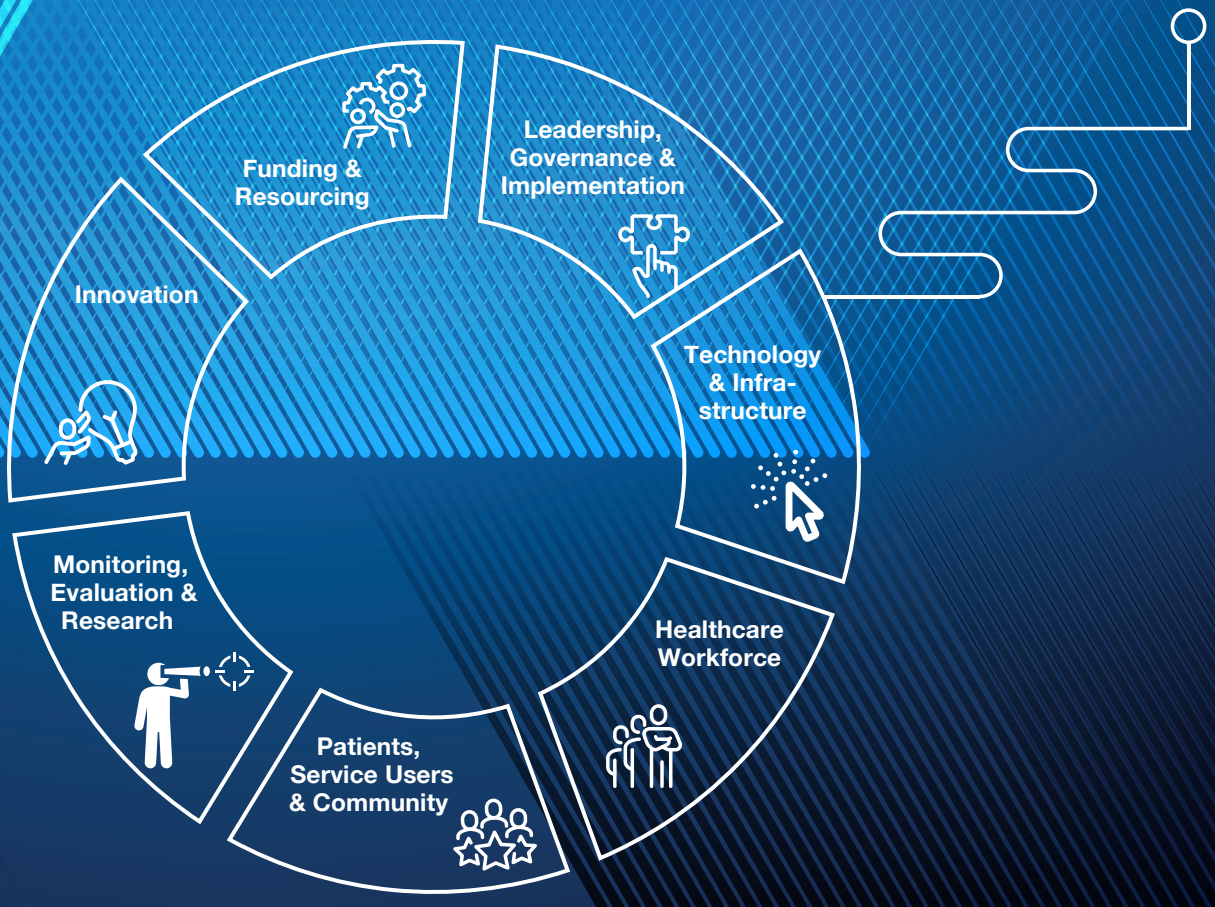
HSE Telehealth Roadmap 2024 - 2027



Building Blocks for the Embedding & Expansion of Telehealth

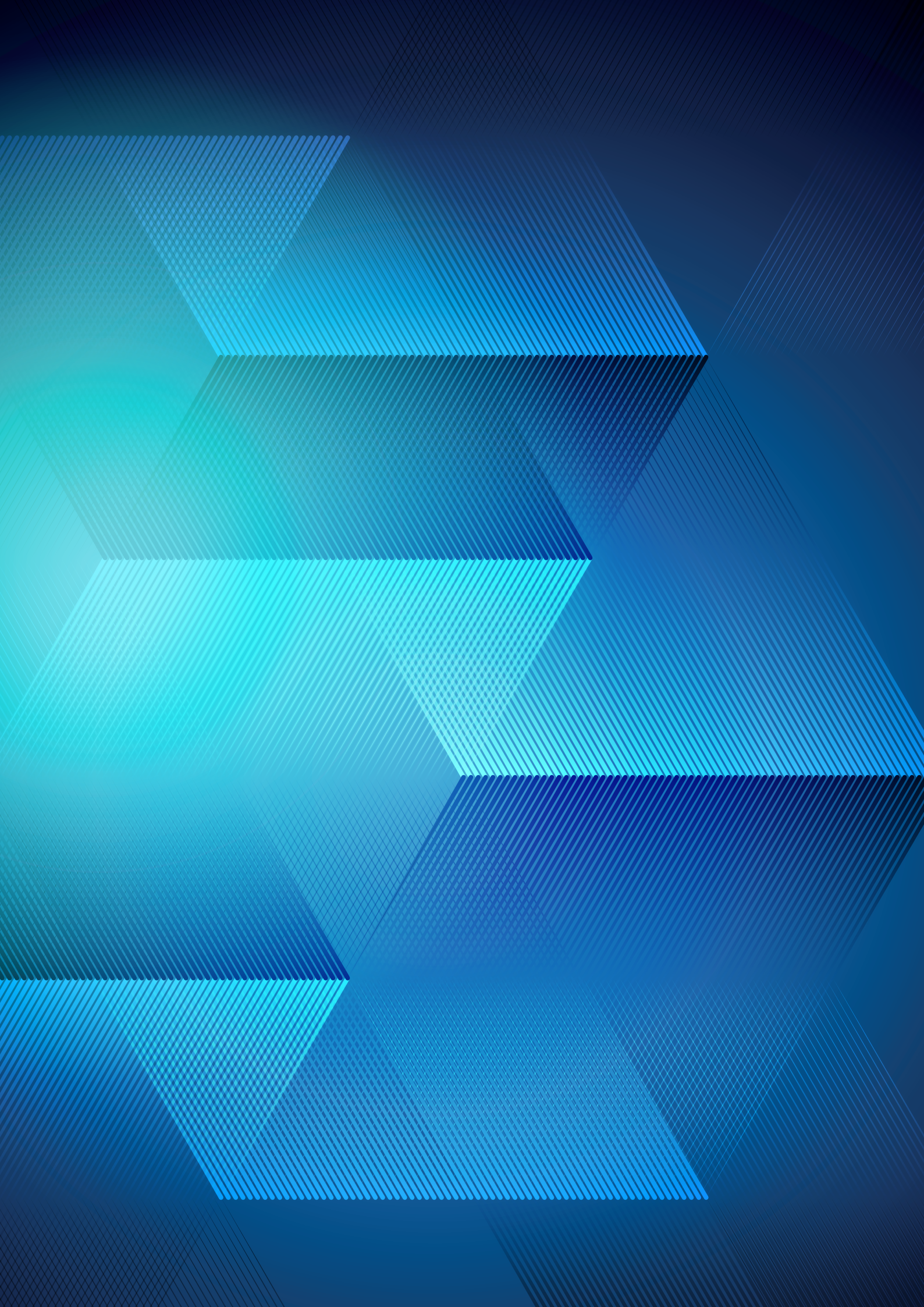


Table of Contents

Executive Summary	**4**
Telehealth Vision and Guiding Principles	**5**
1. Telehealth Roadmap Background	**6**
1.1 Why do we need a Telehealth Roadmap?	6
1.2. What is Telehealth?	7
1.3. Digital Health Policies and Strategies	8
1.4. Telehealth Roadmap Aim	9
2. Methodology for Roadmap Development	**10**
2.1. Telehealth Steering Committee and Working Group	10
2.2. National and International Telehealth Landscapes	10
2.3. Telehealth Consultation Day May 2023	10
3. HSE Telehealth Case Studies	**11**
3.1. Remote Consultations and Care Case Studies	11
3.2. Remote Health Monitoring Case Studies	11
3.3. Online Supports and Therapies Case Studies	12
4. International Experiences of Telehealth	**14**
5. Telehealth Consultation Day Findings	**15**
5.1. Education, Engagement, Awareness & Accessibility	15
5.2. Infrastructure, Technology, Equipment & Resources	15
5.3. Governance, Processes, Data & Evaluation	15
6. TELEHEALTH BUILDING BLOCKS 2024 - 2027	**16**
7. Conclusion	**25**
Telehealth Roadmap Acknowledgements	**26**
References	**28**

Executive Summary

Telehealth is the delivery of health care services using technology where patients and providers are separated by distance. In Ireland, telehealth supports delivery of care via remote consultations and care (video or audio), remote health monitoring, and online supports and therapies. The COVID-19 Pandemic accelerated the adoption of telehealth in Ireland and demonstrated many of the advantages of telehealth for patients and the healthcare service. This included reduced travel time and associated costs, emissions and time away from work, school, families and communities. However, telehealth can also support early intervention and reduced hospital admissions, and empower patients in the management of their health and wellbeing.

While the potential benefits of telehealth are clear, a strategic and coherent plan to ensure that telehealth is developed in an efficient, sustainable, safe and interoperable manner, is needed. This Telehealth Roadmap aimed to identify and assign the key building blocks which are critical to a firm foundation for telehealth in Ireland. These are to be developed over the next three years (2024-2027). International and national learnings as well as involvement from key stakeholders was sought (via a Telehealth Working Group, Steering Committee and Consultation Day).

Many international and national challenges and facilitators to telehealth were identified during the development of this Roadmap. These included requirements for: Funding & Resources (e.g., procurement frameworks); Technology and Infrastructure (e.g., reliable and secure connectivity, equipment); Leadership, Governance and Implementation (e.g., safety & quality standards); Healthcare Workforce (e.g., digital capabilities & buy-in); Patients, Family Carers, Service-users & Community (e.g., accessibility); Monitoring, Evaluation & Research (e.g., risk assessments & evidence building); and Innovation (e.g., mainstreaming innovations). The below building blocks for telehealth are critical for the successful development of telehealth in Ireland. Within each building block are key aims and actions which need to be completed by the end timeframe (2027).

Telehealth Vision and Guiding Principles

Vision for Telehealth in Ireland

To seamlessly integrate telehealth into business-as-usual within the healthcare service, providing high quality and safe healthcare, accessible to all, no matter who they are or where they live.

