Decentralised Clinical Trials

Initial learnings from Trials@Home and the RADIAL Study

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The research leading to these results has received support from the EU/EFPIA Innovative Medicines Initiative [2] Joint Undertaking (H2020-JTI-IMI2) Trials@Home grant n° 831458.

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Trials@Home project

The aim

Provide recommendations on Decentralised Clinical Trials (DCTs) in Europe

Project start September 1, 2019, due to end August 31, 2024

The consortium

TRIALS @HOME

imi efpia

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Operational innovation in clinical trials

Increasing operational and scientific efficiency in clinical trials

Deirdre Kelly, Anna Spreafico & Lillian L. Siu

British Journal of Cancer **123**, 1207–1208 (2020) | Cite this article

2187 Accesses | **3** Citations | **1** Altmetric | Metrics

Summary

Operational and scientific inefficiencies in clinical trials represent roadblocks that need to be identified and circumvented to advance drug development in oncology. The collaboration of key stakeholders to advance this agenda is crucial to accelerate clinical research and ultimately benefit patient care through the optimal allocation of time and resources.

Current challenges include:

- Recruitment
- Retention
- Timelines
- Costs
- Representativeness of study population
- Study compliance issues
- Etc…

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Review > Drug Discov Today. 2023 Feb 6;103520. doi: 10.1016/j.drudis.2023.103520.

Online ahead of print.

Decentralised, patient-centric, site-less, virtual, and digital clinical trials? From confusion to consensus

Yared Santa-Ana-Tellez [1], Bart Lagerwaard [2], Amos J de Jong [1], Helga Gardarsdottir [3], Diederick E Grobbee [2], Kimberly Hawkins [4], Megan Heath [5], Mira G P Zuidgeest [6]; Trials@Home Consortium

Affiliations + expand

PMID: 36754144 DOI: 10.1016/j.drudis.2023.103520

Free article

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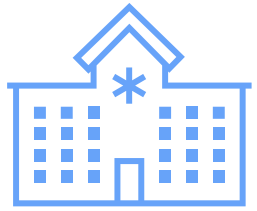
What are Decentralised Clinical Trial (DCT) approaches?

"operational model in which trial activities are designed to take place at or in the vicinity of the participant's home"

"rather than at a traditional clinical site"



"This approach may make use of technologies and other innovative operational approaches to facilitate data collection"

- Not a methodology
- Can be fully decentralised or hybrid
- Can be steered towards pragmatic or towards explanatory methodology

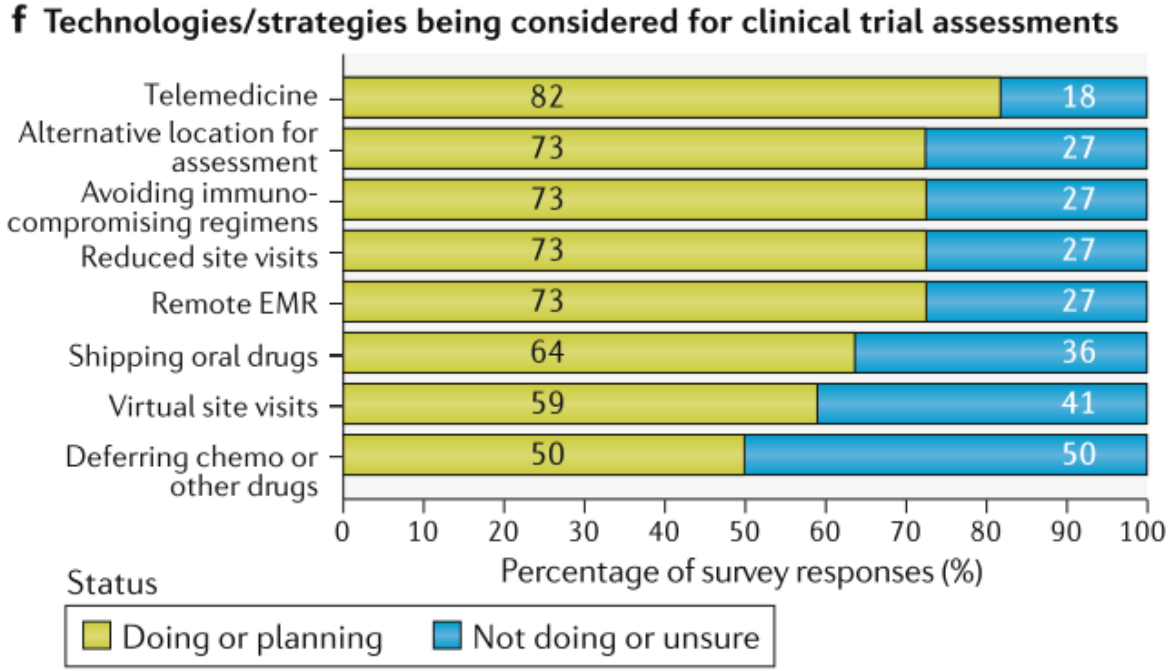
- Better recruitment and retention?
- Lower participant and site burden?
- Lower costs?
- RWE opportunities:
  - More representative study population?
  - Less interference with routine clinical practice?

