

Successfully establishing interconnected digital mental health and
neurodevelopment services:
Emerging evidence from a comprehensive digitally native service.

Dr Frank Burbach & Dr Melinda Rees
European Association for Behavioural and Cognitive Therapy
(EABCT) congress Belfast, 9-11 September, 2021.



Content

1 Introduction & rationale for digital mental health & neurodevelopment services

2 Creating comprehensive interconnected digital services

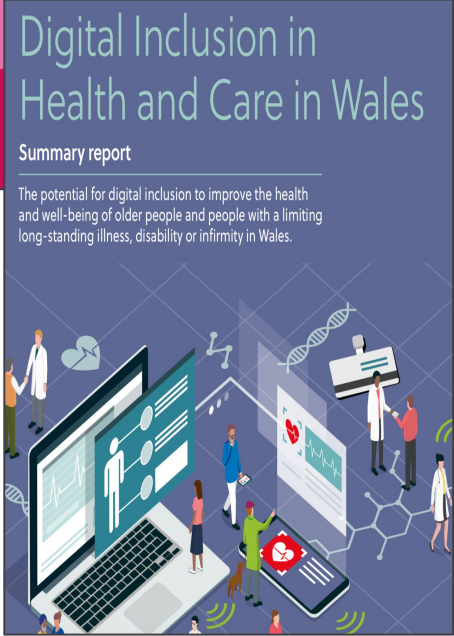
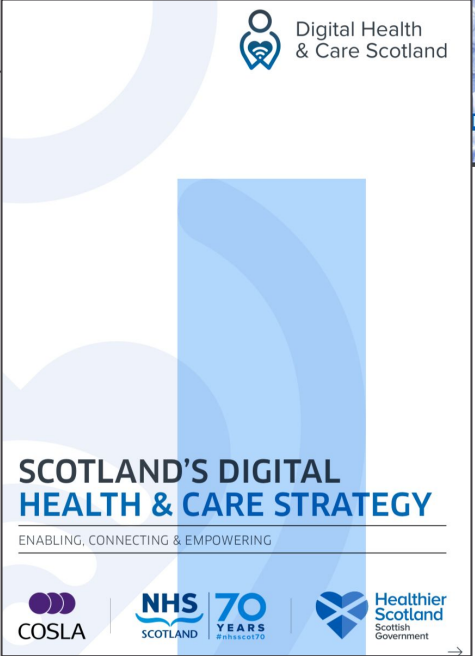
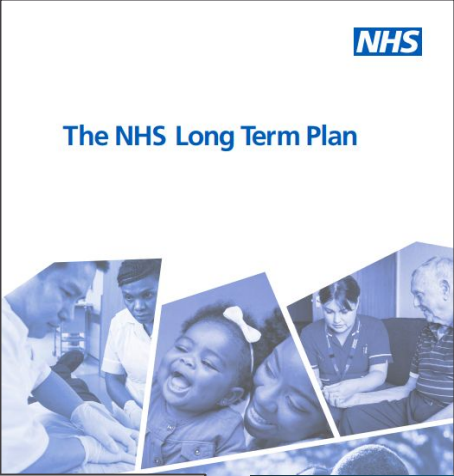
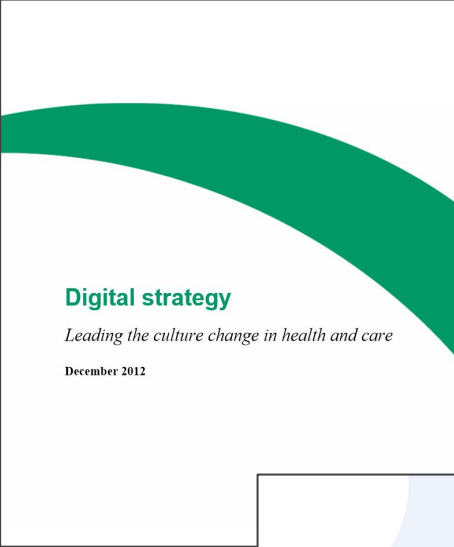
3 Some advantages

4 Outcomes

5 Future developments

6 Conclusions

UK Policy says the future's digital



Evidence base for 'digital' approaches

Good clinical outcomes for range of 'remotely delivered' / 'web-based' / 'computer' / 'online' / 'digital' & 'internet' therapies.



