

Evaluating digital technologies: Health Technology Wales perspective

David Jarrom

Senior Researcher, Health Technology Wales



Technoleg Iechyd Cymru
Health Technology Wales



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Overview

- Who HTW are
- What we do
- Evaluating evidence on digital health technologies





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Health Technology Wales



Hwb Gwyddorau Bywyd | Cymru
Life Sciences Hub | Wales

HTW HEALTH

WORKSHOPS

TECHNOLOGY ASSESSMENT AND ECONOMICS

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WORKSHOPS

TECHNOLOGY ASSESSMENT AND ECONOMICS

Health Technology Wales (HTW) has collaborated with Life Sciences Hub Wales (LSHW) to introduce you to key concepts and methods in Health Technology Assessment and Health Economics, through two interactive and free workshops.

WHY IS THIS IMPORTANT?

Advances in health technologies will have a major impact on the future of health and social care in Wales.

Our Health Technology Assessment (HTA) workshop will introduce you to key methods used to appraise health technologies and understand their potential value to service users, providers and technology partners.

The Health Economics (HE) workshop will introduce you to the methods of economic evaluation used to understand the cost effectiveness and impact on resources of health and care technologies.

Both workshops will use live examples from HTW, the body responsible for producing national guidance to maximise value and optimise use of technologies that will improve health and care in Wales.



BOOK YOUR PLACE NOW

www.htw-workshops.eventbrite.co.uk



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The purpose of HTW



HTW purpose

To deliver a strategic, national approach to the **identification, appraisal** and **adoption** of new technologies into health and care settings

HTW covers all types of *non-medicines* health technologies:

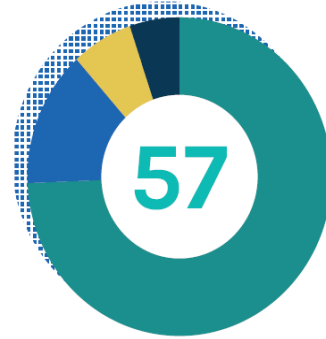
- devices
- diagnostics
- surgical procedures
- clinical interventions
- organisational/service design interventions
- psychological therapies

“Assessing Value - Optimising Use”



In its first year, HTW...

Responded to 57 topic referrals from a variety of stakeholder groups



- NHS
- Industry
- Welsh Government
- Academia & Other



Presented at external meetings and conferences



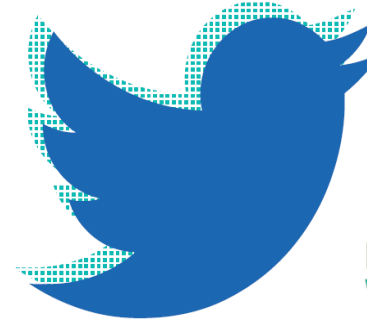
Produced multiple standard operating procedures, an evaluation strategy, a communications strategy, and a new website.