Guiding Principles for Telehealth

A key set of principles have been identified to guide the development, implementation, innovation and operation of telehealth across Ireland:

1. **Care is Care:**
   High quality care is the priority, regardless of the medium
2. **Patients as Empowered Partners:**
   Putting individuals and users at the centre, with respect to personal choice
3. **Digital Inclusion:**
   Ensuring digital access is inclusive and equitable for all
4. **Digitally-enabled Workforce & Workplace:**
   Empowering our healthcare workforce to effectively deliver care using telehealth
5. **Data Driven Service Improvement:**
   Continue our uncompromising commitment to patient safety, quality of care and continual improvement and evaluation
6. **Digitally Secure Foundations & Digital Enablers:**
   Maintain and build upon our stringent data, security and interoperability standards for seamless operations.

1. Telehealth Roadmap Background

1.1 Why do we need a Telehealth Roadmap?

While telehealth has long been used across the Irish health service, the significant pressures placed upon the health service in recent years, has led to further application of digital solutions to support healthcare delivery closer to home. The COVID-19 Pandemic was one such incentive which accelerated the adoption of telehealth to allow people to safely access services and reduce the risk of infection. During this period, approximately half of older people sampled by the Economic and Social Research Institute (ESRI) used some form of telehealth, most commonly with General Practitioners (GPs) but also pharmacists and hospital doctors (Mohan, 2023). However, the full potential of telehealth to transform healthcare is yet to be realised. There is demand among patients for telehealth to avoid hospital admissions by keeping people well and healthy at home (NHS Confederation, 2023a) and reducing unnecessary travel and waiting time for appointments and the associated costs and inconveniences (Denieffe et al., 2021; HSE, 2021a; Reynolds et al., 2021).

However, while the potential benefits are clear, there are many obstacles to the scaling and expanding of telehealth solutions to support the delivery of healthcare across Ireland. These include challenges with broadband connectivity, digital literacy, digital equity, concerns about reduced quality and safety, equipment availability, health information available in digital format, interoperability between devices, and data, and device security and privacy. Additionally, future technological developments underway which could have a huge impact on telehealth will require consideration of clinical governance and patient safety and ethics, including Artificial Intelligence (AI). While there have been some excellent examples of telehealth innovations across Ireland, some of which are described in this Roadmap, these pilots with proven patient benefits need opportunities and pathways to be scaled and expanded across the country where clinically appropriate. Therefore, a coherent and strategic plan for the development of telehealth in Ireland is required to ensure that it is safe, effective, efficient, scalable, sustainable and interoperable.

1.2. What is Telehealth?

According to the World Health Organisation (WHO), telehealth is the "delivery of health care services, where patients and providers are separated by distance. Telehealth uses Information Communication Technology (ICT) for the exchange of information for the diagnosis and treatment of diseases and injuries, research and evaluation, and for the continuing education of health professionals" (WHO, 2016).

