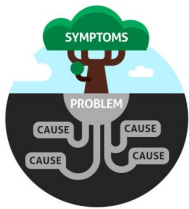


## Solution



Analyze current operations



Identify root causes of the problem



Suggest interventions to be implemented



Pilot successful and feasible solutions

## About Us

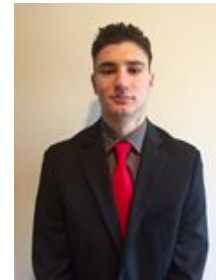
Mohammed Al Saud will be graduating with a Bachelor of Engineering in Engineering Management. Upon graduation he will be gaining work experience in New York City and Dubai before pursuing a Master's Degree.



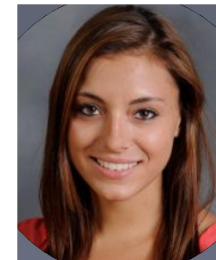
Caroline DeLuca will be graduating with a Bachelor of Engineering in Engineering Management and a Master of Science in Financial Engineering. Upon graduation she will be working for Protiviti in the Data and Analytics department.



Nicholas Russo will be graduating later this year with a Bachelor of Engineering in Engineering Management and a minor in Economics. He will be completing a Master in Systems Engineering next spring.



Jessica White will be graduating this year with a Bachelor of Engineering in Engineering Management and minor in Economics. After graduation, she will start her career as a process engineer for Kerry Group



# HUMC Process Improvement

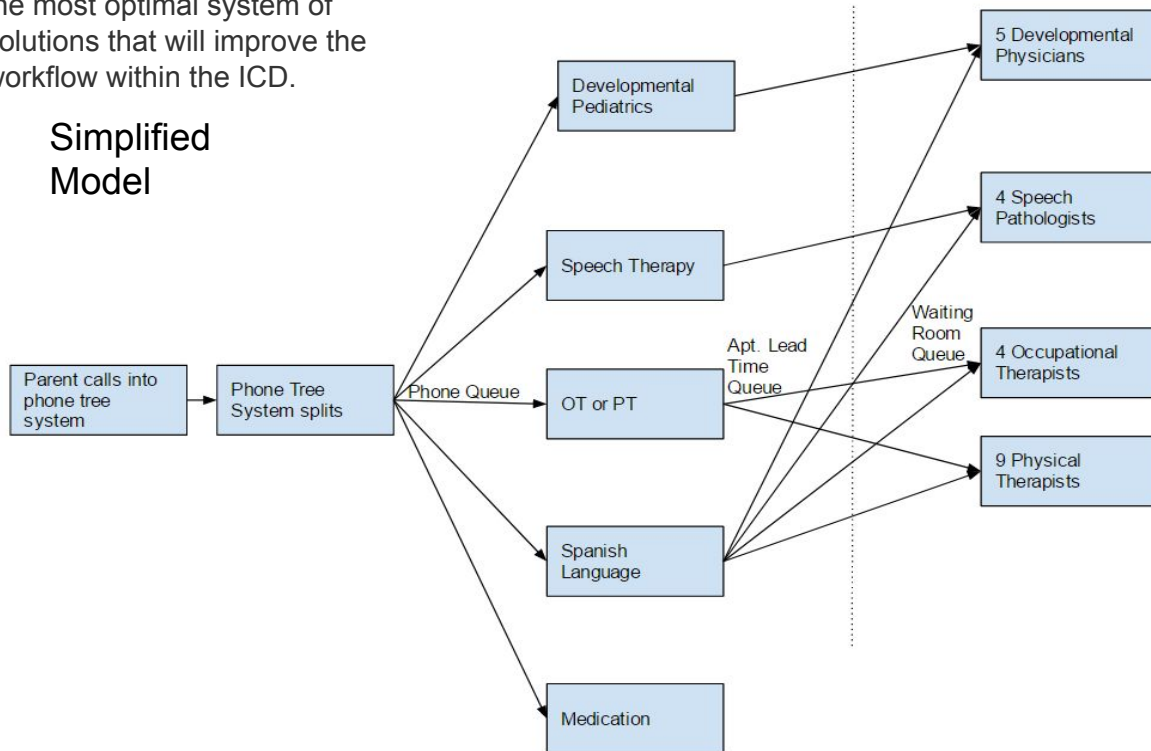
Utilizing simulation modeling to recommend resource allocation improvements to increase the efficiency of the Institute for Child Development.



# Background

This project's focus is on the operations of the Institute for Child Development at Hackensack University Medical Center. The team has been presented with the challenge of analyzing the current process flow as well as the organization of clinical and administrative staff within the Institute. Any inefficiencies or difficulties experienced while scheduling and carrying out appointments shall be improved. A model is utilized in order to simulate this environment and test different alternatives in order to discover the most optimal system of solutions that will improve the workflow within the ICD.

## Simplified Model

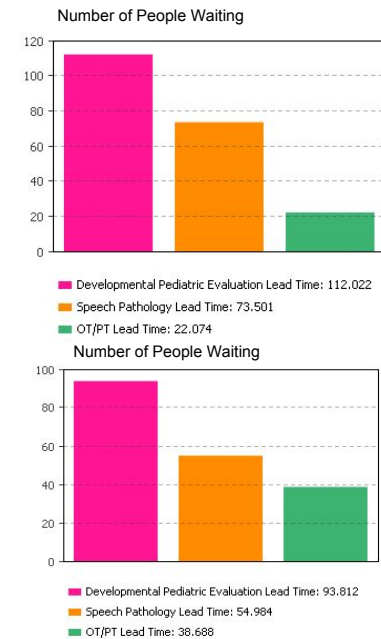


# Problem Analysis

After the extensive analysis of the current state of the ICD and the Intake Office, the team has created an AnyLogic Simulation model to visually represent the current process flows. Upon completion of this working model, the team has been able to simulate and test various resource allocation scenarios. The optimal solutions are being presented to the client for implementation. Interventions found feasible by the ICD's operations team can be piloted in the hospital in the near future.

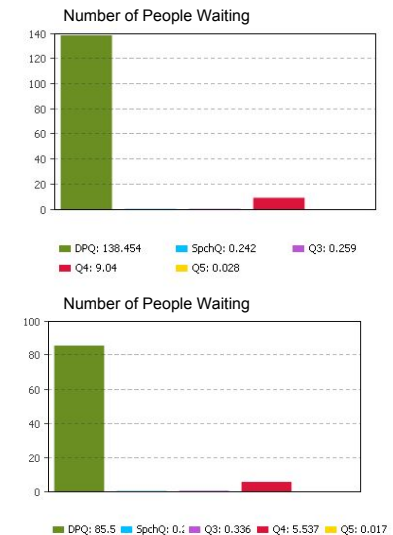
# Results and Conclusion

Graph 1A & 1B: Lead Time Histogram Before & After Addition of Doctor



By adding a doctor, Developmental Pediatric lead times for appointments decreased by approximately 20%.

Graph 2A & 2B: Lead Time Histogram Before & After Addition of Intake Coordinator or Volunteer



By adding an Intake Coordinator, the amount of people waiting to schedule an appointment decreased by 40%.