NURSING VIRTUAL REALITY TRAINING PROGRAM FOR SBIRT (SCREENING, BRIEF INTERVENTION AND REFERRAL TO TREATMENT)

An Undergraduate Research Scholars Thesis

by

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RESEARCH COMPLIANCE CERTIFICATION

Research activities involving the use of human subjects, vertebrate animals, and/or biohazards must be reviewed and approved by the appropriate Texas A&M University regulatory research committee (i.e., IRB, IACUC, IBC) before the activity can commence. This requirement applies to activities conducted at Texas A&M and to activities conducted at non-Texas A&M facilities or institutions. In both cases, students are responsible for working with the relevant Texas A&M research compliance program to ensure and document that all Texas A&M compliance obligations are met before the study begins.

We, Brendan Hutchins[1] and Andrea Ballesteros[2], certify that all research compliance requirements related to this Undergraduate Research Scholars thesis have been addressed with my Research Faculty Advisors prior to the collection of any data used in this final thesis submission.

This project required approval from the Texas A&M University Research Compliance & Biosafety office.

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ABSTRACT

Nursing Virtual Reality Training Program for SBIRT (Screening, Brief Intervention and Referral to Treatment)

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Can a virtual reality training simulator enhance a nurse's ability to learn basic screening, brief intervention, and referral to treatment (SBIRT) skills better than traditional training programs? Based on SBIRT's universal screening process, it was determined that the most beneficial training application would be one that created role playing simulations wherein practitioners could test their skills and knowledge within an immersive environment. The portability and accessibility provided by this virtual reality application not only addresses the limited opportunities students must practice screening and brief intervention skills, but also presents a practical solution to conducting tests while keeping physical distancing measures in place. As today's world faces the need for strict social distancing measures, technologies like virtual reality open doors to practice a new way of interaction and learning. Past studies have

researched whether standard online video training modules, in-person instruction, role-plays and optional patient simulations have a sufficient effect in student practitioner's overall performance; however, simulated training in virtual reality was not considered as part of the equation. Our research will be focused on the efficacy of our virtual reality training simulator on a student's acquisition and retention of the relevant learning material. We will do this by measuring the amount of exposure that is needed before significant changes are observed in a practitioner's SBIRT knowledge, skills, and confidence when compared to other traditional programs.

By utilizing text-to-speech solutions, user audio input, and lip-synced animation on virtual avatars, we can create a realistic environment that nurses can use to practice and test their SBIRT skills. With a variety of scenarios, voices, and characters, the application "Nursing Virtual Reality SBIRT Training Program" will provide a variety of simulated environments for training and education in healthcare.

DEDICATION

To our friends, families, instructors, and peers who supported us throughout the research process. We also dedicate this work to training nurses and those working in the field, past, present, and future.

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Contributors

We would like to express our thanks to our amazing advisors, Dr. Jinsil Seo and Caleb Kicklighter, for guiding us through this project and giving advice and support every step of the way.

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NOMENCLATURE

VR	Virtual Reality
SBIRT	Screening, Brief Intervention, and Referral to Treatment
3D	3-Dimensional
PC-ADMIN	Computer Administrator
PUN	Photon Unity Networking
Look-Dev	Look Development

1. AESTHETIC MOTIVATION AND RESEARCH QUESTION

The goal is to discover how virtual reality interaction can support practitioner's overall performance in SBIRT assessment.

1.1 Introduction to Research Project

The applications created for this research project were built using the Unity Game Engine. There are two applications: the first is an administrative application (called PC-Admin) that is controlled by an instructor using any personal computer; the second is a virtual reality application built for the Oculus Quest. An internet connection is required between the two applications for the text-to-speech communication to take place. There also needs to be a microphone and speakers on the instructor's computer for the PC-Admin application to function correctly. Ideally, there would also be a camera set up within the VR user's space to record their real-world movements, which the instructor or user could review later to provide feedback on the practitioner's body language. Lastly, the VR user must at least have three feet by three feet area of space around him for safe navigation and usage of the application.

