OPERATIONAL PROCEDURES

Insight Service
DIGITAL TELECARE
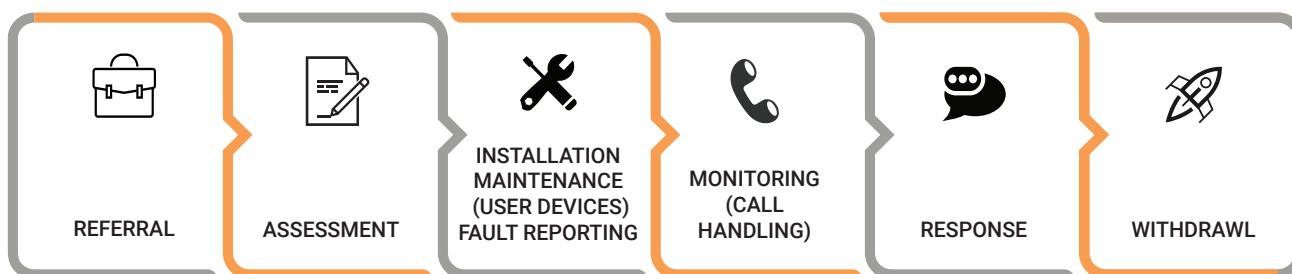Scottish Local Government

INTRODUCTION

By December 2025, the existing analogue telephone network will be switched off and all citizens and Partnerships will have to migrate to internet-based telephony.

Adapting current operational procedures will be crucial to accommodate the transition to digital telecare. To successfully do this, Partnerships will need to highlight elements of their existing operational procedures that will be impacted by the move to digital telecare and implement changes to accommodate.

This Insight Service piece will provide details of operational procedure changes required and best practice examples that Partnerships should follow to accommodate digital telecare.

CLIENT FACING PROCEDURES

CLIENT FACING OPERATIONAL PROCEDURE PROCESS FLOW

| REFERRAL | ASSESSMENT | INSTALLATION MAINTENANCE (USER DEVICES) FAULT REPORTING | MONITORING (CALL HANDLING) | RESPONSE | WITHDRAWL |

The key operational changes to Client Facing Procedures Partnerships should be aware of are:

1. DIGITAL CONNECTIVITY AT REFERRAL (REFERRAL)
Partnerships should check the type of connectivity required for the installation of TEC including mobile coverage or if it is a "not spot". If there is no mobile connection, you may have to consider an Ethernet connection. Utilising True-roaming SIMs will decrease risk of loss of connection and it roams from network to network finding the strongest signal.

2. CHANGE TO USER EXPERIENCE WITH A DIGITAL CONNECTION (INSTALLATION)
The user experience of using digital telecare should be very similar to that on analogue equipment except the connection between the ARC and alarm unit should be faster. It is important to carry out test calls with users to make them aware that the alarm will react and sound differently if a device is activated.

3. RESPONDING TO ISSUES WITH HEARTBEATS (INSTALLATION)
In the event of issues being identified with the connection to a user's alarm, a maintenance visit may be needed to improve the connection. This could include relocating the alarm device within the home to obtain a better mobile signal. If a reliable signal cannot be found it may be necessary to look at alternative connectivity options.

4. REMOTE PROGRAMMING OF DEVICES (INSTALLATION)
With digital devices and device management platforms (DMP), remote programming of devices should be easier than analogue programming. Some suppliers have set up their digital devices with an out of range function so pendants can be programmed remotely, sent in the post and the DMP will indicate when the pendant is in range of the alarm unit. Partnerships should note that the device may not update automatically and will "synchronise" on the next "ping" from the device to the DMP.

5. MARGINAL CONNECTION (INSTALLATION)
Digital dispersed alarm devices use the mobile phone network to connect to the ARC. The quality of the mobile phone signal can change after installation, potentially due to the alarm device being moved in the home.

Signal quality dropping may be identified through the heartbeats sent by the alarm device e.g. heartbeats being lost over a long period, or heartbeats being lost regularly for a relative short period of time.

6. QUICKER INSTALLATIONS (INSTALLATION)
Digital devices and device management platforms may allow for quicker installations as there is no need to install phone extensions or electrical sockets. There is also more flexibility to relocate the alarm if a person's needs change.

7. CALLS ARRIVING ON ANALOGUE (CALL HANDLING)
Alarm devices that have lost their digital connection can be configured to 'fall back' to analogue connectivity. The ARC should have procedures in place to monitor where this is occurring so that they can rectify why the digital connection has failed.

8. FAILED CALLS MONITORING (CALL HANDLING)
Failed digital calls should first be processed in the same way as regular analogue e.g. record calling line information, terminate call, use the failed call information to identify service user. If no further calls present or calls continue to fail, the service user should determine whether emergency assistance is required.

9. AUTOMATION OF CALLS MONITORING (CALL HANDLING)
Some calls and signalling from digital alarm devices can be configured to be handled automatically. These auto-answered calls may include: periodic test calls; low battery on unit; low battery on peripherals; mains fails or inactivity alarms.

10. SIM MANAGEMENT (RESPONSE)
Many digital alarms are supplied with an inclusive SIM and a contract for a period of connectivity. In many cases, it is not possible to 'pause' the connectivity for any periods when the alarm is not in use. Partnerships should consider whether the SIMs are still using their inclusive connectivity when determining how much equipment to hold in stock.

