

NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

Evidence Standards Framework for Digital Health Technologies

Examples of Functional Classifications for Selected Digital Health Technologies

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Examples of Functional Classifications for Digital Health Technologies

York Health Economics Consortium has tested the different functional classifications for digital health technologies (DHTs), as proposed by NICE in the Framework issued on 10 December 2018. The example DHTs were selected from various sources including the NHS Apps Library, the NHS Innovation Accelerator and apps in the Improving Access to Psychological Therapies (IAPT) programme. The classifications for over 90 DHTs is provided in tables 1-4. These are also available in an Excel format, with filters available to use to analyse the information.

Table 1: Examples of tier 1 digital health technologies

Name of DHT	Brief description	Functional category	Evidence tier & risk (lower/higher)	Clinical area	Source (i.e. NHS apps library, IAPT etc)	Current use in NHS organisations? ¹
Shrewd	Enables front line teams and operational leaders to identify where pressure is across the health system and its root cause.	System services	Tier 1 lower	System services	Other	Yes
Artemus ICS	Data mining tool. Purpose is to enable efficient use of resources and track outcomes of interventions.	System services	Tier 1 higher	System services	NHS innovation accelerator	Yes
DrDoctor	DrDoctor enables patients to view, change and schedule outpatient appointments themselves, online, on smartphone or by conversational SMS.	System services	Tier 1 lower	System services	NHS innovation accelerator	Yes
S12 Solutions	Enables approved mental health professionals to use real-time information to efficiently assemble Mental Health Act assessing teams.	System services	Tier 1 lower	System services	Other	Yes

Name of DHT	Brief description	Functional category	Evidence tier & risk (lower/higher)	Clinical area	Source (i.e. NHS apps library, IAPT etc)	Current use in NHS organisations? ¹
Mypreop	Service enables users to complete their pre-operation assessment digitally for use by multidisciplinary team.	System services	Tier 1 lower	System services	Other	Yes
Lantum	Bank staff management system for hospitals, also used for locum work and GP practices.	System services	Tier 1 higher	System services	NHS innovation accelerator	Yes

¹This is based on information from the developers' websites as at December 2018. It does not capture self-initiated use by patients.

GP – general practitioner; NHS – National Health Service.

Table 2: Examples of tier 2 digital health technologies

Name of DHT	Brief description	Functional category	Evidence tier & risk (lower/higher)	Clinical area	Source (i.e. NHS apps library, IAPT etc)	Current use in NHS organisations? ¹
Echo	Delivers NHS prescriptions to the user's home. Reminders for when and how to take medicine.	System services & communications	Tier 2 higher	Pharmacy	NHS apps library	Yes
DIMEC	App used to order repeat prescriptions.	System services & communications	Tier 2 higher	Pharmacy	NHS apps library	Yes
Baby and Child First Aid	Provides info on skills to provide baby and child first aid.	Inform	Tier 2 higher	First aid	NHS apps library	No
First aid	Provides info on skills to provide first aid in emergency conditions.	Inform	Tier 2 higher	First aid	NHS apps library	No
Health and Care Videos	Provides information videos related to the health and social care system.	Inform	Tier 2 lower	Not condition specific	Other	Yes
BECCA breast cancer	Information, support and inspiration to help move beyond breast cancer.	Inform	Tier 2 lower	Breast cancer	NHS apps library	No

Name of DHT	Brief description	Functional category	Evidence tier & risk (lower/higher)	Clinical area	Source (i.e. NHS apps library, IAPT etc)	Current use in NHS organisations?¹
Brush DJ	Plays music for 2 minutes and provides info to encourage effective oral hygiene.	Inform	Tier 2 higher	Oral health	NHS apps library	No
Health help now	Provides information on where to get the best treatment based on location and time of day, also can recommend based on symptoms.	Inform	Tier 2 higher	Not condition specific	NHS apps library	Yes
WaitLess	Combines waiting times at urgent care centres & travel information to inform decisions on which minor injury centre to attend. Plus info on self-care and health improvement.	Inform	Tier 2 lower	People needing a minor injury unit	NHS app library	Yes
Health Unlocked	Communication app for people to chat with others with the same health condition.	Communicate	Tier 2 lower	Not condition specific	NHS apps library	Yes
Talking Point	Online community to ask questions & share experiences.	Communicate	Tier 2 lower	Not condition specific.	NHS app library	Unclear

