

# Supporting Scotland's Workforce

## TECHNOLOGY ENABLED CARE



# Supporting Scotland's Workforce

## TECHNOLOGY ENABLED CARE

### COMMISSIONED BY

#### Scottish Government

- > Technology Enabled Care (TEC) Programme

#### NHS Education for Scotland

- > Sheena Greco, Principal Educator
- > Dorothy Wright, Director of Workforce

### PAMELA DIMBERLINE

Specialist Lead  
Workforce Development  
NHS Education for Scotland

Designed and distributed survey.

Undertook all data collection from one to one interviews and focus groups.

Contributed to report.

### DR NANCY EL-FARARGY

Research & Information Officer  
NHS Education for Scotland

Analysed survey data and wrote the report.

### ACKNOWLEDGEMENTS

#### Thanks are extended to the following colleagues for their invaluable contribution to this research

- > Technology Enabled Care Partnerships
- > Staff and managers in health, care, housing and other sectors
- > Nessa Barry, Scottish Centre for Telehealth and Telecare
- > Caroline Burgess, NHS Education for Scotland
- > Ruth Lockwood, NHS Education for Scotland
- > Tommy Marshall, NHS Education for Scotland

# CONTENTS

<b>1. EXECUTIVE SUMMARY</b>	<b>5</b>
1.1 Workforce Questionnaire	7
1.2 Results	9
1.3 Recommendations	10
1.4 Conclusion	12
<b>2. INTRODUCTION</b>	<b>13</b>
2.1 Technology for Health and Care	14
2.2 The Political Landscape	17
2.3 Technology at Work	22
<b>3. METHOD</b>	<b>23</b>
3.1 Workforce Questionnaire	24
3.2 Report Layout	24
<b>4. RESULTS</b>	<b>25</b>
4.1 Questionnaire – Respondents’ Demographics	26
4.1.1 Summary	31
4.2 Current Use of Technology Enabled Care	32
4.2.1 Summary	35
4.3 Confidence in Using Technology Enabled Care	36
4.3.1 Summary	37
4.4 Past Learning and Training in Technology Enabled Care	38
4.4.1 Summary	43

CONTINUED OVER 

# CONTENTS

<b>4. RESULTS (CONTINUED...)</b>	
4.5 Future Intentions in Using Technology Enabled Care	44
4.5.1 Summary	47
4.6 Learning, Skills and Development Opportunities	48
4.6.1 Summary	52
4.7 Championing Technology Enabled Care and Further Engagements	54
4.7.1 Summary	55
<b>5. DISCUSSION</b>	
5.1 Summary	58
5.2 Recommendations	59
5.3 Conclusion	61
<b>6. APPENDICES</b>	
6.1 Glossary	64
6.2 Questionnaire	65



# SECTION 1

# EXECUTIVE SUMMARY

## SECTION 1

## EXECUTIVE SUMMARY

**Over the last ten years, digital technologies have revolutionised the way we access and deliver services and the growing impact on health and care services is evident.**

With the ongoing transformation and integration<sup>1</sup> of health and social care services, partnership working across acute care, community care, and third and private sectors is increasing. Innovative models of care – with increased access to information, advice, care and support – further empower people to self-manage their own health and wellbeing and live well and safely at home or in the community.

2014 witnessed the launch of the **Scottish Government's Technology Enabled Care (TEC) Programme<sup>2</sup>** to deliver digital transformation of health and care services at-scale, and improve health, care and wellbeing outcomes. With investment at around £30 million for three years<sup>3</sup>, initial objectives were around the expansion, integration and sustainable use of TEC within health, housing and care services.

At a national level, the TEC Programme Board oversees the development and delivery of the TEC Programme and TEC services throughout Scotland. At an operational level, the Scottish Centre for Telehealth and Telecare (SCTT)<sup>4</sup> (embedded within NHS 24<sup>5</sup>) drives transformational change and service redesign to improve outcomes for the people of Scotland, through the promotion and use of technology enabled care.

- 
1. Crown Copyright (2014). Public Bodies (Joint Working) (Scotland) Act 2014 (UK: The Stationery Office) Available at: [http://www.legislation.gov.uk/asp/2014/9/pdfs/asp\\_20140009\\_en.pdf](http://www.legislation.gov.uk/asp/2014/9/pdfs/asp_20140009_en.pdf) [Accessed 20 December 2015].
  2. Hodgson, A. (2015). TEC Programme - Overview of Year One Activity. Available at: <http://www.jitscotland.org.uk/resource/tec-programme-overview-of-year-one-activity/> [Accessed 21 July 2017].
  3. TEC Board (2016). Technology Enabled Care: Annual Report 2015-2016 Available at: <http://www.ehealth.nhs.scot/wp-content/uploads/sites/7/2016/11/Technology-Enabled-Care-Annual-Report-2015-2016.pdf> [Accessed 13 July 2017].
  4. SCTT (2017). Programmes. Available at: <https://sctt.org.uk/programmes/> [Accessed 21 July 2017].
  5. NHS 24 (2017). NHS 24 Explained: NHS 24 Services. Available at: <http://www.nhs24.com/explained/services/> [Accessed 23 August 2017]. (NHS 24 is an online and out-of-hours phone service that offers access to health advice and information throughout the year.)
- 

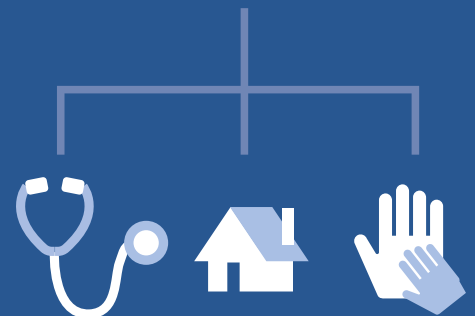
2014

LAUNCH OF THE  
SCOTTISH GOVERNMENT'S  
TECHNOLOGY ENABLED  
CARE (TEC) PROGRAMME

INVESTMENT AT AROUND  
**£30 MILLION**  
FOR 3 YEARS

INITIAL  
OBJECTIVES

EXPANSION, INTEGRATION  
AND SUSTAINABLE USE OF TEC  
WITHIN HEALTH, HOUSING  
AND CARE SERVICES.



## 1.1 Workforce Questionnaire

Given the Scottish strategic landscape around the integral role that technology is expected to play in the delivery of safe, high quality and cost-effective care, there was a need to understand current and future workforce knowledge, confidence, experiences and learning needs around using technology in health, care and support services.

A questionnaire was therefore distributed by NHS Education for Scotland to a wide range of social care, housing and health stakeholders across Scotland. It was informed by a series of one-to-one interviews and focus groups with a range of participants from across health, care and support services.



**The aim of the questionnaire was to gain an understanding of any learning, development and support needs around technology enabled care.**



**Specifically, the objectives were:**

- How technology is currently used in delivering health, social care, and housing care and support and how this may change in the future.
- Current confidence in using technology to deliver care and support.
- Current access to learning and support in technology enabled care.
- Insights into future learning opportunities and support that would be helpful in the future to deliver technology enabled care.
- Insights into any challenges which may impact on abilities to embed technology enabled care into everyday practice.



**Views were welcomed from all staff cohorts, including from those who did not use technology enabled care.**

**Analysis of the questionnaire was undertaken via descriptive statistics and free text responses were grouped into themes.**





## 1.2 Results

### Respondents' demographics:

- 635 individuals responded to the questionnaire, and a range of roles were represented from across primary, secondary and community sectors.

### Current use of technology for health and care:

- The cited technologies were used infrequently, with approximately 29% of the sample using telecare daily.
- Main reasons highlighted for not using the presented technologies were centred around workplace availability, lack of opportunities and no perceived requirements for job roles.
- Lack of technology knowledge also hindered use. However, there was an appetite to learn more about the area.
- Approximately, 2% of the sample had no interest in using technology enabled care resources.

### Confidence and learning:

- Confidence in using the resources was somewhat varied. However, in the main this could not be sufficiently attributed due to lack of use or access.
- In the same vein, most of the sample had not participated in learning or training in the area (and for some, it simply was not applicable).
- However, from the resources presented, respondents positioned telecare the highest in their confidence rating (very confident 23%, confident 25%), and approximately 44% of the sample had participated in telecare learning or training.

- Of those having participated in any type of learning or training, face to face (75%) and 'learning on the job' (61%) were the most commonly cited approaches.

### Anticipated future use of technology for health and care:

- Future intentions towards using technology for health and care were somewhat varied. Expected daily use of telecare was rated the most likely (37%), followed by health and care apps (25%), and home and mobile health monitoring (21%).
- Once again, main reasons for not expecting to use digital technologies were around lack of relevance for day to day work roles.
- However, there was much interest in taking up further learning and training and a variety of learning approaches were viewed positively (including learning *in situ*, job shadowing, online simulations and e-learning).

### 'Championing' technologies and further engagements:

- Approximately 50% of respondents were not interested in becoming a TEC 'champion' or in engaging further<sup>6</sup>.
- However, a large minority reserved judgement, noting that they were open to discussion.
- Additionally, they were open to the usefulness of a national technology enabled care champions network (over the next three years) to offer workforce support and guidance.



**In summary, whilst there is enthusiasm towards learning more about technology enabled care to improve knowledge, skills and confidence in the use of technology within health and care, there currently appear to be some perceived challenges and barriers that need to be addressed.**

6. Via potential future workshops or focus groups.

## 1.3 Recommendations

**Technology has the potential to transform the way people engage and control their own health and wellbeing, empowering them to manage it in a way that is right for them.**

For this ambition to reach its full potential, it is imperative that people are supported by a knowledgeable and skilled workforce who can work confidently with technology to support health, wellbeing, choice and independence.



**Based on this study, recommendations for moving forward focus on workforce upskilling, learning and development, and in building confidence around the use of technology within health and care. Other aspects involve leadership and management, and a consideration of finance and resources (Table 1).**



ASPECTS	RECOMMENDATIONS
<p><b>A1. Workforce Knowledge, Skills and Confidence</b></p> <p><i>Knowledge gaps, lack of confidence, and poor awareness of services available across the workforce need to be addressed.</i></p>	<ol style="list-style-type: none"> <li>1.1. National awareness raising programme and promotion of digital technologies for health and care. This should demonstrate the benefits and advantages for the workforce and generate increased knowledge and understanding of using such technologies in everyday work.</li> <li>1.2. Develop a national online learning resource to cover the various aspects of digital technologies for health, care and housing.</li> <li>1.3. Implement a national online learning resource and ‘face to face’ (live) learning networks for ongoing support, learning and development.</li> <li>1.4. Consider a national stepped learning framework such as informed, skilled, enhanced and expert.</li> </ol>
<p><b>A2. Leadership and Management</b></p> <p><i>At-scale change in culture is required to facilitate ‘new ways of working’.</i></p>	<ol style="list-style-type: none"> <li>2.1. Support a national shift to ‘new ways of working’ and promote a ‘culture of readiness’ for a mainstreamed future digital health and care service.</li> <li>2.2. Support a national drive to alleviate concerns around the use of digital technology in health, care and housing services.</li> <li>2.3. Develop national strategies and measurable objectives for the deployment and mainstreaming of digital solutions for health, care and housing services.</li> <li>2.4. Consider further developing organisational partnerships and work with a range of stakeholders to drive forward a national approach to digital health and care.</li> </ol>
<p><b>A3. Finance and Resources</b></p> <p><i>Visibility and deployment of technology enabled care should be encouraged.</i></p>	<ol style="list-style-type: none"> <li>3.1. Support a ‘digital by default’ ethos and the mainstreaming of digital technologies for health and care.</li> <li>3.2. Encourage and promote the necessary deployment of a digital infrastructure and IT investment to support Scotland’s ambitions for digital transformation of health and care services.</li> </ol>

**Table 1:** Suggested recommendations for supporting workforce development in Scotland.



## 1.4 Conclusion

**In conclusion, the results suggest that further work is required to drive forward nationally the ambitious digital vision for health and social care services in Scotland.**

However, the mere provision of technologies alone will not drive transformative change. The development of the workforce is at the very heart of delivering high quality health and care services.

Building workforce skills and confidence, and changing workforce perceptions, are required to maximise effective and at-scale use of technology in health and care services. In turn, a confident and knowledgeable workforce could empower the people of Scotland to harness the power of digital technologies and further embed preventative and self-management measures to health, wellbeing and care.



**It is hoped that the accompanying report provides the insight to support the critical role the workforce plays in meeting Scotland's ambitions for delivering digital transformation and in supporting an ongoing focus and investment in the workforce development agenda.**





## SECTION 2

# INTRODUCTION

## SECTION 2

## INTRODUCTION

## 2.1 Technology for Health and Care

The last decade has witnessed a surge in digital technologies; revolutionising the way we live, communicate, and deliver and access services. We have also witnessed the ongoing transformation and integration of health and social care services<sup>7</sup>; which has further brought statutory services into closer partnership working with community care, third and private sectors.

**These recent changes afford the opportunity to review how technology can support:**

- The self-management of health and wellbeing.
- People to live well and safely at home.
- Cohesive working and the delivery of high quality health and care services.

**Technologies for health and care are continuously evolving; current examples and benefits for users and services include:**

- The use of real-time patient remote monitoring to support optimal personalised care, independence and safety at home.
- Integrated and coordinated care utilising improved communication technology systems.
- Efficiency savings and access to specialist health and care services at a distance.
- The use of consumer IT and ‘health wearables’ to self-manage health and wellbeing.
- The efficient use of workforce capacity and skills – for example, professionals spending more time on their core competencies (as opposed to administrative tasks and travel).
- Accessing personalised electronic patient records to jointly manage health and wellbeing.

This ongoing service redesign agenda aims to support self-management, the delivery of personalised care, wellbeing and the efficient use of workforce capacity and skills. However, the use of technology for health and care is not without its caveats. There is a need to support digital inclusion across the populations<sup>8</sup> and access to fast internet broadband access is still an issue for some remote and rural communities<sup>9</sup>.

Additionally, systems need to be up to date and protected against potential cyber-attacks and any data breaches.

Similarly, privacy, data sharing and ethical boundaries require deliberation. The return on technological investment and financial pressures may also make the deployment of such technological solutions less appealing to some organisations and teams.

7. Crown Copyright (2014). Public Bodies (Joint Working) (Scotland) Act 2014 (UK: The Stationery Office) Available at: [http://www.legislation.gov.uk/asp/2014/9/pdfs/asp\\_20140009\\_en.pdf](http://www.legislation.gov.uk/asp/2014/9/pdfs/asp_20140009_en.pdf) [Accessed 20 December 2015].

8. GOV.UK (2017). Digital Skills and Inclusion Policy. Available at: <https://www.gov.uk/government/publications/digital-inclusion-and-skills-policy/digital-skills-and-inclusion-policy>. [Accessed 24 July 2017].

9. Williams, F., Philip, L., Farrington, J., and Fairhurst, G. (2016). “Digital by Default” and the “hard to reach”: Exploring solutions to digital exclusion in remote rural areas. *Local Econ.* 31, 757–777.



Despite these noted issues, progress to date has been positive. The use of services/resources such as teleconsultation and tele-coaching is increasingly becoming available to home users, the community, and across the health and care spectrum<sup>10</sup>. This is particularly the case for the north of Scotland.

In 2014, the Scottish Technology Enabled Care (TEC) Programme was launched with a specific remit to further improve outcomes for individuals through the application of technology, as an integral part of quality cost-effective care and support<sup>12</sup>.

Initial objectives included the expansion, integration and the sustainable use of TEC resources within health, housing and care services<sup>13</sup>.

With investment of around £30 million for three years, achievements over year one included the funding of 23 organisations and the delivery of TEC learning events<sup>14</sup>.



