Digital Inclusion to Prevent Drug Related Deaths:

Scoping user needs

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Report to

Digital Lifelines Scotland

From

Drugs Research Network Scotland

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1 Introduction

1.1 Background

Scotland is experiencing an ongoing public health crisis of drug-related deaths (DRD). In 2020, 1,339 DRD were recorded in Scotland, a 5% increase on 2019 figures and more than double the figure for 2008 (574) (NRS, 2021). The Scottish DRD rate is more than three times than that of the UK as a whole and is the highest in Europe. Three-quarters of DRD occur among people aged 35+ years. There is an ageing cohort of people who use drugs (PWUD) in Scotland and their vulnerability to DRD is exacerbated by the impact of many years of substance use, and often undiagnosed/poorly managed chronic health conditions e.g., Chronic Obstructive Pulmonary Disease (Matheson et al 2018).

Barriers to care and support are created by the existing digital exclusion of people with multiple and complex needs. This has been highlighted and brought into particular focus by COVID-19 and the loss of much face-to-face support activity. This experience informed the development of the Digital Lifelines Scotland programme.

Digital Lifelines Scotland is a partnership initiative led by Technology Enabled Care Programme (Scottish Government Digital Health and Care Directorate) and Connecting Scotland (SG Digital Directorate) and is delivered in partnership with the Drugs Deaths Taskforce, Drug Research Network Scotland (DRNS), Scottish Council of Voluntary Organisations (SVCO) and Turning Point Scotland (TPS). It supports delivery of the priorities and recommendations of the Drug Deaths Taskforce, and of Overdose Detection and Responder Alert Technologies programme (ODART).

Digital Lifelines Scotland has the following high-level aims:

By 2023, a range of digital solutions and re-designed services that meet the needs of people with multiple and complex needs at increased risk of drug related harm are available and are being adopted. Specifically, that:

1. People have greater access to digital solutions that keep them safe and that enable them to become and remain connected to family, friends and relevant services that support them.
2. The services that support these citizens have the digital means to develop and strengthen the support they provide, and staff that are skilful in using and developing digital solutions to enable those they support.
3. The sector is digitally connected and collaborating, developing joined-up services and exploring innovative solutions together.

1.2 Evaluation work package one: scoping user needs

The DRNS hosted by the University of Stirling has been tasked with undertaking the evaluation of the programme. This report covers evaluation work package one which was baseline data collection to scope user needs. We use the term 'user needs' to mean the needs related to those who would be beneficiaries of the wider programme of work and specifically in terms technology-related needs.

1.2.1 Aims and objectives

The aim of work package one is to scope user needs and collect baseline data (current state of the field prior to intervention roll out) to inform the development of the Digital Lifelines Scotland programme. The specific objectives are to identify and explore the views and experience of:

1. Scottish service providers who work with PWUD to determine how they currently use digital technology to support their client group, and how technology and client/provider skills can be developed to reduce harms and improve outcomes.
2. PWUD who live in Scotland on their current use of digital technology and how technology and their skills can be developed to reduce harms and improve outcomes.

1.2.2 Key research questions

The key areas of enquiry for the evaluation are:

1. What can be learned from published academic and grey literature on the use of digital technology for PWUD?
2. What are the current digital technologies used for, by, or to support PWUD? What are the needs of PWUD in relation to digital inclusion/exclusion?
3. What are the challenges faced by PWUD and service providers in accessing digital technology?
4. How do multiple, complex needs impact on digital use?
5. What will work for whom and in what circumstances / settings / stages of addiction/recovery?
6. What issues do people face in using digital technology?
7. What are the training and support requirements to enable people to use digital technology?

This report covers research questions 3-7. Questions 1 and 2 will be addressed in a separate evidence paper.

2 Methods

2.1 Design

A mixed-methods approach was used to explore technology use by PWUD and how PWUD and staff could be supported to use digital technology. Surveys were used to collect quantitative data and focus groups were conducted to collect qualitative data. Both the surveys and focus groups were undertaken with two target groups: people who use/used drugs (PWUD) and staff members (service providers) of third sector organisations who provide services to PWUD.

Ethical approval for the study was granted from the University of Stirling's General University Ethics Panel (GUEP; 2883), the Ethics Subgroup of the Research Coordinating Council of The Salvation Army, TPS and We Are With You.

2.2 Survey data

2.2.1 Survey development
The survey content was developed in consultation with the Digital Lifelines Scotland team and in line with project aims. The survey was piloted with six TPS staff and three service users after which some changes were made to wording. Minor changes to wording of four questions were inadvertently made when uploading to the online system. This only became apparent after three surveys had been completed by PWUD. The wording was corrected and since the meaning of the questions was not changed the three completed questionnaires were integrated into the findings.

2.2.2 Sampling and participation
Two distribution approaches were used to maximise the potential for engagement in the survey. A direct email with the link to the online survey was sent to a list of 161 non-NHS services that are involved in service delivery to PWUD and the survey was promoted via social media (i.e., Twitter). The study inclusion criteria: individuals aged over 18 years, using/used illicit drugs in the past 12 months, and currently living in Scotland. Service provider inclusion criteria were people working in non-NHS services that supported PWUD. Organisations were also informed that hard copies of the survey could be provided for any PWUD without access to the internet; six services requested hard copies.

2.2.3 Survey data collection
For those with access to the internet, a link was supplied to the online survey (JISC online platform). Service staff were asked to support PWUD with online access to complete the survey by providing a web-connected electronic device within the service, or to share the link with individuals who had such devices. If this was not possible, they were asked to provide a hard copy. The hard copy was to be completed on-site by clients and placed in a sealed envelope. These sealed envelopes were then posted back to the research team who entered them into the online database (copies of the survey questions are available in appendices 1 and 2).

Information sheets were provided alongside paper copies and at the start of the online survey. Consent was requested before the start of the survey with a tick box for progress in the online and paper-based versions. Participants were provided with details of sources of information and support at the end of the survey. Participants were asked not to disclose personal information with which they could be identified.

2.2.4 Survey analysis
Survey results were downloaded from the online survey platform and used to generate tables. Basic descriptive statistics were carried out by HD and CM. Free text responses were themed using simple content analysis in word.

2.3 Qualitative data: focus groups

2.3.1 Sampling and participation
Participants were identified through researcher networks of third-sector organisations and managers of relevant organisations were provided with information about the study by email and asked to

support recruitment of the focus groups. Staff participants (service providers) were recruited through managers in services, who were asked to either set up the focus groups directly or provide a list of staff names and contact details to the research team. Staff participants were able to participate if they worked with PWUD and included those in frontline and managerial positions. PWUD participants were identified by staff in services and asked if they would participate in a focus group; convenience and purposive sampling were used to try to identify a range of experiences with technology use. The inclusion criteria for PWUD for the focus groups were the same as for the surveys, described above.

2.3.2 Focus group data collection

Face-to-face and virtual focus groups were conducted by JD, KH, TPr and DF with a total of 97 PWUD and staff participants. Eleven focus groups were conducted with PWUD (two online, nine face-to-face; n=61) and seven with staff (one face-to-face, six online; n=36). Focus groups were conducted virtually using MS Teams, Zoom or Google Meet, or face-to-face in the premises of third-sector services who supported the study. PWUD participants who attended the face-to-face focus groups were provided with refreshments. Participant information sheets were distributed to all participants prior to the focus groups being held, and written or verbal consent was collected prior to the beginning of the focus groups. Participants were asked not to share any information which could be used to identify them. The focus groups were audio-recorded using audio recorders with the permission of participants (and notes also taken) and were on average 56 minutes in duration. Focus groups followed a topic guide which differed for the two participant groups (see appendices 3 and 4). These topic guides were developed by the research team to answer the study research questions. At the end of each focus group, participants were provided with a debrief sheet to provide further information about the study and the support available. PWUD participants were given a £10 shopping voucher to thank them for their time. Researchers debriefed after the focus groups in order to aid reflexivity.

Data were transcribed in full by an experienced external transcriber who was subject to confidentiality agreements with the University of Stirling. The transcripts were combined into two datasets (one for service providers and one for PWUD), read in full by TPr, and coded line by line, following the process of thematic analysis (Braun & Clarke, 2006) and using the NVivo 12 analysis software package. An initial thematic framework was developed by TPr and HC after coding five transcripts and used to code the remainder. TPr coded the remainder of the focus groups, with HC checking for clarity/coherence. Data were arranged into themes and sub-themes by TPr and CC relating to study research questions. Data from focus groups are reported in accordance with Consolidated Criteria for Reporting Qualitative Research (COREQ) guidelines, a 32-item checklist for interviews and focus groups (Tong, Sainsbury & Craig, 2007).

3 Quantitative Survey Findings

3.1 Views and experiences of PWUD[1]

3.1.1 Participation

Over the five-month data collection period (July-November 2021), 18 PWUD completed online and paper-based surveys. This included 12 men, five women and one person who did not specify their gender. A third of participants were 40-49 years (33.3%, n=6) and the remaining were 18–29 years old (22.2%, n=4). Less than half of the participants were from small towns (44.4%, n=8), with 22.2% (n=4) from a 'large town' and 16.7% (n=3) from 'rural' areas, giving a range of geographical coverage. Geographical spread is displayed in Table 1.

Table 1. Current location of participants (n=18)

Living situation	Number	%
City	3	16.7
Large town	4	22.2
Small town	8	44.4
Rural area	3	16.7

Half of the participants lived in 'council, housing association or social housing'. Under half of the participants lived alone 38.9% (n=7), while the remainder lived with a range of others. Three participants did not disclose their living situation. Details of living arrangements are displayed in Table 2.

Table 2. Living arrangements of participants

Type of current accommodation (n=18)	Number	%
I own my home	1	5.6
Private rented	2	11.1
Council / Housing Association / Social Housing	9	50
Homeless hostel	1	5.6
With family/friends	1	5.6
Currently rough sleeping	0	0
Other	4	22.2
Living situation (n=15)	**Number**	**%**
Live alone	7	46.7
Live only with partner	2	13.3
Live with wider family members	2	13.3
Live with people not related to	2	13.3
Prefer not to say	0	0
Other	2	13.3

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[1] The term people who use/used drug is used and includes those who use or have used drugs in the past 12 months.

Half of participants had a school education (n=9), a third had a college education, and one participant had a university education. The education level attained is displayed in Table 3.

Table 3. Education level (n=18)

School	Number	%
School	9	50
College	6	33.3
University	1	5.6
N/A	2	11.1

3.1.2 Health and drug use status

Two thirds of participants had long-term physical and/or mental health conditions (66.7%, n=12). Almost half of participants reported currently using non-prescribed drugs (44.4%, n=8). Prescribed medication for problem substance use was also taken by almost half of participants (44.4%, n=8). Just over a quarter were in treatment, with the same number in recovery (27.8%, n=5). Additionally, one quarter also revealed that they consumed alcohol on regular basis (22.2%, n=4). Table 4 details reported current drug and alcohol use of participants.

Table 4. Current situation regarding drug and alcohol use (n=18)

Option	Number	%
Currently using (non-prescribed) drugs	8	44.4
In treatment for problem substance use	5	27.8
Prescribed medication for problem substance use	8	44.4
Using alcohol on a regular basis	4	22.2
Not using drugs	1	5.6
Not using alcohol	0	0
Not in treatment	2	11.1
In recovery	5	27.8
Other	3	16.7

3.1.3 Access to technology and the internet

Almost all participants reported having a device that was used for phone calls (94.4%, n=17). Two thirds of the 12 participants who responded to this question said that they used digital technology for health purposes or for accessing different services (66.7%, n=8). The majority of participants who responded owned smartphones, amongst which the majority of them had internet connection (64.7%, n=11/17). A small number of participants had access to desktop computers, tablets, smart watches, or voice assistant technologies. Details are shown in Table 5 (number of respondents varied for each option).

Table 5. Participants' access to devices and internet

Devices	Own		Access to someone else's		Regularly use		Don't have access		Devices connected to the internet	
	No.	%	No.	%	No.	%	No.	%	No.	%
Smartphone (n=18)	15	83.3	4	22.2	6	33.3	1	5.6	11	64.7
Desktop computer (n=12)	1	8.3	3	25	1	8.3	7	58.3	3	60
Laptop computer (n=14)	5	35.7	3	21.4	4	28.6	5	35.7	5	55.6
Tablet (n=12)	2	16.7	1	8.3	2	16.7	8	66.7	2	50
Smart watch/ wearable (n=11)	1	9.1	0	0	0	0	10	90.9	0	0
Voice assistant (e.g. Alexa / Google home / Siri) (n=12)	4	33.3	1	8.3	1	8.3	7	58.3	2	40

The majority of participants had constant/daily connection to the internet on their mobile phones, (88.8%, n=16). Two thirds of participants had regular/daily/constant home internet connection. Very few participants used Wi-Fi internet connection in cafés, libraries, buses, or trains to connect to the internet. The detail of internet connection is shown in Table 6.