Telehealth is used to deliver virtual care for patients in Ireland via remote consultations and care, remote health monitoring, and online supports and therapies.

Remote Consultations and Care

This encompasses clinical consultations and appointments conducted remotely by healthcare providers using web-based video call, audio solution(s), or telephones as part of business-as-usual operations, where clinically appropriate. This reduces time away from home, families, work and communities for service-users and patients, and the associated travel costs, inconveniences, and carbon emissions. Additionally, remote consultations can allow healthcare providers to seek a specialist review at the same appointment adding convenience and efficiency for patients, and supports hybrid work models for healthcare professionals.

Remote Health Monitoring

This harnesses digital technologies to allow patient monitoring outside of conventional clinical settings, such as in the home or in a remote area. Remote health monitoring facilitates care of patients by allowing clinicians to track longitudinal vital signs, physical symptoms, chronic conditions, patient feedback etc., from the patients' own day-to-day environment as opposed to a snapshot in the clinical setting, enabling a view of trends and patterns and a more proactive approach to healthcare provision. This also empowers patients and involves family carers who have access to the data, and allows early detection of disease, and early intervention; thereby reducing emergency department visits, hospitalisations, and the duration of hospital stays. This reduces demands on the healthcare system while providing high value care to the patient in the comfort of their own home.

Online Supports and Therapies

These encompass internet and messaging-based solutions and resources which offer peer and healthcare provider support, and self- or healthcare provider-led therapies. These supports and therapies can provide synchronous and asynchronous responses and may include secure text-messaging, interactive mobile apps, web-based video calls (e.g., virtual exercise class) and social media. Online supports and therapies helps make healthcare and well-being services more accessible to everyone, and can help support early intervention, detection and prevention. This type of education and intervention can be more effective and appealing for some service-users and also reduces travel to appointments. It also allows some people to get initial support when waiting to see a specialist healthcare provider face-to-face.

As demonstrated in Figure 1, each of the telehealth approaches can be used alone or in combination with each other, to provide effective high-quality healthcare to service-users and patients (e.g., virtual wards use the systems and staffing of a hospital ward while enabling the patient to get the care they need safely and conveniently from where they live by using video-enabled consultations and remote monitoring devices).

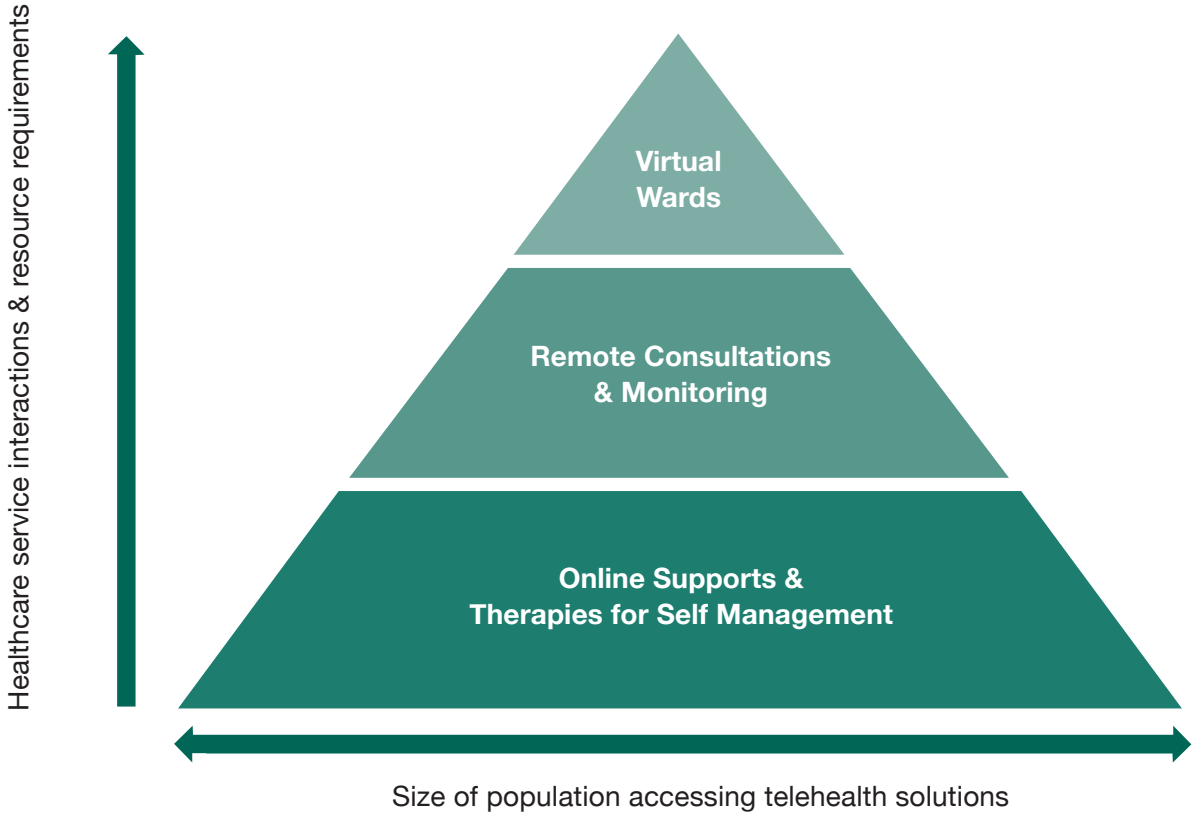


Figure 1 Pyramid of Telehealth Use

1.3. Digital Health Policies and Strategies

Telehealth plays a major role in many of the international and national healthcare plans and policies, in particular the Health Service Executive (HSE) Digital Health Strategic Implementation Plan and the HSE Climate Action Strategy. This Telehealth Roadmap needs to strategically align with these policies.

HSE Digital Health Strategic Implementation Plan

The new HSE Digital Health Strategic Implementation Plan aims to incorporate telehealth as a major component of the digital health developments over the next decade (HSE, 2023a).

This will require telehealth to align and integrate with the other key digital developments outlined by this implementation plan including:

- **Electronic Health Records (EHRs):** provide a longitudinal digital record of a patient's health information
- **Shared Care Record:** bring together a summary of patient health information from the various systems across organisations to enable healthcare providers in different settings to view the patient records
- **Patient portal:** provides patients with acccess to their own health information

The further development of these systems will support virtual care and further development and enhancement of telehealth services. However, to future-proof telehealth, telehealth solutions will need to be able to seamlessly exchange information with these systems (i.e. they must be interoperable) and provide a single point of access to all healthcare services.

