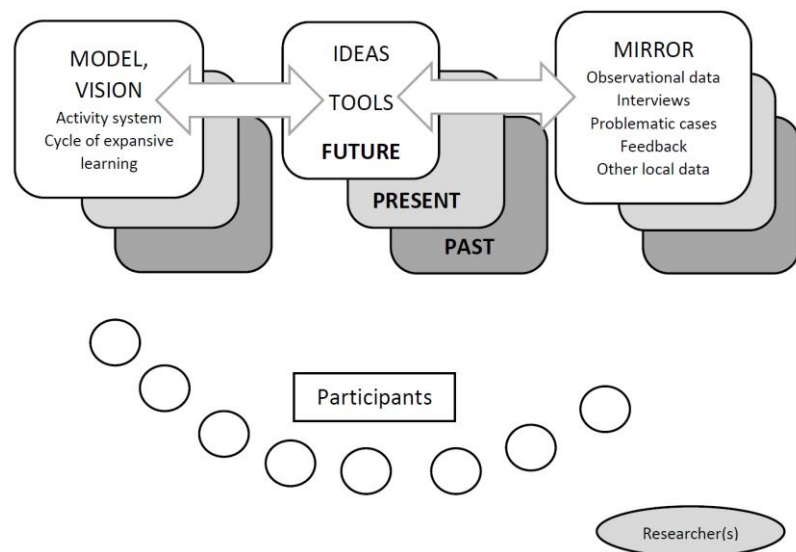


Conduction of Change Laboratory sessions:

Activity Theory offers a method, The Change Laboratory (CL), for translating the results of theoretical and empirical modelling into interventional studies. The central tenet of the CL is the creation of a 3 X 3 matrix of viewpoints for participants to reflect on effort and working practices as shown in Figure 1 below. The researcher acts as a group facilitator guiding the group through a cycle of CL sessions over time.



In the vertical plane, participants explore their experiences, effort and working practices in the past, present and future. In the horizontal plane, they do this at three levels of abstraction: through reflection on mirror items, through new ideas and potential tools for change, through developing of a model or vision.

The six CL sessions planned in this study are:

CL 1: Questioning (understanding what the 'need' state is)

CL 2: Analysis – what are the challenges and binds?

CL 3: Modelling new solutions – what could be possible?

CL 4: Exploring how to examine and test the model in different ways

CL 5: Issues of implementation

CL 6: Process reflection – what might stabilise new ways of working, how could practices be consolidated and generalised.

Mirror and potential tool items will be provided by data from WP1 & WP2 of the study.

1 The Change Laboratory

Due to the iterative nature of the study and, in particular, the importance of the CL sessions building on earlier phases of the work as well as being co-constructed with participants it is not possible to give a detailed description of exactly what will be discussed in advance. The ultimate goal is to explore whether the CL model can be used to systematically develop a coherent practice-based theoretical basis and modelling of experienced as well as intended processes to inform the design of any interventions for improvement. In essence, can it be used to create a framework for the “...use of knowledge to offer standardised responses to common needs, customised responses to particular needs, and flexible responses to emergent needs”¹?

Exemplar tools which might be used (according to participant preferences) are provided below.

Participants will be encouraged but not obliged to reflect and complete guided thought exercises between sessions alongside being supported to explore the ideas generated within their usual workplaces, if they want to.

¹ Batalden Paul. Getting more health from healthcare: quality improvement must acknowledge patient coproduction—an essay by Paul Batalden BMJ 2018; 362 :k3617

Exemplar Change Laboratory Tools (adapted from Virkkunen, J. The Change Laboratory: A tool for collaborative development of work and education. 2013. Netherlands: Sense Publishers.
Available at : <https://www.springer.com/gp/book/9789462093263> DOI: 10.1007/978-94-6209-326-3)

Change Laboratory Session Planning Sheet			
			Session No.
To-do list for preparation:			
Main purpose of the session in the cycle of expansive learning:			
Time	Min	Themes	Tools, Mirror, 2 nd Stimuli
Participant tasks for next session:			
For facilitators attention:			

Illustrative example of possible session structure : Note this is not specific to the current study (which will not include all elements) but drawn from previous work using the method in order to share and discuss with participants.

