

Faculty/Presenter Disclosures

- Presenter: Dylan Turner
- Relationships with financial sponsors:
 - Grants/Research Support: Health Canada's Substance Use and Addictions Program (SUAP)
 - No other disclosures

Pharmaceutical Automated Reporting: An Opioid Stewardship Tool

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Healthy People, Healthy Saskatchewan

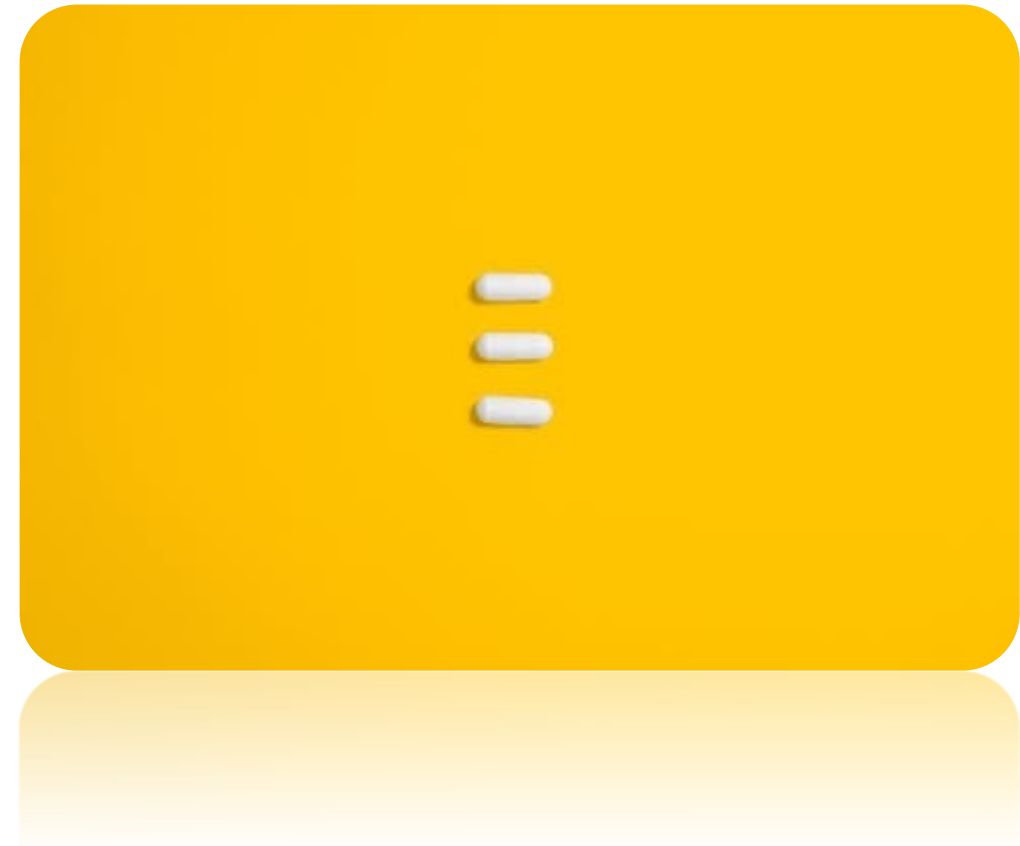
The Saskatchewan Health Authority works in the spirit of truth and reconciliation, acknowledging Saskatchewan as the traditional territory of First Nations and Métis People.