Santa-Ana-Tellez et al. Decentralised, patient-centric, site-less, virtual, and digital clinical trials? From confusion to consensus. 2022; *In press*

COVID as catalyst for DCT approaches

Decentralised methods	Prior to COVID-19	As mitigation for COVID-19
Patient-HCP interaction	**35%**	**70%**
IMP supply	**46%**	**67%**
Participant outreach	**67%**	**78%**

Suman *et al*. Trials. 2022 Oct 6;23(1):856.. doi: 10.1186/s13063-022-06706-x.

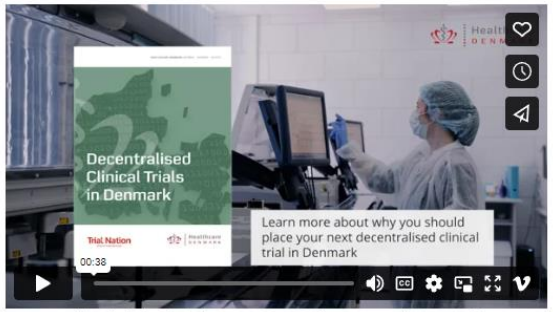


Upadhaya *et al* Nat Rev Drug Discov 2020. doi: https://www.nature.com/articles/d41573-020-00093-1

Regulatory interest & guidance

Healthcare DENMARK

Decentralised clinical trials



Decentralised clinical trials (DCTs) introduce a revolution in the clinical trial industry by enabling faster trial execution, delivering more representative and diverse datasets, and providing clinical trials that are easily accessible and convenient for participants to take part in.

Denmark is moving full speed ahead to become a global DCT frontrunner. The close collaboration between authorities, clinicians,

09.09.2021

Position paper by Swissmedic and swissethics on decentralized clinical trials (DCTs) with medicinal products

The development of novel technologies and digitalization in the field of therapeutic products offers new opportunities. Through the use of these technologies in clinical trials, it is possible that study visits do not always have to be carried out in the hospital, but can also take place at home. In this context, innovative technologies allow health-related data to be digitally recorded and transmitted via devices worn on the body. These special features and other aspects play an essential role in so-called decentralized clinical trials (DCTs).

This development poses new challenges for all those involved. In a position paper, Swissmedic and swissethics have summarized the main current challenges of DCTs with medicinal products and show under which conditions such clinical trials could be conducted in Switzerland. The paper is addressed to researchers and sponsors as well as all those interested in clinical research.

