

# "TOUGH TALKS": DEVELOPING A VIRTUAL REALITY APPLICATION TO SUPPORT HIV STATUS DISCLOSURE AMONG YOUNG MSM

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**Background:** After diagnosis, persons living with HIV, including young men who have sex with men (YMSM) continue to engage in sexual risk behaviors. HIV-status disclosure can decrease risk, however currently there are no scalable interventions for youth. Virtual reality (VR) technologies can be leveraged as innovative approaches to communication skill building and sexual risk reduction.

**Description:** Tough Talks is a VR application designed for HIV+ YMSM to practice disclosing their status to intimate partners in a safe, confidential environment. Created in collaboration between two research universities and a software company, Tough Talks is delivered via a laptop and tablet. YMSM first select a disclosure setting and realistic avatar to disclose their status to. Avatars and scenes were designed by and with MSM to ensure appropriateness and resonance. Avatars respond from a database of over 100 phrases, developed and refined through 4 focus groups with HIV+ and HIV- YMSM and 45 usability sessions with 15 HIV+ YMSM. Users currently disclose via chat; future iterations will include ability to speak to the avatar. At this development stage, an automatic algorithm suggests responses to user utterances, which are then verified or changed by a human operator in real time. Presently, the algorithm provides 40-60% appropriate responses; performance improves with increased usability data.

