1145-G5-2392 **Melissa A Stoner*** (mastoner@salisbury.edu), 1101 Camden Ave, Salisbury University, Salisbury, MD 21801. *Building Relevance and Connection: Using Medical Simulation to Enhance Students' Connections between Calculus and Biology.* Preliminary report.

Building connections between the mathematical concepts we want students to learn and their usefulness in the world around them enhances student mastery of concepts and increased student perception of mathematics. In our Calculus I for Biology and Medicine course, we do this by having students use calculus to model various properties of a set of lungs being mechanically ventilated, mainly the volume, flow, and pressure of air in the lungs. We then attach a mechanical ventilator to a test lung in our medical simulation center on campus. Students are able to compare their mathematical models to the data being generated by the test lung and discuss similarities, differences, and how assumptions made in modeling account for those differences. Data collection and results focus on students' perception of mathematics to the real world, and the impact on their outlook towards mathematics. We also mention development of additional student projects that can be simulated including arterial blood flow. (Received September 25, 2018)