Table 6. Access to the internet

Devices	Always		Daily		Regularly		Rarely		Never	
	No.	%	No.	%	No.	%	No.	%	No.	%
On my mobile phone (n=18)	8	44.4	8	44.4	0	0	1	5.6	1	5.6
Home connection (n=16)	5	33.3	3	20	2	11.1	2	11.1	4	22.2
Work or college connection (n=13)	0	0	0	0	2	11.1	2	15.4	9	50
Public Wi-Fi (n=15)	3	20	0	0	2	11.1	5	27.7	5	27.7
Cafe Wi-Fi (n=13)	0	0	0	0	1	5.6	5	27.7	7	53.8
Library Wi-Fi (n=14)	1	5.6	0	0	1	5.6	2	11.1	10	55.5
Bus or train Wi-Fi (n=15)	1	5.6	0	0	2	11.1	4	22.2	8	44.4
Service provider's computer / Wi-Fi (n=13)	2	11.1	3	16.7	0	0	2	11.1	6	27.7

3.1.4 Purpose of use of digital technology

Data on the purpose of digital connections i.e. connection to friends and family, service providers, health and social problems and information on drugs is presented below.

3.1.4.1 Connection to friends and family

Most of the digital technologies used by participants to connect to their family and friends were text messages and social media. Video calls were also used by almost half of the participants on a regular basis (46.7%, n=7). Table 7 illustrates participants' use of digital technologies to connect to their family or friends.

Table 7. Use of digital technologies to connect with family or friends

Method	Always		Daily		Regularly		Rarely		Never	
	No.	%	No.	%	No.	%	No.	%	No.	%
Video call (n=15)	0	0	3	20	4	22.2	3	20	5	27.8
Text message (n=18)	6	33.3	5	27.8	4	22.2	2	11.1	1	5.6
Social networking (n=18)	5	27.8	5	27.8	5	27.8	2	11.1	1	5.6
Email (n=15)	1	5.6	1	6.7	2	11.1	8	44.4	3	20

3.1.4.2 Connection to service providers

More than half of participants used their smartphones to connect with service providers to receive support services. Text messages were highly used (72.2%, n=13), followed by social networking, (44.4%, n=8), while online chat functions were the least used service (27.7%, n=5). Table 8 shows the detail of the technology used by PWUD to contact their service providers to receive support.

Table 8. Use of technology to keep in touch with service providers for support

	Smartphone		Desktop computer		Laptop		Tablet		None of these	
	No	%	No	%	No	%	No	%	No	%
Video call (e.g. Zoom, Skype, FaceTime) (n=17)	9	52.9	0	0	4	23.5	0	0	4	23.5
Text message (e.g. SMS, WhatsApp) (n=18)	13	72.2	0	0	2	11.1	1	5.6	2	11.1
Social networking (e.g. Instagram, Facebook, Twitter) (n=16)	8	50	1	6.3	2	12.5	1	6.3	4	25
Online chat functions (Support organisations, Recovery Forums) (n=10)	5	50	1	10	1	10	0	0	3	30
Email (n=18)	10	55.6	1	5.6	3	16.7	1	5.6	3	16.7

Note: answers are not mutually exclusive

3.1.4.3 Health purpose and social problem

Over three quarters of participants used digital technologies to find out how to get help with health or social problems (83.3%, n=15). Internet searches were used regularly or on a daily basis by the majority of participants (61%, n=11). Additionally, many participants regularly contacted their healthcare providers (61%, n=11) using digital technologies. The detail of getting help with health/social problems is provided in Table 9.

Table 9. Use of technology to get help with health/social problem

	Always		Daily		Regularly		Rarely		Never	
	No	%	No	%	No	%	No	%	No	%
Search on the internet (n=16)	3	18.8	3	18.8	4	25	4	25	2	12.5
Ask friends to search on the internet (n=13)	1	7.7	0	0	3	23.1	5	38.5	4	30.8
Check service provider website (n=11)	1	9.1	0	0	1	9.1	6	54.5	3	27.3
Check NHS website (n=15)	4	26.7	0	0	3	20	7	46.7	1	6.7
Ask voice assistant (Alexa, Google Home, Siri) (n=12)	0	0	0	0	3	25	1	8.3	8	66.7
Contact healthcare provider (e.g. GP, Addiction service) (n=15)	1	6.7	0	0	10	66.7	4	26.7	0	0

3.1.4.4 Information related to drug use

Many participants (82.4%, n=14) used digital technology when they needed information about seeking help for problems related to drug use. When asked about frequency of use of technologies to seek help with drug problems from those who responded, half of them selected that they regularly searched on the internet to find solutions. Results are displayed in Table 10.

Table 10. Use of technology to seek help with drug problems

	Always		Daily		Regularly		Rarely		Never	
	No	%	No	%	No	%	No	%	No	%
Search on the internet (n=9)	1	7.1	0	0	7	50	4	28.6	2	14.3
Ask my friend / family member to search on the internet (n=12)	0	0	0	0	4	36.4	3	27.3	4	36.4
Check service provider's website (n=13)	1	7.7	1	7.7	3	23.1	4	30.8	4	30.8
Check NHS website (n=13)	0	0	0	0	5	38.5	5	38.5	3	23.1
Check social media (n=13)	1	7.7	1	7.7	3	23.1	4	30.8	4	30.8
Online forums / chat (n=11)	1	7.7	0	0	2	18.2	3	27.3	5	45.5
Ask voice assistant (n=11)	0	0	0	0	1	10	0	0	9	90
Phone call (n=15)	3	20	0	0	7	46.7	4	26.7	1	6.7

3.1.5 Challenges in use

The challenge that prevented participants using technology was not having any devices (n=3). One participant mentioned that they had internet connection problems, and two people stated that they had difficulty using devices or technology. One person had problems with reading and writing and did not know how to perform online searches. Another participant stated that they had difficulty understanding digital systems.

3.1.6 Requirement/suggestions for support with using digital technology

Almost half of participants (47.1%, n=8) agreed that they would benefit from some type of support in the use of devices and digital technologies. Of these, six believed that having their own device could be beneficial alongside having support in the use of devices. For more details, see figure 1.

Figure 1
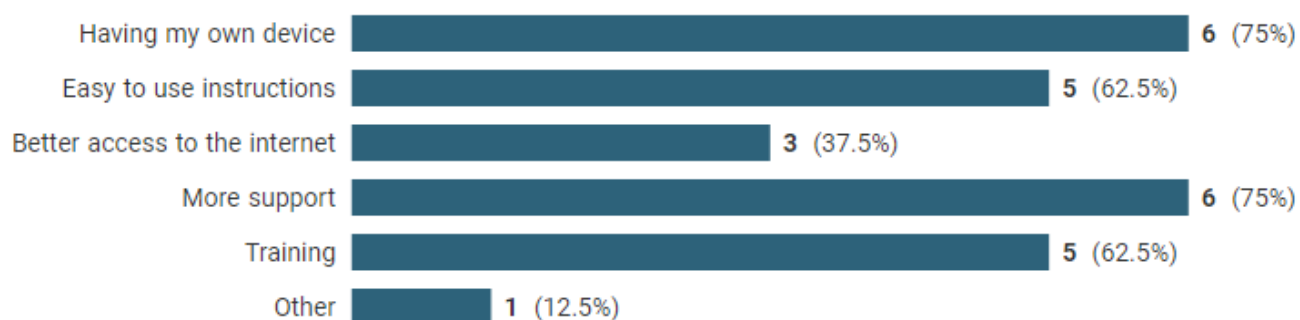
Figure 1. Participants' suggestions of what might be helpful in terms of support to use devices or digital technology (n=8)

3.2 Views and experiences of service providers

3.2.1 Participation

The online survey received responses from 43 people who provide services to PWUD in Scotland. Respondents included 13 men and 28 women A third (34.9%, n=15) were in the 50-90 year age range. Age and gender information is displayed in Table 11.

Table 11. Age group and gender of service provider participants (n=43)

Age group	Number	%
18-29	6	14
30-39	9	20.9
40-49	11	25.6
50-59	15	34.9
60-69	2	4.7
70+	0	0
Gender	**Number**	**%**
Males	13	30.2
Female	28	65.1
Non-binary	1	2.3
Other	0	0
Prefer not to say	1	2.3

3.2.2 Organisation type and function

The participants performed a wide spectrum of roles such as managerial, caring, social work, specialists, or service managers from different organisations across Scotland which provided services to PWUD. Almost all participants worked for a voluntary, third sector or charitable organisation (95.4%, n=41), and one person worked for a local authority. Around half of the participants (46.5%, n=20) worked for organisations that gave a combination of support to PWUD. See Table 12.

Table 12. Organisation type and type of service – service providers (n=43)

Organisation service type	Number	%
Voluntary / Third Sector / Charity	41	95.3
Local Authority	1	2.3
Other	1	2.3
Type of services	**Number**	**%**
Harm Reduction	6	14
Recovery support	7	16.3
Treatment	0	0
Homelessness support	6	14
A combination of supports	20	46.5
Other	4	9.3

Two thirds of participants worked for local organisations. The geographical scope of the organisations is shown in Table 13.

Table 13. Organisation geographical scope (n=43)

Organisation geographical scope	Number	%
Local (town/city/Local Authority level)	32	74.4
Regional (Health Board level)	5	11.6
National	5	11.6
Other	1	2.3

Participants had access to different devices. More than three-quarters of organisations provided smartphones or laptops for their employees who worked in this field. Some participants noted that the purpose of 'direct support' that they provided included helping clients to do online activities such as online application forms, virtual meetings or video calls, or communication with users in different ways. Many participants mentioned that since the start of the pandemic, they moved to online services to provide digital services to PWUD. The details of devices that are used for work and their purposes are shown in Table 14.

Table 14. Types and purpose of devices used by participants for work

Devices	Personally owned		Owned by organisation	
	Number	%	Number	%
Smartphone (n=40)	13	32.5	33	82.5
Desktop computer (n=16)	1	6.3	15	93.8
Laptop (n=29)	9	21.4	33	78.6
Tablet (n =14)	3	21.4	11	78.6
Purpose use of device	**Number**		**%**	
Direct support work with clients	31		72.1	
Email	42		97.7	
Access to websites	42		97.7	
Office applications (Word, Excel, etc.)	41		95.3	
Applications within my organisation	27		62.8	
Other	7		16.3	

Most (86%, n=37) participants said their organisation shared their clients' details with other organisations. While they noted that their organisation shared a wide range of information with different partner organisations, they highlighted that the nature of sharing depended on contract and data sharing agreements. Different types of information were mentioned by participants, with most citing client referral information as the main information exchanged between different partners. Other information exchanged included updates on progress, client reviews, and support plans.

3.2.3 Clients' situations

A third (32.6%, n=14) of participants estimated that more than half of their clients (PWUD) had access to an internet connection through their smartphones. Around half of participants believed that only a very small minority of their clients had access to the internet through their laptops, personal computers, or tablets. The details of estimates are displayed in Table 15.

Table 15. Estimates of clients' access to internet-connected technologies (n=43)

Devices	All of them		More than half		Approx. half		Less than half		A very small minority		I don't know	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Smart phone	3	7	14	32.6	8	18.6	10	23.3	4	9.3	4	9.3
Laptop	0	0	1	2.3	3	7	10	23.3	20	46.5	8	18.6
Personal computer	0	0	0	0	1	2.3	6	13.9	20	46.5	13	30.2
Tablet	0	0	0	0	2	4.6	8	18.6	20	46.5	10	23.3

3.2.4 Current services provided to PWUD using digital technology

The majority of participants (93%, n=40) said their organisation provided services to PWUD via digital technology. A number of participants emphasised that their organisation had started providing their service via digital technology after the COVID-19 pandemic began. Of those providing digital

technology, a phone call or text message check-in were used by the majority (82.5%, n=33). One-to-one online support meetings were used by 62.5% (n=25), and more than half of the participant group provided therapeutic group-work services to their clients through digital technology (57.5%, n=23). Half of the participant group (50%, n=20) highlighted that they provided video call/consultation for specific issues. The detail of type of services provided is shown in Table 16.

Table 16. Type of digital technologies used to provide services for PWUD (n=40, 3 missing)

Type of service provide to PWUD	Number	%
One-to-one online support meeting	25	62.5
Therapeutic group-work	23	57.5
Access to video call/consultation for specific issue	20	50.0
Online booking for a service	9	22.5
Phone call/text check-in	33	82.5
Online access to personal data record/history	3	7.5
Other	7	17.5

More than half of participants believed their organisation provided information to their clients via digital technology. Text messaging was well-used by 67.5% (n=27) of organisations, and social media was somewhat used by 47.5% (n=18) of organisations. The details of uses of digital technology for providing information to PWUD is presented in Table 17. Different applications such as WhatsApp and Facebook were mentioned by participants as a communication tool with clients. Some participants mentioned that their organisations provided website chat/online chat, with one commenting that it was rarely used by their clients.

