSD	Opioid	Follow up after changes to prescription
6	50-59	M	Northeast	Depression	Opioid Cocaine Alcohol	Follow up after changes to prescription

7	40-49	M	Northeast	Depression PTSD	Opioid Cocaine Benzodiazepine	Prescription change
8	40-49	M	Northeast	Depression PTSD	Alcohol	Follow up after changes to prescription
9	50-59	M	Northeast	Depression	Opioid Benzodiazepine	Follow up after changes to prescription
10	30-39	F	Northeast	PTSD	Opioid Benzodiazepine	Prescription change
11	40-49	M	Central	Anxiety	Opioid	Mental health/treatment check in
12	40-49	M	Northeast	Depression	Opioid	Mental health/treatment check in
13	50-59	F	Northeast	Depression	Benzodiazepine	Mental health/treatment check in
14	40-49	M	Northeast	Depression	Opioid Cocaine	Mental health/treatment check in
15	50-59	M	Northeast	None	Benzodiazepine	Mental health/treatment check in
16	50-59	M	Central	Depression	Benzodiazepine	Prescription change
17	40-49	M	Central	Depression	Opioid Benzodiazepine	Mental health/treatment check in
18	40-49	M	Northeast	PTSD	Opioid Cocaine Benzodiazepine Alcohol	Mental health/treatment check in
19	30-39	M	Northeast	Depression	Opioid Benzodiazepine	Prescription change
20	40-49	M	Northeast	ADHD	Opioid Cocaine Benzodiazepine	Mental health/treatment check in
21	40-49	M	Northeast	PTSD	Opioid Cocaine Benzodiazepine Alcohol	Mental health/treatment check in
22	40-49	F	Northeast	Depression	Alcohol	Prescription change
23	50-59	F	Northeast	Acute Stress Disorder	Opioid Benzodiazepine	Follow up after changes to prescription

4.1 Logistics and Technical

Of the 23 scheduled consultations, 39% of patients did not attend their appointment, while an additional 22% were only reached via a follow-up phone call. Only 9% of consultations were successfully conducted using Near Me (Figure 1). All appointment letters were sent at least two weeks in advance by the administrative staff, which was standard practice for in person appointments. Among those who did not attend, six patients requested a change to their appointment. Two patients preferred in-person consultations due to anxiety and recent significant changes in their addiction, and four chose telephone consultations instead due to being stressed or unable to feel confident in using the technology. In one instance, an addiction nurse/keyworker had helped a

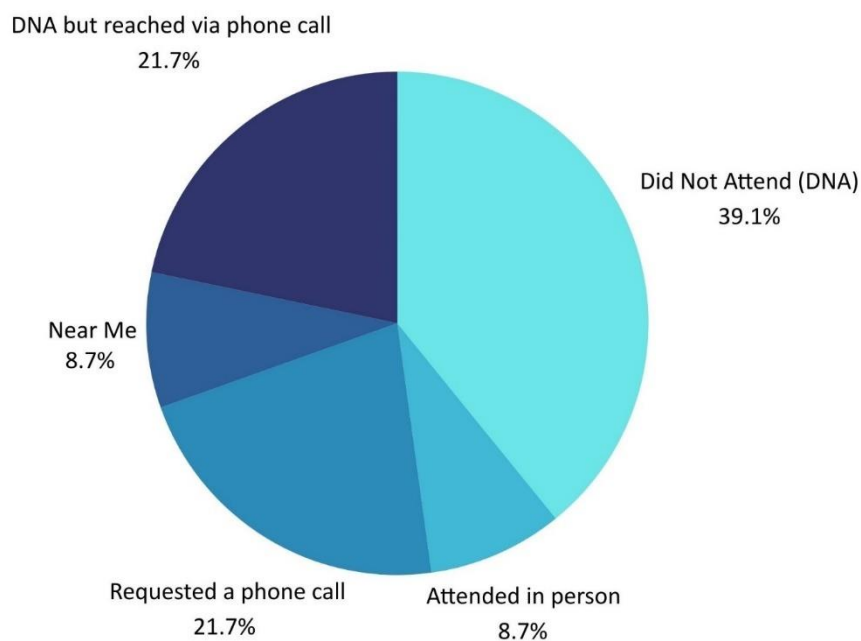
patient an in person visit to set up Near Me, but the patient still opted for a phone consultation of the day due to finding it too difficult.