Position paper on decentralized clinical trials (DCTs) with medicinal products (PDF, 164 kB, 15.12.2022)

European Commission | EN English

Public Health

Home > Latest updates > Recommendation paper on decentralised elements in clinical trials

NEWS ANNOUNCEMENT | 14 December 2022 | Directorate-General for Health and Food Safety

Recommendation paper on decentralised elements in clinical trials

14 DECEMBER 2022
mp_decentralised-elements_clinical-trials_rec_en.pdf
English (478.17 KB - PDF)
Download

Details

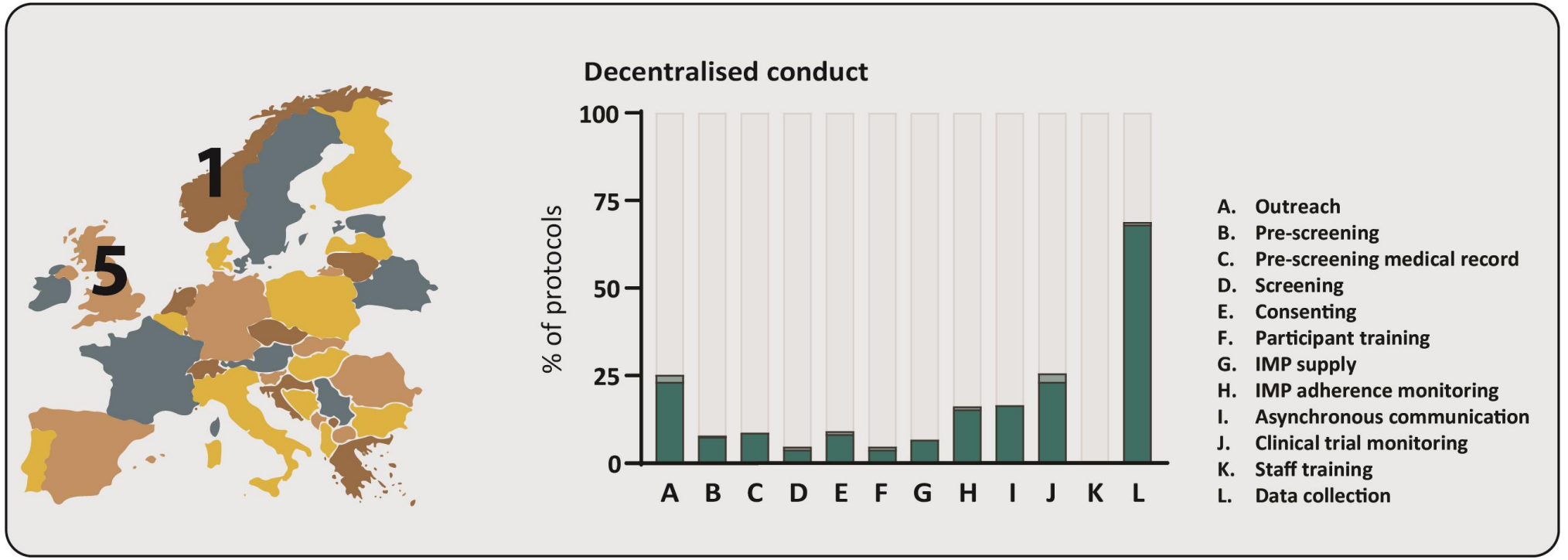
Publication date: 14 December 2022

Author: Directorate-General for Health and Food Safety

Please see relevant footnotes for responses marked with an asterisk. A footnote may be raised even though no response is given.	AT	BE	BG	CY	CZ	DE BfArM	DE PEI	DK	EE	EL	ES	FI	FR	HR	HU	IE	IS	IT	LI	LT	LU	LV	MT	NL
The delivery of IMPs from sponsor/site, in relation to RP section 4.																								
Q1: Is it possible to deliver IMPs directly to trial participants from their associated trial site?	No *	No *			Yes *	Yes *		Yes	Yes	*	Yes *	Yes	*	No *	Yes	Yes		Yes		Yes *			Yes *	Yes *
Q2: Is it possible to deliver IMPs directly to trial participants from the pharmacy associated with the trial site?	No *	No *			Yes *	Yes *		Yes	Yes	*	Yes *	Yes *	*	No *	Yes			Yes		No *			Yes *	Yes *
Q3: Is it possible to deliver IMPs directly to trial participants from any delegated pharmacy?	No *	No *			Yes *	Yes		Yes *	No *	No *	No *	No *	Yes	No *	Yes			*		No *			No	Yes *

