BDA The Association of UK Dietitians

Foreword

Digital transformation has rapidly changed the way healthcare professionals communicate and conduct business. Evolving technologies present opportunities for optimising service provision and development, but require the knowledge, skills and experience of a diverse workforce.

This vision has been developed to support the whole of the nutrition and dietetic workforce to understand their responsibility surrounding digital working. The vision aims to guide the profession on how they can ensure that not only the technology and interventions they use are appropriate, but that they understand the considerations surrounding safety and security in addition to the equity of use of digital tools for themselves and the populations they serve.

This document considers the current landscape of digital literacy and transformation within the dietetic workforce and aims to predict where we may see further developments and how we manoeuvre through digital advancements with confidence and integrity.

We recognise that with the speed of digital evolution, this document will require regular review and encourage the workforce to continue to be mindful of the nuances that may be applicable to new and evolving digital applications and ways of working.

It is the belief of the British Dietetic Association (BDA) that the nutrition and dietetic workforce embodies a diverse and often unique range of skills that well equip the profession to have the confidence to lead digital transformation within healthcare and beyond, at every level within the workforce.

Amy Curtis-Brown, RD
BDA Professional Practice Officer

Contents

Terminology

Term (abbreviations used if more common)	Explanation
AI	Artificial Intelligence (AI) is a growing field in digital health. It uses a range of computer and cloud-based tools to support a range of health and social care work.
Apps	An application is a piece of software, or a program, usually on a mobile device, which performs specific functions.
CIO, CCIO, DMO, Digital Lead	Chief Informatics Officer (CIO), Chief Clinical Informatics Officer (CCIO), Digital Mobilisation Officer (DMO), and Digital Lead are various roles that are now being undertaken by healthcare professionals, including Allied Health Professionals, to support organisations in developing digital services.
Cyber security	Cyber security describes the various ways in which digital personal information is protected in healthcare e.g. password protection on computers, encryption, training and awareness surrounding actions, for example; not clicking links in emails from unknown sources.
Cyber attacks	Cyber attacks describe online attacks on digital technology made through the internet by groups of people to disrupt and hold ransom people and organisations.
Deepfake	Media that has been created to take on the profile of a person, to imitate that person and to control the fake-profile's actions.
DHT	A Digital Healthcare Technology (DHT) is a technology that aims to support health and wellbeing, or support the healthcare system e.g. smartphone health apps, wearable technology (i.e. pedometer).
Digital health technologies	The Topol Review describes digital health technologies as genomics, digital medicine, artificial intelligence and robotics.

Digital literacy	NHSE describes digital literacy as "those capabilities that fit someone for living, learning, working, participating and thriving in a digital society" [(1)]. There are varying levels of digital literacy, with the aim that every healthcare professional is able to use digital tools to optimise their practice safely and effectively.
Digital maturity	An organisation's relationship with digital working (including a workforce's digital literacy, but also including IT services, available technology etc.).
Digital medicine	Includes telemedicine (e.g. 111), video appointments, support via mobile apps and remote monitoring e.g. home blood pressure monitoring.
Digital poverty	The inability to fully access digital technology which may be due to social or economic factors and may include limitations surrounding digital literacy [(2)].
DTAC	Digital Technology Assessment Criteria (DTAC) is a framework which allows digital technologies used in healthcare to be critically evaluated to ensure they meet the following standards; clinical safety, data protection, technical security, interoperability and usability and accessibility. It is designed to provide confidence in the digital technologies used in healthcare.
GDPR	General Data Protection Regulation (GDPR) is an EU legislation used to ensure data privacy and security. It relates to data collection, processing and storage and all healthcare professionals should be aware of, and adhere to these standards.
Genomics	The study of the genes within human DNA, how they function and how they influence growth, development and processes within the human body. Potential use of genomics in healthcare is to allow more effective screening, and quicker diagnosis of disease, and more effective treatment and use of medicines.
Health informatics	Health informatics is the use of information and technology to enhance patient care, research and education. It is often used as an umbrella term and encompasses a wide range of technology related disciplines.
ICO	The Information Commissioner's Office (ICO) is a UK organisation that protects people's data and information rights in order to increase public confidence in personal data processing e.g. by implementing GDPR. Healthcare professionals are responsible for reporting breaches in GDPR to the ICO.

IG	Information Governance (IG) is a framework for handling data in a secure way in order to maintain personal and sensitive data legally, effectively and efficiently.
mHealth	Mobile health (mHealth) describes the use of mobile phones and other wireless technology in medical care e.g. apps on smartphones.
Phishing emails	Phishing emails are emails from unknown sources (which can appear legitimate) and usually have a link to an external source. If the link is clicked it can lead to data breaches or cyber attacks.
QR code	A quick response (QR) code is a modern barcode, which can usually be 'scanned' by smartphone cameras and contain a host of information or actions (activated with the user's permission) e.g. a link to a website, a set of contact details, create a SMS or email ready to send.
RHP	Remote Health Pathways (RHP) or Services are digital platforms that allow service users to remotely track their own outcomes/measures with clinicians.
Telehealth	Provision of healthcare that is other than face-to-face in person. For example: telephone or online consultation, or direct messaging.
Robotics	Robotics is the use of machinery (robots) to carry out tasks typically carried out by humans, therefore increasing human capacity for more complex tasks.
'The Cloud'	A term to describe multiple global data centres (physical places) that hold and process data, which is inputted from multiple global sources. The cloud is not one place or thing, but multiple data centres working together as a single entity.
VPN	Virtual Private Network (VPN) is a special internet connection which allows data to be transmitted securely when working remotely.

Introduction

The BDA Digital Vision has been developed in response to the rapid evolution of digital technologies, and the need to support the nutrition and dietetic profession in how to embrace new and evolving ways of working and foster good practice when working digitally.

This document is designed to be used by the whole of the dietetic workforce, irrespective of the environment, geographical location, career level, or specialty.

It aims to:

- Provide an understanding of the current use of digital technologies and practices within the nutrition and dietetic workforce;
- Provide a digital vision for the dietetic workforce until 2029;
- Empower the dietetic workforce to use digital tools and technologies efficiently and confidently

With these aims, the BDA Digital Vision supports providing equitable delivery of care, improving health inequalities, optimising service delivery and improving the service user experience which is also reflected within the overall BDA Strategy[3].

This document provides digital input to all four pillars of practice (practice, research, education and leadership)[4]. This document has therefore been created in collaboration with professionals from a wide range of specialist areas through roundtables, surveys, focus groups and individual meetings and communications.

The Topol Review believes that health technologies will support the workforce in addressing the challenges faced in the 21st century, enabling healthcare professionals to have more time that can be dedicated to their service users[5]. Whilst digital tools offer the provision of increased and more efficient outcomes, it is important to maintain the human aspect of the profession. Humans possess skills and qualities that technology is unable to replicate such as; creativity, ethics, emotional intelligence and effective communication, these are essential components to effective roles within the field of nutrition and dietetics. Due to the evolutionary nature of digital working, the BDA Digital Vision endeavours to predict how the landscape of nutrition and dietetics as a profession may grow and develop, however review and update of this document may be required in response to further technological advancements.

Drivers for digital change

In 2023 the Health and Care Professions Council (HCPC) added a requirement to "utilise technology and digital methods to enhance the care that you provide" to their new Standards of Proficiency for all registrants [5a]. This means that it is now a requirement for all UK registered Allied Health Professionals (AHPs) to engage and use digital tools in order to maintain standards of proficiency in healthcare.

The dietetic workforce across the four nations can vary considerably and this is also reflected in the ways in which each has embraced digital working. Each nation has its own priorities and attributed resources, which aim to promote digital working in a way which fits with their infrastructure and services. The Northern Irish [6], Scottish[7] and Welsh[8], and English[9] are united in the recognition of the need for the AHP workforce to develop competencies in digital technology. By working collaboratively there is a great deal to be learnt between nations. Fellow AHP professional bodies have developed their own digital strategies [9a, 9b] which support their relative professions in embracing digital working, this provides opportunities for inter-professional learning.

The digital framework for allied health professionals in England[10] takes forward the NHS Long Term Plan[11] and can be used as a guide for commissioners and managers to bring commitments made in 'Personalised Health and Care 2020'[11a] to make sure service users' digital records are interoperable. In Wales, this is represented within the 'Digital and data strategy for health and social care in Wales'[8]. These national documents support healthcare users having increased access to health records and control over their healthcare and using digital working to overcome challenges, improve safety and create efficiencies. A commitment to digital working is further shown in the 'Five-year framework for GP contract reform' (2019)[12], and in the 'AHP strategy for England – AHPs Deliver' (2022)[13].

As above states that by 2039 "90% of all jobs in the NHS will require some element of digital skills" requiring all staff to have a certain level of digital literacy[5]. Digital literacy can be assessed by using the AHP digital competency framework in the UK[14]. This method was found to be an acceptable framework in a qualitative study including senior dietitians at a large London teaching hospital, with agreement that regular review of digital competencies is valuable[15]. Other methods of evaluating digital literacy are also available e.g. NHS Greater Glasgow and Clyde[16].

'The BDA Strategic Plan 2024-2034' states that BDA members will have access to guidance and tools to promote a digitally competent workforce" and aims to support members in being digitally competent[3]. It is recognised that as a profession, digital technology will play an important part in the progression and development of the nutrition and dietetic workforce and the profession as a whole.

Digital transformation also aligns with 'Net Zero NHS (2021)'[17]. The future of healthcare will bring increased demands, and potentially fewer resources. Utilising digital tools enables opportunities to meet these demands sustainably, by considering environmental impacts e.g. reduced carbon footprint due to reduced travel and estates.

Education, training and finances

Modern life continually exposes opportunities for digital education and training. This may be informal and passive through friends, family and colleagues, self-exploration or a more formalised structured programme of learning. For example, many people are now using online banking or online shopping and have had to learn to do so. Developing digital skills outside of healthcare landscapes provides many transferable skills which can be used within professional practice.

There are a range of healthcare-based digital learning opportunities in England[18], Scotland[19] and Wales[20] available. The BDA webpage holds dietetic-specific information and support for digital working. Whilst some of these offer free training on using digital tools, some offer bursaries for projects. For example, the Topol Digital Fellowship Programme, funded by NHS England, provides £15,000 to clinical and non-clinical professionals to focus on digital projects. Independent digital training also exists e.g. 'The Organisation for the Review of Care and Health Apps' (ORCHA) Digital Health Academy[21].

There are several communities that support digital learning; existing forums such as 'BDA Digital Dietitians Network'[22], and 'Q Community'[23] offer environments with various niches to support the use of digital work in healthcare settings. Conferences such as 'REWIRED'[24], 'Digital health AI and data'[25], 'Digital Summer School'[26] offer opportunities to be at the forefront of digital learning and technological advancement spanning the healthcare environment.

Many of the dietetic workforce will also find local opportunities within organisations which are aligned with local digital roadmaps and local Sustainability and Transformation Partnerships (STP) priorities. Funding specifically for digital projects, or for projects which include a digital aspect, is now commonly available through specialist organisations and charities. In addition, the BDA Digital Innovation Award is an annual award to recognise outstanding achievements in digital dietetic practice.

Safety and governance

Many workplaces will have local protocols and policies that ensure safety and governance in digital working that adhere to current guidelines e.g. GDPR. Online safety and governance are rapidly evolving in response to continued threats and opportunities[27]. ORCHA has identified that there are over 350,000 health apps available, however only 205 of these apps meet safety standards[21]. Many workplaces will have digital safety included in induction processes, with the national support readily available[28,29]. Organisations can self-assess using NHS England data protection and security toolkit[30]. Digital security is further recognised in the HCPC[30a] and BDA record keeping guidelines.

The National Institute for Health and Care Excellence (NICE) has created the 'Evidence standards framework (ESF) for digital health technologies (DHTs)'[31]. This allows people within healthcare systems to ensure that new and developing DHTs are clinically effective and offer value. This framework can be used by those within the healthcare system using products, or by product developers. It is important to be aware that this framework does not guarantee regulatory approval (e.g. Digital Technology Assesment Criteria (DTAC) or endorsement. We must also recognise the potential for challenges surrounding equity of app accessibility and usage and attempt to clearly identify these and mitigate any associated risks.