HSE Climate Action Strategy 2023-2025

Telehealth also plays a major role in the HSE Climate Action Strategy 2023-2025, as it has the potential to reduce travel-related emissions of patients and staff, promote greener models of healthcare with reduced hospital stays and provide alternative care models (HSE, 2023b). This will allow healthcare delivery in a future of increasingly challenging weather events that will likely impact on patient and staff mobility.

Other international and national plans impacting on the development of telehealth include the WHO Global Strategy on Digital Health 2020-2025 and the Sláintecare Action Plan, the HSE Corporate Plan, and Healthy Ireland, which all promote the development of telehealth solutions to deliver care closer to home, support earlier discharge from secondary care services, and enhance access to services for patients and families to healthcare supports while reducing inequalities (Government of Ireland, 2023, 2017; HSE, 2021b; Healthy Ireland, 2023). Emanating from this, the HSE National Service Plan (2023) notes the requirement of eHealth to 'continue to enable the ambitions of Sláintecare through transformational technologies including… the increased adoption of our telehealth platforms' alongside the ambition to facilitate integrated care. Upcoming strategies and regulation including the Irish Health Information Bill, the European Health Data Space and the European AI Act, to name a few, will all support and inform the development of safe telehealth but will also provide standards that telehealth development will need to align to.

1.4. Telehealth Roadmap Aim

Telehealth has an endless and rapidly evolving potential to transform Irish healthcare services, however, this will require vision, determination and resources. This Roadmap aimed to identify the key Building Blocks required during the time period 2024-2027 to develop sustainable, scalable, effective, efficient and safe telehealth with collaboration from key stakeholder and using international learnings. Alongside this Roadmap, there will be a working document on the implementation plan and ownership of each of the building blocks.

2. Methodology for Roadmap Development

The process to develop this roadmap involved key stakeholders and a review of national and international strategies.

2.1. Telehealth Steering Committee and Working Group

The National Telehealth Steering Committee governs the HSE's Telehealth Programme and in April 2023, it set up a dedicated Telehealth Working Group with the mandate to develop a Telehealth Roadmap for Ireland. The Telehealth Working Group included representatives from patient groups, general practice, health and social care professions, hospital doctors, nursing, medical physics, clinical engineering, Department of Health, National Clinical Programmes, mental health operations, quality and patient safety, eHealth programme, training and education, and strategy and planning (see acknowledgements). The Working Group met regularly in person and virtually to provide perspectives and feedback on the building blocks and development of this Roadmap. A workshop was also run with the Steering Committee to finalise the telehealth building blocks.

2.2. National and International Telehealth Landscapes

A review of international telehealth strategies was undertaken by the Telehealth Working Group members and the Digital Health Consultant Researcher using a SWOT (Strengths Weaknesses, Opportunities and Threats) analysis; strategies reviewed included from Canada (Canadian Medical Association, 2019, 2022; Health Canada, 2021); Australia (Queensland Government, 2021; The University of Queensland Australia, 2020; Strategic Reform and Planning NSW, 2022); Scotland (Scottish Government, 2018); Denmark (Healthcare Denmark, 2018); New Zealand (South Island Alliance, 2019; New Zealand Telehealth Services, 2021); and Portugal (SPMS, 2018). Experiences of the Telehealth Working Group of the development of telehealth in Ireland were combined with the international learnings to develop the telehealth building blocks. Information on telehealth case studies in Ireland was also gathered from across the HSE.

2.3. Telehealth Consultation Day May 2023

With the aim of gathering views of patients/service users, healthcare professionals using telehealth solutions and leaders in this space, a Telehealth Consultation Day 'HSE Telehealth Consultation Day: The Now, The Next, The Future' took place (eHealth Ireland, 2023). Following presentations on Video Enabled Care, Remote Health Monitoring, and Online Supports and Therapies, views were gathered from the attendees (n=80) on the development of each area and analysed by the Digital Health Consultant Researcher along with text responses from three other invitees not in attendance.

3. HSE Telehealth Case Studies

Many telehealth solutions are in use across the public and private healthcare service in Ireland. To demonstrate telehealth implementations using different types of solutions across scheduled, unscheduled, community, acute and integrated care, a number of HSE case studies are described below.

3.1. Remote Consultations and Care Case Studies

Remote Video-enabled Consultations

During the COVID-19 pandemic, a number of solutions were quickly deployed to support video-enabled consultations in the HSE. Since 2020, there have been over 400,000 video-enabled consultations with patients. Evaluations have demonstrated high patient satisfaction with 95% of patients/clients reporting that they were likely to recommend a virtual consultation to a friend or colleague (HSE, 2021a). With many benefits associated with video-enabled care including less stress and cost of travel for patients, as well as reduced carbon emissions and cancelled appointments, the HSE is now completing a formal procurement process to establish a framework for a video-enabled consultation technology platform.

Virtual Gestational Diabetes Care Service

Pregnant people with known diabetes and gestational diabetes require specialist care and education to manage their diabetes through all stages of the care continuum. A virtual interactive classroom and was set up by a multidisciplinary team (neonatal, endocrinology etc.) including midwives, ANPs, clinical specialist nurses (CNS), physiotherapists, dieticians and the mental health team. This virtual clinic provides care to approximately 800 women per annum which means that 75% of patients can now have their gestational diabetes managed at home. In an evaluation of the antenatal virtual clinic, almost all of the study participants (n=174) were very satisfied with all aspects of online classes, 99% rated the class as very good, 87% indicated that they would be happy to continue with online classes and 81% found the online classes to be the same or better than the previous face-to face classes (Thompson and Keena, 2022). The four major benefits of online classes to the participants included not travelling to class, no transport/parking costs, the convenience of an online option and feeling safer during the COVID-19 pandemic.

Pathfinder Case Study

A significant majority of patients with low acuity and non-emergent conditions present to local emergency departments (ED). This affects ED capacity and performance and older people are more negatively impacted with high rates of adverse outcomes following ED presentation (Corcoran et al., 2023). Pathfinder sees an ambulance team consisting of an Advanced Paramedic and a Clinical Specialist Occupational Therapist (OT) or Physiotherapist responding to 999 phone calls from low acuity elderly patients (DOH, 2020). Where appropriate, the patient is treated by the Ambulance Team

at the scene and followed up in their home by OT and physiotherapy. Evaluations of the Pathfinder service found that 64% of people remained at home following initial review with none re-presenting to the ED within 24 hours and 10% re-presenting within 7 days; and there was 99% patient satisfaction with the service (Bernard et al., 2021). After two years in operation at Beaumont Hospital, Pathfinder services went live in Limerick, Tallaght, Waterford, Kilkenny, Cork and Kerry.