Hosted 2 multi-stakeholder adoption workshops



150+ ATTENDEES

+437 FOLLOWERS



180 TWEETS

2,586 PROFILE VISITS



15

ADVISORY COMMITTEE MEETINGS HELD



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Scarce resources



**DIFFICULT CHOICES FOR
DECISION MAKERS**



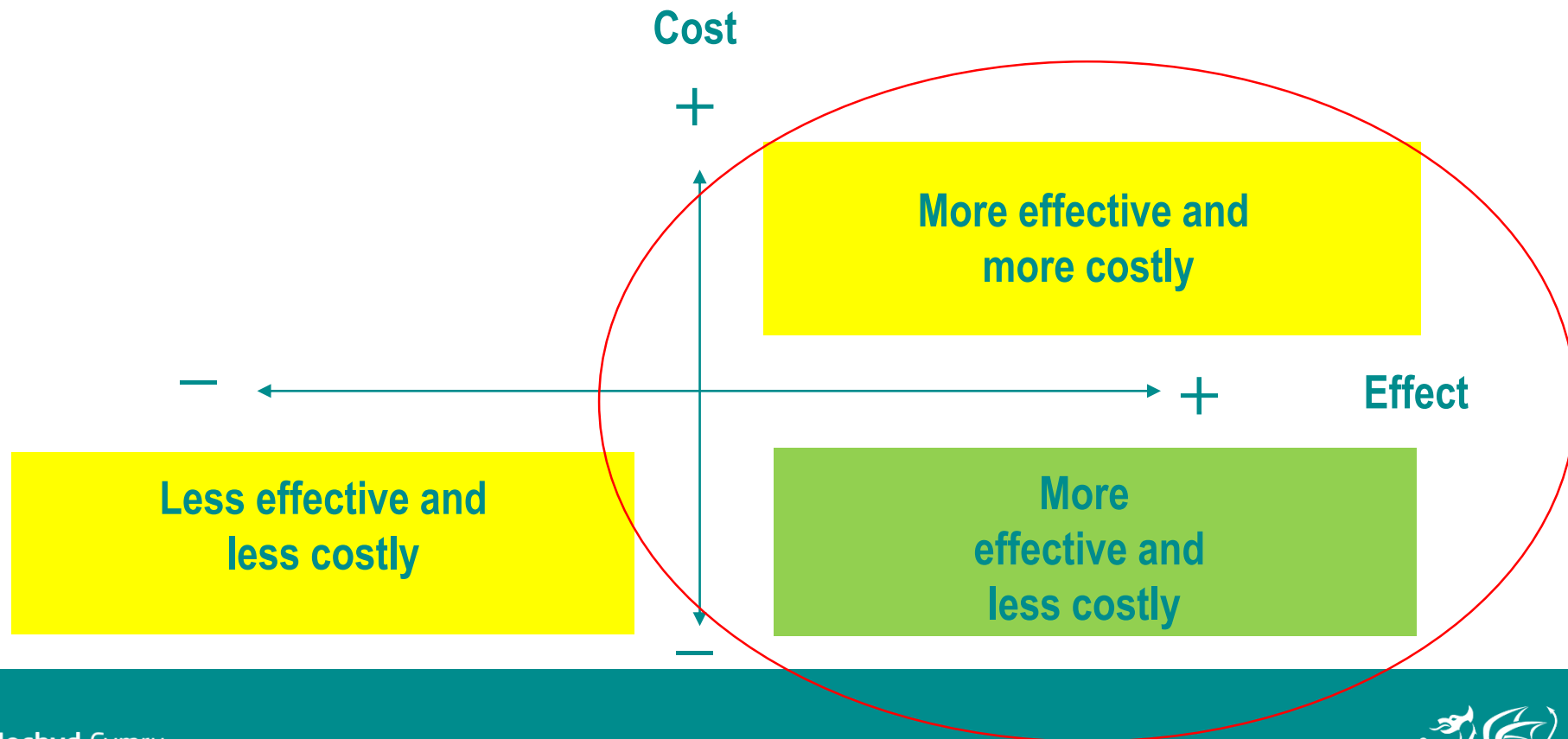
Health Technology Assessment

Evidence-based methods to guide the optimal
allocation of health care resources




Assessing Clinical and Cost Effectiveness

Comparison of two alternative technologies:



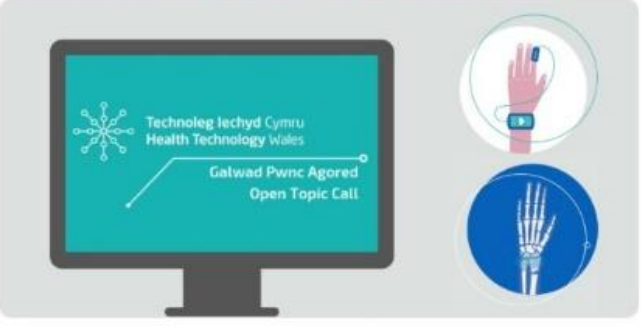
Anyone can suggest a technology for HTW to appraise

 **Health Technology Wales**
@HealthTechWales

Oes gennych chi syniad y gallwn ei arfarnu?
Gall unrhyw un atgyfeirio pwnc atom ni:

- #NHSWales
- Clinigwyr
- Diwydiant technoleg
- Cleifion
- Gofalwyr
- Aelodau o'r cyhoedd

Cliciwch yma i awgrymu eich pwnc iechyd a gofal cymdeithasol:
healthtechnology.wales/suggest-a-topi...