Artificial Intelligence (AI)

The use of AI is quickly becoming a reality in modern life, with the UK government setting out plans for the UK to become a global AI leader[32]. AI can be used to describe many functions of technology, from automated algorithm bots, such as chatbots on websites for simple queries, to more complex and detailed clinical questioning in order to interpret multiple data points which may indicate the most successful clinical options (e.g. genomics). At present AI relies on pre-existing data to function and cannot synthesise original thought.

AI may have many roles including expanding capabilities, collecting and collating outcome data, and to strengthen impact. The power of AI within the dietetic workforce is harnessed when using AI technologies to undertake specific tasks.

Common uses of AI within nutrition and dietetics can include:

- Creating content (meal plans, blogs, images) within set parameters.
- Offering creativity in a clinical setting enabling greater communication.
- Creating virtual training environments with avatars for practising consultations.
- Clinical administration and administrative tasks e.g. meeting minutes and efficient triage of referrals.

Due to workforce pressures, particularly within healthcare, time is a valuable commodity.

AI has the potential to save professionals time by undertaking straightforward tasks in order to reduce workload and provide a positive experience for the end user.

However, despite the opportunities for AI applications, there are risks associated with its use, and these require careful consideration and mitigation. The use of AI within nutrition and dietetic settings requires regular monitoring by the responsible professional for accuracy and effectiveness, and it will be prudent to remember that, particularly within healthcare; professionals remain accountable for their interactions.

As the landscape surrounding AI use expands, so too will the required regulation and ethical considerations that need to be applied to address known flaws such as intrinsic bias, which can exacerbate inequalities, and opportunities for malpractice including deepfake software.

The BDA Digital Vision

Outcomes and evidence for digital working

This document encourages development of the evidence base for digital working in the nutrition and dietetic workforce. Collection of relevant outcome data as evidence for effectiveness is a vital cornerstone in securing the nutrition and dietetic profession in the future digital landscape[33, 34]. This will include work of the BDA in using standardised language terminology, clarifying key outcome data and working towards seamless digital records[3]. 'The BDA toolkit for digital dietetic records and collecting outcome data' can be used as part of this process, and can be accessed on the BDA website. Each member of the dietetic workforce, at every level and in every setting must be able and confident in collecting, analysing and presenting meaningful data to demonstrate the impact of work.

"If it moves, measure it." *Comment from a BDA digital rountable discussion*

This will also include collecting and sharing case studies that demonstrate digital working for the dietetic workforce. Case studies will include a range of specialities and settings, across all four nations of the UK, and aim to be shared in various formats to support contribution to outcome data collection and evidence for digital working. More than ever, finances are under focus, and it may be prudent to consider whether it is possible to include a cost-benefit analysis.

Safety and governance in digital working

It is important that each member of the dietetic workforce continues to be equipped and up to date with emerging evidence and guidance surrounding cyber security, this is essential to maintain trust and confidence in the profession and the use of digital tools. This document supports the recognition and need for awareness and implementation of digital safety strategies and appropriate governance within the nutrition and dietetic workforce so that data can be shared seamlessly, efficiently and safely.

Cyber security on a national level is continually being reviewed and developed, particularly with reference to technologies such as AI. Unfortunately, it is now commonplace for hackers to ransom organisations over data, and cyber attacks are occurring more frequently. Each member of the nutrition and dietetic workforce must ensure that they use, record and secure data effectively and efficiently (cyber security) and adhere to local policies, procedures and governance in this area.

AI has the ability to revolutionise the way in which nutrition and healthcare operates. By utilising and maximising the potential opportunities offered by AI, professionals can focus on higher-level operations, allowing the workforce to improve efficiencies, outcomes and to focus on the essential human elements related to nutrition and dietetic working.

"The power of AI is harnessed when it is used with integrity"

Comment from a BDA digital rountable discussion

At the precipice of AI becoming more common, there is a unique opportunity to shape the way in which AI is applied, and ensure it is done so safely and ethically. The BDA Digital Vision supports the nutrition and dietetic workforce to embrace AI and steer its safe and effective use in nutrition and dietetic related matters.

Training, education and awareness in digital working

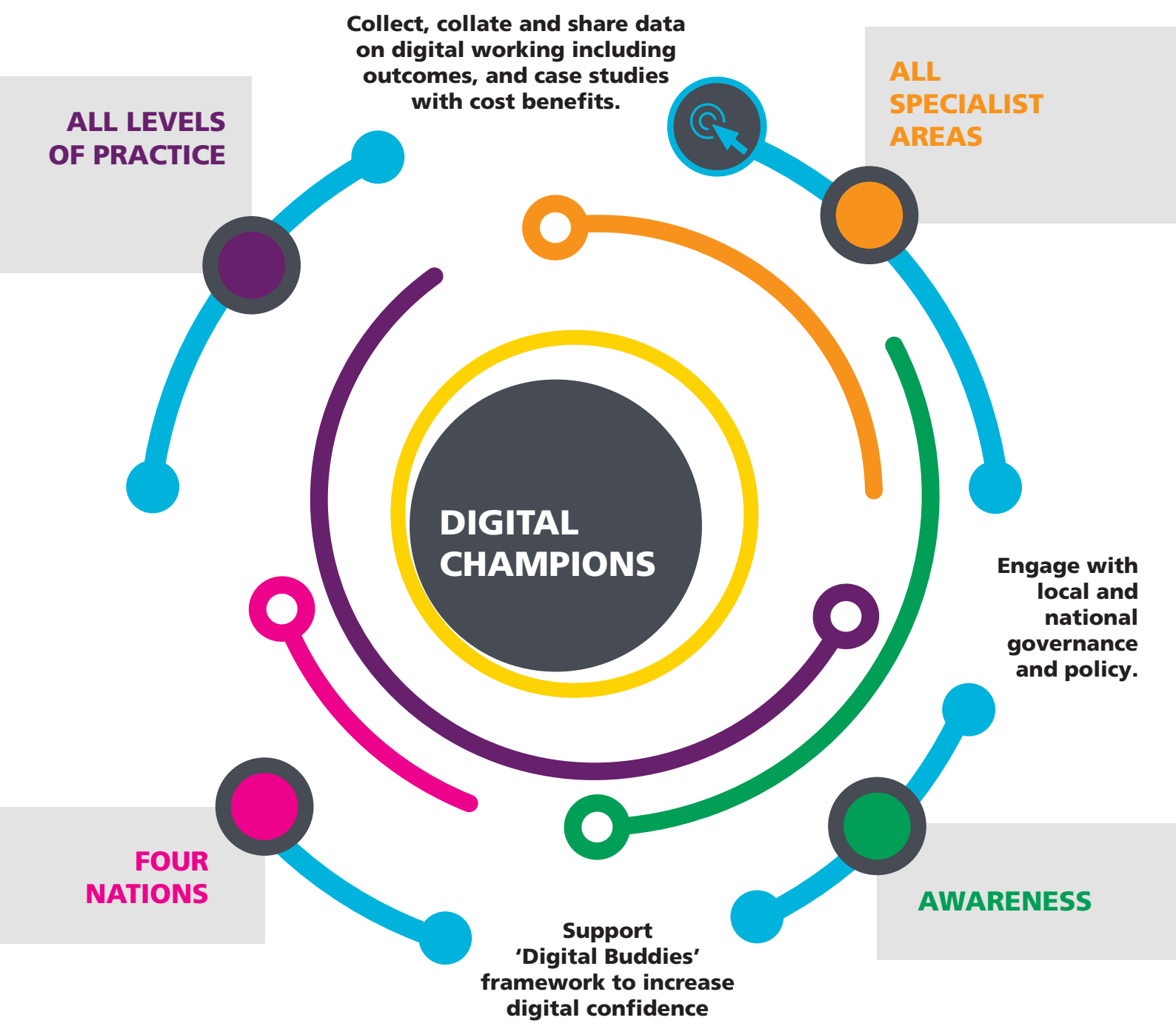
There are a range of training and education opportunities available to increase digital literacy and support the dietetic workforce in all four pillars of practice. The BDA has been working with the Chartered Society of Physiotherapy, Keele University and other AHP professional bodies to develop a learning resource for all AHPs[34a]. This resource is designed to introduce AHPs to digital working and demonstrate how it can support AHP work.

It is also recognised that the dietetic workforce plays a pivotal role in supporting the people that access their services in using digital tools effectively. For many dietetic roles particularly within healthcare, having an awareness of the social determinants of health and the impact this can have on accessing digital care is essential. Digital poverty, and lack of access to training on using digital tools requires the profession to provide appropriate interventions or alternatives where indicated. It is clear from our survey (further details below) that there are a wide range of apps being used within nutrition and dietetics, and that there is a high degree of confidence in using new digital technology. The Topol Review states that 90% of patients access the internet regularly but <25% are registered with online GP services [5]; the nutrition and dietetic workforce is ideally placed to promote accessibility and equity in accessing digital tools for healthcare users.

The vision also promotes the incorporation of 'digital upskilling' into supervision and personal development plans (or in the creation of annual objectives), to enable continued learning, competency and confidence with digital tools. Ensuring every member of the dietetic workforce has digital aspects highlighted in their career development plans promotes workforce digital literacy and encourages digital maturity. Digital development may also be included in team or departmental objectives.

The vision encourages the creation of 'Digital Buddies' in collaboration with Higher Education Institues. 'Digital Buddies' is a suggested framework where those with a greater digital knowledge and ability are paired with those that express less confidence in this area. This aims to increase digital confidence effectively within the workforce. This also creates opportunities to strengthen mentoring and teaching skills and opportunities. Roundtable discussions explored the idea that this reciprocal voluntary framework may be best used within practice-based learning (PBL) placements or equivalent. It focuses on any aspect of digital learning, from optimising use of digital calendar functions to gaining an understanding of the use of AI in practice.

Figure 2 – A Digital Champion Framework



Digital Champions

This document supports the creation of a network of volunteer 'Digital Champions' (Figure 2). With 24% of responders to our survey being interested in this role, and roundtable discussions noting that these roles already informally exist within teams, this is an initiative with potential.

'Digital Champions' form a network of volunteers within the nutrition and dietetic workforce that are interested in promoting and supporting the use of digital tools in the workplace. Similar to BDA Specialist Groups, the Digital Champions access existing proven frameworks within the BDA to connect, support and develop digital working for the nutrition and dietetic workforce.

However, unlike the BDA Specialist Groups, the Digital Champions span all specialities and all settings. Digital Champions are seen as a pivotal role in collecting and sharing examples of best practice, evidence and case studies in digital working. This contributes to the evidence base for digital working and the profession.

Digital Champions can also support the implementation of digital dietetic records. A Digital Champion would ideally be situated in every department, organisation or local team, connecting the dietetic workforce with digital solutions. This document promotes management level roles to identify members of the workforce who may suit this volunteer role which would be viewed as equal to other such roles e.g. designated fire wardens, first aid representatives or student leads. The Digital Champion also has the potential to facilitate the Digital Buddies framework alongside HEIs. Digital Champions would span all four nations of the UK and feed in to all aspects of digital working, including local and national governance and policy. Digital champions are already recognised in Northern Ireland's Health and Social Care [35].

This document encourages the nutrition and dietetic workforce to consider digital leadership roles e.g. Chief Information Officers (CIOs). The BDA recognises the unique skills and experiences of the nutrition and dietetic workforce as clinical professionals, which would provide a valuable contribution to shaping digital transformation within healthcare, and to further promote dietetics as a profession.

This document supports the continued unique connections between HEIs and dietetic workplaces. This promotes research, development and implementation of digital tools and encourages integration of these into teaching, practice based learning (PBL), apprenticeships and preceptorships, enabling the future of the nutrition and dietetic workforce to be digitally ready.

Appropriate representation and advocacy for the nutrition and dietetic workforce in all aspects of digital working is supported by this document. This includes, but is not limited to:

- Attend, report on, and be an active member in digital conferences
- Liaise with NHS England, NHS Scotland, NHS Wales, Northern Ireland Health and Social Care and other medical, nursing and midwifery and other AHP bodies
- Ensuring a presence and active involvement in national drivers for digital tools and working e.g. NICE, Government All Party Parliamentary Groups (APPG), and other specialist groups and organisations
- Liaising with all settings of the nutrition and dietetic workforce
- Liaising with the continuum of the career pathway, from HEIs, to managers and advanced practitioners

"Sometimes getting a seat at the table is the first step; then we need to make sure we use our voice and that we are heard so that we can promote the profession" *Comment from a BDA digital rountable discussion*

The vision supports the inclusion of the explicit expectation of digital literacy in personal specifications and job descriptions, and to provide specific training, education and support where required. This should ideally extend beyond HCPC requirements, to be specific to the individual's role in order to elevate the nutrition and dietetic workforce, supporting a digitally mature workforce.