Source: 1 = Ebert et al., 2015; 2 = Hubley et al., 2016



Steep growth in the development of internet-based psychological therapies, particularly internet CBT (iCBT). iCBT outcomes equivalent to f-to-f CBT.

Most studies of iCBT have been conducted with adults, but a meta-analysis of 13 RCTs with children and adolescents indicates iCBT is also effective for this group¹

<18



Meta-analysis of 569 studies concluded telepsychiatry is comparable to f-to-f services in terms of reliability of clinical assessments & treatment outcomes, patients are satisfied, it reduces costs, and no adverse events²



Prior to COVID-19 implementation of digital mental health was very slow

1 Recent surveysⁱ have found that clinicians:

Have been surprised at how well in-person assessments and therapy have transferred online

2

Identified more advantages than disadvantages

3

Noted that online is preferred by some people for therapeutic reasons and by many for practical reasons

4

Expected to continue offering online services post-COVID; blended approaches; client choice

ⁱ e.g. McBeath et al., 2020, Bhardwaj et al., 2021 & Kenny et al., 2001 in the UK,
& elsewhere e.g Aafjes–van Doorn et al., 2020; Probst et al., 2020, 2021; Reilly et al. (2020); Boldrini et al. (2020)



A photograph of a forest path with tall, thin trees and sunlight filtering through the canopy. A large, semi-transparent white circle is centered over the image, containing the text. The text is arranged in five lines: 'Creating a', '*comprehensive*', '*interconnected*', 'digital stepped', and 'care service'.

Creating a
comprehensive
interconnected
digital stepped
care service

Healios is *uniquely experienced* in the delivery of *family-centric* care across two *specialized clinical divisions*