Current landscape & DCT elements

- Limited full DCTs have been conducted in Europe
- DCT elements are being used in clinical trials



Rogers *et al.* Br J Clin Pharmacol 2022. doi: 10.1111/bcp.15205

de Jong *et al.* BMJ Open 2022. doi: 10.1136/bmjopen-2022-063236

The research leading to these results has received support from the EU/EFPIA Innovative Medicines Initiative [2] Joint Undertaking (H2020-JTI-IMI2) Trials@Home grant n° 831458.

Stakeholder views & preferences

Interviews regulators

de Jong *et al.* Clin Pharma Therapeutics 2022. doi: 10.1002/cpt.2628

Focus groups ECs/NCAs

- Social value & scientific validity
- Favourable B/R ratio & respect for subjects
- Informed consent
- Fair subject selection

Van Rijssel *et al.* Drug Discov Today 2022. doi: https://doi.org/10.1016/j.drudis.2022.07.011

Patient preference study

What are the drivers for possible participants when deciding to participate trials with different levels of decentralisation?

- Focus group study.
  → identify drivers & levels
- Discrete choice experiment
  → solicit preferences

Status: ongoing

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RADIAL proof-of-concept study

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The *why* of the T@H RADIAL proof-of-concept study

RADIAL **aims to assess the scientific and operational quality of a fully decentralised and hybrid trial approach compared to a conventional trial approach**

Evaluate the acceptability of DCTs in terms of safety, data quality and medical endpoints

(i.e., can we responsibly move to decentralized clinical trial approach?)

Explore potential benefits of DCTs, in terms of subject retention, recruitment, diversity, cost, and site and patient satisfaction

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The *what* of the T@H RADIAL proof-of-concept study

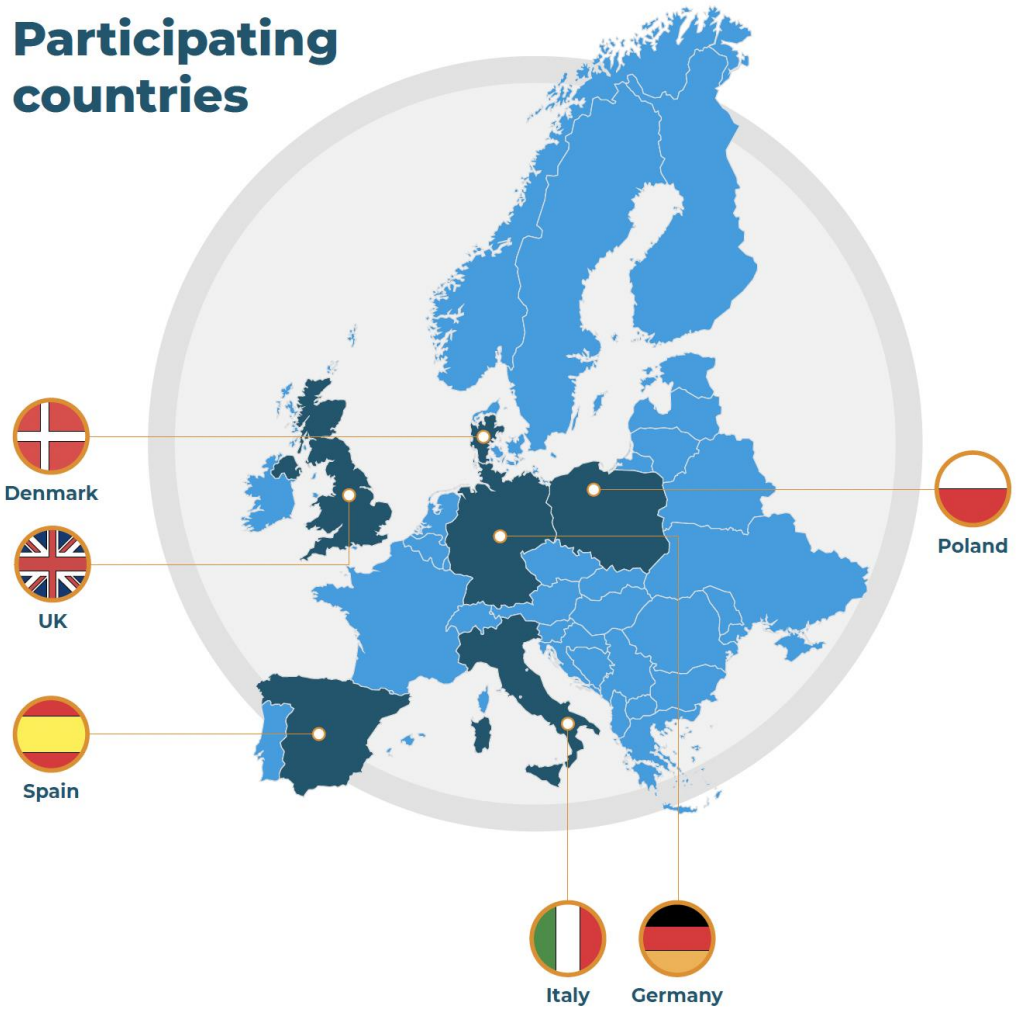
- Pan-EU, Parallel-group, open-label, multi-centre study
- People with type 2 diabetes (with Hb1Ac 7-10%)
  - Basal insulin
  - Phase IV study
- Composed of 2 parts with 3 different arms:

Part A Site-based recruitment

  - Conventional arm (x150)
  - Hybrid arm (x150)

Part B Recruitment performed remotely

  - Remote arm (x300)



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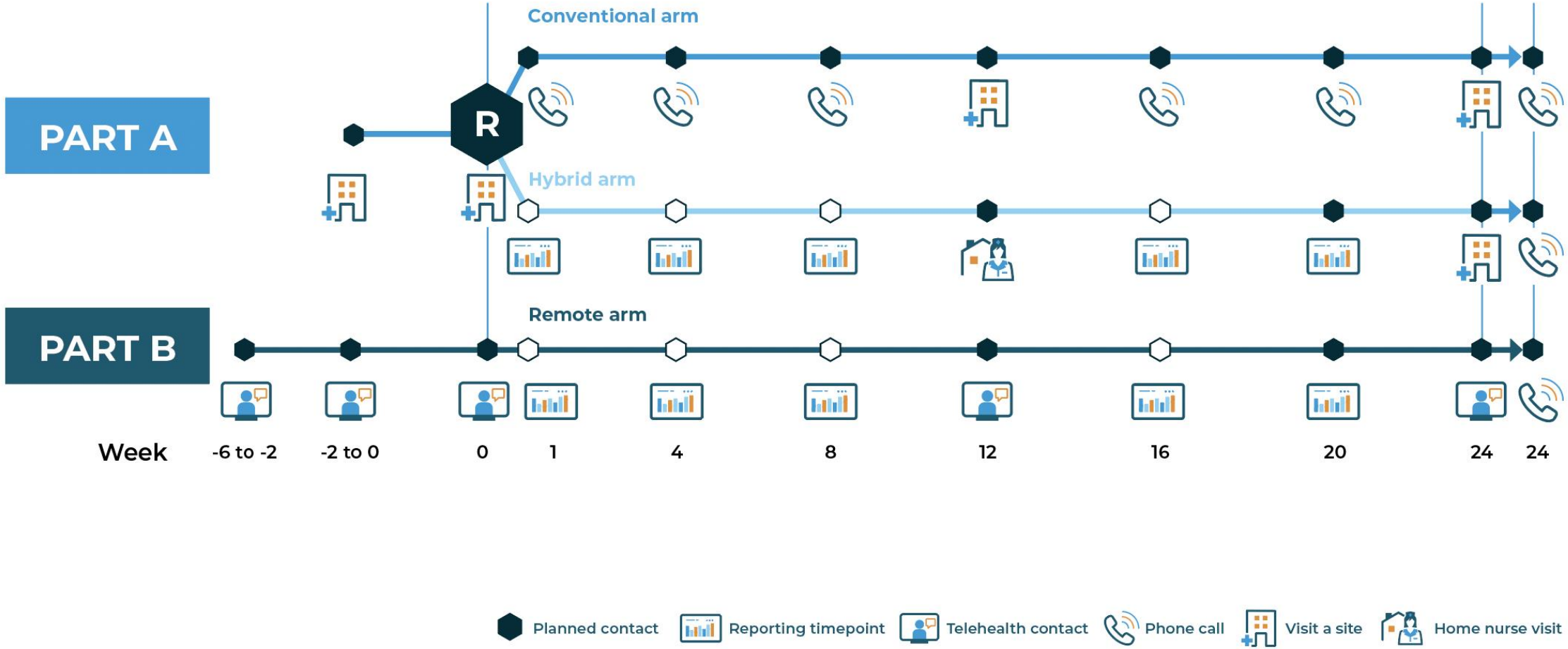
The *how* of the T@H RADIAL proof-of-concept study