By collaborating with the nutrition and dietetic workforce on this vision, it is clear that many are already harnessing the power of digital tools in unique and exciting ways. The vision encourages promotion and awareness of these advancements by frequent and consistent digitally focused communication in multiple formats.

This includes, but it is not limited to:

- Maintain and develop digital forums e.g. basecamp
- Written and online articles surrounding digital working
- Webinars focused on digital matters
- Online and face to face meetings e.g. Digital Dietitians study day
- Resources (digital and video) for upskilling the nutrition and dietetic workforce e.g. "How to" videos
- Podcasts discussing the latest topics

Frequent and consistent communication on digital working, will help cultivate a culture of innovation, encourage new ways of working with digital tools, collectively overcome barriers to using digital technologies, and instinctively consider the use of the latest digital advancements for the whole of the nutrition and dietetic workforce.

Summary of recommendations

For the nutrition and dietetic workforce to embrace digital transformation, to enhance practice, optimise outcome data collection, and lead in innovation and research within nutrition and dietetics.

Outcome data and evidence

This document supports developing the evidence base for digital working in the nutrition and dietetic workforce by using standardised language terminology, clarifying key outcome data and working towards seamless digital records. Curating real-life case studies which endeavour to include cost-benefit analysis will be important.

Safety and governance

It supports digital safety and governance within the nutrition and dietetic workforce by encouraging all to use, record and secure data effectively and efficiently and adhere to local policies, procedures and governance in this area. With particular focus on AI, the vision supports the nutrition and dietetic workforce to embrace AI with integrity and steer its use in nutrition and dietetic related matters.

Training, education and awareness

It supports increased access and equity of digital tools, digital literacy and digital maturity by having local and national training embedded in personal development plans in addition to team or departmental objectives to enable continued learning, competency and confidence with digital tools.

It supports the creation of 'Digital Buddies' and 'Digital Champions'. It encourages ongoing conversations between workplaces and HEIs to support continued training and education on the use of digital tools and sharing of experience of digital working in the nutrition and dietetic workforce.

It supports the representation and advocacy for the nutrition and dietetic workforce in all aspects of digital working.

It promotes increasing awareness of advancements in digital working within the nutrition and dietetic workforce by frequent and consistent digitally focused communication in multiple formats.

It is recommended that the 'BDA Digital Vision' is evolving. The survey is designed to be replicable so that the progression of the nutrition and dietetic workforce can continue to be observed and understood.

References

1. NHS England What is digital literacy? https://digital-transformation.hee.nhs.uk/building-a-digital-workforce/digital-literacy/what-is-digital-literacy (accessed March 2024).
2. Digital Poverty Alliance (2022) UK Digital Poverty Evidence Review 2022. https://digitalpovertyalliance.org/wp-content/uploads/2022/06/UK-Digital-Poverty-Evidence-Review-2022-v1.0-compressed.pdf (accessed March 2024).
3. British Dietetic Association (2023) 20,000 Satisfied Members by 2034: BDA Strategic Plan. https://www.bda.uk.com/about-us/strategic-plan/join-us-on-our-journey-to-20-000-satisfied-members/introduction.html (accessed March 2024).
4. NHS (2017) Multiprofessional framework for advanced clinical practice in England. https://www.hee.nhs.uk/sites/default/files/documents/multi-professionalframeworkforadvancedclinicalpracticeinengland.pdf accessed March 2024).
5. Health education England (2019) The Topol Review. https://topol.hee.nhs.uk/ (accessed March 2024). a. Health and Care Professionals Council (2023) Revision to the standards of proficiency. https://www.hcpc-uk.org/standards/standards-of-proficiency/revisions-to-the-standards-of-proficiency/ (accessed May 2024).
6. Health and social care (2022) Digital Strategy Health and Social Care Northern Ireland 2022-2030. https://www.health-ni.gov.uk/sites/default/files/publications/health/doh-hscni-digital-strategy-final.pdf (accessed March 2024).
7. Scottish Government (2021) Digital health and care strategy. https://www.gov.scot/publications/scotlands-digital-health-care-strategy/ (accessed March 2024).
8. Welsh Government (2023) Digital and data strategy for health and social care in Wales. https://www.gov.wales/digital-and-data-strategy-health-and-social-care-wales-html#127703 (accessed March 2024).
9. Department of Health and Social Care (2022) Policy paper: A plan for digital health and social care. https://www.gov.uk/government/publications/a-plan-for-digital-health-and-social-care/a-plan-for-digital-health-and-social-care (accessed March 2024). a. Chartered Society of Physiotherapy (2023) Physiotherapy Health Informatics Strategy. https://www.csp.org.uk/publications/phis-vision (accessed March 2024). b. RCOT Data and Innovation strategy 2021-2023 (2021). https://www.rcot.co.uk/practice-resources/informatics (accessed April 2024).
10. NHS England (2019) A Digital Framework for Allied Health Professionals. https://www.england.nhs.uk/publication/a-digital-framework-for-allied-health-professionals/ (accessed March 2024).
11. NHS (2019) The NHS Long Term Plan. https://www.longtermplan.nhs.uk/publication/nhs-long-term-plan/ (accessed March 2024). a. UK Government (2014) Personalised health and care 2020. https://www.gov.uk/government/publications/personalised-health-and-care-2020 (accessed April 2024).
12. NHS England (2019) A five-year framework for GP contract reform to implement The NHS Long Term Plan. https://www.england.nhs.uk/publication/gp-contract-five-year-framework/ (accessed March 2024).

13. NHS England (2022) The Allied Health Professions (AHPs) Strategy for England: AHPs Deliver. https://www.england.nhs.uk/publication/the-allied-health-professions-ahps-strategy-for-england/ (accessed March 2024).

14. NHS England (2020) Digital competency framework for Allied Health Professionals (AHPs). https://digital-transformation.hee.nhs.uk/building-a-digital-workforce/digital-literacy/digital-capabilities-frameworks#digital1 (accessed March 2024).

15. Lee G, Caton E, Knight A. Evaluating digital competencies for allied health professionals in the United Kingdom. Digital Health, 2023; 9: 1-9

16. NHS Greater Glasgow and Clyde. AHP Digital Health. https://www.nhsggc.scot/staff-recruitment/staff-resources/allied-health-professions-ahps-professionals-section/ahp-digital-health/ (accessed March 2024).

17. NHS (2021) How to produce a green plan: A three-year strategy towards net zero. https://www.england.nhs.uk/greenernhs/wp-content/uploads/sites/51/2021/06/B0507-how-to-produce-a-green-plan-three-year-strategy-towards-net-zero-june-2021.pdf (accessed March 2024).

18. NHS England. NHS Digital Academy https://digital-transformation.hee.nhs.uk/digital-academy (accessed March 2024).

19. NHS Education for Scotland. Digital Health and Care https://learn.nes.nhs.scot/2198/digital-health-and-care (accessed March 2024).

20. NHS Wales. About Digital Learning Wales. https://nwssp.nhs.wales/ourservices/digital-workforce/digital-learning-wales/about-digital-learning-wales/ (accessed March 2024).

21. ORCHA https://www.orcha-digitalhealthacademy.com (accessed March 2024).

22. Digital Health Networks (2023) https://discourse.digitalhealth.net/pub/about (accessed March 2024).

23. The Health Foundation. https://q.health.org.uk/ (accessed March 2024).

24. Digital Health Rewired https://digitalhealthrewired.com (accessed March 2024).

25. Digital Health AI and Data https://digitalhealthaidata.com (accessed March 2024)

26. Digital Health Summer Schools https://digitalhealthsummerschools.com (accessed March 2024)

27. UK Government (2024) Online Safety Act: new criminal offences circular https://www.gov.uk/government/publications/online-safety-act-new-criminal-offences-circular/online-safety-act-new-criminal-offences-circular (accessed March 2024).

28. NHS England (2021) guidance on phishing emails https://digital.nhs.uk/cyber-and-data-security/guidance-and-assurance/guidance-on-phishing-emails (accessed March 2024).

29. NHS England (2024) Cyber Security https://www.england.nhs.uk/long-read/cyber-security/ (accessed March 2024).

30. NHS England (2023) Data Security and Protection Toolkit https://digital.nhs.uk/data-and-information/looking-after-information/data-security-and-information-governance/data-security-and-protection-toolkit (accessed March 2024). a.Health and Care Professionals Council (2023) Digital Skills and New Technologies https://www.hcpc-uk.org/globalassets/standards/standards-of-proficiency/updated-standards-themes/fact-sheets/digital-skills-and-new-technology.pdf (accessed May 2024).

31. National Institute for Health And Care Excellence (2022) Evidence standards framework for digital health technologies https://www.nice.org.uk/corporate/ecd7/resources/evidence-standards-framework-for-digital-health-technologies-pdf-1124017457605 (accessed April 2024)

32. HM Government (2021) National AI Strategy https://assets.publishing.service.gov.uk/media/614db4d1e90e077a2cbdf3c4/National_AI_Strategy_-_PDF_version.pdf (accessed March 2024).

33. K. Vanherle K, Werkman AM, Baete E, Barkmeijer A, Kolm A, Gast C, Ramminger S, Höld E, Kohlenberg-Müller K, Ohlrich-Hahn S, Walters ME, Wewerka-Kreimel S, Adam M, Valentini L. Proposed standard model and consistent terminology for monitoring and outcome evaluation in different dietetic care settings: Results from the EU-sponsored IMPECD project. Clinical Nutrition, 2018; 37:6; 2206-2216

34. EFAD Professional Practice Committee. The Importance of Outcomes Management in Dietetics EFAD Policy paper, 2020. a.NHS England (2024) Introduction to Informatics project completion. https://digital-transformation.hee.nhs.uk/news/introduction-to-informatics-project-completion (accessed March 2024).

35. Skills for Care (2024) Digital Champions https://www.skillsforcare.org.uk/Support-for-leaders-and-managers/Managing-a-service/Digital-technology-and-social-care/Digital-champions.aspx (accessed March 2024).

36. NHS England Our strategy to digitise, connect and transform https://transform.england.nhs.uk/digitise-connect-transform/our-strategy-to-digitise-connect-and-transform/#:~:text=We%20have%20set%20the%20ambition,electronic%20patient%20record%20in%20place (accessed March 2024).

37. Welsh Government (2023) New digital innovations improving safety, cutting waiting times and saving NHS Wales money https://www.gov.wales/new-digital-innovations-improving-safety-cutting-waiting-times-and-saving-nhs-wales-money#:~:text=All%20Health%20Boards%20and%20most,on%20board%20by%20March%202024 (accessed March 2024).