Table 17. Ways in which organisations provide information to PWUD via digital technology

	Well used		Somewhat used		Rarely used		Never used	
	No	%	No	%	No	%	No	%
Website (n=39)	14	35.9	13	33.3	7	17.9	5	12.8
Text messaging (n=40)	27	67.5	6	15	4	10	3	7.5
Mobile app (n=29)	10	34.5	6	20.7	6	20.7	7	24.1
Social media (n=38)	14	36.8	18	47.4	2	5.3	4	10.5
Other (n=10)	7	70	1	10	1	10	1	10

3.2.5 Challenges
In terms of challenges that were highlighted, almost all participants noted that PWUD may not use digital technology as they could not afford to buy a digital device (90.7%, n=39). More than three-quarters of participants said PWUD could not afford to buy data packages (86%, n=37). Other challenges noted were that PWUD lost their devices, or had them stolen, and they could not replace them (79.1%, n=34). Less than a quarter of participants agreed with the statement: 'lack of trust in digital technology' (23.3%, n=10) or not understanding the need for digital technology (20.9%, n=9). Table 18 shows detail of the barriers of PWUD in using digital technology as perceived by staff participants.

Option	Number	%
Cannot afford to buy a device	39	90.7
Cannot afford data packages	37	86
Has lost their device or had it stolen and cannot replace it	34	79.1
Lack of trust in digital technology	10	23.3
Has no need for the technology	9	20.9
Does not have support or training to use devices	28	65.1
Other	5	11.6

In the open format question, one participant mentioned that moving from place to place and not having stability was a challenge for their clients. Another challenge expressed was keeping long-term connections with PWUD:

We do have a cohort of people who tend to have a different mobile number every few weeks. People can live without a phone but not without substances. This can prove challenging when looking to maintain phone contact with that person. Stopping the revolving changing phone number would good. For example, community care grant takes 6-8 weeks to be assessed, by the time the person has been granted the items, their number has changed, and services cannot then get in contact with that individual.

3.2.6 The impact of pandemic on growth of digital services

Participants were invited to share experience of the impact of the pandemic in an open format question. In general, participants were very positive about the potential of digital technology in the COVID-19 pandemic situation. One participant shared their experience about web chat functions:

We also have a webchat facility and have found that we have had people accessing the service by using webchat as their first point of contact. In this day and age, if people are looking for information on anything, the internet can be their main port of call.

Another participant highlighted the importance of online information and services during the pandemic:

We have been very successful through our digital team I am delivering online information and services. In our service we were forced to deliver online groups suddenly in response to COVID-19 and they worked very well.

Some organisations did not use digital technology prior to COVID-19. As a result of the pandemic, they were forced to go through a transformation which involved use of digital technologies:

My service's main use of digital technology was throughout the COVID-19 pandemic. In the initial lockdown we were not permitted to carry out visits with the people we support, and all contact was over the phone. This has carried on in part and my service makes use of wellbeing calls and over the phone appointments on a more regular basis.

3.2.7 Requirements to reduce digital exclusion

Digitalisation needs new structure and infrastructures in order to enable provision of digital services to PWUD to avoid particular individuals or groups from being excluded. Participants could respond in an open format question and key themes are presented below.

3.2.7.1 Training requirements

Most participants recommended training for both service users and providers. Currently, organisations provide different levels of training and support for their volunteers such as how to install or work with particular apps. Training was seen as a way to encourage volunteers on the uptake of using devices, where they might not otherwise have been utilised:

> *Additional training is always beneficial however the service I specifically manage, are up to date and experienced in using technology and able to support our service users to use technology also. We regularly set up apps on people's phones/ tablets for them to enable them to access groups. We also work in partnership with the College who provide IT classes for services users and volunteers. We also have internal IT/ Google training at the organisation.*

> *It would encourage volunteers on the uptake of using devices, allowing training, where it might not otherwise have been utilised.*

Participants also expressed, in open format questions, that training (including daily digital technology use such as Wi-Fi setup, accessing online resources, making video calls) would be beneficial for service users given that technology is constantly changing. One recommended engaging with the client group and providing direct training to PWUD.

> *Basic skills on setting up wi-fi in the home would be ideal as we can help with this but can be tricky due to the demand of the service and service user needs.*

Training to staff in service provider organisations was also mentioned as helpful in improving service provision through use of newly developed technologies and incorporating them into their daily work practices:

> *Staff require support to make the best use of newly available technologies and incorporate this into their daily work. I have first-hand experience of seeing the barriers and fear that some have in making this leap to the extent that I personally have provided and offered 1:1 coaching.*

A number of service providers were not familiar with digital technology, and this had created a number of difficulties, particularly during COVID-19 restrictions where they relied more heavily on digital means of communication:

> *Although I am confident in the use of digital technology there are a number of my colleagues who are not and this has created a lot of difficulties particularly during covid restrictions where we relied more heavily on digital means of communication with ourselves and clients.*

One important challenge highlighted in terms of provision of training was that some organisations did not have sufficient resources for training:

> *We don't have the resources to offer this support and try to encourage everyone to have face to face counselling.*

3.2.7.2 Views on reducing risk of harm

Table 19 shows the answers to the question '*what would make the most difference to reduce the risk of harm to people who use drugs?*'. Almost all participants (92.9%, n=39) agreed with the need for

ease of access to information on services available locally and connection to support workers, including peer supporters that could help to reduce the risk of harm.

Table 19. Participant views on the approaches to reducing harm among PWUD (n=42, 1 missing)

Option	Number	%
Easy access to information on services available locally	39	92.9
Connection to support workers including peer support	39	92.9
Connection to social support network e.g. family	37	88.1
Easy access to information on safer drug use and harm reduction	36	85.7
Easy access to information on different types of treatment	36	85.7
Use of monitors to detect overdose	28	66.7
Information on other health conditions	25	59.5
Remote access to clinical care	25	59.5
Remote access to non-clinical case work	23	54.8
Other	2	4.8

4 Qualitative Focus Group Findings

4.1 Participants

A total of 18 focus groups were conducted with 97 participants from six organisations across Scotland: 11 with PWUD (n=61) and seven with service providers (n=36). Participants per group ranged from two to 11. This included the following geographical areas: Glasgow, Edinburgh and North Ayrshire.

4.2 Views and experiences of PWUD

The analysis of data from focus groups with PWUD identified four core themes:
1) the type of devices used and what devices are used for;
2) human connection;
3) challenges and problems with digital technology; and
4) what is needed – innovation and ideas.

These four themes and associated sub-themes are explored below.

4.2.1 Type of devices used and what they are used for

Most participants had access to internet-enabled devices including smartphones, tablets, laptops, smart TVs and games consoles. For the two instances in which participants reported not having access, one explained that they were 'not that kind of person', and the other relied on those with whom they were living to undertake any online activities on their behalf, such as applying for a loan.

Participants reported using devices for three main purposes: finding information, support for health and wellbeing, and feeling included.

4.2.1.1 Finding information

Participants discussed how their device was crucial for engaging with service providers as information was communicated digitally or held online. They referred to the 'hassle' of trying to find relevant information if unable to access this digitally:

> *[PWUD] without technology have got so much stress in their lives because they are always darting here, there and everywhere trying to figure stuff out that they know nothing about.*

When seeking information at a point of crisis, participants all reported relying on phone calls and expressed frustration at either the response being too slow or being asked several seemingly irrelevant questions.

4.2.1.2 Support for health and wellbeing

Digital devices were an important tool used to support health and wellbeing by directly accessing meaningful activity such as online learning, social networking, reading about current affairs, listening to music and podcasts, playing games, watching videos, engaging with younger relatives, and connecting via video call. It also supported engagement in valued activities offline, through guidance such as musical tuition or recipes for cooking.

Participants emphasised how online access to activities could also act as a diversion at times of distress, or to support 'time out' from day-to-day pressures:

> *An outside space in this wee tiny wee square, it can take you outside your room mentally. It's whatever you are doing, whatever you are watching, it takes you outside that horrible space sometimes.*

Participants additionally managed their mental wellbeing and substance use recovery through resources on mental health apps, accessing motivational content and engaging in support sessions on videocalls (e.g., Zoom). Apps that encouraged mindfulness and 'slowing yourself down' were discussed as beneficial. Participants also reported boosting their physical wellbeing by following fitness programmes. Some participants noted that when accessing resources this way they lost the group aspects of activity they enjoyed. They also commented that many more formal services had been slow to adapt to online provision during COVID-19, leaving them without access to support at times.

Participants discussed how digital technology could reduce their sense of vulnerability. Two elements were discussed: the use of location tracking (with reference to the app 'HolyGuard') for women with experience of abuse or assault, or at risk of overdose; and storing medical information and identification that could be accessed if they were found unconscious due to substance use or another incident.

However, there were aspects of digital technology that could be detrimental to their health and wellbeing. Several participants described how using technology could cause them stress and frustration. Participants found the need for multiple complex passwords irritating and were worried when they then lost their phones if passwords were stored there. A few participants found 24/7 news content contributed to heightened anxiety:

> *But aye when I was unwell, I was over focussed, feeding into kind of hysteria. Just constantly news on, it was just no healthy. So that was the downside of having access to news constantly.*

Others reported that the sheer volume of available information could be "*too much to process*". The expectation to be constantly available, or knowing that others were not replying, contributed to

anxieties, as did navigating social media platforms.

> *…you can tell when somebody has been online. Their anxiety starts to build and they are going 'why is that person not answering me, she did look at it, he did look at it?'*

Participants discussed the impact of social media on their mental health in relation to stress and anxiety, and in making content available that could (often inadvertently) bring down someone's mood or reinforce negative feelings and prompting ideas that could "*spiral*" in their minds. Ghosting and blocking (when another person disables your ability to contact them or see their account details) was also raised, how this could leave them feeling confused and powerless, and the negative impact this had on their mental health including on anxiety levels and feelings of self-worth.

4.2.1.3 Feeling included

When discussing how technology was used participants talked about the experiences of inclusion via digital technology. This included being able to give feedback on services, positive experiences of accessing the GP online, overcoming geographical barriers, the importance of digital inclusion during lockdown, and rapidly learning to use software. Participants valued their inclusion in the design of sessions, such as suggesting topics, and appreciated provider flexibility in response to this. For those who lived far away from in-person services, the option of daily online access was "*vital*" for their inclusion of services. When in-person access was prohibited due to COVID-19, being able to use the internet was even more essential:

> *It was my only point of information about anything that was going on in recovery services or online groups … it was just there was lots of online services put on which a lot of people benefited from.*

Being able to access GP and other NHS services virtually was a huge bonus for one participant, who felt it was the best thing about technology. Several participants discussed the rapid learning needed during lockdown to access meetings on the various technologies but that this was not challenging once shown how to do so.

4.2.2 Human connection

The human connection facilitated by digital devices generated a lot of discussion, with participants recognising this had both positive and negative aspects. Four sub-themes were identified: supporting connection; barriers to meaningful connection; access to online mutual aid groups; and supporting recovery through technology.

4.2.2.1 Supporting connection

Digital devices supported connection to family and friends, mutual support, and support services. Participants described how facilitating family connection was "*massively important*", while others disagreed and described intention to get a device only due to the pressure of concerned others about being able to contact them. Access to mutual aid was invaluable to some in supporting their recovery, although one participant noted that even an absence of online activity served to communicate to others:

> *…see my problem, if I'm just back from a relapse and I've used, I just hide from everybody, I'm never online, ever, I don't, I just want to hide from folk. But people notice, don't they?*

In describing the impact of COVID-19, participants' digital technologies were essential to supporting their participation in an alternative routine of group activities, enabling them to stay connected to a recovery community after their anchors of stability had been removed. Instant messaging

(individual/group chats via mobile phone apps e.g. WhatsApp) were invaluable for some in providing a space to check in with friends, family and mutual interest groups. Others described the intensity of the contact as overwhelming.

4.2.2.2 Barriers to meaningful connection

Several participants described telephone and video calls with family, friends and mutual aid groups as inferior to face-to-face contact. For some it lacked the sense of togetherness, for others it enabled them to hide aspects of their drug use and several participants described difficulty focusing:

> *I have really struggled with online stuff. I am a total technophobe. Yeah. I am okay with face to face meetings, but online I don't know what it is, I just struggle to engage. And when my head is in a certain space, if my mind is spinning or I'm getting loads of urges, it's hard to focus on, right there is a meeting at such and such a time, I need to do that. It's just, it just gets lost in the ether, whereas if I know there is a drop in or there is a, if I've got to walk to somewhere, and there is going to be people there, I can somehow do that.*

4.2.2.3 Access to online mutual aid groups

Participants had mixed views on attending mutual aid groups online. Many found the flexibility of being able to "*participate any way you want in your own house*" as a "*lifeline*". Some described a vast increase in accessibility compared to travelling considerable distances to attend in-person before. Several discussed the ability to attend at any time as beneficial because of the range of accessible locations, including overnight access when connecting to services operating in different time zones. Being able to turn off the camera so that people could talk without others seeing them was thought to give quieter group participants more confidence to speak in sessions and reduce barriers to attendance as people could gauge the setting more easily. It could enable anonymous sharing whilst building trust and also provide the option to just listen. It also facilitated additional contacts with others through sharing phone numbers. Others found the virtual context more challenging initially, particularly reading the different visual cues of more people. Overall, however, these groups were reported to be a "*lifesaver*".