Name of DHT	Brief description	Functional category	Evidence tier & risk (lower/higher)	Clinical area	Source (i.e. NHS apps library, IAPT etc)	Current use in NHS organisations? ¹
Rally Round/ Rally Round older person version	App to enable family and friends to support someone using text and email notifications.	Communicate	Tier 2 higher	Not condition specific	NHS app library	No
ChatHealth	Text messaging service for children at school to anonymously contact healthcare professionals for advice and support.	Communicate	Tier 2 higher	Not condition specific	NHS apps library	Yes
Patients Know Best	A patient-controlled health information exchange that allows patients to access and share hospital information (e.g. lab results, appointments) and connect to other care providers.	Communicate	Tier 2 lower	Not condition specific	NHS app library	Yes
Student Health App	Provides health information.	Inform	Tier 2 lower	Not condition specific	NHS app library	Yes
CATCH – The Common Approach To Children’s Health	Provides local NHS approved information for parents and carers of children aged 0 to 5 years.	Inform	Tier 2 lower	Child health, not condition specific	NHS innovation accelerator	Yes

Name of DHT	Brief description	Functional category	Evidence tier & risk (lower/higher)	Clinical area	Source (i.e. NHS apps library, IAPT etc)	Current use in NHS organisations? ¹
leso	Provides communication tool to enable therapists to converse with patients to deliver cognitive behavioural therapy.	Communicate	Tier 2 higher	Mental health	NHS apps library	Yes
Cypher	Peer-to-peer social network used to anonymously share thoughts and feelings.	Communicate	Tier 2 higher	Mental Health	NHS apps library	Unclear
Baby Buddy	Guide for pregnancy and first 6 months of baby's life.	Inform	Tier 2 lower	Pregnancy/baby health	NHS apps library	Yes
Integrated Family Delivered Neonatal Care	Educational information for patients with premature babies.	Inform and simple monitoring	Tier 2 lower	Neonatal health	NHS apps library	Yes
TIYGA Health	App focuses on saving time. A patient can record data in a diary and report relevant details to healthcare provider.	Inform and simple monitoring	Tier 2 lower	Not condition specific	Other	Yes
Kicks Count	App to keep track of baby's movements in the womb and look out for changes.	Simple monitoring	Tier 2 higher	Neonatal health	NHS apps library	Unclear
Peanut	Enables new mums to discuss issues and share experiences.	Communicate	Tier 2 lower	New mums	NHS app library	No

Name of DHT	Brief description	Functional category	Evidence tier & risk (lower/higher)	Clinical area	Source (i.e. NHS apps library, IAPT etc)	Current use in NHS organisations?¹
vCreate Neonatal	Messaging service for clinicians and parents of children in Neonatal & Paediatric Units.	Communicate	Tier 2 lower	Parents unable to be with their baby in hospital.	NHS app library	Yes
My Health Guide	Communication tool for adults with learning disabilities.	Communicate	Tier 2 higher	Learning disabilities	NHS apps library	Yes
MyChoicePad	Helps people with learning disabilities communicate better using symbols and signs from the Makaton language.	Communicate	Tier 2 higher	Learning disabilities	NHS apps library	Yes
Myhomehelper	Tablet computer designed for people who struggle with technology to communicate with family and carer.	Communicate	Tier 2 higher	Cognitive impairment	Other	No
NHS Online Bexley	Consult GP, book appointments, order prescription, view medical records, self-help advice.	Communicate	Tier 2 higher	System service	NHS apps library	Yes

Name of DHT	Brief description	Functional category	Evidence tier & risk (lower/higher)	Clinical area	Source (i.e. NHS apps library, IAPT etc)	Current use in NHS organisations? ¹
Engage Consult	Used to book appointments, order repeat prescriptions and have an online consultation.	Communication and system services	Tier 2 higher	GP, Pharmacy	NHS apps library	Yes
Healthera	Allows ordering of prescription online with local pharmacy and can message pharmacist. Medication reminders.	Communication and system services	Tier 2 higher	Pharmacy	NHS apps library	Yes
Evergreen Life	Health record app. Monitors health, and provides system services such as repeat medication.	Simple monitoring, system services & communication	Tier 2 higher	GP, Pharmacy, Health records	NHS apps library	Yes
SOS QR	User creates an emergency record which can be made available to carers and first responder. Also has emergency alert.	Communicate	Tier 2 higher	Emergency	NHS app library	In NHS England Innovation Test Beds programme.
Squeezy/Squeezy CF/ Squeezy for men	Provides pelvic floor muscle exercises.	Inform	Tier 2 lower	Pelvic health	NHS app library	Yes

¹This is based on information from the developers' websites as at December 2018. It does not capture self- initiated use by patients.