38. Tack C, Holdsworth L, Wilson A, McComiskie E, McCabe P, Wilkinson W, King M. Digital competency: a survey of UK allied health professionals. British Journal of Healthcare Management, 2022; 28:8: 1-15

39. Sau N, Jaggi A, Cairns M. Clinicians' Views On The Uptake Of Technology In Health Care. International Journal of Therapy and Rehabilitation, 2019; 26:6: 11-11

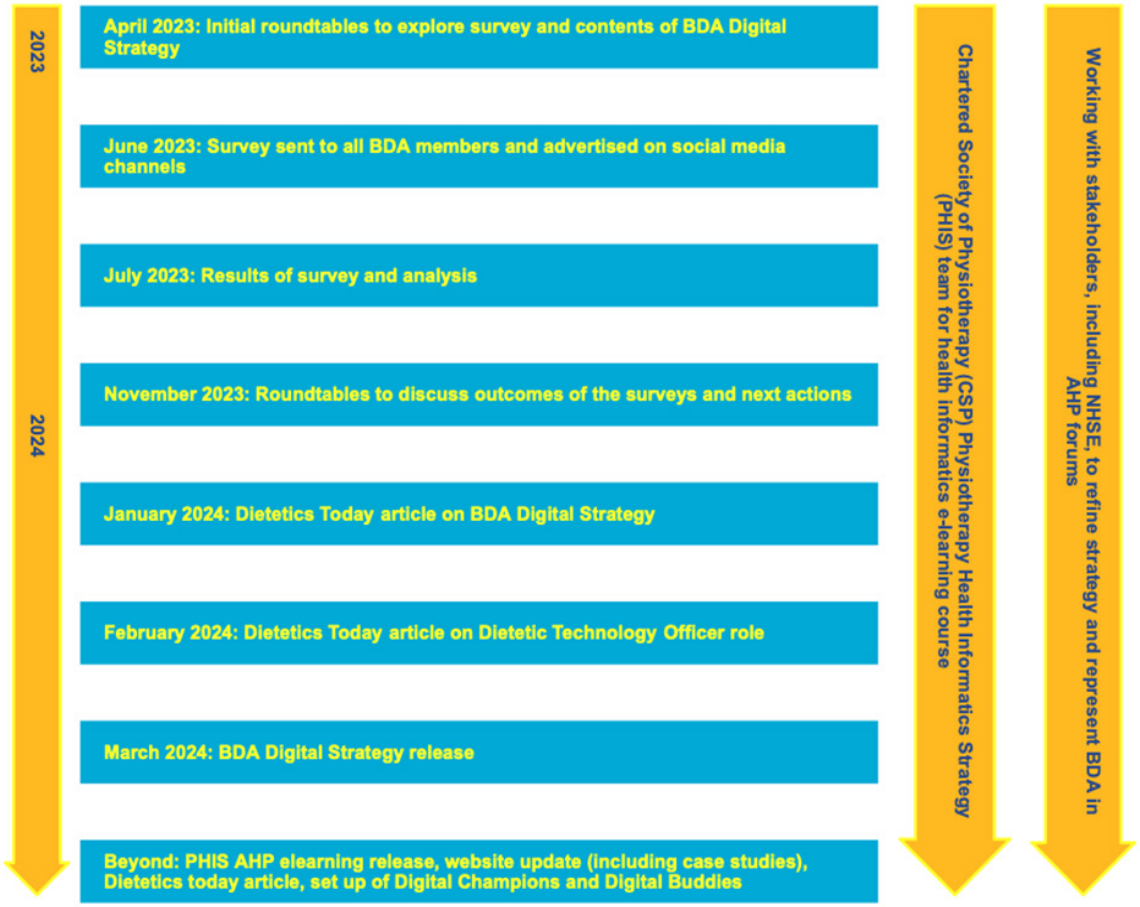
Survey discussion

This survey was created in collaboration with BDA members and the wider dietetic profession to understand the current digital landscape and consider what the future of digital working holds for the dietetic workforce. A collaborative approach was vital in the creation and analysis of the survey, so that the digital vision is representative of the four nations and the diverse workforce. The survey was developed following an online roundtable discussion, where those professionals working in digital roles from all four nations were sent an invitation to contribute.

The results were then collated and discussed at further online roundtables, and by engaging with specific groups to gather and explore common themes (Figure 1 – BDA Digital Strategy timeline).

Every effort was made to ensure that this document was created by the dietetic workforce, for the dietetic workforce in every setting and at every level.

Figure 1 – Timeline*



*Please note this document was initially referred to as a 'strategy', however on review it was collectively felt that 'vision' better represented this content of this document.

Survey results

Demographics

The demographics of 374 responders are shown in Appendix 1, and captures participant responses from a range of settings, specialties, career durations and ages. Due to the low response rates of particular locations, additional efforts were made to achieve input from Scotland, Wales and Northern Ireland, with additional connections made through roundtables and identified individual professionals where possible. We also recognise a low response rate from the support workforce; however, we acknowledge their valuable contribution to the profession, it is recommended that we consider how we may be able to engage better with the whole profession for future surveys. We consider that whilst this document is generally reflective of the current dietetic workforce, future versions should consider how engagement in specific geographical locations, and across the entire workforce can be improved.

The current landscape: digital tools, confidence and apps

Responders were using digital tools such as electronic patient records (EPR), remote consultations and websites/ social media the most (Appendix 1, Q8).

This figure for EPR is in line with NHSE reports of 86% of NHS organisations having some form of EPR [36]. In Wales, it is an aim for all health boards to use EPR in 2024 [37].

Many attempts have been made to promote a paperless-NHS, and many benefits can be seen of using EPR and client management systems outside of the NHS. Roundtable discussions recognised that there are still large organisations using paper notes for patient records, and even where EPR is used, it is not always interoperable with other systems. It was also noted that since the Covid-19 pandemic, using remote consultations had become regular practice for much of the workforce, where possible and appropriate. In the years following the pandemic a hybrid approach had been achieved with varying mixes of face-to-face versus remote consultations. Whilst working in this manner, it is important to be considerate of safe staffing, with further information and support available at bda.uk.com/safestaffing

Responders were using wearable technology, medical technology and AI the least (Appendix 1, Q8). It is noted that AI use is progressing rapidly and that this response may be significantly different if the survey were to be carried out in the near future.

Responders held good confidence in learning and using new digital tools/ skills (73% confidence), with a potential decreasing trend in relation to age and duration of career (Appendix 1, Q9). No other trends were seen in relation to confidence and profession, work setting or specialism.

Discussion of these results at roundtable meetings resonated with a decreasing trend of confidence in using new technology and age/ duration of career, acknowledging a potential generational divide. Whilst this trend may be observed, it is not absolute, and it is important to support all members of the workforce in having confidence in using new digital tools and developing skills. The confidence value in the Digital Vision survey is similar to mean scores of confidence and motivation held by AHPs to use digital technologies in the workplace [38]. The relationship between confidence and other factors may be clearer and stronger with a higher response rate, especially with regards to age as the extremities had the lowest response rates.

There are a number of apps used by responders. In order to understand this further, apps were divided into apps for professional use and apps used with service users/ customers. The aim was to understand which apps are being used and by who. The term 'service users/ customers' to identify non-professional users of apps was felt appropriate following the survey and roundtable discussions. This recognised that the majority of people in the workforce have an end user for their professional work, however this end user varies considerably e.g. service users, students, the dietetic workforce, other healthcare professionals, non-medical professionals, products in industry, customers etc.

Commonly used apps utilised by responders with service users/ customers (listed in descending order of use) were Microsoft Teams, Carbs & Cals, FreeStyle LibreLink, NHS Attend Anywhere, and MyFitnessPal (Appendix 1, Q10). The most commonly utilised apps by professionals (listed in descending order of use) were Microsoft Teams, Nutricia for Professionals, Twitter, Carb & Cals, and Zoom (Appendix1, Q11).

There appears to be a clear theme associated with tools used for communication; and likewise with apps used professionally (WhatsApp, email platforms and social media) with additional comments focusing on accessing various social media platforms for professional networks, and the importance of being able to vary between different communication platforms.

The survey demonstrated a crossover between apps used by professionals and those used by service users/ customers. The survey suggests that apps used by professionals with service users/ customers focus on capturing, sharing and analysing data. Speciality-specific apps are highlighted as the most frequently used, and this likely reflects the majority of responders working in nutrition support and in diabetes. Further value may be found in identifying and sharing speciality specific apps.

When recommending apps to service users/ customers, it was important to understand why particular apps were being chosen, and how they were being shared with service users/ customers. When deciding which apps to recommend, responders sought colleague or professional recommendation (e.g. NHS app library, ORCHA approved apps, or apps recommended under local governance), or own experience/ research (Appendix 1, Q12). When ensuring that service users/ customers accessed the correct app, responders did so by signposting to a website/ app store, by emailing/ texting a link to the app, or by writing down the name of the app (Appendix 1, Q13).

Using shortened links, QR codes and downloading with the service user/customer were used least. There may be scope here for awareness on using QR codes and shortened links to ensure the correct apps are accessed by guiding people more accurately, as governance is required. It is also noted in the comments of the survey that some respondents did not recommend apps to service user/customer even though they were in a service user/ customer-facing role.

Of responders, 49% indicated that more than 60% of their work-time involved digital working. The remainder of the responders indicated that their work-time involves digital working but to less of a degree. It is clear that for the workforce, digital working, in whichever form, is usually required for the majority of their role. It therefore supports the need to embrace digital transformation (Appendix 1, Q14).

The current landscape: professional and customer experience

The survey also looked at the impact of digital working on both the perceived service user/ customer experience and professional experience.

The most positive impacts of using digital tools experienced by responders were:
a) collecting, storing and sharing data more easily,
b) greater productivity and efficiency and
c) greater access to information
(Appendix 1, Q15).

A theme around positive experiences of data and increasing efficiency is clear here.

The main drawbacks of utilising digital tools experienced by responders were:
a) reduced ability to build rapport with service user/ customer,
b) professional isolation, and
c) potential safety issues resulting from service user/ customer mis-interpretation of information
(Appendix 1, Q16).

These results seem to allude to the human element of using digital tools, and that as a profession, many roles require a human focus e.g. psychosocial impacts of nutrition and community to support roles, which is not always fully achieved through digital working. This links with comments seen previously on social media apps being used by professionals to access professional networks.

The most common benefits responders observed service users/ customers experiencing when utilising digital tools were:
a) less travel/ reduced carbon footprint,
b) Greater service user/ customer flexibility for choice around face-to-face interaction, and
c) less time in waiting rooms
(Appendix 1, Q17).

The main theme identified appears to be increased efficiency when accessing dietetic services.

The most common drawbacks responders observed service users/ customers experiencing when utilising digital tools were:
a) Service user/customer unable to access digital technologies,
b) Difficulty navigating digital solutions, and
c) Unfamiliar communication methods
(Appendix 1, Q18).

Digital poverty has been recognised as an essential consideration, which was discussed several times at roundtable discussion. Digital poverty, lower levels of digital literacy and/or confidence in using digital tools is commonly reported, and can also be seen amongst healthcare professionals, however this appears to be less of a concern.

The common barriers for responders to digital working included:
a) Time available to research/ implement digital solutions
b) Lack of understanding in potential of digital solutions, and
c) lack of finance
(Appendix 1, Q19).

The future of digital working

Considering the digital future of dietetics, responders consider that this consists mostly of
a) a unified digital record
b) improved data management and storage, and
c) ability to record outcome data
(Appendix 1, Q20).

Responders to the digital dietetic record template also identified the importance of a unified digital record and the ability to record outcome data, demonstrating that these topics are considered highly important by the profession and require a specific focus in the short-term future.

This is in line with the BDA's projects in moving towards the greater use of standardised language terminology and collecting and evaluating outcome data.

In terms of promoting digital tools in the workplace, responders consider the most support needed as:
a) Having evidence of successful digital working including cost-benefit
b) training, and
c) finances
(Appendix 1, Q21).

Responders consider the most common challenges to utilising digital solutions in the next 5-years as:
a) the changing landscape of the NHS
b) infrastructure, and
c) finances
(Appendix 1, Q22).

The term 'changing landscape of the NHS' is a broad statement, and whilst specific to the NHS it is recognised that as the main provider of healthcare, and as the main employer of dietitians, shifts in the NHS have a domino effect in different areas e.g. industries related to the NHS, HEIs, private health care.

It may also allude to political climate and change in priorities, but warrants further investigation. Research shows that clinicians have positive attitudes towards using technology in practice, and are willing to do so, however infrastructure is a barrier[39]. Solutions to these barriers are offered further in the vision.

