Care City

Empowering carers:

Developing a training model for effective integration of Remote Monitoring Technologies in Social Care

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CARE PROVIDERS' VOICE
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Executive summary

This report explores the integration of Remote Monitoring Technologies (RMTs) into Social Care, highlighting the importance of developing a comprehensive training programme for care staff to maximise the potential of these technologies. RMTs have proven essential in enhancing patient outcomes, improving care delivery, and reducing the burden on healthcare systems, particularly in the post-COVID landscape. Case studies, such as the Enhanced Homecare Model and the Techforce19 project, demonstrate the transformative role RMTs play in enabling early intervention, supporting care workers, and reducing hospital admissions.

The report highlights the importance of a tailored approach to training, taking into account language barriers, varying levels of digital literacy, and the time constraints faced by unpaid carers.

Despite the successes demonstrated in these case studies, the wider adoption of RMTs in Social Care faces significant barriers. One of the primary challenges is the ongoing reliance on clinical oversight, particularly by GPs, which often results in transactional and reactive care. This dependency can limit the scale of RMT implementation and hinder its integration into standard practice. The report identifies the need to shift from a clinical model to one that empowers care workers by increasing their confidence and technical skills. By equipping care staff with the necessary training and qualifications, the reliance on clinical oversight can be reduced, allowing for more proactive, data-driven care.

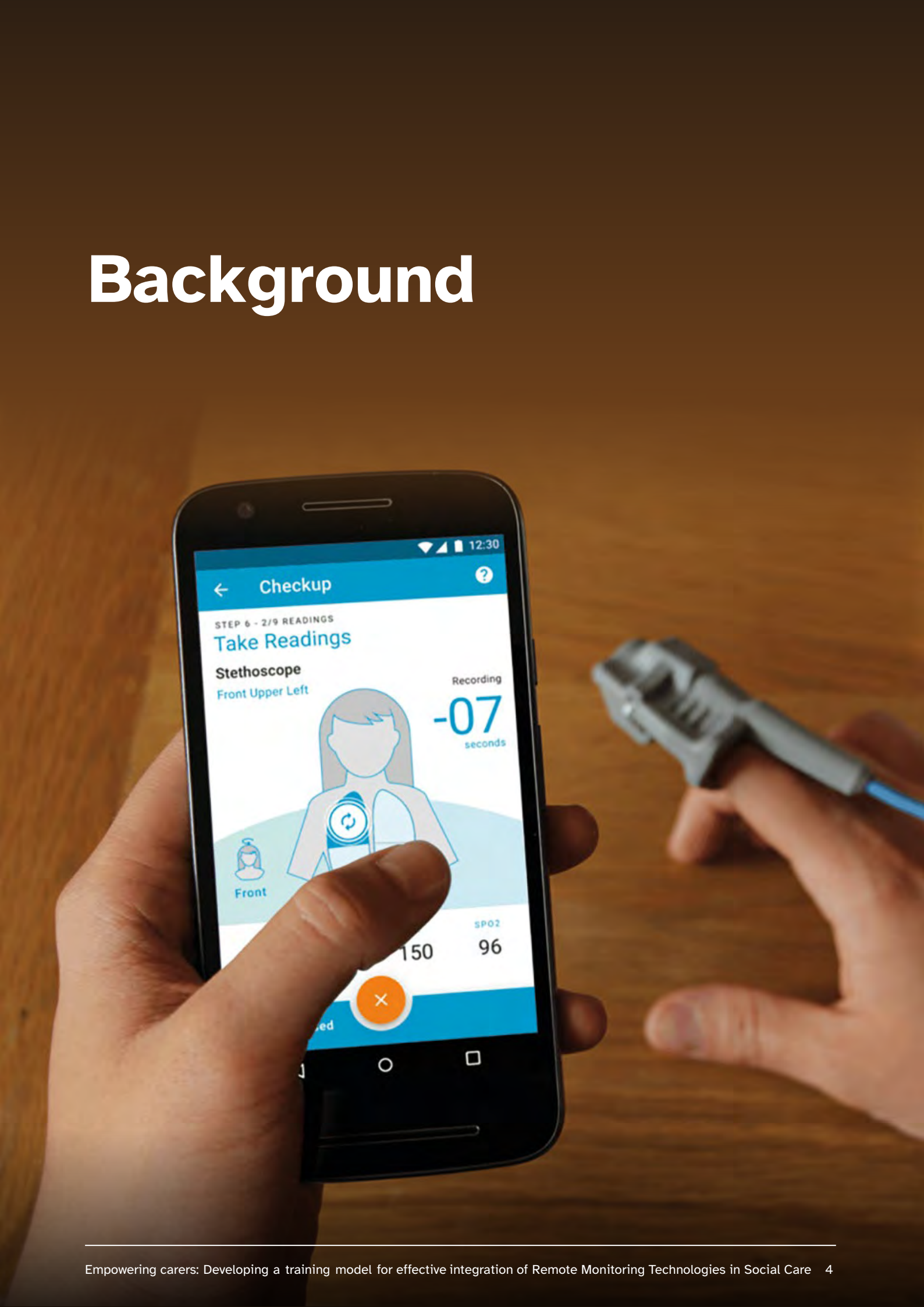
Through in-depth interviews and a co-design session, the project engaged a diverse range of stakeholders, including carers, support workers, GPs, and registered managers. These insights shaped the development of a proposed training model aimed at addressing the challenges faced by care workers and improving their ability to utilise RMTs effectively. Key themes from the research included the need for digital literacy, overcoming technological anxiety, and creating flexible, accessible training formats that cater to both paid and unpaid carers. The proposed model includes specific learning outcomes, such as technical competency, data interpretation, and care coordination, alongside a structure that combines online modules, face-to-face workshops, and ongoing peer support.

The report highlights the importance of a tailored approach to training, taking into account language barriers, varying levels of digital literacy, and the time constraints faced by unpaid carers. A critical recommendation is the need to provide nationally recognised certification, which would validate carers' skills and enhance their confidence in using RMTs. Furthermore, the training should offer ongoing support to ensure that care workers remain competent and confident in using RMTs as technology continues to evolve.

To facilitate the successful implementation of this training programme, the report outlines several key considerations, including flexibility in learning options, adaptation to local contexts, and the role that each stakeholder – such as technology providers, care organisations, and training bodies – can play in the programme's development and delivery. The report concludes with a roadmap for the next steps, including pilot testing, feedback collection, and iterative development to refine the training model and ensure its sustainability and effectiveness.

In conclusion, this report demonstrates that with the right training and support, care workers can fully harness the benefits of RMTs, leading to improved care for individuals, greater empowerment of carers, and a more efficient and integrated Health and Social Care system. The proposed training programme is a crucial step in overcoming the barriers to RMT adoption and ensuring that Social Care staff are equipped to deliver high-quality, data-driven care in the future.

Background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Background

The current landscape

The integration of digital technology into healthcare has revolutionised how we deliver and receive services, empowering patients to become more engaged in their care. Remote monitoring, the use of digital tools to track patients' health data from a distance, plays a pivotal role in this transformation. The COVID-19 pandemic accelerated the adoption of digital solutions across the care sector, with many care providers swiftly implementing RMTs to maintain service delivery amidst strict infection control measures.

The value of remote monitoring post-COVID in Social Care

The pandemic underscored the value of RMTs in Social Care, demonstrating its ability to support continuous monitoring and early intervention for individuals receiving care at home or in care facilities. RMTs enable care recipients to collect and share health data, such as blood pressure and heart rate, using digital tools from the comfort of their own homes. This data is then transmitted to care professionals through automated digital dashboards, allowing for timely and informed decisions about care and support.

It is essential to distinguish between the use of RMTs within the community from the concept of virtual wards. Virtual wards provide a hospital-at-home service, where patients receive acute care and treatment remotely under the supervision of hospital staff, essentially replicating the level of care provided in a physical hospital ward. In contrast, RMTs within the community focuses on routine preventative health monitoring and managing chronic conditions, empowering care providers to deliver timely and effective care while allowing patients to maintain their independence.

The COVID-19 pandemic accelerated the adoption of digital solutions across the care sector, with many care providers swiftly implementing RMTs to maintain service delivery amidst strict infection control measures.

Case studies: Impact of Remote Monitoring Technologies in Social Care

The following case studies illustrate the impact of RMTs in Social Care:

Enhanced Homecare Model

The Enhanced Homecare Model is a forward-thinking approach designed to improve patient care in domiciliary settings by equipping care workers with the tools and knowledge needed to identify early signs of deterioration and ensure timely medical intervention. By combining RMTs with targeted training, the model enhances care workers' ability to make informed decisions, improving patient outcomes and reducing the need for emergency interventions.

This model has two key components:

1. **Remote Monitoring Technology**

   At its core, the model utilises the **Whzan Blue Box**, a health and activity monitoring tool that tracks vital signs including respiratory rate, oxygen saturation and blood pressure. The Blue Box generates a **NEWS2** score, which helps care workers detect early signs of patient deterioration and triggers prompt action through a locally-designed escalation pathway. This pathway ensures that when signs of deterioration are detected, patients are swiftly referred to primary care or other healthcare professionals.

2. **Carer training**

   To complement the use of RMTs, the model includes comprehensive training for care workers using the **RESTORE2** and **Significant Care** frameworks. These frameworks enhance care workers' ability to detect early signs of deterioration that go beyond clinical measurements, such as changes in patient's behaviour, mood, or other non-clinical indicators. By equipping care workers with these skills, the model ensures that they can identify subtle early warning signs of potential health issues before physical symptoms manifest, enabling quicker intervention.