GP – general practitioner; NHS – National Health Service.

Table 3: Examples of tier 3a digital health technologies

Name of DHT	Brief description	Functional category	Evidence tier & risk (lower/higher)	Clinical area	Source (i.e. NHS apps library, IAPT etc)	Current use in NHS organisations? ¹
Active 10	Walking tracker to encourage 10 minutes of 'active' walking.	Preventative behaviour change	Tier 3a lower	General health/wellbeing	NHS apps library	No
iPrescribe Exercise	Personalised 12 week exercise plan based on info entered by user with aim of meeting recommended levels of exercise.	Preventative behaviour change	Tier 3a lower	General health/wellbeing	NHS apps library	No
Couch to 5K	Designed to move individuals from a sedentary lifestyle to running 5km, within 9 weeks.	Preventative behaviour change	Tier 3a lower	General health/wellbeing	NHS apps library	Unclear
BMI Calculator	Calculates BMI and provides info on healthy eating	Preventative behaviour change	Tier 3a lower	General health/wellbeing	NHS apps library	Unclear
Easy meals	Calorie counted recipe app where over 150 healthy meals are provided.	Preventative behaviour change	Tier 3a lower	General health/wellbeing	NHS apps library	Unclear
Smart recipes	Recipes and activities to reduce weight in overweight families.	Preventative behaviour change	Tier 3a lower	Overweight	NHS app library	Unclear

Name of DHT	Brief description	Functional category	Evidence tier & risk (lower/higher)	Clinical area	Source (i.e. NHS apps library, IAPT etc)	Current use in NHS organisations?¹
Drink less	An alcohol-reduction app using goal setting, self-monitoring and feedback.	Preventative behaviour change	Tier 3a lower	Drinkers	Other	No
NHS Smokefree	28-day plan to help people stop smoking. Uses daily messages to motivate, badges to reward progress, and help with cravings.	Preventative behaviour change	Tier 3a lower	General health/wellbeing	NHS apps library	Unclear
HeLP-diabetes	Provides information about type 2 diabetes and its treatments, offers emotional support & help with adopting and maintaining healthy behaviours (e.g. diet, exercise).	Self-manage	Tier 3a lower	Type 2 diabetes	Other	Yes
SidekickHealth	A game-based app to help users manage their weight & stress through exercise, behavioural economics & AI.	Self-manage/Preventative behaviour change	Tier 3a higher	Those at risk of chronic disease and employees.	NHS app library	Unclear

Name of DHT	Brief description	Functional category	Evidence tier & risk (lower/higher)	Clinical area	Source (i.e. NHS apps library, IAPT etc)	Current use in NHS organisations?¹
Blueice	Helps young people manage their emotions and reduce urges to self-harm.	Self-manage	Tier 3a higher	Mental health	NHS apps library	Yes
Beat Panic	Coping strategy for people struggling with panic attacks or a fear of socialising.	Self-manage	Tier 3a higher	Mental health	NHS apps library	No
My Possible Self	Simple learning modules to manage fear, anxiety and stress and tackle unhelpful thinking.	Self-manage	Tier 3a higher	Mental health	NHS apps library	Yes
Chill panda	Designed to help children relax. Monitors heartrate and includes breathing and light exercise.	Self-manage and simple monitoring	Tier 3a higher	Mental health	NHS apps library	Being tested in the NHS
Cove	Designed to display emotions through music as opposed to words. Diary style 'mood journal', but can be shared with others.	Self-manage	Tier 3a higher	Mental health	NHS apps library	Being tested in the NHS