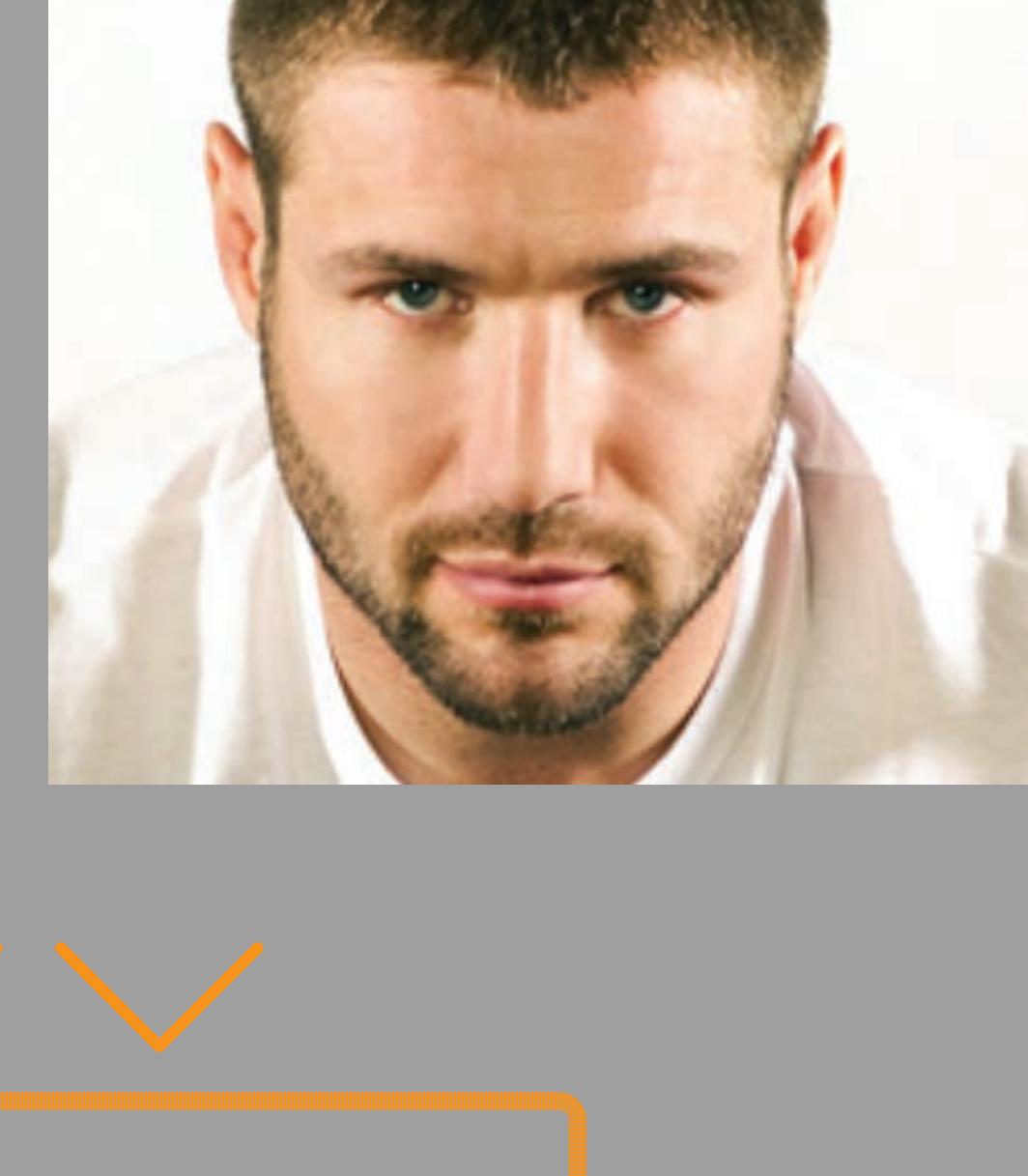
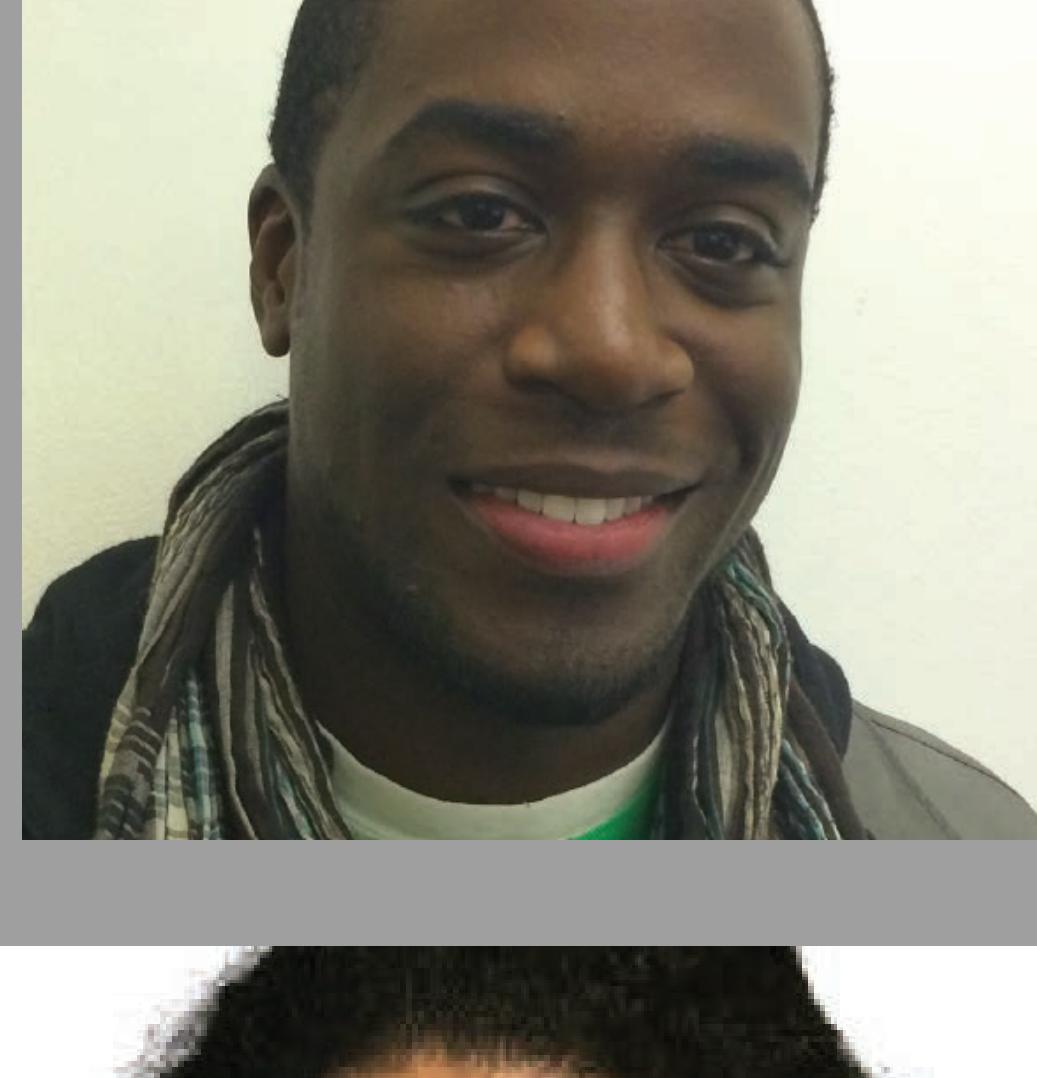
**Lessons Learned:** VR is a powerful, scalable technological tool for addressing complex behaviors like HIV status disclosure. To optimize uptake and utilization, the program must be visually and linguistically tailored for end-users. Scenarios and realistic avatars allowed participants to feel immersed and invested, resulting in strong emotional responses. Participants wanted options to type or speak to the avatar; noting that typing felt like a first-step toward speaking their status out loud.

**Conclusions/Next Steps:** VR can be used to simulate in-person conversations in an immersive, nonjudgmental environment. Tough Talks presents a novel opportunity to practice disclosure strategies prior to engaging in these difficult and stressful situations. As the application is refined, ultimately the human operator will not be needed, facilitating broad scale-up. Future iterations will feature expanded disclosure scenarios and avatar selections including partners, friends, and family members.