   Supported by **Care City**, two distinct projects currently implement the Enhanced Homecare Model:

   - London Borough of Redbridge: A pilot in one locality with two providers, funded by the North East London Integrated Care Board (ICB).
   - Devon: A broader initiative covering five localities and six providers, funded by the Department of Health and Social Care (DHSC) and the Digital Social Care (DiSC) programme.

While both projects follow the same core model, the key difference lies in the localised escalation pathways. These pathways are developed collaboratively by local stakeholders to ensure that the process for referring patients aligns with the specific needs of each health and care system.

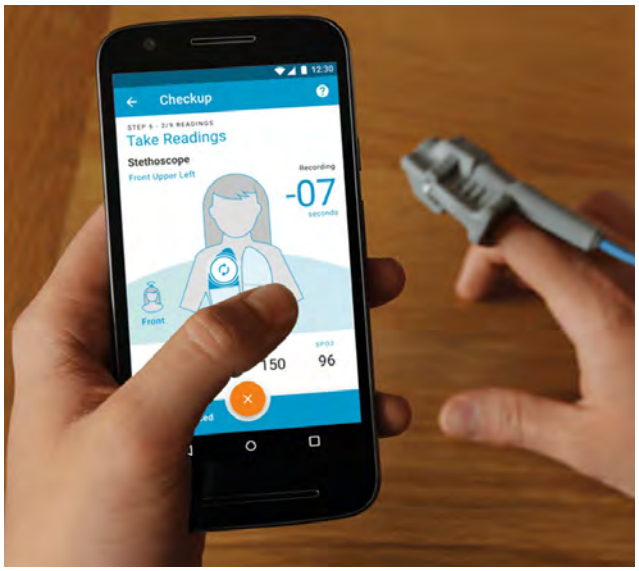
This model represents a significant step forward in addressing challenges in homecare, including communication barriers, lack of clear escalation procedures, and the need for more proactive and preventative care. Its effectiveness has already been demonstrated in **Devon**, where two care workers from Unicare Devon LTD recently used the Blue Box to identify signs of sepsis in a client who had fallen, leading to immediate and lifesaving medical assistance. This example highlights how the model can help address common issues in homecare, including the need for better guidance on when to escalate care, improved communication between teams, and more focus on preventing health problems before they become emergencies.

Techforce19 Project:
Feebris and Care City, an award winning partnership

The collaboration between **Feebris** and **Care City**, supported by the Techforce19 challenge, enhanced the quality of care through innovative health monitoring technology. The **Feebris kit** facilitates a comprehensive 10-minute health check-up, enabling care workers to measure vital signs including respiratory rate, oxygen saturation, temperature, blood pressure, and pulse rate using connected medical-grade sensors.

This technology leverages artificial intelligence to assist care workers in evaluating patients' health needs and aids GPs in conducting remote assessments. By providing real-time insights and decision support, the Feebris kit empowered care workers to deliver timely and effective care, ensuring that health issues are identified and addressed promptly.

Peel Way Care Home's story demonstrates the impact of RMTs on patients and care workers alike. In October 2022, a care worker at Peel Way Care Home, noticed a resident experiencing an unusual tremor in one arm. Conducting a check-up with the Feebris kit, she discovered the resident's blood pressure was alarmingly high, along with other concerning signs. The care home staff promptly called an ambulance, and paramedics accessed the resident's health history through the Feebris app. This included vital signs data from the past year, providing crucial context for emergency services.



The future of RMT in Social Care

The case studies above demonstrate that RMTs can efficiently manage health conditions, reduce hospital admissions, and enhance overall quality of care. This is achieved by empowering care workers to detect early signs of deterioration and perform their duties with greater confidence and effectiveness.

Moreover, the economic benefits and cost savings generated by RMTs are substantial. An **economic impact case study** by the York Health Economics Consortium highlights the use of Feebris, which resulted in a potential benefits value of £518,447 over one year by reducing the use of NHS 111, ambulance, and hospital services in 30 care homes. The study reports an impressive return on investment (ROI) of 5.07, with a total cost of £85,448 for the care homes cohort. This significant ROI underscores the economic viability of implementing RMTs like Feebris. Additionally, the study suggests that Feebris can reduce GP visits and other healthcare utilisation, indicating even greater economic benefits beyond the study's immediate scope.

However, the successful implementation of RMTs in Social Care requires a shift from reliance on clinical resources to empowering care staff with the necessary skills and confidence. The existing pathways through which remote monitoring operates are still heavily reliant on clinical resources (particularly GPs) which are inherently transactional and reactive. This reliance can be a significant barrier to scaling RMT and integrating it into standard practice, limiting its potential benefits.

Increasing the confidence and skills of care staff through training and recognised qualifications can reduce the dependence on clinical oversight. For instance, the **Skills for Care report (2024)** highlights how structured training programmes have significantly improved the ability of care staff to handle complex tasks independently. The report indicates that care workers who undergo regular training are more confident and capable of making informed decisions, thus reducing the need for constant clinical oversight.

Similarly, the **Care Certificate initiative** by Health Education England has shown that providing foundational training to Health and Social Care workers not only enhances their skill set but also boosts their confidence in delivering high-quality care. This foundational knowledge empowers care workers to manage routine and some complex care needs without immediate recourse to clinical professionals.

Moreover, there are many RMTs available on the market, each with different capabilities and data outputs. A generic understanding of what these technologies can do and how to effectively use the data they provide will be invaluable in scaling RMT in Social Care. The high levels of internal movement within the care sector, characterised by frequent transitions of care staff between roles, care settings or employers, can disrupt continuity of care and create challenges in maintaining a consistent level of knowledge and skills across the workforce.

Therefore, providing a comprehensive and standardised training on RMTs can ensure that care staff are well-prepared to utilise these technologies effectively, regardless of their specific work environment or the particular RMT systems they encounter. By addressing the skills and confidence gap among care staff, we can unlock the full potential of RMT, making it a standard part of Social Care practice and maximising its benefits for both care providers and recipients.

Project overview

This project aimed to address these challenges by developing insights into the local needs, opportunities, barriers, and facilitators for a Social Care training programme focused using technology and digital tools for remote monitoring. The project sought feedback from health and care staff, care organisations, education and technology providers. It explored the role that technology can play in the delivery of training and ongoing support. The ultimate goal was to incorporate these insights into a suggested training programme for further development and testing in the future.

Project aims

- Understanding, across all stakeholders, of the wants, needs, opportunities, barriers and facilitators for a Social Care training programme in remote monitoring
- Understanding of the role that technology could play in delivering and supporting this training programme
- Identification of the optimum format/model for the training (i.e. CPD accredited training, a recognised qualification, a module within an existing qualification etc.)
- Development of the structure and learning outcomes of a proposed training model
- An understanding of how the proposed training model could be further developed, tested and rolled out.
- Learn and share how co-production as an approach can inform training programme development within Social Care
- Learn how this training could potentially benefit staff, care recipients and the health and care system

Learn how this training could potentially benefit staff, care recipients and the health and care system.

Methodology

Methodology

We adopted a participatory approach, guided by **codesign principles**, engaging all stakeholders (including health and care staff, care organisations, technology and education providers) from the earliest stages to ensure that the development of our deliverables was comprehensive and impactful. This approach ensured that every aspect of the project, from the initial research questions to the final outputs, was meaningful and tailored to the needs of those involved.

Timeline of activities

Project initiation, including alignment with key stakeholders, logic model development and planning for the in-depth interviews.

Remote interviews conducted with care workers, care tech providers, education partners, and healthcare professionals to gather comprehensive insights.

Co-design session organised to collaboratively develop the training programme, ensuring all stakeholder perspectives were incorporated into the design.

Logic model development

From the project's inception, it became clear that we needed a practical and straightforward framework to guide our efforts. Collaborating with our partners, the developed logic model helped us visualise and connect the dots between our resources, activities, outputs, and desired outcomes. This model allowed us to translate our strategic vision into a detailed operational plan. It provided a clear pathway that ensured every action taken was aligned with our ultimate objective: developing a robust training programme for remote monitoring in Social Care.

Logic model

Input

- Stakeholder Collaboration
- Budget/Funding from the Health Foundation
- Access to subject matter expertise:
  - Tech – Feedbris
  - Education – Newham College
  - Workforce – Care Providers' Voice

Activities

- Engagement via interviews, co-design workshops
- Sharing knowledge and data between partners
- Testing of proposed training model

Outputs

- A proposed structure for a training/ qualification programme tailored to care staff
- Learning outcomes based on the new training model
- Recommendations for leveraging technology in the delivery and support of the training program
- Risks associated to using the RM tools and technology

Outcomes

- Improved resource allocation
- Increased scope of practice
- Upskilled domiciliary care workers
- Improved/objective data on resident wellbeing
- Improved early interventions
- Empowered/supported care staff
- Optimal Staffing
- Increased access to learning and development
- Increased awareness of the benefits of RMTs
- Regular quality checks and assessments of care provided

Impact

- Resident health and wellbeing
- Meaningful relationships between care provider and residents
- Improved workflows in the care sector
- Improved patient and workforce experience
- Ability to scale service delivery for more reach and impact
- Enhanced productivity and value for money

Co-design principles

The design and development of the proposed training programme was heavily informed by co-design principles, which ensured that the perspectives and experiences of all stakeholders were integrated into the process.