3.2. Remote Health Monitoring Case Studies

Community COPD Virtual Ward

With the aim of reducing hospital admissions for people with Continuous Obstructive Pulmonary Disease (COPD), a community virtual ward was established in Letterkenny. Patients were admitted and monitored from their home using a bespoke platform incorporating continuous remote monitoring of respiratory rate. The objective and subjective patient data were reviewed daily by a registered advanced Nurse Practitioner (ANP) and when a deviation from the normal trend became apparent, the Patient was assessed and necessary support was provided virtually including rescue prescriptions where required. An evaluation of the small early stage pilot with 10 participants found that hospital admission was avoided for 100% of identified COPD exacerbations, the service was, on average, less costly and more effective than hospital care, and patients' self-management, understanding of COPD and quality-adjusted life years were improved. With the success of the pilot COPD community virtual ward, further virtual wards for acute care are planned by the HSE.

3.3.Online Supports and Therapies Case Studies

Cognitive Behavioural Online Therapy

With one in four people in Ireland expected to experience some mental health problems in their lifetime, online Cognitive Behavioural Therapy (CBT) programmes can help reach more people than in-person therapy alone. Since April 2021, therapist-supported online CBT programmes, addressing mild to moderate depression and anxiety, have been developed in Ireland and are available via referral from GPs, Primary Care Psychology, National Counselling Service and Jigsaw. As of June 2023, 18,099 referrals have been made and 11,201 user licenses were activated. An evaluation of 3,614 users found that the percentage of those with moderate to severe anxiety reduced from 68% to 38%, and those with moderate and severe depression reduced from 23% to 17% and 13% to 9% respectively.

HSE Stop Smoking Service

The HSE Stop Smoking Team offers free support to those who want to quit smoking via telephone, text message, the internet and social media. According to the National Patient Management System for HSE Stop Smoking Service, in 2022, 10,320 tobacco users attended a virtual structured behavioural support programme of 10 minutes or more (compared with 6,550 in 2021), and 50% of those set a quit date and remained quit at 4 weeks post this date.

Ask Our Breast-Feeding Expert

This is an online breastfeeding support live chat or email service which allows users to communicate with a breastfeeding expert in real-time. Since 2019, there have been 4,169 chats answered and 10,253 emails answered by this service.

Text About It

'Text About It' is a HSE-funded free, anonymous, 24/7 messaging service providing everything from a calming chat to immediate support for mental health and emotional wellbeing. Support is provided by a trained volunteer monitored by a mental health professional, and emergency protocols are in place to escalate imminent risk to the National Ambulance Service where appropriate. While 'Text About It' may be accessed via SMS message, internet-based communications are also used through platforms such as WhatsApp. There were nearly 350,000 users of the 'Text About It' website in 2022, with nearly 50,000 conversations engaged, and 675 emergency escalations of users.

4. International Experiences of Telehealth

Having reviewed the international telehealth strategies and additional literature, it is clear that Ireland is not unique in the challenges identified in the scaling and development of sustainable and interoperable telehealth. While some countries are more digitally advanced, Ireland can learn from their experiences and progress in telehealth. Some of the key international learnings identified are outlined below:

- Strategic and coordinated governance and regulation over telehealth initiatives is recommended as opposed to autonomous fragmented local initiatives to support sustainability of initiatives and scalability to other organisations (Alami et al., 2017; Healthcare Denmark, 2018; SPMS, 2018; South Island Alliance, 2019).
- Seamless data exchange between healthcare systems and providers with protection of security is advised to avoid fragmented healthcare when using telehealth (Queensland Government, 2021; SPMS, 2018; South Island Alliance, 2019).
- Infrastructure, equipment and connectivity is required to allow widespread adoption for everyone no matter where they work or live (SPMS, 2018; Queensland Government, 2021).
- Staffing, resources, funding, procurement and training is critical to the scalability and sustainability of telehealth (NHS Confederation, 2023b; SPMS, 2018; Alami et al., 2017; Canadian Medal Association, 2022; SPMS, 2018).
- Resistance to telehealth can be overcome by developing digital capabilities and building trust and buy-in with education, training and public awareness campaigns (South Island Alliance, 2019; Scottish Government, 2018; SPMS, 2018).
- Assessment of the effectiveness, safety, security, regulation, privacy, confidentiality, usability, accessibility, interoperability and technical stability of telehealth solutions is required (Public Health England, 2017).
- Health inequalities which can be exacerbated by telehealth need to be considered for certain communities or marginalised groups do not have equal access to telehealth services due to socioeconomic factors, language barriers, or disability-related challenges (Slater and French, 2023).

5. Telehealth Consultation Day Findings

The findings from the Telehealth Consultation Day were incorporated into the Telehealth Guiding Principles, Vision and Building Blocks. A link to the detailed report on the Telehealth Consultation Day is provided in the references with a summary provided below.

5.1. Education, Engagement, Awareness & Accessibility

Participants highlighted the importance of education for healthcare providers on the use and implementation of telehealth and the promotion of digital literacy for patients, while supporting them with accessible language and equitable access to technology. Ongoing input from the key stakeholders (patients, families, healthcare staff and IT) in the design, development and implementation of telehealth, was also recommended with their concerns and expectations addressed. The need for more sharing of learning and telehealth opportunities across the health service was also promoted by participants to increase awareness and further implementations.

5.2. Infrastructure, Technology, Equipment & Resources

In relation to technology, participants highlighted the need for funding and investment in telehealth equipment, research and innovation. They also recommended supports for data management and security, as well as technology and data standards to promote interoperability. The development of this infrastructure should however, consider ongoing developments within the wider healthcare service including EHRs and patient portals.

5.3. Governance, Processes, Data & Evaluation

Finally, the participants also discussed the importance of the processes around telehealth including governance, data collection and evaluations. It was recommended that telehealth devices are accredited and approved in the future where appropriate with national and local governance in place. Additionally, further evaluations of telehealth solutions were recommended with meaningful data collected and evidence shared alongside examples of best practices and standard operating procedures.

In addition to the key components required to develop telehealth, the participants also discussed the future potential for telehealth in Ireland over the next 10 years. It was believed that telehealth will become the norm within healthcare services. AI is also expected to play a role in telehealth, however, it is expected that human oversight and assessment of safety will be required. Overall, telehealth was believed by participants to have huge potential to enhance the delivery of healthcare and empower the citizens of Ireland.

6. Telehealth Building Blocks 2024 - 2027

To reap the full benefits for patients of telehealth and its rapid evolution, innovation and potential, the HSE and wider health service need to spend the next three years (2024-2027) putting in place the building blocks to provide a firm foundation for telehealth. Within each of the seven building blocks, there are key aims and actions which should be completed across community and acute care.

