

Sarah Walker Career Development Outline 2021

I want to be a pediatric critical care physician and independent clinical scientific investigator with expertise in **physiologic signal analysis**, **predictive modeling**, and **clinical decision support tools** to help guide resuscitation in real-time and improve outcomes in critically ill children.

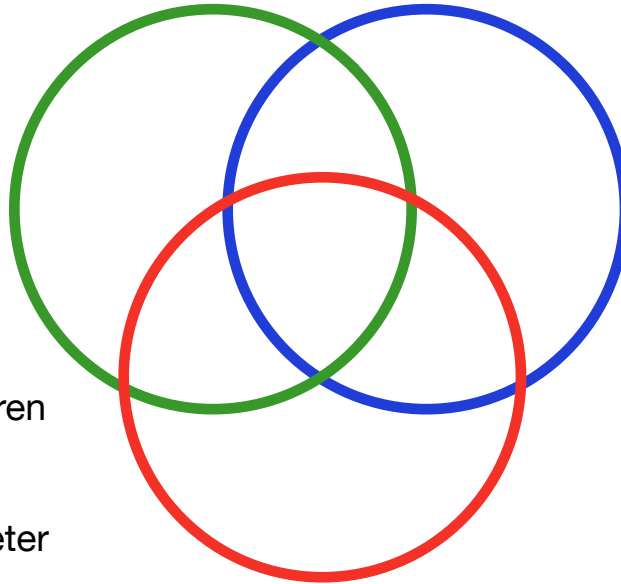
Physiologic Signal Analysis

Mentorship/Collaboration:

Debra Weese-Mayer (meets quarterly); plan to contact other institutions for expertise when literature or prelim data look promising

Current Project: systematic review and meta-analysis of physiologic signals used to predict fluid responsiveness in children

Future Project: explore the relationship between physiologic signals in arterial line vs pulse oximeter waveforms



Predictive Models

Mentor: Nelson Sanchez-Pinto (meets every other week)

Collaboration: Kyle Honegger, Michael S. Carroll (meets monthly)

Current Project: Dynamic arterial elastane to predict blood pressure increase with fluid bolus in hypotensive children

Current Coursework: Coursera R language & statistics

Future Coursework:

Master's of Science in Health and Biomedical Informatics with electives in Predictive & Health Care Analytics

Decision Support Tools

Mentor: TBD, planning to chat with Justin Starren for more information

Collaboration: Nelson Sanchez-Pinto (meets every other week), Michael S. Carroll (meets monthly)

Future Coursework: Master's of Science in Health and Biomedical Informatics with coursework in Decision Support Systems

Future Project: real-time bedside Decision Support Tool guiding fluid, inotrope, and vasopressor management in pediatric shock resuscitation