



nova scotia
health authority

Innovative use of data to understand capacity
and improve access

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Westville Medical Clinic

Location : Northern Zone, Nova Scotia
Providing Service to : Westville, Pictou Counties, New Glasgow

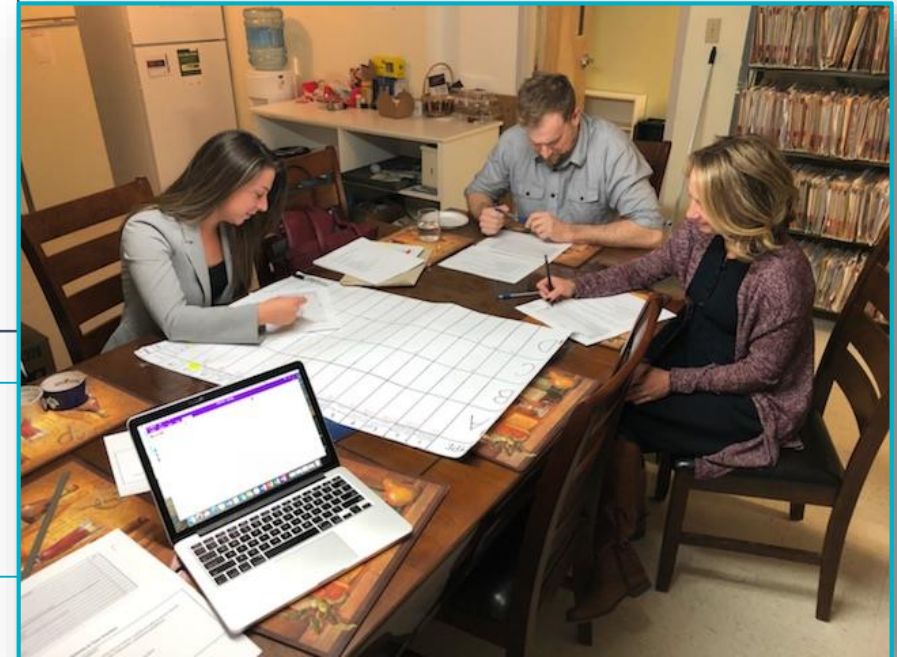
The Team :

Core – 3 Physicians, 2 Nurse Practitioners, 2 FPNs
Allied Health – Psychologist (specialized in Geriatric), Psychiatrist, Dietitian
Administrative – Administrative Lead, Clerical Staff

