

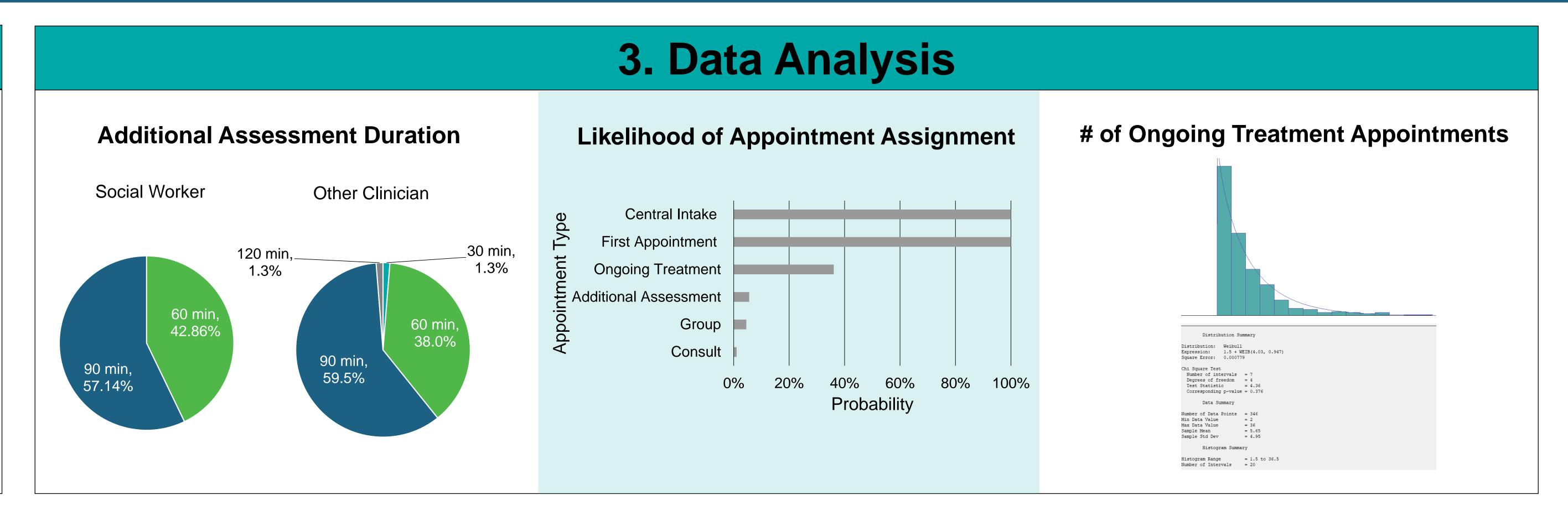
# NSHA Mental Health and Addictions Resource Capacity Analysis



### Department of Industrial Engineering

Dax Conrad, Chelsea Hansen-Batten, Angus MacIntosh, Sebastian Young

# 1. Background The Nova Scotia Health Authority (NSHA) is a province wide, fully integrated health system that delivers care to Nova Scotians and some specialized services to Atlantic Canadians. Currently, there are discrepancies relating to how patients access Mental Health and Addictions (MHA) services across the province. To improve timely and equitable entry to care, a centralized intake process is being implemented. Centralized Intake Process