## PHASE 1 - DEVELOPMENT

### FOCUS GROUPS

#### HOT OR NOT



#### ROLE PLAYING

#### DISCLOSURE DIALOGUE

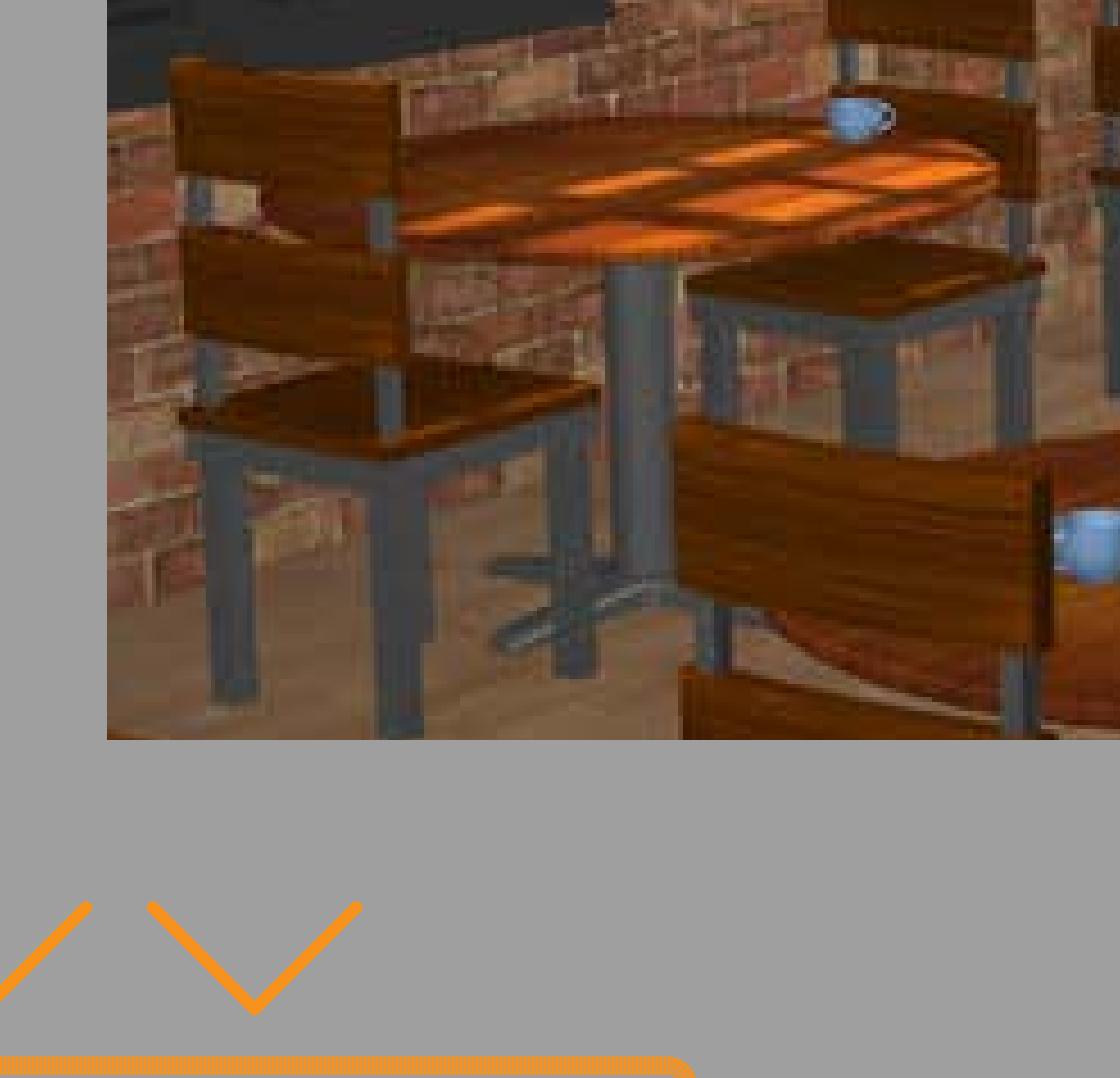
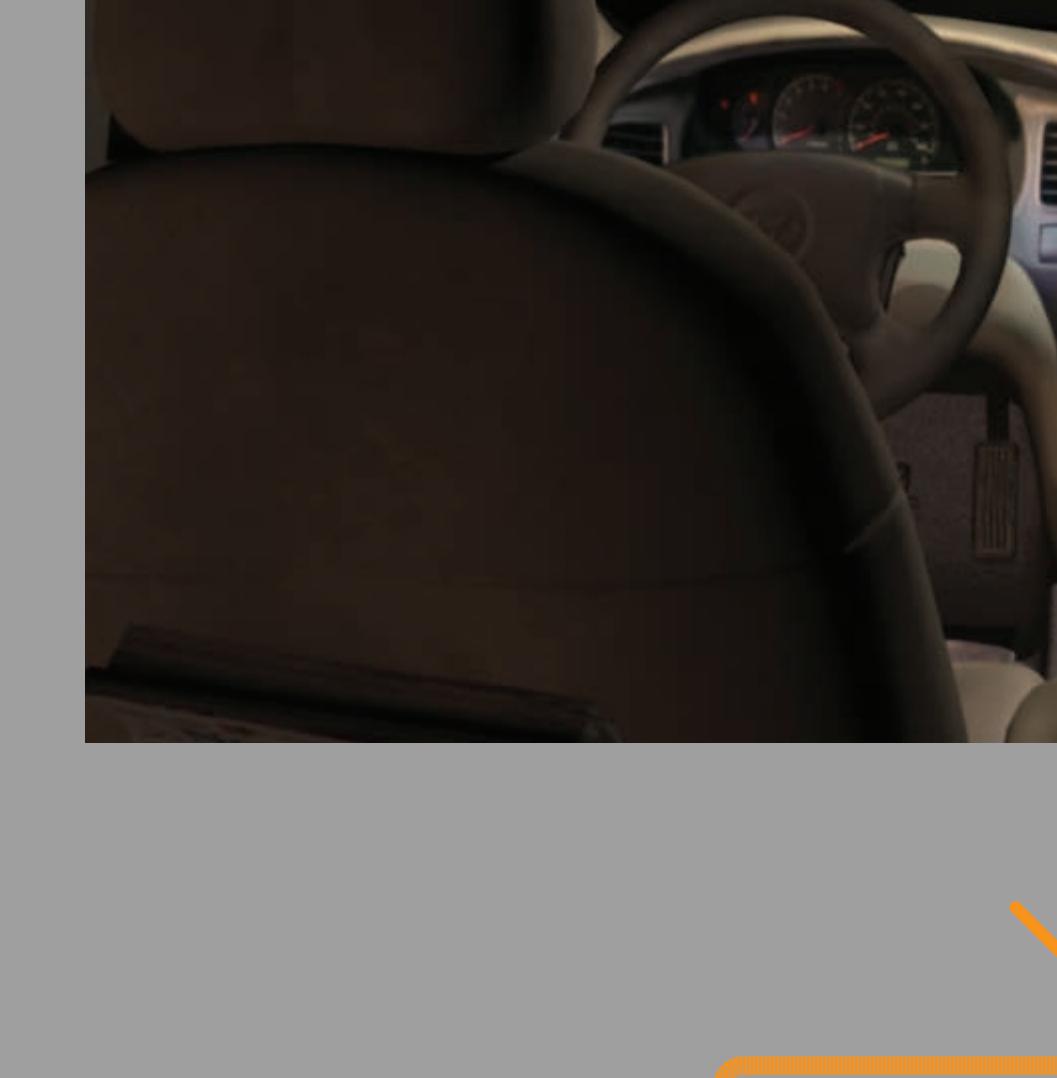