Staff Meetings : Weekly

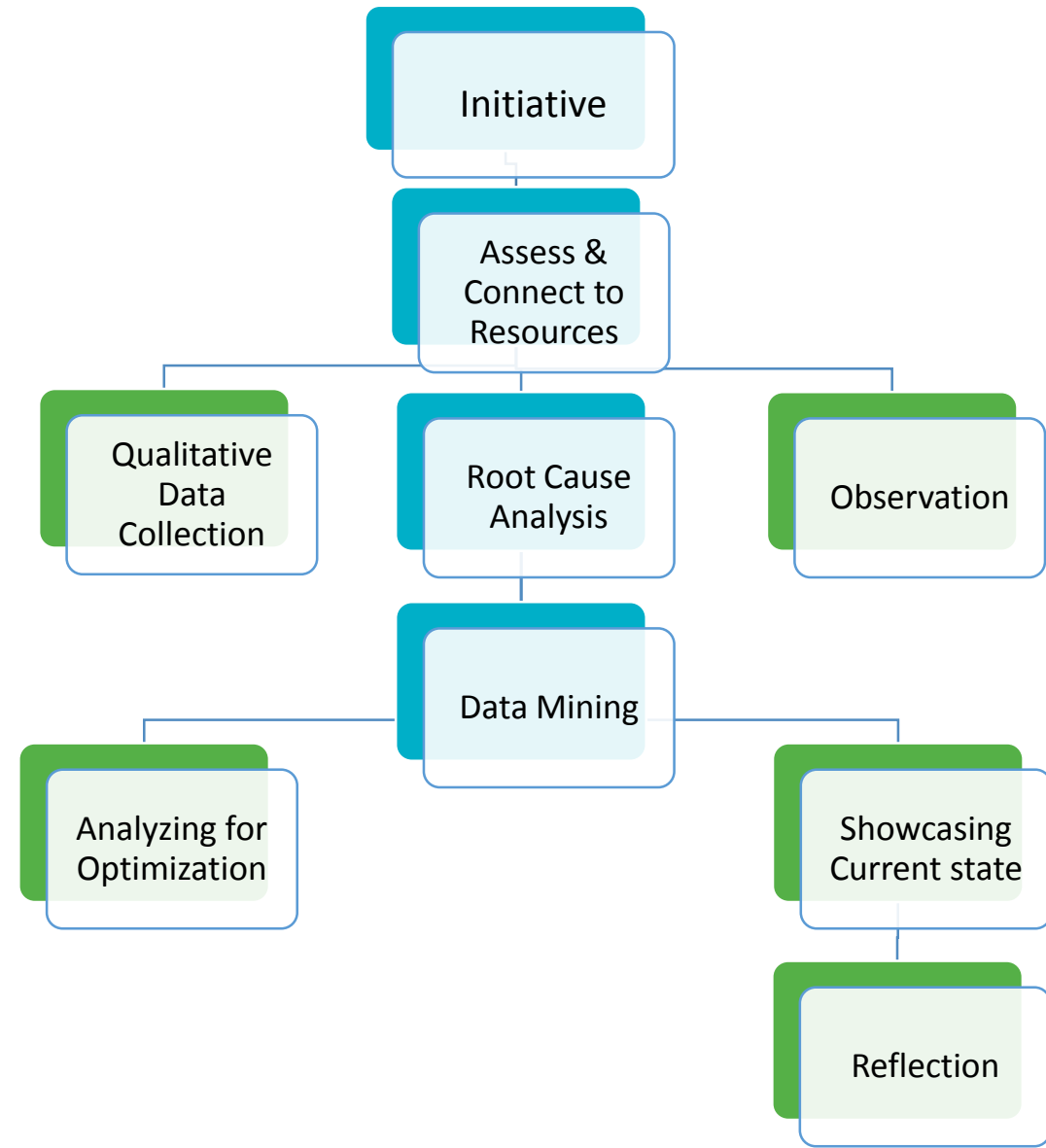
Partnered with for Research

- NSHA
- Dalhousie Industrial Engineering (IE)



Quality Improvement Initiative

- **Initiative:** Improve Access for Patients
- **Connections:** Community Resources, NSHA for Research Opportunity
- **Potential Cause:** Understand Team Roles and Team Capacity
- **Data Mining:** Booking data, observations, anonymized billing data



Tasks	June	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	April	May	June	July	Aug
Understand	█	█	█											
Data Collection				█	█	█								
Analyze							█	█	█	█				
Optimization Modeling									█	█	█	█		
Feasibility													█	█
Suggested Improvement														█

Gantt Chart

Use of Data

- **Available Sources** – EMR appointments, Time Studies, shadowing, FTE
- **Extractable Data** - Working hours, Cycle Time (appointment length), total number of patients in clinic, frequency of patients accessing the clinic
- **Calculatable Data** – Utilization, Overflow Frequency, Demand Rate per Patient, Panel Size, Forecasted Demand, Frequency Classification of patients

Availability (based on EMR)		
Provider	"Slots"/day	Appt/18
Provider A	31	5239
Provider B	33.75	5703.75
Provider C	29.67	2878

Utilization & Overflow						
Provider	Provider A		Provider B		Provider C	
	Avg.	Max	Avg.	Max	Avg.	Max
Utilization	1.45	1.90	1.31	1.70	1.67	2.19

	Provider A	Provider B	Provider C
Historical Appts over 18 months	7636	7399	4985
Availability based on FTE in 18 months	5239	5704	2878
Approx. Panel <i>(excluding out of clinic)</i>	2155	1543	1430
Additionally seen patients <i>(cross coverage)</i>	77	244	75



Impact and innovation

- An established and well documented method for data extraction and data use – adaptability and spreadability
- Data presented is small aspect of the broader research study, however of high relevance to clinical team in understanding capacity
- Application of results will lead to considerations such as group visits, virtual medical home, complex patients rostered equitably across
- Self-awareness for team on current state performance

Considerations for Use of Data and QI

Challenges

- Pending switch over of EMR
- Change of staff members
- Data access, anonymized data

Opportunities

- Academic collaborations, across many disciplines and timelines
- Connection and communication removes risk of duplicate work
- Innovative use of data in understanding capacity and access issues

Key Learnings & Opportunities

- Get the ball rolling on data that is available
- Be optimistic and available towards new partnerships and collaborations



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