

## BACKGROUND

- Critical Decision Method (CDM) is a form of Cognitive Task Analysis used for studying macrocognition and eliciting tacit knowledge in navigating complex situations.
- We used CDM to retrospectively study investigators' navigating critical incidents (challenges) during the implementation of the Cirrhosis Care Alberta (CCAB) trial.
- Retrospection is a norm in CDM interviews and people recall events and share critical decision events, a) which either require course correction or change of plans, b) has a significant impact.

## RATIONALE

- Retrospection relies on human memory, which poses challenges due to the possibility of forgetting events and situations over time.
- As the CCAB trial started in 2018, relying on human memory to give an accurate account of critical incidents for this extended period was impractical. To address this issue, we supplemented the conventional CDM approach by designing an aide- mémoire, which was developed to assist interview participants in recalling events.

## METHODS

There were two major steps undertaken:

### Step 1: Designing the aide- mémoire

An Human Centered Designer (HCD) created a 32" x 24" Activity sheet using Adobe Indesign with multiple sheets based on Google's mail default calendar format with space for notes or concept maps (Figure 1).

### Step 2: Data collection to populate the aide- mémoire

- Before the interview, participants were asked details of CCAB-related meetings, team activities, outreach activities, and actions during project implementation
- Participants were asked to identify up to five critical incidents affecting project implementation
  - All of this information was mapped to the respective places on the activity sheet, mimicking the calendar format.
  - The chosen critical incidents were highlighted within the tool by distinct shapes, bigger font sizes and contrasting colors.

Pilot testing was impractical due to the project's nature, but feedback on the design and utility of aide- mémoire was collected from participants and interviewers.

## RESULTS

The tool facilitated the simulation of memory, aiding data recall during interviews and helping probing critical incidents