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Do you have a solution-based idea we can appraise? Anyone can refer a topic to us, whether you are:

- #NHSWales
- Clinicians
- Industry
- Patients
- Carers
- Members of the public

Click here to suggest your health and social care topic: healthtechnology.wales/suggest-a-topi...



Criteria for selecting potential appraisal topics

Are there likely to be sufficient published research findings available upon which to base a technology assessment, and to allow HTW to provide clear advice to support decision making?	Yes/No/Unclear
Is a clear additional health benefit to patients or benefit to the NHS anticipated or evident from the use of this technology?	Yes/No/Unclear
Is there wide variation in provision or outcome of the technology across NHS Wales, and/or uncertainty about the effectiveness of the technology?	Yes/No/Unclear
Is the technology likely to have an impact on NHS resources (consuming or releasing)?	Yes/No/Unclear
Is the technology likely to have a major impact on NHS Wales? (eg a new addition to care; alter care processes/improve their quality)	Yes/No/Unclear
Is there potential for quality improvement from undertaking an assessment of this technology at this time? (eg is there recent sufficient evidence to assess; is the topic a priority in Wales)	Yes/No/Unclear



Topic exploration reports give an overview of the effectiveness of a health technology

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Home About Reports & Guidance Suggest a topic News & Events Contact

Reports & Guidance > Parkinson's KinetiGraph™ system

Parkinson's KinetiGraph™ system

TOPIC STATUS Complete ●

Parkinson's KinetiGraph for monitoring symptoms in people with Parkinson's disease.

Summary This report was prepared by Health Technology Wales on behalf of the Bevan Commission. It summarises the existing evidence on the technology of interest to support a Bevan health technology exemplar application.

Topic Exploration Report
TER028 (10.2018) [View PDF](#)

Suggest a topic
If there's a technology that you'd like us to appraise then we'd love to hear from you. [Suggest a topic](#)

Newsletter
Keeping you up-to-date with periodic news and important developments at HTW. [Subscribe](#)

Health Technology Wales Partners

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GIG CYMRU NHS WALES Ymddiriedolaeth GIG Prifysgol Felindre Velindre University NHS Trust



Topic Exploration Report

Topic explorations are designed to provide a high-level briefing on new topics submitted for consideration by Health Technology Wales. This report was prepared by Health Technology Wales on behalf of the Bevan Commission. It summarises the existing evidence on the technology of interest to support a Bevan health technology exemplar application.

Topic:	Parkinson's KinetiGraph™ system
Topic exploration report number:	TER028
Referrer:	Lauren Evans
Topic exploration undertaken by:	Health Technology Wales

Aim of Search

Health Technology Wales researchers searched for evidence on the use of virtual clinics supported by the Parkinson's KinetiGraph data logger, or any other wearable device used to measure motor symptoms in people with Parkinson's disease.

Summary of Findings

There is very limited evidence on the effectiveness of KinetiGraph as a method of measuring motor symptoms. We identified two small studies that investigated the effectiveness of KinetiGraph and its consistency with other motor symptom measurements, but further high-quality research is needed.

The use of wearable devices in general by people with Parkinson's disease has been assessed in a number of recent systematic reviews. These highlight that a wide range of different wearable devices are available, but that further high-quality research is needed to better understand the utility of these in Parkinson's disease.

Key sources of evidence

- Hubble, R.P., et al., Wearable sensor use for assessing standing balance and walking stability in people with Parkinson's disease: a systematic review. PLoS One, 2015. 10(4): p. e0123705.
- Rovini, E., C. Maremmani, and F. Cavallo, How Wearable Sensors Can Support Parkinson's Disease Diagnosis and Treatment: A Systematic Review. Front Neurosci, 2017. 11: p. 555.
- Ossig C, Gandor F, Fauser M, Bosredon C, Churilov L, Reichmann H, et al. Correlation of Quantitative Motor State Assessment Using a Kinetograph and Patient Diaries in Advanced PD: Data from an Observational Study. PloS one. 2016;11(8):e0161559.