CHAPTER 4

Table 4.1. An example of a possible session structure of the analysis and design phase of a Change Laboratory intervention

Session	Content
1.	Explaining the way of working in the Change Laboratory. Introducing the researchers and the participants. Nominating the scribes and minute takers for the sessions. Beginning the expansive learning process by discussing mirror data about problematic aspects of the current practice; questioning and problematizing aspects of current practices.
2.	Continuing the work on mirror data about disturbances and problems.
3.	Summarizing the main problem areas in the current form of the activity, defining tasks of further analysis.
Between 3. and 4.	Participants collect data about historical changes in the activity system.
4.	Collecting/discussing mirror data about changes in the activity system.
5.	Analyzing the development of the activity system (historical analysis) and identifying periods in it. Modeling the 'old form of the activity'. Modeling the current form of the activity and the main inner contradictions in it that explain the disturbances and problems. Testing how well the putative inner contradictions explain the problems and disturbances summarized in session 3.
Between 5. and 6.	A discussion of the preliminary results of the analysis with the management. Collecting additional data about the relationships between the contradictions and the main problem areas if needed.
6.	Searching for ideas about possible ways to mediate the contradiction so as to resolve or better manage it. Drafting a vision of the future form of the activity.
Between 6 and 7.	Further elaboration of ideas about new elements of the activity system.
7.	Discussing and elaborating the ideas for a new model and new tools and forms of action. Selecting the best ideas for further development.
Between 7. and 8.	Further elaboration of the main ideas for a new model and new tools.
8.	Examining the ideas for a new model through thought experiments. Modeling the new form of activity.
Between 8. and 9.	Preparing a plan of experimental implementation of the new solutions.
9.	Elaborating the plan of experimental implementation of the new model. Organizing the experimental implementation of the new model.
Between 9. 10.	Negotiating the mandate and organization of the experimental implementation of the new model with the management.
10.	Elaborating the experimentation plan based on the negotiations. Planning how the experiments will be followed up and evaluated. Scheduling the follow-up sessions.

Virkkunen, J. *The Change Laboratory: A tool for collaborative development of work and education*. 2013. Netherlands: Sense Publishers. Available at : <https://www.springer.com/gp/book/9789462093263> DOI: 10.1007/978-94-6209-326-3 p76,

Disturbance diary

Individual participants will be asked if they are willing to keep a diary where they record (without any personal identifiable data) problem situations, disturbances and difficulties in their daily activities – as either providers or receivers of healthcare. Diaries can be as brief or extended as the participants wants and although the table for recording here is shown as a written version submissions can be made to the research team in audio or other formats if the participant prefers. Diaries will only be shared within group sessions with the participants permission.

To complete: Start with the second column, using this to describe the issue: what was the situation, what happened, who was present (do not use names but either roles or first initial), what did you do. You can also describe your experience of the issues – how did you feel, what did you think? Next complete the third and fourth columns if you can, although these can be discussed at the next change laboratory session or with the research team first if you prefer. Last if you can identify a broad topic or theme that would want to label the issue with put this in the first column.

Topic	Difficulty/Disturbance/Surprise/Problem	Available means of going forward in the situation	Ideas for eliminating this kind of disturbance

Change Matrix: Changes in the history of activity through which the current form has developed (for collective completion)

Time	Changes in the object / outcomes (what has transformed/ what is produced?)	Subject (Who, what kind of persons do the work?)	Instruments (what concepts, methods and tools are used?)	Community (who takes part in the activity to which the subjects belong?)	Division of labour (how work is divided, what new specialities emerge)	Rules (that have to be followed)	Central problems
This year							
Previous 2 years							
3-7 years ago							
8-12 years ago							
13-19 years ago							
20-30 years ago							
30-50 years ago							
More than 50 years ago							