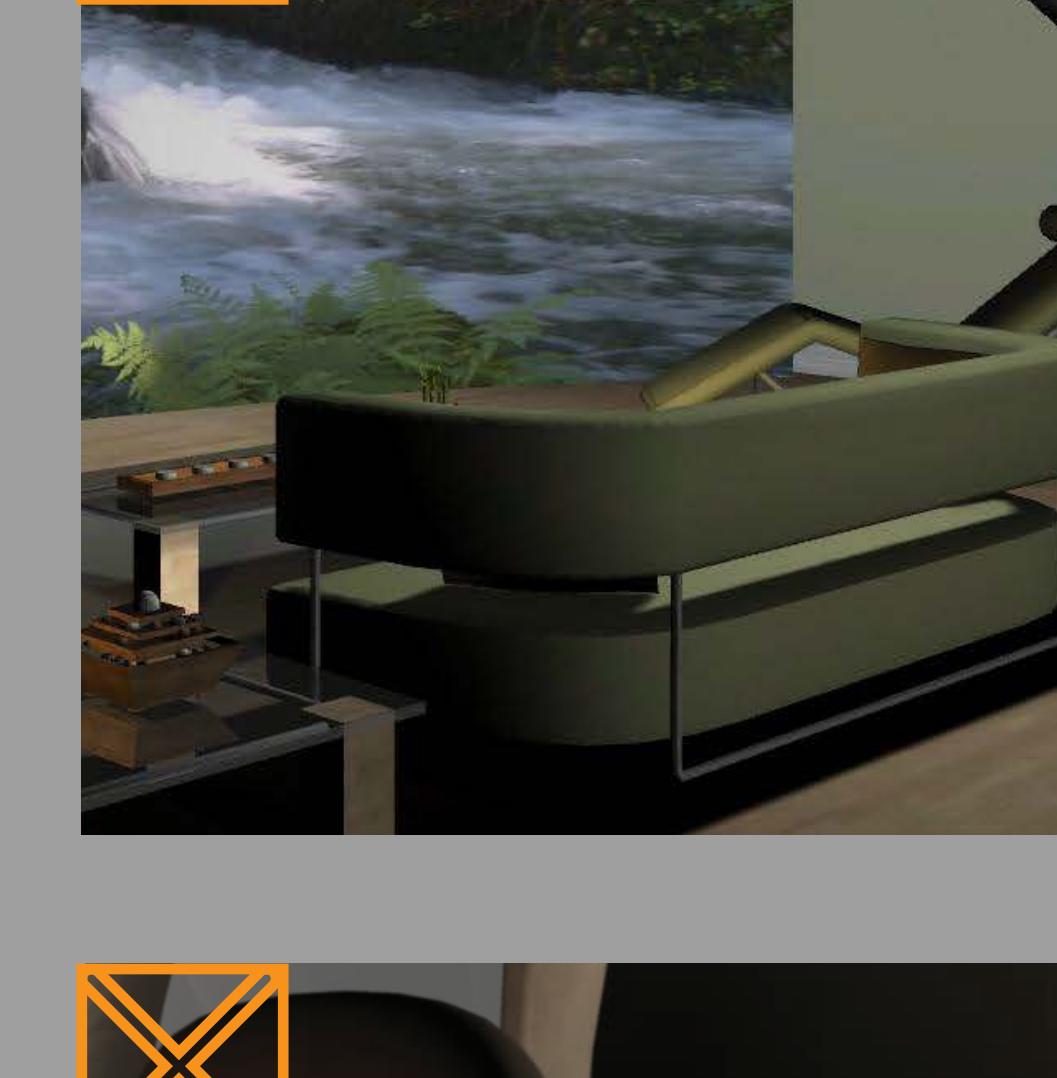
"So, um... what are you about to get into since you know the movie is over? What are you getting into for the rest of the night?"