Others viewed in-person groups to be preferable and saw the online context as something that should be reserved for emergencies such as lockdown. Some felt conscious of their home environment, in comparison to others, and feared judgement. These participants spoke about experiencing online groups as an intrusion on their "*private domain*" and highly anxiety provoking. They commented that they started to associate the room in which they accessed meetings as associated with their drug problem. Some participants found the increasing regulation of the online space frustrating and limiting, such as being asked not to have others in the background, which was challenging for those with childcare responsibilities. Others found the process of sharing and people interjecting in the online setting confusing. However, the generally supportive nature of the people within the group helped many to manage this. Some participants had experienced 'zoom bombers' (people who join online meetings uninvited to create impact) and found this distressing, with lasting effects: "*it affected me for a few days afterwards*".

4.2.2.4 Supporting recovery through technology

Many participants talked about how isolating life could be because of their substance use. Some were alone; while others had to conceal an aspect of themselves from friends and family that left them feeling isolated, despite the people in their life. Participants recognised that "*a lot of people that take drugs and all that are themselves and they haven't got anybody*" and viewed the human connection of real-world interaction as invaluable to them. One participant felt "*sadder*" after online interactions as they returned so sharply to their isolation. Participants also described how someone's dealer could be the only human connection they had to offer words of comfort. Having someone to connect with

was seen as crucial for countering the hopelessness that could contribute to overdose or suicide, especially with the long wait for access to treatment services. The overnight availability in the online space was again referred to as crucial in this regard: "*cause everybody else is sleeping, so you have not got anybody have you?*". For some participants, the in-person space had provided the additional value of pre- and post- meeting social interaction, which was reported to be as important as the group. This was missed with online support.

Some participants discussed how it did not matter if the connection was online or in-person, it was the experience of compassion elicited in human interaction that was of greatest importance. Being able to access the internet opened "*whole world of recovery that I didn't know about*" that was previously unavailable to them.

4.2.3 Challenges and problems

Despite the clear benefits for many of the participants, there were also many challenges experienced with digital technology. The areas discussed most are summarised first: difficulties in accessing technology, financial barriers; digital technology as a stressor; mistrust; accessing the welfare system; and the experience of those with multiple complex needs. The remaining areas are then grouped together.

4.2.3.1 Difficulties in accessing technology

Many participants had their own devices. Without this, participants described accessing computers in range of locations but that this relied on knowing what is "*out there*", such as library and drop-in services facilitated by different voluntary organisations. However, there could often be a wait for an available machine which led to one participant feeling frustration and losing motivation, particularly if they needed to do something essential or important and perceived the person using the machine as engaged in less important activities (e.g., scrolling through Facebook).

Despite having devices, participants often struggled with a low data allowance. This meant a reliance on public internet access. Despite some local authority provision, participants did not describe this positively due to the poor quality of the connection. One participant described being allowed to sit in a well-known chain café to access the internet and being offered water when they had no money to purchase anything. Several participants tried to use bus service Wi-Fi although often found the connection unstable or said that they had been cut off after a period. The library was often cited as a source of internet access and tutoring in using the computer, which was unavailable during COVID-19 lockdowns. This disadvantaged those attempting online learning activities and was worrying for those required to attend meetings, for example with justice social work.

There was a reported lack of privacy when relying on communal spaces for internet access, and a sense that, despite trying to access services, the services themselves would not facilitate access.

> *…if we've not got the Wi-Fi in the house, that's the thing. A safe place where you could go if you want to share you can share… because you are in a public place, there should be somewhere where you can go to where you can be safe …. They wouldn't give you the Wi-Fi code, so no organisations are open to give you their Wi-Fi because it's only for staff they say.*

Some described a tendency to lose their phone and being "*down*" when this happened. They described the challenges of then getting a new phone, given the cost and the reluctance of a service that may have initially provided it to issue another device. A few participants referred to knowing people who had sold their devices, or doing so themselves, suggesting that the free device issue may not be suitable for people "*actually caught up in addiction*". One participant expressed a sense that they left

themselves excluded by selling their device. Some suggested that permanent ownership rather than loan devices may mitigate this, with a sense of the item being a special possession.

A few participants discussed the specific eligibility criteria for free access to digital devices, and how these were not always transparent, "*you have to be picked up by that service as well, you have to know that.*" Being unaware of this could lead to disappointments and frustration. Charging a phone was also identified as a challenge for people who experienced homelessness, and for those who used their phone to attend virtual meetings when out of the home.

4.2.3.2 Financial barriers

The challenges of having sufficient data allowance to engage in all the activities they wanted to, especially on pay-as-you-go contracts, were raised by many participants. Both contracts and the costs with accessing some Wi-fi hotspots were prohibitively expensive for many: "*it costs a pure fortune and all, like when you top it up, once you do use your phone it's gone in whatever.*" Many participants did not have internet access in their home or temporary accommodation so were either in a position of paying far more for data, or "*going without*". Participants recognised that competing financial priorities, including funding drug use, contributed to their digital exclusion. They also highlighted that poor credit history could prevent them being able to get a better deal on a contract and being trapped in ongoing expensive data use:

> I've only got a wee cheap phone, I didn't get funding to access it and I've not got good credit to go into a mobile shop and ask for one of the payments, I find it hard.

4.2.3.3 Digital technology as a stressor

Many participants recognised that they needed basic digital skills to fully utilise their devices, with a few describing that they do not make use of several functions because of a lack of knowledge:

> …don't know anything to do with this iPad, I just know my Zooms are all logged in and I know how to go onto them. What else, I don't know. Same as my phone. I don't know how to work it really. I know how to answer a call and to send an email, that's it. All the other features are no good to me.

Some said that they did not know how to even start using or setting up a new device:

> I've got a brand new laptop there I've not got it set up because of COVID they wouldn't come out and I cannae dae it, I cannae get it up and going.

Several participants described relying on family or friends, particularly younger relatives, to assist. A few suggested having simple one-on-one tutoring would assist most, and that using the phone to access support was increasingly becoming obsolete:

> They are no willing to speak to you on the phone, you've got to dae this stuff online and I just struggle with that I just cannae do it.

This often led to a loss of motivation and that then it just "*doesn't get done*".

4.2.3.4 Mistrust of technology

Several participants described concerns about security, making them reluctant to use online banking, share account details, or shop online. When things went wrong, this could trigger substance use:

…something that has happened online with either somebody trying to use my bank card … but I've no got a clue what's going on. I've seen me going back out the door and used knowing that because I don't know how to sort that out.

Participants also worried about their confidentiality, particularly if they had had poor experiences in the past, and identity theft, although acknowledged that they shared a lot of their information on public social networking sites:

My worry about data protection is if someone wants to steel my identity, welcome to my debt, and if you want to know my story just sign up to my Facebook page.

4.2.3.5 Accessing the welfare system

Participants were required to use online systems to access the welfare system. A few participants described receiving texts to remind them or prompt them to access something online as controlling.

…texts that were kind of urgent and you were, that was going through your head, they have got control of us 24 hours a day. You must look at this immediately and respond. It's not healthy. I've got a life outside of benefits, you know.

This caused particular concern during lockdown when public internet access such as in libraries was curtailed, because services closed. It meant a reliance on their data that was often limited. They suggested that data for accessing welfare sites such as universal credit or job-seeking should be free.

Participants pointed out that, despite the requirement to make use of online services, council or service providing offices often they did not have the means to log on within them:

Oh my God you are actually going back the way in technology just to be rude. You are actually making people who are actually trying to use this building and use the service go outside and use a phone box.

Some participants were suspicious that the challenges of claiming welfare to which they were entitled were deliberately set up to reduce their likelihood of accessing support. One participant described having to *"jump through these twelve hoops and then we will hit you with a brick wall"*. Participants also highlighted the lack of options for those whose literacy levels were low. This was suggested to lead to people needing to rely on others that rendered people vulnerable and dependent.

4.2.3.6 Experience of those with multiple and complex needs

Several participants identified that there were additional barriers experienced, as alluded to above. This could be homelessness that prevented safe access to internet connection and charging points; times of disorganisation or being "*chaotic*" that meant devices were lost, dates and appointments could be missed; and mental health challenges that could be exacerbated or alleviated by technology. Participants also highlighted literacy, dyslexia, attention deficits, and other disabilities that may pose challenges to digital device use, and that some of the software solutions were inaccessible without financial outlay.

4.2.3.7 Other challenges

A range of other issues were raised. The availability of drugs online was raised as a challenge, although not frequently. This was highlighted as particular risk of social media for some participants, where they could be targeted by people selling drugs because of their online presence in communities who were in recovery. Social media was also seen as a risk in relation to sharing too much personal information and inadvertently coming across a post that could trigger a desire to use drugs or impact

their mental health. The issue of how much time social media could absorb was also highlighted, linking to the experience of digital technology as a stressor.

Some participants identified that the requirement to have virtual GP appointments during the pandemic was difficult, both technically and in the need to send intimate pictures and personal information, often to a doctor they had no prior relationship with. They were also hesitant about the safety of prescribing when this was not done face-to-face. There was also a sense that the amount of time waiting to receive formal support was too long where people could experience serious adverse consequences and loss of motivation for change in the interim period:

> *I made a self-referral and I never got word back. Like I could have been dead by the time I got help, do you know what I mean? And naebody, it was just like nothing, I was like that, well f*** it.*

Finally, some participants described some scepticism about whether digital inclusion *really* included them. There was a suspicion that the term was starting to be used to give a positive impression to the public, without actual changes.

4.2.4 What is needed? innovation and ideas
Participants described a range of potential solutions to digital exclusion. This section covers the main areas of discussion: funding for access; overdose prevention; and basic training. The remaining ideas are discussed together.

4.2.4.1 Funding for access
Free universal Wi-Fi internet access in properties, including temporary accommodation, was widely supported by participants. They further suggested specific SIM cards that would allow free data use on certain platforms (such as social media or government/welfare websites). They noted that devices were often accessed via Government grants to organisations, but that there were often criteria that meant that not everyone could easily access these.

4.2.4.2 Overdose prevention
In relation to support for overdose, some participants felt that a wearable device that would alert a responder to a person's overdose history, identify what substances had been taken, and instruct the responder on what to do, would be beneficial. Relatedly, they discussed an app that was able to monitor substance use and alert the person taking substances if they were at risk of overdose, or alert emergency services if there was an overdose detected. This had mixed views among participants, with some suggesting they would be suspicious of the motives of the people recommending it, and of being tracked via the app/device. An automatic naloxone release in the event of an overdose was discussed. One participant suggested using technology to make a trusted person aware when they used so that the person could check they were alright after a set period, although this carried a risk if that person was also using at the same time, as they may not be able to recall their need to check in. Participants highlighted that there was the risk that items or devices would be sold if they had market value and so this should be considered in their design:

> *…the problem is that people wouldn't download the app because they'd be scared it would be tracked.*

Participants identified release from prison, or admission to hospital for overdose or substance use related issues, as an opportunity to provide digital overdose prevention devices and to engage people in support, if staff were adequately equipped with the relevant knowledge to share:

It would need to be something that if you were in prison that they would try and gae you upon release, some, as you say whether it's an app or something like that, something that you are going to have on your person on release

They also noted the current Scottish Government/Scottish Drugs Forum campaign around naloxone and suggested that 'pop up' promotion in the online environment could prompt people to access it, reducing barriers to a single click. This could also be used to raise public awareness and challenge stigma associated with substance use. Participants raised the importance of pop ups coming from credible sources that were trusted by people who use drugs. Participants felt that use of technology was important for those at risk of overdose. However, given the numbers of people without access, it was essential for non-digital means of reaching people to be maintained.

Because of the challenges in accessing digital devices with a robust internet connection and sufficient data, and with charging devices, participants suggested that drop-in facilitated computer access was needed to enable those experiencing homelessness or without digital skills to be assisted to make online applications. Whilst recognising that many services provided this, participants emphasised that it was essential that this information was communicated to people, suggesting that the GP surgery, hospital admissions periods, and release from prison were potential points to reach people and let them know of the range of available support.

Some participants described the need to be ready to ask for certain types of support, and that support from those with experience of substance use themselves was enormously valued and preferred to a "*book worm*". As highlighted above, a benefit of online access to recovery communities was the value of 24/7 support given traditional services were unavailable overnight and at weekends.