Stakeholder engagement

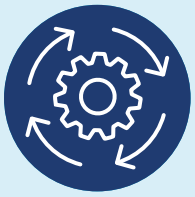
From the outset, the project engaged a diverse group of stakeholders. This inclusive engagement ensured that the training programme addressed the real-world needs and challenges faced by those directly involved in Social Care and remote monitoring. By involving these stakeholders early and often, we ensured that the training model was grounded in practical realities and reflected the genuine needs and aspirations of those who would benefit from it.

Co-design workshops

The project facilitated a series of co-design workshops where stakeholders collaboratively contributed to shape the framework for the proposed RMT training programme tailored to the needs of carers and support workers. The sessions emphasised co-design as a methodology to ensure inclusivity, alignment, and practical relevance across stakeholder groups. This workshop provided a platform for sharing insights, discussing potential barriers, and co-creating solutions.

Interactive techniques

The sessions utilised participatory design techniques, including interactive discussions, live polling, and collaborative exercises, to harness the expertise and insights of all stakeholders. These techniques facilitated active engagement and ensured that all voices were heard, fostering a sense of ownership and collaboration among participants.



Iterative development

The co-design process was iterative, with continuous feedback loops allowing for regular refinement of the training model. Stakeholder input was sought at every stage, ensuring that the final product was both comprehensive and adaptable to the evolving landscape of Social Care and digital technology integration.

Trauma-informed approach

Recognising the sensitive nature of the work, the project employed a trauma-informed approach to ensure that the voices of all participants were heard and respected. This approach fostered a safe and supportive environment, encouraging open and honest dialogue about the challenges and opportunities in remote monitoring and Social Care.

> *This session has really shown the importance of working together across roles to ensure the programme is both practical and meaningful for carers and their day-to-day challenges.*

In-depth interviews

As part of our research, we interviewed five registered care managers, one GP, and one support worker to explore how a RMT training programme could enhance care workers' skills and improve care delivery. We focused on capturing stakeholders' perspectives, emphasising their experiences and needs. Participants were selected for their commitment to engaging in the research process and collaborating in the project's next stages.

Key discussion areas included the specific digital skills care workers need, the potential benefits of a RMT training programme, and its impact on using digital tools, collaborating with healthcare professionals, and managing daily workloads. We identified barriers and facilitators to implementing such a training programme and the most effective training formats. The interviews also highlighted gaps in care workers' digital literacy, their ability to interpret clinical information, and their confidence in using RMTs. We explored how improved training could enhance communication within healthcare teams, reduce workload pressures, and ultimately improve care quality. These insights informed the development of the proposed RMT training programme tailored to the needs and challenges of care workers.

Our research aimed to understand the impact of introducing a RMT training programme for care workers on healthcare practices, focusing on enhancing their skills in digital monitoring and collaboration with healthcare professionals.

We addressed key questions:

- What are the specific needs and preferences of care workers and other stakeholders regarding a RMT training programme in remote monitoring?
- How could the proposed training potentially benefit care workers, care recipients, and the broader health and care system?
- What are the primary barriers and facilitators to implementing a RMT training programme for care workers?
- What is the most effective format or model for the training?
- What should be the key components and learning outcomes of the proposed training model?
- How can we provide ongoing support and continuous professional development for care workers?

We focused on capturing stakeholders' perspectives, emphasising their experiences and needs. Participants were selected for their commitment to engaging in the research process and collaborating in the project's next stages.

Co-design session

To gain a deeper understanding of the emerging themes from the interviews, we conducted a co-design session with the key stakeholder including care managers, GPs, support workers and representatives from the education and technology partners. Our goal was to work together to identify the main barriers to using RMTs in Social Care and to create a clear plan for the proposed RMT training programme suitable for both paid and unpaid carers.

Priority poll

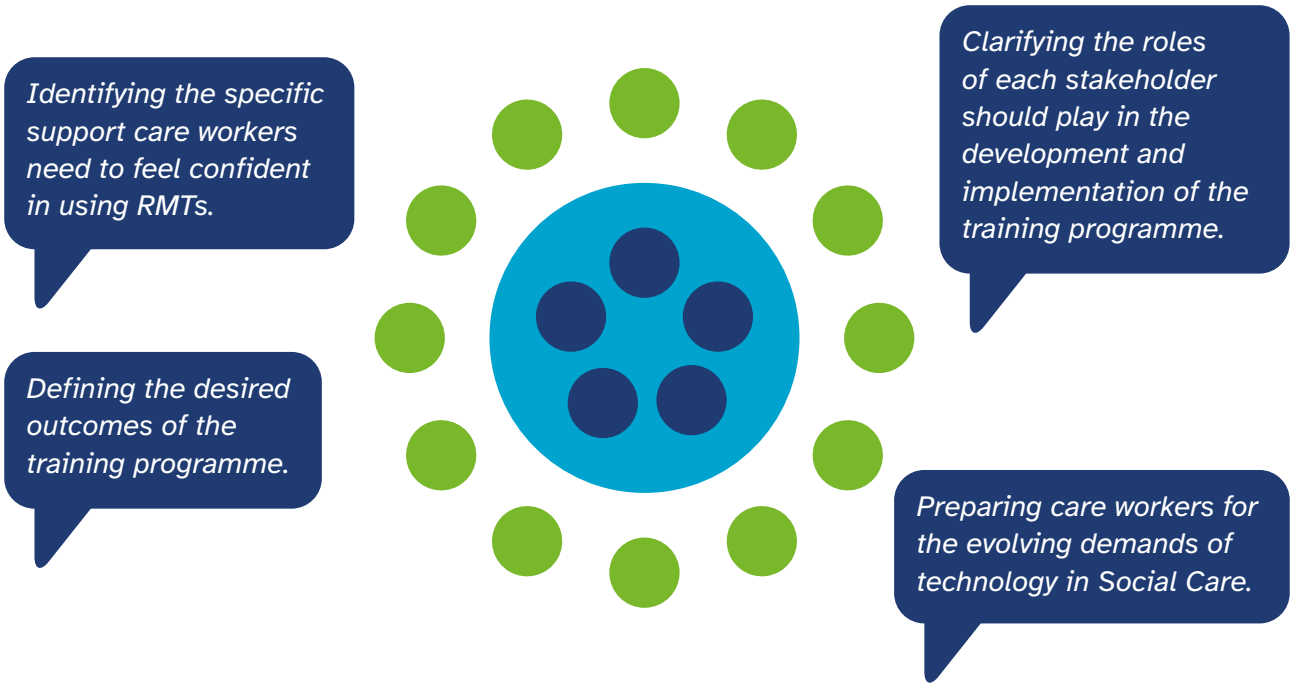
During the session, participants engaged in a priority polling exercise to identify and rank the most pressing barriers to RMT implementation in Social Care. Each barrier was presented as a polling option and participants were asked to rank them in order of importance. Additionally, participants had the opportunity to add comments and suggest additional barriers that were not initially listed. This exercise ensured that all critical barriers were captured and prioritised according to the collective insights of the group.

Designing the training programme

Participants worked together to create a clear and practical roadmap to designing the training programme, outlining the key steps, modules, assessments and support systems essential for implementing the training.

Fishbowl discussion

The session concluded with a group discussion on specific aspects of the training programme. The discussion focused on:



This structured and interactive session laid the foundation for creating a clear and practical training programme that works for care workers.

Findings

This section presents a comprehensive synthesis of the interview and workshop data, structured to provide a clear understanding of the needs and opportunities identified through our research.

The findings are framed by **personas** representing key stakeholders, providing a detailed exploration of those involved in the design, development, and implementation of the proposed training programme. These personas are a series of realistic, insight-driven narratives, offering glimpses into their daily routines, challenges, and aspirations.

Each persona establishes the stakeholders' needs as tangible and actionable for the design of the training programme. Embedded within each persona are the challenges they face in their roles. Alongside the challenges, the personas reveal key opportunity areas where the training programme can empower stakeholders, foster collaboration, and ultimately enhance care delivery.

Personas from the field

Tom: The compassionate and dedicated support worker

Tom is a compassionate and dedicated support worker whose role demands he quickly learns to operate and use new RMTs to monitor clients' health. Each day, he is responsible for taking vitals and ensuring his clients' well-being. However, the short training he received leaves him uncertain, often requiring him to troubleshoot and adapt on his own. These moments are daunting, as he knows his clients rely on him for accuracy and support, yet he doesn't always have the tools or guidance he needs.

Challenges

Tom's challenges resonate the most with struggles of many immigrant care workers who find themselves in unfamiliar systems with cultural apprehensions and limited training and resources. He regularly faces challenges like:

- **Gaps in training:** Tom is expected to understand complex devices with minimal hands-on practice, which fuels his anxiety about potential errors.
- **Language and technical barriers:** While he's fluent in conversational English, the technical terms in healthcare add another layer of difficulty, further isolating him from a sense of proficiency.
- **Lack of immediate technical support:** Often left to figure out device issues on his own, Tom feels the absence of real-time assistance when it's needed most.
- **Clinical data interpretation, integration and understanding:** Tom struggles to interpret clinical data from remote monitoring devices, reducing her confidence when discussing client conditions with healthcare professionals.

Opportunities for improvement

Tom relies on self-motivation and resourcefulness, sometimes reaching out to colleagues or clients for help when facing new challenges. He would benefit significantly from resources and training tailored to her needs and he has identified the following opportunities to address the challenges he faces:

- **Enhanced training programmes:** Offering interactive, simulation-based training materials and refresher sessions to help care workers retain essential skills over time.
- **Work-specific tools:** Providing a work-specific tablet or device to separate personal and professional boundaries and improve efficiency.
- **Certification:** Developing training that offers certifications to reinforce his skills and build his confidence.