### National Action Plan Technology Enabled Care Vision:



**Scotland is an international leader in technology enabled care, supporting more people to live longer healthier lives at home or in community settings.<sup>11</sup>**

10. Audit Scotland (2011). A review of telehealth in Scotland. Available at: [http://www.audit-scotland.gov.uk/docs/health/2011/nr\\_111013\\_telehealth.pdf](http://www.audit-scotland.gov.uk/docs/health/2011/nr_111013_telehealth.pdf) [Accessed 21 July 2017].
11. Scottish Government (2016). Supporting & Empowering Scotland's Citizens: National Action Plan for Technology Enabled Care. Available at: <http://www.gov.scot/Publications/2016/10/3839/downloads> [Accessed July 2017].
12. Joint Improvement Team (2017). Technology Enabled Care Programme. Available at: <http://www.jitscotland.org.uk/action-areas/telehealth-and-telecare/technology-enabled-care-programme/> [Accessed 21 July 2017].
13. Hodgson, A. (2015). TEC Programme - Overview of Year One Activity. Available at: <http://www.jitscotland.org.uk/resource/tec-programme-overview-of-year-one-activity/> [Accessed 21 July 2017].
14. TEC Board (2016). Technology Enabled Care: Annual Report 2015-2016 Available at: <http://www.ehealth.nhs.scot/wp-content/uploads/sites/7/2016/11/Technology-Enabled-Care-Annual-Report-2015-2016.pdf> [Accessed 13 July 2017].

### The main work-streams and improvement programmes funded were:

- Increasing the use of Home & Mobile Health Monitoring (H&MHM).
- Extending the use of video conferencing across health and social care (including for clinical consultations).
- The creation of a national digital framework platform, for public access to information, advice and assistance.
- Expanding the uptake of people receiving telecare packages.
- Feasibility study of switching from analogue to digital telecare provision.

### Key principles for years two and three of the TEC programme are<sup>15</sup>:

- *To contribute to the health and wellbeing outcomes*
- *To enable the significant expansion and integration of the use of TEC within health, housing and care supports and services*
- *To embed TEC as a key enabler within strategic plans and service design processes*
- *To promote greater use, integration and sharing of technologies across sectors and services*
- *To ensure TEC becomes a sustainable, embedded and an effective and economically viable component of core health and social care services*
- *To promote the digital agenda within health and social care*
- *To achieve sustainable and manageable growth in the number of individuals supported*
- *To embed measurement and evaluation for continuous improvement*

At a national level, the TEC Programme Board oversees the development and delivery of the TEC Programme, and specifically, ensures that resources are used effectively to achieve high quality TEC services. At an operational level, the Scottish Centre for Telehealth and Telecare (SCTT)<sup>16</sup> (embedded within NHS 24<sup>17</sup>) drives transformational change and service redesign through the promotion and use of technology enabled care at-scale.

---

15. TEC Board (2016). Technology Enabled Care: Annual Report 2015-2016 Available at: <http://www.ehealth.nhs.scot/wp-content/uploads/sites/7/2016/11/Technology-Enabled-Care-Annual-Report-2015-2016.pdf> [Accessed 13 July 2017].

16. SCTT (2017). Programmes. Available at: <https://sctt.org.uk/programmes/> [Accessed 21 July 2017].

17. NHS 24 (2017). NHS 24 Explained: NHS 24 Services. Available at: <http://www.nhs24.com/explained/services/> [Accessed 23 August 2017].

---

## 2.2 The Political Landscape

The delivery of public services in Scotland is undergoing significant reform<sup>18,19</sup>. Rising demands have driven the integration of health and care service provision, prioritisation of prevention and self-management, and increased scrutiny on performance and efficiency. Individuals and communities are empowered to engage with innovative models of care, and have crucial roles in managing their own health, care and wellbeing.

**The Scottish Government's '2020 Vision' is that by 2020 everyone will be able to live longer healthier lives at home or in a homely setting:**



We will have a healthcare system where we have integrated health and social care, a focus on prevention, anticipation and supported self-management. When hospital treatment is required, and cannot be provided in a community setting, day case treatment will be the norm.

Whatever the setting, care will be provided to the highest standards of quality and safety, with the person at the centre of all decisions. There will be a focus on ensuring that people get back into their home or community environment as soon as appropriate, with minimal risk of re-admission<sup>20</sup>.”



18. Crown Copyright (2011). Commission on the Future Delivery of Public Services (Edinburgh: Scottish Government) Available at: <http://www.gov.scot/Publications/2011/06/27154527/18> [Accessed 20 December 2015].

19. Scottish Government (2011). Renewing Scotland's Public Services: Priorities for reform in response to the Christie Commission. Available at: <http://www.gov.scot/Resource/Doc/358359/0121131.pdf> [Accessed July 2017].

20. Scottish Government and NHS Scotland (2011). 2020 Vision Strategic Narrative - Achieving sustainable quality in Scotland's healthcare. Available at: <http://www.gov.scot/Topics/Health/Policy/2020-Vision/Strategic-Narrative> [Accessed 13 October 2016].



**The adoption of digital technologies is part of this vision, and is highlighted as a key role for the 2020 workforce:**

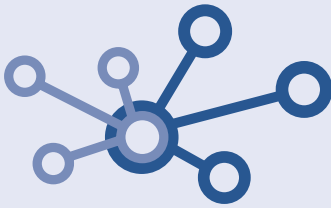


We will respond to the needs of the people we care for, adapt to new, improved ways of working, and work seamlessly with colleagues and partner organisations. We will continue to modernise the way we work and embrace technology. We will do this in a way that lives up to our core values.

Together, we will create a great place to work and deliver a high quality healthcare service which is among the best in the world<sup>21</sup>.



21. Scottish Government (2013). Everyone Matters: 2020 Workforce Vision. Available at: <http://www.gov.scot/Resource/0042/00424225.pdf> [Accessed 20 December 2015].



**Given the emphasis on cohesive and seamless working with colleagues across NHS Scotland and beyond, digital infrastructure is a key development area for delivering new patterns of care and in improving efficiency and quality access to services.**

**Both the National Telehealth & Telecare Delivery Plan<sup>22</sup> and the eHealth Strategy<sup>23</sup> emphasise the crucial role that technology plays in transforming health and care, and in enhancing wellbeing and quality of life. Key milestones and achievements documented include<sup>24,25</sup>:**

- Publications of the first National Telecare Strategy (2008) and Telecare Action Plan 2010-2012.
- The Scottish Centre for Telehealth and Telecare (SCTT) is embedded within NHS 24 to provide national technology enabled care services across NHS Scotland.
- A National Telehealth and Telecare Advisory Board (NTTAB) was established to drive forward the technology enabled care across Scotland.
- Approximately 44,000 people received a telecare service between 2006 and 2011 (including over 4000 with dementia).
- A validated Professional Development Award (PDA) in Tele-healthcare was developed in collaboration with the Scottish Qualifications Authority.
- The delivery of specialist mental health services to two prison populations.

**Further milestones are outlined in the National Action Plan for Technology Enabled Care<sup>26</sup>:**

- The 2013 launch of the Digital Health & Care Institute<sup>27</sup> (DHI), which brought together academics, care professionals, and service providers to explore and develop technological solutions for health and care.
- The signing of memoranda of understanding with European regions to support knowledge transfer and international collaboration.
- The increased access of telehealth and telecare services across the population.

**The emerging Digital Health and Social Care Strategy 2017-2022<sup>28</sup> is expected to build upon these achievements to date, and set out future developments and priorities.**

22. Scottish Government (2012). A National Telehealth and Telecare Delivery Plan for Scotland to 2015. Driving Improvement, Integration and Innovation. Available at: [www.gov.scot/resource/0041/00411586.pdf](http://www.gov.scot/resource/0041/00411586.pdf) [Accessed July 2017].

23. Scottish Government (2015). eHealth Strategy 2014-2017. Available at: <http://www.gov.scot/Publications/2015/03/5705> [Accessed July 2017].

24. Scottish Government (2012). A National Telehealth and Telecare Delivery Plan for Scotland to 2015. Driving Improvement, Integration and Innovation. Available at: [www.gov.scot/resource/0041/00411586.pdf](http://www.gov.scot/resource/0041/00411586.pdf) [Accessed July 2017].

25. Also note the European Commission Digital Award of Four Star Reference Site status (the highest level of award). Available online: <http://www.ehealth.nhs.scot/2016/12/21/scotland-gains-eu-digital-health-and-care-award/> [Accessed 27 July 2017].

26. Scottish Government (2016). Supporting & Empowering Scotland's Citizens: National Action Plan for Technology Enabled Care. Available at: <http://www.gov.scot/Publications/2016/10/3839/downloads> [Accessed July 2017]. "Our overarching aim is to contribute to preventative and personalised care and support for those with care needs and their carers, supporting our citizens to make greater use of technology to manage their own health and wellbeing at home and in the community as a key contribution to the 2020 Vision."

27. Digital Health and Care Institute (2017). Innovating in digital health & care for Scotland. <https://dhi-scotland.com/> [Accessed 25 July 2017]

28. Scottish Government (2017). Digital Health and Social Care Strategy 2017-22 – Development. Available at: <http://www.ehealth.nhs.scot/strategies/the-person-centred-ehealth-strategy-and-delivery-plan-stage-one/> [Accessed 04 July 2017].

**At the heart of a range of other strategies, plans and initiatives, is a transformed health and social care system that builds upon the ambitions of the ‘2020 Vision’ and the ‘2020 Workforce Vision’.**

- **The National Health and Social Care Workforce Plan: Part 1<sup>29</sup>**

- Sets out a process to further improve workforce planning across health and social care.
- Mentions potential changes in the workforce due to the use of technology to monitor care.

- **The Health and Social Care Delivery Plan<sup>30</sup>**

- Presents research, innovation and digital health as central to all high-performing health systems.
- Outlines a transformed system at individual, community, regional and national levels.

- **Active and Independent Living Programme in Scotland<sup>31</sup>**

- Reviews the potential of Allied Health Professionals (AHPs) in delivering key elements of the Health and Social Care Delivery Plan.
- Presents the case for prevention and early intervention in supporting health and wellbeing.
- Further highlights the roles of research, innovation and technology to transform service delivery.

- **Health and Social Care Standards<sup>32</sup>**

- Highlights quality standards for people using health, social care or social work services in Scotland.
- Notes the role of technology in supporting independent health and wellbeing.
- The key principles are centred around dignity and respect, compassion, inclusion, responsive care and support, and wellbeing.

- **Scotland’s National Dementia Strategy 2017-2020<sup>33</sup>**

- Advocates the national implementation of the ‘Technology Charter for People in Scotland with Dementia’<sup>34</sup>; enabling people to live safely and independently in their own homes.
- Highlights the role of supporting the workforce in using technology in dementia care.
- Mentions the importance of increasing the use of technology in dementia care and support plans.

- **The National Clinical Strategy for Scotland<sup>35</sup>**

- Sets out a framework for developing Scottish health services in the next 15 years.
- Highlights the need for significant change to adapt to changing circumstances.
- Depicts the potential of utilising digital technologies in a changing health and care landscape.

---

29. Scottish Government (2017). National Health and Social Care Workforce Plan: Part 1 - a framework for improving workforce planning across NHS Scotland. Available at: <http://www.gov.scot/Resource/0052/00521803.pdf> [Accessed 13 July 2017].

30. Scottish Government (2016). Health and Social Care Delivery Plan. Available at: <http://www.gov.scot/Resource/0051/00511950.pdf> [Accessed July 2017].

31. Scottish Government (2017). Allied Health Professions Co-creating Wellbeing with the People of Scotland: The Active and Independent Living Programme in Scotland. Available at: <https://beta.gov.scot/publications/allied-health-professions-co-creating-wellbeing-people-scotland-active-independent/documents/00521325.pdf?inline=true> [Accessed July 2017].

32. Scottish Government (2017). Health and Social Care Standards: My support, my life. Available at: <http://www.gov.scot/Resource/0052/00520693.pdf> [Accessed 13 July 2017].

33. Scottish Government (2017). Scotland’s National Dementia Strategy 2017-2020. Available at: <http://www.gov.scot/Resource/0052/00521773.pdf> [Accessed 13 July 2017].

34. Alzheimer Scotland et al (2015). Technology Charter: For People Living with Dementia in Scotland. Available at: [http://www.alzscot.org/assets/0002/0289/Technology\\_Charter\\_for\\_People\\_with\\_Dementia\\_in\\_Scotland.pdf](http://www.alzscot.org/assets/0002/0289/Technology_Charter_for_People_with_Dementia_in_Scotland.pdf) [Accessed 25 August 2017].

35. Scottish Government (2016). A National Clinical Strategy for Scotland. Available at: <http://www.gov.scot/Resource/0049/00494144.pdf> [Accessed July 2017].



- **Realising Realistic Medicine Annual Report<sup>36</sup>**
  - Describes a person-centred health and care model from a service that is ‘realistic’, innovative and flexible.
- **Nursing 2030 Vision<sup>37</sup>**
  - Sets out a vision for preparing the 2030 nursing workforce that is responsive to future needs, offers personalised care, and supportive of career development.
  - Highlights how social media and digital technology can contribute to learning, communication and cooperation; further impacting on the health and wellbeing of the population.
  - Anticipates the increasing use of technology enabled care resources, and the need to prepare nurses to be confident and competent in the area.
- **Achieving Excellence in Pharmaceutical Care: A Strategy for Scotland<sup>38</sup>**
  - Presents a vision for pharmacy as an integral and enhanced part of NHS services in Scotland.
  - Commits to the availability of technology enabled care solutions to enhance access to pharmaceutical care in remote and rural communities.
  - Commits to optimising the use of digital information, data and technologies for improved service delivery.

Finally, on a wider scale, the recent publication of the Scottish Government’s refreshed digital strategy – Realising Scotland’s Full Potential in a Digital World<sup>39</sup> – further advocates the ‘digital by default’ agenda and envisions a Scotland that is at the very forefront of innovation, investment and connectivity.



**The recent publication of the Scottish Government’s refreshed digital strategy further advocates the ‘digital by default’ agenda and envisions a Scotland that is at the very forefront of innovation, investment and connectivity.**

**36.** Scottish Government (Calderwood C, Smith G, Baird A, Taylor M, Norris R, White C, Morris A, McQueen F, Johnstone J, Parr R, Riley A and Paterson G) (2017). Realising Realistic Medicine: Chief Medical Officer’s Annual Report 2015-16 Available at: <http://www.gov.scot/Publications/2017/02/3336/downloads> [Accessed July 2017].

**37.** Scottish Government (2017). Nursing 2030 Vision: Promoting confident, competent and collaborative nursing for Scotland’s future. Available at: <http://www.gov.scot/Resource/0052/00522376.pdf> [Accessed 13 July 2017].

**38.** Scottish Government (2017). Achieving Excellence in Pharmaceutical Care: A Strategy for Scotland. Available at: <http://www.gov.scot/Resource/0052/00523589.pdf> [Accessed 21 August 2017].

**39.** Scottish Government (2017). Realising Scotland’s Full Potential in a Digital World: A Digital Strategy for Scotland. Available at: <http://www.gov.scot/Resource/0051/00515583.pdf> [Accessed 13 July 2017].

## 2.3 Technology at Work

The following illustrates examples of how technology is being applied to support health, care and wellbeing.



Funded by the Scottish Government TEC Programme, the **Telecare Self-Check Online Tool** aims to review needs around access to telecare services. Open to the general public, it presents a series of 6-12 questions related to various situations in the home and other areas; resulting in suggested advice around appropriate telecare options.

**[WWW.TELECARESELF.CHECK.SCOT](http://WWW.TELECARESELF.CHECK.SCOT)**



The **'United 4 Health'** initiative was a three-year European funded project to support the implementation (and onward impact assessment) of remote monitoring of patients with chronic conditions. Over the life of the project, highlighted achievements in Scotland include nine new Home and Mobile Home Monitoring (H&MHM) services across primary, community and secondary care services, and access to H&MHM services by almost 6000 people with long term conditions<sup>40</sup>.