Name of DHT	Brief description	Functional category	Evidence tier & risk (lower/higher)	Clinical area	Source (i.e. NHS apps library, IAPT etc)	Current use in NHS organisations? ¹
True Colours	Answers to health-related questions are fed back to physician, enabling remote review. Users can also track changes in wellbeing.	Self-manage and communicate	Tier 3a higher	Mental health	Other	Unclear
Feeling Good: positive mindset	Audio tracks designed for adults who are depressed, stressed, anxious etc. Uses CBT through a 12- track audio training programme.	Self-manage	Tier 3a higher	Mental health	NHS apps library	Yes
Stress & Anxiety Companion	Uses CBT to help relieve the symptoms of anxiety and better manage stress.	Self-manage	Tier 3a higher	Mental health	NHS app library	Unclear
Thrive: Feel Stress Free	A game-based app to manage stress, anxiety and suitable for all employees.	Self-manage	Tier 3a higher	Mental health and general public	NHS app library	Unclear
Pzizz	Uses psychoacoustics to aid sleep.	Preventative behaviour change	Tier 3a lower	Sleep disorder	NHS app library	Unclear

Name of DHT	Brief description	Functional category	Evidence tier & risk (lower/higher)	Clinical area	Source (i.e. NHS apps library, IAPT etc)	Current use in NHS organisations? ¹
My Health Fabric	Has self-help plans for long term health conditions e.g. diabetes or high blood pressure. Diary tracks measurements e.g. blood pressure.	Self-manage	Tier 3a higher	Not condition specific	NHS apps library	No
Liva UK	Digital platform to help manage conditions such as diabetes, heart problems & obesity and make changes to lifestyle.	Self-manage	Tier 3a lower	Not condition specific	NHS apps library	Yes
Mapmydiabetes	Online programme of information, guidance and self-help tools to support people to manage type 2 diabetes.	Self-manage	Tier 3a higher	Diabetes	NHS apps library	Yes
nujjer	Wristband records activity & app sends personalised motivational messages, as a 12 month programme.	Self-manage	Tier 3a lower	Type 2 diabetes	NHS app library	Yes

Name of DHT	Brief description	Functional category	Evidence tier & risk (lower/higher)	Clinical area	Source (i.e. NHS apps library, IAPT etc)	Current use in NHS organisations? ¹
OurPath	3-month programme providing daily articles and access to a health coach to lose weight and change behaviour.	Self-manage	Tier 3a lower	Type 2 diabetes	NHS app library	Yes
Oviva	A food diary and tracks progress against goals. Provides access to a dietician.	Self-manage	Tier 3a lower	e.g. Type 2 diabetes	NHS app library	Yes
mumoActive	App to make tracking of type 1 diabetes easier allowing blood sugar to be tracked and shared with family or doctor.	Self-manage	Tier 3a higher	Type 1 diabetes	NHS apps library	No
My Diabetes My Way	Used by people with diabetes and their family, friends, carers to provide information & resources to help manage the condition & view clinic results.	Self-manage	Tier 3a higher	Diabetes	NHS apps library	Yes

Name of DHT	Brief description	Functional category	Evidence tier & risk (lower/higher)	Clinical area	Source (i.e. NHS apps library, IAPT etc)	Current use in NHS organisations?¹
Changing Health	Uses videos, articles and interactive activities on diet and exercise to manage type 2 diabetes.	Self-manage	Tier 3a lower	Type 2 diabetes	NHS apps	Yes
MyCognition Home	Brain training app to improve focus, decision-making, memory and thinking speed.	Self-manage	Tier 3a higher	Alzheimer's/Parkinson's or no condition	NHS apps library	No
MyCOPD	App to help people with COPD manage it, perfect inhaler technique, improve breathing, reduce exacerbations & track medication.	Self-manage	Tier 3a higher	COPD	NHS apps library	Yes
Rafi-Tone	Aims to improve inhaler use; also need an Able Spacer and innovative whistle mask.	Self-manage	Tier 3a higher	Children with a wheeze or asthma.	NHS app library	Yes
Epilepsy Self Monitor – EpSMon	Self- monitoring app for adults with epilepsy to assist them to risk-manage seizures.	Self-manage	Tier 3a higher	Epilepsy	NHS innovation accelerator.	Yes

Name of DHT	Brief description	Functional category	Evidence tier & risk (lower/higher)	Clinical area	Source (i.e. NHS apps library, IAPT etc)	Current use in NHS organisations? ¹
Engage warfarin self-care	For adults on warfarin anticoagulation therapy. Monitors the INR at home to prevent blood clots.	Self-manage	Tier 3a higher	Anticoagulants	NHS apps library	Yes
OWise breast cancer	Website & app with information on breast cancer plus should record feelings, symptoms etc.	Self-manage	Tier 3a lower	People with breast cancer.	NHS app library	Yes

¹This is based on information from the developers' websites as at December 2018. It does not capture self-initiated use by patients.

