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Student Satisfaction and Quality Improvement for an Alzheimer's Virtual Interprofessional Training (AVIT) Program



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Learning Objectives

After engaging in this presentation, participants will be able to:

- Identify key areas of focus for addressing student satisfaction in 3-DVW IPE simulations
- Discuss specific quality improvement strategies targeting student satisfaction and engagement based on the Flexible Learning Model
- Apply findings of the continuous quality improvement (CQI) strategies used in the AVIT 3-D virtual world simulation to their own approaches to CQI for virtual simulations

3D virtual worlds (3-DVWs) and Continuous Quality Improvement

- 100's of 3-DVWs exist, see <https://ryanschultz.com/list-of-social-vr-virtual-worlds/>¹
- JCIPE uses Second Life ® as the 3-DVW for AVIT; currently exploring additional 3-DVW options
- 3-DVWs can be customized to varying extents, which enable changes to be implemented for continuous quality improvement (CQI)

AVIT Format

- Case-based learning (3 cases at different stages of Alzheimer's disease)



- Interprofessional teams of 3-5 students enact provider, patient, caregiver, and observer roles

Preparation

- Orientation
- Learning resources



Simulation

- Role enactment



Debriefing

- Reflection

Applying the flexible learning model to 3-DVW training and CQI

5 DIMENSIONS OF FLEXIBILITY

Flexible Learning Model² Applied to Virtual Simulations³

Time - duration of simulation/entire program

Content of the Program or Course (specific persons with Alzheimer's and their caregivers; other populations)

Entry Requirements (who can participate in the program or course)

Instructional Approaches and Resources - preparatory material (case bios, resource articles and websites, videos; other learning resources); use of simulation; debriefing

Delivery and Logistics - Second Life 3-DVW in JCIPE Sim Center; orientation immediately prior to simulation (initial format)

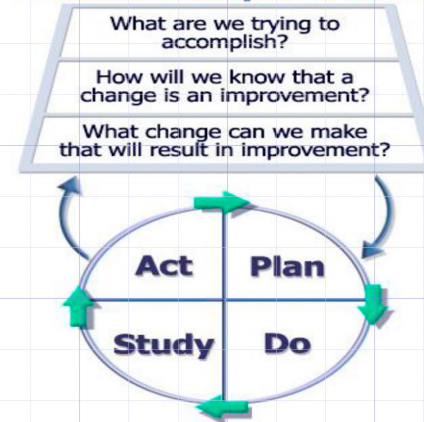


Can use to identify potential areas for change



...in conjunction with guidance provided by CQI Model for Improvement⁴

Model for Improvement



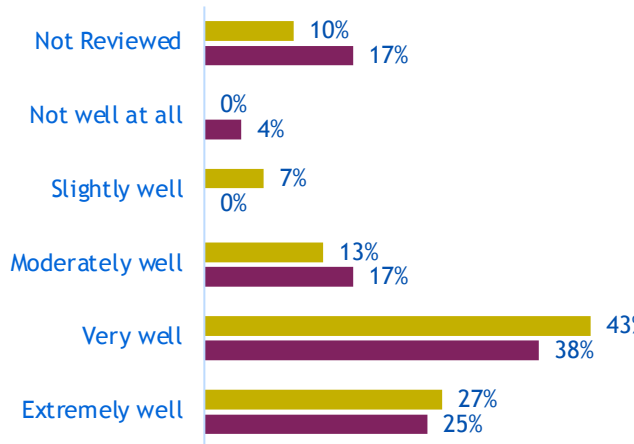
Application of Flexible Learning Model to CQI in 3-DVW simulation

		AVIT Format 5 Dimensions of Flexibility	QI Focus/Source of Data ▲ Changes 2021 -> 2022
Time	Length of sessions & Time Frame	1 day, 40 - 60" per session →	No Δ, not raised as an issue by students; facilitators found format effective (Survey, Debrief)
Content	Focus of the Program	Person w-dementia, CG); stages & environments	-Knowledge (Survey) ▲ Shortened. Removed questions that were too easy -Areas of learning (Debrief)
Entry requirements	Who participates in AVIT?	Students in Nursing course + other disciplines →	No Δ, not perceived as an issue by students; facilitators found format effective (Survey, DB)
Instructional Approaches	Structure of AVIT (Case based learning, Specific learning methods)	Students enact patient, caregiver, provider, observer roles; read lit. on best practice; eval. tech's	- ▲ Addition of 2 nd provider role (pharmacist) - Survey - Debrief (facilitators)
Logistics	Where/When/How AVIT takes place	JCIPE Virtual Sim; time set by core team; orientation on day of simulation	Students reported issues with technology (Survey, Debrief) ▲ Pre-check of computer readiness; Additional practice before simulation;

Results of Student Satisfaction: How well did the learning materials on Canvas facilitate your learning about dementia?