Although the introduction of Near Me was new to the clinician’s workflow, they did state that telephone consultations are routine within their practice. The clinician prepared for the consultation in the same format, which included:

- Confirmation of the appointment letter being sent.
- Review of the patient’s clinical history and previous attendance using MORSE (the electronic paper record used within the service) and the Health and Social Care portal.
- A review of the patients’ current prescriptions and any recent changes.

Technical accessibility issues were frequently documented throughout. Five patients reported being unable to use Near Me due to confusion or difficulty navigating the platform. In one instance, a patient was placed in the mental health Near Me waiting room rather than the addiction service, leading to a delay in their consultation. Three telephone consultations were affected by difficulties in the sound which limited communication between the clinician and patient and made the flow of the conversation challenging (Table 3, appendix 3).

Figure 1- Appointment Attendance



4.2 Consultation Environment and Communication

All consultations were conducted in a private office space within addiction services premises. The office had a closed door, a computer desk with appropriate setup for video consultations, including a webcam and headphones. Throughout all consultations there was minimal external noise noted apart from in the corridor where noise was occasionally noted but did not impact the ability to conduct the consultation. Internet and phone connections worked throughout with no issues at all.

Privacy was a concern in four phone consultations (Table 3, Appendix 3), where family members were present in the room with the patient. In one of the successful Near Me consultations, a family member had assisted in setting up the call but remained in the room. As the patient was known to the clinician, the clinician reported after the consultation that this may have limited the patient's ability to speak freely and affected the range of questions, they felt they could ask. The clinician fed back after the consultation that this is something they are aware as a main difference to in person consultations. These instances raised concerns about the level of confidentiality that could be maintained in remote consultations.

The clinician reported a preference for Near Me consultations compared to phone consultations due to the ability to observe the patient's appearance and body language as this allows for a more holistic and person-centred approach. However, the sample size was too small to determine whether Near Me consultations influenced clinical decision-making, such as changes to prescriptions or other treatment outcomes, in comparison to phone consultations. Despite the low number of successful Near Me consultations, the limited observation did indicate that this was more effective in facilitating communication compared to telephone calls.

The most frequently reported communication challenges were interruptions affecting the clinician by other staff members, which occurred twice during phone calls and once during an in-person consultation. It is worth noting that the viewing window to the room showed the clinicians back and therefore it would not have been obvious for staff that they were on a call. The clinician discussed this and considered it may be worth adding a 'do not disturb' sign to the door in future.

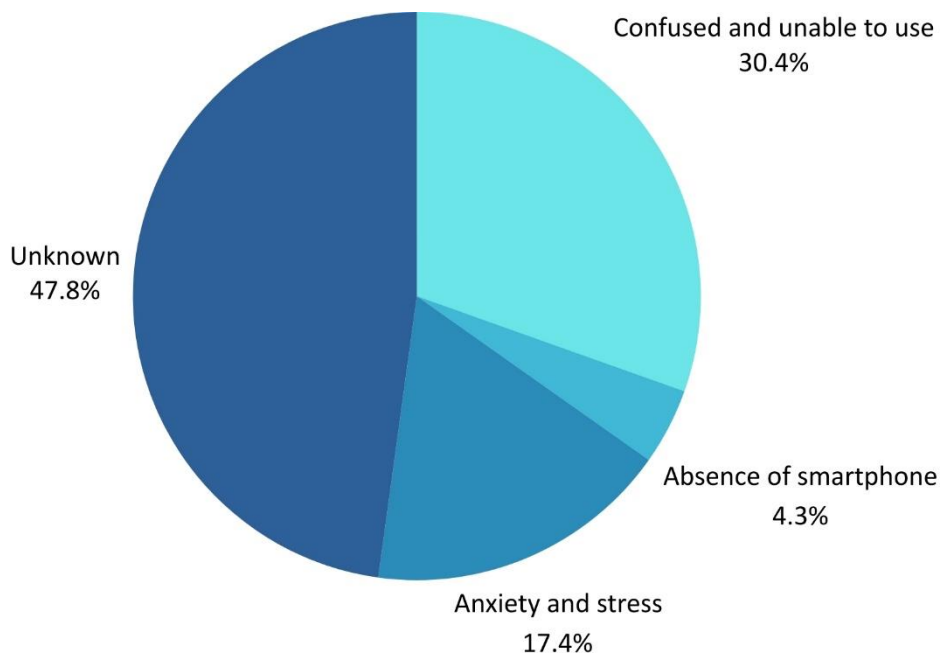
4.3 Clinical Workflow and Decision-Making