4.2.4.3 Basic training

Simple courses delivered one-to-one and face-to-face in layperson's terms were emphasised as necessary, with participants expressing preference for relatable facilitators. This needed to include information about how things work, where to access Wi-fi, the settings on a device, app functionality, how to use devices responsibly, online safety and privacy, and how to avoid harmful overuse. Participants highlighted the need for an inviting and safe environment where they could be open about their lack of skills. Libraries and recovery cafés were cited as places where this was already facilitated and highly appreciated. Participants with experience of prison suggested prison as a location for developing relevant skills, with the skills learned facilitating their community integration on release. They highlighted how the pace of change meant that digital devices and their functionality had significantly changed during their time in prison that added an additional barrier.

4.2.4.4 Other ideas

Participants suggested an app or platform where people could access information about support organisations available in their area, rather than having to go to the website of each individual organisation to see if there was a local provision. This app/platform should be wider than just drug use, recognising that many people also have other needs. Participants felt it should also include social or other activities that would support their wellbeing. They suggested that this could be a useful source of information for people concerned about another person's substance use. Participants discussed the need to balance competing views about how comprehensive the app/platform should be to ensure people could get what they need without being overwhelmed at whatever point they were at in their journey. Participants wanted people with experience of using drugs to be involved in app/platform design and marketing (and even started planning this) seeing this as an opportunity for skill development. They discussed outreach to people in their homes or the places where they were using to inform them about the app/platform, holding in mind their physical safety and protecting their own recovery.

Participants felt there was now good awareness of naloxone and referred to the training they had accessed. They thought this should be continued with the option of leaflets for those not online. In relation to frustrations and challenges at filling out forms online, one participant suggested a digital solution that would transfer their data onto other forms for them. Participants discussed providing 24/7 services. This included phone support, with participants themselves willing to provide this, and drop-in services:

> *You need to combat the problem the same way as the problem exists, 24 hours, seven days a week. Do you know what I mean? You need to have something there that is readily available for people just to stagger into on their hands and knees and needing help.*

Participants often mentioned simplifying platforms and the language on these to make them easier to engage with. Any additional steps could lead to people missing out or giving up.

> *It was just a link that you pressed and you went straight there. But for NA meetings I had to download Zoom and stuff like that. So, aye I struggled with that and [Service] was much easier … it was kind of a text and then you just when through the link in the text and you were straight onto it.*

One participant also suggested that, to simplify things, devices could come pre-loaded with relevant recovery support apps. One participant also suggested financial incentives to encourage use.

Finally, participants agreed that online support should not replace but complement existing services, ensuring that there were options for everyone: "*the one to ones are vital. That kind of time spent with somebody*".

4.3 Views and experiences of service providers

Analysis of data from service provider focus groups identified six core themes:
1) the type of devices provided and how they are used;
2) experiences of digital exclusion and inclusion;
3) challenges with digital technology;
4) learning from digital inclusion projects;
5) the impact of COVID-19;
6) what is needed? – innovation and ideas.

These are explored below.

4.3.1 Types of devices provided and how they are used
Participants reported that the types of devices they most often provided to clients were tablets and smartphones. One service provided slightly more tablets, which they attributed to the fact that most of their clients already owned a smartphone. Tablets were more suitable for writing documents (e.g., CVs) because of the large screen. Another service noted that phones were the preferred device. One service provided a laptop to volunteers involved in facilitating activities for other service users. In this service, the main devices provided were phones with data packages, as phones were more readily available to them. In addition to calls, texts and filling out documents, participants reported that some of their clients used their device for online shopping. Participants discussed how they had access to office computers, tablets and smartphones themselves. Smartphones and tablets enabled them to

access and rapidly provide information to clients, e.g., on available services or welfare benefits information, when meeting outside the office.

4.3.2 Experiences of digital exclusion and inclusion

Within the second core theme, participants discussed how they had observed clients experience both digital exclusion and inclusion. Participants reflected on striking examples of the lengths to which people without technology had to go to ask for support, including someone travelling to a nearby town to use a payphone to make initial contact. They considered that, even where people were known to services, if they did not have access to digital devices, they could be excluded and were potentially at greater risk:

> *There are a huge group of people that are actually known to services but, for whatever reason, are still at that sort of high-risk end, and I think sort of not having access to technology plays a huge part in that.*

Another participant described how a client they support now lives with life changing disabilities after a non-fatal overdose, which occurred when they were with someone who did not have access to a phone, which led to delay in seeking help: "*But it's left him with literally no quality of life, and if the [person] who was with him just had that mobile phone.*"

Participants discussed how issuing a digital device increased a person's access to a range of support, including their own service, wider harm reduction initiatives, crisis support, 24-hour support and mutual aid. Having been delivering online services for the first time during the pandemic, services had maintained online services as they were preferred by some clients. This broadened inclusion to those whose financial circumstances prevented frequent travel to in-person services and allowed a more person-centred approach: "*you are fitting around individuals as opposed to trying to get you to slot into what we are doing.*" They observed how useful it had been for people who were unable to physically see their families or friends during COVID-19 restrictions.

Participants described how they issued phone numbers for crisis services (e.g. Samaritans) when providing digital devices to increase accessibility of other support. Issuing the device provided an opportunity to engage someone in other services, for example naloxone provision or needle exchange services. Participants noted how limitations in traditional support times were overcome by digital access to 24-hour services, such as service's online chat and mutual aid groups all over the world.

By supporting people to make use of their device functionality, such as email and calendar management, participants considered access to be empowering for PWUD: they could directly contact their support workers in a way that was previously unavailable. Whilst not everyone used all the features available, the choice provided was viewed positively by participants as they believed it enhanced people's autonomy and control over their recovery journeys:

> *It became more, in my experience, more self-directed, and we are more willing to sort of try these things out. And also, online affords a bit of autonomy. So maybe people would be a wee bit reluctant to go into groups but they would go into an online group because they could still get that wee bit of autonomy.*

Access empowered PWUD to address other needs that they may have neglected if expected to attend in-person at a set time, for example applying for housing or financial support. Digital devices made a range of information immediately accessible, with some of the simple things being transformative, like access to public transport timetables.

For PWUD who were less confident with technology, working collaboratively with staff to complete online applications served to strengthen relationships, by facilitating conversations and teaching skills that further empowered people to continue independently:

> *Show them how to send an email and help them set up their own email address sometimes as well, they are that proud of themselves, I've got an email address now and ken know how to log in, show them, teach them how to do that as well, so aye it's really good.*

The devices served to empower PWUD in other aspects of their lives:

> *No just for recovery but just so as they could have a bit of a life, a social life as well whether it was Facebook for them to keep up to date with family members as well.*

Participants described how the increased availability of leisure activities facilitated through digital devices served to provide meaningful activity for people who previously found unstructured time risky for engaging in substance use. Activities were provided by their services, by clients within it, or accessed generally online. This could further engage people in services and peer support:

> *He goes 'I got that bored at night … I've got nothing to do, I'd just go back and use [drugs] daeing what I was daeing before'. But because he had an iPad that was he was daeing wee games and stuff like that so he was, and he was accessing groups … so the guys could all link in with each other and support each other on it as well.*

One participant provided an example of how a change in someone's activity served as a flag to check on their wellbeing, and ultimately meant that they accessed potentially lifesaving treatment in hospital.

4.3.3 Challenges of digital technology

The third core theme concerned challenges or problems for clients that were identified by staff participants, including access to and affordability of technology. However, even when this was overcome by free devices, staff discussed how many PWUD lacked skills and confidence to use their devices and were mistrustful of device security. Some participants described drawing on their own initial concerns about technology to support clients in overcoming their suspicions. Participants agreed that it was important that support was available to teach skills and inform people about the benefits and security features, "*giving people the skills and knowledge to use it properly instead of just ticking a box and handing out tablets*". Sometimes the concerns around technology served to prevent people accessing online meetings:

> *People who attend these meetings and haven't been able to attend any because they weren't in the position where they felt comfortable maybe and speaking to a screen as well you know it can be a barrier for people.*

There were some clients who maintained that the devices were "*not for me*", thought the device would just be stolen, or that they could not afford the technology. Participants spent time encouraging them to try, and offering support because of the benefits they could see it would bring to their lives, often empathising and sharing their own experiences of frustrations:

> *By showing them how… it's probably that, you probably get that feeling if you don't know how to do it, you think it's dead complicated, do you know what I mean? So, it's just about giving them that wee bit of education saying 'no this is dead, dead easy'.*

Participants identified that clients who had limited literacy and clients with additional needs such as autism needed bespoke support, something they worked hard to deliver, "*bringing more services in house, to meet those complex needs and they can then provide them with the digital offering*". One participant highlighted the availability of substances facilitated by digital spaces, and the vulnerability of their clients, as risks that had to be considered and which they tried to understand to enable them to support effectively: "*So it's trying to find a way people are tracked down on that and getting useful information on it as well*". Participants agreed that data or Wi-Fi access was a huge challenge for many of their clients (and some of their colleagues), with low availability in supported accommodation, the need to use unstable connections in public places, and the competing priorities for finances and attention that meant internet access could be overlooked:

> *People are really, really in the midst of I suppose a level of chaotic kind of type thing, they don't prioritise it at all.*

Another challenge participants were aware of for their clients was the need to engage with health appointments remotely. They were concerned clients would feel less comfortable discussing their health over the phone, and particularly with sending photographs of their bodies to GPs via email. However, even if willing, the staff noted that many clients did not have the device functionality to do this, as they often issued basic phones without cameras and additional smart functions.

From a service provision perspective, participants acknowledged how challenging it could be for them to provide support when an interaction was over video conference or a phone call. They expressed concerns about whether they could accurately judge a person's account but recognised the benefits of being able to contact people who could not or would not engage in-person. Participants commented on the challenge of managing group dynamics in the online space and, although they had the ability to mute people, they did not utilise this, instead spending time following up with group participants afterwards. Some participants experienced challenges with Wi-Fi when working from home and trying to contact clients, and this was initially a shared experience between them and their clients that was appreciated by clients. Participants working in residential services pointed out that Wi-Fi in the accommodation was not available to clients, and Wi-Fi available to staff could be poor.

> *It's so terrible in the office, it's the layout of the building which we've had many people come and assess, so where it is in the building, certain rooms can have it, certain rooms can't have it.*

They recognised that organisational decisions about having separate staff and client internet access was limiting their clients' autonomy.

> *They don't have it in their own rooms so … trying to use Wi-Fi on your own mobile phone, you cannae, you have to go and use the computer in the lounge which is horrible sometimes because 'please just give me the password I just want to be in my room and watch Netflix or something' and you are like 'I really can't'.*

Participants described how they noticed a few clients reported they had lost or sold their devices, sometimes "*before they got them out the box*", although selling devices did not happened often. However, they acknowledged that they could not know why a person no longer had an issued device. Participants were keen to give clients the chance to have a device and recognised the risks of lost, broken, sold or stolen devices. One participant suggested a trial with a cheaper device to test engagement before issuing an expensive model. Participants described different services' approaches to managing this, such as providing phones without boxes to limit retail value, capping the number of devices issued, and case-by-case review of whether it was appropriate to issue another device.

Finally, the welfare and benefits systems were identified by staff as very challenging for clients and themselves. In discussing Universal Credit (to claim, you must demonstrate you are regularly checking and updating an online journal), one participant outlined the "*bizarre*" cycle of being sanctioned for not accessing an online requirement, so then not having the money to be able to get online and being sanctioned again:

> *Well, if we are expecting people to access technology but they have not got the funds to do that because you are sanctioning them every time they can't check their journal it does just seem a bit bizarre to me.*

Because of the crucial need for online access, participants described how they had worked with other organisations if they could not provide a device to someone, to try and minimise impact of welfare sanctions. In some circumstances, participants would use additional time and resource to support clients to make Personal Independence Payment applications, compensating for thoughtlessness and lack of inclusion in the design of the assessment process:

> *It's just do it like that video call such a day such a time without even wondering if they actually have a computer or a way to, you know, it's really not well done at all.*

Participants described organising phone appointments to take place at their service so someone could use a telephone, and that video call appointments could be impossible to achieve given all the challenges discussed above. Some suggested that greater availability of drop-in supported computer use could partly address this. Participants were trying to mitigate their clients' lack of access, but it was frustrating for both parties as resources and time could not meet all people's needs:

> *So they have got an hour, maybe two, a week, with somebody with a piece of technology that they can then use… I'm leaving somebody's house and saying you will need to wait until next week for that, that's another week of no benefits, that's another week of bills getting on top of their head. How much that impacts their mental wellbeing is so bad like, and like services can't do anything about it because we only have a limited amount of time and by giving that person more time will be taking away from another person kind of thing so that is just how it is with digital inclusion.*

4.3.4 Learning from digital inclusion projects

The fourth core theme involved participants describing the success of rapidly getting funding and devices so that clients could engage in a way that was crucial to their wellbeing: "*if we didn't have that then probably the majority of our service users wouldn't have been able to access*". Some services partnered with others to optimise access to devices and enable clients to access different provisions, such as meaningful activity, alongside substance use support. Despite the speed of their response during the COVID-19 restrictions, there was some scepticism about understanding and genuine commitment to digital inclusion from statutory services. Participants discussed a sense that there was a lack of thought about the realities of people's lives in implementing policies around digital inclusion:

> *To me that was just a tick box exercise, let's give everyone an iPad instead of thinking about the bigger picture. Let's get people trained in how to use them and let's find some digital inclusion workers to go around and help instead of just giving everyone an iPad so they can tick their box and say they have all been given a tablet. So, we declined.*

Participants learned about device preferences for their client groups and described the ongoing process of judging supply and demand to manage the budget allocated to devices. The limited

resources meant that sometimes there were not enough devices for everyone to get their preference, or a device at all. Some services had to offer more basic (non-smart, non-internet enabled) devices, which although allowing clients to make calls, still left them substantially digitally excluded.