Topic exploration reports give an overview of the effectiveness of a health technology

The screenshot shows the website for Technoleg Iechyd Cymru (Health Technology Wales). The main navigation includes Home, About, Reports & Guidance, Suggest a topic, News & Events, and Contact. The current page is titled "iNOTZ oncology documentation system" and is marked as "TOPIC STATUS Complete". A summary box states: "This report was prepared by Health Technology Wales on behalf of the Bevan Commission. It summarises the existing evidence on the technology of interest to support a Bevan health technology exemplar application." Below this is a "Topic Exploration Report" card for TER027 (10.2018) with a "View PDF" button. At the bottom, there are sections for "Suggest a topic" and "Newsletter".

The thumbnail displays the report's title and a brief description: "Topic explorations are designed to provide a high-level briefing on new topics submitted for consideration by Health Technology Wales. This report was prepared by Health Technology Wales on behalf of the Bevan Commission. It summarises the existing evidence on the technology of interest to support a Bevan health technology exemplar application." Below the description is a table with the following details:

Topic:	iNOTZ oncology documentation system to create and store haematology patient data
Topic exploration report number:	TER027
Referrer:	Ceri Bygrave
Topic exploration undertaken by:	Health Technology Wales

Below the table, the "Aim of Search" section states: "Health Technology Wales researchers searched for evidence on the use of the iNOTZ oncology documentation system, or use of digital case notes in general in any cancer setting." The "Summary of Findings" section states: "We did not identify any published or ongoing studies investigating the use of iNOTZ, or the use of digital case notes in general in any cancer setting." The "Key sources of evidence" section states: "None identified." The "Areas of Uncertainty" section states: "Evidence on the impact and/or effectiveness of digital case notes in oncology, or any other setting, appear to be very limited or non-existent. Further research in this area is required." The footer of the report shows "TER027", "Page 1 of 3", and "October 2018".



HTW guidance provides detailed advice on the use of a technology, based on a rigorous evidence review



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Health Technology Wales

HEALTH TECHNOLOGY WALES (HTW) GUIDANCE 004 (November 2018)

FreeStyle Libre flash glucose monitoring for the management of type 1 or type 2 diabetes



Figure 1. Image of FreeStyle Libre sensor and reader (provided by Abbott Diabetes Care)

HTW guidance: Freestyle Libre shows promise for detecting and guiding the correction of hypoglycaemia in patients requiring multiple daily insulin dosing for Type 1 and Type 2 diabetes mellitus. The current evidence, however, does not support routine adoption. The use of Freestyle Libre may be considered as an alternative to finger-prick self-monitoring of blood glucose in clinical circumstances where multiple testing (eight or more times per day) is required.



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Health Technology Wales

Evidence Appraisal Report¹

Review of systematic reviews and additional primary studies

Clinical and cost effectiveness of FreeStyle Libre flash glucose monitoring for the management of type 1 or type 2 diabetes



Figure 1. Image of FreeStyle Libre sensor and reader (provided by Abbott Diabetes Care)

1. Health problem

Type 1 diabetes, an autoimmune condition that results in destruction of insulin-secreting cells and subsequent loss of control of blood glucose levels, is treated with insulin replacement therapy. In healthy individuals, insulin levels fluctuate, and insulin replacement therapy aims to replicate these normal fluctuations in insulin levels and improve control of blood glucose levels (NICE 2015a). Type 2 diabetes is usually managed through a combination of lifestyle interventions and (non-insulin) pharmaceutical treatments, but some people with type 2 diabetes require insulin treatment when these other interventions have failed to control blood glucose levels or are not suitable for them (NICE 2015b).