Children Mental Health Division

Assessments

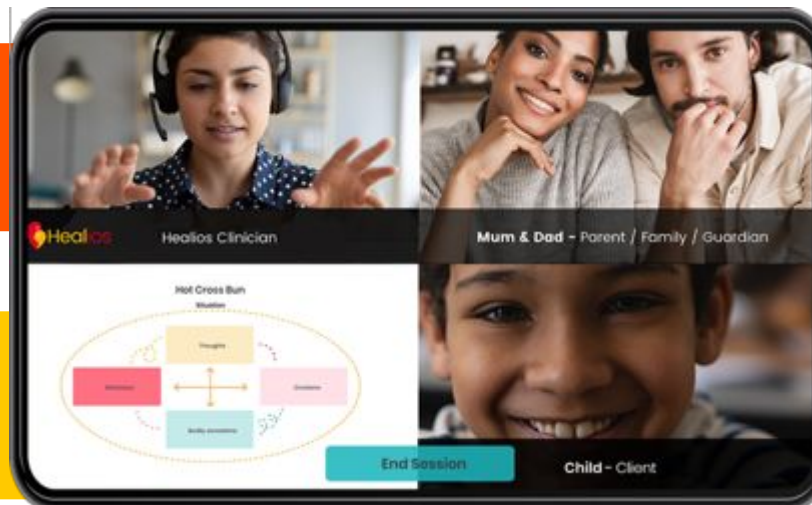
Treatments



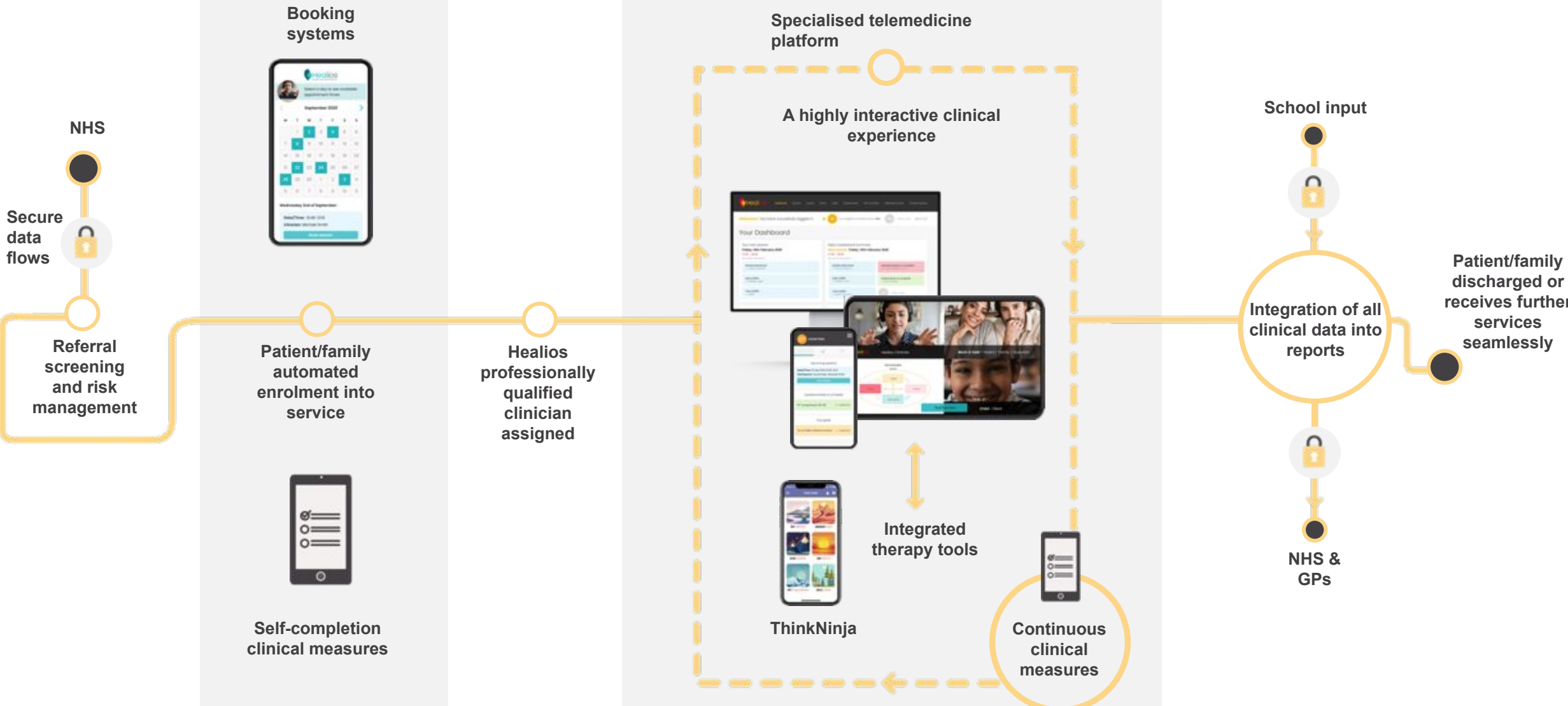
Neurodevelopmental Division

Autism and ADHD
assessments

Autism and ADHD
management



We've pioneered **specialised and complex digital care pathways** to bring an interactive and engaging experience for **clients and their families** [example pathway]



Psychoeducation - example slide

Moods

It's normal for our mood to go up and down and for some situations to trigger different feelings e.g. feeling hurt or upset if someone is unkind.

It's helpful to be able to recognise our own triggers and what we can do to help ourselves manage how we're feeling. That way we can control our emotions rather than our emotions controlling us.



Anxiety and our bodies



Do any of these happen to you?

A photograph of a forest with tall, slender pine trees. Sunlight filters through the canopy, creating long shadows on the forest floor. A dirt path is visible on the right side. A large, semi-transparent white circle is centered over the image, containing the text "Some advantages".

Some
advantages



Rapid response to referrals

Current average waiting times (weeks)

27.08.21 data

2.3

Initial Assessment

7.1

Autism Assessment

10.5

ADHD assessment

3.8

CBT

5.0

GBI

Capturing change

We use session x session outcome measures to inform clinical practice and report back to our stakeholders including:

- Goal Based Outcomes
- Healios Progress Rating Scale
- YP-CORE

Pre/post intervention tools include: RCADS, SDQ

Young people give feedback via Healios website, client experience questionnaire and friends and family test

Goal review

Where are you **now** and where do you **want to be**?



0 is not yet started, 5 is halfway to achieving the goal and 10 is **complete success** with the goal being achieved

What might one step closer look like?

What could you do tonight that would get you even a little bit closer to your goal?