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Decentralised elements in RADIAL

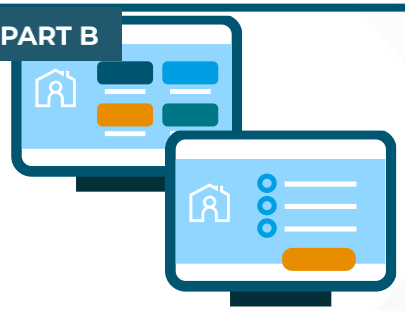
PART B

eConsenting and eSignature

PART B

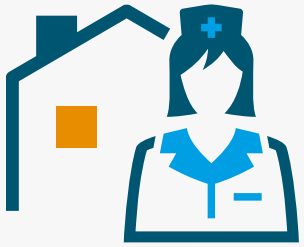
Telemedicine

PART B



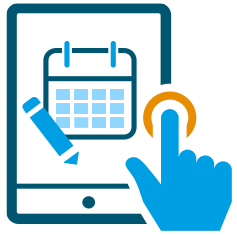
Online recruitment and pre-screening

PART A



Home nurse visits

Remote monitoring IMP adherence



Study app for reporting (S)AEs and ePROs

Direct to patient shipment of IMP

At home blood collection

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Stakeholder interactions

Regulators, Ethicists, Patients, Trialists, Tech Experts, Data Scientists, HTAs, HCPs and Investigators

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RADIAL stakeholder interactions - focus topics

Patient Onboarding, Training & Consent

Investigator Oversight & Patient Safety

Between-Arm Comparisons & Considerations for Bias

Data Integrity

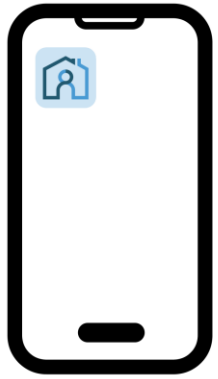
Participant Rights & Data Privacy

How to maintain oversight when participants are remote?

- In decentralised arm, the investigator has access to tools to maintain oversight – even though the participant never physically visit the site.

Remote

Data collection



Continuous reporting

Remote

monitoring

(Ad hoc)