**[HTTP://UNITED4HEALTH.EU](http://UNITED4HEALTH.EU)**



The **'eConsult'** service<sup>41</sup> offers patients the opportunity to consult online with GPs. With funding from the Scottish Government, it is currently being piloted in a GP practice in Aberdeen. Initial feedback has highlighted that eConsult was an offered alternative when no appointments were available, and when patients did use the eConsult service, the majority noted that further face to face appointments were not necessary<sup>42</sup>.

40. SCTT (2017). United4Health. Available at: <https://sctt.org.uk/programmes/home-and-mobile-monitoring/united4health-new/> [Accessed 26 July 2017].

41. SCTT (2017). eConsult. Available at: <https://sctt.org.uk/programmes/digital-services-and-apps/primary-care/econsult/> [Accessed 26 July 2017].

42. Kundraw, A. (2017). Old Machar Case Study: A new approach to consulting. Available at: <https://econsult.net/news/a-new-approach-to-consulting/> [Accessed 26 July 2017].



## SECTION 3

# METHOD

## SECTION 3

# METHOD

**Given Scotland’s strategic landscape around the integral role that technology is expected to play in the delivery of safe, high-quality and cost-effective care, there was a need to understand current and future workforce needs and confidence levels around using technology in health, care and support services.**

### 3.1 Workforce Questionnaire

A survey (Section 6.2, Questionnaire, p. 65) was therefore designed and distributed by NHS Education for Scotland to a wide range of social care, housing and health stakeholders across Scotland. It was informed by a series of one to one interviews and focus groups with a range of participants from across health, fire and rescue, housing and social care.

**The aim of the questionnaire was to gain an understanding of any learning, development and support needs around technology enabled care. Specifically, the objectives were:**

- How technology is currently used in delivering health, social care, and housing care and support, and how this may change in the future.
- Current confidence in using technology to deliver care and support.
- Current access to learning and support in technology enabled care.
- Insight into future learning opportunities and support that would be helpful to deliver future technology enabled care.
- Insights into any challenges which may impact on abilities to embed technology enabled care into everyday practice.

Views were welcomed from all staff in health, social care, housing and support services; including those who did not work with technology enabled care. Analysis of the questionnaire was undertaken via descriptive statistics, and free text responses were grouped into themes. Verbatim quotes<sup>43</sup> are included to highlight views and experiences.

### 3.2 Report Layout

**This report is comprised of the following sections:**

- Executive Summary (p. 5).
- A brief introduction and an overview of the Scottish strategic landscape (p. 13).
- Questionnaire results and analysis:
  - Respondents’ demographics (p. 26).
  - Current use of technology enabled care (at individual and team levels) (p. 32).
  - Confidence in using technology enabled care (p. 36).
  - Past learning and training in technology enabled care (p. 38).
  - Future intentions around using technology enabled care (p. 44).
  - Preferred learning and support methods for workforce development (p. 48).
  - Interests in ‘championing’ technology enabled care and any further engagements (p. 54).
- Discussion, recommendations and a conclusion from the research intelligence (p. 57).

---

<sup>43</sup>. Spelling and grammar may have been corrected.



## SECTION 4 RESULTS

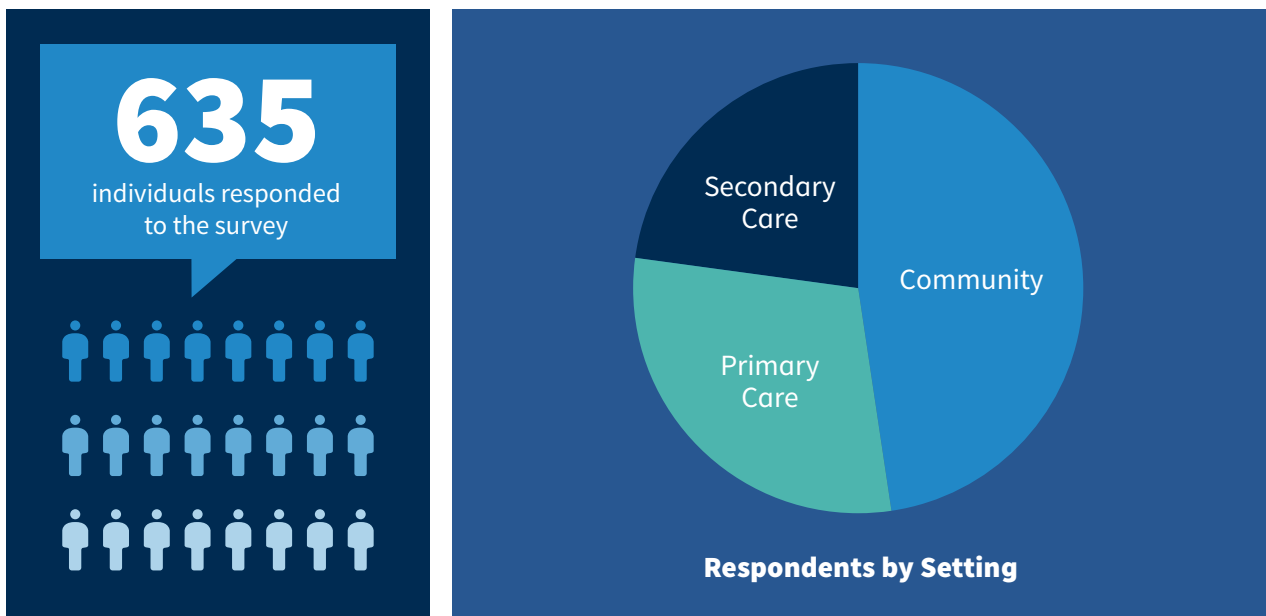
## SECTION 4

## RESULTS

## 4.1 Questionnaire – Respondents’ Demographics

635 individuals responded to the survey; covering a wide range of health, care and housing roles (Figures 1-6 and Table 2). Respondents were primarily placed in the community setting (35.5%), followed by primary care (22.1%) and secondary care (17%) (Figure 2, p. 28).

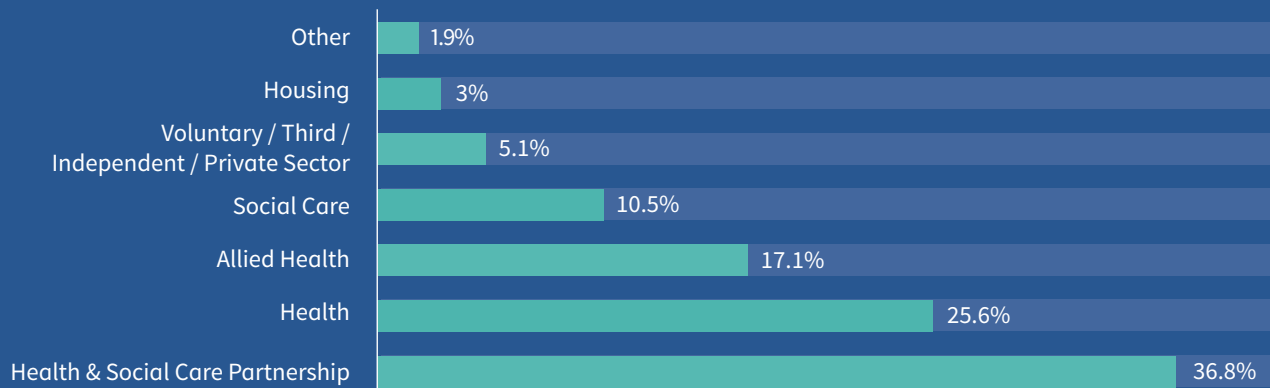
67% of respondents identified a Health Board as their primary place of work (Figure 3, p. 28), with approximately 33% identifying a Local Authority (Figure 5, p. 30). However, approximately 13% also noted other organisations (Table 2, Question 26), such as housing, education, and other support services. Most of those within the health sector had roles in Allied Health (32.9%), Nursing and Midwifery (27.8%) and the Medical area (11.3%) (Figure 4, p. 29). For those within social care, the main role identified was care at home (31.3%, Figure 6, p. 31).





### FIGURE 1: RESPONDENTS' SECTOR OF WORK (N=630).

(Question 17 - About You - Tell us which sector you work in?)



#### DEMOGRAPHIC DATA<sup>44</sup>

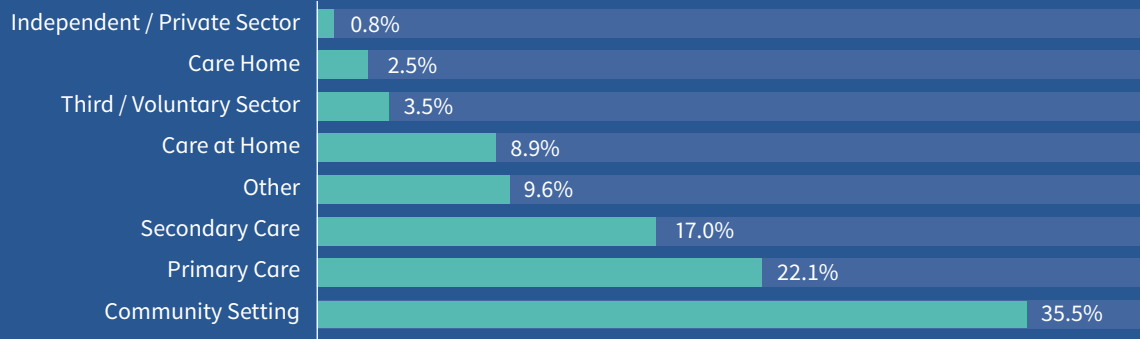
<p><b>Question 19</b> What is your job title?</p>	595 individuals provided their job title; indicating a wide range of roles, levels and responsibilities.
<p><b>Question 20</b> Do you work for a Health Board?</p>	From 615 respondents, 60% noted that they work in a Health Board.
<p><b>Question 23</b> Do you work for a Local Authority?</p>	From 609 respondents, 29% highlighted that they work for a local authority.
<p><b>Question 26</b> If you do not work for a Health Board or Local Authority tell us the name of your organisation?</p>	85 individuals noted their employing organisation.

**Table 2:** Demographic data (questions 19, 20, 23 and 26).

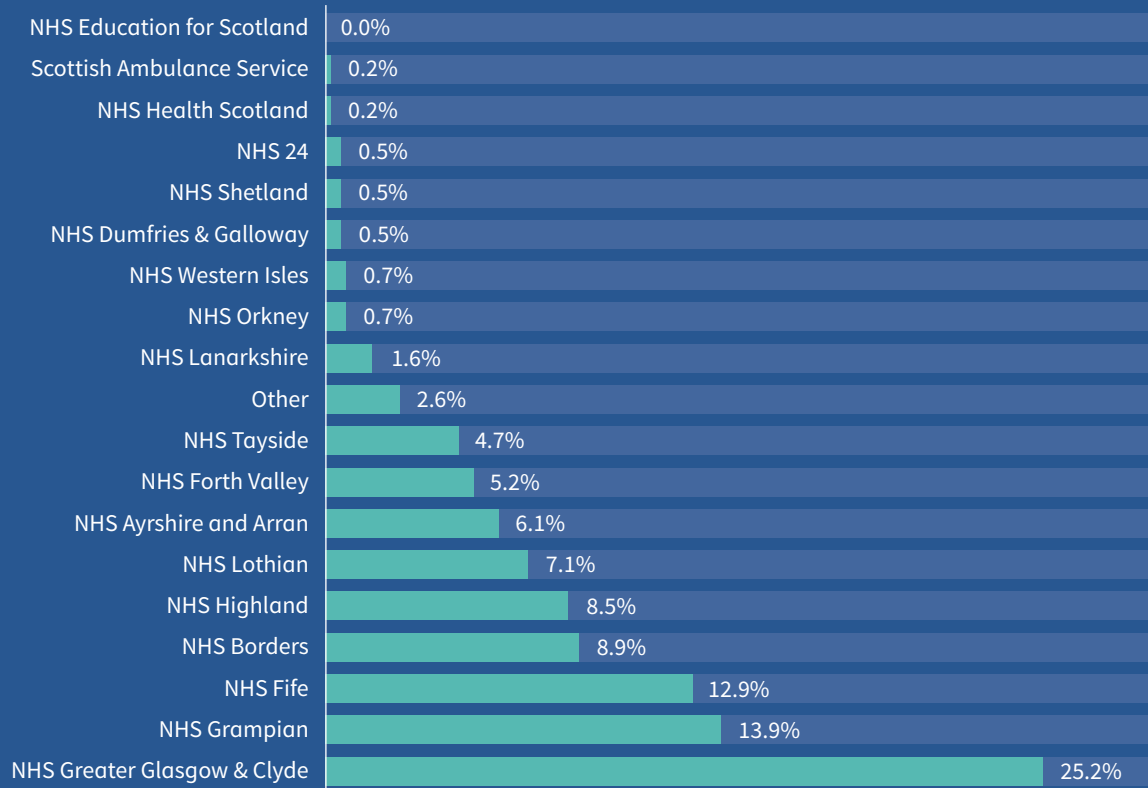
<sup>44</sup>. Note: there were no mandatory questions and this is perhaps reflected in these figures.

**FIGURE 2: RESPONDENTS' PRIMARY PLACE OF WORK (N=628).**

(Question 18 – Tell us your primary place of work?)

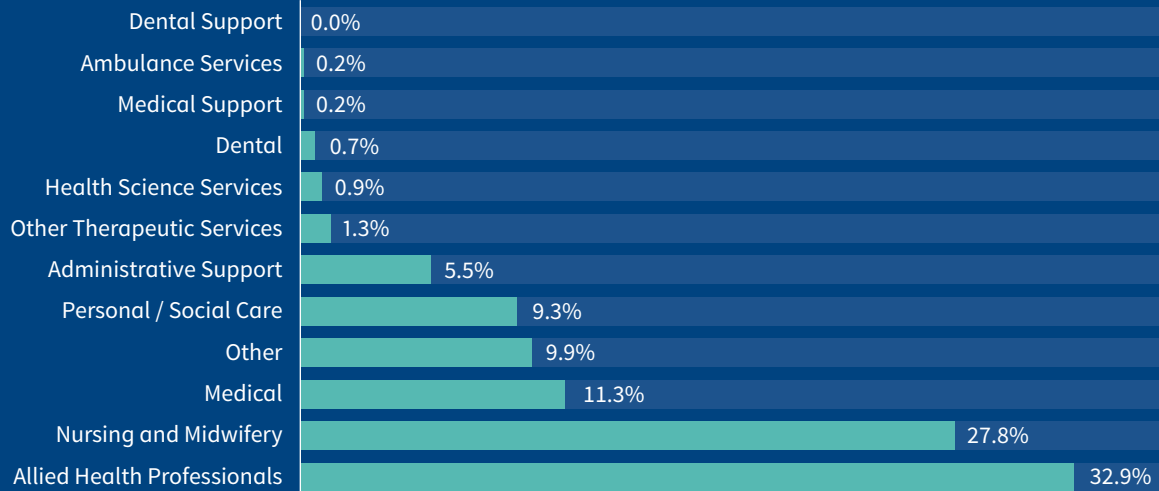
**FIGURE 3: PERCENTAGE OF RESPONDENTS WORKING IN A HEALTH BOARD (N=425).**

(Question 21 – Tell us which Health Board is your primary place of work?)