David Brown, Business Relationship Manager for Digital Telecare for Scottish Local Government, further explains Sim Management.

ADMINISTRATION PROCEDURES

ADMINISTRATION PROCEDURES PROCESS FLOW

BUSINESS CONTINUITY / DISASTER RECOVERY → TECHNOLOGY / ASSET / SYSTEM MANAGEMENT → TRAINING AND DEVELOPMENT → QUALITY / MANAGEMENT INFORMATION → CHARGING

The key operational changes to administration Procedures Partnerships should be aware of are:

1. DIVERTING CALLS TO THE DISASTER RECOVERY SITE (BUSINESS CONTINUITY/DISASTER RECOVERY)
Transfer of service to and from the Disaster Recovery Centre (DRC) will differ when digital telecare is implemented. It is likely that the transfer to disaster recovery will be faster than current arrangements. Digital alarms will be programmed to prioritise main ARC site's address followed by the DRC address.

2. REMOTE WORKING CAPABILITY (BUSINESS CONTINUITY/DISASTER RECOVERY)
Digital systems provide more flexibility in where alarm calls can be answered. This raises the opportunity for Partnerships to implement remote working. It is likely that this will be a long-term aspiration as the transition from analogue to digital will be an incremental process requiring analogue and digital systems to run concurrently.

3. CYBER INCIDENTS (BUSINESS CONTINUITY/DISASTER RECOVERY)
Cyber incidents will present a new potential trigger for a business continuity event. Digital alarms will present new security risks as there isn't currently an ARC recovery procedure for cyber-attacks. Partnerships should seek further cyber security advice from their ICT security teams.

4. PATCHING ARRANGEMENTS (TECHNOLOGY)
Digital telecare systems are likely to require more frequent software updates (patching) than analogue equivalents. This is partly to ensure that they remain secure given their exposure to the Internet. This applies to both the ARC solution and alarm devices. Partnerships will need to decide whether to apply patches to devices as soon as they are released by the manufacturer, or to complete patching to a regular schedule.

5. HEARTBEAT MONITORING (TECHNOLOGY)

Digital alarm devices send regular "heartbeat" messages to show that they are operating and communicating correctly. ARC staff must regularly check the status of the heartbeat messages to identify any devices that are not operating correctly. The nature of the connections used for digital telecare means that a proportion of heartbeat messages will be lost during normal operation.

A device should be considered as malfunctioning if the number of lost heartbeats over a 24-hour period is higher than a defined percentage or more than a defined number of heartbeats are lost in a row.

6. MOBILE CONNECTIVITY ISSUES (TECHNOLOGY)

Digital dispersed alarm devices use the mobile phone network to connect to the ARC. The quality of the mobile phone signal can change after installation, potentially due to the alarm device being moved in the home causing connectivity issues.

The mobile SIMs fitted in alarm devices allow the unit to roam between mobile networks to find a stronger signal. Signal quality dropping may be identified through alarm receiving platforms or the heartbeats sent by an alarm device.

7. INCIDENT/ FAULT RESOLUTION (TECHNOLOGY)

Digital telecare systems are more complex than their analogue equivalents meaning in the event of a system fault it is potentially more complex to determine who is responsible for resolving the incident and what that resolution involves. In the event of an incident occurring, Partnerships need to have a procedure in place for determining who is responsible for resolving it i.e. IT staff or supplier.

8. FIRMWARE UPDATES ON WITHDRAWAL (TECHNOLOGY)

A firmware update is a software update provided by the manufacturer that is used to control a piece of hardware. These updates can be sent to alarm units remotely via the mobile GSM data connection or by plugging a USB cable into the base unit. As part of the procedure of preparing withdrawn equipment for a new installation, Partnerships should check the firmware installed on the device and install any patches required to ensure it is using the latest version. This reduces the requirement to install patches "over the air" once the equipment is redeployed and operational.

9. STAFF AND USER TRAINING (TRAINING AND DEVELOPMENT)

In some cases equipment manufacturers will provide some training free of charge however training requirements should align with the Partnerships' operational procedures.

It is important when upgrading a user from analogue to digital to do a test call to demonstrate these changes such as different alarm sounds.

10. DIGITAL TELECARE COSTS AND CHARGING (CHARGING)

The move to digital telecare may require Partnerships to review their approach to charging as digital equipment can be more expensive than analogue.

David Brown, Business Relationship Manager for Digital Telecare for Scottish Local Government, further explains Heartbeat Monitoring.

Considerations should include:
- £200 per unit with 1-2 years of connectivity;
- Cost ranges from £178-£199 per unit with extra £5 monthly cost for SIM connectivity;
- Digital capability in the ARC may be licensed by the solution provider. The digital capacity of the ARC solution may be dependent on the number of licenses purchased.

WHAT MATERIALS ARE AVAILABLE TO SUPPORT CHANGE TO OPERATIONAL PROCEDURES?

Connectivity for Digital Telecare: This document provides an overview of the mobile connectivity options for digital telecare and a summary of the connectivity supported by each of the devices on the marketplace.

Summary Of Alarm And Peripheral Compatibility: This document provides a summary of the compatibility between telecare alarm devices and peripherals. Produced in response to enquiries from Partnerships, it outlines how the move to digital telecare will impact on their existing stock of peripheral devices.

If you have any questions relating to this Insight Service piece or the wider Telecare environment, please get in touch.