Consultations were observed over three days. Of the 23 planned Near Me consultations, only two were successfully conducted using the platform. The 22% of patients who were reached via phone call were all contacted up to 15 minutes after the appointment start time and were attempted to be reached up to twice. In all instances, these appointments lasted no longer than 20 minutes. Compared to the two in-person appointments, which

were of 40 and 45 minutes duration. The in-person consultation delays had a knock-on effect on other appointments scheduled for that day, causing delays in the overall service schedule. The method of telephone consultation resulted in a clear reduction in clinician time. While this efficiency may have benefited scheduling, the shorter consultation time appeared to limit the depth of clinical discussions and the ability to assess non-verbal cues. However, this did not impact on the consultation outcome from the clinician's perspective. Understanding the patients perspective was unknown and could be explored further.

Prescription changes took place regardless of which type of consultation (video, phone or in person). The clinician reported no concerns regarding making prescription changes via telephone or video consultations. However, antipsychotic prescription changes still required GP approval, which introduced delays in implementation. Addiction-related prescriptions could be directly changed by the clinician, but the NHS Scotland requirement for wet signatures on prescriptions meant that an additional step was needed to ensure the prescription was delivered to the patient. This was either managed by the patient collecting the prescription in person or by an addiction nurse delivering it to the designated community pharmacy.

Figure 2- Reason for not using Near Me



5. Discussion

The findings from this study highlight the complexities of implementing Telemedicine for Medication-Assisted Opioid Use Disorder (TMOUD) within NHS Fife Addiction Services. In the study, Near Me was being introduced to assess if this platform improved accessibility and efficiency in addiction related care, however, the overall uptake remained low and therefore difficult to make conclusive recommendations based on this. This was due to multiple barriers, including patient preferences, technical challenges, and systemic limitations such as the absence of electronic prescribing.

Using the Availability, Accessibility, Acceptability, and Quality (AAAQ) framework (GBV Guidelines, 2019), alongside insights from the Digital Lifelines DHI Discover and Define Final Report (Raman, Jasim, and Burton, 2023), this study assess the feasibility and challenges of Near Me within addiction services.

5.1 Availability

The infrastructure for Near Me was already established within the service prior to the commencement of this study and it is thought that access to it has been available since mid-2020. However, despite its availability there has been minimal use across the service in this time and over the days of the study there was very low uptake:

- 9% of consultations were successfully conducted using Near Me.
- 39% of patients did not attend their scheduled appointment.
- 22% of patients were reached only via a follow-up phone call.

This indicates that simply having access to the technology does not ensure uptake or success. The lack of clinicians' training, awareness, and routine integration into addiction services further limited its use, especially when helping clinicians understand and manage risk. The Digital Lifelines DHI Discover and Define Final Report (Raman, Jasim, and Burton, 2023) emphasises that digital solutions must be embedded into service pathways rather than offered as standalone alternatives, which aligns with these findings. The idea that patients should be "...supported in a way that works for them, which includes a 'no wrong door' approach with joined up services.", further demonstrates that digital consultation should form part of a service offering (Raman, Jasim, and Burton, 2023p. 6). Having differing appointment options and providing more choice, may increase service uptake.

5.2 Accessibility

While digital exclusion was a concern raised by clinicians in both this study and the TMAT-OLE Report to Funders (2024), the study found that all participants but one owned a smartphone (Figure 2). This highlights that access to technology is not the main barrier and instead most accessibility issues mostly came from:

- Technical issues with the platform itself, caused one patient to struggle logging into Near Me and being placed in the wrong waiting room.
- Poor understanding of the technology and low digital literacy meant that five patients reported being unable to navigate the platform without assistance and therefore did not join the consultation using the technology.
- Anxiety and stress in relation to using a new technology, resulted in a significant number of patients requesting phone or in-person appointments instead.