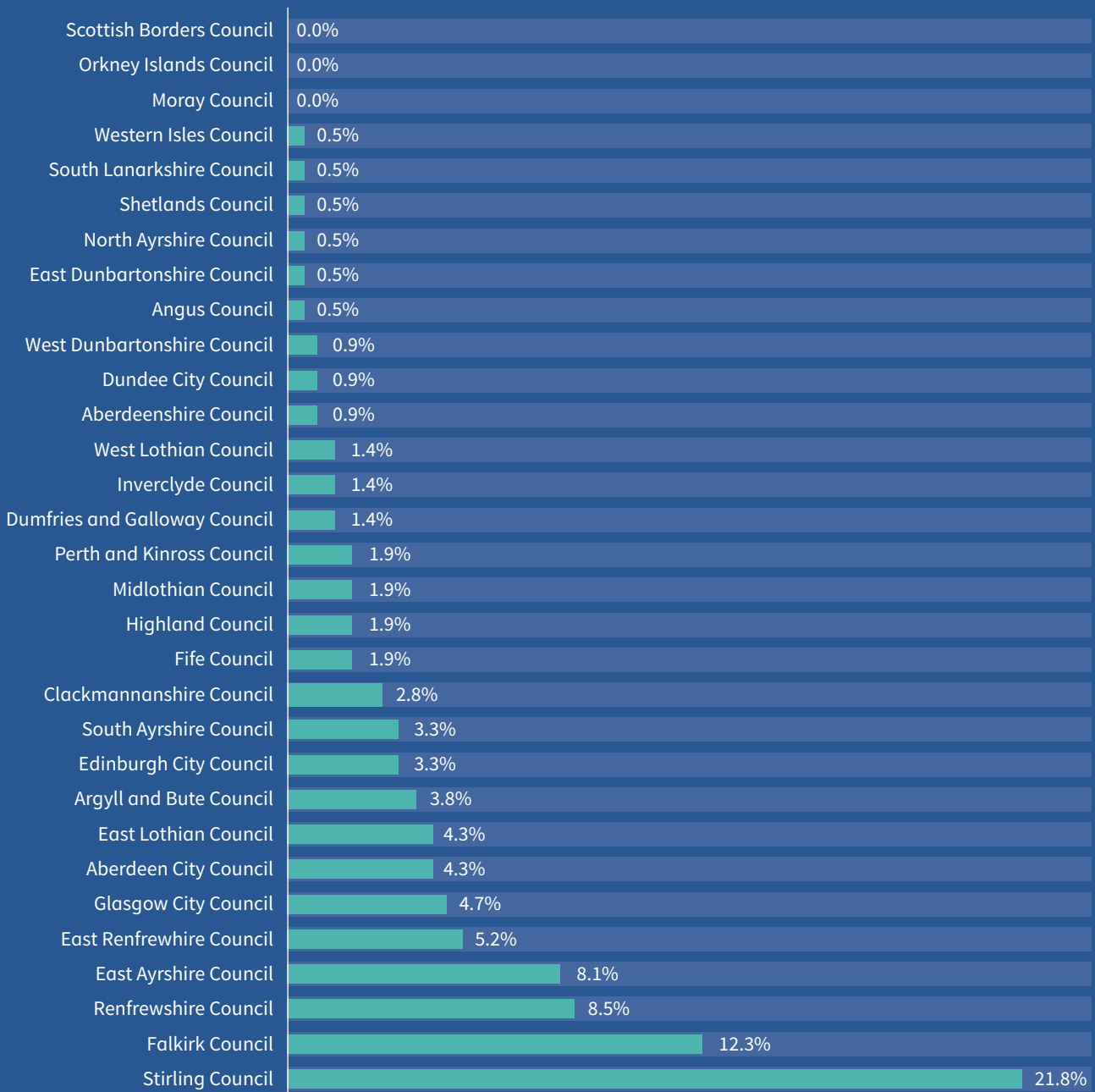
**FIGURE 4: RESPONDENTS' HEALTH SECTOR SPECIALISM OR SERVICE (N=453).**

(Question 22 – Tell us which best describes your health sector specialism or service?)



**FIGURE 5: RESPONDENTS' LOCAL AUTHORITY PRIMARY PLACE OF WORK (N=211).**

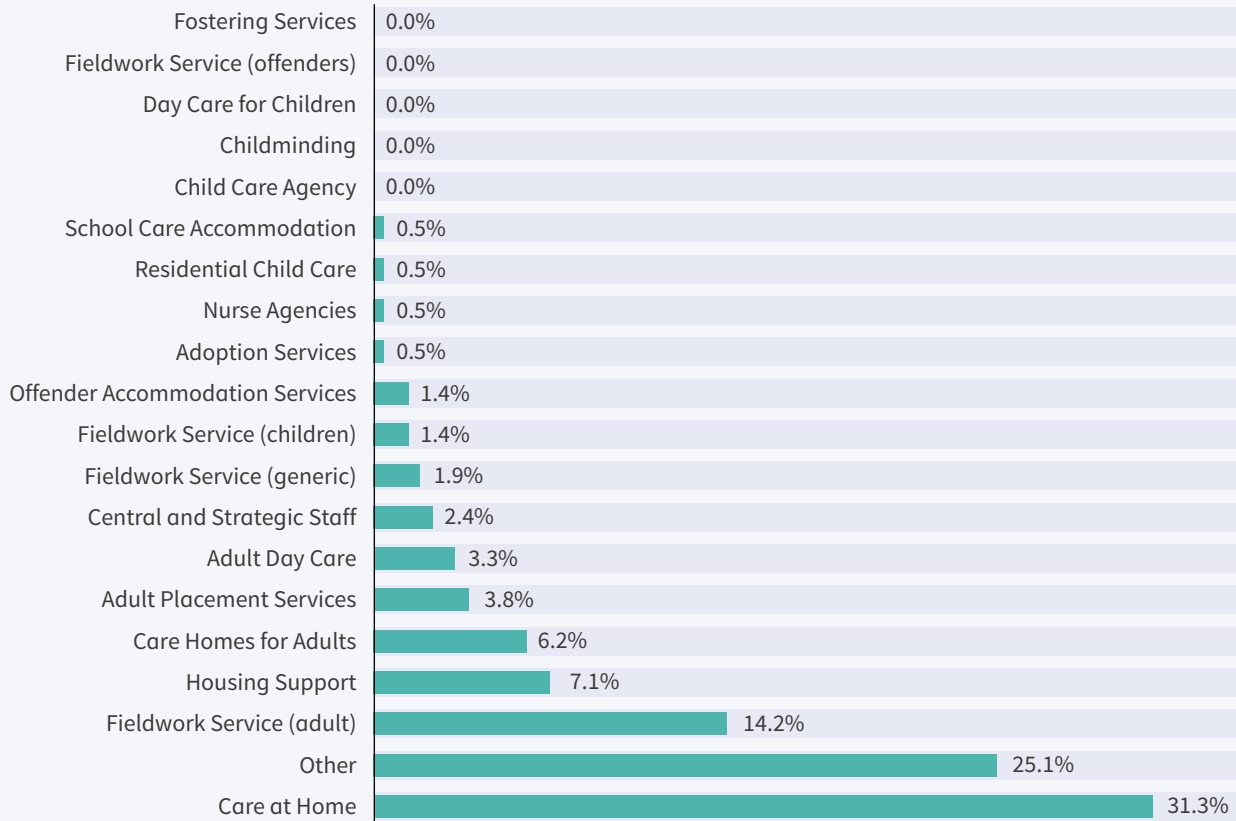
(Question 24 – Tell us which Local Authority is your primary place of work?)



Note: Unfortunately, due to omission, one also noted North Lanarkshire Council in Q26.

**FIGURE 6: SOCIAL CARE SECTOR SPECIALISM OR SERVICE (N=211).**

(Question 25 – Tell us which best describes your social care sector specialism or service?)



### 4.1.1 Summary: Respondents' Demographics

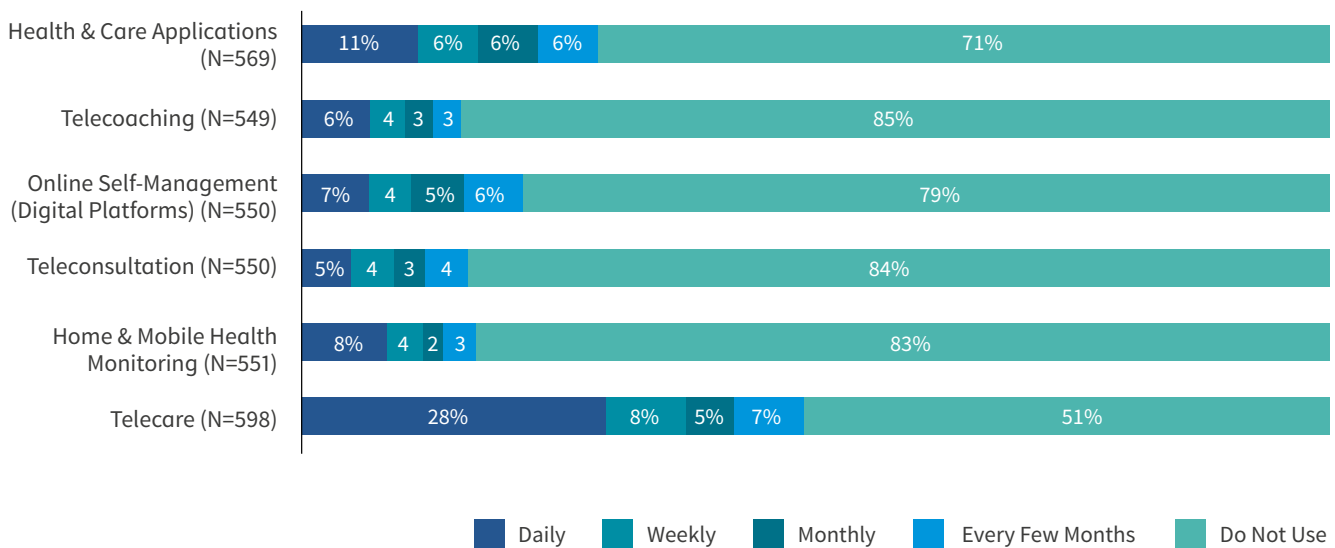
- A wide range of roles in health, care and housing is represented.
- In terms of work setting, representations are evident from across primary, secondary and community care.
- The majority of respondents identified a Health Board as their primary place of work, with Local Authority and a range of other organisations, such as care providers, housing and support services, represented.

## 4.2 Current Use of Technology Enabled Care

From the technologies currently available, six were identified as the focus of this study (Figure 7 and section 6.1, Glossary, p. 64). It can be seen that there is currently limited use of such technologies for health and care (Figure 7).

FIGURE 7: USE OF TECHNOLOGY ENABLED CARE (N=549-598).

(Question 1 – Which of the following do you or your team use at work?)



A large minority (29.3%) use telecare daily, however most of the sample (51.3%) do not use telecare. There is also limited use of the other cited technologies for health and care.

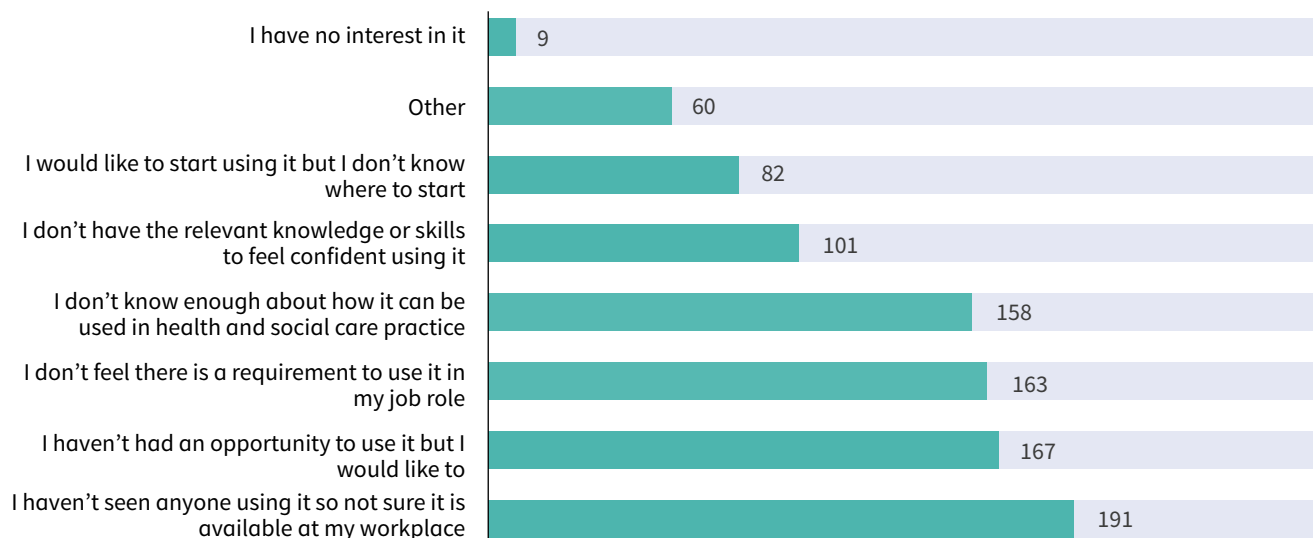
Additionally, whilst health and care ‘apps’ are used by 11% of the sample daily, once again, most of the sample do not use (71.4%).

Having noted the limited current use of the cited technologies for health and care (Figure 7), there appears however, to be a general appetite for using such resources (Figure 8).

Nevertheless, respondents highlighted that no opportunities existed and were simply not sure about availability. Additionally, perceptions were weighted towards a lack of knowledge around using technology for health and care, and indeed, whether it was a role requirement.

## FIGURE 8: REASONS FOR NOT USING TECHNOLOGY ENABLED CARE (FREQUENCIES PRESENTED; N=522. RESPONDENTS COULD SELECT AS MANY AS APPLIED).

(Question 2 – If you selected DO NOT USE for any of the above, tell us why?)



**60 respondents highlighted a range of other reasons, with an array of themes emerging. Some evidence highlighted the personal and professional use of resources, although caveats involved in promoting them as part of role requirements were noted.**

“ Whilst I suggest apps to my patients, I am not aware of any that have been endorsed by [organisation] so I am cautious about integrating them more actively in my work. With regards [to] VC, I need more information about how secure this is and what it means for [the] therapeutic process.”

CLINICAL PSYCHOLOGIST  
NHS HEALTH BOARD

“ I don't need in my role but use Health and Care Applications in my personal life. I have used some aspects in other posts.”

CLINICAL SERVICES SUPPORT MANAGER  
NHS HEALTH BOARD



Considering the other evidence presented, the following comments further highlight the lack of use of the cited technologies, and that face to face contact is preferred for engaging with people who use health and care services.

“ When interacting with the older population, I find that face to face interaction is a very important part in assessment and rehab. I would not exclude [the] use of apps, but have limited opportunity to use [them] with my client group.”

PHYSIOTHERAPIST  
NHS HEALTH BOARD

“ I feel that we need to have face to face contacts with people to assess and monitor them individually.”

NURSING AND MIDWIFERY  
COMMUNITY SETTING  
NHS HEALTH BOARD

Additionally, peoples' personal circumstances, workplace facilities, and the IT infrastructure were other noted limitations.

“ They are not available in my workplace, and I believe the technology required would be more advanced than that which is available to our workplace.”

SPEECH AND LANGUAGE THERAPY SUPPORT  
WORKER  
NHS HEALTH BOARD

“ The majority of service users we support do not have internet access/WIFI and so cannot use this type of technology.”

CARE MANAGER  
SOCIAL CARE

Finally, finances to support the cost of training, equipment and 'new ways of working' were noted.

“ Cost of training & equipment plus a workforce who seem hesitant to use technology. We would also need a regulatory approval.”

DIRECTOR  
CARE HOME

“ No finances to support any new ways of working.”