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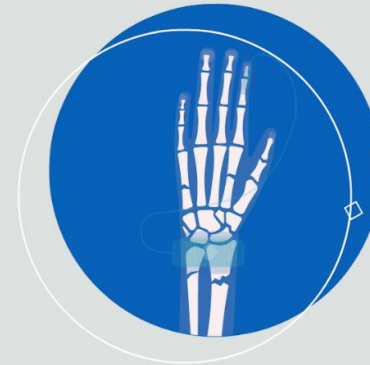
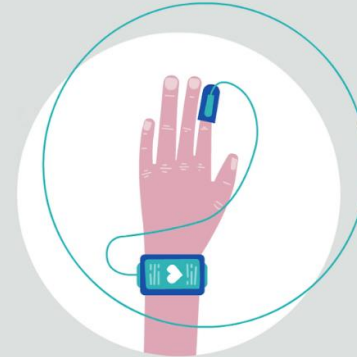


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Galwad Pwnc Agored
Open Topic Call

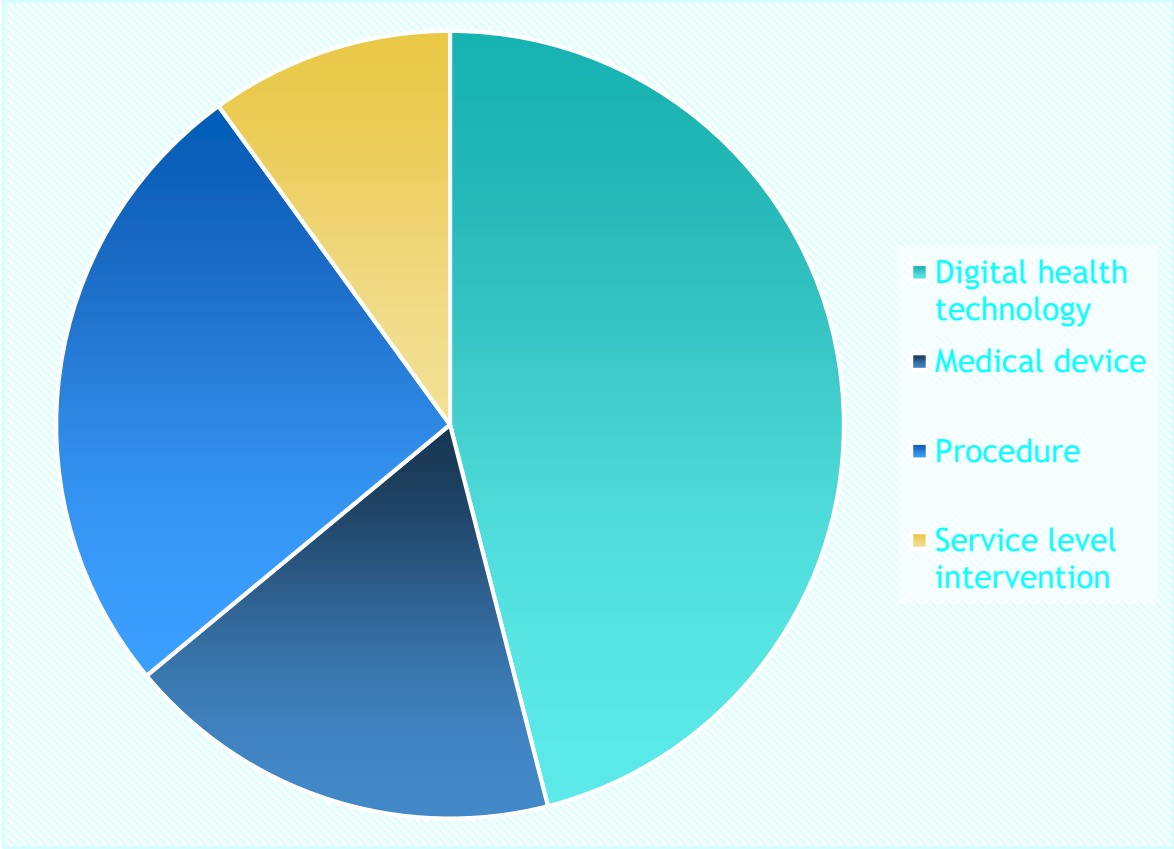


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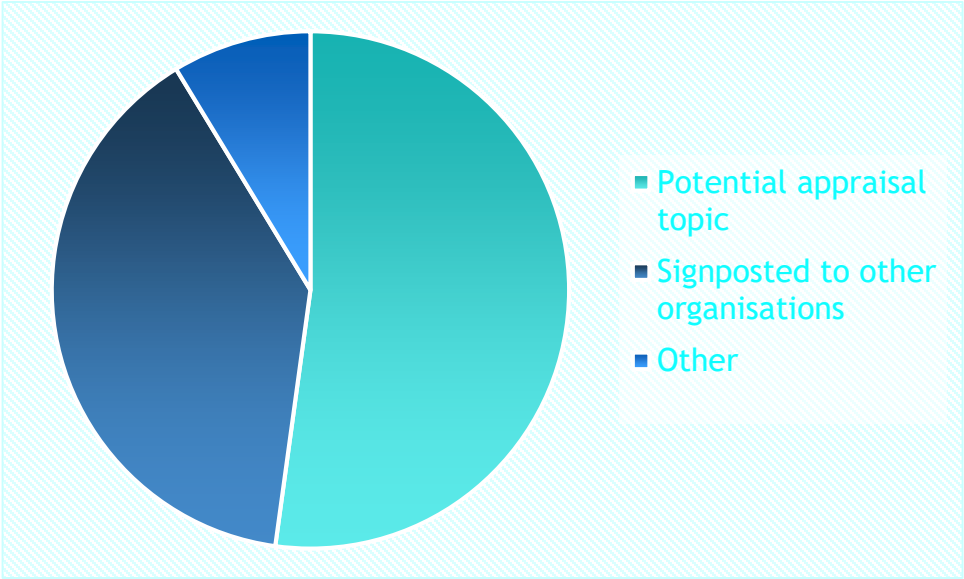
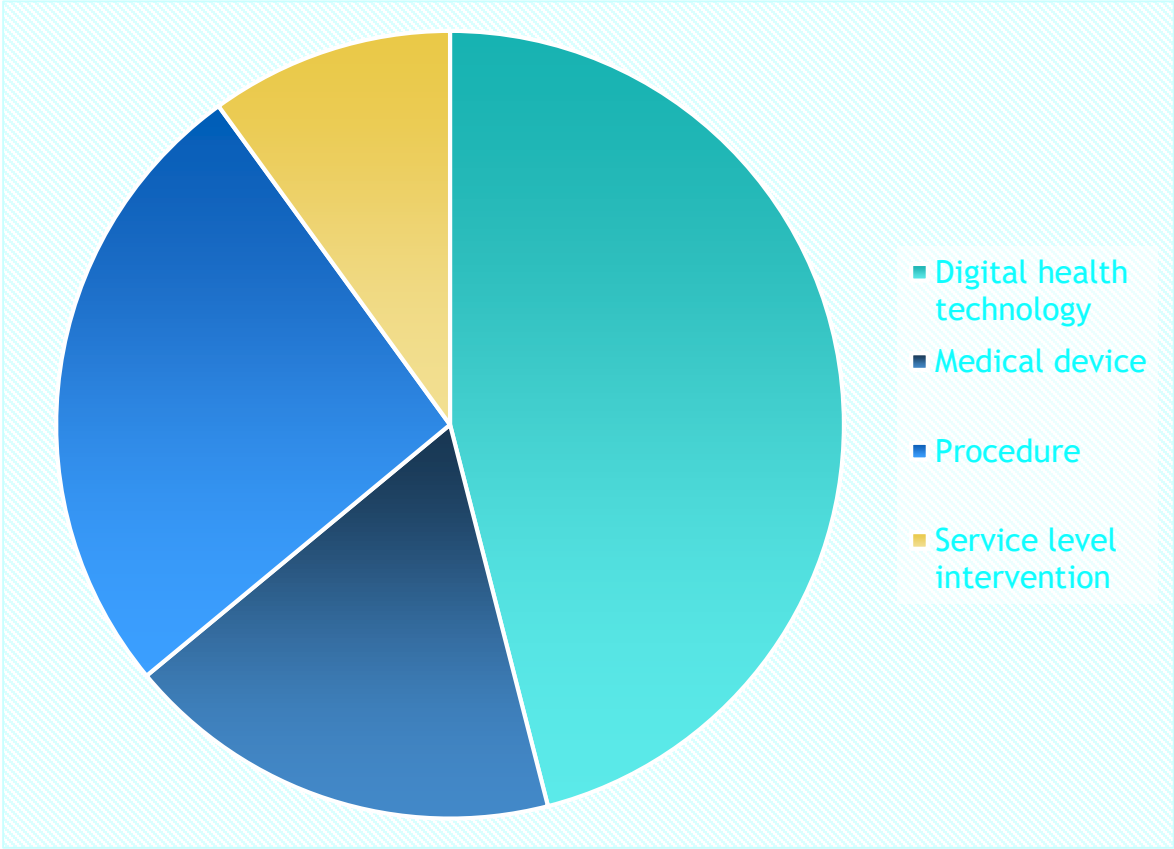