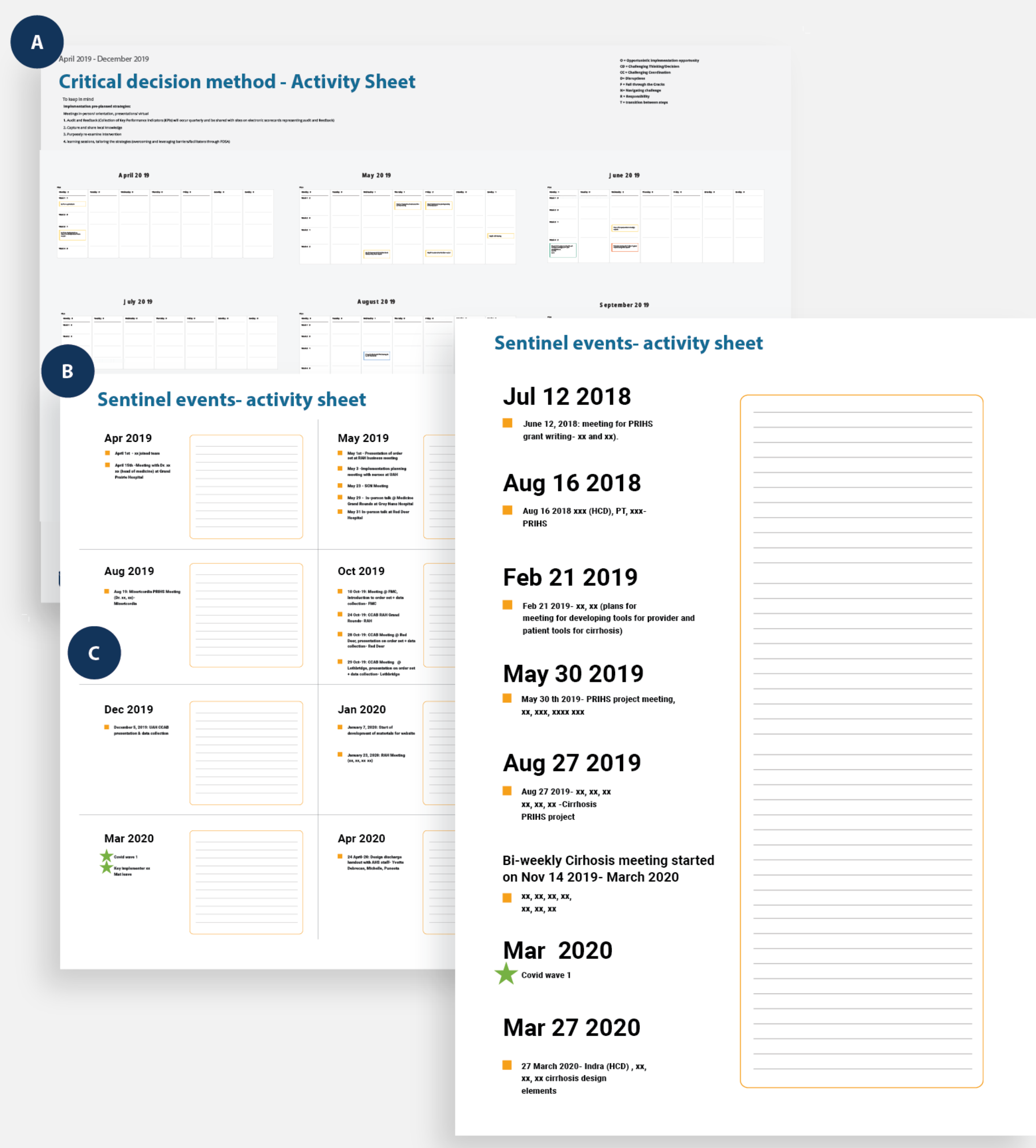


Figure 1: Iterations of aide- mémoire

- The aide- mémoire served as an information source during interviews, lessening reliance on human memory, enabling stimulating conversations and streamlining the process for interviewers.
- With the help of a HCD approach the data collection tool served as a mnemonic aid. The tool helped the investigator's to have a focused sweep 1, which subsequently facilitated deep investigation in the next sweeps and helped understand investigators' information processing, decision-making, problem-solving, and real time adaptations during the implementation of CCAB trial.
- By incorporating an aide- mémoire into our methodology, we were able to introduce a significant modification to the traditional CDM. Rather than solely examining one isolated critical event, we applied the CDM framework to identify critical and sentinel events spanning a four-year period (Figure 2).
- In addition, our approach involved an in-depth probing of all critical events, collectively influencing the implementation process (Figure 2).

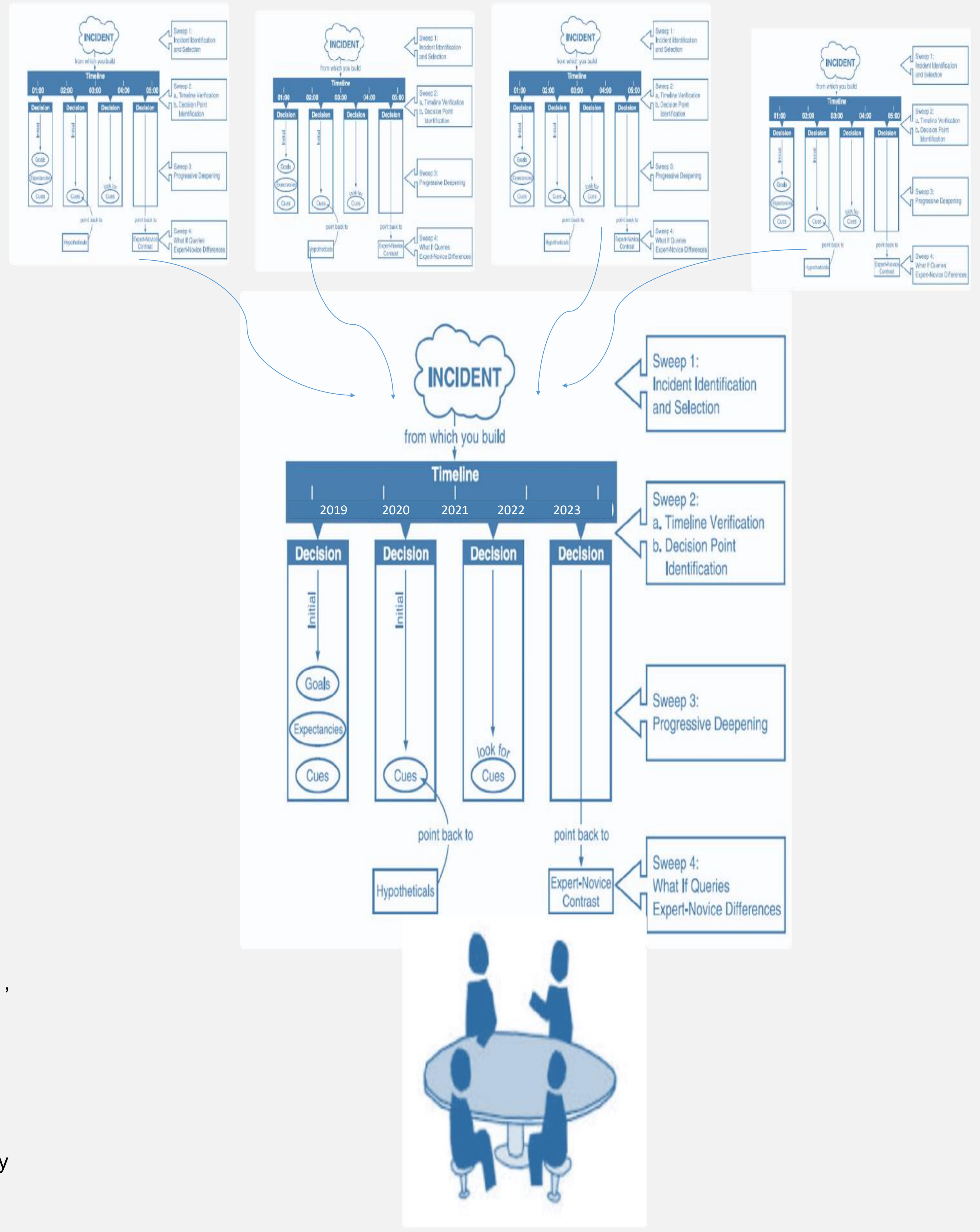


Figure 2: Aid memoire supported the CTA interviews

## CONCLUSIONS

The HCD approach of developing an aide- mémoire allowed the researchers to pre-map a critical incident timeline, which subsequently facilitated the data collection process to help understand the investigator's information processing, decision-making, problem-solving, and real time adaptations during the implementation of CCAB trial.