telemedicine

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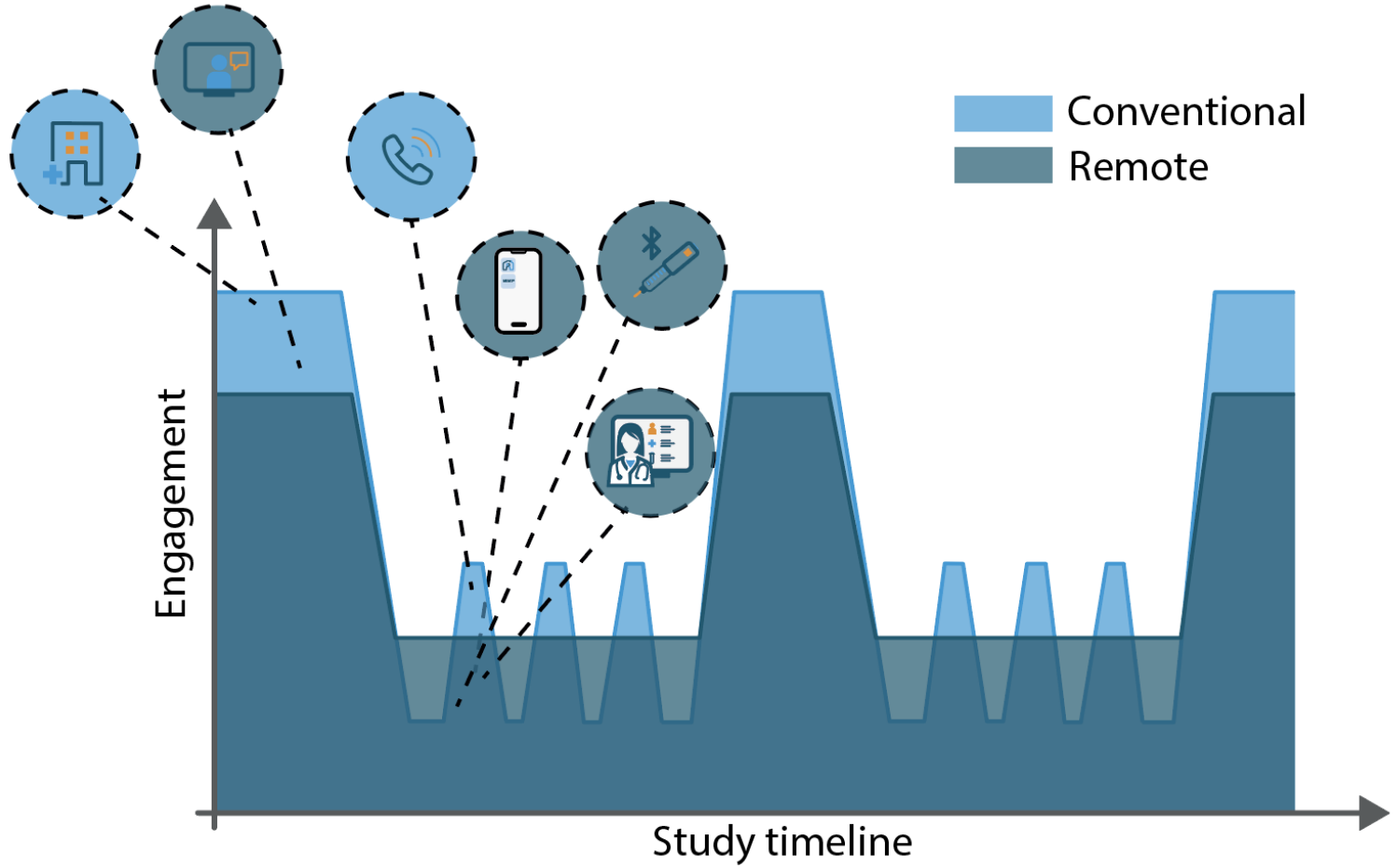
Investigator oversight in a DCT (RADIAL)

- In a conventional trial, the participant is most of the time 'remote' (not at the clinical trial site).
- Using (novel) technology the remote participant can be brought 'closer' to the investigator



