# **Phase 5: Findings and Analysis Video (1 min 9 sec)**

Setting: Science Laboratory. Two females in white lab coats are standing in front of a blackboard. They are looking at the camera and talking.

Transcript:

Emma:

We compared prototype data and commercial data for respiration rate, vital capacity, and blood oxygen using Pearson correlation analysis.

The Respiration Rate on the prototype was strongly correlated to the commercial instrument with a correlation coefficient of 0.99 out of 1.

Likewise, Lung Vital Capacity was also highly correlated, with a correlation coefficient of 0.66.

Blood Oxygen Saturation had a correlation coefficient of 0.77, which is also strong. The high correlation coefficients mean that the prototype’s output was very similar to the commercial instruments.

Sarah:

When comparing the prototype heart rate output to the commercial instrument output, the prototype heart rate averaged at 99-Beats per minute, which is very similar to the 102-beats per minute produced by the commercial instrument.

After analyzing this data, we can conclude that the prototype is accurate with similar results to the commercial devices we tried. This shows that our prototype could be used to accurately measure a patient’s Respiration, Vital Capacity, and Blood Oxygen Saturation.