The Digital Lifelines Report states, “access to integrated digital services that enable people to be supported in a way that works for them,” is essential to ensure success (Raman, Jasim, and Burton, 2023p. 6). To support these patients, step-by-step guidance could be delivered by a clinician or peer before their first digital consultation. Alternatively, the first Near Me consultation could be undertaken in clinic but in different rooms to help trouble shoot with any issues. Furthermore, this could be integrated into addiction nurse visits, ensuring patients practice using Near Me in a supportive environment before being expected to engage independently. Almost all patients had been seen within the last two weeks by their addiction nurse, therefore, making this solution easy to implement.

5.3 Acceptability

Patient preferences played a crucial role in the limited adoption of Near Me. The findings suggested that stress and anxiety in relation to the technology but also due to their current condition played into the preference.

- Patients requested phone consultations as they felt more comfortable with the technology.
- Privacy was compromised in some phone consultations, where family members were present, limiting open discussions.
- The clinician preferred Near Me over phone calls due to the ability to observe body language and some of the patient’s environment. Furthermore, physical cues and non-verbal cues were present which can aid the clinician in their holistic assessment. However, due to the small sample size, it was unclear if Near Me consultations resulted in different clinical outcomes compared to phone or in-person visits.

The AAAQ framework highlights the importance of patient-centred care. While Near Me offers clear advantages in terms of accessibility when barriers exist, patients with anxiety or chaotic lifestyles may require alternative telemedicine options or hybrid models.

5.4 Quality

It was overall difficult to measure quality because of the size of the study. Telephone consultations were more efficient in terms of timings but did appear to lack the same depth as in person and this was evidenced in the time taken for these differing appointment types. In person consultations took double the amount of time compared to telephone. Whilst this is advantageous when looking at scheduling, it may have reduced the overall depth of the consultation and patients' willingness to share.

Prescribing took place with no concerns from the clinician, however, challenges existed, with antipsychotic medication changes requiring GP approval. This can cause a delay but remains current practice in all types of consultation types (Near Me, telephone and in person). The absence of electronic prescribing meant prescriptions still needed to be physically collected or delivered. Both issues limit the success of TMOUD.

DHI's Discover and Define Final Report (Raman, Jasim, and Burton, 2023), highlights the importance of seamless integration for uptake of services and this barrier of prescribing demonstrates a significant challenge in ensuring the success of TMOUD. Without electronic prescriptions, Near Me will continue to offer limited benefits to clinician workflow.

5.5 Consistency with current UK telemedicine research

It is important to recognise that this research has surfaced a common theme identified consistently in UK-based telemedicine research (Shaw et al., 2021; Wherton et al., 2022) and the literature on TMOUD (Teck et al., 2023). Following Wherton et al., for both sustaining an IT infrastructure for upscaling telemedicine and mitigating digital exclusion, the issue is only one third technological. The other two thirds are about pre-existing or new interdisciplinary and organisational collegial partnerships and clinical processes and care pathways which allow coordination and interfacing between the material and digital aspects of health care. In other words, the implementation of TMOUD is more so a social endeavour than a technical one.

Unfortunately, this also means that TMOUD implementation is far more challenging than simply improving the interface (for example the near-me platform) or even addressing digital exclusion. Social aspects of implementation include altering the ways in which different professionals and other actors interact and share accountability through modified clinical processes, structure their workday and in-person responsibilities, adapt to boundary changes in the scope of their practice, and adjust to changes in role

and resources allocation. The TMOUD implementation model, combining the international literature with Scottish perspectives, has been developed precisely to address the socio-technical aspects of this complex endeavour (Tay Wee Teck et al., 2023).

5.6 Strengths and limitations

Within the UK context, this study is the first to report on patient participants' observation from the perspective of the clinician when delivering TMOUD. This research approach has been used elsewhere in UK telemedicine research (Greenhalgh et al., 2022, 2021, 2018) and is an important bridge to understanding the technical aspects of telemedicine (e.g. technology and infrastructure) and the social aspects (e.g. acceptability, risk perception, changes in practice). Critically, as the study was intended to examine the "work-as-done" rather than "work-as-imagined", it was not possible to explore variations in the delivery of TMOUD which may have shifted clinician risk perceptions. In the absence in the UK of an established specification of TMOUD and its variations (see Tay Wee Teck et al., 2023 for example), clinicians focussed on a linear model of consulting where clinical decisions were based solely on a single audio or video telemedicine consultation between clinician and patient. The focus among clinicians also seemed to be on diagnosing Opioid Use Disorder and deciding on whether to prescribe MOUD based on this consultation.