"Sometimes, the hardest part is feeling like I have to guess my way through it. I want to do right by my clients, but I need the tools to do it with confidence.

“We can’t take a one-size-fits-all approach to training. Every carer deserves personalised support to grow their confidence and use technology effectively.

Sarah: The carer’s advocate – registered manager

Sarah, a seasoned registered manager, oversees a large team delivering over 1,000 care visits daily. She is committed to improving care quality and believes in leveraging technology to optimise care delivery. However, managing a diverse workforce with varying levels of technological proficiency and educational backgrounds presents daily challenges. Cultural and language differences often complicate training, making it difficult to achieve uniform understanding and engagement with new tools. Despite these hurdles, Sarah strives to empower her team with continuous education and support, envisioning a future where every carer feels confident using technology.

Sarah's commitment to innovation and quality care is often met with several obstacles. Here are some of the specific challenges she faces and the opportunities for improvement:

Challenges

- **Technological proficiency:** Staff skills vary widely, with older care workers often struggling to adapt to digital tools, requiring personalised training.
- **Cultural and language barriers:** Training materials and methods don’t always accommodate care workers’ diverse cultural needs or limited English proficiency, reducing engagement.
- **Resistance to change:** Some staff members prefer traditional paper-based methods, making the shift to digital systems slow and challenging.
- **Resource constraints:** Limited time and budgets for training make it difficult to deliver comprehensive programmes.
- **Assessment gaps:** There are no formal methods to evaluate care workers’ functional skills with technology during recruitment or ongoing operations.

Opportunities for improvement

- **Personalised training programmes:** Creating a standardised, engaging training programme that accommodates diverse cultural and educational needs.
- **Certification:** Implementing certification for completed training to validate care workers’ skills, building their confidence and enhancing team performance.
- **Supportive workplace:** Fostering a supportive workplace with an open-door policy, encouraging her team to seek help when needed.

Dr. Penn: Thoughtful GP adapting to digital innovation

Dr. Penn is a general practitioner managing the healthcare of a diverse patient population. In her practice, she coordinates with families, care workers, and community services to deliver effective care. While intrigued by the potential of RMTs, Dr. Penn has limited experience with their implementation and feels cautious about the implications for safety and workflow. She believes in the value of proactive care but faces challenges in building trust with agency-employed care workers and ensuring clinical data is used accurately and effectively.

Dr. Penn's openness to innovation is tempered by practical concerns. Here are the specific challenges she encounters and the opportunities for improvement:

Challenges

- **Limited carer interaction:** Dr. Penn mainly interacts with family carers rather than professional care workers, leading to variability in communication.
- **Data accessibility:** Current systems require manual log-ins to access remote monitoring data, which disrupts workflow and delays care.
- **Safety concerns:** Penn worries about care workers misinterpreting health readings, which could result in unnecessary interventions or missed emergencies.
- **Workload uncertainty:** Many GPs hesitate to adopt remote monitoring, fearing it will increase their workload without clear evidence of efficiency gains.
- **Training gaps:** Dr. Penn observes that care workers often lack the skills to interpret clinical data or understand its context, creating additional pressure on healthcare professionals.

Opportunities for improvement

- **Enhanced carer training:** Ensuring care workers are well-trained and confident in using monitoring devices, reducing unnecessary hospital visits and enabling better decision-making.
- **Data integration:** Developing reliable, data-driven tools that integrate seamlessly into her practice without increasing inefficiencies or risks.
- **Collaboration:** Fostering better collaboration between care workers and healthcare providers for seamless care delivery.

Terms like “systolic pressure” or “oxygen saturation levels” are not explained in a practical or relatable manner, leading to misinterpretation or incorrect application of knowledge.

Synthesis of findings

The exploration of the stakeholder persona reveals a complex landscape of challenges and opportunities that must be addressed to integrate RMTs effectively into Social Care. By delving into their daily routines, struggles, and aspirations, we uncover critical insights into the barriers they face and the transformative potential of a RMT training programme.

Challenges and barriers

Based on the input from stakeholders, several critical challenges and barriers have been identified in integrating RMTs into their daily practices. These challenges are multi-faceted and impact care workers' ability to deliver effective care. Stakeholders were asked to identify and rank these challenges by priority – low, medium, and high. Below, we present a detailed analysis of these barriers, organised according to the priorities assigned by the stakeholders:

HIGH PRIORITY BARRIERS

Language barriers

Language barriers consistently emerge as a critical challenge. For care workers with English as a second language, these barriers impact their ability to engage with training and use RMT effectively. We identify a three-tiered framework of language challenges:

- **Non-English speaking backgrounds:** Care workers who do not speak English as their first language struggle with understanding both training materials and workplace communication. This creates foundational issues in acquiring skills and applying them in practice. This results in reduced confidence, errors in care delivery, and reliance on peers or supervisors for clarification.

  > *If you tell someone to start learning about technical terms of English, they can sometimes feel in shock.*

- **Medical/technical terminology:** Complex medical and technical terms are overwhelming and often misunderstood. Terms like “systolic pressure” or “oxygen saturation levels” are not explained in a practical or relatable manner, leading to misinterpretation or incorrect application of knowledge.

  > *The first one is some, I would say, data interpretation. Because sometimes you see figures on the screens of these things, and you really don't know the meaning of them.*

- **Digital/technological vocabulary:** Care workers often struggle with terminology related to digital systems. Terms like “data calibration,” “cloud storage,” or device synchronisation,” often are unfamiliar even to fluent English speakers which

adds an additional layer of complexity. This further discourages care workers from adopting and utilising remote monitoring systems effectively.

> *Some of this, this language is very technical, yeah... There's also some language barrier that then limits them from understanding data.*

Inconsistent quality of training

A significant challenge identified in the adoption and effective use of RMTs is the inconsistent quality of training received by care workers. This inconsistency stems from several factors, each contributing to the overall effectiveness and engagement of care workers in the training process:

- **Lack of hands-on, practical training opportunities:** Care workers repeatedly express the need for more hands-on, practical training sessions. Theoretical knowledge, while important, does not fully prepare care workers for the nuances of using remote monitoring devices in real-world settings. Practical training allows care workers to troubleshoot, ask questions, and build the necessary muscle memory to use these technologies effectively.

  > *Once you've embedded the training and the knowledge and the content amongst your carer population, if it's not put into practice, it will go in vain.*

- **Inconsistent quality of instruction:** The quality of training varies widely, with some trainers failing to provide clear and comprehensive instructions. This inconsistency can be attributed to a lack of standardisation in training programmes and varying levels of expertise among trainers. When instructions are unclear, care workers may feel confused and less confident in using RMTs, leading to potential errors in patient care.

  > *It's kind of being able to have some flexibility to work at their pace. Some will pick up, the information and knowledge a lot quicker. Some will take a little bit more support and time.*

- **Over-reliance on online training:** While online training offers flexibility and accessibility, it may not be effective for all learners. The diverse learning preferences and needs of care workers mean that a one-size-fits-all approach is insufficient. Online modules often fail to engage care workers fully or provide the interactive, practical experience needed to master the use of remote monitoring tools.

- **Cultural differences affecting training adaptability:** Cultural differences in caregiving practices and training approaches present additional challenges. Training materials often fail to account for the diverse cultural needs of care workers, resulting in lower engagement and effectiveness. There is a pressing need for culturally sensitive and relevant training materials that resonate with care workers from various backgrounds. Such materials can enhance the learning experience and ensure that all care workers feel included and understood.

  > *We've got some staff that are dyslexic and so the training that we provide, we ask if they need any special considerations with regard to the training, and we're able to put the training in different formats. So again, from a lady that's not very good with reading and writing, there's a talking mode on there so it reads it to you, so you don't have to read it.*

Fear and anxiety around technologies

A prevalent issue among care workers is the fear and anxiety associated with using new medical devices and digital tools. This apprehension can significantly impact their willingness to adopt RMTs, ultimately affecting the quality of care provided to patients. Several factors contribute to this fear and anxiety, highlighting the need for targeted strategies to address these concerns:

- **Lack of familiarity and confidence:** A primary source of fear and anxiety is the care workers' lack of familiarity with new technologies. Many care workers, especially those who have been in the field for a long time, are accustomed to traditional, paper-based systems. Transitioning to digital tools and remote monitoring devices can be daunting for them, as they feel unprepared and insecure about their ability to use these technologies effectively.

  > *I think a lot of people are scared of digitalisation, and they'll be very quick to find barriers as to why they shouldn't do it, whether that be capability or they, they're just a bit scared of what the digital world's becoming. Now, they don't like that. Everything's in a cloud. Now we're less paper based. They're used to ooking through paper notes, whereas they would need to log in and look at something.*

- **Resistance to training due to perceived redundancy:** Older care workers, in particular, often resist training on new technologies, perceiving it as redundant or unnecessary. They may feel that their existing methods are sufficient and worry that new technologies will complicate their workflow. This resistance is rooted in a comfort with familiar practices and a scepticism about the benefits of digitalisation.
- **High-stakes patient care:** The high-stakes nature of patient care adds another layer of anxiety. Care workers are acutely aware that errors in using medical devices can have serious consequences for their patients' health. This awareness intensifies their fear of making mistakes with unfamiliar technologies, leading to hesitancy in adopting new tools.
- **Limited access to real-time technical support:** Care workers often face challenges when technical issues arise with remote monitoring devices. The lack of immediate, real-time technical support exacerbates their anxiety, as they feel unsupported and left to troubleshoot problems on their own. This uncertainty can discourage care workers from fully engaging with the technology.