Both the VR user and the administrator operating the PC-Admin application interact with one another in a shared, virtual room. The administrator remotely controls the actions of a virtual patient, while the VR user practices their SBIRT interviewing skills on this avatar as if they were interviewing a real patient. The main interaction of this application revolves around this virtual patient; the VR user follows their training and asks the virtual patient relevant SBIRT questions, and the administrator responds accordingly to the VR user through the virtual patient. On startup of the VR application, the VR user must wait for the PC-Admin to connect and join the room from their side for the simulation to begin. Through the PC-Admin application, the administrator

is given a script that contains a pre-made scenario that they can follow, complete with information about the virtual patient's background and a list of appropriate responses that the PC-Admin user can choose from. When a text response is selected by the administrator, the virtual patient within the VR application verbally repeats that response to the VR user. The VR user can then speak back to the virtual patient following their SBIRT training, and this response is then recorded and played back in real-time to the PC-Admin user. If there is no response in the list of options suitable for the PC-Admin user's needs, the user can type out a custom response that the text-to-speech software will then play as audio to the VR user. This is one of the advantages of using a real-time text-to-speech and lip-sync technology as opposed to using prerecorded audio files: it gives users the ability to adapt to changes, go off script, or add variation to the lesson with minimal effort. The PC-Admin is also able to unmute themselves to talk directly to the VR user through a microphone, without the use of text-to-speech. This can provide an effective feedback system where the administrator can comment and give feedback to the VR user at any point during the lesson. The PC-Admin can also see the user's movements in the virtual space, so they can be aware of the person's hand and head movements to determine their body language.

1.2 What is SBIRT?

Screening, Brief Intervention and Referral to Treatment, also known as SBIRT, is a comprehensive public behavior health approach that nurses and social workers use in their practice to detect potential substance abuse in their patients before they are at major risk of dependency. This clinical tool identifies risky behaviors using an evidence-based approach which makes for a reliable and effective tool to provide appropriate intervention. The advantages to this screening process are that it is able to evaluate the severity of substance abuse no matter

what stage the patient finds themselves in. Practitioners are able to identify patients who are not seeking or receiving suitable help and work towards reducing the number of patients who do not receive specialized treatment. During the brief intervention process, practitioners work with the patient to increase substance abuse awareness and encourage them towards behavioral change. Moreover, through the referral process practitioners are able to identify patients who are in need of more intensive treatment. This allows practitioners the ability to provide a timely referral to users who would benefit from specialty care. Overall, the treatment referral process is highly regarded by patients and their families as it provides a positive therapeutic atmosphere.

1.3 Motivation

The motivation behind this project is to create a viable method of learning virtually, especially in these times of social distancing and classroom virtualization. VR has served as an alternative to face-to-face interaction, as seen in chat rooms and social applications like VR-Chat. However, most existing VR training/educational software are self-contained and do not allow for dynamic interaction by a proctor or instructor user. Certain subjects, like SBIRT interviewing techniques, require a trained expert to guide the lesson from the outside, and need the ability for said expert to dynamically respond to the learner through the application.

While in-person training has proved to be the most beneficial way for students to hone their skills with ceiling effects, simulated training has the potential to become a valuable resource due to its ease-of-access, cost efficiency, and convenience it provides in situations that require physical distancing. Even alternative training resources like the use of standardized patients and student-to-student role plays have been proven to lack realistic learning experiences because of script-restricted interactions. Dr. O'Brien states that "training via technology on its own might actually decrease the total resources required to train social workers and nurses in

SBIRT" and would have the added benefit of having a "wider reach" to those in training (487). With the increased accessibility to cheaper options of virtual reality (such as the Oculus Quest) it's becoming more and more feasible for organizations to adopt virtual reality as their primary platform for training and education.

1.4 Importance to the Field

Research has found that only "1 in 10 people who need substance use treatment receives it" (Putney). As a result, it is imperative that students entering the medical field receive adequate training in identifying patients with signs of substance abuse. We chose to use virtual reality to solve this issue since it immerses the player into the training scenario, where the student can practice freely to raise their confidence in their SBIRT skills and go into a real-world situation knowledgeable and self-assured. With the technological resources available to us today, and past research indicating the need for additional SBIRT training for social workers and nurses, a virtual reality application is an obvious choice for addressing this need. Simulated training as a medium has also proven to have multiple benefits. For instance, the repeated cost of running a training scenario is significantly reduced, as there is no need to hire a real-life actor or standardized patient to train against; you can practice if you want with the virtual patient. Another benefit is that instructors have creative flexibility to tailor scenarios however they see fit, giving them the ability to recreate important situations or experiences that the student might encounter on the job. The use of avatar patient simulations allows for both the proctor and student to receive immediate feedback, allowing the student to immediately sharpen their skills and the proctor to adjust the module to fit the dynamic scenario.

