

Aperture Bioscience Laboratories

Progress Report 5 for NICView: A Virtual NICU Simulation

Due: 1/30/15

Professor Walker

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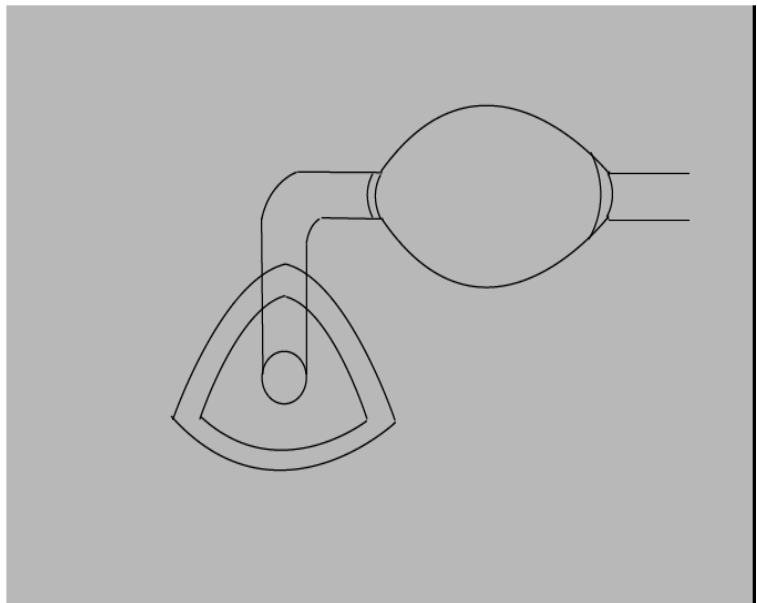
## **I. Background of the project**

Considering the new regulations that limit work hours for medical residents, these residents do not have the same real case experience as in the past. Therefore, this reduces patient safety, because the residents do not experience a large and varied amount of cases. In order to solve this problem, our project will involve developing a simulation game that can be played at the resident's home. By playing this game, the residents will be able to gain experience by going through different scenarios, which addresses the issues of volume and variety of cases and patient safety.

## **II. Achievements since the last report**

Since the last report, the team attended a meeting with CELA. The main focus of this meeting was to determine the best way to measure improvement by the residents in certain areas. After the discussion, it was decided that the team will incorporate surveys and checklists into the game to allow the resident to evaluate their own performance. This evaluation will involve a scale of 1 to 5 and a short answer question.

The other form of evaluating the resident's progress will be to monitor his/her performance in different scenarios. The team and Dr. Krakauer will come up with a series of scenarios that test certain concepts. If the resident plays the first scenario and is exposed to the concept, it is expected that the resident will perform better during the second scenario than if they had not played the first. The performance of the resident will be based on making the correct decision, choosing the right decision in a timely matter, and their communication with the patient, which will be incorporated into the quiz questions. This information will then be stored in order to allow the residents to see their improvement. The team will attend a simulation session at a later date in order to see these forms of evaluation in practice and to better understand how to design the game.



*Figure 1: Drawing of CPAP Mask*

Looking at the development of the game, the third scenario is completely flowcharted, and the points for various actions has been assigned. The fourth scenario is halfway completed. As for programming, Pam finished drawing the CPAP mask, which is shown in Figure 1. The software GIMP has been downloaded, and the process of coloring the baby and equipment has been started.

### **III. Deviation from the plan and corrective action**

Looking at the expectations from last week, deviations from the plan occurred in the fact that not all of the scenarios were completely flowcharted, and the first scenario was not completely programmed. However, the team has determined that these actions will be completed by the time of the next report.

### **IV. Plan for Next Week**

The team plans to have complete the second and fourth scenario flowcharts, draw the rest of the equipment for the first scenario, finish programming the first scenario, and determine what scenarios should be added in order to assess the progress of the residents.

### **V. Assessment of Progress**

Considering the current progress, the team is a little behind the expected schedule. However, as long as the team can make the new deadline, the project can still follow the expected schedule.