Documentation

Risk screen

Completed in session 1 with guidance on keeping safe between sessions and sources of additional support

Session summaries

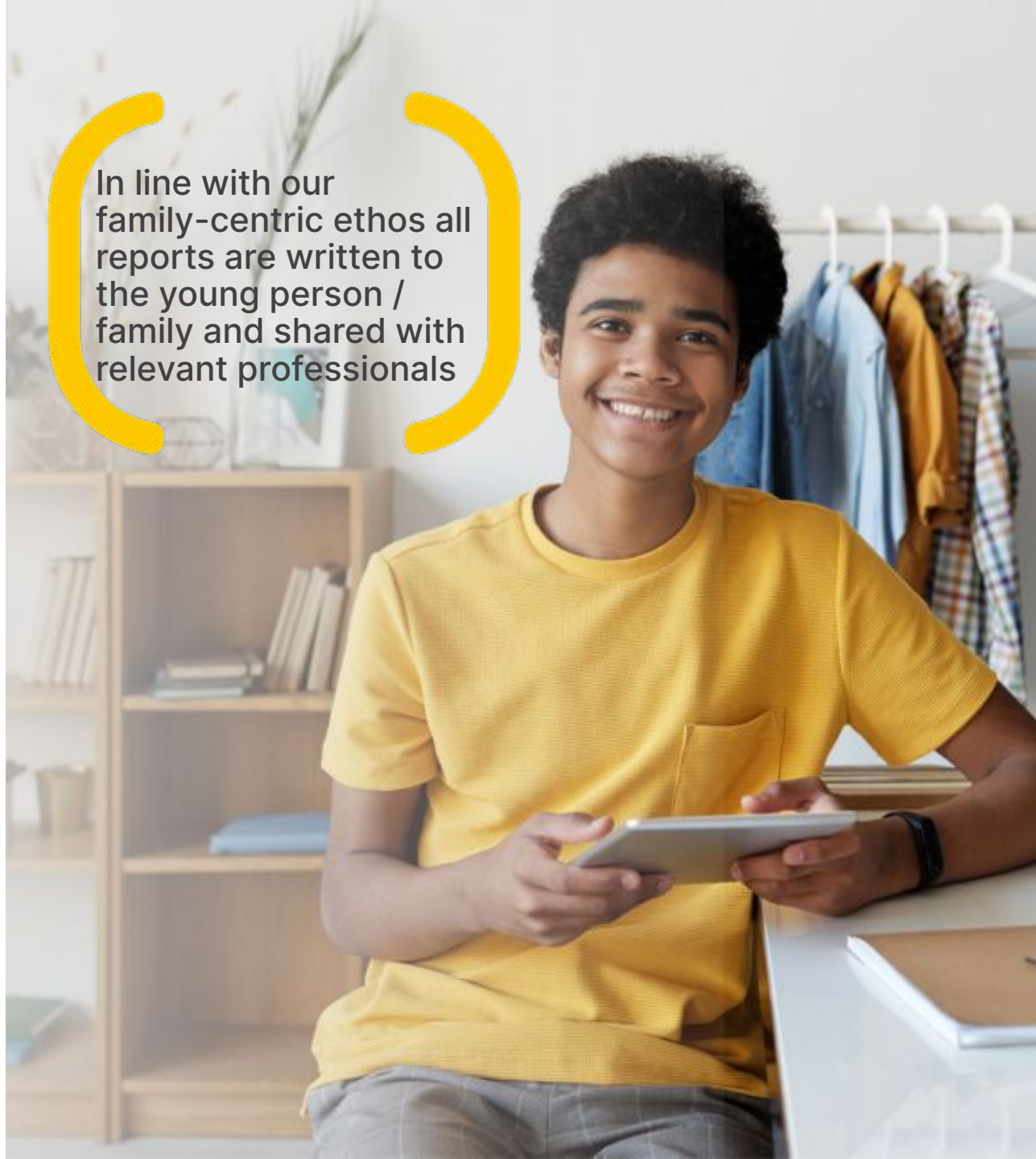
Completed every session as a record of key learning and any agreed between session tasks

Completion reports

An end of intervention report which reflects on skill development, change and next steps for support (where indicated)

Keeping safe plan

Built collaboratively during sessions to support young people to recognise their early warning signs, the strategies that work for them and when and where to access additional support



In line with our family-centric ethos all reports are written to the young person / family and shared with relevant professionals

A photograph of a dense forest of tall, thin evergreen trees. Sunlight filters through the canopy, creating long shadows on the forest floor. A large, semi-transparent white circle is centered over the image, with the word "Outcomes" written in a black, sans-serif font inside it.