PRACTICE NURSE  
NHS HEALTH BOARD

### 4.2.1 Summary - Current use of Technology Enabled Care

---

- In general, there is limited use of a range of technology for supporting health and care.
- The most popular resource used by the sample was telecare (daily at 29%), followed by health and care apps (11% daily), and home and mobile health monitoring (8% daily).
- Whilst overall limited use was cited, there was an appetite to start using such resources.
- The main reasons highlighted for not using technology for health and care, included lack of knowledge and skills, no role requirements, and no opportunities.



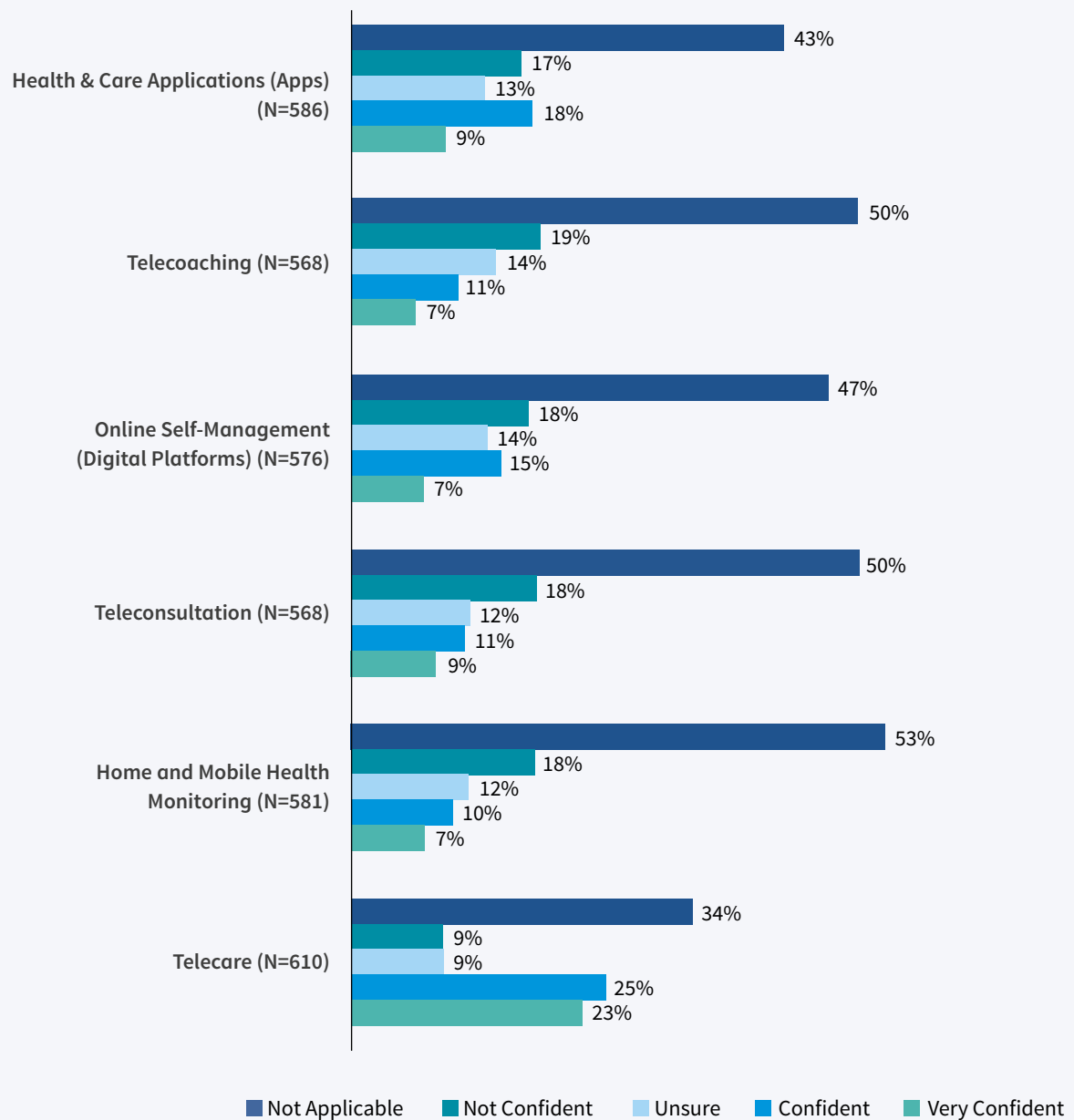
## 4.3 Confidence in Using Technology Enabled Care

Confidence levels towards using a range of technology enabled care were somewhat varied (Figure 9). Considering previous data presented (Figure 7), the sample was most confident with telecare.

In most cases, however, confidence could not be sufficiently attributed, due to lack of use or access.

FIGURE 9: CONFIDENCE IN USING A RANGE OF TECHNOLOGY ENABLED CARE (N=568-610).

(Question 3 – How confident are you or your team using the following?)



### 4.3.1 Summary - Confidence in using Technology Enabled Care

- In general, confidence towards technology enabled care could not be sufficiently attributed due to lack of use or access.
- However, as with previous evidence noted, 48% of respondents were most confident with using telecare resources (e.g. community alarms with a wearable pendant for the neck or wrist, fall detectors, and smoke, gas and heat detectors). This was followed by health and care apps (27%) and using online self-management digital platforms (22%).



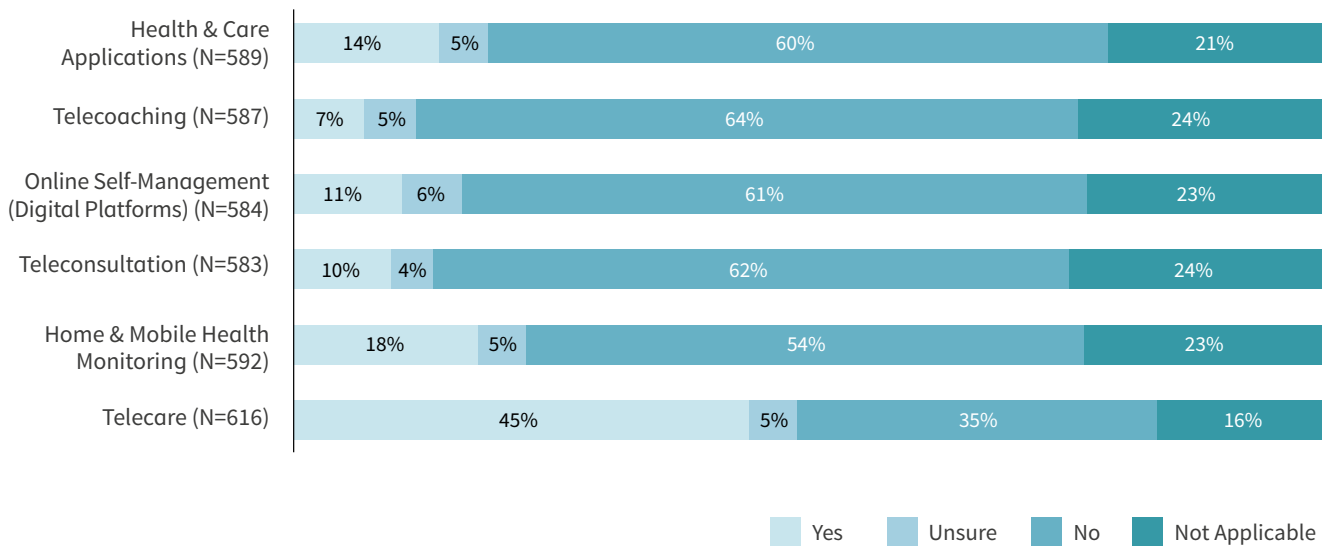


## 4.4 Past Learning and Training in Technology Enabled Care

Whilst 45% of the sample had participated in learning or training about telecare (Figure 10), there was little evidence of learning or training for the range of other cited technologies.

**FIGURE 10: INDIVIDUAL OR TEAM LEARNING OR TRAINING IN TECHNOLOGY ENABLED CARE (N=583-616).**

(Question 4 – Have you or your team participated in learning or training on the following?)



Reasons for not engaging in technology enabled care learning and training opportunities included a perceived lack of relevance for role, lack of opportunities, and that such resources were simply not used in the workplace (Table 3).

THEME <sup>45</sup>	FREQUENCY
<b>Not used within the workplace and lack of perceived relevance to job role</b>	88
<b>Perceived lack of organisational availability and lack of TEC discussions</b>	68
<b>No opportunity or limited availability</b>	59
<b>Limited knowledge</b>	19
<b>Training has been delivered at team or individual level</b>	16
<b>Already engaging in work-based learning</b>	9
<b>Already engaging in personal use (perhaps questioning whether formal training in the work environment is necessary)</b>	4
<b>Lack of funding</b>	4
<b>Perceptions of time management</b>	2
<b>Not sure</b>	1

**Table 3:** Reasons for not participating in learning and training around technology enabled care (237 responded, and frequencies denote number of comments). (Question 6 – If you have not participated in learning or training on technology enabled care, tell us why?)

<sup>45</sup>. 11 comments highlighted interest in future use.



The following quotes highlight perceptions around the use of technology enabled care.

“ [I] work in Housing Services and this has always been done by other services.”

TEAM LEADER  
HOUSING  
LOCAL AUTHORITY

“ Not prioritised in our social care setting for young adults.”

FAMILY SUPPORT WORKER  
LOCAL AUTHORITY

“ As far as I know it has not been offered - I work within public health department in health improvement, so not direct health care but rather prevention and supporting healthy choices and lifestyles. To date, my impression is that much of technology enabled care has been concentrated on direct health care services rather than prevention.”

SENIOR HEALTH IMPROVEMENT SPECIALIST  
NHS HEALTH BOARD

“ Our triage team phones patients to see if they are suitable for clinic appointments. If they attend clinic, they are given patient education. It would be difficult to deliver podiatry remotely.”

PODIATRIST  
NHS HEALTH BOARD

“ Lack of technology and resources available to use in clinical practice. Still using paper based systems.”

CHARGE NURSE  
NHS HEALTH BOARD

“ Whilst I have an interest in TEC, the majority of my colleagues are not, and regard TEC with disdain and avoid engagement.”

CONSULTANT SURGEON IN EMERGENCY MEDICINE  
NHS HEALTH BOARD

However, self-learning and expressions of interest to attend training in the area were noted.

“ None offered: tele rehab was used successfully - self-taught supported by local IM&T and supported by Rural project, but service no longer funded.”

LEAD PHYSIOTHERAPIST  
NHS HEALTH BOARD

“ I've not been offered this kind of training but would love to attend.”

REABLEMENT WORKER  
LOCAL AUTHORITY

“ Done when there were opportunities to see new or proposed systems to be piloted. Otherwise there has been no dedicated time/courses on this area of practice. Lots of self-learning and knowledge base within team variable.”

LEAD DIETICIAN  
NHS HEALTH BOARD

Several questions were raised as to why such technologies were 'needed' and comments surrounding current IT infrastructures were noted.

“ These things not really been on offer. So not yet decided what role they would or should play if any in our care of patients. Our primary technology needs are more basic and not yet addressed.”

GENERAL PRACTITIONER  
NHS HEALTH BOARD

“ It has not yet been integrated into team practice/there is no service level understanding about how/why we might need or use these technologies.”

CLINICAL PSYCHOLOGIST  
NHS HEALTH BOARD

“ Never been offered. NHS secondary care IT is pretty poor, so there is a bit of a worry about making things more electronic.”

CANCER GP/SPECIALITY DOCTOR, PALLIATIVE CARE  
NHS HEALTH BOARD

Finally, reservations regarding the requirement for formal learning and training in digital technology for health and care surfaced.

“ There does not appear to be any training events offered in relation to Home and Mobile Health Monitoring, Teleconsultation, Online Self-Management (Digital Platforms), Tele coaching and Health & Care Applications (Apps). However, I have found most of these avenues as easy to navigate and utilise as most are user friendly and do not necessarily require much expertise or training to understand and use.”

SOCIAL WORKER / MENTAL HEALTH OFFICER/  
COUNCIL OFFICER  
LOCAL AUTHORITY

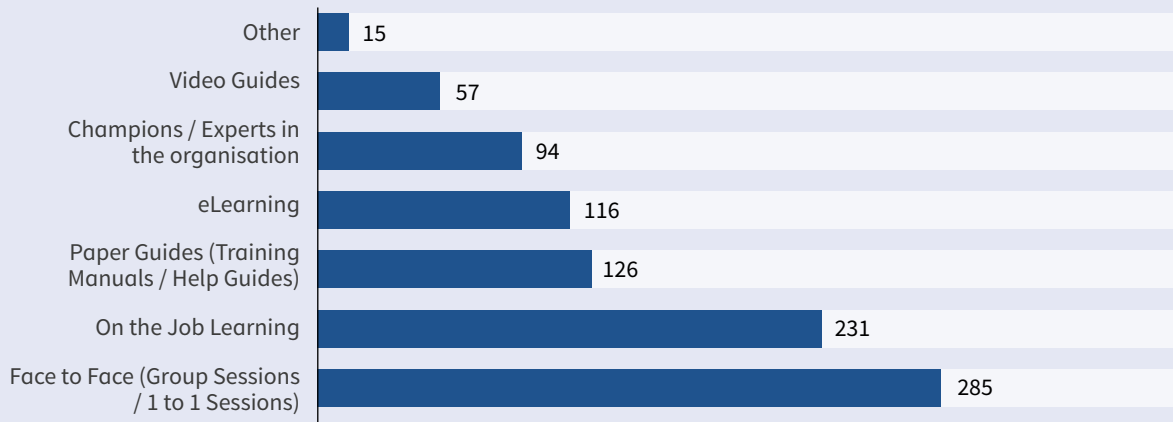
“ Not applicable to job role. Wearable tech for personal health and well-being only. Online training/information for use provided with device.”

COMMUNITY STAFF NURSE  
NHS HEALTH BOARD

Most of those participating in formal learning or training around technology enabled care, engaged in face to face sessions or simply ‘on-the-job’. Large minorities engaged with e-learning, paper based materials, and ‘champions/experts’ in their organisations (Figure 11).