In fact, hybrid forms of TMOUD were common in the extant literature including scenarios where the clinician may be located remotely, the patient was in a telemedicine hub or even at home, but with a community health worker, support/key worker or nurse physically present with them. In Yorkshire for example, the only UK RCT of TMOUD applying to review patients only involved exactly such a model, with evidence for effectiveness, efficiency, safety and acceptability (Mayet et al., 2023, 2021). In Ireland, the necessary clinical examination, brief medical assessment and drug testing would be carried out by trained nurses prior to a telemedicine consult with a clinician to enable MOUD initiation where appropriate, with an in-person consult occurring between 2-4 weeks later (Durand et al., 2022). Treatment naive patients would tend to be excluded from this pathway. Other examples from the US included hybrid TMOUD models in primary care settings where formal physical examination, drug testing and ECG could be completed prior to the telemedicine consult with the prescribing clinician (Hser, 2021; Hser et al., 2023). In Scotland, seven rural ADP areas submitted a joint proposal on diversifying treatment access options to patients through telemedicine, support with travel and models of care incorporating GP practices, home, community hubs; with the support of generic primary and secondary care staff (Public Health Scotland, 2023). In future iterations of similar work, a "Discover, Define, Develop and Deliver" approach in accordance with the Double Diamond design strategy (Raman and Simms, 2023) should be considered in advancing TMOUD as a treatment option in Scotland.

6. Recommendations

Based on the study findings and guided by the AAAQ framework and Digital Lifelines recommendations, the following actions should be considered to enhance the integration of Near Me within addiction services alongside the use of the risk framework Tay Wee Teck et al. (2023).

a) Find alignment with national telemedicine initiatives

Whether patients are offered telemedicine through addiction treatment services or not, they are certainly having to contend with it in other settings, for example when trying to access urgent and unscheduled care. The number of PWUD attending Accident and Emergency departments increased by 15% in 2023, and in 2019/2020, individuals with substance use disorder had ten times, and people with complex mental health issues, nine times more emergency department visits than those in the low health user group (Mooney and Barnes, 2022). Building on COVID-19 learning, the national redesign of urgent care has been underway in Scotland, incorporating increased use of audio and video telemedicine through the near-me platform. Further, telemedicine has played a significant role in the National Centre for Sustainable Delivery for Health and Social Care (CfSD) plans to improve clinical pathways and service delivery (Margaret Wood et al., 2024), including in the redesign of urgent care. The expertise contained within the CfSD may be invaluable to improving addiction treatment services and potentially in introducing TMOUD models yet seems largely inaccessible at present.

b) Improve Digital Literacy and Support for Patients

Addiction nurses or other members of the team should assist patients in-person to set up Near Me during a prior face-to-face visit or have first calls take place in clinic. Establishing a helpdesk for troubleshooting and ensuring patients receive immediate assistance if they struggle to access the platform, could both support patients and aid uptake.

c) Adopt a common specification of TMOUD and variations of this model

This will facilitate a more nuanced risk assessment of each individual model and allow for a risk benefit analysis based on specific clinical scenarios (for example, mental health reviews, reviews of patients already on MOUD, people with significant disability and travel challenges, people supported within primary care settings). These specifications have been identified in the literature (Tay Wee Teck et al., 2023a, 2023b).

d) Process map current clinical pathways and identify gaps which can be addressed by telemedicine

This approach has been identified as a critical first step in designing telemedicine systems and in addressing infrastructural and digital exclusion risks

e) Address Systemic Barriers (an environment supporting Qi)

Urgently advocate for the incorporation of MOUD prescribing into current electronic prescribing systems planning to address inequities in access to national standards of care for PWUD. Develop a better local system for prescribing, including e-prescribing, whilst waiting for the national system to be developed and rolled-out'

f) Offer TMOUD as part of catalogue of appointment options (Hybrid)

Allow patients to choose their consultation format (Near Me, phone, or in-person) to improve engagement. A structured approach should be used, where patients unfamiliar with digital consultations first engage via phone, then transition to video if clinically appropriate.

g) Improve Clinician Training, Awareness and Use of Risk Framework

- Train clinicians on Near Me and how to support patients to use the platform.
- Ensure clinicians understand the risk framework and have an opportunity to discuss concerns relating to risk with managers.
- Review the use of the current daily Near Me drop-in services, which have existed since 2020 but remain underutilised due to lack of staff and patients' awareness.
- Develop guidelines for prescription changes via Near Me, ensuring clinicians feel confident in prescribing remotely.
- Address Privacy and Environmental Concerns.
- Encourage private settings for remote consultations. Patients should be advised to attend their Near Me or phone call in a confidential space.
- Introduce "Do Not Disturb" signage to prevent interruptions during video consultations.

h) Develop a deeper understanding of human behaviour in relation to drug and alcohol use, alongside telemedicine, to strengthen implementation models.