AI – artificial intelligence; CBT – cognitive behaviour therapy; COPD - chronic obstructive pulmonary disease; NHS – National Health Service.

Table 4: Examples of tier 3b digital health technologies

Name of DHT	Brief description	Functional category	Evidence tier & risk (lower/higher)	Clinical area	Source (i.e. NHS apps library, IAPT etc)	Current use in NHS organisations? ¹
FreeStyle Libre	Glucose monitoring system, with optional app.	Active monitoring	Tier 3b higher	Diabetes	Other	Yes
Be Mindful	Online course on mindfulness based on CBT.	Treat	Tier 3b higher	Mental health	NHS apps library	Yes
Big White Wall	Help with mental health and wellbeing issues either via support network or live online therapy.	Treat and self-manage	Tier 3b higher	Mental health	NHS apps library	Yes
iPrevail	Mental health support and community to connect with.	Treat	Tier 3b higher	Mental health	NHS apps library	No
Deprexis	Intervention for people with elevated symptoms of depression.	Treat	Tier 3b higher	Mental health	IAPT	No
OCD-NET	Therapist-guided internet-based cognitive behavioural therapy for obsessive-compulsive disorder.	Treat	Tier 3b higher	Mental health	IAPT	No

Name of DHT	Brief description	Functional category	Evidence tier & risk (lower/higher)	Clinical area	Source (i.e. NHS apps library, IAPT etc)	Current use in NHS organisations? ¹
SHADE	SHADE (CCBT) is an online CBT-based programme designed to treat mild to moderate depression in people with drug or alcohol misuse.	Treat	Tier 3b higher	Mental health	IAPT	Yes
Space from depression	Space from Depression is an online CBT programme for adults with depression and anxiety symptoms.	Treat	Tier 3b higher	Mental health	IAPT	Yes
Sleepio	Uses CBT for insomnia treatment. Also uses exercises to overcome worry and negative emotions associated with insomnia.	Treat	Tier 3b higher	Sleep disorder	Other	Yes
FearFighter	Online course for people who struggle with phobias, panic or anxiety. Uses CBT to change the way individuals view situations.	Treat	Tier 3b higher	Mental Health	NHS apps library	Yes

Name of DHT	Brief description	Functional category	Evidence tier & risk (lower/higher)	Clinical area	Source (i.e. NHS apps library, IAPT etc)	Current use in NHS organisations? ¹
SilverCloud technologies	CBT programmes, several using AI.	Treat	Tier 3b higher.	Mental health	NHS app library	Yes
Sleepstation	Sleep review and advice using CBT.	Treat	Tier 3b lower	Sleep disorder	NHS app library	Yes
Ask NHS	Provides advice for urgent, but non-life threatening, emergencies and routes patients to the correct care pathway using a virtual assistant. Also can remotely monitor a person's health & advise clinicians.	Active Monitoring	Tier 3b higher if monitor vulnerable people; else lower.	Not condition specific	Other	Yes
GDm-Health	Service to help clinicians manage gestational diabetes in pregnant women. Women input blood glucose readings which are monitored by clinicians and inform treatment.	Self-manage and active monitoring	Tier 3b higher	Diabetes, Pregnancy and Baby	NHS apps library	Yes

Name of DHT	Brief description	Functional category	Evidence tier & risk (lower/higher)	Clinical area	Source (i.e. NHS apps library, IAPT etc)	Current use in NHS organisations? ¹
Mersey Burns	Calculates burn area percentages, prescribing fluids using Parkland, background fluids and recording patients' details.	Calculate and treat	Tier 3b higher	Burns	Other	Yes
SEND	SEND charts vital signs observations used in hospitals to monitor risk of deterioration, with the appropriate next steps for treatment then advised.	Calculate and treat	Tier 3b higher	Not condition specific	Other	Yes
GIQuant	GIQuant is an image processing software developed to facilitate the analysis of dynamic image series using image registration.	Treat	Tier 3b higher	Crohn's	Other	Yes

¹This is based on information from the developers' websites as at December 2018. It does not capture self- initiated use by patients.

AI – artificial intelligence; CBT – cognitive behaviour therapy; NHS – National Health Service.