Funding & Resourcing

1. Aim: Make funding processes for telehealth visible and available to all healthcare organisations (including HSE, Section 38/29 Partners and General Practice

Actions:

1. Provide support to all healthcare providers and organisations seeking resources to fund telehealth solutions, equipment and evaluations.
2. Establish and share business case templates for telehealth solutions.
3. Promote availability of other funding sources (e.g., Slaintecare) which can contribute to the funding for telehealth development, implementation and research.

Intent: Equitable access by all public healthcare organisations and providers to funding opportunities for telehealth solutions

2. Aim: Make procurement processes for telehealth visible and available to all healthcare organisations (including HSE, Section 38/29 Partners and General Practice).

Actions:

1. Provide support to all healthcare providers and organisations seeking resources to procure telehealth solutions and equipment.
2. Establish and share procurement frameworks for telehealth solutions.
3. Where suitable and appropriate, administer licencing centrally to ensure best value for money and optimise efficiency of administration and domain expertise.
4. Embed established data, security, privacy, safety, and interoperability standards in procurement processes (See Aims 6 and 9).

Intent: Equitable access by all public healthcare organisations and providers to procure telehealth solutions.

3. Aim: Ensure appropriate workforce planning and resourcing for telehealth development and implementation.

Actions:

1. Continue to expand on the appointment of dedicated digital health roles and the inclusion of telehealth within these roles and other core healthcare provider roles.
2. Support healthcare providers with time and resources to plan telehealth interventions and development of telehealth projects.
3. Embed workforce planning in all business cases for large telehealth initiatives.

Intent: Appropriate resources and support for healthcare providers to develop and implement telehealth solutions.

Leadership, Governance & Implementation

4. Aim: Establish a dedicated and resourced telehealth operating model which includes regional and local telehealth networks to provide leadership and support the coordinated development and local implementation of telehealth solutions.

Actions:

1. Identify the resource requirements for a dedicated telehealth operating model to provide support in the procurement, development, implementation and scaling of telehealth solutions locally.
2. Develop a business case for the funding and resourcing of this telehealth operating model.
3. Develop a telehealth network with regional and local leadership which is coordinated by the telehealth operating model and links across all healthcare regions and organisations.

Intent: Coherent, sustainable and equitable development and implementation of effective and interoperable telehealth solutions at a national, regional and local level.

5. Aim: Ensure guidance is available for good, standardised clinical and data governance for telehealth solutions.

Actions:

1. Develop and make available templates for business cases, telehealth policies, standard operating procedures, consent forms and patient information leaflets, that can be adapted and localised to any service or organisation.
2. Develop enabling connected governance for telehealth at national, regional and local levels to support telehealth implementation.
3. Embed telehealth into clinical governance for quality and safety frameworks and encourage regular risk assessments.

Intent: Appropriate political, financial, clinical and data governance structures are in place to support the safe, effective and cost-effective implementation of telehealth solutions.

6. Aim: Develop minimum performance criteria requirements for telehealth solutions to ensure clinical safety and quality.

Actions:

1. Set out minimum performance criteria and characteristics for telehealth solutions in relation to clinical effectiveness, validity and reliability and security by which they should be evaluated.
2. Build awareness across the health service of these requirements, digital clinical safety and those for medical and non-medical devices as well as clear definitions of what falls under each of those category.

3. Liaise with vendors to ensure collaboration and understanding of requirements in terms of quality, clinical, technical and fiscal performance of telehealth solutions and ensuring these are based around real health services challenges.
4. Ensure that telehealth solutions which do not achieve their potential as set out in the business case are removed from use, ensuring complete risk-based documentation of decisions and processes around this.
5. Initiate discussion and develop the required policies, procedures, protocols and guidance to support safe and effective clinical decision support and AI in telehealth.
6. Ensure conformance, where appropriate, with these requirements in all new and existing telehealth solutions and encourage audit of compliance.

Intent: Appropriate technology is used at the right time, in the right place, in line with appropriate governance structures and with instructions for use.

Technology & Infrastructure

7. Aim: Align development of telehealth solutions with overall digital health implementation strategy and other digital health related developments, plans and policies.

Actions:

1. All new and existing telehealth solutions should consider how they need to integrate and be interoperable with existing and future digital health solutions (e.g., EHRs, shared care record, patient portal).
2. Build awareness and ensure compliance with technical standards used nationally.
3. Share and align resources and policies for telehealth with other digital solutions where possible including those on security and crisis-readiness.

Intent: Interoperable, sustainable and scalable telehealth solutions.

8. Aim: Improve the availability of telehealth infrastructure to support the delivery of telehealth within healthcare organisations.

Actions:

1. Provide support to those seeking funding for telehealth equipment (See Aim 2).
2. Provide support to those procuring telehealth equipment meeting national standards and regulations (See Aim 3).

3. Work with the core infrastructure teams to ensure identification and allocation of appropriate clinical settings for telehealth consultations and remote health monitoring, with consideration of connectivity, privacy and ergonomics where required.

Intent: Digitally-enabled workplace with approved telehealth equipment, technology space and connectivity for healthcare providers, patients and service-users.

9. Aim: Ensure technical measures are in place to support security, privacy and interoperability, and compliance with GDPR.

Actions:

1. Develop security and privacy recommendations and supports for the storage and management of data from telehealth solutions, including for data in the cloud with input from the Data Protection Commission where appropriate.
2. Align standards for telehealth solutions with those in the standards API framework and other recommended standardised data formats and communication protocols recommended for other digital health solutions.
3. Include plans for data management and security, as well as any accompanying disinvestment opportunities and risks of data breaches, in all telehealth business plans.
4. Build expertise on surmounting the challenges of conflicts between connected medical devices and cyber security software and firewalls.

Intent: Secure and safe sharing of health data in line with data protection regulation.

Healthcare Workforce

10. Aim: Build an awareness of opportunities, trust and buy-in for telehealth within the healthcare workforce.

Actions:

1. Develop and deliver an effective communication plan across the health service and academic institutions which includes the benefits of, and evidence and opportunities for telehealth both for patients and the healthcare providers themselves.
2. Develop and share robust and consistent change management strategies, standard operating procedures, toolkits, guidelines and policies for any service or individual who wants to implement telehealth.

3. Ensure engagement of relevant healthcare providers, administrators and relevant partners in the design, development and implementation of all telehealth applications.

4. Make dedicated staff available to healthcare providers to provide ongoing support on the development and use of telehealth with access to staff dedicated to promoting and supporting the uptake of telehealth (e.g., Champions, Clinical Informatics Officers, Administrators, Operations, Business Intelligence) (See Aim 3).

Intent: More healthcare providers developing ideas and implementing telehealth in clinically appropriate areas of their practice and supporting retention and recruitment of the healthcare workforce with new work practices.