**FIGURE 11: TYPE OF LEARNING AND TRAINING ATTENDED IN TECHNOLOGY ENABLED CARE (N=379, RESPONDENTS COULD SELECT AS MANY AS APPLIED).**

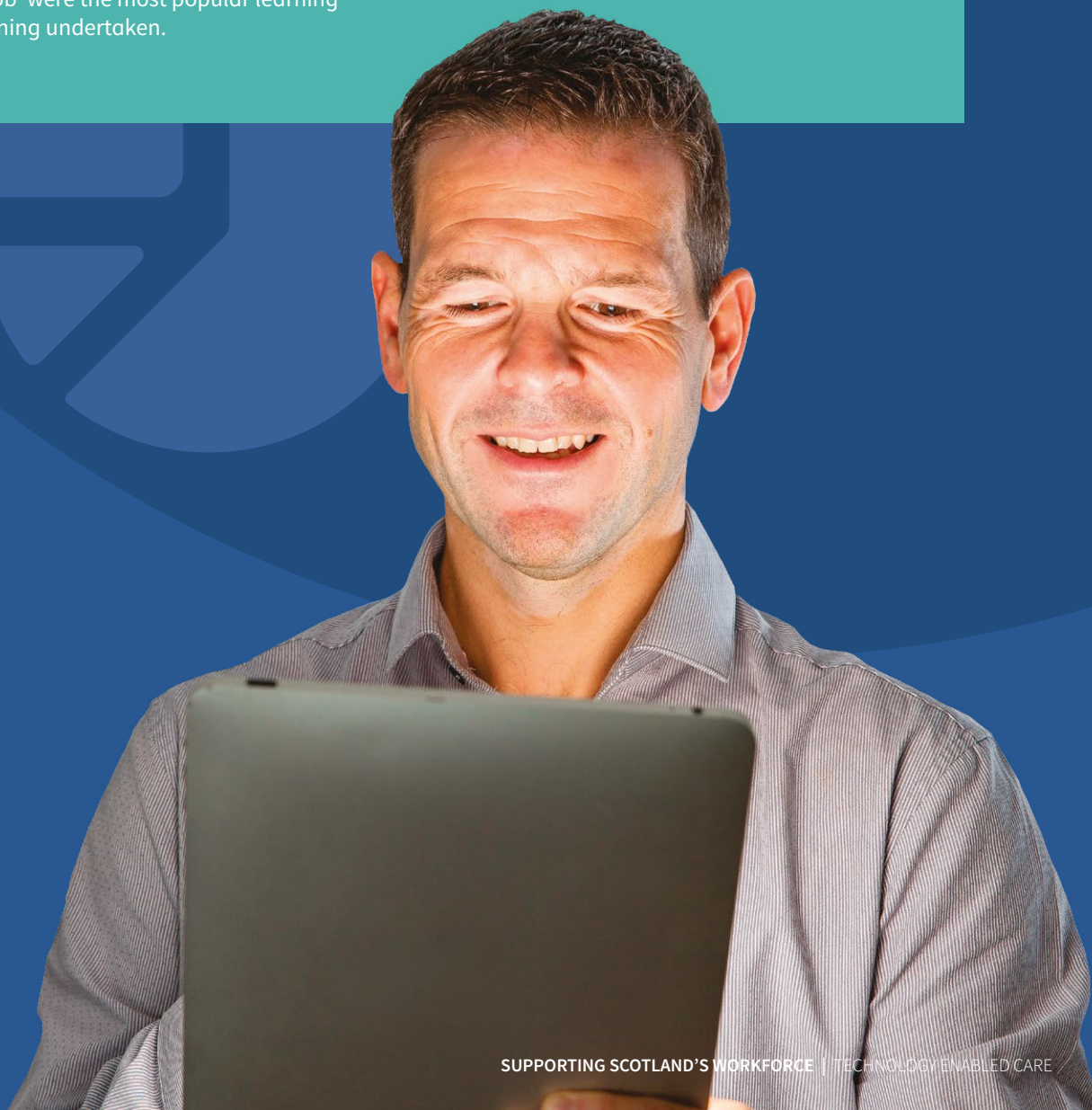
(Question 5 – If you have participated, what sort of learning or training was provided? (select all that apply))



### 4.4.1 Summary - Past Learning and Training in TEC

---

- In general, training or learning in technology for health and care ranged from 7% for telecoaching to 45% for telecare.
- The greatest reason for not having engaged in previous learning or training was that such resources were not used in the workplace or not relevant to roles.
- Other reasons cited were that opportunities were not offered, no training was available, and a lack of awareness that such opportunities existed.
- Additionally, questions were raised as to why such training was required, and perceptions highlighted that efforts should be directed towards improving current technology infrastructures.
- Finally, face to face approaches and 'learning on the job' were the most popular learning and training undertaken.

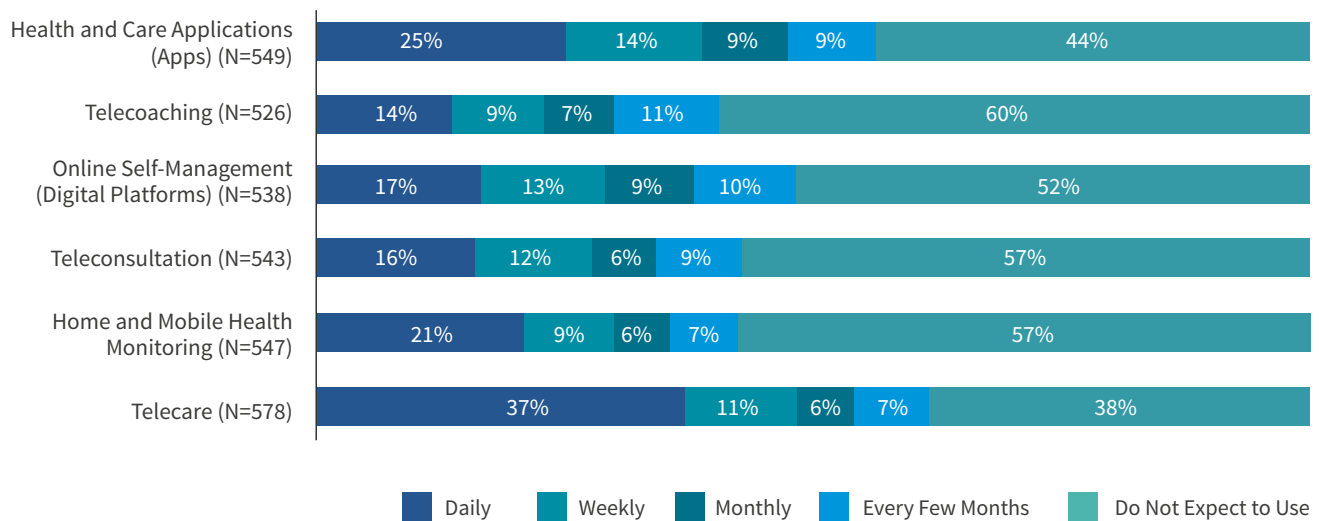


## 4.5 Future Intentions in Using Technology Enabled Care

In looking at future intentions to use technology for health and care, there were some expectations of using these daily (Figure 12). For most of the presented technologies, however, responses were skewed towards no intentions to use.

**FIGURE 12: EXPECTATIONS TO USE A RANGE OF TECHNOLOGY ENABLED CARE IN THE NEXT THREE YEARS (N=526-578).**

(Question 7 – Which of the following do you or your team expect to use in the next 3 years?)



The main reasons for not expecting to use technology for health and care in the future, were overwhelmingly around perceived lack of relevance and applicability of such resources in day to day work roles (Table 4, p.45).

“ Because I work for Social Work Adult Services rather than Healthcare, I do not expect to be involved with healthcare technology until much further down the line with Integration of Health and Social Care.”

SENIOR WORKER  
CARE AT HOME  
LOCAL AUTHORITY

“ Telecare has not been considered within Housing Options Service delivery; we are unaware of how this would benefit our service users.”

HOUSING OPTIONS COORDINATOR  
LOCAL AUTHORITY

“ I suspect it will take longer than this for it to shown to be an adequate and safe replacement for current systems.”

CONSULTANT  
NHS HEALTH BOARD

“ Not relevant to role. Great potential for other members of staff.”

DEVELOPMENT OFFICER  
THIRD SECTOR

“ Not applicable for the area I work in as far as I can see....but who knows maybe there is a place for this type of TEC within Nutrition.”

NUTRITION MANAGER  
NHS HEALTH BOARD

THEME <sup>46</sup>	FREQUENCY
Not used within the workplace and lack of perceived relevance to job role	195
Lack of knowledge and strategic intent	75
Would like to know more about future use	22
Lack of funds, resources and use of time	14
Suitability of use and concerns about safety	5
Require training	4

**Table 4:** Main reasons cited for not expecting to use technology enabled care in the future (302 responded, and frequencies denote number of comments). (Question 8 – If you selected DO NOT EXPECT TO USE for any of the above, tell us why?)

<sup>46</sup>. 22 comments highlighted miscellaneous issues, such as not applicable as already using technology for health and care.



Respondents also highlighted that their limited knowledge of technology for health and care hindered their expected use in the future.

“ Have no idea what these technologies are - think they relate to health and although we will be integrated, would need training on such technologies.”

SENIOR PRACTITIONER SOCIAL WORKER  
LOCAL AUTHORITY

“ Less applicable for our profession but this opinion may be due to personal lack of knowledge of application.”

LEAD DIETICIAN  
COMMUNITY SETTING  
NHS HEALTH BOARD

“ Have very limited knowledge and how this would impact on my patient care.”

OCCUPATIONAL THERAPY  
NHS HEALTH BOARD

Other perceived barriers to future usage included costs, needs of people who access health and care services, and current IT infrastructures.

“ I can't imagine there being enough budget to invest in IT systems or wearable technology unless it is already proven to be 1) effective clinically and 2) cost effective long term. Using Apps is cheap and easy but getting patients to engage with them more difficult.”

PODIATRIST  
NHS HEALTH BOARD

“ Inadequate broadband speeds in rural areas render much technology obsolete before it starts so [it's] a no brainer to not train in its use as a waste of time and resource.”

MEDICAL CONSULTANT  
NHS HEALTH BOARD

“ No clear plan for introducing this within current practice but would be hopeful that some investment would be available. Also, work with Learning Disability Population and some of these technologies and access to them are quite difficult for service users to access [...] lack of finances, info not in accessible format, complexity of task etc. Reasonable adjustments would need to be made to help support service users to engage and understand particularly with regards to self-management.”

CHARGE NURSE  
NHS HEALTH BOARD

### 4.5.1 Summary - Future intentions in Using TEC

---

- There were moderate expectations to use a range of technologies for health and care in the future.
- Once again, main reasons for not expecting to use such resources were in areas around: perceived lack of relevance to work roles; lack of knowledge and organisational plans; finance issues; and concerns around citizens' needs.
- Lack of knowledge hindered expectations to use in the future, however, there was an appetite to learn more.



## 4.6 Learning, Skills and Development Opportunities

**Supporting the learning and development of Scotland's health, care and housing workforce to build knowledge, skills and confidence in technology enabled care is critical. To prioritise ways forward, respondents were invited to indicate their views on the effectiveness of a variety of learning or support methods (Figure 13, p. 49).**

**Although most of the suggested approaches were favourable, face to face methods feature prominently. The following list highlights the order of preferences (combined data for 'Very Effective' and 'Effective'):**

- Face to face – 1 to 1 or small group learning (95.7%)
- Face to face – facilitated group learning (92.7%)
- Online learning – simulation (82%)
- Online learning – e-learning (77.8%)
- Training manuals/help guides (74.6%)
- Online learning – e.g. webinars (68.1%)
- Applications (Apps) (60%)
- Podcasts (audio learning) (46.4%)
- Online learning – communities and networks (blogs) (45.7%)

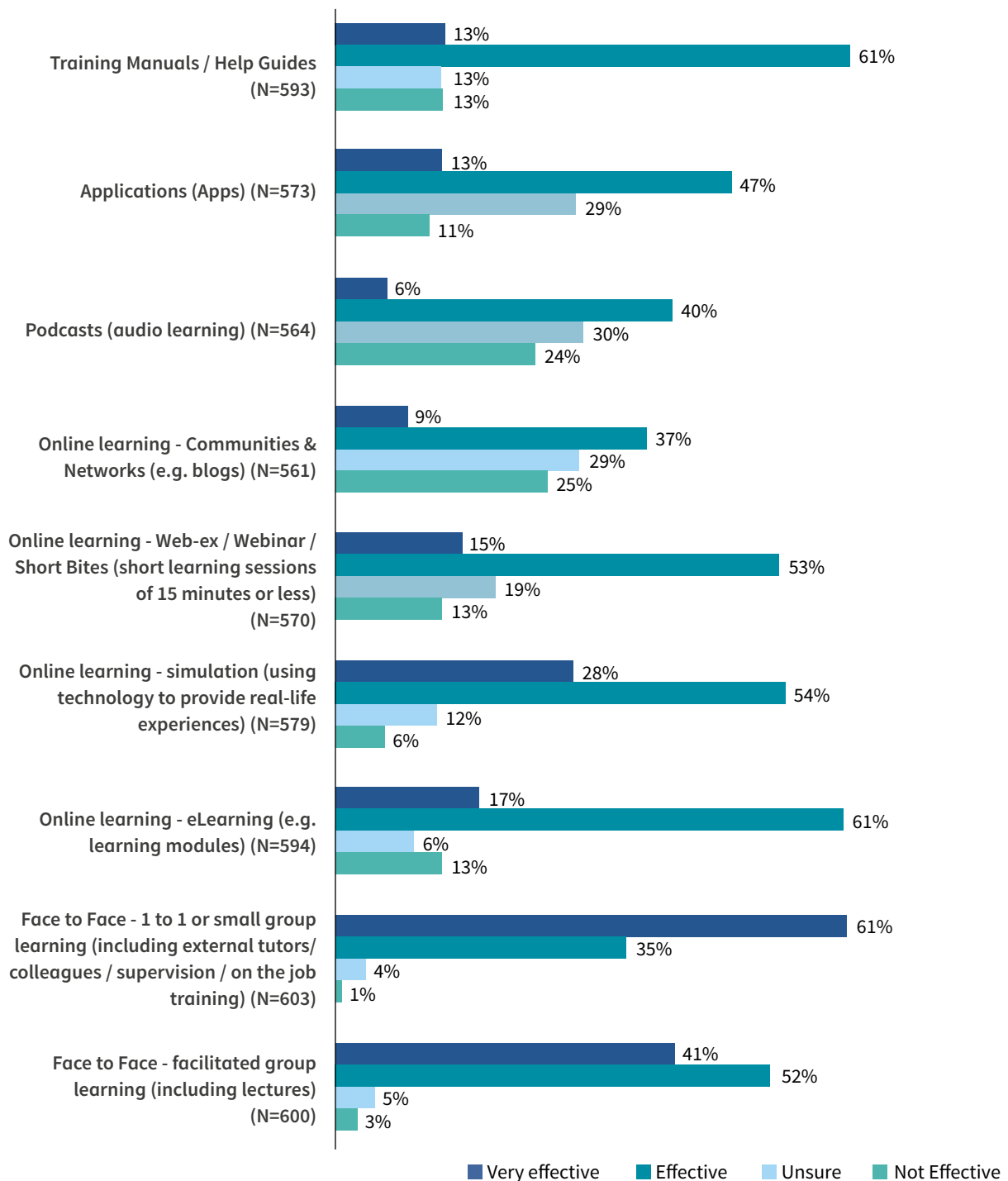
**Additionally, in projecting workforce learning and engagement approaches over the next three years, respondents highlighted the potential usefulness of a range of learning developments (Figure 14, p. 50). This data is also presented in order of importance ('Very useful' and 'Useful' data combined):**

- National online platform (78%)
- National help and guidance (76%)
- National TEC Champions Network (74%)

Taking these two responses together, and given the favourable reactions to most of the cited approaches and developments, a blended approach to learning (supported by digital learning technology) may be profitable. Additionally, simulation methods allow for the practice of skills or procedures in a relatively realistic and safe environment.

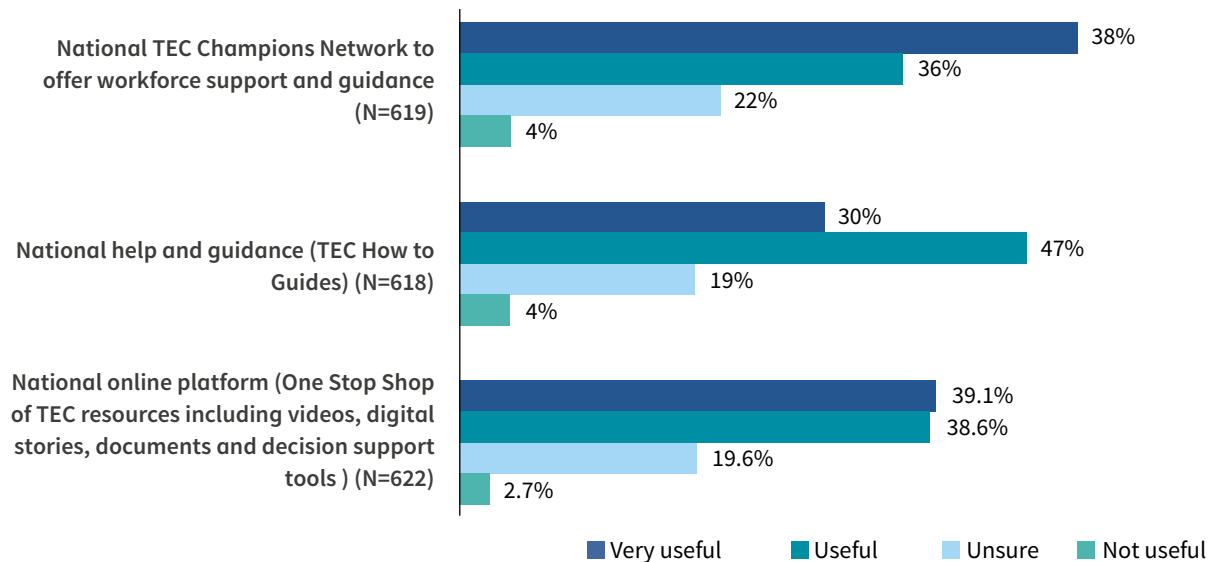
**FIGURE 13: RESPONDENTS' VIEWS ON THE EFFECTIVENESS OF A RANGE OF LEARNING AND SUPPORT METHODS (N=561-603).**

(Question 9 – Which of the following learning or support methods would be effective to support workforce development?)