Recognise that the way Near Me was received by this patient group differs significantly from other services. The human factors and behaviours underlying this difference are not yet fully understood and warrant further exploration.

7. References

Carroll R.L. et al. 2000 Enterprise Risk Management: Implementing ERM American Society for Healthcare Risk Management, Chicago available from: https://www.ashrm.org/system/files/media/file/2020/12/ERMImplementing-ERM-for-Success-White-Paper_FINAL.pdf Accessed 25/02/25

Durand, L., Keenan, E., Boland, F., Harnedy, N., Delargy, Í., Scully, M., Mayock, P., Ebbitt, W., Vázquez, M.O., Corrigan, N., Killeen, N., Pate, M., Byrne, P., Cousins, G., 2022. Consensus recommendations for opioid agonist treatment following the introduction of emergency clinical guidelines in Ireland during the COVID-19 pandemic: A national Delphi study. *International Journal of Drug Policy* 106, 103768. <https://doi.org/10.1016/j.drugpo.2022.103768>

GBV Guidelines (2019)GBV Guidelines (2019 AAAQ) AAAQ *framework: Availability, Accessibility, Acceptability and Quality*. Available at: <https://gbvguidelines.org/wp/wp-content/uploads/2019/11/AAAQ-framework-Nov-2019-WEB.pdf> (Accessed: 27 March 2025)

Greenhalgh, T., Rosen, R., Shaw, S.E., Byng, R., Faulkner, S., Finlay, T., Grundy, E., Husain, L., Hughes, G., Leone, C., Moore, L., Papoutsis, C., Pope, C., Rybczynska-Bunt, S., Rushforth, A., Wherton, J., Wieringa, S., Wood, G.W., 2021. Planning and Evaluating Remote Consultation Services: A New Conceptual Framework Incorporating Complexity and Practical Ethics. *Front. Digit. Health* 3. <https://doi.org/10.3389/fdgth.2021.726095>

Greenhalgh, T., Shaw, S., Wherton, J., Vijayaraghavan, S., Morris, J., Bhattacharya, S., Hanson, P., Campbell-Richards, D., Ramoutar, S., Collard, A., Hodgkinson, I., 2018. Real-World Implementation of Video Outpatient Consultations at Macro, Meso, and Micro Levels: Mixed-Method Study. *Journal of Medical Internet Research* 20, e9897. <https://doi.org/10.2196/jmir.9897>

Greenhalgh, T., Shaw, S.E., Alvarez Nishio, A., Booth, A., Byng, R., Clarke, A., Dakin, F., Davies, R., Faulkner, S., Hemmings, N., Husain, L., Kalin, A., Ladds, E., Moore, L., Rosen, R., Rybczynska-Bunt, S., Wherton, J., Wieringa, S., 2022. Protocol: Remote care as the ‘new normal’? Multi-site case study in UK general practice. *NIHR Open Res* 2, 46. <https://doi.org/10.2196/jmir.9897>

Hser, Y.-I., 2021. Rural Expansion of Medication Treatment for Opioid Use Disorder (Rural MOUD): Phase 1 Feasibility Study (CTN-0102) (Clinical trial registration No. NCT04418453). clinicaltrials.gov

Hser, Y.-I., Mooney, L.J., Baldwin, L.-M., Ober, A., Marsch, L.A., Sherman, S., Matthews, A., Clingan, S., Fei, Z., Zhu, Y., Dopp, A., Curtis, M.E., Osterhage, K.P., Hichborn, E.G., Lin, C., Black, M., Calhoun, S., Holtzer, C.C., Nesen, N., Bouchard, D., Ledgerwood, M., Gehring, M.A., Liu, Y., Ha, N.A., Murphy, S.M., Hanano, M., Saxon, A.J., 2023. Care coordination between rural primary care and telemedicine to expand medication treatment for opioid use disorder: Results from a single-arm, multisite feasibility study. *The Journal of Rural Health* 39, 780–788. <https://doi.org/10.1111/jrh.12760>