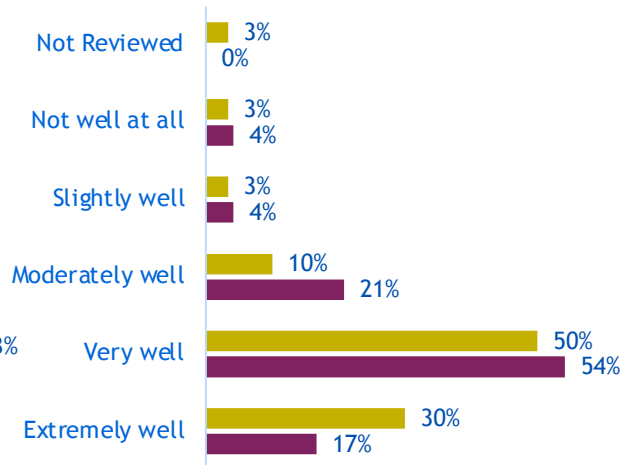
Intro to Alzheimer's PPT

■ 2022 (n = 30) ■ 2021 (n = 24)



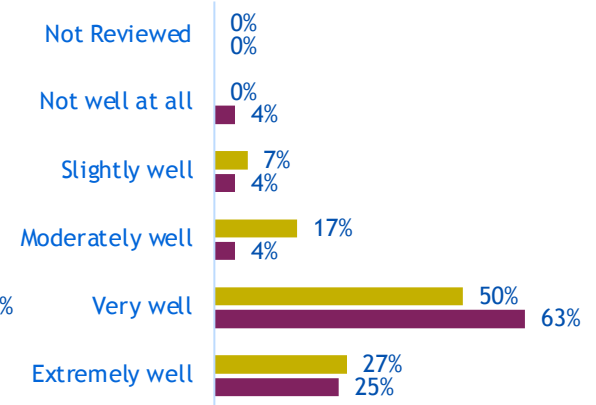
YouTube Videos

■ 2022 (n = 30) ■ 2021 (n = 24)



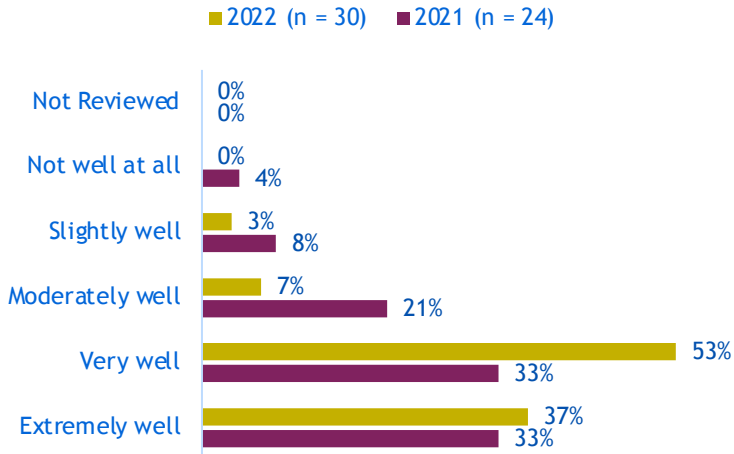
Articles / Readings on Dementia

■ 2022 (n = 30) ■ 2021 (n = 24)

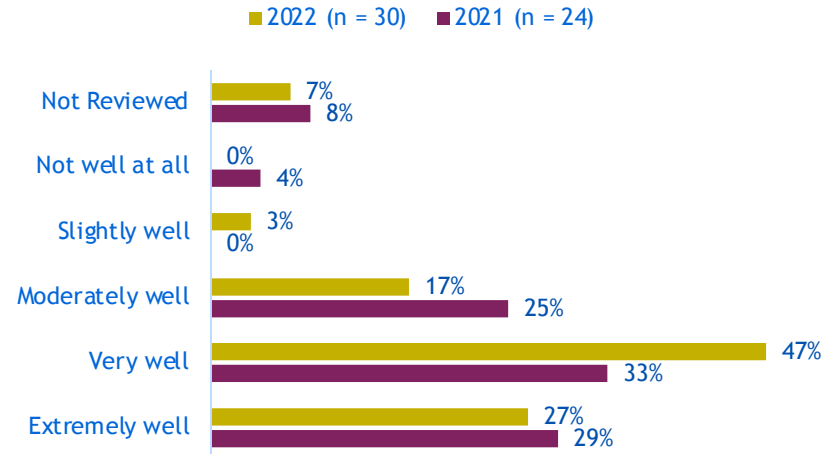


Results of Student Satisfaction: How well did the learning materials on Canvas facilitate your ability to participate in the online simulation