Outcomes

1

Timely provision of mental health services leads to better engagement and outcomes.

2

Personalized and flexible care leads to successfully building therapeutic alliance and client satisfaction.

3

Access to multiple interconnected services leads to more comprehensive care that meets the individual's needs.

4

Digital mental health provides a more egalitarian experience than in-person mental health and leads to the empowerment of the client and better outcomes.

5

Using multiple digital communication tools (e.g. videoconferencing, therapeutic information, interactive whiteboards, rating scales, and outcome measures) can enhance engagement and the therapeutic alliance.

6

Web-based communication facilitates safe care, networking, and access to therapeutic resources: particularly, information, support from peers and family, and liaison with schools and other agencies.

Digital mental health and neurodevelopmental services: a case-based realist evaluation.
Burbach & Stiles
JMIR Formative Research 2021

We developed an initial program theory and six Context- Mechanism- Outcome statements to enable data collection to focus on testing the different elements of the program theory.

- 1** Flexible delivery and timely response
- 2** Personalized care to the individual
- 3** Comprehensive care enabled by multiple interconnected services
- 4** Effective client engagement and productive therapeutic alliances
- 5** Use of multiple communication tools
- 6** Client satisfaction with the service
- 7** Good clinical outcomes
- 8** Ease of family involvement throughout sessions or from different locations
- 9** Facilitation of multi-agency working and integration with NHS services
- 10** Management of risk and safeguarding.

Digital mental health and neurodevelopmental services: a case-based realist evaluation.

Burbach & Stiles

**JMIR Formative Research
2021**

**Ten key elements
of online services
were identified**

The effective delivery of digital CBT: a service evaluation exploring the outcomes of young people who completed video conferencing therapy in 2020.

Porter, Galloghly & Burbach, 2021

The Cognitive Behavioural Therapist (submitted)

989

989 records of CYP who had completed CBT between January and December 2020.

Data:

- Baseline & endpoint ROMs: RCADS & SDQ
- Session by session ROMs: YP-CORE & GBO
- Feedback at the end of treatment: FFT

Results:

- 98% had baseline scores on at least one ROM
- 72% had paired outcome scores.
- Reduction in anxiety & depression with medium to large effect sizes($r=.41$ to $r=.57$)
- Significant progress towards goals, with a large effect size ($r=1.45$).
- 70% reliably improved, 28% clinically improved, and 25% clinically and reliably improved on at least one ROM.
- 92% would recommend Healios.

Perinatal CBT project outcomes (2019-2021)

Referrals: 134

Completed treatment & Closed: 95

Closed Early: 39

Sessions Delivered: 962

Sessions DNA: 156

Late cancelations: 189

DNA Rate: 11.94%



Goal Based Outcomes:

84 clients (88%) completed baseline goals

69 (82%) had paired goals

61 (88%) clients showed reliable improvement



Measure	Number of Clients with paired measures	Average Baseline Score	Average final score	Clinical cut off
EPDS	82 (86%)	18.3	11.9	13
GAD-7	82	14.1	7.8	8





Perinatal Qualitative feedback

35

All 35 clients who completed the FFT said that they would recommend Healios to others.

"I preferred it because it was easy to access and fit around my busy life.."

"In some ways it was easy as I could do the sessions from home. On the other hand, it was difficult to find quiet and privacy as you are not speaking to someone face to face as it's over video call."

"I have experienced a huge change since starting therapy. It's hard to remember how anxious I was when we began. My partner has also noticed big changes in my behaviour."

"I'm able to enjoy my baby and older child much more and stop letting my anxiety affect their enjoyment of things."

Would you recommend online therapy to others? Why or why not?

"Yes. I feel it has been easy to build up a relationship and I enjoy being in the comfort of my own home."

"Yes. I would recommend online therapy online to others as those who do not like public transport can still have similar experience as those who go to see a therapist in person. Overall, I am happy and grateful to have had these sessions. I think I have definitely benefited from the CBT as it has helped me understand myself, reassured me that I am not the only one and helped me find confidence in raising my baby and that I am doing things right and I am a good mum."