Margaret Wood, David McDonald, Lech Rymaszewski, Margaret Nugent, 2024. Active Clinical Referral Triage (ACRT) & Discharge Patient Initiated Review (PIR) TOOLKIT

Mayet, S., Gledhill, A., McCaw, I., Hashmani, Z., Drozdova, Z., Arshad, S., Shahbaz, S., Huang, C., Phillips, T., 2023. Telemedicine in addictions: Feasibility randomised controlled trial. *Heroin Addiction and Related Clinical Problems*

Mayet, S., Mccaw, I., Hashmani, Z., Drozdova, Z., Gledhill, A., Arshad, S., Shahbaz, S., Phillips, T., 2021. Patient experience of telemedicine in addictions. *BJPsych open* 7, S269–S270. <https://doi.org/10.1192/bjo.2021.717>

Mooney, A., Barnes, E., 2022. *A Fractured Service: A Report on NHS Scotland*. Health Commission

Public Health Scotland, 2023. National benchmarking report on implementation of the medication assisted treatment (MAT) standards: Scotland 2022/23

Raman, S., Jasim, S., and Burton, C. (2023) *Digital Lifelines DHI Discover and Define Final Report*. Glasgow: University of Strathclyde. Available at: <https://strathprints.strath.ac.uk/84668/> (Accessed: 27 March 2025)

Scottish Government Technology Enabled Care Programme , 2024. *Near Me final report 2024*. Available at: <https://tec.scot/sites/default/files/2024-01/Near%20Me%20final%20report%20v13.pdf> (Accessed: 27 March 2025)

Shaw, S.E., Hughes, G., Wherton, J., Moore, L., Rosen, R., Papoutsis, C., Rushforth, A., Morris, J., Wood, G.W., Faulkner, S., Greenhalgh, T., 2021. Achieving Spread, Scale Up and Sustainability of Video Consulting Services During the COVID-19 Pandemic? Findings From a Comparative Case Study of Policy Implementation in England, Wales, Scotland and Northern Ireland. *Front. Digit. Health* 3. <https://doi.org/10.3389/fdgth.2021.754319>

Tay Wee Teck, J., Gittins, R., Zlatkute, G., Oteo Pérez, A., Galea-Singer, S. and Baldacchino, A., 2024. Developing a theoretically informed implementation model for telemedicine-delivered medication for opioid use disorder: qualitative study with key informants. *JMIR Mental Health*, 10, e47186. <https://doi.org/10.2196/47186>

Tay Wee Teck, J., Butner, J.L., Baldacchino, A., 2023a. Understanding the use of telemedicine across different opioid use disorder treatment models: A scoping review. *Journal of Telemedicine and Telecare*. <https://doi.org/10.1177/1357633X231195607>

Teck, J.T.W., Zlatkute, G., Perez, A., Dritschel, H., Ghosh, A., Potenza, M.N., Ambekar, A., Ekhtiari, H., Stein, D., Khazaal, Y., Arunogiri, S., Torrens, M., Ferri, M., Galea-Singer, S., Baldacchino, A., 2023b. Key implementation factors in telemedicine-delivered medications for opioid use disorder: a scoping review informed by normalisation

process theory. *The Lancet Psychiatry* 10, 50–64. [https://doi.org/10.1016/S2215-0366\(22\)00374-1](https://doi.org/10.1016/S2215-0366(22)00374-1)

TMAT-OLE Project Team (2024) *TMAT-OLE report to funders 2024*. Scotland Available at: <https://digitallifelines.scot/media/1340/tmat-ole-report-to-funders-2024-06-11.pdf> (Accessed: 27 March 2025)

Wherton, J., Greenhalgh, T., Hughes, G., Shaw, S.E., 2022. The Role of Information Infrastructures in Scaling up Video Consultations During COVID-19: Mixed Methods Case Study Into Opportunity, Disruption, and Exposure. *Journal of Medical Internet Research* 24, e42431. <https://doi.org/10.2196/42431>

8. Appendix

- **Appendix 1** – Near me instruction guide which was sent with appointment letter



Leaflet Near Me Cameron (1).pdf

- **Appendix 2** – Near Me Consultation Observation Sheet



Near Me
Consultation Observa

- **Appendix 3** – Table 3



Table 3.pdf