  > *Sometimes the people you call don't have ready answers. So I feel like we need more technical support.*

- **Difficulty in understanding and using RMTs:** Many care workers struggle with the technical aspects of RMTs, such as blood pressure machines and other devices. This difficulty stems from a combination of inadequate training and the complexity of the devices. Without clear, practical instruction, care workers may feel overwhelmed and reluctant to use these tools.
- **Concerns about technology replacing personal touch and clinical judgement:** Another significant concern among care workers is that technology might replace the personal touch and clinical judgement that are crucial in caregiving. They fear that an over-reliance on digital tools could diminish the human connection and nuanced decision-making that are essential components of effective care.

Another significant concern among care workers is that technology might replace the personal touch.

Older or more experienced staff often perceive training on new technologies as unnecessary. They may feel confident in their existing methods and view new training as redundant.

MEDIUM PRIORITY BARRIERS

Time constraints for training

Long working hours and demanding schedules often leave care workers with limited time to attend training sessions. Many care workers struggle to balance their responsibilities with the need to upskill, resulting in missed opportunities for professional development. Training programmes that fail to accommodate these time constraints further exacerbate this issue.

> *Most healthcare providers don't have all the time to like, train and retrain and retrain [staff]. You're expected to like, grasp how to use this technology within the timeframe that they've provided.*

Difficulty in assessing staff's tech skills

Some stakeholders believe that the lack of standardised tools to assess staff's technological skills makes it difficult to identify those that may benefit from additional support and training to effectively use remote monitoring devices. As a result, some care workers may struggle with the technology, leading to inconsistent use and potential errors in care delivery.

Perceived lack of need for training among experienced staff

Older or more experienced staff often perceive training on new technologies as unnecessary. They may feel confident in their existing methods and view new training as redundant. This mindset can hinder the adoption of remote monitoring tools.

> *We introduced a software to all the carers. There was a lot of reluctance due to age and language barriers, but it was just taking that extra time to give them the extra training and spend with them and making them not feel, you know, that less, because they couldn't understand it.*

Integration challenges between technologies and traditional care methods

The lack of seamless integration between RMTs and traditional care methods presents another challenge. Care workers may struggle to incorporate new tools into their established workflows, leading to inefficiencies and frustration.

> *The ones that I've found challenging sometimes are the blood pressure machines, the patch patch monitors, the smart inhalers. Tried it once, never again.*

LOW PRIORITY BARRIERS

Lack of basic functional digital skills

Many care workers struggle with foundational digital skills, which significantly hinders their ability to effectively use RMTs. Simple tasks such as logging into apps, troubleshooting devices, or navigating digital interfaces can be overwhelming, leading to frustration and a lack of confidence. This digital skills gap not only makes it harder for care workers to engage with the technology but also diminishes their overall sense of competence, which in turn affects their willingness to fully embrace these tools in their caregiving role.

Connectivity issues

Care workers report significant delays and inefficiencies caused by poor internet connectivity, which hinders their ability to use digital tools effectively and on time. This lack of reliable connectivity disrupts the seamless integration of RMTs, making it challenging to manage patient care promptly and accurately.

Limited access to appropriate technology

Many care workers often have to use their personal devices, like smartphones, to access work-related apps for retrieving data from the RMTs. This not only introduces potential privacy and security concerns but also reduces the ability to maintain clear boundaries between personal and professional life. This reliance on personal technology for professional tasks highlights the need for better access to dedicated, secure devices that can support the integration of remote monitoring tools and enhance care workers' ability to deliver efficient, safe care.

> *I feel like having a separate device for work that is work purpose to, like, make it better and feel more official, because having a work app on my phone feels like encroaching on my personal space.*

> *So yeah, we try to definitely keep client data as private as possible... but as I said earlier, it's definitely on my personal phone again, so yeah, [I] try not to open the app around someone else.*

Many care workers struggle with foundational digital skills, which significantly hinders their ability to effectively use RMTs.

Recommendations for integrating Remote Monitoring Technologies into Social Care

In response to the barriers identified through stakeholder feedback, this section presents a set of tailored recommendations designed to bridge the gaps and enhance the integration of RMTs into carers' daily practices.

The following recommendations focus on the development of a training model for a RMT training programme, as well as key considerations for its successful implementation.

Stakeholder insights

In developing the proposed training model for a RMT training programme and the key considerations for its implementation, we drew heavily on the insights shared by various stakeholders:

Technology providers

Technology partners highlighted the need to improve carers' digital and technical literacy. Many carers struggle with basic device operations, troubleshooting, and data interpretation. The partners stressed that technology is often underutilised or misused when end users lack confidence or foundational knowledge.

One partner remarked:

> *This programme can bridge the gap between carers and the tools they use. It's about simplifying the technology, but also ensuring that carers understand its purpose, its limitations, and how it integrates into the larger care ecosystem.*

Another added:

> *Confidence is key. If carers aren't sure about the readings they're getting or the steps they need to take, the entire chain of care can be disrupted. This training programme isn't just about the 'how'; it's also about the 'why.' Why the data matters, why it should be trusted, and why it's a critical part of proactive care.*

Education providers

Education partners emphasised the need to bridge the gap between technology and caregiving. They called for a curriculum that demystifies technology and equips carers with practical tools to integrate these devices into their routines.

One participant noted:

> *This training programme isn't just about teaching carers how to use technology. It's about building their confidence to act on what the data tells them, to trust their skills, and to make informed decisions that improve care.*

The training programme was also viewed as an opportunity for carers to advance professionally, providing them with a recognised credential that validates their expertise in RMTs. A standardised training programme would ensure consistent knowledge and care practices across different organisations, reducing variability and enhancing trust in carers' abilities.

Confidence is key. If carers aren't sure about the readings they're getting or the steps they need to take, the entire chain of care can be disrupted.

Care providers

Care providers expressed concerns about the safety of using RMTs, particularly around the potential for carers to misinterpret readings, which could lead to unnecessary interventions, such as GP visits or ambulance calls. They highlighted the need for carers to have a clear understanding of what constitutes normal versus abnormal readings, when to take measurements, and how to act on the information they receive.

One provider commented:

> *It's crucial that carers are not only comfortable using the devices but also confident in interpreting what they see and knowing when to escalate.*

There was a strong emphasis on practical, hands-on training to build confidence and ensure carers can handle the tools effectively in real-world situations. Additionally, challenges with language barriers and varying levels of digital literacy among care staff were raised, suggesting the need for training that caters to these factors to ensure all carers can benefit from the training programme.

General practitioners

GPs highlighted issues with sharing data from remote monitoring devices, particularly in the context of a pilot project in Redbridge, where data was sent via email or through a platform that GPs needed to log into. They pointed out difficulties with notifications and interpreting abnormal readings in a timely manner.

One GP explained:

> *The data often arrives too late or doesn't get flagged in a way that's easy to respond to. We need a more reliable system that ensures we're not missing critical information.*

GPs believed that carers with better training in interpreting remote monitoring data would lead to more accurate decision-making and ultimately improve patient care. However, they also expressed concerns about over-sharing sensitive information, stressing the importance of secure and efficient data sharing when collaborating with other healthcare services.

One GP stated:

> *We need to ensure that the information being shared is appropriate and protected.*

GPs highlighted issues with sharing data from remote monitoring devices, particularly in the context of a pilot project in Redbridge, where data was sent via email or through a platform that GPs needed to log into.

Across all stakeholders, several key themes resonated:

National recognition and standards

Stakeholders stressed the importance of ensuring that the training programme is nationally recognised to validate the training's value across the sector.

One representative said:

> *I think that it would help if this training programme becomes a recognised qualification – one that demonstrates or proves [care workers] competency and knowledge in using RMTs. I think it will help in improving communication and overall relationship between Health and Social Care staff.*

There is also a need for a balance between adhering to national standards and accommodating local health delegation arrangements, ensuring that the training programme aligns with both broader policies and local healthcare practices.

One representative stated:

> *The training programme must be flexible enough to account for different regional practices while maintaining consistency in essential standards.*

Training for effective clinical risk management

To ensure care workers can effectively use RMTs, it is essential to incorporate education on clinical guidelines and clear protocols for responding to vital signs in the training programme. Care workers need to accurately interpret readings from remote monitoring devices, understanding normal versus abnormal values for parameters like blood pressure, heart rate, and oxygen levels. They must know how to respond appropriately to abnormal readings, whether it involves contacting healthcare providers, administering first aid, or escalating the situation.

Confidence and practical skills

The programme should build care workers' confidence in using technology, interpreting data, and making informed decisions. Practical, hands-on training was highlighted as essential to ensure carers can handle the tools effectively in real-world situations.

Secure data sharing

Ensuring secure and efficient data sharing when collaborating with other healthcare services was a major concern. Stakeholders stressed the importance of having a reliable system that ensures critical information is not missed and that sensitive data is protected.

The programme should build care workers' confidence in using technology, interpreting data, and making informed decisions.

Proposed RMT training programme

To address the identified challenges and improve the adoption of RMTs, we propose a training model that includes both foundational skills and advanced technical knowledge. The training should empower care workers to confidently use digital tools while integrating them seamlessly into their caregiving roles.

In addition, we also feel strongly that unpaid carers (such as family members), should be offered access to this training. These individuals form the backbone of the patient support system, holding experiential and consistent knowledge about the care they provide. Unlike paid care workers, whose presence may fluctuate due to staff turnover, unpaid carers are typically a consistent part of the patient's life and have an intimate understanding of the patient's health, behaviours, and needs. This continuity allows them to provide stable and personalised care. However, without formal training in emerging RMTs, unpaid carers may struggle to fully leverage these tools, diminishing their potential impact.