### FIGURE 14: USEFULNESS OF POTENTIAL TECHNOLOGY ENABLED CARE DEVELOPMENTS (N=618-619).

(Question 11 – To support workforce learning and engagement over the next 3 years, which potential technology enabled care developments would you find useful?)



Other cited options for individual and team learning included learning and reviewing experiences from those already working in the area, learning from best practices, job shadowing and ‘hands-on’ demonstrations (Table 5).

THEME <sup>47</sup>	FREQUENCY
Work-based learning, including learning from others, best practice examples, and practical demonstrations	21
Unable to advise due to lack of knowledge (e.g. relevance to job role)	13
Face to face learning, such as small group teaching and subject experts at team meetings	12
Online learning/e-learning	6
Don't know or unsure	3
Reflecting on a case study and clinical example	2
Reflecting on user experiences	2

**Table 5:** Other individual and team learning and development opportunities (72 respondents, and frequencies denote number of comments). (Question 12 – Tell us about workforce learning and development opportunities you or your team would find useful which is not listed above.)

<sup>47</sup>. Other miscellaneous comments (19) included the requirement for protected time, negative perceptions around TEC learning (including e-learning), and concerns around the IT infrastructure.

The following quotes highlight some respondents' views for individual and team learning opportunities.

“ Best practice show casing and site visits. Interaction with suppliers' manufacturers on design projects. Service user focus groups and online feedback on user experience.”

RESOURCES AND SUPPORT SERVICES  
COMMUNITY SETTING  
LOCAL AUTHORITY

“ Allowing staff to use the technology themselves so they can experience and understand the technology first hand.”

TEAM LEADER  
LOCAL AUTHORITY

“ More local apps (that cover a geographic location.”

HEALTH IMPROVEMENT SPECIALIST  
NHS HEALTH BOARD

“ Spend time with Telecare support staff to see: what is available; how it is installed; what type of client would benefit from it.”

SOCIAL CARE OFFICER  
LOCAL AUTHORITY

“ Access to NHS resources for e-learning/ technology would be of big benefit to us as a small provider.”

DIRECTOR  
PRIVATE CARE HOME

Other comments highlighted needs around protected time for learning, and how limited technology enabled care knowledge hindered decision making.

“ Time dedicated to the understanding and learning of tech enabled care. For example, half an hour out of clinic to do the e-learning, to read the extensive 50 page documents, or to watch YouTube videos. Would not need a lecture, just the time to do this.”

ANONYMOUS  
NHS HEALTH BOARD

“ What would be useful is to be able to do any learning, training or development in paid hours. Nothing is of benefit, if we can't afford/find the time to access it.”

CARDIOVASCULAR RESEARCH NURSE/  
PRACTICE NURSE  
NHS HEALTH BOARD

“ To understand what is available, what might help, how to request TEC resources. Although it is heard at various training and events, I still feel it is not widely known about and thus this lack of knowing and understanding means it is often not considered as a resource.”

TEAM LEADER  
LOCAL AUTHORITY



**Finally, respondents' immediate and future learning or support needs in technology enabled care, are apparent (Figure 15, p. 53).**

**Overall, there is interest in learning about all the cited topics. The learning topics, in order of importance (combined data for 'Very important' and 'Important') are:**

- Privacy, Confidentiality, Data Protection & Data Security (97%)
- Legal, Ethical and Informed Consent issues (96%)
- General awareness and understanding of the benefits of using technology enabled care (95%)
- Awareness of the range of technology solutions available (95%)
- Finding online health and wellbeing information and providing the information to promote people's independence and self-management (94%)
- Enabling people and carers to use technology enabled care including learning basic trouble-shooting skills (91%)
- Assessment Skills - assessing and reviewing to ensure technology enabled care becomes embedded in every day health, care and support planning (89%)
- Change management skills to facilitate transition to new ways of working that embed technology enabled care into every day health and care practice (88%)
- Benefits realisation and evaluating the impact of technology enabled care (87%)
- Data analysis to provide evidence for service change and improvement (86%)
- Technical Skills - How to set up, install, use and basic trouble-shooting (84%)
- Business case planning and development using technology enabled care for service transformation at scale (77%)

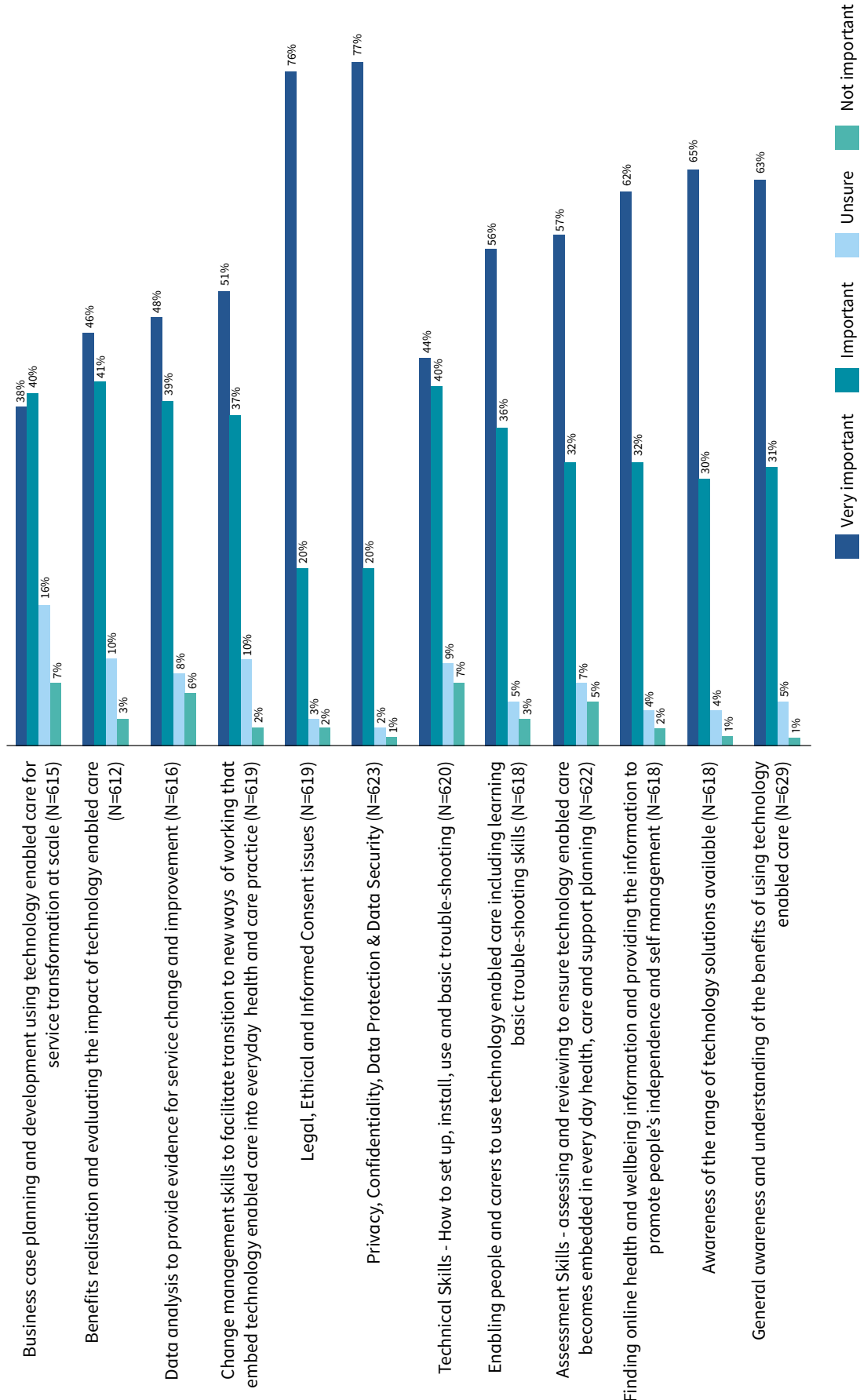
In line with the research data already presented in this report, results in this section further highlight the need for learning about the benefits of technology for health and care. Importantly, there were expressed learning needs in privacy controls and legal and regulatory issues. Whilst business case planning for technology enabled care was not prioritised (relative to the other cited resources), there is still much interest in learning about the area.

### 4.6.1 Summary - Learning, Skills and Development Opportunities

- Face to face learning was prioritised by the workforce sample as being most effective.
- However, respondents also expressed interest in a variety of other learning approaches (e.g. e-learning, simulation, training manuals/help guides and national networks).
- It is suggested that future learning and development opportunities in technology for health and care take on a 'blended approach'.
- In terms of key learning topics, respondents were ambitious towards all the offered areas.
- Prioritised matters were privacy issues, legal and ethical considerations, and general awareness of the benefits and solutions offered by health and care technologies.

**FIGURE 15: IMMEDIATE AND FUTURE LEARNING AND SUPPORT NEEDS (N=612-629).**

(Question 10 – Thinking about you or your teams' learning and support needs now and for the future, how important are skills in the following?)

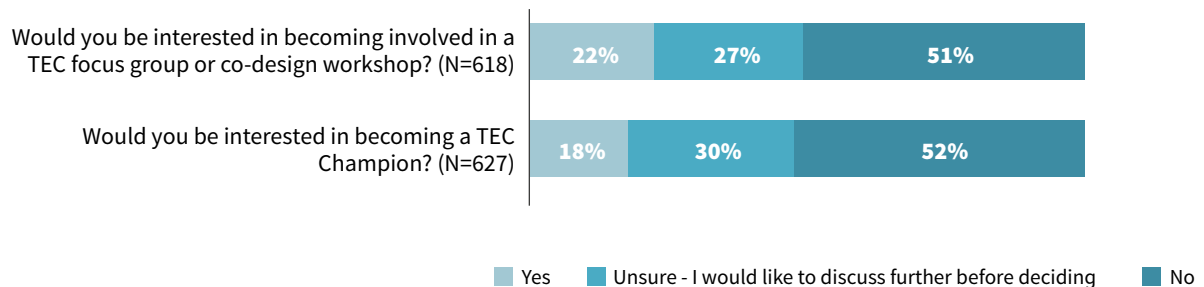


## 4.7 Championing Technology Enabled Care and Further Engagements

There was somewhat limited support for ‘championing’<sup>48</sup> technology enabled care (Figure 16<sup>49</sup>). However, a large minority reserved judgement noting that they would like to discuss further prior to deciding (30%).

FIGURE 16: CHAMPIONING TECHNOLOGY ENABLED CARE (N=618) AND INTEREST IN FUTURE ENGAGEMENT (N=627).

(Question 13 – Would you be interested in becoming a Technology Enabled Care Champion?  
Question 14 – Would you be interested in becoming involved in a technology enabled care focus group or co-design workshop?)



Similarly, there was limited support in becoming involved in a technology enabled care focus group or a co-design workshop (Figure 16). However, taking into consideration previous views and experiences around technology for health and care, interest by 22% of the sample is to some extent promising. Additionally, approximately 27% are open to discussion prior to deciding.

In support of awareness raising and shared learning, a minority of respondents (13.5%, 84/623) indicated that they were willing to share a range of information around technology for health and care (e.g. URLs, learning and training materials, or case studies). This very limited support, once again, appears to be consistent with previously reported data.

However, 215 individuals<sup>50</sup> agreed in providing their contact details as potential ways forward in being a ‘technology enabled care champion’, being involved in a focus group or co-design workshop, or having resources to share.

<sup>48</sup>. This result is perhaps expected, as these individuals would be required to act as ambassadors and advocate the overall digital agenda amongst peers and a range of stakeholders.

<sup>49</sup>. Whilst limited support was given towards **being** technology enabled care ‘champions’, respondents were indeed supportive of a national TEC ‘champions’ network to offer workforce support and guidance (Figure 14, p. 50).

<sup>50</sup>. Comprising a combination of 212 names, 213 emails, and 202 phone numbers.

## 4.7.1 Summary - Championing TEC and Further Engagements

- Respondents demonstrated limited support for championing technology enabled care.
- Similarly, 22% of the sample (N=618) noted interests in engaging with focus groups or co-design workshops.
- Despite the low numbers, these figures appear promising (considering the previous comments, views and experiences around technology enabled care).
- 215 individuals agreed to being contacted for further discussions and engagements in the technology enabled care agenda.







## SECTION 5 DISCUSSION



## SECTION 5

## DISCUSSION

## 5.1 Summary

**Technology has the potential to transform the way people control their own health and wellbeing, empowering them to manage it in a way that is right for them. For this intent to reach its full potential, it is imperative that people are supported by a knowledgeable and skilled workforce.**

From a wide range of respondents in primary, secondary and community care, this report has brought together workforce views, experiences and learning and development needs, of using technology in health, care, housing and support services.

Most respondents highlighted limited use of the range of technologies presented, with approximately 29% of the sample using telecare daily. The main reasons for not using the selected technologies were centred around workplace availability, lack of opportunities and no requirements for job roles. The lack of knowledge in the area also hindered use, however, there was an appetite to explore the area further. Furthermore, confidence in using technology enabled care was somewhat varied, and in the main, could not be sufficiently attributed due to lack of use or access. These results also seem to align with the fact that most of the sample had not participated in learning or training in the area (and for some, it simply was not applicable).

Of those having participated in learning and training, face to face approaches and 'learning on the job' were the most common.

Anticipated future use of the resources was somewhat moderate, ranging from 14% for daily use of telecoaching to 37% of daily use for telecare. Once again, main reasons for not expecting to use technologies for health and care in the future were around perceived lack of relevance for day to day work roles. However, there was much interest in taking up further learning, and a variety of formats were viewed positively (including learning *in situ*, job shadowing, e-learning, simulation approaches and training manuals).



**There was limited support for 'championing' technologies for health and care and engaging further<sup>51</sup>. However, a large minority reserved judgement, noting that they are open to discussion. In summary, there appear to be some perceived challenges and barriers towards using digital technology for health and care.**

51. Via potential future workshops and focus groups.

## 5.2 Recommendations

Given Scotland's strategic landscape around the fundamental role that technology is expected to play in redesigning health and social care services, the workforce will be required to use technology as an integral part of everyday service delivery to support self-management, preventative care and independent living. Improved care in the community, digital inclusion and greater support for remote and rural communities will also support an enhanced Scottish health and social care system<sup>52</sup>.

In moving forward, key areas for consideration focus on upskilling the workforce, learning and development, and building confidence in the benefits of using technology within health and care. A greater understanding of technologies, what they mean for the delivery of health and care services, and how they can be used to support self-management, health, care and wellbeing, is required.

Additionally, there are clear needs to promote a culture of appreciation and build professional confidence towards Scotland's digital agenda. All of this highlights the need for change and, particularly, the immediate need to instil a 'culture of readiness' towards 'new ways of working'.