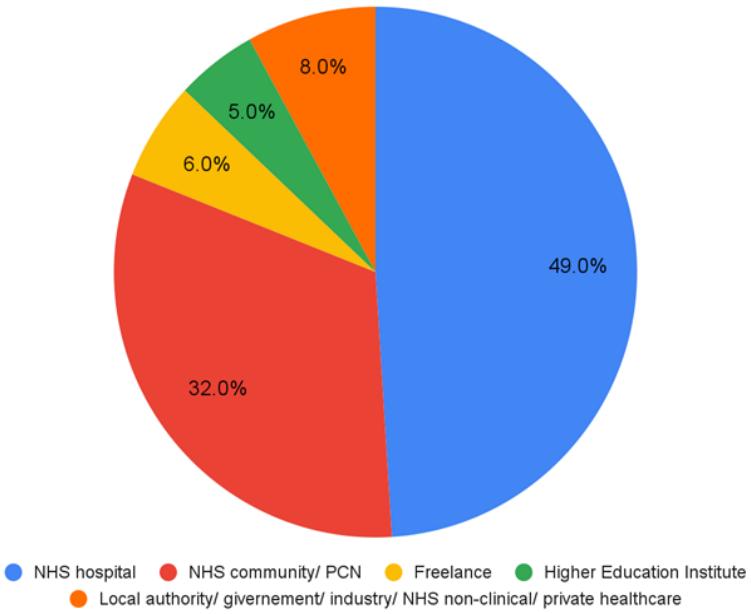
Appendix 1 - BDA Digital Survey results graphics

Q1: The demographics of the 374 survey responders are summarised below

- 96% BDA members
- 93% Registered dietitians

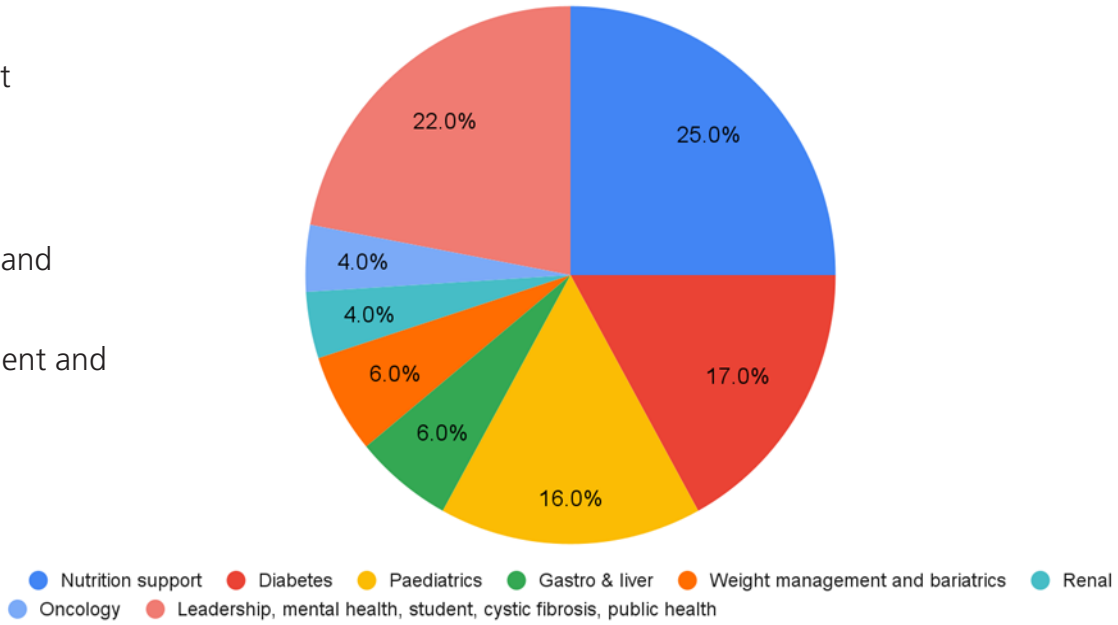
Place of work

- 49% NHS hospital
- 32% NHS community/ PCN
- 6% Freelance
- 5% Higher Education Institute

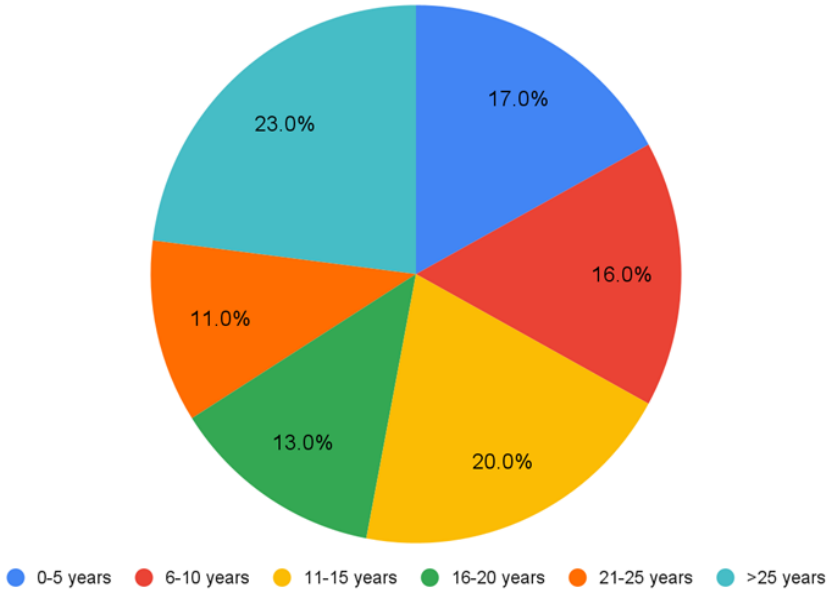


Q2: Speciality

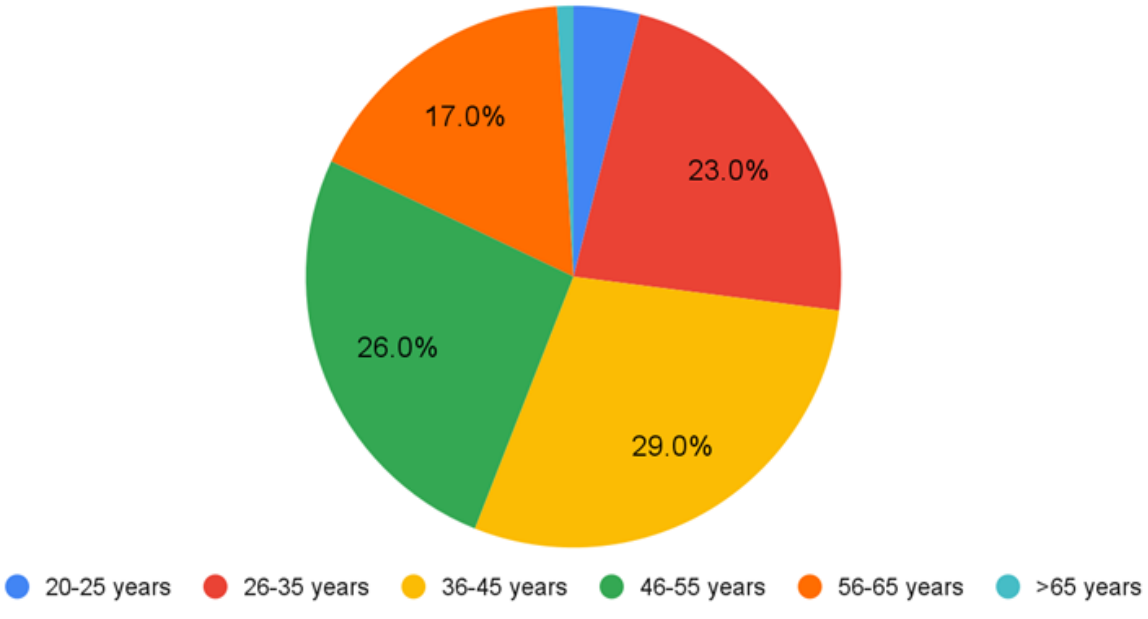
- 25% nutrition support
- 17% diabetes
- 16% paediatrics
- 6% gastroenterology and liver
- 6% weight management and bariatric surgery
- 4% renal
- 4% oncology