"Well, it's still early. We can go back to my place and chill and probably just watch Netflix cuz that movie sucked."

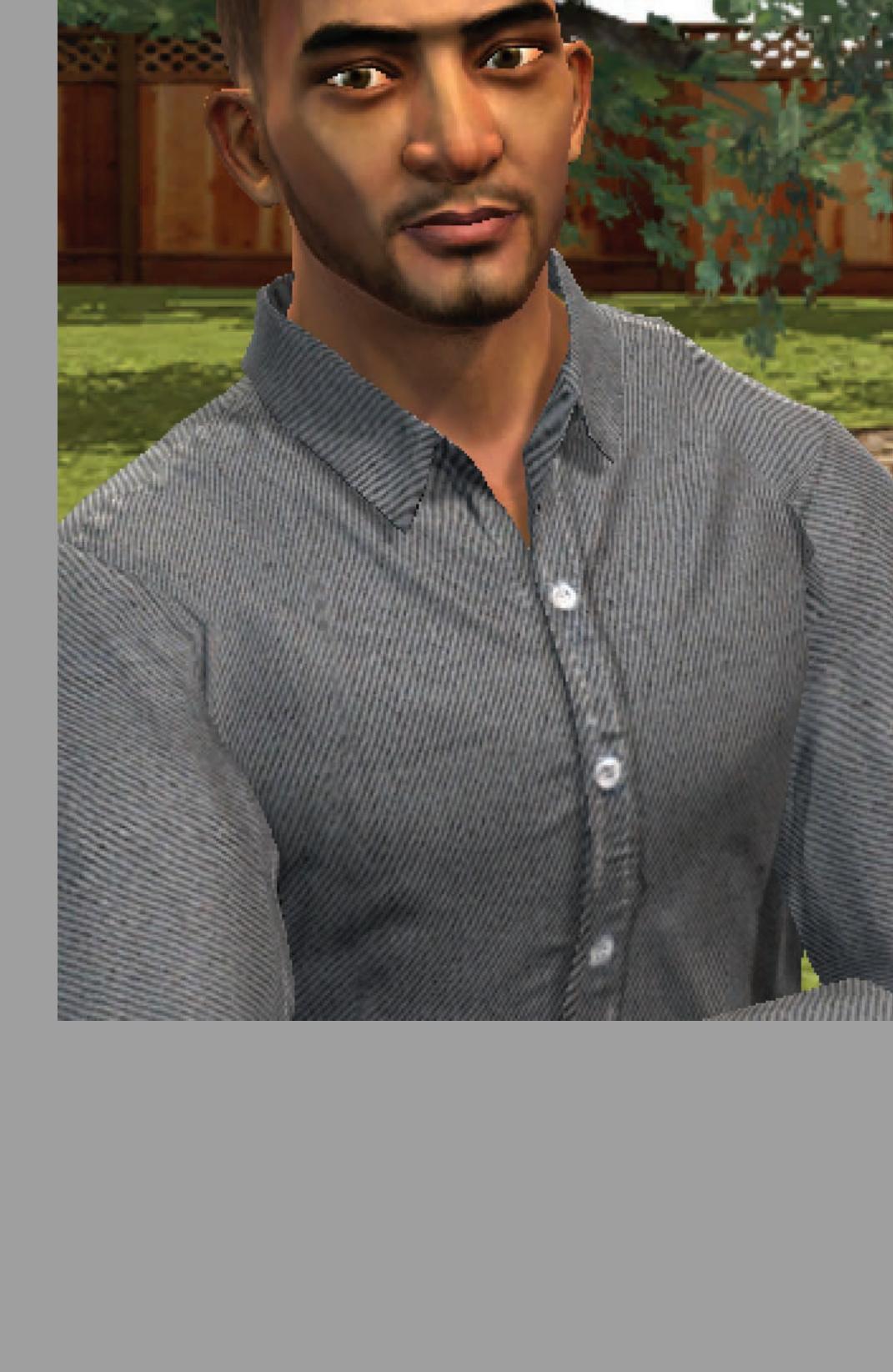
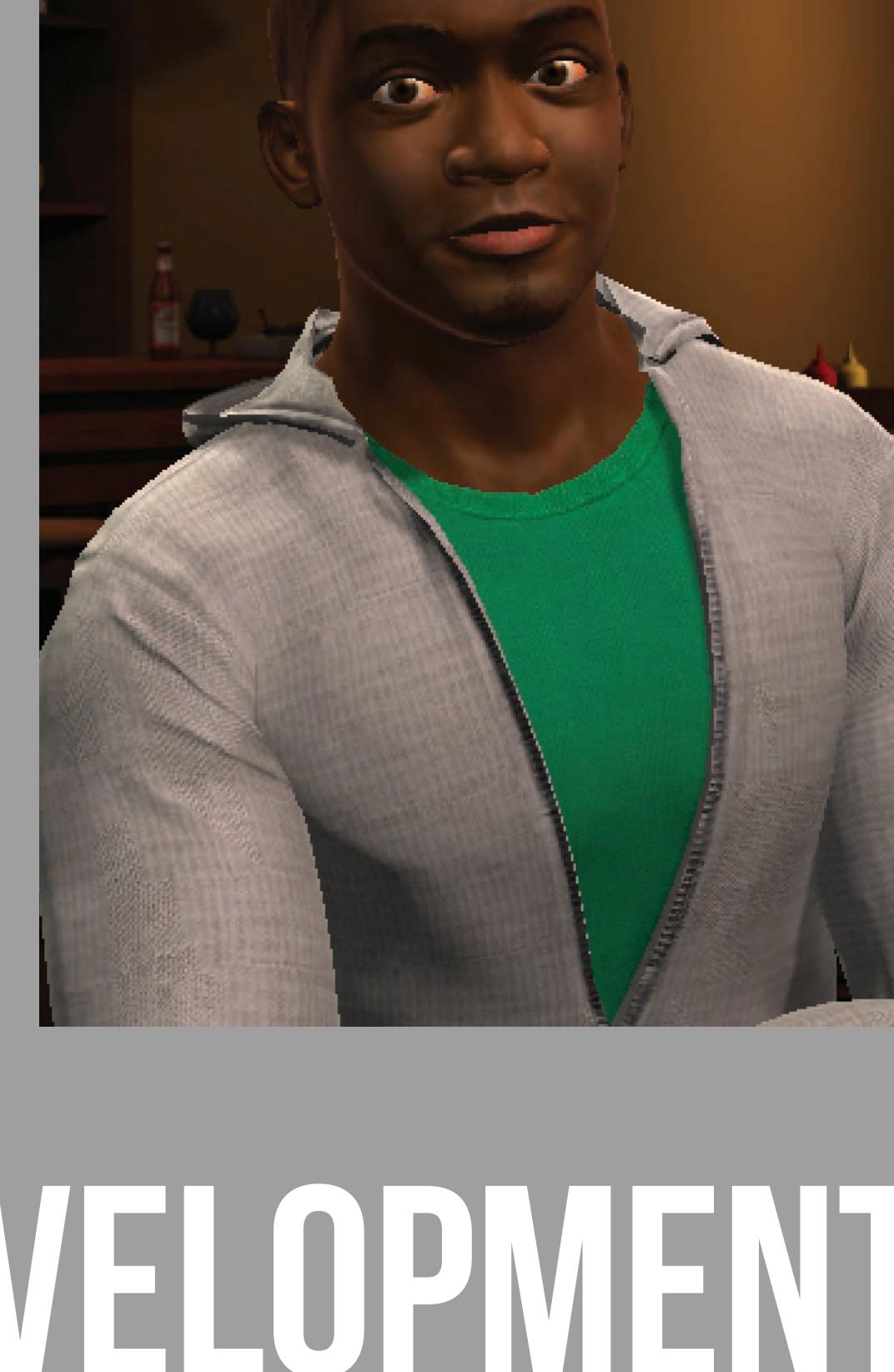
"Ok, ok, that sounds like a good plan. You want to go back and cuddle and everything?"