**The key recommendation is in developing and upskilling the workforce and building confidence in the benefits using technology in health and care services. Other aspects include leadership and management, and a consideration of finance and resources (Table 6).**



**52.** The wider health inequalities agenda, and the financial, social and personal determinants of health and wellbeing are not addressed here. However, any onward actions and recommendations should be cognisant of these areas.

ASPECTS	RECOMMENDATIONS
<p><b>A1. Workforce Knowledge, Skills and Confidence</b></p> <p><i>Knowledge gaps, lack of confidence, and poor awareness of services available across the workforce need to be addressed.</i></p>	<ol style="list-style-type: none"> <li>1.1. National awareness raising programme and promotion of digital technologies for health and care. This should demonstrate the benefits and advantages for the workforce and generate increased knowledge and understanding of using such technologies in everyday work.</li> <li>1.2. Develop a national online learning resource to cover the various aspects of digital technologies for health, care and housing.</li> <li>1.3. Implement a national online learning resource and ‘face to face’ (live) learning networks for ongoing support, learning and development.</li> <li>1.4. Consider a national stepped learning framework such as informed, skilled, enhanced and expert.</li> </ol>
<p><b>A2. Leadership and Management</b></p> <p><i>At-scale change in culture is required to facilitate ‘new ways of working’.</i></p>	<ol style="list-style-type: none"> <li>2.1. Support a national shift to ‘new ways of working’ and promote a ‘culture of readiness’ for a mainstreamed future digital health and care service.</li> <li>2.2. Support a national drive to alleviate concerns around the use of digital technology in health, care and housing services.</li> <li>2.3. Develop national strategies and measurable objectives for the deployment and mainstreaming of digital solutions for health, care and housing services.</li> <li>2.4. Consider further developing organisational partnerships and work with a range of stakeholders to drive forward a national approach to digital health and care.</li> </ol>
<p><b>A3. Finance and Resources</b></p> <p><i>Visibility and deployment of technology enabled care should be encouraged.</i></p>	<ol style="list-style-type: none"> <li>3.1. Support a ‘digital by default’ ethos and the mainstreaming of digital technologies for health and care.</li> <li>3.2. Encourage and promote the necessary deployment of a digital infrastructure and IT investment to support Scotland’s ambition of digital transformation of health and care services.</li> </ol>

**Table 6:** Suggested recommendations for supporting workforce development in Scotland.

## 5.3 Conclusion

**The TEC Programme and other Scottish initiatives have inevitably delivered significant benefits across a range of funded organisations and work-streams<sup>53,54</sup>. However, this report has brought together wider workforce<sup>55</sup> views, experiences and learning needs around using technology in health, care and support services in Scotland.**

In general, the results suggest that there is limited appreciation of the benefits and advantages of deploying and mainstreaming technology enabled care, and this perhaps stems from a lack of knowledge and awareness. Additionally, approximately 2% of the sample (9/522) stated that they had no interest in technology enabled care, however, in the main, there was general interest in learning more.

This report has brought together staff experiences, views and future intentions towards technology enabled care in Scotland. It has highlighted the importance of learning and development opportunities for the current and future workforce, and presented key recommendations to support the strategic vision of using digital technologies for health and care.

To support the scale and pace of change required to meet the strategic vision of using digital technologies as part of everyday health, wellbeing and care services, key recommendations centre around national approaches to learning and development, partnership working, and leadership and management initiatives. Additionally, at-scale change in culture, behaviours and mindsets is required to facilitate ‘new ways of working’.

In order to alleviate cited fears around privacy, data sharing and ethical issues, the need for education and training has also been highlighted.

In conclusion, the results presented here suggest that further work is required to drive forward the ambitious digital vision for health and social care services in Scotland. However, the mere provision of cutting edge technologies alone will not drive transformative change – the workforce is at the very heart of delivering high quality care, and building workforce skills and confidence, and changing workforce perceptions (at the outset) are required to maximise effective and at-scale use of technology. This in turn could empower the people of Scotland to harness the power of digital technologies and further embed preventative measures to health, wellbeing and care.



**It is hoped that this report provides the insight to support the critical role the workforce plays in meeting Scotland’s ambitions for delivering digital transformation, and in supporting an ongoing focus and investment in the workforce development agenda.**

**53.** TEC Board (2016). Technology Enabled Care: Annual Report 2015-2016 Available at: <http://www.ehealth.nhs.scot/wp-content/uploads/sites/7/2016/11/Technology-Enabled-Care-Annual-Report-2015-2016.pdf> [Accessed 13 July 2017].

**54.** NHS 24 (2016). End of year report 2015/2016: Supporting Improvement, Integration and Innovation Available at: [https://sctt.org.uk/wp-content/uploads/2016/08/EOYR\\_11\\_08\\_16-FINAL.pdf](https://sctt.org.uk/wp-content/uploads/2016/08/EOYR_11_08_16-FINAL.pdf) [Accessed 21 July 2017].

**55.** Reasons for not responding to the questionnaire are not known, however, a wide range and level of roles are represented.





## SECTION 6

# APPENDICES

## SECTION 6

## APPENDICES

## 6.1 Glossary

<b>HEALTH &amp; CARE APPLICATIONS (APPS)</b>	Programmes/software that offer health and care related services and advice, particularly on mobile devices such as smartphones and tablet PCs. They aim to help people manage their own health and wellness, as well as access to useful information when and where they need it. Examples include 'Map My Walk', 'My Fitness Pal', and 'Medisafe'.
<b>HOME AND MOBILE HEALTH MONITORING</b>	The use of digital remote technology to monitor people's health, thus reducing the need to keep visiting a health centre or hospital. Examples include COPD and asthma monitoring oxygen levels, and diabetes monitoring blood sugar levels.
<b>ONLINE SELF-MANAGEMENT (DIGITAL PLATFORMS)</b>	Using information through the web or mobile devices to support self-care, self-management and wellness. Examples include "Living it Up: NHS Inform", and 'Care Information Scotland'.
<b>TECHNOLOGY ENABLED CARE</b>	Includes quality, cost-effective care and support resources/services such as telehealth and telecare, where outcomes for individuals in home or community settings are improved.
<b>TELECARE</b>	The use of technology, equipment and sensors which offer reassurance and reduce risks, by alerting staff, carers or a monitoring centre. Examples include community alarms with a wearable pendant for the neck or wrist, fall detectors, and smoke, gas and heat detectors.
<b>TELECOACHING</b>	Using everyday technology such as a telephone, mobile phone or tablet to provide flexible and convenient access to professional advice and support for self-management and wellbeing. An example is 'NHS Smokefree' which offers advice and support by email, text, or face to face contact.
<b>TELECONSULTATION</b>	Using videoconferencing technology to provide more convenient access to services locally and reduce the need for people or health professionals travelling distances in isolated, remote or rural communities. For example, an older person in a rural island community videoconferencing an outpatient appointment with their health professional on the mainland.



## 6.2 Questionnaire

### Workforce Learning and Support Needs for Technology Enabled Care Survey

#### Introduction

The Technology Enabled Care Programme aims to support digital transformation of health, care and support services through the application of technology as an integral part of high quality, cost effective care and support.

Recognising the importance of workforce needs in relation to Technology Enabled Care NHS Education for Scotland is conducting this survey to support the wider Technology Enabled Care Programme.

#### Who should complete this survey?

We welcome the views of staff in health, social care, housing and support services. And we would like to hear from as many people as possible - whether you are support workers, practitioners, administrators or managers. So please forward this link widely to your colleagues.

We want to understand the learning and development you believe is needed, even if you don't at present work with technology enabled care.

#### What do we mean by Technology Enabled Care?

**Technology Enabled Care:** where outcomes for individuals in home or community settings are improved through the application of technology.

#### Examples of **Technology Enabled Care:**

**Telecare** - using technology, equipment and sensors which offer reassurance, reduce risks and alert staff, carers or a monitoring centre. Examples include community alarms with a wearable pendant for the neck or wrist, fall detectors, smoke, gas and heat detectors.

**Home and Mobile Health Monitoring** - using technology to monitor people's health, reducing the need to keep visiting a health centre or hospital. Examples include COPD and asthma monitoring oxygen levels, diabetes monitoring blood sugar levels.

**Teleconsultation** - using videoconferencing technology to provide more convenient access to services locally and reduce the need for people or health professionals travelling distances in isolated, remote or rural communities. For example, an older person in a rural island community videoconferencing outpatient appointment with their health professional on the mainland.

**Online Self-Management (digital platforms)** - using information through the web or mobile devices to support self-care, self-management and wellness. Examples include Living it Up, NHS Inform, Care Information Scotland.

**Telecoaching** - using every day technology such as a telephone, mobile phone or tablet to provide flexible and convenient access to professional advice and support for self-management and wellbeing. Examples include NHS Smokefree which offers advice and support by email, text, or face to face contact.

**Health & Care Applications (Apps)** - offer health and care related services and advice for smartphones and tablet PCs to help people manage their own health and wellness and gain access to useful information when and where they need it. For Example Map My Walk, My Fitness Pal, Medisafe Pill Reminder.

## Objectives of this survey

### We would like to find out:

How you or your team currently use technology in delivering health, social care and housing care and support, and how this may change in the future.

How confident you or your team currently feel using technology to deliver care and support, and what learning and support is accessed at present.

Your insights into learning opportunities and support you or your team would find most helpful in the future to deliver technology enabled care.

Your insight into challenges which impact on you or your teams ability to embed technology enabled care into everyday practice.

Your input is important so we would appreciate your time to complete this short survey. It should take no more than 10 minutes. Your answers given will be confidential and the final report will be fully anonymised. Thank you for your input and if you have any questions about this survey, please contact **Pamela Dimberline** at **[Pamela Dimberline@nes.scot.nhs.uk](mailto:Pamela.Dimberline@nes.scot.nhs.uk)** or **07769 367 675**.

### 1) Which of the following do you or your team use at work?

	Daily	Weekly	Monthly	Every few months	Do not use
Telecare	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Home and Mobile Health Monitoring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Teleconsultation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Online Self-Management (Digital Platforms)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Telecoaching	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Health & Care Applications (Apps)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### 2) If you selected DO NOT USE for any of the above, tell us why? (select all that apply )

- I haven't had an opportunity to use it but I would like to
- I would like to start using it but I don't know where to start
- I don't know enough about how it can be used in health and social care practice
- I don't have the relevant knowledge or skills to feel confident using it
- I haven't seen anyone using it so not sure it is available at my workplace
- I don't feel there is a requirement to use it in my job role
- I have no interest in it
- Other

**3) How confident are you or your team using the following?**

	Not confident	Confident	Very Confident	Unsure	Not Applicable
Telecare	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Home and Mobile Health Monitoring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Teleconsultation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Online Self-Management (Digital Platforms)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Telecoaching	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Health & Care Applications (Apps)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**4) Have you or your team participated in learning or training on the following?**

	Yes	No	Unsure	Not Applicable
Telecare	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Home and Mobile Health Monitoring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Teleconsultation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Online Self-Management (Digital Platforms)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Telecoaching	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Health & Care Applications (Apps)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**5) If you have participated, what sort of learning or training was provided? (select all that apply)**

- Face to Face (Group Sessions / 1 to 1 Sessions)
- elearning
- Paper Guides (Training Manuals / Help Guides)
- Video Guides
- On the Job Learning
- Champions / Experts in the organisation
- Other

**6) If you have not participated in learning or training on technology enabled care, tell us why?**

**7) Which of the following do you or your team expect to use in the next 3 years?**

	Daily	Weekly	Monthly	Every few months	Do Not Expect to Use
Telecare	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Home and Mobile Health Monitoring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Teleconsultation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Online Self-Management (Digital Platforms)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Telecoaching	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Health & Care Applications (Apps)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**8) If you selected DO NOT EXPECT TO USE for any of the above, tell us why?**

**9) Which of the following learning or support methods do you feel would be effective to support workforce development?**

	Not Effective	Effective	Very Effective	Unsure
Face to Face · facilitated group learning (including lectures)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Face to Face · 1 to 1 or small group learning (including external tutors / colleagues / supervision / on the job training)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Online learning - eLearning (e.g. learning modules)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Online learning - simulation (using technology to provide real-life experiences)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Online learning - Web-ex / Webinar / Short Bites (short learning sessions of 15 minutes or less)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Online learning - Communities & Networks (e.g blogs)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Podcasts (audio learning)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Applications (Apps)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Training Manuals / Help Guides	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**10) Thinking about you or your teams learning and support needs now and for the future, how important are skills in the following?**

	Not important	Important	Very Important	Unsure
General awareness and understanding of the benefits of using technology enabled care	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Awareness of the range of technology solutions available	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Finding online health and wellbeing information and providing the information to promote people's independence and self management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Assessment Skills - assessing and reviewing to ensure technology enabled care becomes embedded in everyday health, care and support planning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Enabling people and carers to use technology enabled care including learning basic trouble-shooting skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Technical Skills - How to set up, install, use and basic trouble-shooting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Privacy, Confidentiality, Data Protection & Data Security	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Legal, Ethical and Informed Consent Issues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Change management skills to facilitate transition to new ways of working that embed technology enabled care into every day health and care practice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Data analysis to provide evidence for service change and improvement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Benefits realisation and evaluating the impact of technology enabled care	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Business case planning and development using technology enabled care for service transformation at scale	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**11) To support workforce learning and engagement over the next 3 years, which potential technology enabled care developments would you find useful?**

	Not Useful	Useful	Very Useful	Unsure
National online platform (One Stop Shop of TEC resources including videos, digital stories, documents and decision support tools)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
National help and guidance (TEC How to Guides)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
National TEC Champions Network to offer workforce support and guidance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**12) Tell us about workforce learning and development opportunities you or your team would find useful which is not listed above?**

**13) Would you be interested in becoming a Technology Enabled Care Champion?**

- Yes  
 No  
 Unsure - I would like to discuss further before deciding

**14) Would you be interested in becoming involved in a technology enabled care Focus Group or Co-design Workshop?**

- Yes  
 No  
 Unsure - I would like to discuss further before deciding

**15) Do you have technology enabled care information, resources, URL's, learning and training materials or case studies you are willing to share?**

- Yes  
 No

**16) Please provide contact details if you might be interested in being a TEC Champion or involved in a Focus Group/ Co-design Workshop or have resources to share? (this will be followed up at a later date)**

Name

E-mail

Contact number

**17) About you - Tell us which sector you work in?**

**18) Tell us your primary place of work?**

**19) What is your job title?**

**20) Do you work for a Health Board?**

- Yes
- No (Click Next)

**21) Tell us which Health Board is your primary place of work?**

**22) Tell us which best describes your Health sector specialism or service?**


**23) Do you work for a local Authority?**

- Yes
- No (Click Next)

**24) Tell us which Local Authority is your primary place of work?**

**25) Tell us which best describes your Social care sector specialism or service?**

**26) If you do not work for a Health Board or local Authority tell us the name of your organisation?**



# Supporting Scotland's Workforce

## TECHNOLOGY ENABLED CARE

NHS Education for Scotland (NES) is a national health board working to provide education, training and workforce development for those who work in and with NHS Scotland. Our aim is to provide excellence in health and care for the people of Scotland through high quality education, training and development. We provide an extensive educational infrastructure that supports learning and workforce development across all Scotland.

### COMMISSIONED BY:

Scottish Government Technology Enabled Care Programme



Scottish  
Government  
gov.scot



This resource may be made available, in full or summary form, in alternative formats and community languages. Please contact us on **0131 656 3200** or email **altformats@nes.scot.nhs.uk** to discuss how we can best meet your requirements.



NHS Education for Scotland  
Westport 102  
West Port  
Edinburgh EH3 9DN  
tel: 0131 656 3200  
fax: 0131 656 3201  
[www.nes.scot.nhs.uk](http://www.nes.scot.nhs.uk)

Published November 2017