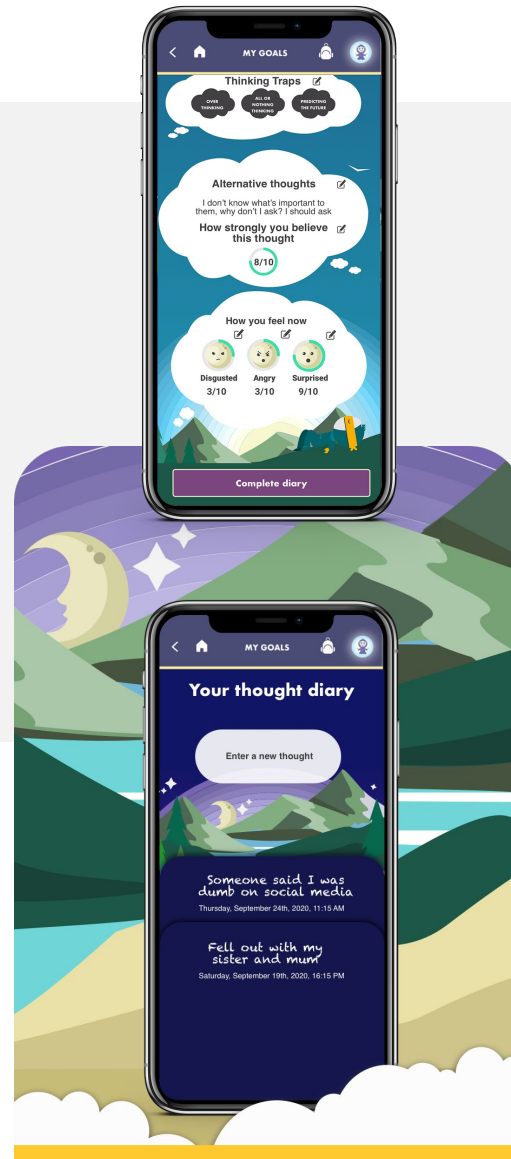
A photograph of a dense forest of tall, thin evergreen trees. Sunlight filters through the canopy, creating long shadows on the forest floor. A large, semi-transparent white circle is centered over the image, containing the text 'Future developments' in a bold, italicized, black sans-serif font.

Future developments

ThinkNinja

CBT-based
psychoeducational
mobile phone app
Added to the NHS App
library in 2020...

a 'therapist in your
pocket'?



A YP journey through CBT Bytesize



START

Download ThinkNinja, complete baseline measures & CBT Bytesize orientation

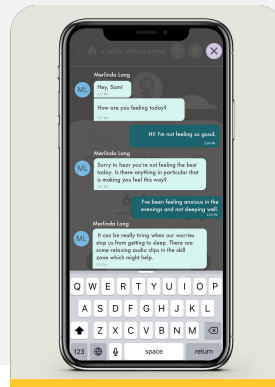


WEEKS 1-3

1st Clinical session - assessment (incl. risk), formulation & goal setting

TEXT CHAT

Three clinician initiated weekly text chats with additional YP led check ins when needed



VIDEO CALLS

Shorter video calls to support the YP, fitting in with their lifestyle

WEEKS 4-7

Thought diaries, developing helpful thoughts, facing fears augmented by self help resources



TAKE CONTROL

Continued access to resources to embed learnings & skills post intervention completion



WEEKS 8-11

Additional weeks where needed (max 4) to refine goals & practice skills



CBT Bytesize- assessing the feasibility of a novel multimodal intervention for anxiety (Poster-66)

Frank Burbach, Melissa Snaith & Emily Galloghly



- Therapist script (template which can be personalised by the therapist) designed to complement and prompt use of the extensive therapeutic resources contained within our app; e.g. psychoeducation, formulation (the hot cross bun), thought diaries, graded exposure.
- Three weekly 'check-ins' where the therapist reaches out to the young person via text to see how they were doing and to set missions within the app, provide support and facilitate skills learning.
- The young people have 24/7 access to the app, can revisit their work at any time and can text their therapist.
- Therapists have access to an online dashboard where they can message their client and monitor their progress and entries within the app in real time which enables timely reinforcement when missions are completed or goals rated.

A photograph of a dense forest of tall, thin trees, likely pines or firs, with sunlight filtering through the canopy. A large, semi-transparent white circle is centered over the image, containing the word "Conclusions" in a bold, italicized, black sans-serif font. The forest floor is covered in grass and fallen needles, with long shadows cast by the trees.