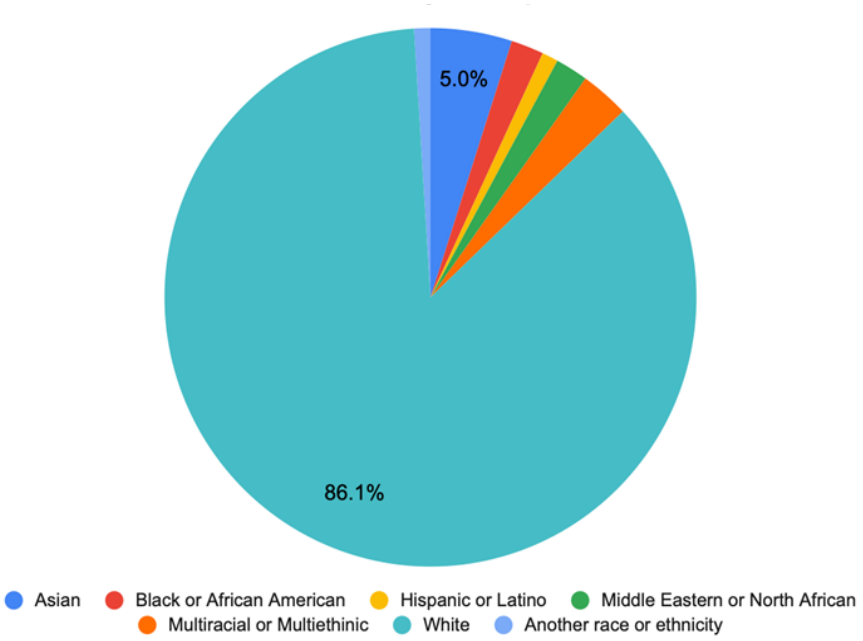
Q3: Duration of career



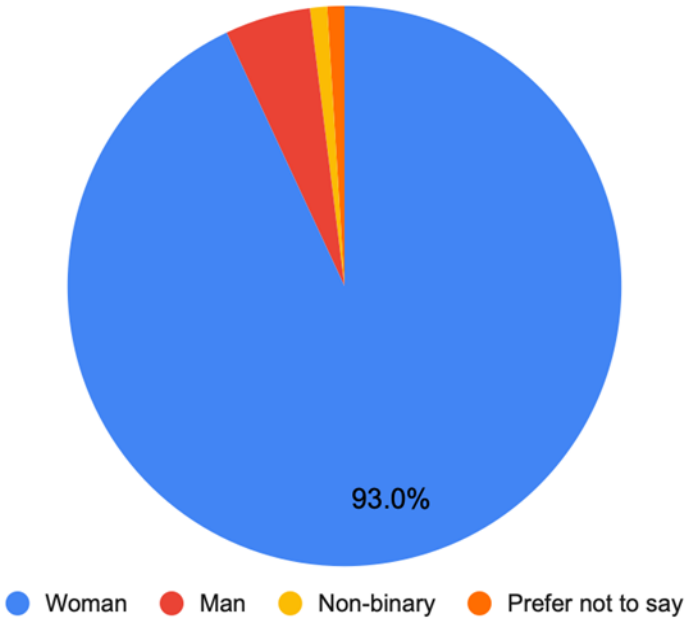
Q4: Age Range



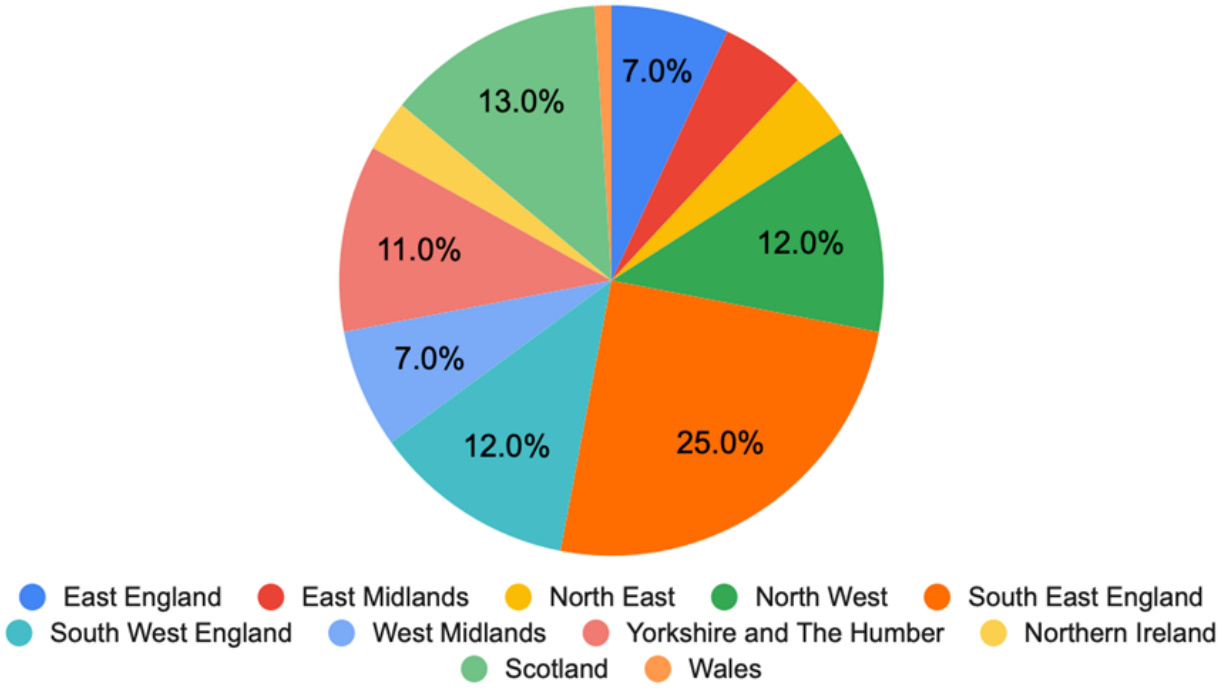
Q5: Race or ethnicity



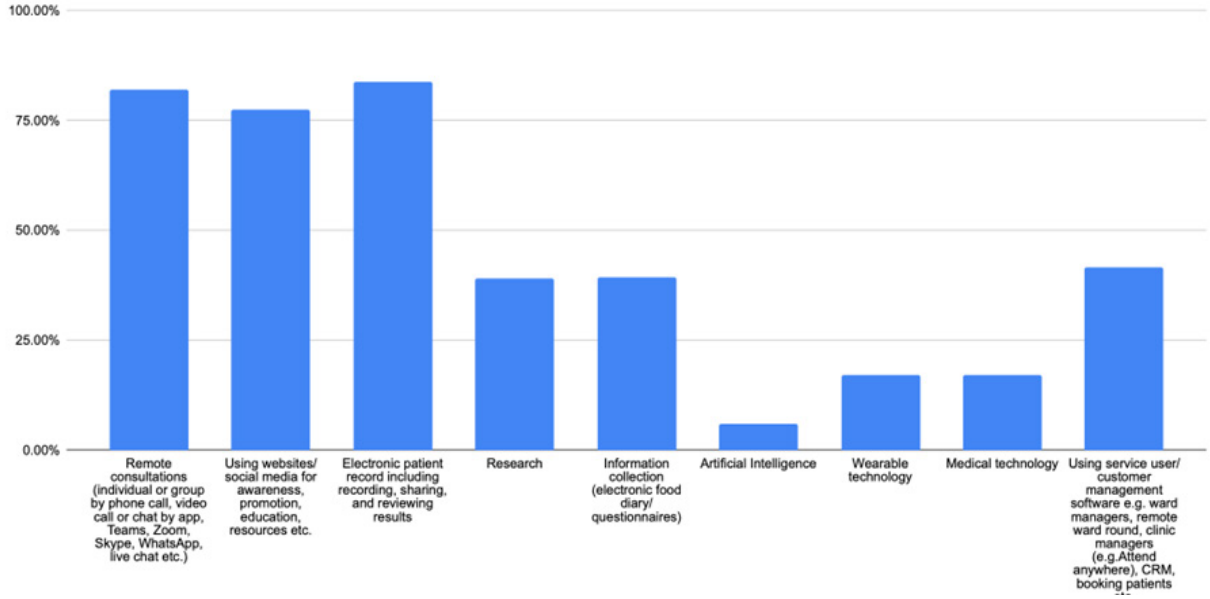
Q6: Gender or sex



Q7: Location of respondents

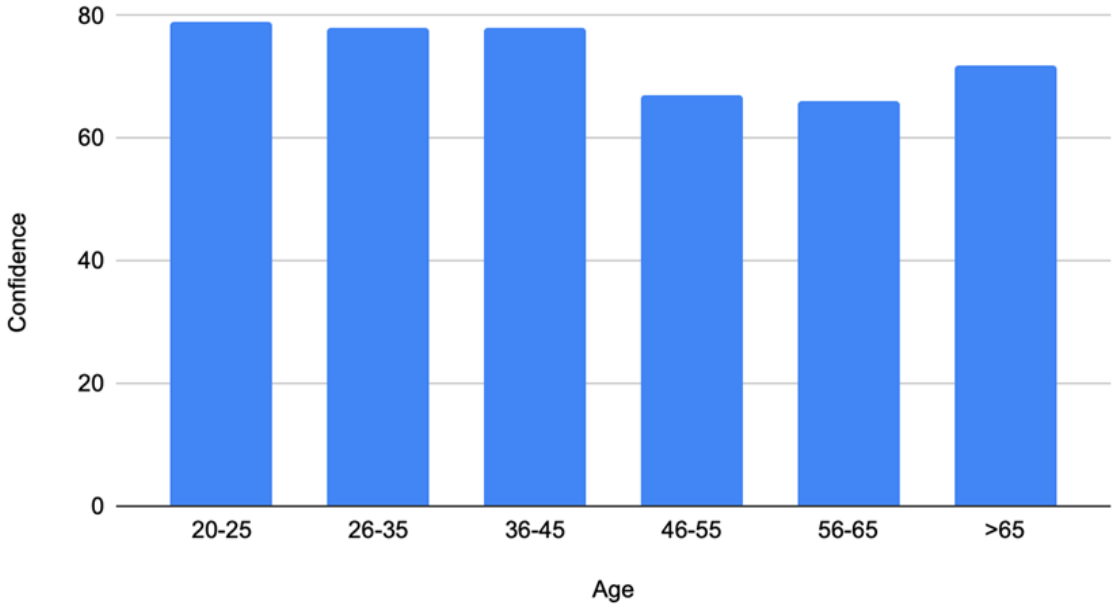


Q8: Digital tools being used by respondents

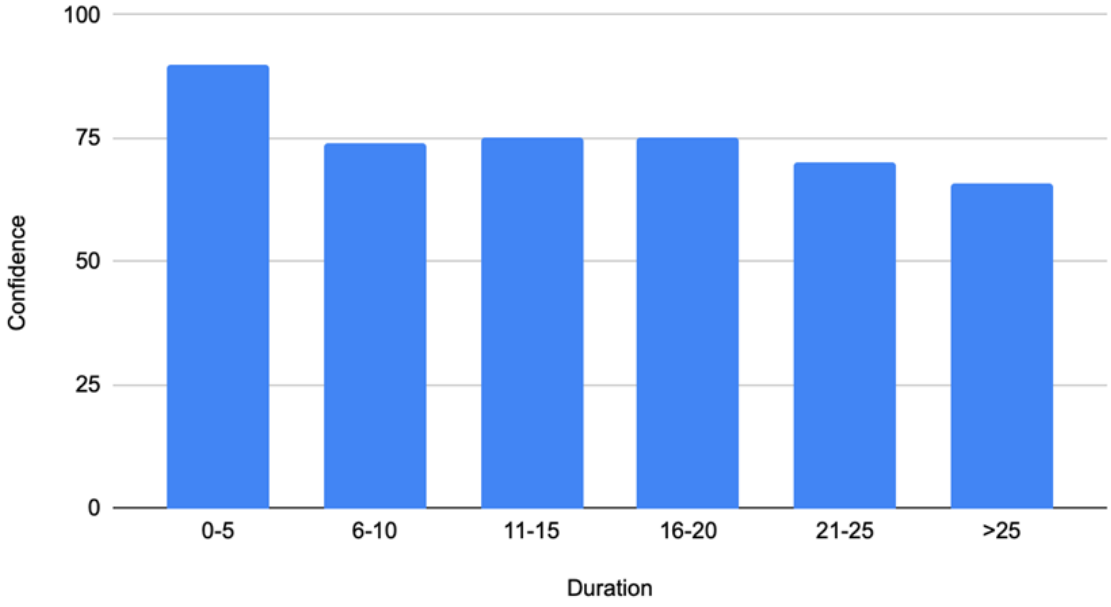


Q9: Responders confidence in learning and using new digital tools/ skills by age and career duration

Confidence vs. age



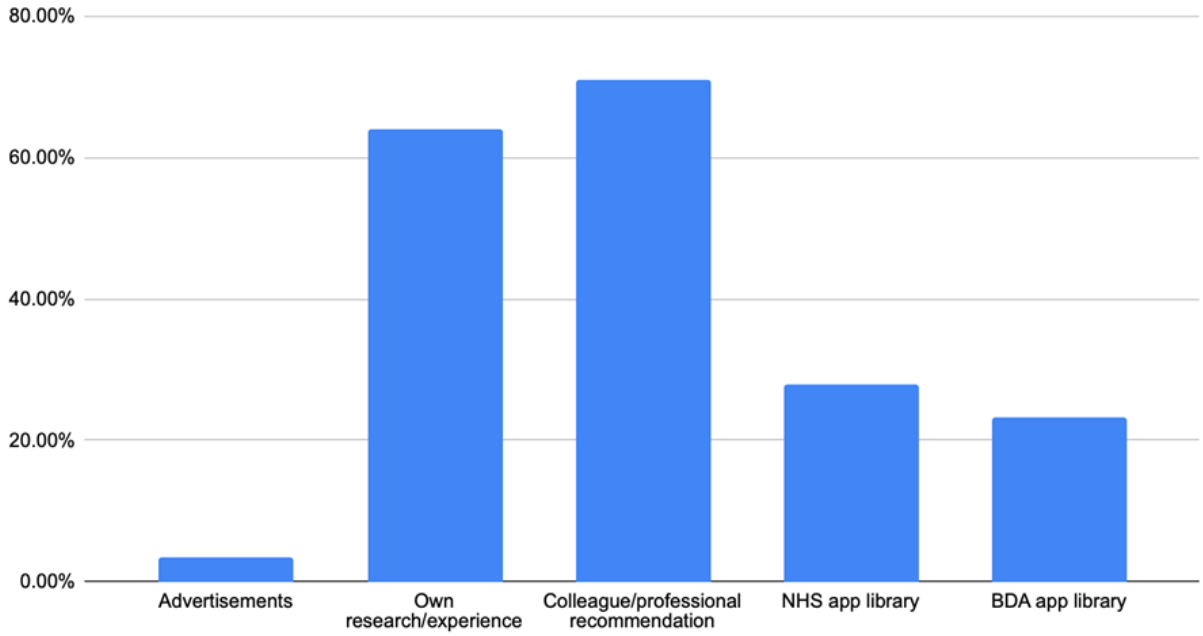
Confidence vs. duration



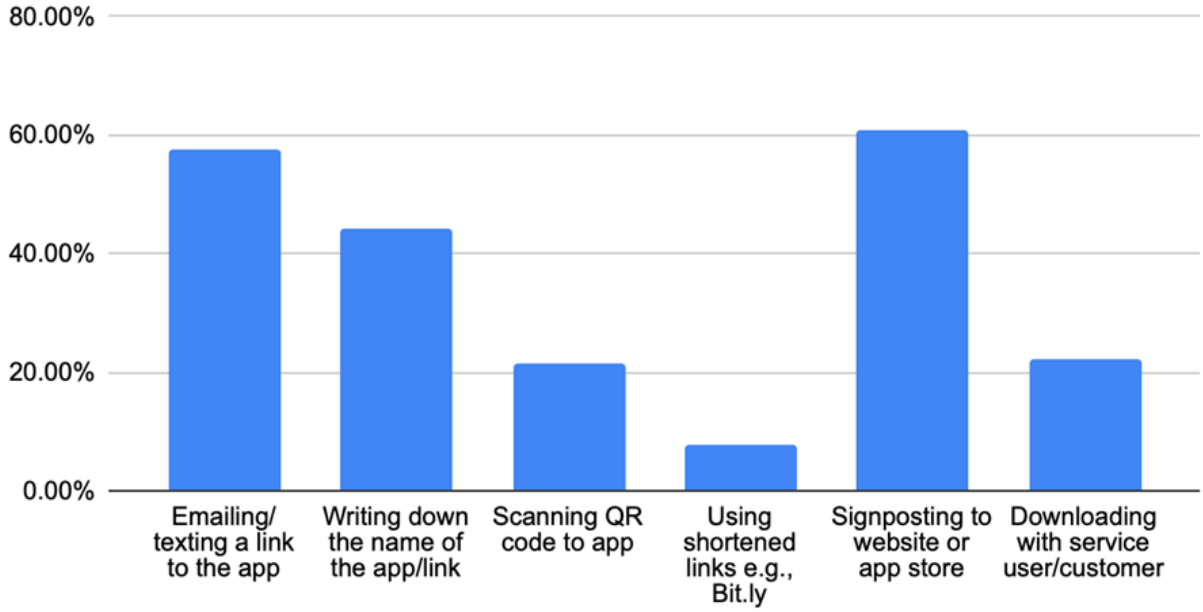
Q10: Word cloud of apps used by respondents