A structured training programme could bridge this gap, enabling both paid and unpaid carers to seamlessly integrate remote monitoring into their caregiving. The training programme could include case studies or simulations that relate to real-world caregiving scenarios. By combining their personal knowledge of the patient with data from monitoring tools, unpaid carers could make more informed decisions and provide more effective care, enhancing communication with healthcare professionals.

Learning outcomes

The training model will focus on the following learning outcomes.

Note: 'Carers' refers to both paid and unpaid carers.

Learning outcome – Digital literacy	
Carers will have enhanced their digital literacy, equipping them with both **basic and advanced digital skills** to confidently navigate digital interfaces, troubleshoot issues, and manage remote monitoring tools effectively.	
Impact	
Individual level	Improved digital literacy boosts confidence and efficiency, empowering individuals to effectively navigate and troubleshoot digital tools in their roles.
Patient level	Patients benefit from more accurate care management and faster responses, as carers are better equipped to use remote monitoring tools and interpret data.
Wider health and care system level	Enhanced digital literacy among care workers contributes to greater system efficiency, reduced errors, and improved integration of remote care, easing the burden on healthcare services.

Learning outcome – Technical competency	
Carers develop technical skills necessary to **confidently use RMTs and interpret data accurately.** This includes basic device operations, data interpretation, troubleshooting and data integration into care routines.	
Impact	
Individual level	Carers will feel more confident and proficient in using remote monitoring tools, improving their ability to respond to patient needs.
Patient level	Patients will experience more precise and timely care as carers can effectively monitor their health data, leading to improved outcomes.
Wider health and care system level	A more skilled workforce will reduce errors in device use and data interpretation, enhancing care quality and reducing reliance on technical support.

Learning outcome – Data privacy and security

Carers will understand the importance of **maintaining patient confidentiality**, the implications of data handling, and will learn to use devices and apps securely.

Impact	
Individual level	Carers will be able to confidently manage sensitive patient data, ensuring compliance with privacy regulations and maintaining trust with patients.
Patient level	Patients will have greater peace of mind knowing their personal data is secure, fostering trust in digital health tools.
Wider health and care system level	Ensuring proper data handling will reduce risks of breaches and improve the overall security of the health and care system.

Learning outcome – Care coordination

Carers will develop the skills to integrate **remote monitoring data into their daily care routines**, understanding how to synthesise data from various devices (e.g. blood pressure monitors, glucose meters, wearables) and use it to create a comprehensive care plan for each patient.

Impact	
Individual level	Carers will gain confidence in using remote monitoring data to inform their care decisions, improving their ability to provide personalised and proactive care, leading to enhanced job satisfaction and a stronger sense of competence in their caregiving role.
Patient level	Patients will benefit from more coordinated, data-driven care. This will result in more timely and accurate responses to changes in health, improving patient outcomes, enhancing engagement, and fostering a more individualised care experience.
Wider health and care system level	Improved care coordination will lead to a more efficient use of healthcare resources, reducing the need for unnecessary hospital visits or emergency interventions. The integration of remote monitoring data into care systems ensures smoother communication between care workers, healthcare teams, and families, improving patient continuity of care and promoting a more integrated, holistic approach to healthcare delivery across the system.

Learning outcome – Communication skills

Carers will develop the skills needed to improve their communication skills to **effectively convey remote monitoring data and its implications to patients**, families, and healthcare professionals.

Impact	
Individual level	Carers will become more effective communicators, ensuring clear understanding of remote monitoring data and fostering collaborative decision-making.
Patient level	Patients will receive clearer explanations of their health data, improving their engagement in their care and decision-making process.
Wider health and care system level	Improved communication will lead to better collaboration between care workers, patients, and healthcare teams, ensuring that care decisions are based on accurate, timely data.

Specific modules/topics

Pre-training competency assessments

To tailor the programme to individual carers' needs, pre-training assessments should be conducted to identify existing knowledge gaps. This will allow the development of personalised learning pathways and increase carers' engagement by addressing their unique challenges.

Core training programme modules

1. Introduction to RMTs

This module covers the basics of remote monitoring tools, explaining their role in enhancing patient care, how they work, and how they can improve care delivery.

Barriers addressed

- **Language barriers (Non-English speaking backgrounds and medical/technical terminology):** The module simplifies complex concepts into everyday language, with potential for multilingual support or visual aids, helping carers who are less familiar with technical jargon.
- **Digital/technological vocabulary:** Common terms related to digital tools (e.g. cloud storage, device synchronisation) are explained in accessible ways, making the technology less intimidating for carers.
- **Fear and anxiety around technologies:** Introducing remote monitoring tools in a simplified and non-technical manner helps reduce anxiety and build familiarity, encouraging carers to feel more comfortable with new technologies.

2. Device operation and usage

This hands-on module provides carers with practical training on the setup, operation, and troubleshooting of common remote monitoring devices like pulse oximeters and blood pressure monitors.

Barriers addressed

- **Inconsistent quality of training (lack of hands-on, practical training opportunities):** The module provides carers with the opportunity to engage directly with devices, which builds muscle memory and confidence in using them in real-world settings.
- **Fear and anxiety around technologies (lack of familiarity and confidence):** Carers gain firsthand experience in a controlled setting, reducing anxiety by familiarising themselves with the devices and their functionalities.
- **Difficulty in understanding and using RMTs:** Hands-on practice ensures that carers can troubleshoot and perform routine maintenance, enhancing their confidence in using the devices.

3. Data interpretation and escalation pathways

This module focuses on understanding the clinical data generated by common remote monitoring tools, interpreting readings, and knowing when and how to escalate concerns to healthcare providers based on predefined protocols.

Barriers addressed

- **Language barriers (medical/technical terminology):** Medical terms like “systolic pressure” and “oxygen saturation” are broken down into simpler explanations, potentially using visuals or examples, ensuring carers can accurately interpret the data.
- **Difficulty in understanding and using RMTs:** Carers will learn how to interpret data in a practical way, reinforcing their ability to use monitoring devices effectively and act on the results in real time.
- **Fear and anxiety around technologies (high-stakes patient care):** By showing how interpreting data accurately can directly affect patient outcomes, the module instills confidence in carers to act quickly and appropriately in critical situations.

4. Data privacy and security

This module covers best practices for maintaining patient confidentiality, ensuring that sensitive data is handled securely in accordance with regulations such as GDPR.

Barriers addressed

- **Language barriers (Non-English speaking backgrounds):** Clear, straightforward explanations of data privacy principles in accessible language will help carers understand their responsibilities and how to ensure patient data is protected.
- **Digital/technological vocabulary:** Commonly used terms related to data privacy and security are explained in simple terms, ensuring carers are confident in managing and securing patient data.
- **Limited access to appropriate technology:** The module highlights how to securely use remote monitoring tools, ensuring that carers understand the risks of using personal devices and the importance of keeping professional and personal data separate.

5. Overcoming digital anxiety and building confidence

This module addresses the fears and anxieties associated with using digital tools. Carers will learn strategies to build confidence in using RMTs and overcome their apprehensions.

Barriers addressed

- **Fear and anxiety around technologies (lack of familiarity and confidence):** By focusing on the supportive role of technology and providing reassurance, this module helps carers build confidence and reduce fear, especially those who are new to digital tools.
- **Resistance to training due to perceived redundancy:** The module reinforces that technology is an enhancement, not a replacement, helping carers who may resist digital tools feel more open to adopting them.
- **Fear and anxiety around technologies (high-stakes patient care):** By addressing concerns about making mistakes and the potential risks, this module helps carers feel more in control of using technologies safely, reducing anxiety about patient care outcomes.

6. Overcoming integration challenges and improving workflow

This module will focus on helping carers understand how to integrate RMT into their existing caregiving practices without disrupting their workflows. It will provide practical tools and strategies for using RMTs alongside traditional care methods, ensuring that the technology enhances rather than complicates daily tasks. The module will also address the challenges of technology adoption, particularly for workers who are used to traditional, paper-based methods of care.

Barriers addressed

- **Integration challenges between technologies and traditional care methods:** By providing strategies for incorporating RMTs into established workflows, this module addresses concerns about the friction between new technologies and traditional care practices.
- **Fear and anxiety around technologies (resistance to training due to perceived redundancy):** The module reassures carers that technology will enhance rather than replace their existing caregiving methods, helping ease their concerns about adopting new tools.
- **Difficulty in assessing staff's tech skills:** The module may include techniques for evaluating how well carers are integrating new technologies into their routines, providing insight into where further support might be needed.

Format and structure

We propose a blended learning structure, combining online modules with face-to-face workshops and practical assessments:

1. Online modules

The online learning component will cover foundational knowledge such as digital literacy, data privacy, and theoretical aspects of RMTs. The flexibility of online learning will accommodate carers'' diverse schedules, allowing them to learn at their own pace, making it particularly suitable for both paid carers with fixed shifts and unpaid carers who may have varying availability.

Solution for barriers

- **Language barriers:** To address language challenges, online modules will be offered in multiple languages with bilingual resources, visual aids, and multilingual glossaries. Audio versions will also be available to help learners with different literacy levels.
- **Digital/technological vocabulary:** Simple, clear explanations of technical terms will be provided to make the content more accessible, avoiding jargon where possible.
- **Lack of basic functional digital skills:** Interactive tutorials will guide carers in developing foundational digital skills, helping both paid and unpaid carers feel more comfortable with the technology.