Conclusions



- Technology-enabled clinical services can use standard recordings of clinical sessions to facilitate clinical audit.
- Digitally delivered surveys, video, workshops and supervision can be blended in a collaborative process to inform service development.



**Action research for
clinical quality in a
digital world**

Snaith, Porter,
Ghataore & Burbach

(Poster-13)

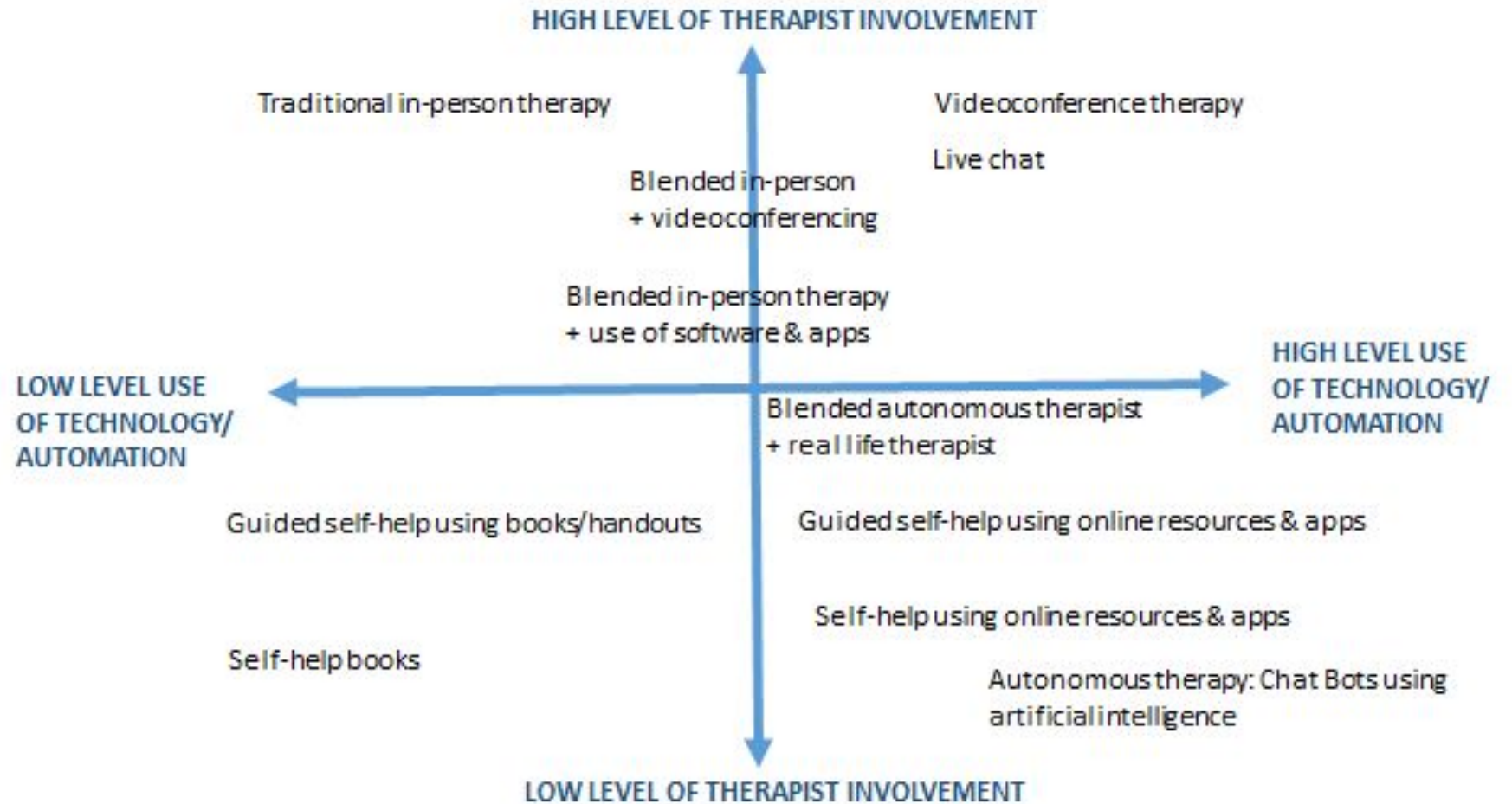
THE DIGITAL MENTAL HEALTH REVOLUTION: TRANSFORMING CARE THROUGH INNOVATION AND SCALE-UP



WISH Report
Roland et al., 2020

“The need for digital tools in mental health is not simply to add scale and efficiency to existing care models. The goal cannot be to have services similar to face-to-face care, but cheaper. Rather, digital innovation is needed at every stage of the system – to rethink and redesign what is delivered, how it is delivered, who it is for, and how we know if it works.”