> *[They] aren't able to access the internet and obviously everything that comes with that which can be a huge barrier in terms of our clients sort of staying stable and staying in touch with the relevant partners.*

In engaging with digital inclusion projects, participants described the consideration of who was prioritised for devices. Devices were seen as crucial for digital and social inclusion for people living in remote areas to stop them "*slipping through the kind of cracks as they often would*". Recognising the vulnerability of people in a more chaotic phase of substance use, one participant described mixed results from issuing devices:

> *We gave some to the most chaotic people experiencing the most chaotic circumstances so that they could have that interaction. Sometimes it worked because they then got that connection and sometimes it didn't.*

Another participant described that the devices were provided via another service with particular criteria, but that they could still note who would potentially benefit from a device:

> *Basically, they said to us 'you need to meet this criteria or whatever'. So, we weren't given the option of who got it, but we were able to say 'this person would really benefit from it for this reason'.*

Finally, staff noted they needed training themselves to then support and enable clients to optimise their devices:

> *Two staff that were trained up as well, so any problems once they got their iPad or a phone, they didn't know how to set it up, then we made an appointment for them to come in so that we could set aside time twice a week for them to come in and somebody could sit with them and show them.*

4.3.5 Impact of COVID-19

The fifth core theme concerned the relevance of COVID-19 to use of digital technology. All participants described the rapid adaptation they made in response to COVID-19 restrictions. Even if some participants were reluctant to use digital approaches previously, the necessity of the situation, care for their clients and desire to deliver a service were drivers in the pace of change. Some described getting "*inventive*" to get their message across and communicate effectively. For others it was scary and challenging, but ultimately helpful:

> *It's convenient, you know, when we are at home and we can still interact and dae team meetings and things. I dae find it really useful but at the beginning it was quite a struggle for me.*

Not only did they have to adapt themselves but staff participants needed to support their clients to adapt, and managers needed to support their staff: "*it was like dead weird for the clients, but it was weird for us as well*". After an initial intense period of newness and worry, participants tended to feel that "*everybody picked it up dead well including us*", and were more confident they had options to meet people's needs:

I don't know it was just like panic modes, but it was just phone calls constantly… it was like at the start, I remember it was like… twice weekly, some people sometimes more than twice if needed… it's more like high risk sort of things … until we sort of got a bit levelled out where we were actually allowed to go out and see high risk clients.

According to staff members there were different responses from clients. Where clients had previous experience of a service, some were keen to see a return to that, whilst others "*came on board and engaged*". Newer clients were accepting of the digital ways of working:

It wasn't all necessarily plain sailing in the respect of that we had clients that were used to a level of service. They had to readapt to new clients that came in and didn't know any different.

Finally, for those clients who found lockdown challenging or could not utilise digital devices, participants were concerned about isolation when outreach and visits were suspended. Strains could increase as time passed and participants were aware of the need to support those clients:

Particularly going into the second lockdown a lot of people really struggled with that because they just didn't know what to do with themselves. It was bad enough the first time but the second I think they really, really struggled and just to kind of keep the routine and what not, and I think the kind of uncertainty because of all the rules changing and how that would impact on them. So yes, it had a big part to play in our roles.

4.3.6 What is needed? innovation and ideas

The sixth and final core theme concerned the ideas that service providers had for improvement. Participants recognised that there had been significant changes in availability of services with the shift to digital prompted by the COVID-19 restrictions. They were conscious that they too needed to know what was "*out there*" to be able to adequately signpost people and to avoid setting up duplicative services. They had several ideas, including trying to get large companies to provide low cost or basic devices. Participants recognised six areas of potential digital innovation in their services and potential needs that could be addressed: basic training; harm reduction; internet cafes; navigating services; overdose prevention; and online chats.

4.3.6.1 Basic training

Staff recognised that a large number of their clients lacked the skills and confidence to make use of their devices and therefore capitalise on online offerings:

There is still a huge number of people that they were working with who didn't access anything like that throughout it because they just didn't, either have the ability to do it or didn't want to do it.

Different strategies were discussed for providing education, with staff also noting the limitations of their services, time and skills in providing this:

When do we then stop becoming someone, you know a service that is responding to people at risk of a drug related death, you know, when do we become a digital technology education service?

They considered different ways they could offer support via ad hoc instruction whist clients were on site, organising timetabled sessions, visiting people at home (when restrictions permit), and providing information packs. They were of the view that skill development opportunities needed to be accessible, appropriate, and tailored to PWUD.

4.3.6.2 Harm reduction

Participants discussed needle exchanges, and whether this could be done digitally more often. They were aware that some clients did not want to collect from a service to which they were known, out of a desire to hide ongoing use. One participant commented that being able to reach support at night could also be beneficial. By enabling clients to access devices, participants were able to encourage clients to access harm reducing education:

> *[Harm reduction] E-learning modules, that has been a big thing in here. The women are enjoying and just giving them the opportunity and the space to learn about that in their own time.*

One service described how their new use of technology brought a more interactive approach to harm reduction education:

> *We had to use technology for that and coming up with different resources and putting them on the telly and sitting with the laptop and showing them the different things, you know, these are the sites that you want to avoid, these are the sites that are more high risk, if your wound looks like this then this is what you should be doing, these types of things.*

Participants discussed using apps or other means to alert people to health risks in current drug markets, such as contaminated batches. They were clear this should be educational rather than to try and frighten people.

4.3.6.3 Internet cafes

Participants felt that internet café type provision, similar to libraries, would be very helpful for clients. This could address both access and skill development if there was someone available to support. They recognised how COVID-19 restrictions had limited availability and discussed recommencing or instigating internet access in their services. However, participants recognised that this would need to be balanced with cost implications and their service policies, "*but we can't have strangers walk in off the street in here. Because of risk assessments and all that, you know what it's like*". They recognised that this would not facilitate access at times of crisis or provide privacy for engaging in health appointments, support groups or crisis support. Participants drew parallels with restaurants where there is access to tablets, but that these are secured to benches to prevent theft. They thought a community hub could be set up that used a similar approach to enable people to access devices at times that suited them, with availability in evenings and weekends.

4.3.6.4 Navigating services

Participants described how it could be challenging for clients to access support for their complex and varied needs (such as mental health, substance use, homelessness, physical health, mindfulness) because information was spread over multiple locations and required a degree of digital literacy to access. Participants found it challenging to signpost because of the rapidly changing landscape of service provision. A single user-friendly platform which was kept up to date was considered more likely to enable clients to find what they needed and to empower them to take control of their support:

> *You had a big list of all the sites and different things for the women to navigate to, but you know, the digital skills really weren't there for them to do that themselves. So, it didn't become, it wasn't very easily embedded. But if we just had a platform were we could access all this, that would be amazing.*

There is so many incredible resources out there that if we could just link them to them directly. I just feel like they would have a much better outcome from it.

Participants discussed how they were keen to support inter-agency working and engagement with health care providers, recognising that several clients experienced similar health issues (e.g., diabetes, need for GP). They were aware that meeting senior service providers and health care professionals could be a source of anxiety for clients and considered whether greater use of video conferences with health professionals could alleviate this. However, they noted that this was not always easy to achieve with health providers:

Our vision going forward is to have the service users being able to virtually meet up with health, you know, and we will keep promoting that, but we are up against barriers aren't we with health quite a lot of the time.

We have women who will refrain from going to the GP because they are frightened of the outcome, they are frightened of the condition so the best way to deal with it is just to blank it out, whereas we would rather have more people, more external services coming in, building up relationships with the women. And virtually that would be ideal. We can see that happening, we don't give up.

4.3.6.5 Overdose prevention

Participants discussed overdose prevention and how having access to even a basic mobile could save someone's life. One participant had a recent case in which someone had died because of delays in calling emergency services due to not having mobile devices. Participants cited how successful the campaigns for naloxone and recognising overdose signs had been through social media and other online platforms, and that this needed to be amplified in the general public. A participant proposed services like 'Click and Deliver' for naloxone run by Scottish Families Affected by Alcohol and Drugs could be rolled out with an app, and that a similar model or the same app could incorporate needle exchange. They felt that the overdose detection training could be made available via an app so that it would be available at the point of responding and talk the person through what to do.

Some participants were aware of developing wearable technology that could alert someone to overdose risk and prompt them or service providers to administer naloxone or go to hospital. Other participants found this idea interesting.

Participants were enthusiastic about a buddy system via an app for people who were using drugs alone. The person could alert a buddy if they were going to use, and that buddy could then check in with them to ensure they were OK and alert others if no responsive: "*You could be checking in to someone who is using across the world and but then still have your emergency contact to check in with*". A second idea was for clients to have apps that precisely located them (such as 'These Three Words') so that when in remote locations in need of assistance, they could be quickly located. However, participants kept returning to the point that people first needed to have a device and be able to use it, and even the ability to make a call would be a significant improvement for many people.

4.3.6.6 Online chat services

Online chat (Webchat) services available outside 9am-5pm were considered positive by participants, and they noted that the anonymity and convenience could feel a safer way to initially seek support and explore their concerns about approaching a service:

Just to kind of explore things with someone in a more kind of comfortable space for them because they are just in their house at the other end of the computer.

The online chat provided by one service was thought very accessible and potentially used more than phone lines. The 'pop-up' option was thought to reduce barriers further to getting people quickly to support: "*it's genuinely just pressing a button and they are on. Because otherwise people just give up*". If someone then did not have the skills to use this after clicking, the web chat operator could quickly get them the phone support instead. Participants discussed some of the complexities in determining whether someone was at risk of overdose, and how to respond in a way that balanced trust with life-saving intervention. They acknowledged that this is the "*nature*" of overdose services.

4.4 Summary

The findings from 18 focus groups with PWUD and service providers provide insight into experiences of using digital technology and the associated barriers and challenges. The findings are broadly similar across both groups. PWUD use digital technology for a range of reasons, including to find information, for connecting with others and to support their health and wellbeing. Service providers also discussed their access to technology as part of their roles. Both groups discussed the role of digital technology in connecting with others and the importance of having access to technology for these reasons. Identified challenges related to issues around access to technology, finance, skills, mistrust of technology, accessing the welfare system and the experiences of those with additional needs. PWUD and service providers also reflected on what is needed to support digital inclusion, highlighting funding, overdose prevention and harm reduction, training, internet cafes, online chat and navigating services.

5 Discussion

5.1 Summary of key findings

This baseline component of the evaluation collected information from 79 PWUD and 79 service providers using surveys and focus groups. Data collected allows baseline data to be compared with follow up data at the end of the programme but also enables us to assess user needs and provide recommendations for programme development.

There was synergy between the findings from PWUD and those who provide services, and between survey and focus group findings. Notably, the majority of participants who identified as PWUD had access to digital devices and the internet, but this was not without challenges and did not necessarily capture an experience of digital inclusion. There are still gaps in access to technology and there was a reliance on mobile phones, with less access to desktop, laptop or tablet computers. Whilst survey data indicated many had connectivity at home, focus group data suggested that paying for connectivity was challenging for some. PWUD used technology to connect with friends/family and service providers, but the highest reported use was to access information on health and social problems, followed by information on drug use. There was a clear need expressed for support to access and use digital technology. The benefits of connection with service providers and peer support was strongly expressed as a means to reduce risk of harm. Participants had creative ideas to address identified needs and expressed a strong motivation to be involved in developing solutions and in leading these.

5.2 Methodological considerations

Data collection was conducted during the COVID-19 pandemic which restricted the ability to conduct face-to-face data collection and necessitated a very flexible approach. Online surveys were used and worked reasonably well with service providers, with 43 respondents involved. This was complemented by rich focus group data. We were less successful in gaining access to PWUD with our survey but there was very good engagement with the focus groups using the existing networks and connections of the DRNS team. Survey completion relied on staff providing support to access the survey online or to ask people to complete a hard copy in the service. As it became clear that participation in the survey was more difficult, we increased the data collection through focus groups, hence the relatively high number of focus groups. Geographical spread of the focus groups was across three areas of Scotland in the central and South West areas. Whilst some more rural area coverage in Ayrshire was possible there was under-representation from more remote and rural areas and of the North and East. All data collection relied on those with digital access and/or service access which meant that the perspective of those who remain without connectivity, or who did not or rarely used services, had limited representation.

