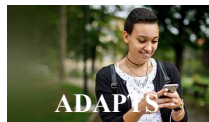


# User Heterogeneity



Oralytics



- 30 min discussion 10 min together, 10 min in group, randomly selected group leads last 10 min
- How to accommodate user heterogeneity

Time for Questions!

2

Please ask questions...!

## User Heterogeneity

- Users have heterogeneous responses
  - Some users will do a good job brushing their teeth regardless of which Oralytics action is delivered
  - Some users will struggle with brushing their teeth well regardless of which Oralytics action is delivered.

3

## User Heterogeneity

- Users have heterogeneous responses
  - Some users are primarily differentially responsive to treatment actions depending on the time of day (morning vs evening).

4

## Discussion

- These are trials in which the treatment actions are delivered as users go about their daily life
  - High noise in responsivity
- How to manage the high noise yet personalize?
  - By personalize we mean the RL algorithm learns in which state to send which action for each user.

5

## Operationalize This Tension!

- What does this mean
  - For constructing an RL algorithm?

6