Q11: Wordcloud summary of apps used professionally with other people

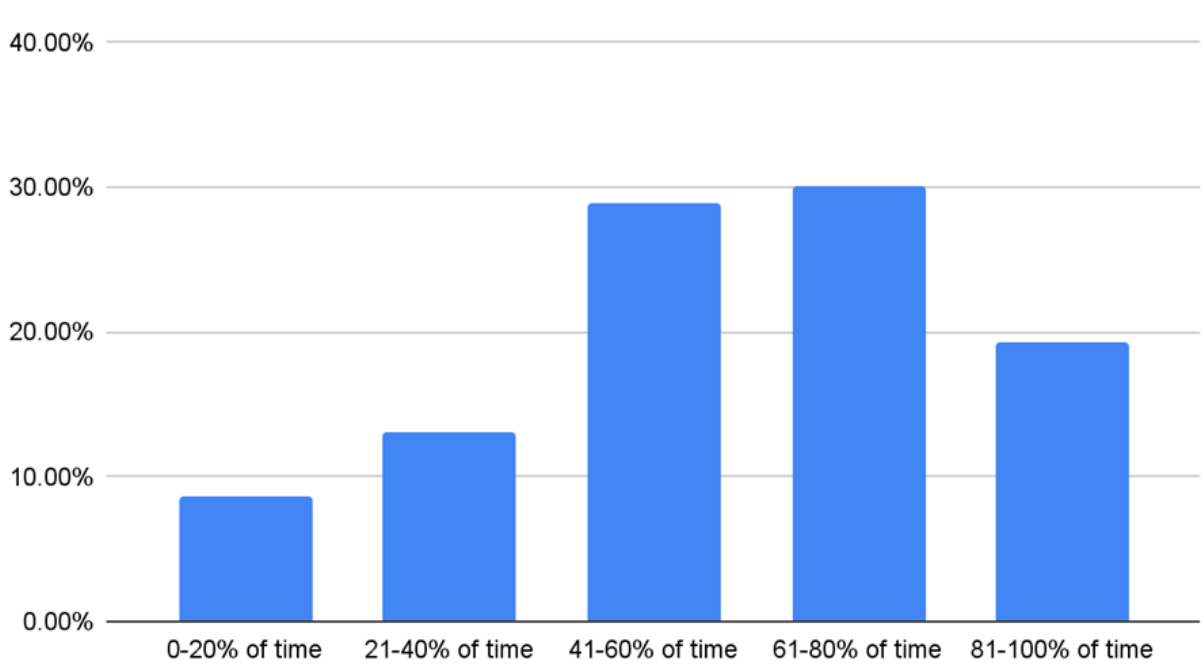
Q12: How responders decide which apps to recommend to other people



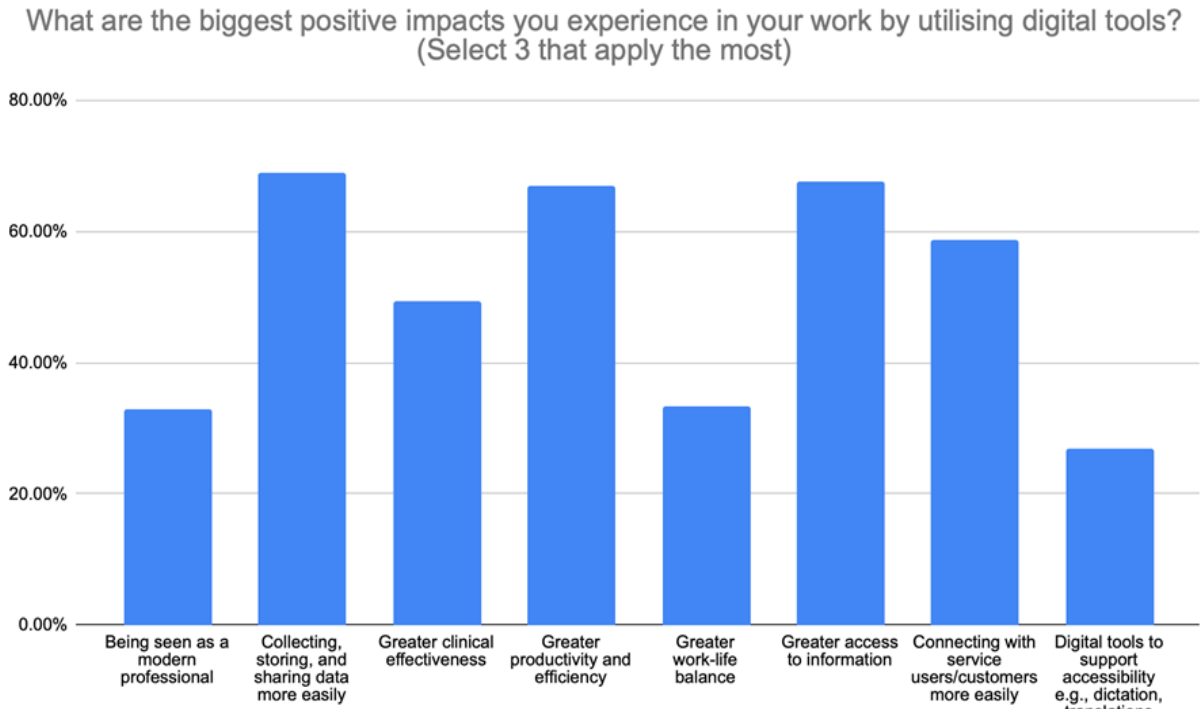
Q13: How responders ensure people are accessing the correct recommended app



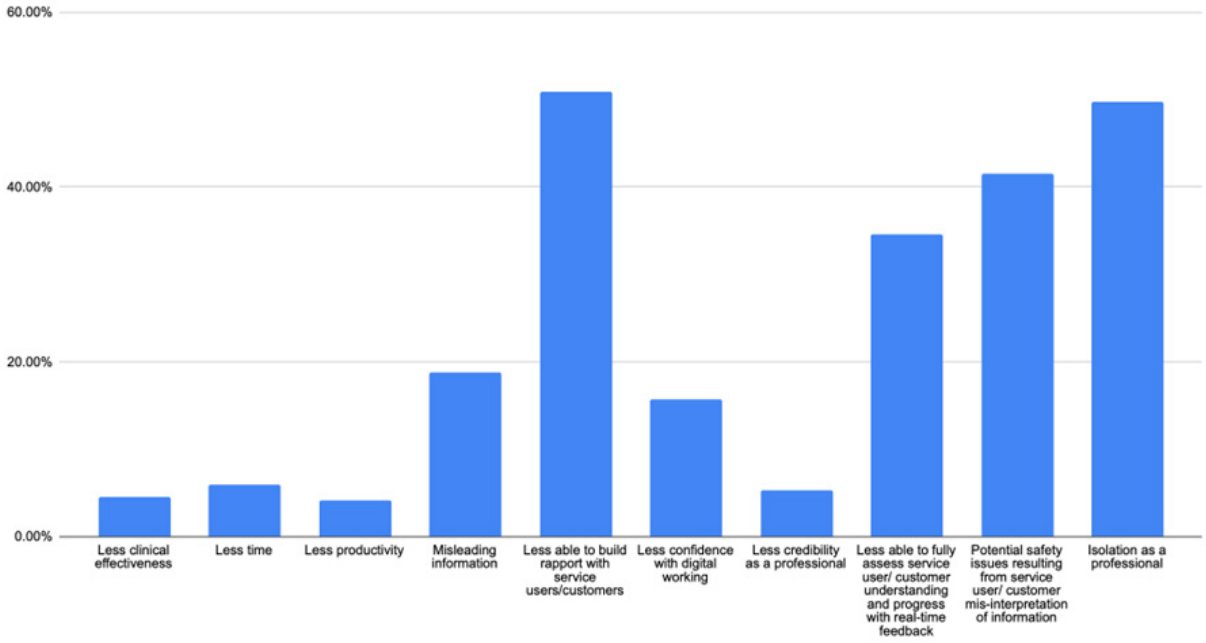
Q14: Percentage of time working digitally



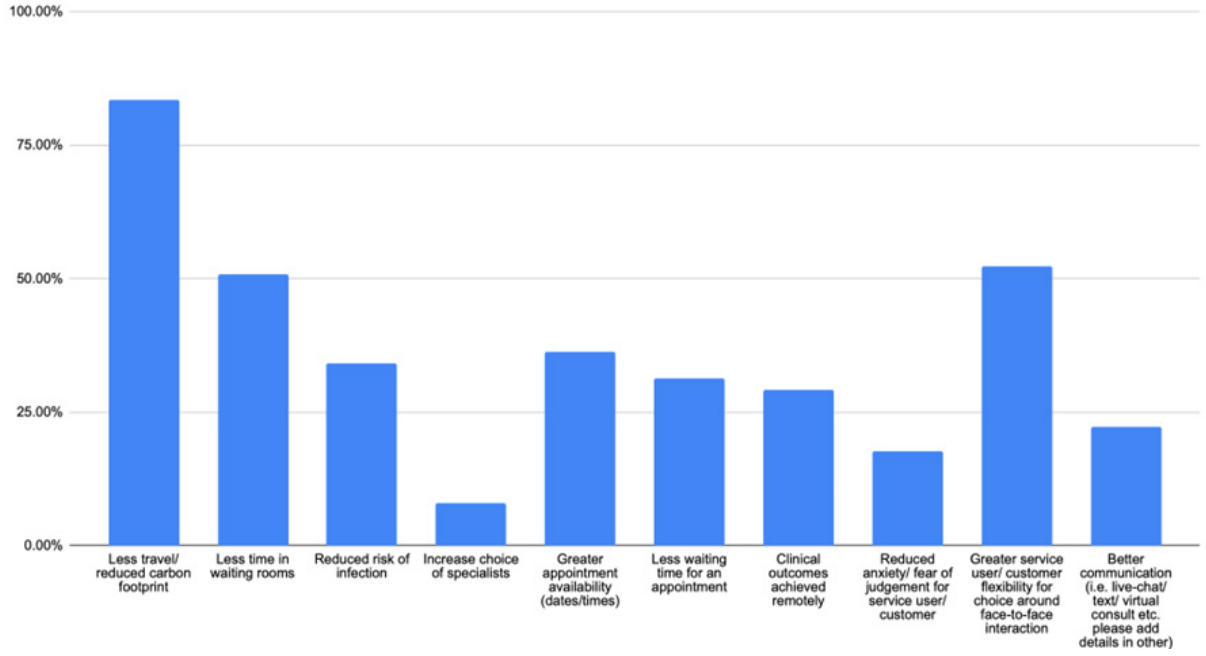
Q15: The biggest positive impacts of utilising digital tools experienced by responders



