Transitioning In-Person Research to Remote: A MONELL ADVANCING DISCOVERY IN TASTE AND SMELL Reflection on the Taste of Medicine Study



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Introduction:

Children's Hospital of Philadelphia

Our team is studying children's perceptions of a bittertasting pediatric medication (oral liquid clindamycin) and relationships between taste perception, side effects and taste receptor genetics. When the COVID-19 pandemic changed the research guidelines within the CHOP Emergency Department, we adapted our protocols to allow for remote assessments. This included:

- Reframing the timeline of enrollment procedures
- Utilizing secure video chat platforms
- Mailing participants relevant study materials.



Figure 1. Saliva Collection Kit mailed to participants



Figure 2. Liquid Clindamycin

Methods:

- Trialed secure video chat platforms and protocols for remotely recording the child swallowing and rating the medicine were created.
- Created procedures to remotely obtain saliva samples for genetic testing.
- Developed remote screening methods.
- Reconfigured our REDCap database to allow electronic consent to be emailed to participants and completed remotely.
- Developed electronic surveys to replace daily paper adherence diaries

Results:

Table 1. Protocol Changes made during COVID-19 Pandemic

Protocol Element	In-Person Protocol	Remote Protocol
Recruitment	 Study team alerted when liquid clindamycin ordered in CHOP Emergency Department (ED) Approach family in ED at time of prescription 	 Study team alerted when liquid clindamycin ordered in CHOP ED or participating CHOP outpatient clinics Contact parent by telephone
Consent Procedures	• In-person consent/ assent discussion with written consent	 Consent discussion(s) over phone and/or WebEx Consent document sent via email with a survey link for electronic signature in REDCap
Observation of Child Taking Medicine Dose	 Saliva collected in ED prior to medication dosing Child trained to use taste rating scale in ED First dose of medicine given in the ED Videotaping of first dose and ratings of taste done in-person 	 Time of medication dose (first dose when possible) coordinated for WebEx meeting between family and study team Child trained to use taste rating scale over WebEx Medicine dose given by parent and recorded over WebEx with rating of taste
Medication Adherence and Side Effect Follow- up	 Paper diary given in ED and sent back to study team (mailed or scanned) Telephone call after completion of prescription to discuss course of treatment with parent 	 Daily electronic adherence surveys sent via
Saliva Collection	• Completed in person in the ED	 Collection tubes sent in mail Second WebEx study encounter for facilitated/observed saliva collection Collection tubes mailed back to study team

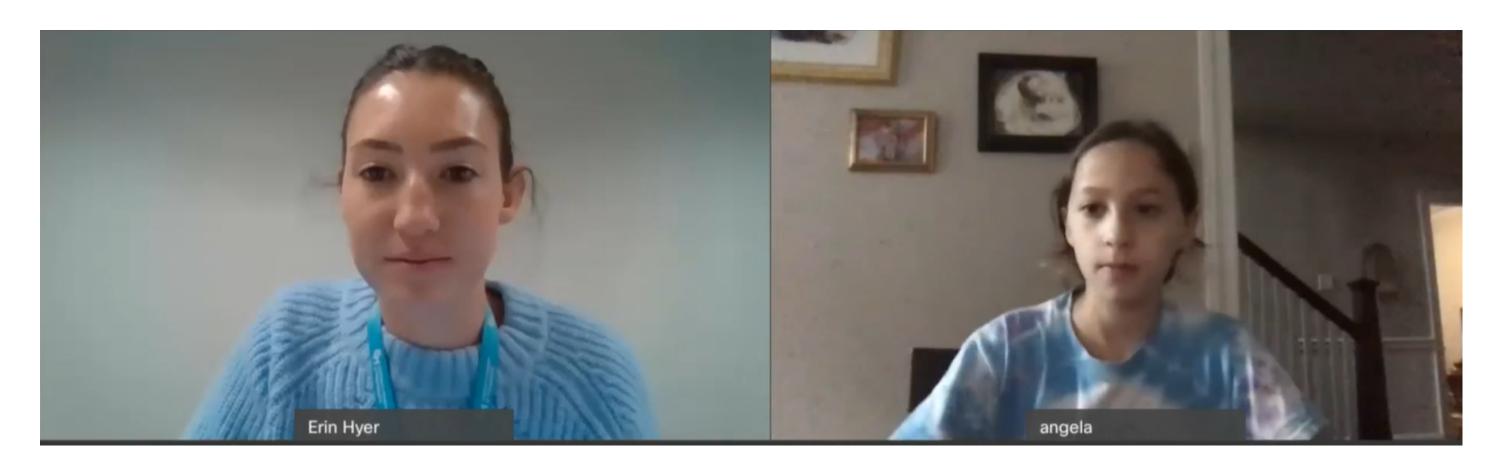


Figure 3. Example of remote enrollment recording using Webex

Benefits and Challenges of Remote Enrollments

Benefits

- Flexibility for study participants
- Expand recruitment pool
- Relationship-building with some families

Challenges

- Technology limitations (e.g. cell phones vs. computer use)
- Inability to assess reasons for non participation of eligible individuals
- Scheduling difficulties
- Maintaining data integrity (e.g parents prompting children offscreen)

Conclusion:

- Remote methods allowed for continued enrollment during the pandemic, but created new challenges
- Some limitiations we experienced during this study include:
 - Remote research increased pool of eligible patients: but may increase risk of selection bias
 - When doses other than the first dose are observed/rated, taste ratings may be modified by number of prior doses
 - Response bias harder to avoid with remote procedures
 - o Missing or unreliable data may be increased with remote methods due to technology limitations