11. Aim: Improve digital capabilities for telehealth for the healthcare workforce.

Actions:

1. Adopt the Digital Capability Frameworks within Nursing, Midwifery, HSCP and Medical undergraduate and postgraduate university programmes.

2. Develop and promote in-person and virtual telehealth continuous professional development (e.g., training modules on HSELand) to drive upskilling of workforce.

3. Promote professional recognition of competencies in telehealth.

4. Develop and/or expand on communities of practice for telehealth.

Intent: Digitally-enabled workforce with digital competency in the use of telehealth.

12. Aim: Embed telehealth in clinical practice

Actions:

1. Include telehealth in all relevant healthcare workforce terms and conditions, and professional educational programmes.

2. Identify system-wide key performance indicators (KPIs) for the development of telehealth services for monitoring success.

3. Promote clinical audit and monitoring of telehealth activity across the health service (See Aim 16).

4. Develop a new Roadmap at the end of this time period which builds on the progress made from 2024 to 2027.

Intent: Telehealth is part of business-as-usual for healthcare providers.

Patients, Family Carers, Service-users & Community

13. Aim: Build awareness and trust to support utilisation of telehealth by patients, family carers, service-users and communities.

Actions:

1. Continue to involve and seek input from the public, patient advocacy groups and carers in the co-design, development and implementation of and strategies for telehealth.
2. Develop and deliver an effective communication plan for the public, patients and family carers which promotes the availability and benefits and safety of telehealth, motivating them to use telehealth when deemed clinically appropriate.
3. Develop standardised consent forms and patient information leaflets, which include assurance of patients regarding data security and governance, and can be adapted for appropriate telehealth solutions.
5. Identify existing and develop new training, supports and guidance, where required, on the use of telehealth for patients and families.
6. Clear process for patients and their families to report any issues regarding telehealth utilisation and for healthcare providers in dealing with same.

Intent: Person-centred care and patients as empowered partners in the use and development of telehealth.

14. Aim: Equitable and inclusive access to telehealth for everyone from any background.

Actions:

1. Develop standardised patient readiness checklists which consider available family support and digital competence which can be adapted for appropriate telehealth solutions.
2. Include training on accessibility in telehealth training and education for the healthcare workforce including providers and administrators.
3. Work with community organisations for priority populations (e.g., social deprivation, migrants, travelling community, people with disabilities, older people) to identify appropriate strategies, address barriers and ensure more inclusive design (e.g., multiple languages).
4. Develop a multi-agency approach with different points of access to telehealth resources and supports (e.g., libraries, digital hubs, schools).
5. Provide resources (e.g., devices, connectivity) and supports (e.g., training) required by patients to use telehealth.

6. Ensure consideration of determinants of health and wellbeing in business plans for telehealth solutions.

Intent: Reduce inequalities in accessing healthcare via telehealth.

Monitoring, Evaluation & Research

15. Aim: Create a clearer national picture of current and new telehealth projects across the public and private sectors.

Actions:

1. Collect information on existing and future telehealth implementations nationally including the types of technologies and infrastructure, resources required, utilisation and evaluation learnings and evidence.
2. Use the current information on telehealth to develop appropriate KPIs in relation to telehealth usage and related to each of these building blocks.
3. Implement the use of these KPIs across the healthcare service to monitor success of the building blocks.

Intent: Incentivise further telehealth implementation, buy-in and adoption.

16. Aim: Increase the focus on telehealth quality improvement, risk assessments, audit, evaluation and research.

Actions:

1. Provide guidance on health technology assessments (HTAs), risk assessments, standard tools, guidance documents and meaningful metrics for telehealth evaluations and the scaling of these projects.
2. Prioritise HTAs, risk assessments and regular audits of telehealth including on compliance with regulations and standards (See Aim 3).
3. Require more evaluations on all new and existing telehealth solutions which include the patient, carer, and clinician experience, outcomes and safety.
4. Share learnings and evidence from telehealth evaluations for the national picture and with healthcare providers, patients and those implementing further telehealth projects.
5. Increase links with academic institutions in relation to telehealth research and joint funding for telehealth development.

Intent: Ensure patient safety and high-quality care.

Innovation

17. Aim: Support and promote more telehealth innovations across the health service.

Actions:

1. Develop clear and safe processes and guidance to establish, operate, evaluate and close pilot telehealth innovations (e.g., regional digital design labs) within the healthcare service including safeguarding of patient data collected.
2. Develop a formal process for engaging with industry partners regarding emerging telehealth innovations.
3. Engage internationally to share learnings on telehealth innovations.
4. Engage with academic and research institutions on the development of telehealth innovations.
5. Continue to support telehealth innovation and research, and integrate into the wider research and innovation function of the HSE.

Intent: Increase the number of innovative telehealth ideas and projects which benefit the public.

18. Aim: Support the mainstreaming of innovative telehealth solutions across the health service.

Actions:

1. Develop a clear map of stages of innovation, from development through to mainstreaming, with the recommended steps to be undertaken at each stage.
2. Develop mechanism to support efficient and effective mainstreaming including standardised innovation governance structures and processes.
3. Engage closely and partner with industry partners involved in telehealth innovations.
4. Conduct health technology assessments (HTAs) and other evaluations including research on new telehealth innovations and share findings with relevant stakeholders (See Aim 16).

Intent: Strategic and cost-effective mainstreaming of telehealth innovations which have proven patient benefits.

7. Conclusion

Telehealth expands our opportunities to deliver high quality and safe care to patients. The key building blocks and actions identified in this Roadmap are critical to promote a strategic and consistent path for more scalable, safe, effective and interoperable telehealth development. Overall, the aim of integrating telehealth into business-as-usual within the healthcare service ensures care provision closer to home which is accessible to all, benefiting patients, their families and communities.