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Open topic call output - total 50 topics received



Open topic call output - total 50 topics received



What are digital health technologies?

- Apps, programmes and software used in the health and care system. They may be standalone or combined with other products such as medical devices or diagnostic tests.

Compared to other technologies, DHTs:

- Have rapid development/iteration
- Tend to have less/lower quality evidence available for evaluation
- May have specific issues around data security/privacy/confidentiality that make their implementation challenging





[Home](#) > [About](#) > [What we do](#) > [Our programmes](#)

Evidence standards framework for digital health technologies

Help shape the framework

close x

We've launched a survey to find out about your experiences of the framework. Help us shape what we do next to improve it.

Feedback welcomed from all stakeholders - developers, commissioners, individuals and organisations. Closing date: 10 October 2019

[Take the survey](#)

As digital health technologies develop at an increasing pace, we've worked with partners to develop standards that ensure new technologies are clinically effective and offer economic value.

The aim of the standards is to make it easier for innovators and commissioners to understand what good levels of evidence for digital healthcare technologies look like. Digital healthcare technologies must also meet the needs of the health and care system, patients, and users.

We created the standards as part of a working group led by NHS England. The group also includes:

- Public Health England
- MedCity
- DigitalHealth.London.



NICE National Institute for Health and Care Excellence



Public Health England



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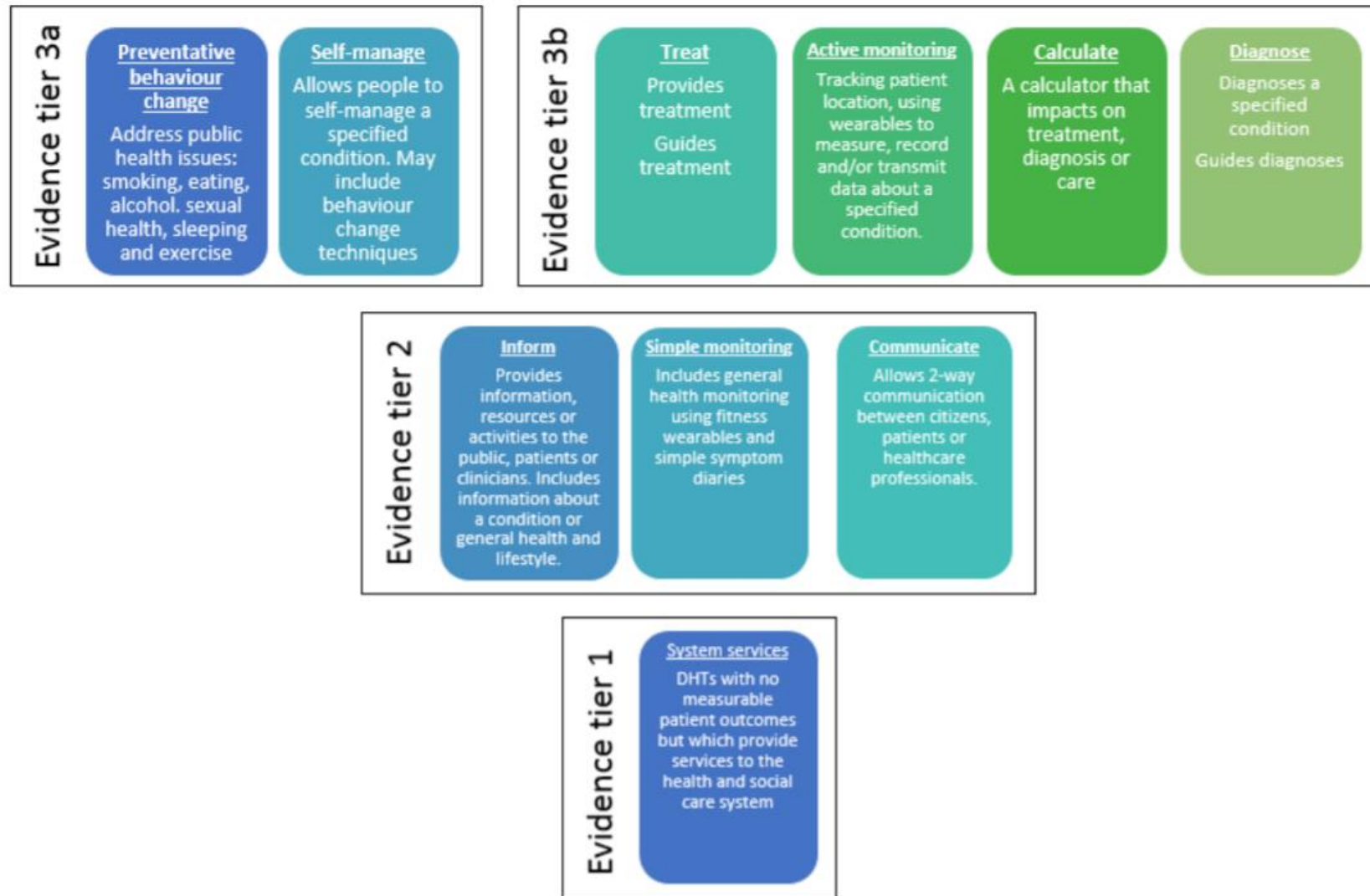
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The digital evidence standards framework describes:

- The types and levels of evidence needed to show the effectiveness of a DHT
- The types and levels of evidence needed to show the economic impact of a DHT
- The risk to service users and economic risk of introducing a DHT
- **It is not a tool for evaluation in itself.**



Figure 1 DHTs classified by function and stratified into evidence tiers



How can we use the evidence standards to appraise DHTS?

- Assessing suitability of a DHT for assessment/guidance
- Assessing what evidence should be taken into account in assessment
- Categorising DHTs according to the standards, and including this in any published advice



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Criteria for selecting potential appraisal topics

Are there likely to be sufficient published research findings available upon which to base a technology assessment, and to allow HTW to provide clear advice to support decision making?	Evidence for effectiveness tables
Is a clear additional health benefit to patients or benefit to the NHS anticipated or evident from the use of this technology?	Evidence for effectiveness. Functional classification
Is there wide variation in provision or outcome of the technology across NHS Wales, and/or uncertainty about the effectiveness of the technology?	
Is the technology likely to have an impact on NHS resources (consuming or releasing)?	Risk classification Economic standards
Is the technology likely to have a major impact on NHS Wales? (eg a new addition to care; alter care processes/improve their quality)	Functional/risk classification
Is there potential for quality improvement from undertaking an assessment of this technology at this time? (eg is there recent sufficient evidence to assess; is the topic a priority in Wales)	



So far....

- Topic exploration conducted on first tranche of DHTs, taking the evidence standards into account (published on our website)
- Three selected for further more detailed work/production of Guidance
- A further tranche being piloted with input from the technology developers



Challenges and considerations

- Avoiding unnecessary duplication (for the NHS, commissioners, and manufacturers)
- Avoiding unnecessary variation (across Wales and the wider UK)
- “even playing field” for DHTs versus other technologies
- Longevity/future-proofing of any Guidance we produce



Have your say on evidence standards 2.0

All Reports Archives - Page 2 of 7 | evidence standards framework fo | Evidence standards framework fo | NICE seeks feedback from users

nice.org.uk/news/article/evidence-standards-framework-for-digital-health-technologies

NICE National Institute for Health and Care Excellence

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NICE seeks feedback from users of the evidence standards framework for digital health technologies

Consultation on priority areas open to stakeholders until mid October

23 September 2019 [Share](#)



Want to find out more?



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HTW HEALTH WORKSHOPS TECHNOLOGY ASSESSMENT AND ECONOMICS

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