Therapist and Technology Dimensions to understand Digital Practice



Burbach & Pote,
2021

Selected references re. Healios services

Burbach, FR & Hansen, L (2018) A large-scale project to deliver interconnected digital mental health assessments and therapy alongside face to face CAMHS services. Poster presented at **NIHR MindTech symposium**, London, 5 December.

Powis, S, van Wilsem, A, Cunningham, S & Burbach, FR (2019) Is there a digital solution to the challenge of providing Autism Spectrum Condition (ASC) diagnosis to adults and young people? Poster presented at **BPS Division of Clinical Psychology conference**, Manchester, 23-24 January.

McGowan, NM & Burbach, FR (2020) Reaching the digital natives: Integrating with local CAMHS to provide online CBT for anxiety in Children and Young People. Poster presented at **BPS Division of Clinical Psychology conference**, Solihull, 22-23 January, Solihull.

Allen, V, Davidson, L, Good, S, Lockett, M, Patching, R & Burbach, FR (2020) ThinkNinja: A rapid national response to support mental health and emotional wellbeing of young people during COVID-19. Poster presented at **MindTech2020: Digital Mental Health in the Age of COVID-19**, 2-3 December.

McGowan, NM, Kalu, U, Healy, SJ, Burbach, FR & Alexander, K (2020) Online specialist CBT for perinatal anxiety and depression: Early findings from an innovative pilot project. Poster presented at **MindTech2020: Digital Mental Health in the Age of COVID-19**, 2-3 December.

Burbach FR, Stiles KM. Digital mental health and neurodevelopmental services: a case-based realist evaluation. **JMIR Form Res.** 2021 Aug 8. doi: 10.2196/29845. Epub ahead of print. PMID: 34369382.

Porter, CM Galloghly, E & Burbach, FR (2021) The effective delivery of digital CBT: a service evaluation exploring the outcomes of young people who completed video conferencing therapy in 2020. **The Cognitive Behavioural Therapist** (submitted)

Other useful references

- Barnett P, Goulding L, Casetta C, et al. (2020) Remote working in mental health services: a rapid umbrella review of pre-COVID-19 literature [published online ahead of print, 2020 November 30]. **medRxiv**. .
- Burbach, F. & Helps, S. (2021) Delivering Systemic Therapy Using Digital Platforms. Chapter 18 in H. Wilson (Ed.) **Delivering Mental Health Therapies Using Digital Platforms**. Jessica Kingsley (Forthcoming)
- Burbach, F. & Pote, H. (2021), Digital approaches – a paradigm shift?. **Journal of Family Therapy**, 43(2), 169-184.
- McKenny, R., Galloghly, E., Porter, C.M. & Burbach, F.R. (2021), 'Living in a Zoom world': Survey mapping how COVID-19 is changing family therapy practice in the UK. **J. Fam Ther.**, 43(2), 272-294.
- Fairburn, C.G. & Patel, V. (2017). The impact of digital technology on psychological treatments and their dissemination. **Behaviour Research & Therapy**, 88, 19-25.
- Nicholas, J., Bell, I. H., Thompson, A., et al. (2021). Implementation lessons from the transition to telehealth during COVID-19: a survey of clinicians and young people from youth mental health services. **Psychiatry Research**, 299, 113848.
- Roland J, Lawrance E, Insel T, Christensen H. (2020) **The digital mental health revolution: Transforming care through innovation and scale-up. (The WISH report)** Doha, Qatar: World Innovation Summit for Health.
- Tremain, H., McEnery, C., Fletcher, K., & Murray, G. (2020). The therapeutic alliance in digital mental health interventions for serious mental illnesses: narrative review. **JMIR mental health**, 7(8), e17204.
- World Health Organisation (2019). **WHO guideline: recommendations on digital interventions for health system strengthening**. [.https://apps.who.int/iris/bitstream/handle/10665/311941/9789241550505-eng.pdf?ua=1](https://apps.who.int/iris/bitstream/handle/10665/311941/9789241550505-eng.pdf?ua=1)

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