5.3 Current uses of technology

5.3.1 Devices used and purposes of use

A range of devices were accessed, spanning smartphones, tablets, laptops, but also access via games consoles, Smart TVs and Smart speakers. Both survey and focus group data highlighted the utility of technology to access information on health, social and substance use issues; connecting with others (including family, friends, services, peer support); and engaging in health and social services. Focus group data highlighted the utility of digital devices for accessing meaningful activity and leisure activities, which service provider participants considered an important protective factor by providing meaningful occupation within unstructured time which could be a risk for turning to drug use.

The rapid change in service provision and investment in devices for PWUD during the COVID-19 restrictions led to a significant shift in the way services were accessed. This brought considerable benefit to PWUD through the availability of 24-7 support and connection to others. Our findings reflect those of Bergman et al. (2021), Parkes et al (2021) and to an extent Caulfield (2021), that there are some elements of service provision and mutual aid that are difficult to replicate in the online space. Thus, most services had opted for blended provision to maintain the advantages of reaching those who would otherwise be excluded from in person provision (due to finance, distance or worries).

5.3.2 Challenges, issues and resulting needs among PWUD

There was a clear parallel between the challenges and issues experienced, and the range of needs that resulted. These included being able to access devices, internet connectivity, and easier navigation of the range of available information. However, for many, this was insufficient on its own, and both survey and focus group data identified that many PWUD needed support and training to develop their skills and confidence in using devices. Crucially, this needed to be tailored to their needs, including literacy and cognitive ability, and include safe use. It was also clear that non-digital options have to be maintained for people who are unable or unwilling to connect online.

5.3.2.1 Accessing devices

Whilst most participants in this study had good device access, service providers made a wider observation that there were a sizeable number of their clients without devices, and that funding to provide devices was sometimes still insufficient. Whilst a basic phone (calls and texts) may be a step up for some of the most marginalised people, there was limited benefit to wider digital inclusion, given the internet dependency of modern life. Participants identified that many PWUD relied on public services, such as libraries, or third sector facilitated computer drop-ins, and that knowledge of when and where this was available was a challenge. Support was often required to use devices at a drop-in.

5.3.2.2 Connecting to the internet

Internet access was a considerable discussion point in the focus groups among PWUD, and to a notable extent in the service provider focus groups. Whilst survey findings indicated good home access to the internet, focus groups ascertained that internet connection could be intermittent at home, or difficult for those in temporary accommodation. This had implications for engaging in key services or completing mandatory activities to access welfare assistance.

5.3.2.3 Navigating services

Survey findings indicated participants in both focus groups (PWUD and staff) emphasised the challenge of finding information on service provision, partly because there are multiple providers and partly because of the regular changes in the provider landscape. For example, there can be multiple providers of substance use support in a single locality that each have a differently laid out website, and then participants may be experiencing the same complexity of provision for their related mental health, alcohol, physical health and social needs. A single website or software application (app), kept up to date, and with an intuitive user interface was discussed and considered beneficial. Other features could be added whilst maintaining a balance with simplifying online navigation.

5.3.2.4 Impact of multiple, complex needs on digital use

Survey results found PWUD participants had physical and mental health needs, alongside substance use. Although few survey respondents described themselves as homeless, focus group participants did discuss additional challenges of homelessness and domestic violence. For some, this led to favourable opinions about location tracking devices, for protecting them from someone or enabling emergency services to locate someone who had overdosed. For others, it impacted on their willingness or ability to engage in health services. Video conferencing by health providers to reach in

to trusted services presented one way of establishing relationships and imparting important health information. Limited literacy was also identified as seriously limiting people's abilities to engage with online content, and those with additional learning needs or with different neurodiversity profiles may need additional consideration in the design of digital solutions.

5.4 Future use of digital technology: Innovation and skills development

5.4.1 Innovation

5.4.1.1 Connectivity
Solutions to the limited data and web connectivity included provider arrangements that meant data used in accessing certain essential services (such as government sites) was free, better public provision, service providers sharing internet connectivity with clients, and better Wi-Fi provision in people's homes.

5.4.1.2 Connection
Survey findings indicated many people used digital means to connect to service providers, but this was largely through text messaging, with half also noting using video calls. There is scope, as expressed in focus group data, to develop web chat functions with both service providers and peer support groups as well as increasing the use of video calls.

5.4.1.3 Overdose prevention
A number of innovations were discussed by PWUD and service providers. For example, use of wearable devices to alert someone to an overdose, including the potential for a naloxone dose integrated into a device; provision of apps with information to help navigate services; and buddy apps to connect people including alerting to when using drugs. Use of such technology at high-risk points such as release from prison was also suggested. A relevant review of the potential of overdose prevention technology has been undertaken by the ODART project (Daneshvar et al, 2021). Information apps to provide harm reduction information (which could be integrated into overdose detection apps) were also suggested by PWUD and service providers.

5.4.2 Skill development needs
The potential of technology to be enabling and empowering was firmly recognised. Some staff noted that there was simply not enough resource to support everyone who needed assistance with digital devices and they recognised that this may be outside the remit of the service they were providing. To maximise the benefits of digital technology in this group, and to maximise the ability of staff to support their client group, it is critical to address knowledge and training needs alongside access to technology.

Improved knowledge and skill development will ensure that people have the technology that they need, are aware of the value and potential applications of their device, and have the skills and confidence to make use of it. Given the discussion of impact on mental health due to overuse, concerns about security, harmful online cultures, and the availability of substances online, there is a need for training and support on how to safely use devices. Such training and support should be tailored to the needs of PWUD.

5.5 Recommendations

The recommendations below cover general recommendations for services and those specific to the Digital Lifeline programme.

5.5.1 General recommendations

1. Online service options must be available to enable access for those excluded by in-person expectations (e.g., by finance, personal concerns or distance);
2. Offline options from services (including health, government agencies, local authorities) must be maintained for those who remain without digital devices/required skills for engagement;
3. Access to good quality, free internet provision in private but accessible locations is required;
4. Solutions should take into account additional learning needs, literacy and neurodiversity.

5.5.2 Recommendations for the Digital Lifelines Programme

1. Ongoing provision of smart phones and data packages is required for those who do not have them;
2. Access to computers, laptops and tablets is desirable to complement phone use, and facilitate more complicated online tasks. This could be via household provision, service based, or another hub such as a community group;
3. All device provision should be supported by appropriate and tailored skills training for example by appropriately skilled staff;
4. Services could develop access public/hubs/internet cafes to support people with skills development generally but also to support practical use e.g., completion of online forms for specific purposes;
5. Innovative skills training involving or led by PWUD should be developed;
6. A single website or software application on local service availability, kept up to date, and with an intuitive user interface should be developed;
7. Online chat (webchat) opportunities/functions in services or community groups should be developed;
8. Harm reduction information apps should be developed;
9. Overdose prevention technology including wearables and apps should be considered.

References

Bergman B., Kelly J. (2021) Online digital recovery support services: An overview of the science and their potential to help individuals with substance use disorder during COVID-19 and beyond. Journal of Substance Abuse Treatment;120, 108152 available at: https://www.sciencedirect.com/science/article/pii/S0740547220304098

Caulfield CP. Using Telecare to Treat Opioid Use Disorder: An Ethnographic Study in New York During COVID-19. *Contemporary Drug Problems*. 2021;48(4):346-361. doi:10.1177/00914509211046705

Daneshvar H., Oteo A., Matheson C., Baldacchino A., Schofield J., Parkes T. (2021) Mapping of Overdose Detection and Alert Technologies December 2021. Report available on request from the ODART team.

Matheson C., Hamilton E., Wallace J. Liddell D. (2018) Exploring the health and social care needs of older people with a drug problem, Drugs: Education, Prevention and Policy, DOI: 10.1080/09687637.2018.1490390.

NRS, 2021 Drug Deaths in Scotland at https://www.nrscotland.gov.uk/files/statistics/drug-related-deaths/20/drug-related-deaths-20-pub.pdf

Parkes T, Carver H, Masterton W, Falzon D, Dumbrell J, Grant S, Wilson I. 'They already operated like it was a crisis, because it always has been a crisis': a qualitative exploration of the response of one homeless service in Scotland to the COVID-19 pandemic. Harm Reduct J. 2021 Mar 3;18(1):26. doi: 10.1186/s12954-021-00472-w.

Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. Int J Qual Health Care. 2007 Dec;19(6):349-57. doi: 10.1093/intqhc/mzm042. Epub 2007 Sep 14. PMID: 17872937.

Appendices

Appendix one: Questionnaire (online & paper-based) for PWUD

Use of Digital Technology for People who Use Drugs

Survey Questions for people who use drugs/have used drugs in the past 12 months

1. I have read the Personal Information Sheet which provided and would like to take part in this survey
   - ☐ *Yes*   ☐ *No*

2. I have read the Ethical Consent Form which provided and agree to take part in this survey.
   - ☐ *Yes*   ☐ *No*

3. Where do you currently live? (Please tick one)
   - ☐ *City*
   - ☐ *Large town*
   - ☐ *Small town*
   - ☐ *Rural area*

4. What type of housing or accommodation do you live in? (Please tick one)
   - ☐ *I own my home*
   - ☐ *Private rented*
   - ☐ *Council accommodation*
   - ☐ *Homeless hostel*
   - ☐ *With family/friends*
   - ☐ *Currently rough sleeping*
   - ☐ *Other (specify)*

5. Do you have any long-term physical or mental health conditions?
   - ☐ *Yes*   ☐ *No*
     - ☐ *If yes, do you use digital technology to access information or services regarding this?*

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     | |

     - ☐ *If no, would you like to use digital technology to get help and support with this condition?*

     | |
     | |

Current Situation

6. Do you receive any support from organisations regarding your drug use?
    ☐ *If yes, what services and organisations (Free text)*

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    ☐ *If no, would you like to? Please provide information (Free text)*

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7. Do you own / have access to / use any of following devices?
(Please tick the boxes that apply).

	I own	I have access to	I regularly use	I don't have access	This device can connect to the internet
Smartphone	☐	☐	☐	☐	☐
Desktop computer	☐	☐	☐	☐	☐
Laptop computer	☐	☐	☐	☐	☐
Tablet	☐	☐	☐	☐	☐
Smart watch	☐	☐	☐	☐	☐
Voice assistance (e.g. Alexa/Google home)	☐	☐	☐	☐	☐

    ☐ *Other* (Please explain)

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8. Do you have a device, that you use it for phone calls?   ☐ Yes   ☐ No
    ☐ *If yes*, do you have a data package for it in order to make phone calls, access webpages etc? Please provide more information on data packages / connectivity

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☐ *If you do not have a device (smartphone, tablet, etc), what is the reason?*
  ☐ *Cost*
  ☐ *Lost/stolen*
  ☐ *Do not need*
  ☐ *Cannot afford data package*
  ☐ *Other (please specify)*

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9. Which of the following ways do you connect to the internet? (Please tick all that apply).

	How often do you connect to the internet this way?				
	Always	Daily	Regularly	Rarely	Never
On my mobile phone	☐	☐	☐	☐	☐
Home connection	☐	☐	☐	☐	☐
Work or college connection	☐	☐	☐	☐	☐
Public Wi-Fi internet	☐	☐	☐	☐	☐
Cafe Wi-Fi	☐	☐	☐	☐	☐
Library Wi-Fi	☐	☐	☐	☐	☐
Bus or train Wi-Fi	☐	☐	☐	☐	☐
Service provider computers/Wi-Fi	☐	☐	☐	☐	☐

Other (please specify)

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10. Which of the following do you use to connect to your family or friends? (Please tick all that apply)

	How often do you connect to friends / family this way?				
	Always	Daily	Regularly	Rarely	Never
Video call (Zoom, Skype, Facetime, WhatsApp…)	☐	☐	☐	☐	☐
Text (SMS, WhatsApp)	☐	☐	☐	☐	☐
Social networking (Instagram, Facebook, Twitter etc)	☐	☐	☐	☐	☐
Email	☐	☐	☐	☐	☐

Other (please specify)

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11. Which of the following do you use to keep in touch with your service providers for support? (Please tick all that apply)

	Which devices do you use to do this?				
	Smart phone	Desktop computer	Laptop	Tablet	None of these
Video call (e.g. Zoom, Skype, Facetime)	☐	☐	☐	☐	☐
Text message (SMS, WhatsApp)	☐	☐	☐	☐	☐
Social networking (Instagram, Facebook, Twitter)	☐	☐	☐	☐	☐
Website chat functions (Support organisations, Recovery Forums)	☐	☐	☐	☐	☐
Email	☐	☐	☐	☐	☐

Other (please specify)

Digital Technology and Services

12. Do you use devices or digital technology to find out how to get help with health or social problems?
    ☐ *If yes, what technology do you use? And how often?*