Orientation

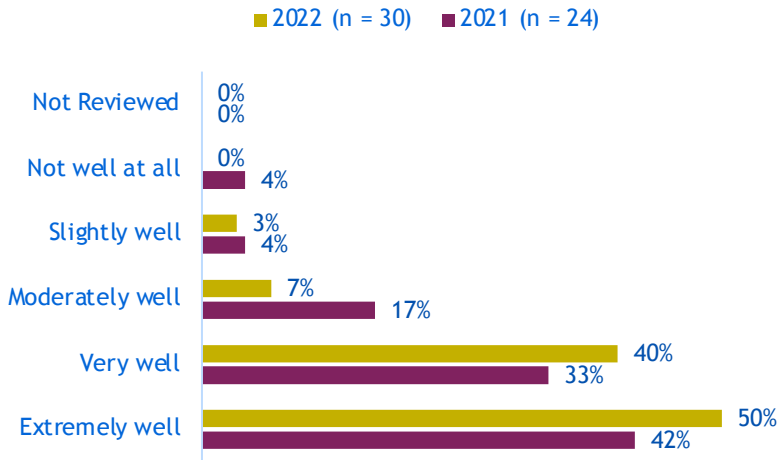


Instructional Videos

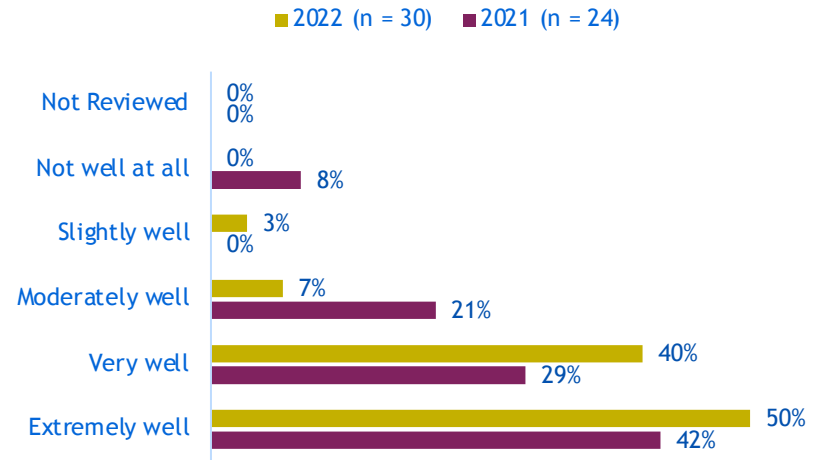


Results of Student Satisfaction: How well did the learning materials on Canvas facilitate your ability to participate in the online simulation

Case Descriptions



Role Guides



Learning Growth across 2 cohorts

- Knowledge: 21 question quiz shortened for 2022 cohort
 - Pre-post gains significant in both cohorts
- Confidence: 6 item scale measuring confidence in delivering care
 - Pre-post gains significant in both cohorts
 - High reliability

	Pretest Mean (SD)	Posttest Mean (SD)
2021 (n = 20)		
Knowledge	86.35% (7.66%)	89.62% (6.13%)
Confidence	3.83 (0.62)	4.27 (0.42)
2022 (n = 27)		
Knowledge	81.67% (11.38%)	87.37% (11.71%)
Confidence	3.57 (0.59)	4.12 (0.80)

AREAS TARGETED FOR CHANGE RELATED TO STUDENT SATISFACTION 2021->2022

Preparation <i>Specific Area/Materials</i>	2021 Student Feedback	2022 Changes and Student comments
Specific Area/Materials: Instructional Approaches ² Realism ⁶		
-Flexible Learning Model (Instructional Approaches) -Realism (Problem in virtual simulation)	I think there should be cases that involve more collaboration between professions rather than just the provider/ patient/ caregiver. For example, opportunities to show how the physician, nurse, and OT collaborate to assist the patient.	Faculty interpreted problem as lack of realism since the case did not show actual application of IPE ▲ Added 2nd Provider Role: Collaborating Pharmacist <i>*Consider OT collaboration in home visit case for Spring 2023</i>
	<i>More specific guidelines for how a patient with dementia should behave</i> in a long term care facility to ensure that the actor portrays the patient with the greatest sense of dignity	▲ Revised Role Guides The Role Guides were rated higher on the student survey for 2022

AREAS TARGETED FOR CHANGE RELATED TO STUDENT SATISFACTION 2021->2022

Preparation <i>Specific Area/Materials</i>	2021 Student & Faculty Feedback	2022 Changes and Student comments
Specific Area/Materials: Logistics/Navigation ² Technology problems ⁶		
Navigation during simulation	<p>-It was a little difficult to navigate using the simulation while also paying attention to zoom at times (student survey)</p> <p>-- Provide a clearer way to get group 2 to the Second [Sim site] and/or practice with transporting students (Faculty debriefing)</p>	<p>Problem: Students were trying to follow the Zoom screen and the 3-DVW simultaneously. Changed protocol to turn off cameras while engaging in simulation (Faculty debriefing)</p> <p>-Corrected error in address of 2nd sim site; provided notecards to faculty</p>
3-DVW technology problems	<p>-[3-DVW] was difficult and added complication (combination of computers not being able to handle 3-DVW and difficulty performing tasks in virtual environment)</p>	<p>-Conducted pre-check of computer technology (ability to handle the 3-DVW)</p> <p>-Provided additional orientation and practice session prior to simulation</p>



References

1. Schulz, R. "Welcome to the Metaverse: A Comprehensive List of Social VR/AR Platforms and Virtual Worlds
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