2. HISTORICAL CONTEXT, DISCIPLINARY PARADIGMS, AND AESTHETIC STANDARDS

2.1 Literature Review

Existing bodies of research have shown that SBIRT is a great method for nurses and social workers to easily gauge substance use issues in their patients. Its emphasis on simplicity and brief intervention allows even practitioners that may not have as much experience evaluating substance abuse to use it as a starting point to identify potential candidates (Sacco 153). Another factor solidifying the importance of SBIRT is its uniqueness as a universal screening process and ability to suit the needs of any social worker, regardless of their expertise or their patient's level of risk (153). The most advantageous aspect of SBIRT is that its methodology can be modified to any level the practitioner sees fit. Whether the client shows evidence of less severe substance use issues or is dealing with a more critical case of substance abuse, the SBIRT methodology can be modified and combined with additional examining practices for a personalized treatment.

With as many as 1 out of every 10 persons older than the age of 12 affected by substance abuse disorders, proper intervention, and treatment of substance abuse from healthcare workers is in great demand. However, there is a national shortage of trained healthcare professionals that can provide evidence-informed care for substance use issues, and many of them are retiring and leaving nursing programs without an adequate number of experts in the field (Simpson 83). With the average professor ranging between 52 and 49 years of age, the shortage of available, trained practitioners is predicted to worsen as the Baby Boomer generation retires from the workforce. These recent events have made it imperative for education programs to share their limited resources and standardize their training with the help of virtual technology. As Dr. Padilha states,

"the introduction of clinical virtual simulation in nursing education has the potential to improve knowledge retention and clinical reasoning in an initial stage and over time, and it increases the satisfaction with the learning experience among nursing students" (Padilha 2). There are already proven benefits toward using virtual simulation tools in the classroom in conjunction with traditional classroom learning, hence solidifying the argument in favor of producing more virtual simulations.

Distance learning has been studied for the past two decades and has shown potential to "increase access to education for the adult, working student who represents a growing proportion of the undergraduate nursing population" (Simpson 84). It is also a matter of allocating resources effectively; instructors can reach a wider population of nursing students by teaching remotely as well as in-person and can even reach students at other institutions than their own. With the rising demand of nursing jobs and the shrinking pool of experts who can teach these necessary skills, there is an urgent call for the development of learning tools that can ease the burden medical educational programs are currently facing with the lack of necessary personnel to continue training students.

Immersive virtual reality has been utilized by nursing educators in the past, including various surgery, first aid, and social simulations. Real-world training, on the other hand, might require lab resources or procedures that can be very expensive, like sterilization of equipment, or access to a trained professional. These costs increase with the number of times the training scenario needs to be run. Instead of relying on the availability of well-trained professionals, "VR trainers and simulators offer the advantage of allowing as much training as is required to achieve the training goal" (Seymour 462). While there is a proven benefit of using VR in modules that require usage of hands and motor skills, there is a gap of evidence to support emphatic care and

emotional training in nursing students, or in other words, interpersonal skills (Dean 2057). Therefore, more projects need to be produced to demonstrate with the recent technological advances in text-to-speech solutions and development of more powerful, cheaper devices, simulating reality in VR has become less of a far-fetched concept. Therefore, immersion and believability within social situations in VR could be achieved, if not now, then soon.

As we built the virtual examination room within our application to produce a medically accurate space, we also deliberated the ways in which we could also engender a sense of comfort in our users. Based on our research, we found that one of the most efficient ways to transmit a comfortable atmosphere was using our architectural space (Okken 737). We applied this concept to our application by designing our exam room to be a size that feels both spacious and intimate. This in turn directly impacted the layout of furniture and medical equipment throughout the room. Additionally, we learned that a pleasurable environment can also stimulate disclosure of sensitive information from a patient, so we made careful use of color, overall design aesthetic, and object synergy to create a pleasing space (739). The final element that contributed to creating a comfortable space was lighting. Our focus for this process was to simulate warm, natural lighting by placing a long window on the far end of the room to give an inviting feeling to the environment. So as to reinforce we were creating both a comfortable and a professional space, our exam room was illuminated with cool lights that are typically used in medical scenarios. As we finalized the design process for our clinical room, we ensured that each design element was working collectively and harmoniously to produce our desired architectural space.