	How often do you do this?				
	Always	Daily	Regularly	Rarely	Never
Search on the internet	☐	☐	☐	☐	☐
Ask friends to search on the internet	☐	☐	☐	☐	☐
Check service provider website	☐	☐	☐	☐	☐
Check NHS website	☐	☐	☐	☐	☐
Ask voice assessment (Alexa, Google home, Siri)	☐	☐	☐	☐	☐
Contacting health care provider e.g. GP, Addiction service	☐	☐	☐	☐	☐

☐ *If not, why do you not use digital technology?*
    ☐ *I don't have a device*
    ☐ *I don't have access to internet*
    ☐ *I don't know how to find information*

□ I don't trust digital technology
□ I prefer face to face communication
□ Other please explain below:

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13. When you need information about seeking help for problems related to drug use, do you use a device/digital technology? □ Yes □ No

    □ *If yes, what technology do you use? How often?*

	How often do you do this?				
	Always	Daily	Regularly	Rarely	Never
Search on the internet	□	□	□	□	□
Ask my friend / family member to search on the Internet	□	□	□	□	□
Check service provider website	□	□	□	□	□
Check NHS website	□	□	□	□	□
Check social media (Facebook groups)	□	□	□	□	□
Forums	□	□	□	□	□
Ask voice assistant (Alexa, Google home, Siri)	□	□	□	□	□
Phone call	□	□	□	□	□

    □ *If no, why do you not use digital technology?*
        □ *don't have my own device*
        □ *I don't have access to a device*
        □ *I don't have access to the internet*
        □ *I don't know how to find the right information*
        □ *I don't trust digital technology for this*
        □ *I prefer face-to-face communication*
        □ *Other (please describe below)*

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14. Do you experience any difficulties in using devices or digital technology? *□ Yes □ No*

    □ *Yes, it would be really helpful to us to know more about these difficulties so please use the free text box to explain.*

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    □ *No or Not sure, Please provide more information (Free text box)*

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15. Do you think having support to help you use devices and digital technologies would be helpful?
E.g., training, skills development, confidence building, support?   □ *Yes*   □ *No*

    □ *If yes, what might be helpful (tick all that apply and please add further ideas of your own)?*

        □ *Having my own device*
        □ *Easy to use instructions*
        □ *Better access to the internet*
        □ *More support*
        □ *Other (please specify) Free text box for further information*

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    □ *If you don't need any support to help you use digital technology, please tell us why.*

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About you

Now please answer a few final questions about your circumstances

16. What is your age? (Please tick one)
    □ *18-29*
    □ *30-39*
    □ *40-49*
    □ *50-59*
    □ *60-69*
    □ *70+*

17. Which of the following best describes your gender identity? (Please tick one)
    □ *Male*
    □ *Female*
    □ *Non-binary*
    □ *Other*
    □ *Prefer not to say.*

18. What level of education you have completed (e.g., school/ college/university)?

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19. Which of these best describes your living situation? (Please tick one)
    □ *I live alone*
    □ *I live only with my partner*

- ☐ *I live with wider family members (e.g., sister, parent)*
- ☐ *I live with people I am not related to (e.g., friends, hostel accommodation)*
- ☐ *Prefer not to say*
- ☐ *Other (please specify)*

20. What is your current situation regarding drug and alcohol use? (Please tick all that apply)
- ☐ *I am currently using (non-prescribed) drugs*
- ☐ *I am in treatment for problem substance use*
- ☐ *I am prescribed medication for problem substance use*
- ☐ *I use alcohol on a regular basis*
- ☐ *I am not using drugs*
- ☐ *I am not using alcohol*
- ☐ *I am not in treatment*
- ☐ *I am in recovery*

Free text box to use if required

Appendix two: Service Provider Questionnaire (online)

1. You are eligible to take part in the study if you are a professional involved in non-NHS service to people who use drugs or their family in Scotland and you do not work for an NHS organisation. Does this describe to you?

   o *Yes/no (go to end of survey)*

2. Do you consent to the above statements?

   o *Yes/no (go to end of survey)*

Online Survey (Service Providers)

3. What type of organisation do you work in?

   o *Voluntary/Third Sector/Charity, Local Authority, other (please specify)*

4. What is the geographical scope of your service?

   o *Local (town/city/Local Authority level), Regional (Health Board level), National, other.*

5. What is the main focus of your service for people who use drugs?

   o *Harm reduction, recovery support, treatment, homelessness support, a combination of supports, other (please specify)*

   Free text option to provide more information if needed

6. Please describe your current role in your organisation. How does it relate to people who use drugs with complex needs?

   Free text box

7. What devices do you personally use in your working role?

   ▪ *Smart phone, Desktop computer, Laptop, Tablet, other (please specify)*

   o Who owns the device(s) you use for work?

   ▪ personal owned/organisation/ other (please specify)

   o How do you use these devices in your work?

   ▪ *Direct support work with clients, email, access to websites, Office applications (word etc), Applications within my organisation (please specify), other (please specify).*

   • Free text option if required to provide additional information.

- o f you use devices for direct support work with clients, please let us know more about what this support involves. How does the device / software help you to support people who use drugs with complex needs?

    - ▪ Free text

8. Please estimate what proportion of your clients who use drugs have access to internet-connected technology?

	All of them	More than half	Approximately half	Less than half	A very small minority	I don't know
Smart phone	○	○	○	○	○	○
Laptop	○	○	○	○	○	○
Personal computer	○	○	○	○	○	○
Tablet	○	○	○	○	○	○
Other	○	○	○	○	○	○

Use this space to tell us more about your answer if you wish.

9. In your opinion, what are the barriers for those who do not have a device or do not use digital technology? Please tick all that apply.

    - o *Cannot afford to buy a device/ cannot afford data packages / has lost their device or had it stolen and not replaced it / lack of trust in digital technology/ has no need for the technology / does not have support or training to use devices / other (Please specify)*

We would be grateful if you could expand on your answer here.

Free text option to provide more details.

10. Does your organisation provide information to people who use drugs via digital technology? If so, please indicate how well used these are.

	Well used	Somewhat used	Rarely used	Never used
Website	☐	☐	☐	☐
Text messaging	☐	☐	☐	☐
Mobile app	☐	☐	☐	☐
Social media activity	☐	☐	☐	☐
Other	☐	☐	☐	☐

- o If uptake is poor or could be better, please provide your view as to why that might be and ways to address this.
    - ▪ Free text box

11. Does your organisation provide *services* to people who use drugs via digital technology (e.g. online meetings with clients, phone call / text check-ins with clients, other)?
    - o *If yes, What services do you provide via digital technology?*
        - ▪ *One to one online support meeting, Therapeutic groupwork, Access to video call/consultation for specific issue, Online booking for a service, Phone call/text check in, Online access to personal data record/history, Other (please specify)*
    - o *If no, do you know why? Please tick all that apply.*
        - ▪ *Lack of technology, Lack of training in using technology, Lack of data access, Unfamiliarity with technology, other (please specify)*
        - ▪ *Please elaborate in the box below.*
        - Free text box

12. Do you use digital technology to share information regarding support for clients with other organisations?
    - o Yes. What kind of information?
    - o No. Why not?
        - Free text box

13. Do other organisations share information on their clients and services with you? Yes/No
    - *If yes, what kind of information?*
    - Free text box
    - o *If no, Why not?*
        Free text box

14. Would you welcome more training on using digital technologies in your work with people who use drugs with complex needs?

    Yes/ No

    Please tell us what training you would find helpful? *(please specify)*

    Free text box for more information

Free text box

15. What training is needed to enable your clients to use digital technology/devices/software?

Free text boxes

16. What support settings would benefit most from deploying digital technology to provide info / services to people who use drugs?

   o *Homeless hostel/Supported accommodation, Prison/Police custody, Clients' homes, Remote / rural locations, NHS services ,Local Authority services, Voluntary sector services, Other*

17. In your opinion, what would make the most difference to the lives of people who use drugs in relation to access to/use of digital technologies to reduce harms in their lives. (Please tick all that apply)

   Easy access to information on drug use and harm reduction/ easy access to information on different types of treatment/ easy access to information on services available locally/ connection to support workers including peer support/ connection to social support network e.g. family/ use of monitors to detect overdose/ information on other health conditions/ Remote access to clinical care/ Remote access to non-clinical case work/ other (text box)

18. What is your organisation's experience of delivering information and services to people who use drugs via digital technologies?   Free text box

How could services best use digital technology to provide information and services to people who use drugs? Free text box

Is there anything else relevant that you would like to add that you have not been asked about above? Free text box

Which of the following best describes how you think of your gender identity?

   o *Male/Female/Non-binary/Other/Prefer not to say.*

19. Please provide your age group?
   o *18-29, 30-39, 40-49, 50-59, 60-69, 70+*

Thank you for participating in this research project.

Appendix three: Focus group topic guide for PWUD

1. Do you currently have / have access to digital tech (phone, web-connected computer or tablet)?
   - *If not, why not? probe/listen for: no need / lack of interest; cost / lack of skills / loss / damage*
   - *If yes, probe/listen for: type of tech they have access to / different tech for different requirements.*
   - *Do you use mobile data or WiFi?*
   - *Mobile data: are you on a contract or pay-as-you-go? Does this affect your online activities, e.g. what uses up your data and do you ever run out?*
   - *If WiFi, where do you have access to this?*
     - *Listen/probe for: home/health and social care services/libraries/ shopping centres*

2. What do you use this technology for?
   - *Listen/probe for: social media/contact with friends and family/ contact with support services/ job skills/education/entertainment / benefit contact / banking*
   - *If not using technology: would you use technology for these things?*
   (social media/contact with friends and family/ contact with support services/ job skills/education/entertainment / benefit contact / banking)

3. What, if any, challenges do you face accessing technology and the internet
   - *Listen probe for: Cost / lack of skills-knowledge / mental health / no Wi-Fi /data caps*
   - *What limits do you have in accessing mobile data / WiFi (cost, data cap, only available in certain places)*
   - *Listen for mention of losing / breaking devices.*

4. Do you think it's a problem/does it matter if some people don't use digital tech?
   - *Probe/listen for: people on low incomes miss out on advantages, access to health and care services etc.*

5. Is there anything that you think would encourage more people who you know to use technology?
   - *Probe/listen for - more public access, greater awareness of benefits, incentives etc/free courses/subsidised tech/training*

6. What health / social care / welfare info and services do you access via digital tech? How have you found this?
   - *(Prompts: websites, apps, SM, online meetings. Harm reduction info, managing drug use, treatment, recovery support. Get the names of sites / apps)*
   - *Do you keep in touch with any workers / people in recovery by phone / text email / mobile app?*
   - *Prompts/listen for: examples of online services you found easy / difficult to use?)*

7. *Would you like to access more info / services to help keep you safe and healthy? If so, what would you like to see?*
   - Are there things you currently do/would like to do that you think would be facilitated by technology?

- *Probe/listen for: maintaining contact with services, sharing information with services etc.*
- *What barriers / concerns do you have regarding using online info / services / apps?*
- *If you were advising someone on the development of a digital technology, what key piece of advice would you give them?*

8.   This study is informing how services will provide digital technology to people who use drugs. If you were given a new device tomorrow as part of this programme, what things would you consider?
- *What kind of device you are given (phone, laptop, tablet)*
- *Training/support needs*
- *Additional equipment (e.g. internet, other tech etc)*
- *What would you use this device for?*
- *Would you use apps that would support you in relation to your drug use (e.g. healthcare, engagement with services, overdose prevention)?*
- *Anything else?*

9.   Do you think it is important for people who are vulnerable to overdose to use digital technology? *Prompt – why do you say that?*

10.   Is there anything else you'd like to say about your experience of digital tech?

Appendix four: focus group topic guide for service providers

1. Does your service use digital technologies to provide information or services to people who use drugs?
(Prompt: website, apps, social media, online video calls, phone, email or text check-ins / appointment reminders)

2. What is your overall experience of using digital technology to inform / provide services for PWUD?
(Prompt: what works well, what is easy for you to provide, what challenges are there?)

3. Did your organisation's use of technology for client engagement change during the pandemic?
(Prompt: using tech to maintain contact during lockdown, to meet additional needs clients experienced during the pandemic e.g. isolation, anxiety, difficulty accessing in-person services)

4. How (much) are these used by your clients? Which types of clients tend to use these most?
(Note, we might want to ask them to send us any monitoring / evaluation reports)

5. What barriers do you think clients face in using digital tech to access info/services?
(Prompt, how many have mobile phones, web-connected tablets, laptops/PCs; how long do they keep phones etc; are these contract / pay as you go? Do they have mobile data and/or WiFi access? Do they know how to use devices to access info and services online)

6. How could digital technologies be developed / used to improve the health and wellbeing of people who use drugs?
(Prompts: In your / other organisations, What features would make this accessible / useful for clients. What about clients with multiple / complex needs e.g. homelessness, physical/mental health problems, especially problematic substance use)

7. Is there anything you would like to add about the potential use of digital tech to reduce drug-related deaths in Scotland?