2. Face-to-face workshops

In-person workshops will allow carers to interact with the devices, troubleshoot issues, and receive immediate feedback from trainers. These workshops will focus on real-world caregiving scenarios, ensuring that both paid and unpaid carers can see how RMTs can be applied in practice. Special consideration will be given to the specific challenges faced by unpaid carers, such as the need for flexible scheduling and reduced time constraints.

Solution for barriers

- **Inconsistent quality of training:** Face-to-face workshops will standardise training quality by ensuring all carers receive consistent, high-quality instruction in an inclusive environment. Trainers will be well-equipped to clarify technical concepts and provide tailored guidance based on carers' individual needs.
- **Lack of hands-on, practical training opportunities:** These workshops will address the need for more hands-on training by offering practical, experience-based learning for all carers, giving them the confidence to use the devices effectively.
- **Fear and anxiety around technologies:** Carers will be able to engage with the technologies in a safe environment, reducing anxiety and building confidence. The practical setting will allow carers to ask questions, resolve doubts, and gain direct experience with troubleshooting.

3. Practical assessments

Throughout the training, carers will complete practical assessments to demonstrate their proficiency in using RMTs. These assessments will focus on real-world scenarios, ensuring both paid and unpaid carers can apply what they have learned in their daily practice.

Solution for barriers

- **Difficulty in understanding and using RMTs:** Practical assessments will identify gaps in understanding, allowing tailored support for carers who may struggle with specific technologies.
- **Resistance to training due to perceived redundancy:** For unpaid carers, assessments will demonstrate how training directly benefits their caregiving experience, making the value of the training more evident and helping to overcome resistance.

4. Peer-to-peer mentorship and support

A key component of the training will be peer mentorship, where experienced carers act as mentors to guide their colleagues through challenges. Peer mentors – “super users” – can offer real-time guidance, reduce anxiety, and reinforce training content through practical, step-by-step support. This mentorship will be particularly valuable for unpaid carers, who may not have the same level of ongoing support as paid carers.

Solution for barriers

- **Fear and anxiety around technologies:** Peer mentors, including both paid carers and other unpaid carers who have successfully integrated remote monitoring tools, can offer practical advice and emotional support, helping to ease fears and build confidence.
- **Cultural differences affecting training adaptability:** Peer mentorship will offer carers the chance to learn from others who share similar cultural backgrounds or caregiving experiences, ensuring the training resonates with diverse groups.

5. Ongoing support and mentorship

Carers will have access to continuous support after the training, including technical assistance and peer networks. This is essential for both paid and unpaid carers, as it ensures that they can receive help when facing challenges with RMTs.

Solution for barriers

- **Limited access to real-time technical support:** Ongoing technical support will address issues faced by both paid and unpaid carers, ensuring they feel confident using the technology, whether on the job or at home.
- **Time constraints for training:** Flexible, on-demand support will ensure that carers can access help outside scheduled training times, allowing both paid and unpaid carers to learn at their own pace without the pressure of work-related time constraints.

6. Support materials and adaptability

Training materials will be provided in multiple formats, including written guides, videos, and audio instructions. These materials will be designed to accommodate the needs of both paid and unpaid carers, considering that unpaid carers may require more accessible, easy-to-follow resources due to time limitations and varying levels of experience.

Solution for barriers

- **Cultural differences affecting training adaptability:** Training materials will be designed to be culturally sensitive, helping to engage carers from diverse backgrounds. Additionally, resources will be adapted to meet the needs of those with literacy challenges, including audio versions and simplified content.
- **Inconsistent quality of training:** Standardised, adaptable training materials will ensure consistent, high-quality content for all carers, addressing the diverse learning needs and experiences of both paid and unpaid carers.

Key considerations for implementation

While the training model is a critical component, there are several factors to consider during the implementation of the proposed RMT training programme to ensure its success:

Time constraints

Many carers face time constraints due to their demanding schedules. Training programmes must be designed with flexible learning options, including bite-sized modules, to accommodate carers who have limited time for study. Additionally, consideration should be given to providing protected study time during shifts to allow carers to complete necessary modules without impacting patient care.

Ongoing support and integration

It is crucial to offer ongoing support post-training, ensuring carers continue to feel confident in using the technology. Peer networks, follow-up workshops, and dedicated technical assistance will help bridge the gap between theoretical knowledge and practical application.

Standardised assessment

A standardised assessment tool should be developed to evaluate carers' technological skills, helping to identify those who need additional support or training. This will ensure a consistent baseline of skills across the care workforce, reducing variability and improving patient care outcomes.

Adapting to cultural and language needs

To ensure that the training programme is inclusive, training materials should be available in multiple languages, and be adapted to reflect the cultural diversity of carers. This will promote greater engagement and understanding among those from non-English speaking backgrounds or with varying levels of technical proficiency.

Certification and validation

A nationally recognised certification should be provided to validate carers' expertise in RMTs. Education partners highlighted the value of formal recognition as a powerful motivator, professionalising the role of carers and boosting their confidence. Certification not only provides carers with new skills but also offers a sense of pride and accomplishment, supporting career development and improving retention.

Use of technology in training delivery

Technology should be leveraged to enhance the training experience. Interactive learning tools, such as virtual simulations and gamified modules, will make the training more engaging and memorable. Digital dashboards can be created for carers to track their progress, access tailored resources, and receive real-time feedback. Additionally, training materials should be accessible offline to ensure that carers in remote areas or with limited internet connectivity can still participate.

Supporting carers' emotional and practical needs

The training programme must also address the emotional and practical challenges carers face. It should offer gradual, hands-on learning to ease anxiety about using new technologies. Flexible, modular learning options will help carers balance their demanding workloads while engaging in training. A training programme that acknowledges both emotional and practical needs will encourage carers to adopt new technologies more confidently and effectively.

Role each stakeholder can play in the development and implementation of this training programme

The success of any RMT training programme depends on the collaboration of all stakeholders involved in its development and implementation. Each group brings unique perspectives, expertise, and responsibilities that, when aligned, can create a programme that is practical, inclusive, and impactful. Below is a breakdown of the roles each stakeholder should play to ensure the training programme meets its objectives.

Carers

Carers are the primary users of RMTs and, therefore, their voices are critical in shaping the training programme. They can provide firsthand insights into the challenges they face daily, such as understanding data, operating devices, and managing their workload. By participating in focus groups, surveys, and pilot programmes, carers can ensure the training is rooted in the realities of care delivery. Their feedback during the development process can also highlight gaps and help refine the curriculum.

Registered managers

Registered managers play a dual role as advocates for their teams and enablers of the training programme within their organisations. They are responsible for ensuring the training is seamlessly integrated into day-to-day workflows and aligns with organisational priorities. Managers can also offer feedback on logistical challenges, such as scheduling training sessions around carers' busy routines, and advocate for the resources needed to support successful implementation. Importantly, they can champion the programme, encouraging carers to engage with the training and recognise its value.

Education partners

Education partners bring expertise in instructional design and pedagogy, making them essential in creating a curriculum that is engaging, accessible, and effective. They are responsible for developing training materials that are culturally sensitive, multilingual, and adaptable to carers with diverse learning needs. Education partners should also ensure the programme includes a variety of formats, such as hands-on training, online modules, and interactive simulations, to cater to different learning styles. Their experience ensures the training programme is both rigorous and achievable.

Education partners bring expertise in instructional design and pedagogy, making them essential in creating a curriculum that is engaging, accessible, and effective.

Healthcare professionals, such as GPs and nurses, play a critical role in ensuring the training aligns with clinical protocols.

Technology partners

Technology partners are key to demystifying the tools and systems carers will use. They should collaborate with education providers to ensure training materials include clear instructions and practical demonstrations of their devices. Beyond the training itself, technology partners must work on simplifying device interfaces to make them more user-friendly. They can also contribute by developing interactive learning tools, such as simulations or troubleshooting guides, to enhance carers' understanding and comfort with the technology.

Healthcare professionals

Healthcare professionals, such as GPs and nurses, play a critical role in ensuring the training aligns with clinical protocols. They can provide expertise on interpreting health data, recognising early warning signs, and understanding when to escalate concerns. By contributing real-world examples and use cases, healthcare professionals can help carers see how their role in remote monitoring fits into the broader care ecosystem, fostering confidence and collaboration.

