



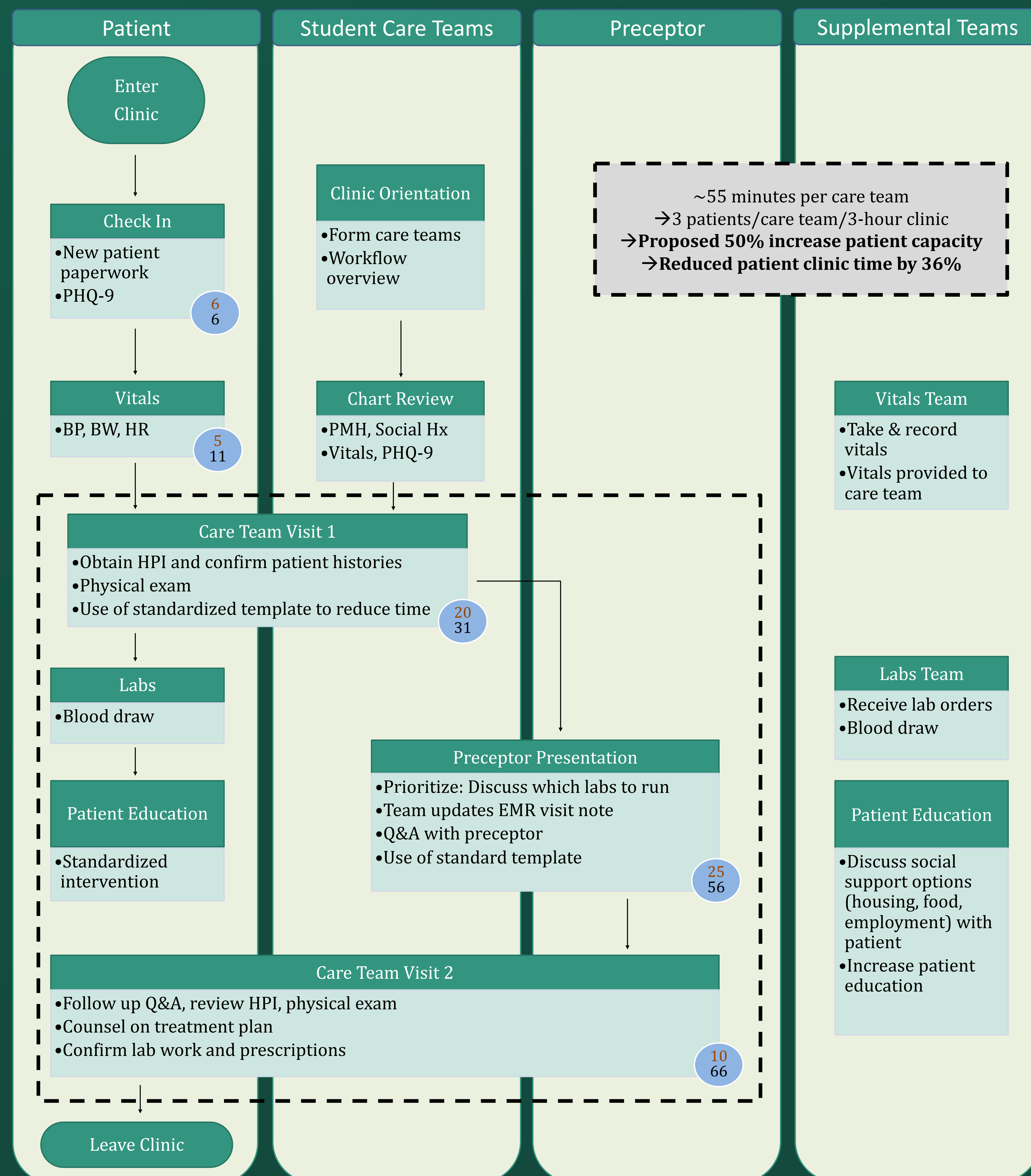
INTRODUCTION

- The Student Run Free Clinic serves uninsured patients in the Metro Detroit community and has over 150 patient visits per year
- The clinic experiences difficulty in predicting patient turnout, turnaround times, and overall clinic efficiency

METHODS

- The DetroitX Innovations & Consulting organization utilized a modified version of the Define, Measure, Analyze, Improve, and Control (DMAIC) process in order to evaluate the current state of the clinic, identify opportunities for improvement, and create actionable recommendations
- An initial stakeholder interview with the clinic director was conducted to define areas of concern for the clinic
 - A primary concern was identified: inability to efficiently meet patient demand stemming from two causes – unpredictable patient turnout and slow patient turnaround time
- Detailed process mapping was then conducted to identify the current clinic workflow, and an existing workflow timeline was established as the average of all patients in clinic on one clinic day
- Trendline analysis of patient no-show and cancelled appointments over times was conducted and visualized using Microsoft Excel
- A PowerPoint slide deck was the final deliverable communicating actionable recommendations, educational materials, and future implementation strategy

Proposed Clinic Workflow Efficiency Improvement Map



RESULTS

- Detailed process mapping of current clinic workflows yielded an average of 103-minute patient visits that were notably bottle-necked by an 80-minute stage: 40-minute encounters with the medical student care team, 30-minute oral patient presentations with the physician preceptors, and 10-minute care team follow-up encounter
- This yielded a capacity of two patients per care team per clinic shift
- Lack of standardized patient encounter and oral patient presentations guidelines, which created notable redundancy and delays, resulted in recommendations to implement a template
- An open-ended template for the encounter and oral presentation was proposed to decrease the bottle-neck stage to 55-minutes, **increasing patient capacity by 50%**
- Simultaneously, recommending a reordering of the patient education and resources team workflow contributed to the **overall decrease in patient visit time by 36% from 103 minutes to 66 minutes**, while also standardizing care

CONCLUSIONS

- Student-led consulting initiatives can be a unique source of unbiased recommendations for quality improvement
- The DMAIC methodology can be a useful and reliable tool to evaluate current state workflows and identify actionable steps for improved efficiency and quality improvement within a healthcare system, including local free clinics