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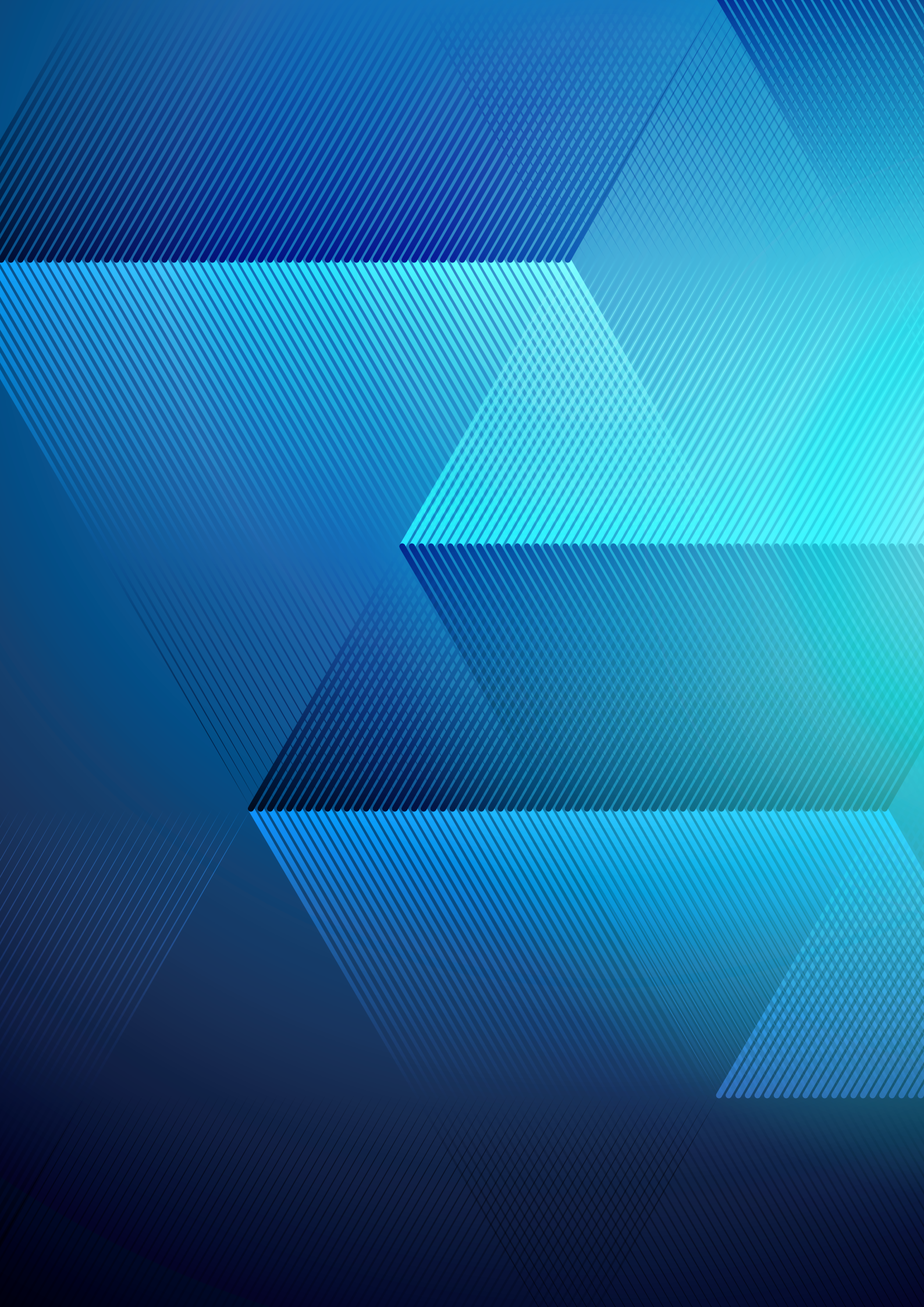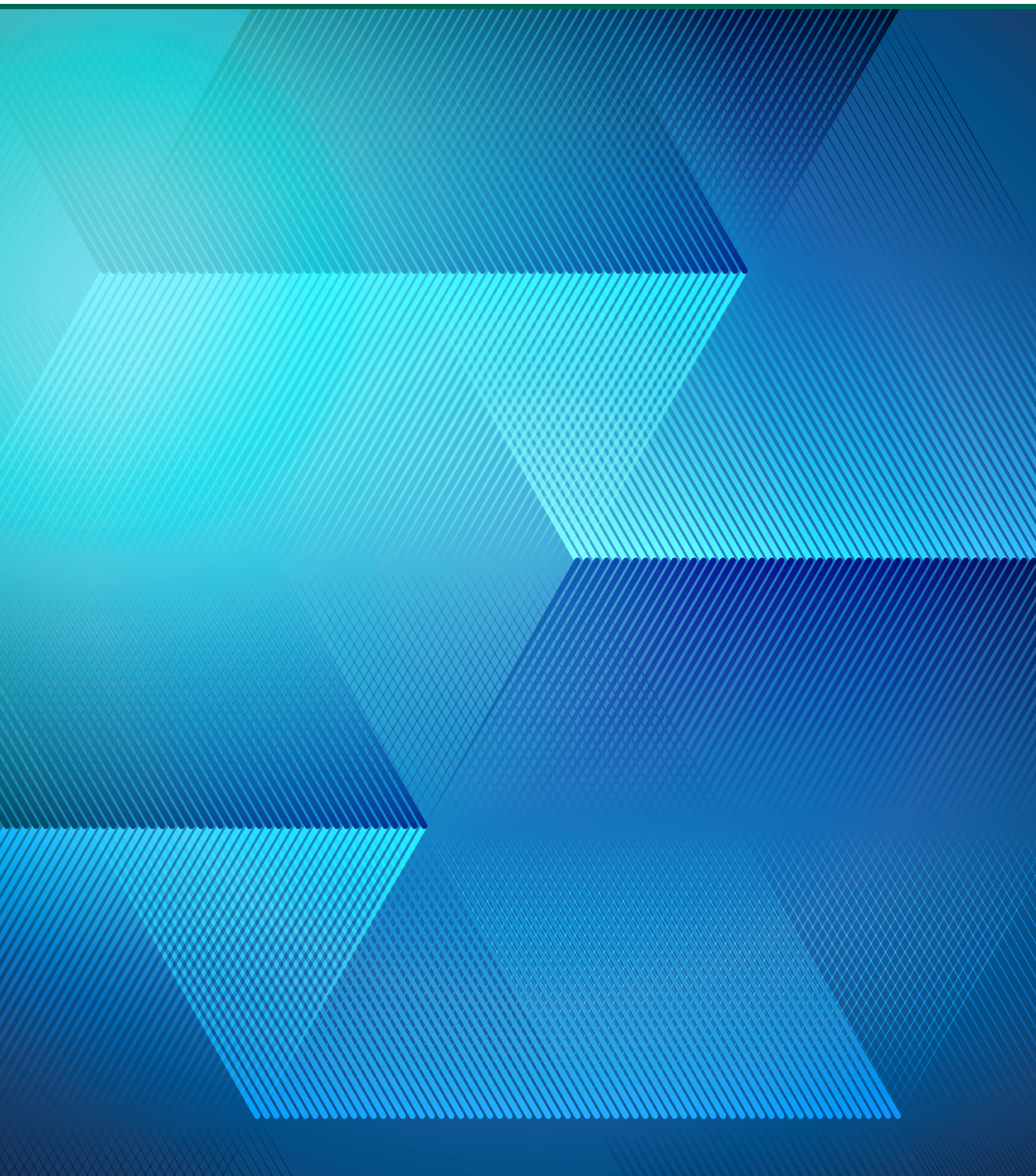
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