Regulators

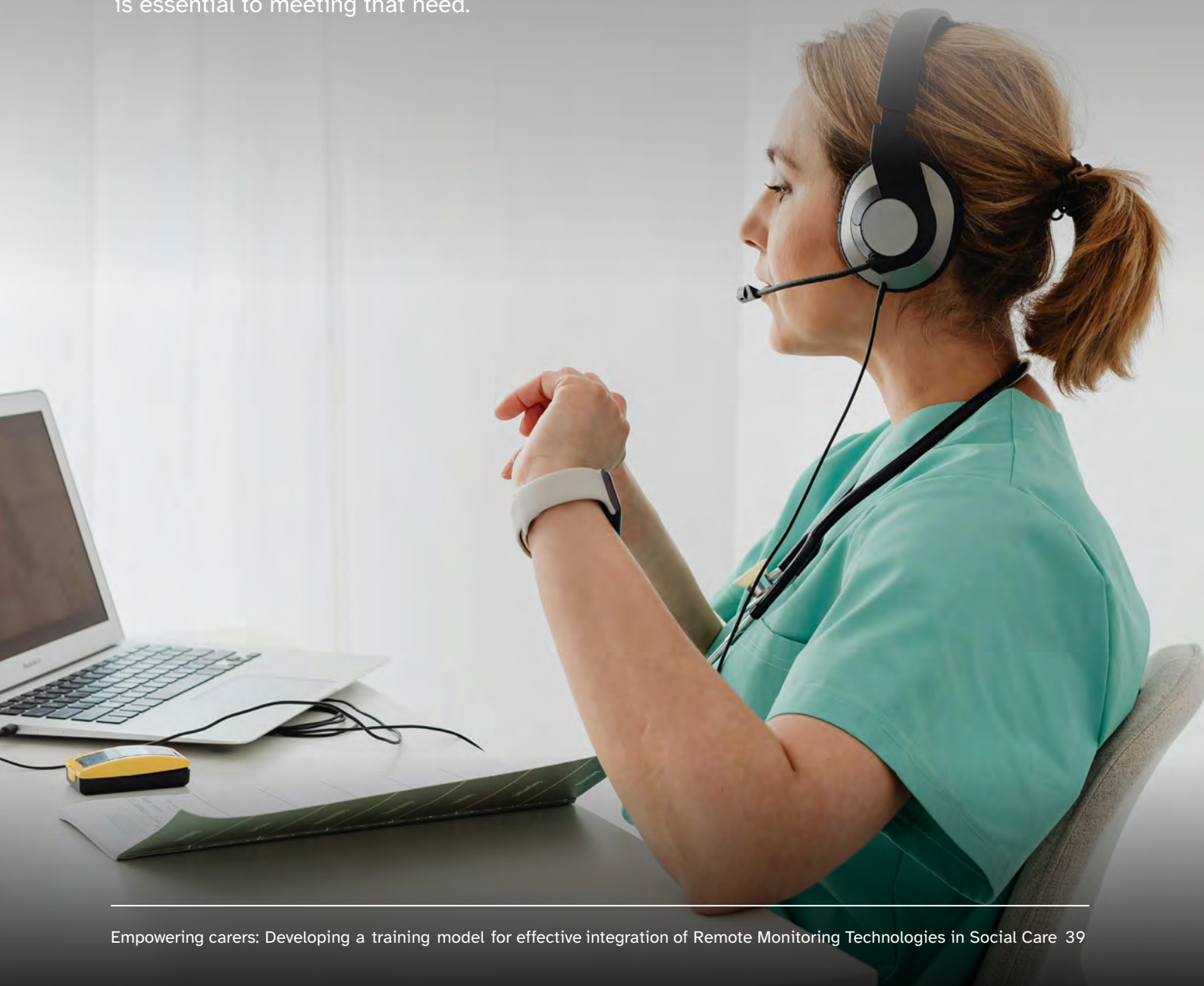
Regulators are crucial in ensuring the training programme meets national care standards and is recognised across the sector. Their endorsement lends credibility to the programme and ensures it aligns with broader goals for quality improvement in Health and Social Care. Regulators can also help standardise training requirements, creating consistency across organisations and reducing variability in carers' knowledge and skills.

Roadmap/next steps

This project sought to understand the local needs, opportunities, barriers, and facilitators related to creating an RMT training programme focused on the use of technology and digital tools for remote monitoring.

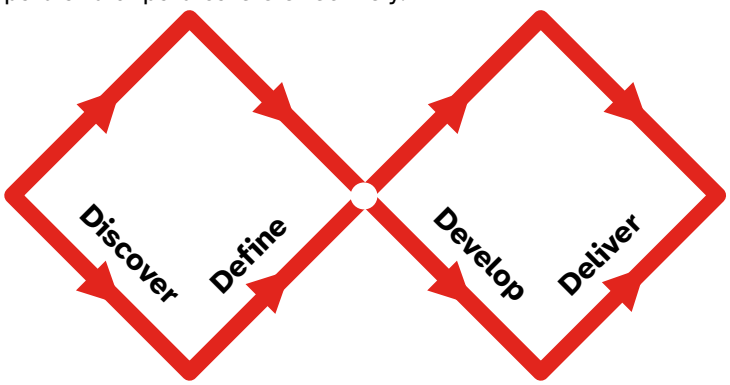
By actively engaging with health and care staff, care organisations, education providers, and technology experts, we explored how technology can play a crucial role in training and ongoing support. The insights gained from these stakeholders have laid the foundation for developing a co-designed RMT training programme that reflects the diverse needs of both paid and unpaid carers. The ultimate aim was to ensure that the training programme is effective, accessible, impactful, and ready for further iteration and testing.

There is significant local demand for this programme, and we anticipate a national appetite given the strong interest we have already received from local stakeholders. The next stage is essential to meeting that need.



Next Steps: Iterating the training programme

Building on the insights gathered during the discovery phase, the next step is to further iterate the proposed Remote Monitoring Training programme using the **Double Diamond Framework**. This structured approach, which includes four stages – Discover, Define, Develop, and Deliver – will guide the refinement and validation of the training programme through continuous feedback and testing, ensuring it meets the needs of both paid and unpaid carers effectively.



Source: **www.designcouncil.org.uk/our-resources/framework-for-innovation**

Develop: Refining the training modules

In the *Develop* phase, the focus will be on both refining the training modules and iterating the methods of delivery to ensure they effectively meet the diverse needs of carers.

This will involve:

- **Incorporating feedback from stakeholders:** Further feedback from key stakeholders will guide the refinement of the content, addressing any gaps or barriers identified during the discovery phase. This will include tailoring the training materials to be more culturally and linguistically adaptable, ensuring accessibility for all learners – especially those from non-English-speaking backgrounds or with varying levels of digital literacy.
- **Enhancing hands-on learning opportunities:** Building on the hands-on modules already outlined (e.g. device operation and troubleshooting), the training will further integrate practical, real-world scenarios to ensure carers are confident and capable in using RMTs. Special attention will be given to developing more interactive elements and simulations that can better engage both paid and unpaid carers.
- **Customising for different care settings:** We propose further iterating the content to better reflect the various care settings in which RMTs are used, whether in home care or residential settings. This will ensure the training programme is flexible enough to meet the needs of both environments.
- **Iterating delivery methods:** Alongside content refinement, we will focus on iterating and testing different methods of delivery (e.g. online, in-person, blended learning) to ensure that the training is engaging, accessible, and practical for all carers. This may include piloting different formats to identify the most effective approaches for diverse learner groups and environments.

In parallel, it is also essential to explore the implications of the RMT programme on clinical risk management. Stakeholders have already recognised the critical importance of training carers for effective clinical risk management. However, further work needs to be done to understand the fine line between what carers can and cannot do within the scope of their job role and responsibilities. This includes clarifying where clinical responsibility and the duty of care sit, and determining how much clinical input is still required. This aspect of the discovery phase will help define the boundaries of carers' roles in clinical decision-making and identify the training needs to ensure safe and effective use of RMTs while maintaining clear lines of responsibility and clinical oversight.

Pilot testing and feedback collection

After refining the modules and mode of delivery, we suggest conducting pilot tests with a small group of carers to assess the effectiveness of the training programme in real-world scenarios.

This will help identify:

- **Practical application:** Whether carers can successfully apply the knowledge and skills learned during the training to real-life situations.
- **Barriers to adoption:** Any remaining barriers, such as digital anxiety or integration challenges, that may prevent carers from fully engaging with or using remote monitoring tools.
- **Content relevance and delivery effectiveness:** Whether the content is relevant, accessible, and engaging for carers across different backgrounds and experience levels, and whether the chosen methods of delivery (e.g. online, in-person, blended) are effective in engaging carers and supporting their learning.

Based on this feedback, both the modules and methods of delivery can be further iterated to ensure they meet the specific needs and challenges of the target audience.

Deliver: Scaling and finalising the training programme

Once the training programme is tested and refined, the next step will be to focus on scaling and delivering the training programme to a broader audience.

This will involve:

- **Training trainers:** We suggest developing a network of qualified trainers who can deliver the training programme consistently and effectively. These trainers will be equipped to provide support and guidance tailored to both paid and unpaid carers, addressing any specific needs or concerns.
- **Developing support systems:** In addition to the core training, we suggest putting in place support mechanisms such as peer mentorship, ongoing technical support, and accessible learning resources to ensure carers can continue to use RMTs with confidence. Peer mentors, particularly those with shared caregiving experiences, can help reinforce the training and provide emotional support to carers who may feel anxious about using technology.
- **Adapting for flexibility:** To ensure accessibility for all carers, including unpaid carers who may have time constraints, the training should offer a blended learning format with online modules, in-person workshops, and on-demand support. The structure and timing of the training programme should be flexible, with accommodations for carers' varying schedules and needs.

Continuous improvement and long-term sustainability

We suggest integrating ongoing monitoring and feedback collection into the training programme to ensure its relevance and effectiveness over time.

This will include:

- **Feedback loops:** Continuing to collect feedback from participants after the training programme is delivered, ensuring that updates and improvements can be made to keep pace with changes in technology and caregiving practices.
- **Scaling the training programme:** Expanding the training programme across different regions and care sectors, with the support of both public and private stakeholders, ensuring it is accessible to carers in a variety of settings.
- **Sustainability planning:** Identifying long-term funding opportunities to ensure that the training programme remains sustainable and adaptable as new technologies emerge.

By iterating both the content and the delivery methods, and by working towards formal qualification recognition, we aim to create a comprehensive, adaptable, and sustainable training programme that supports carers in safely and confidently using RMTs, while also enhancing their professional standing through accredited qualifications.

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