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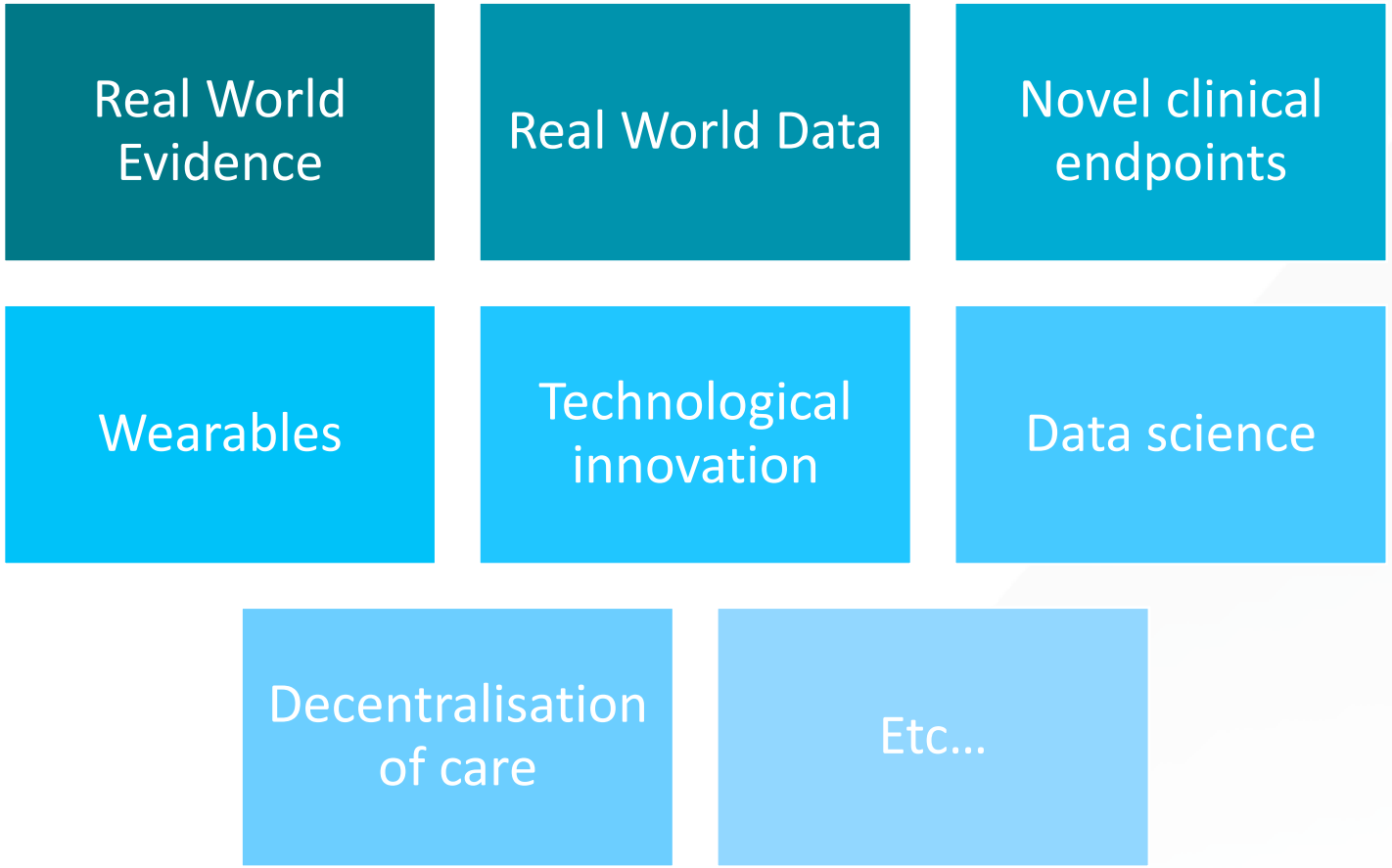
Observations

- **General interest** in possible benefits of DCT approaches
- **Concerns** about the nitty gritty operations of how decentralised elements are implemented in practice
- **Remain critical**: Is the situation really that different from that in a site-based clinical trials? Are we more stringent for DCT elements in ensuring quality, safety and oversight?
- **Stay current**: Healthcare is also moving towards decentralised and society is moving towards digital
- **Moving from the theoretical to the practical:** Many learnings and change accomplished within T@H through proof-of-concept study

Linking DCT approaches to other innovations



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Thank you!

Further information on T@H and RADIAL:

Project website www.trialsathome.com
Contact us at trialsathome@umcutrecht.nl
Mira Zuidgeest m.g.p.zuidgeest@umcutrecht.nl

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