Another important aspect we took into consideration was the distance between our virtual patient (controlled by the administrator) and VR user. Strategic placement was needed, seeing as the physical distance between the experimenter and the participant in a real-world scenario has a

direct impact on the extent of self-disclosure (739). Considering the main goal of this project was to create an immersive experience for the VR user, one of our key objectives was to ensure our virtual avatar behaved realistically by maintaining eye contact with the user and holding good posture. This was done to motivate the user to respond to the avatar and make a conscious effort to engage patients with proper eye-contact and good posture to build trust and to indicate a desire to connect.

We carefully deliberated on these design problems, with the intent of enhancing the practitioner's experience within the application. As users repeatedly engage with our application for practice purposes, we hope they are also able to reflect on their experience and take some of these concepts of spatial design and body language into their future practice in the real world.

3. EXPLANATION OF EXHIBIT

3.1 Development of Application

From the start of production, our objective was clear: create an immersive experience for practitioners to test and develop their SBIRT knowledge and skills. As we worked toward this goal, we knew that the best way to achieve it would be by developing a prototype that we could test and use to identify areas of improvement. After we refined those areas, we would then develop another prototype to test with, repeating this process until we reached our desired goal. As we went through this process and studied our prototypes, we had underlying objectives we kept in mind as we continued development. We knew that for our application to be successful, it was essential for us to create a realistic environment that possessed an inviting atmosphere and provided a soothing experience for our users. If we managed to build our application around these three objectives, then users would be more likely to engage with the simulation and would improve their overall performance. Our breakdown of these objectives trickled down to each major component of our design process-- the character design, room layout, and look development.

3.2 Character Design

One of the first tasks that was tackled at the beginning of production was character design and software selection. Due to lack of expertise in character development, we knew our best plan of action would be to implement a 3D character model provided by a third-party software. After testing various options, we decided that Adobe Fuse's character creator was the ideal candidate seeing as it would provide us realistic 3D characters that also came with blendshapes. Blendshapes are like "poses" that are saved with a 3D model that can change the shape of the

object, giving a user the ability to do things like cause eyelids to blink or a mouth to open or close. This was important to our workflow, as we would need blendshapes to animate the face and mouth of our characters as they talked. Salsa, the text-to-speech software we chose for this project, not only creates audio from text but can also procedurally animate a 3D character's face to match the sound by using included blendshapes. During the concept development of our characters, we knew that we wanted to have a female and male character that ranged between the ages of 30-45 so we took this into consideration regarding their physical appearance and apparel. Moving forward we hope to further diversify our choice of avatars by adding more characters of different ethnicities and age groups.

3.3 Room Layout

When it came to the design of our exam room, we knew we needed to give a lot of thought to the dimensions, arrangement and use of space of the room. The mock design alone took us weeks to edit until we landed on a final design. After conducting research on the major elements that should be considered when building a clinical space, collecting references, and receiving feedback from our faculty advisors as well as the Nursing Department, we believed we put together a practical and logistical layout for us to build upon. After various conversations and revisions, we concluded that there were several elements we wanted to make up our room: the patient's chair, cabinet/storage space, desk area and a large window. The reason for integrating a large window was one of those elements is because we knew we wanted to make the space feel spacious and open, and a window was a great way to make that happen while brightening up the room. However, we did want to maintain a certain degree of intimacy between the user and patient so we made sure that the glass would have a translucent texture. Furthermore, we considered various arrangements of medical equipment and furniture to create what would be an

efficient exam room with the optimal layout. While some layout decisions were more obvious (like placing the patient's chair towards the middle of the room so the user's visual field would have an interesting view of the room from their standing position), others might not be as obvious for someone outside of the medical field. For instance, placing the trash bin at an accessible spot or placing the door in a way that it would open away from the patient chair for privacy purposes.