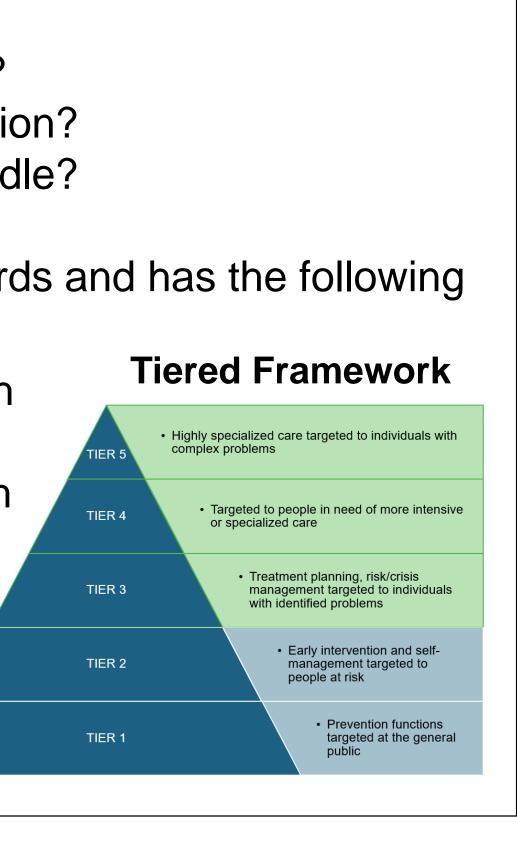
## 2. Project Objectives & Scope

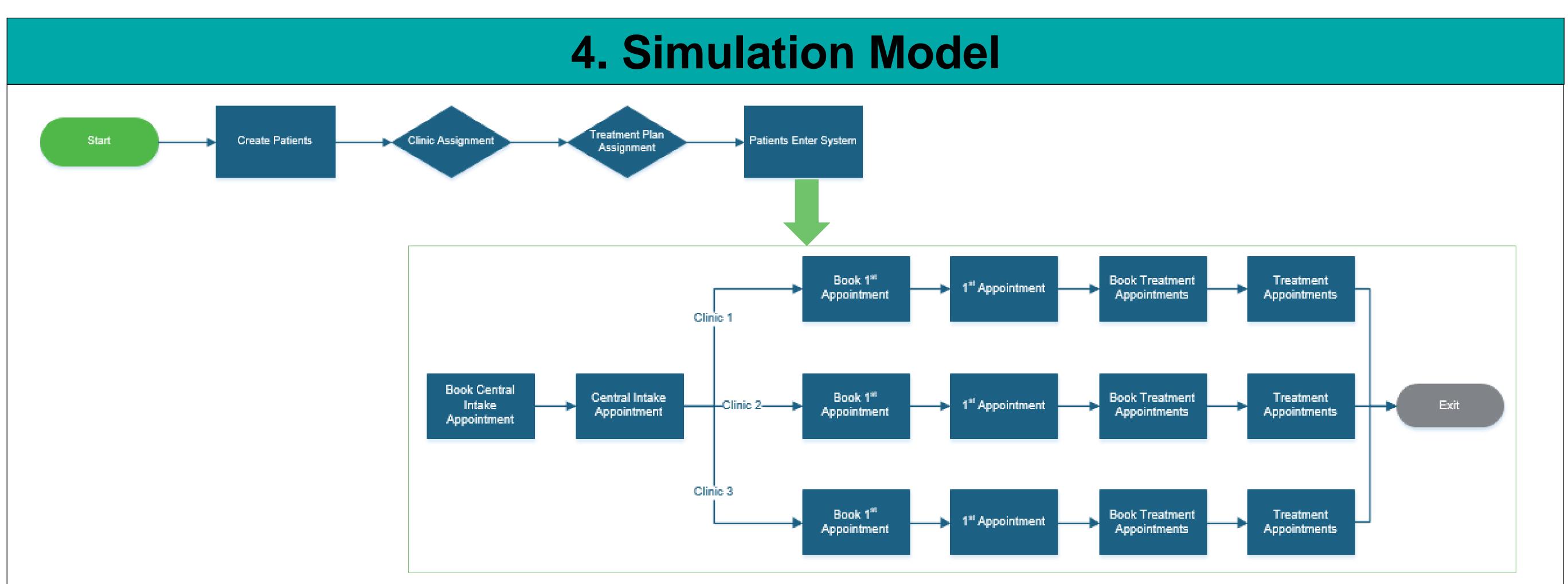
Understand current capacity of MHA resources across the province by answering the following:

- 1. How does demand fluctuation affect wait times?
- 2. What is the impact of adjusting resource allocation?
- 3. How much demand can the current system handle?

