

## Introduction

- Current EHR technology does not properly support the cognition of health care clinicians to analyze, diagnose or treat patient problems.
- This lack of support can negatively impact patient care and outcomes, particularly in complex environments like primary care, which is characterized by high levels of
  - (A) Coordination.
  - (B) Information needs.
  - (C) Information seeking.
- As primary care shifts to a more team-based approach through the patient-centered medical home model, the cognitive work of health care teams continues to be unsupported by current EHR designs.

## Study Objective and Aims

- Objective: design EHR interfaces to support both clinician and team cognition
- Specific aims:
  - (1) Identify the cognitive work requirements of primary care clinicians and teams
  - (2) Develop and test specific EHR interface design requirements by performing usability testing of EHR prototypes with primary care clinicians

## Methods

- Identify the cognitive requirements of primary care clinicians and team members using goal-directed task analysis (GDTA), to ascertain:
  - Goals
  - Sub-goals
  - Decisions
  - Information requirements
- GDTA data collection: interviews and observations with clinicians and team members
- Data analysis: develop GDTA maps using qualitative thematic analysis
- Interface design will be informed by GDTA analysis and human factors design principles, followed by usability testing

## Poster Session Goals

- Share overview of project and progress to date
- Gather feedback on GDTA maps
  - The following posters contain portions of the GDTA map for physicians, PAs and NPs.
  - Please write comments on the posters or talk to a member of our research team!

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## Project Overview

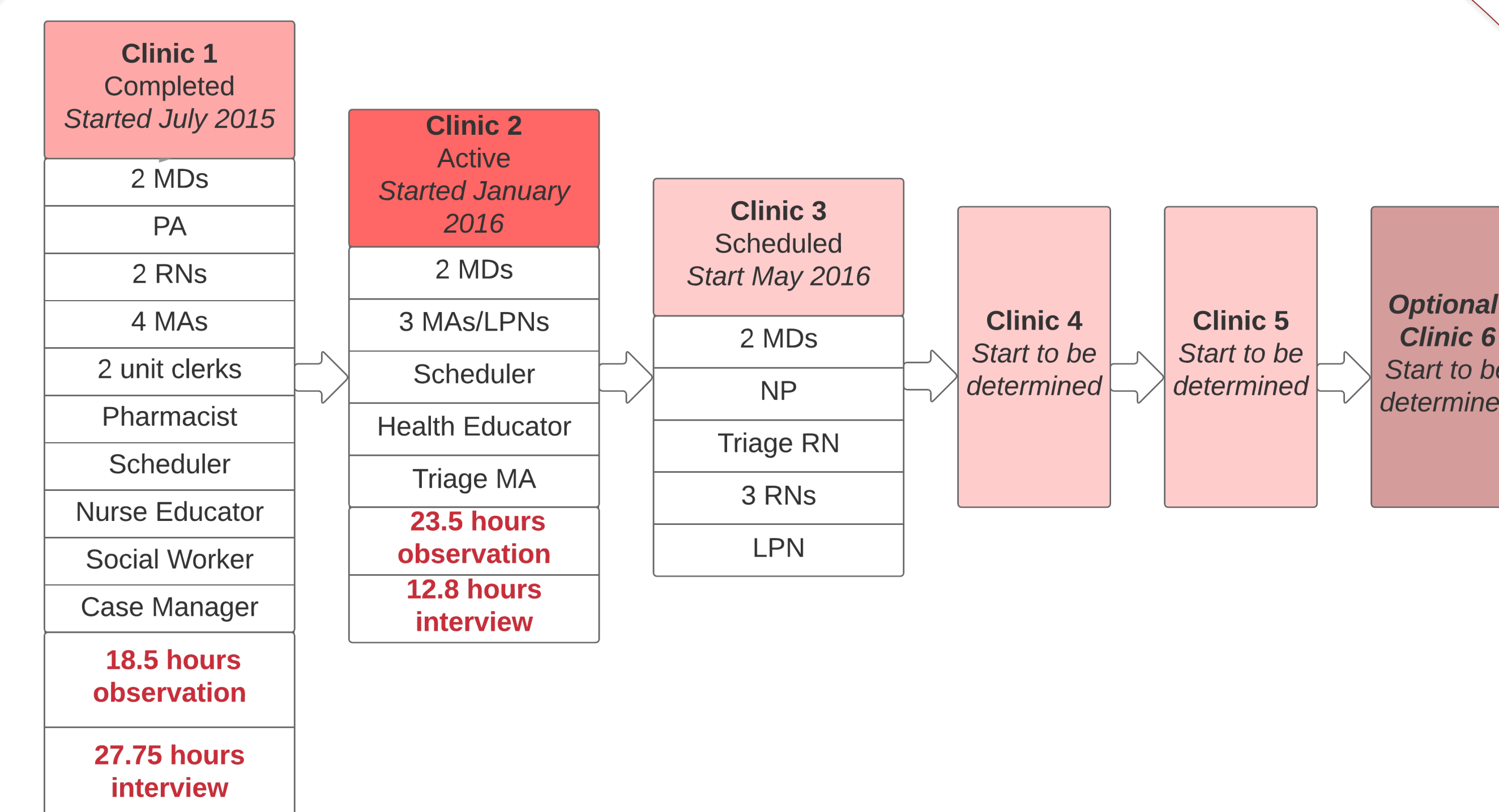
### Project Kickoff: January 2015

#### Conduct GDTA:

Participants:  
5-6 clinics  
Minimum of 2 teams per clinic

Data Collection Methods:  
Observation  
Interview

Output:  
GDTA maps (visual representations of cognitive work requirements)



#### Interface Design:

Based on GDTA maps  
Design for situation awareness  
Human factors principles

Output:  
EHR interface mockups

#### Usability testing:

Participants:  
4-5 clinics

Analysis based on human factors principles

Output:  
Improved EHR interface mockups

## Interested? Questions?

#### Contact:

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