3.4 Overall Look Development

As we finalized the bigger components of our design, we started looking into more detailed elements of our look development. We began to examine color palettes, room decor and references to establish our atmosphere and tie the room together. To incorporate standard colors from the field of healthcare we included blue into our color palette as it is typically associated with trust, knowledge and is a calming color. Based on an existing design, we decided to make our secondary color green for an overall cool, fresh palette and for its associations of relaxation and growth. Moreover, we went on to add framed paintings and posters to decorate the walls using colors like our color palette. While the finishing touches came together, we also gathered references that were able to illustrate our vision for the atmosphere we were looking to create between our user and the patient. Lighting played a big role in this procedure as we planned to imitate the look of natural light coming through the window to have warm tones to enhance the inviting atmosphere.

3.5 Unity Game Engine

A big decision to make early in development was to develop the project either in Unity or Unreal Engine. Both engines have their upsides and downsides that cannot be covered in this thesis, however, there was an interesting challenge in creating this project in that we needed to

develop multiplayer connectivity between a virtual reality device and a computer remotely. For this reason, Unity Engine seemed to be the best choice in accomplishing this goal, largely due to how much support and software is already made to start with. One of our graduate student assistants, Yining Zhou, was adept at writing C#, the language of Unity, and writing scripts in code is better documented than Unreal Engine.

Although post processing and rendering takes more effort in achieving great looking scenes and lighting, Unity can achieve great looking scenes comparable to that of Unreal's rendering power. Our faculty advisors also have more experience in Unity, as well as access to more resources and people knowledgeable in the engine, so we could receive immediate feedback and advice compared to if we chose Unreal. Sharing files with team members is better in Unity's case due to its low default file size. Finally, Unity places less strain on Macintosh computers compared to Unreal. Unreal Engine severely slows down Apple computers a considerable amount due to its dependency on a strong graphics processing unit, which most Apple computers do not have a strong one compared to windows-based computers, so Unity was a smart choice since half of our team worked with Apple computers and laptops.

3.6 Software and Importance

For the purposes of our project, we used several different third-party software packages to speed up development and place less strain on our programmers. The first was Photon Unity Networking, or PUN, which allows users to talk to each other remotely via microphones and chat logs. In our case, we used a microphone and text-to-speech sent from the administrator as events to the virtual reality user to receive and play on their end. PUN also allows for users to join and leave at any moment without disrupting any server connectivity, which is useful for short sessions where an administrator can continue being in a room while multiple nursing students

drop in and out. PUN also allows for joining specific rooms, which we plan on implementing so that the administrator can set a room code to join and the VR user can input that code before joining. This is useful if multiple administrators and nursing students are actively using the application.

Text-to-speech implementation was a decision made over the course of many weeks of planning. On one hand, we could have had a scenario utilizing a voice actor to catch more subtle emotion than with text to speech, and on the other hand, we could have had the administrator also be the scenario actor in the program since we already had microphone input for both PC-Admin application and the VR application. However, both sides had their downsides. For the voice actor situation, we were not able to create custom responses should the nursing student respond with something completely different than what was planned in the script. As for the administrator voicing the patient, this would be dependent on what gender, accent, and voice the administrator had (imagine a high-pitched administrator voicing a large man). For this reason, we decided to go forward with text-to-speech, which enables us to have multiple voices accessible in our application. RT-Voice Pro, another software package we use in our application, does the heavy lifting of configuring text-to-speech voices built into the computer with Unity's event system, such as clicking on a dialogue option in text and RT-Voice translates that into speech.

The final software package used was SALSA Lipsync Suite, which lip syncs the dialogue provided by RT-Voice. This improves user experience and immersion. The lip syncing is automatically generated, which allows for the administrator to type whatever custom dialogue they choose, solving the primary issues we had previously. All these software packages have a

profound amount of documentation and support teams eager to assist in any way they need to, which makes these packages easy to work with and adapt for the sake of our own project.

4. REFLECTION

For our public presentation, we participated in the Undergraduate Research Symposium, this year hosted virtually by LAUNCH. For this, we created a PowerPoint and accompanying video of us presenting our project for any viewers to watch. In addition, we also created a poster featuring a screenshot of the project and information about the different aspects of it. Based on the feedback we received, the poster would need to be revisited, as it focused on the wrong areas, did not have enough graphics, and was unreadable due to small text size.

Through the celebration of our creative artifact, we came to realize there was a vital balance between the nursing background and technical aspects of our application. While our research mainly focused on our findings that reinforced the importance of our application to the nursing field, we were also needing to introduce the technology that made it possible. After receiving feedback from a party who was outside of the nursing field and virtual reality production, it made us realize how important it was to give both sides an equal amount of an explanation. It was brought to our attention that there were instances where terminology was used that would be unknown to someone who was not part of the visualization field. Based on this feedback, we made sure to pay closer attention to the vocabulary we used and made sure to offer an explanation that broke down unfamiliar concepts when it seemed appropriate.