This project considers data collected from 2016 onwards and has the following scope parameters:

- 1. Province wide assessment of both Mental Heath and Addiction services
- 2. Includes services provided in Community Health Clinics:
  - Outpatient services (~90%)
  - Inpatient services (~10%)
- 3. Focus on adults in tiers 3-5 of the tiered framework

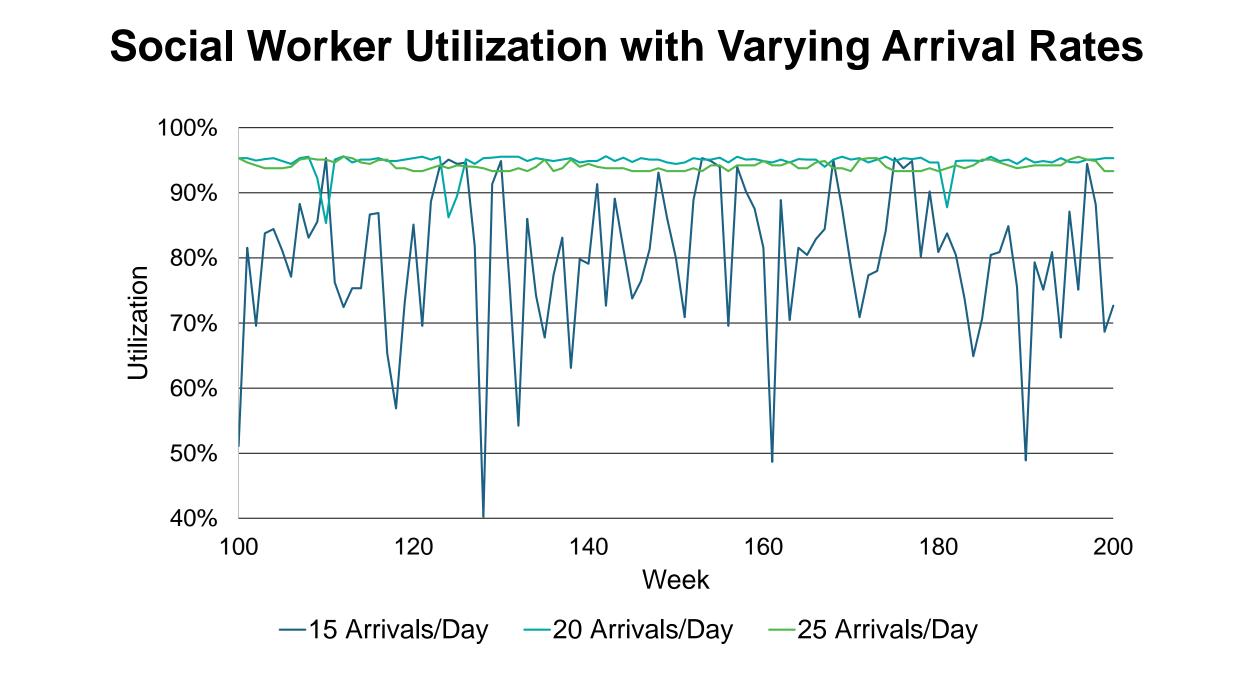




### 5. Test Scenarios

# 8.00 7.00 6.00 9 4.00 3.00 2.00 1.00 100 120 140 160 180 200 Week —15 Arrivals/Day —25 Arrivals/Day

First Appointment Wait Times with Varying Arrival Rates



### 6. Conclusions & Recommendations

- The model reacts as expected to changes within the system and is a valid tool in testing various resource allocation and demand fluctuation scenarios.
- Our tool will provide the NSHA with the ability to more accurately evaluate the
  effect of demand fluctuation on resource capacity. This will enable them to
  develop effective strategies to better serve the changing needs of the
  population.
- The validity of the model inputs drives the quality of the model outputs, and the inputs should be updated as new data is collected and becomes available.
- The tool should be adapted and modified by the NSHA to reflect any standardization of processes, reallocation of resources, and changes in demand for MHA services.