"Yeah, it is cuddling season." "So cool, so do you know your status and everything?"

"Yeah, I do, I do. I'm positive. And you?"



#### AVATAR DESIGN



#### FINAL BACKGROUNDS

## PHASE 2 - DEVELOPMENT

#### USABILITY ROUND #1

N = 15

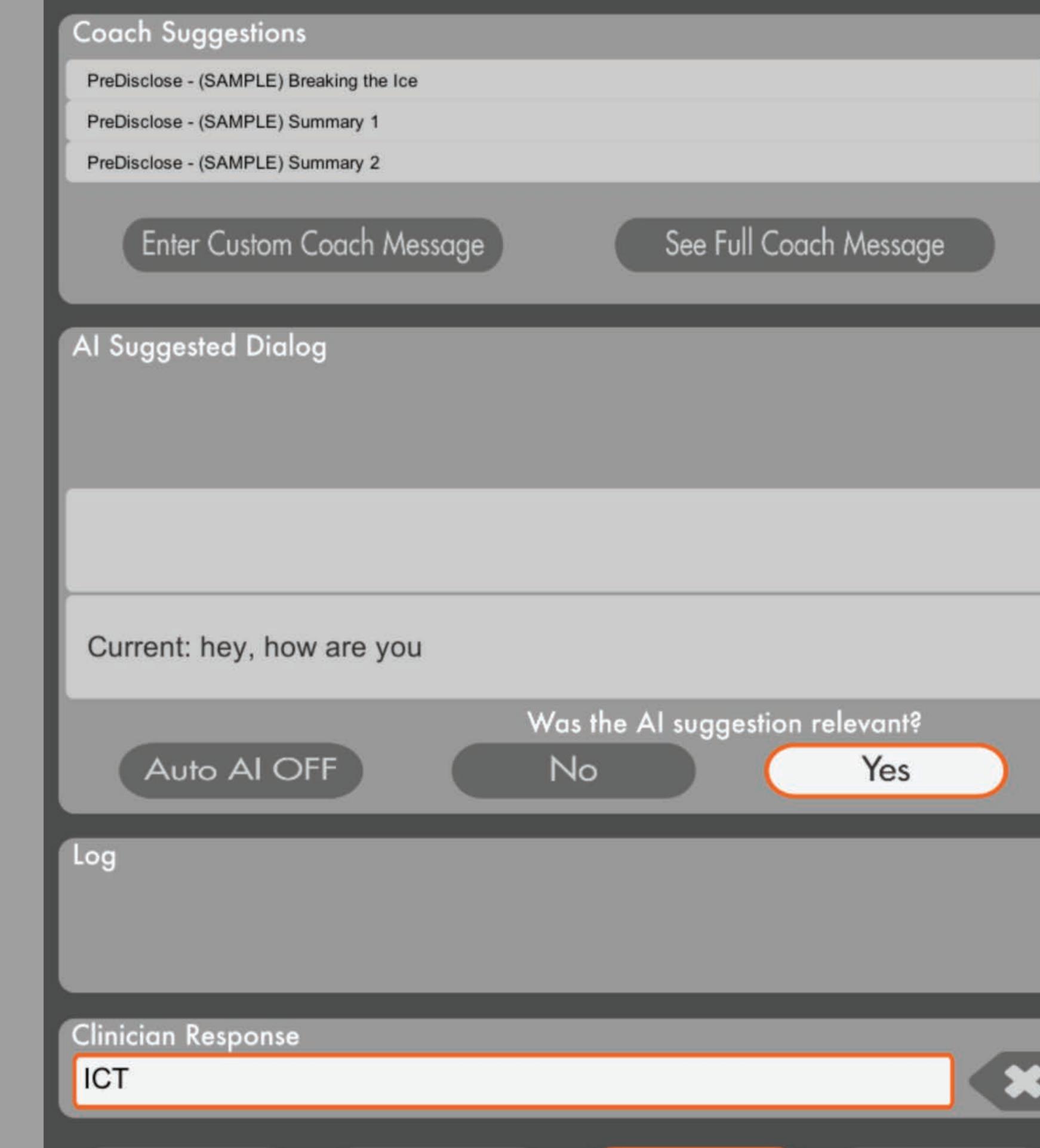


#### COACH FEATURE

HELPS TO GUIDE USERS THROUGH GAME PLAY AND DISCLOSURE

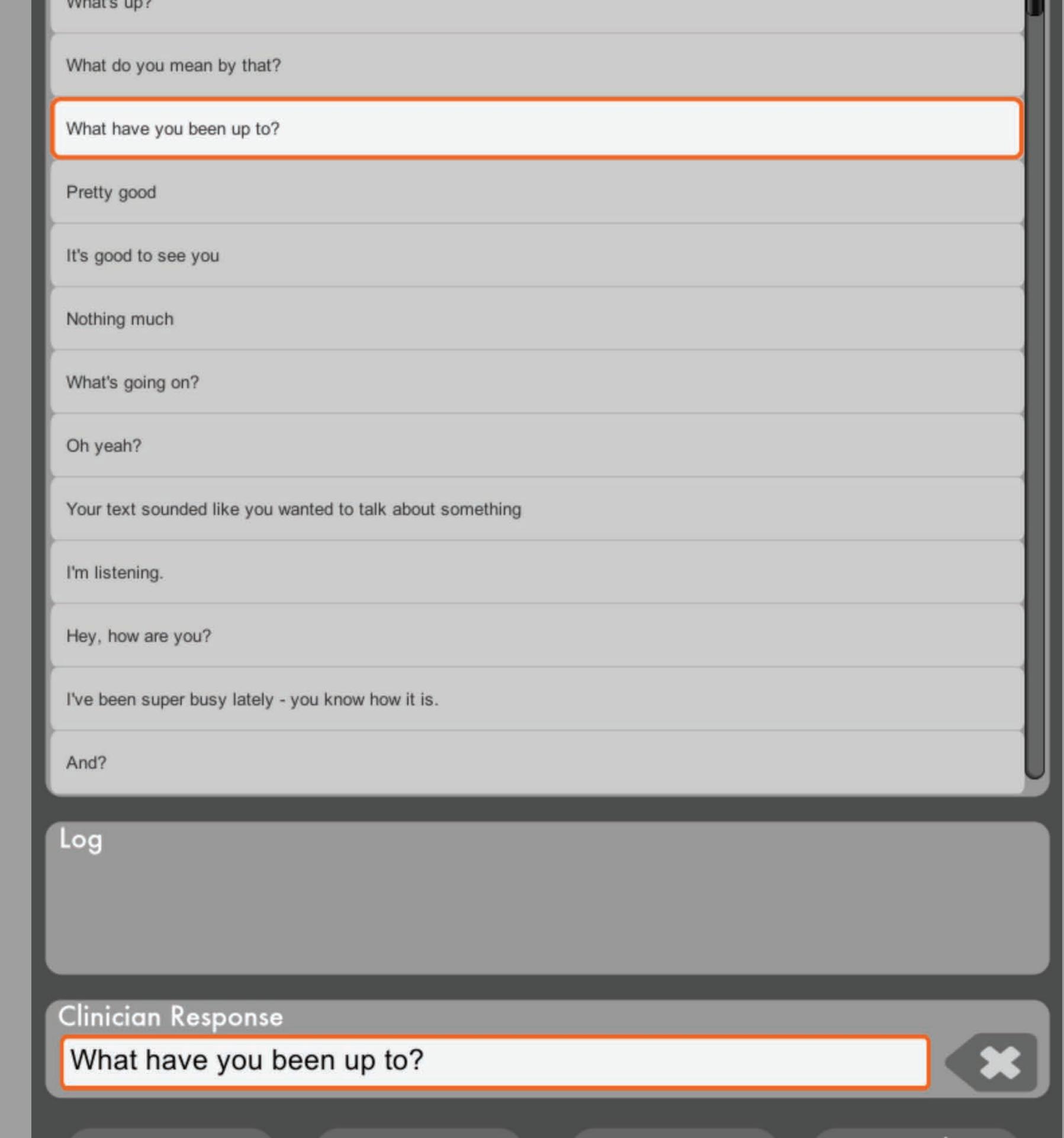
#### USABILITY ROUND #2

N = 14



#### USABILITY ROUND #3

N = 4



## PHASE 3 - TESTING

PILOT TRIAL TO BEGIN JULY 2016

NIIMH 1R43MH104102-01

BATLAB

BEHAVIOR AND TECHNOLOGY LAB @ UNC

USC Institute for Creative Technologies

VBI

THE UNIVERSITY  
of NORTH CAROLINA  
at CHAPEL HILL

#### WIZARD INTERFACE

WHAT THE CLINICAN SEES DURING THE GAMEPLAY. SENDS DIALOGUE, COACH MESSAGES TO USERS. CLINICAN ALSO "RATES" UTTERANCE ACCEPTABILITY FROM THIS SCREEN

#### UTTERANCE DATABASE

LIBRARY OF PHRASES AROUND DISCLOSURE THAT CAN BE SENT TO THE PARTICIPANT USING TOUGH TALKS. CAN CHOOSE BETWEEN THREE SETS OF DIALOGUE SCENARIOS