# A Means To Improve Debriefing By Graphing Outcomes As A Function of Actions

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## ABSTRACT

Simulations are typically followed by a debriefing session as a sort of conclusion or cap to an experience. Debriefs involve an assesor and a participant. The assessor need not be the facilitator of the exercise, but he or she should be able to communicate specific learning objectives and evaluate the participant based on these objectives. An assessor must distill the actions taken and emphasize those that caused significant outcomes. Current debriefing modalities are not optimized for visualizing this causality effectively.

This project will demonstrate a tool to assist assessor debriefing that displays the effect of actions on a simulator's health.

## OBJECTIVES

Leveraging the resources at WISER, this project will design, implement, and demonstrate a software package that satisfies the following criteria:

- ❑ Retrieve objective, computable simulation data
- ❑ Mine educational information from recorded data
- ❑ Visualize the impact of participant decisions on simulation vital signs
- ❑ Visualize a "gestalt" of class performance
- ❑ Scale the software to variable scenario types

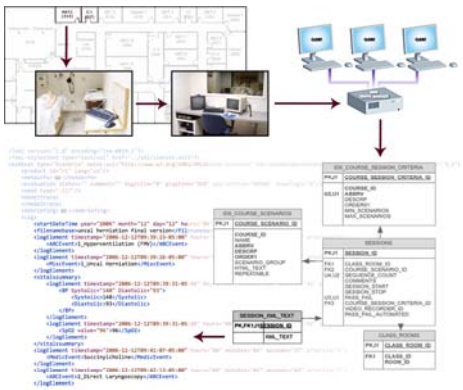
## METHODS

- ❑ Choose a simulation stored in the WISER database with discrete decision possibilities
- ❑ Examine Laerdal® SimMan™ XML schema for decision and vital sign fields
- ❑ Create a software interface to retrieve XML schema logs from the WISER database in real time
- ❑ Plot a 2D graph with participant decision-making on the abscissa vital signs on the ordinate
- ❑ Provide a background of all participant data for context

## BACKGROUND ON WISER

The Peter M. Winter Institute for Simulation, Education & Research (WISER) is a world class multidisciplinary training and research facility. It features:

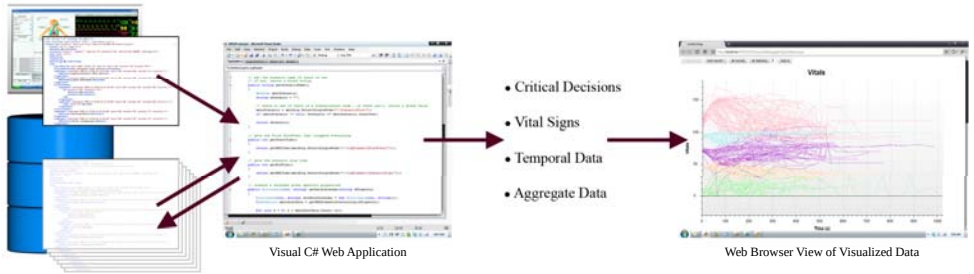
- 16 full size Laerdal® SimMan™ patient simulators
- Each simulator has a control room where a facilitator uses Laerdal® software to control and record simulations
- Following each simulation, the facilitator can upload SimMan™ logs to the WISER web application
- The WISER web application extracts out XML data and stores it into the WISER database
- Logs can be stored indefinitely and retrieved retrospectively



## FUTURE DIRECTIONS

- ❑ Real-time implementation of tool during simulation debriefing
- ❑ Controlled, qualitative comparison of debrief with and without vital sign visualization tool
- ❑ Stratify performance comparisons to global, attendings, residents, medical students, and other participant populations
- ❑ Compare participant interpretation of visualization with assessor interpretation

## IMPLEMENTATION

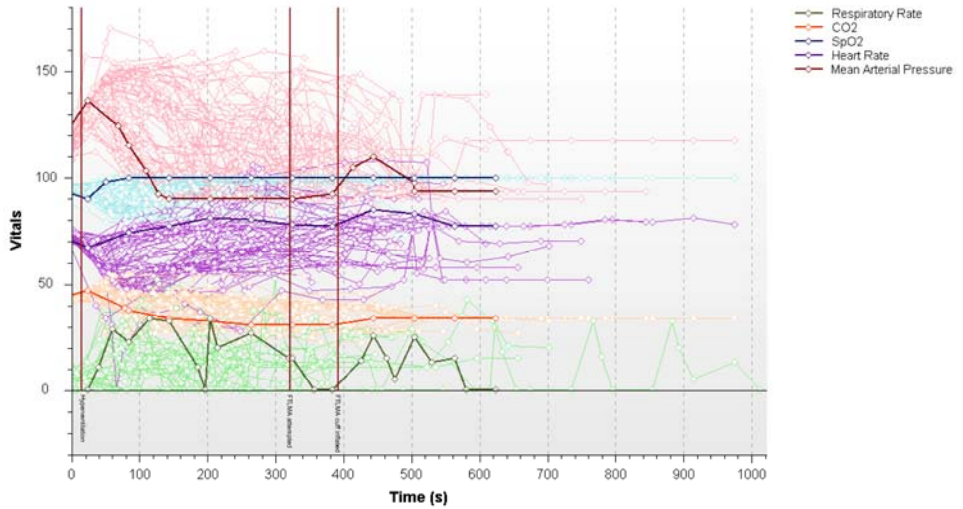



72 Uncal Herniation Records

Visual C# Web Application

Web Browser View of Visualized Data

## RESULTS




## REFERENCES

Tour WISER. Date Accessed: 14 January 2010. http://www.wiser.pitt.edu/sites/wiser/aboutus/facility.asp