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10 Facts about Analogue to Digital: How it will affect telecare

1.7 million vulnerable people rely on telecare in the UK. When someone falls, they might press an alarm button or rely on automated sensors in their home. Alarm data is sent, via the Public Switched Telephone Network (PSTN), to a monitoring centre, where an operator will provide advice or get help.

That's how telecare works today, but things are changing. Here are 10 things we know about the analogue to digital shift and how it may affect telecare services.

1. **As early as 2023, it won't be possible to buy an analogue phone line from BT.** Instead, BT will move its customers to a digital, Internet Protocol (IP) network, in readiness for the shut-down of all its traditional telephone lines.
2. **In 2025 the traditional, Public Switched Telephone Network (PSTN) will be switched-off** and replaced with a digital 'all-IP' network. Voice calls and data (including telecare alarm calls) will no longer be sent via traditional point-to-point connections. Instead, they will be sent as 'data packets' over digital networks.
3. **In 2025, all ISDN lines will be switched off.** Many telecare services still use ISDN to feed alarm data, via multiple phone lines, into their monitoring centres. They will need to find alternative solutions.
4. **With some digital migration already underway, analogue telecare alarm services are reporting a rise in the number of failed alarm call attempts.** One service provider has reported a failure rate of 11.5% (and rising) for the first alarm attempt.
5. **Telecare alarms will fail due to loss of power to routers.** This isn't an issue for alarms on the old phone networks. When power fails, these alarms have 24-hr battery back-up and phone lines still work. But when analogue alarms run on digital networks, they will rely on routers, plugged in at home, which will stop working during or shortly after a power cut.

This also means that 999 calls will not be possible from fixed-line phones when power is lost. Telecoms providers have responded differently to this critical issue, but their proposals are limited.

- BT have confirmed that their new router will come with one hour of battery back-up.
- Virgin Media's router has no back-up at all and 'vulnerable clients' will be provided with a separate device that allows 999 and 112 calls only.

These proposals unfortunately go against industry standards (EN50134) and best practice guidance, which all require 24-hour operation of telecare alarms in the event of a local power failure.



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- 6. Communications providers and Ofcom all recommend a shift to digital and away from traditional analogue devices.** This is because analogue devices, including alarms, send data as audible voice tones over the PSTN network. When they are connected via a digital network this ‘voiceband’ data could potentially be corrupted or lost. This has implications for the reliability and safety of analogue telecare.

Other countries have already encountered this problem; Sweden launched a national digital upgrade programme after failed telecare calls were widely reported and a 76-year-old man died after his analogue alarm was unable to connect via the digital network. In fact, more than 95% of Swedish digital alarm installations now use mobile network connections.

- 7. Mobile networks may be essential to future UK alarm connection, however, Vodafone will switch off 3G in the next ‘two to three years’.** The head of Vodafone’s UK networks, Andrea Dona confirmed this in July 2019. [2G switch-off is unlikely to happen before the mid 2020's, and possibly the early 2030's.](#) It is vital that we guide telecare alarm services to the right mobile network options, as reduced coverage and eventual switch off will impact the quality and safety of these systems.
- 8. Awareness of the challenges posed by the digital shift varies hugely across the TEC sector.** TSA’s research shows that digital maturity amongst telecare service providers differs enormously, as does their awareness of the digital shift. A large proportion of services providing telecare to vulnerable people haven’t even begun to upgrade their analogue equipment.
- 9. After a telecoms upgrade, communications providers are not committing to the re-installation and testing of telecare alarms.** Once they fit a connection, router and adapter device, engineers will only be permitted to check a new phone line connection is up and running– they won’t test telecare alarms to make sure they work on the new digital network.
- 10. BT and Virgin Media currently use adaptors to connect analogue phones and telecare alarms to routers, but they have not guaranteed that these plug-in devices will be available in the long-term.** So, in the future, existing telecare alarms may not work over the new digital networks, or users may have to pay for an Analogue Telephone Adaptor (ATA). This would have cost implications for telecare service providers and vulnerable customers.

KEY ACTIONS:

Immediate, collaborative action is needed to tackle these issues and avert a potentially major disruption to telecare services. We can’t risk high volumes of alarm calls being switched directly to emergency services. TSA, the national body for technology enabled care services is already working with communications providers, Ofcom and care regulators around the digital switchover. But a support package must be funded to enable local authority and NHS TEC commissioners and service providers to manage digital switchover risks effectively and harness the opportunities.

More information

- Watch our video about the Digital Shift www.tsa-voice.org.uk/campaigns/digital-shift/
- Download TSA’s White Paper on the Digital Shift www.tsa-voice.org.uk/campaigns/digital-shift/
- Email TSA chief executive, Alyson Scurfield: alyson.scurfieldCEO@tsa-voice.org.uk