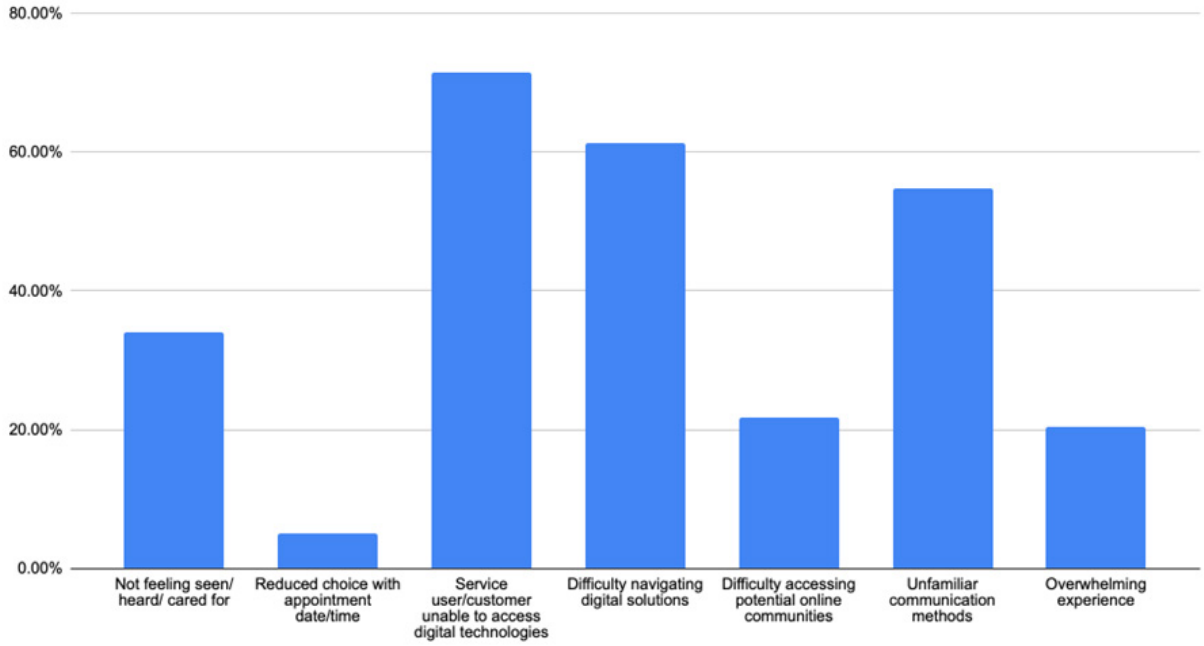
Q16: The biggest drawback of utilising digital tools experienced by responders



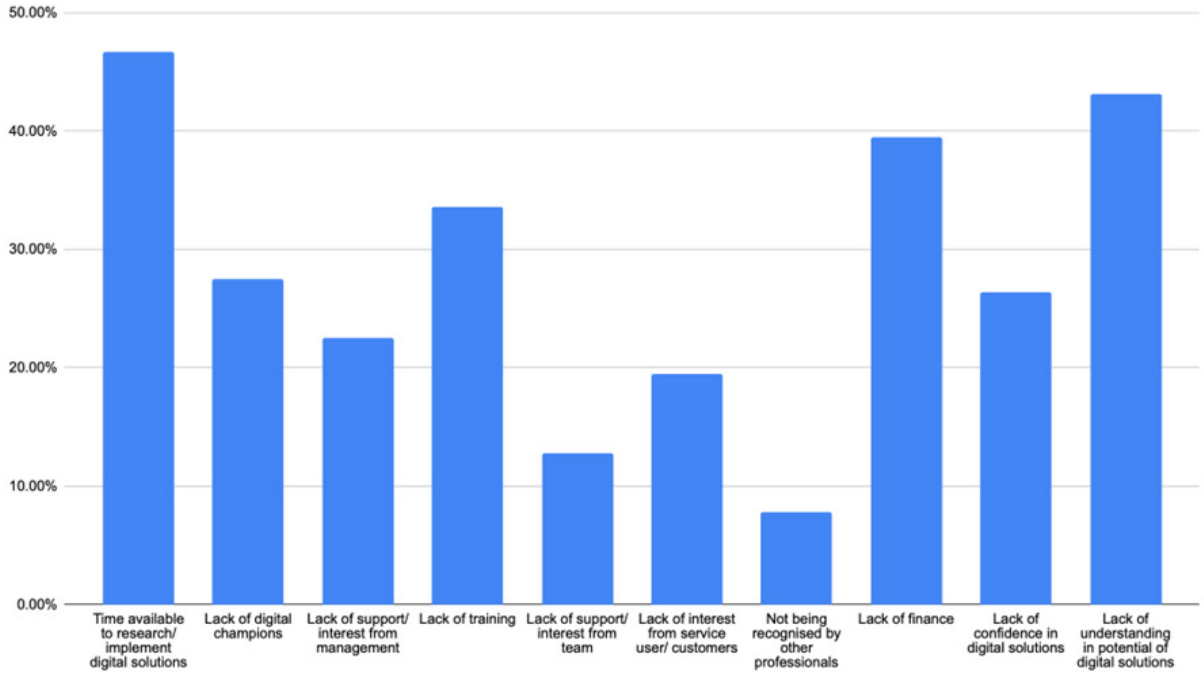
Q17: Benefits of using digital tools for service users/ customers observed by responders



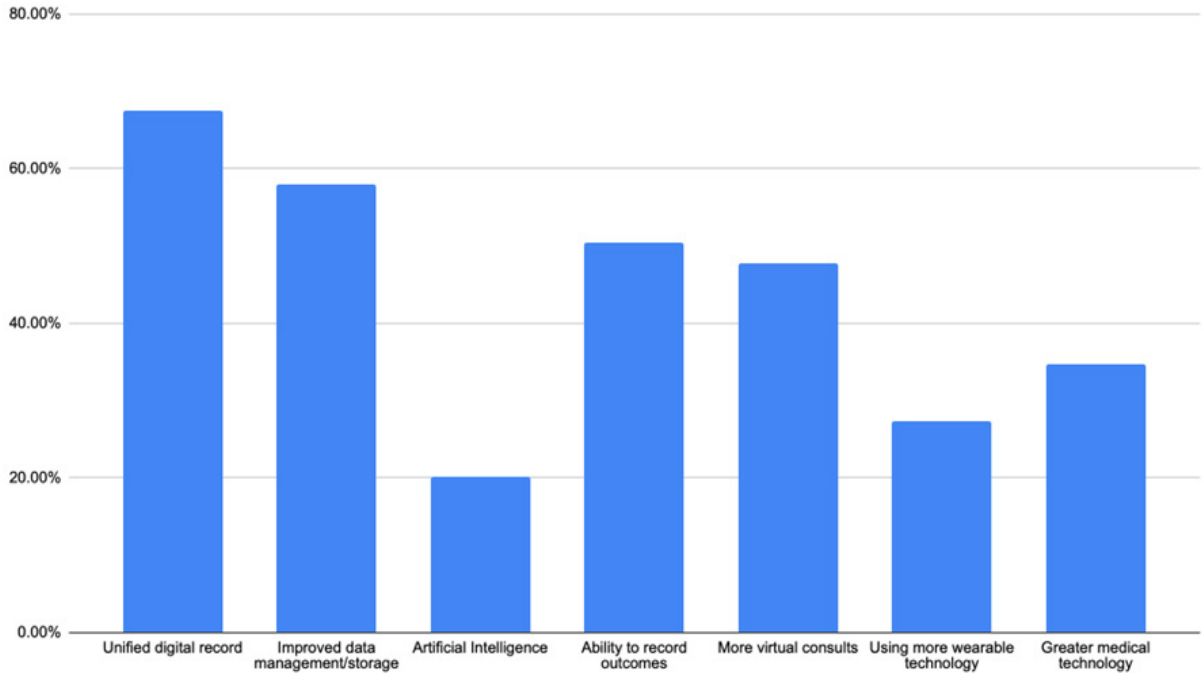
Q18: Drawbacks of using digital tools for service users/ customers observed by responders



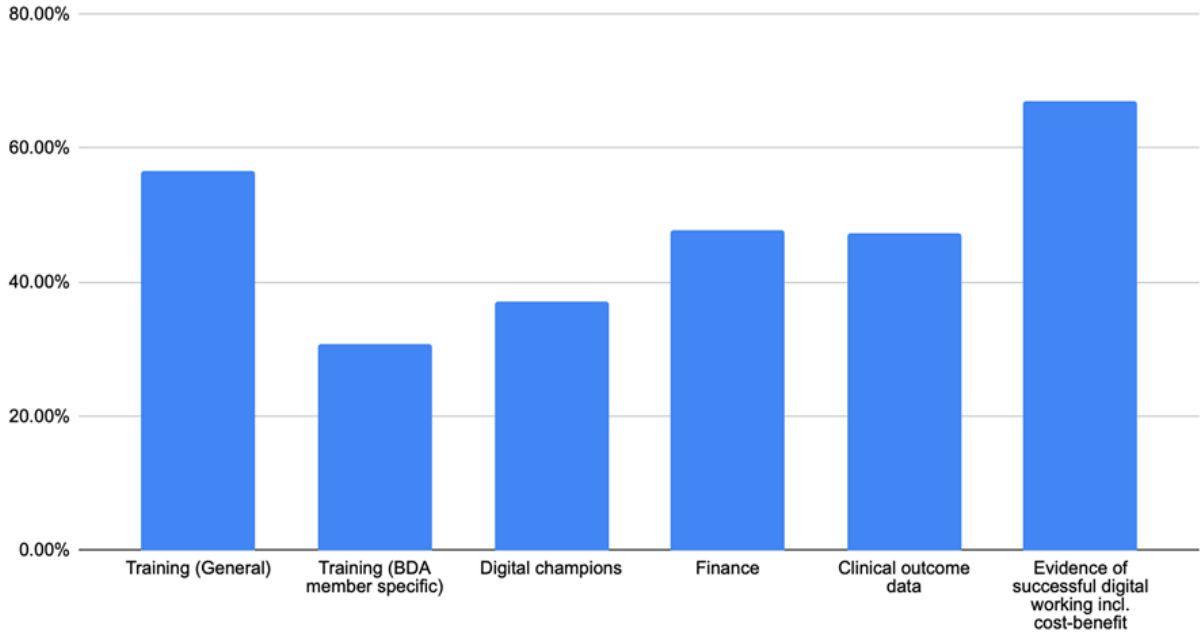
Q19: Responders barriers to digital working



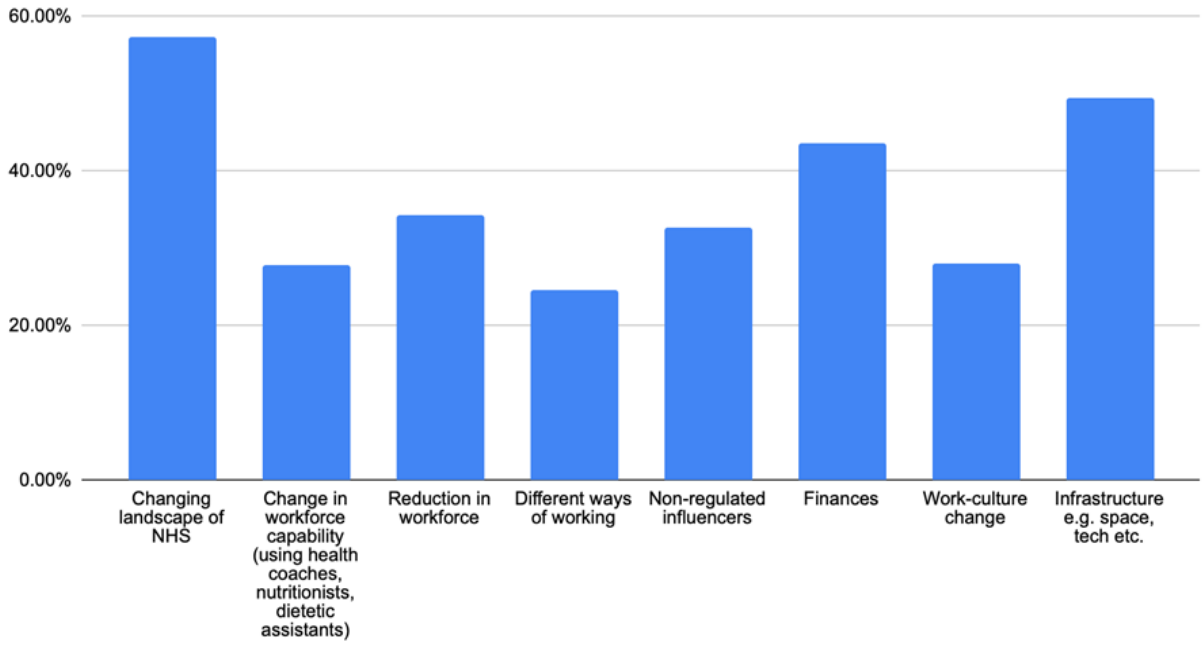
Q20: What responders consider the future of digital nutrition and dietetics looks like



Q21: Support needed to promote/ utilise digital tools in workplace



Q22: What responders consider the main challenges impacting ability to use/ implement digital solutions in the next five years



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0121 200 8080
info@bda.uk.com
bda.uk.com