In addition, since our presentation was recorded ahead of time instead of being held live in-person, there was a level of disconnect between us and the audience. This made engaging and getting people excited about our work more difficult than usual. While content is important, what also matters in a presentation is visual communication, body language, and eye contact, which we had none with our audience. Our delivery came time to present was dry and unengaging.

However, we were able to communicate the importance of our project, which we hope to accomplish as well in this paper and in the future. While we were unable to have a Q&A for this session, the feedback we received was still helpful, and caused us to change our paper to be more informationally friendly to those outside of our area of expertise.

Our target audience is nursing practitioners, specifically those trained in behavioral issues as well as substance abuse mitigation and recovery. We also expect to see experts of all kinds involved in the field of medicine, as well as researchers in virtual reality interested to see our results from this project. However, since there is terminology exclusively known to those in visual computing, we made sure to break down and offer additional explanation to terminology that was not common knowledge as well as graphics that were able to give a visual of the message we were trying to explain (an example being "Look-dev"). This was conveyed to us especially through the feedback we received from the undergraduate research symposium.

After meeting with professors and students from the nursing department, we were able to take note of factors that we could better from a medical perspective. It was brought to our attention that, unlike in the real world, our VR application has the nurse practitioner start the screening process without a patient pre-brief. In future iterations, we would include a screen that gives the user a background of the patient and would also offer fine-tuned scripts that are categorized with introductory statements and then move on to specific patient questions.

4.1 Conclusion

If we were to start our application from scratch, one key element that we would keep in mind would be the documentation of our process. In hindsight, keeping a log of the obstacles we came across and how we managed to overcome them would have been ideal to keep a record of our problem-solving process. Another aspect that we seemed to neglect at the beginning of our

application was how big of an impact the lack of face-to-face contact had on our application. Due to restrictions caused by COVID-19, we relied on virtual meetings as our main form of communication. In the process, we came to solely rely on showcasing progress and receiving feedback from our academic advisors through virtual recordings and failed to schedule in-person demos. Towards the end of our production schedule, we decided we would benefit from scheduling a demo with both our faculty advisors as well as the individuals from the nursing department to make sure we had well rounded feedback. After noticing we were able to receive more thorough feedback from this session, we realized the lack of in-person meeting withheld us from taking advantage of the resources at our disposal. In addition, the lack of access to Oculus Quests caused miscommunication and kept the team from having a well-founded idea of what the progress of our scene looked like.

Our goal to create an accessible and fully functional remote option for teaching students SBIRT skills has been achieved through this project. While there is a hardware cost of buying an Oculus Quest 1 or 2, the price for these devices (300 dollars at the time of this paper) is far lower than most other options for virtual reality display. It is also an initial cost that does not add up over time, the only necessary cost It was challenging to develop for a mobile platform, especially as digital artists were sometimes disappointed by the visual quality difference in the PC-Admin versus the VR project. However, the benefit is more accessibility and lessening the burden on school resources COVID-19 has caused this semester. We also hope that our application will be used even beyond these times of social distancing. This application also has the benefit of enabling a rapid cycle of deliberate practice, causing more students to gain more experience in less time using less resources. Our project has the potential to connect a trainee to an administrator anywhere in the world, vastly increasing communication between previously

isolated departments and institutions. This has the potential to standardize and practice SBIRT skills not just in the United States, but around the world as well. The advancements achieved through this project will provide new ideas in how we approach nursing education, and the capabilities virtual reality has in the nursing field.

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APPENDIX: CREATIVE ARTIFACT

SBIRT Demo Video

Description

A video showcasing our Nursing Virtual Reality Training Program. The simulation shows what a typical SBIRT screening process looks like, the male voice represents the patient, while the female voice represents the nurse. The video starts with the PC-Admin logging into the application. After the administrator logs in, the VR user is taken to the medical room to speak with the avatar patient, controlled by the administrator. The administrator has camera switching, the ability to type custom messages, and is also able to speak directly to the VR user through an external microphone.

File Name

SBIRT_demo_Final.mp4