Pharmaceutical Automated Reporting (PAR): An Opioid Stewardship Tool

Goals:

- Increase capacity, reach, and impact of the OSP
- Promote safe and appropriate prescribing of opioids, optimize pain management, prevent adverse events, and reduce opioid usage



Challenges

- **Resource Limitations**

- Electronic Health Record
- Lack of Medical Services
- Clinicians

- **Data Aggregation**

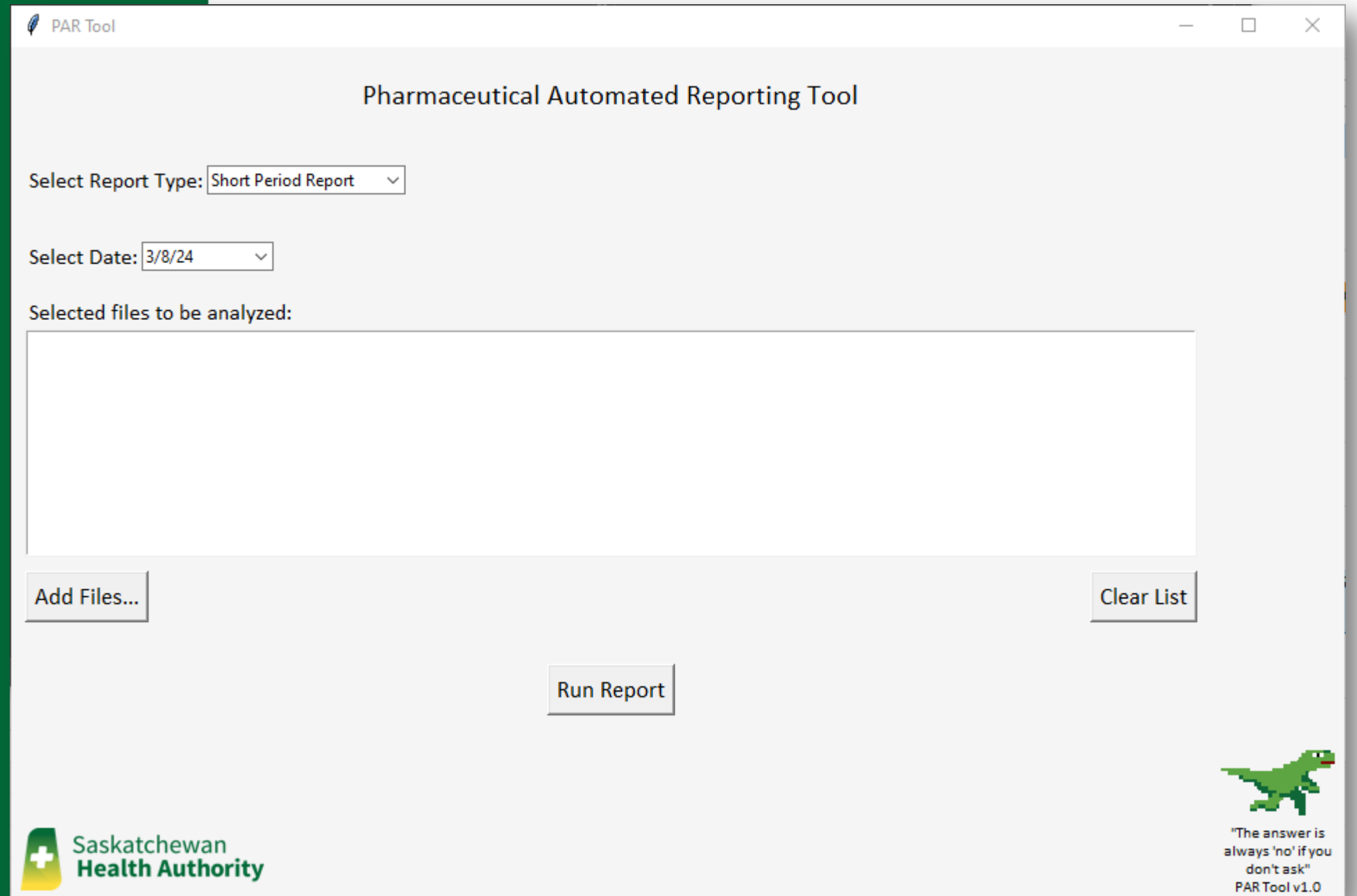
- Accuracy
- Efficiency
- Consistency



Development

PAR Tool:

- Pharmacy Drug Utilization Reports
- Python code
- Microsoft Excel



The screenshot shows a web application window titled "PAR Tool" with the subtitle "Pharmaceutical Automated Reporting Tool". The interface includes a dropdown menu for "Select Report Type" set to "Short Period Report", and another dropdown for "Select Date" set to "3/8/24". Below these is a large empty box labeled "Selected files to be analyzed:". At the bottom of the interface are three buttons: "Add Files..." on the left, "Run Report" in the center, and "Clear List" on the right. The footer contains the Saskatchewan Health Authority logo on the left and a green dinosaur icon with the text "The answer is always 'no' if you don't ask" and "PARTool v1.0" on the right.

Development

Risk Factors

- MME taken ≥ 90
- Possible opioid agonist therapy
- Naloxone given
- No Naloxone prescription with an opioid prescription
- Multiple opioids prescribed
- Over 7 days of IV therapy
- High frequency dosing (q1h, q2h, or q3h)
- Benzodiazepine and opioids are prescribed concurrently
- Possible CIWA [Clinical Institute Withdrawal Assessment] Use



PAR Landing Page

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
	Visit Number	Facility	Admit Date	MME taken (Previous 24 Hours)	Total MME Available (Previous 24 Hours)	MME taken >= 90	Possible Opioid Agonist Therapy	Naloxone Given	No Nalox RX with Opioid RX	Multiple Opioids Prescribed	Over 7 days of IV	High Frequency Dosing (q1h, q2h, or q3h)	Benzo + Opioid	Possible CIWA Use	Risk Factors	Add to patient list tab?
1																
2		D-3A	1900-01-01 0:00:00	90	906	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	6	
3		C-6A	1900-01-02 0:00:00	420	540	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	FALSE	FALSE	5	
4		D-4C	1900-01-03 0:00:00	122	332	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	FALSE	FALSE	5	
5		D-4C	1900-01-04 0:00:00	0	460	FALSE	FALSE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	5	
6		C-3E	1900-01-05 0:00:00	1080	1080	TRUE	TRUE	FALSE	TRUE	FALSE	FALSE	FALSE	TRUE	TRUE	5	
7		C-3E	1900-01-06 0:00:00	840	870	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	4	
8		C-3F	1900-01-07 0:00:00	120	400	TRUE	FALSE	FALSE	TRUE	TRUE	FALSE	TRUE	FALSE	FALSE	4	
9		C-5F	1900-01-08 0:00:00	90	504	TRUE	FALSE	FALSE	TRUE	TRUE	FALSE	TRUE	FALSE	FALSE	4	
10		C-6F	1900-01-09 0:00:00	0	40	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	TRUE	TRUE	4	

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Impact

Seven-Month Report: July 10, 2023 – January 15, 2024

Screened Patients

- The PAR Tool screened over 10,562 individual patient visits with prescribed opioids and 65,688 individual patient prescriptions.

Risk Factor Triggers

- 98.9% (10,450) of visits triggered at least one opioid-related harm risk factor, with 62.4% triggering multiple simultaneously.

Results

Seven-Month Report: July 10, 2023 – January 15, 2024

Seven-Month Report: July 10, 2023 – January 15, 2024	
Average Available MME	389
No Naloxone Prescription with Opioid Prescription	79.2% (8361)
High Frequency Dosing (q1h, q2h, or q3h)	42.8% (4518)
Multiple Opioids Prescribed	37.8% (3992)
Benzodiazepines and Opioid	9.7% (1026)
Over Seven Days of Intravenous Therapy	9.5% (1004)
MME Taken Over or Equal to 90	6.9% (724)
Possible Opioid Agonist Therapy	5.8% (617)
Naloxone Given	1.2% (123)*
Possible CIWA Use	1.2% (125)

*Naloxone usage determined by removal from automated medication cabinet (PYXIS)

Results

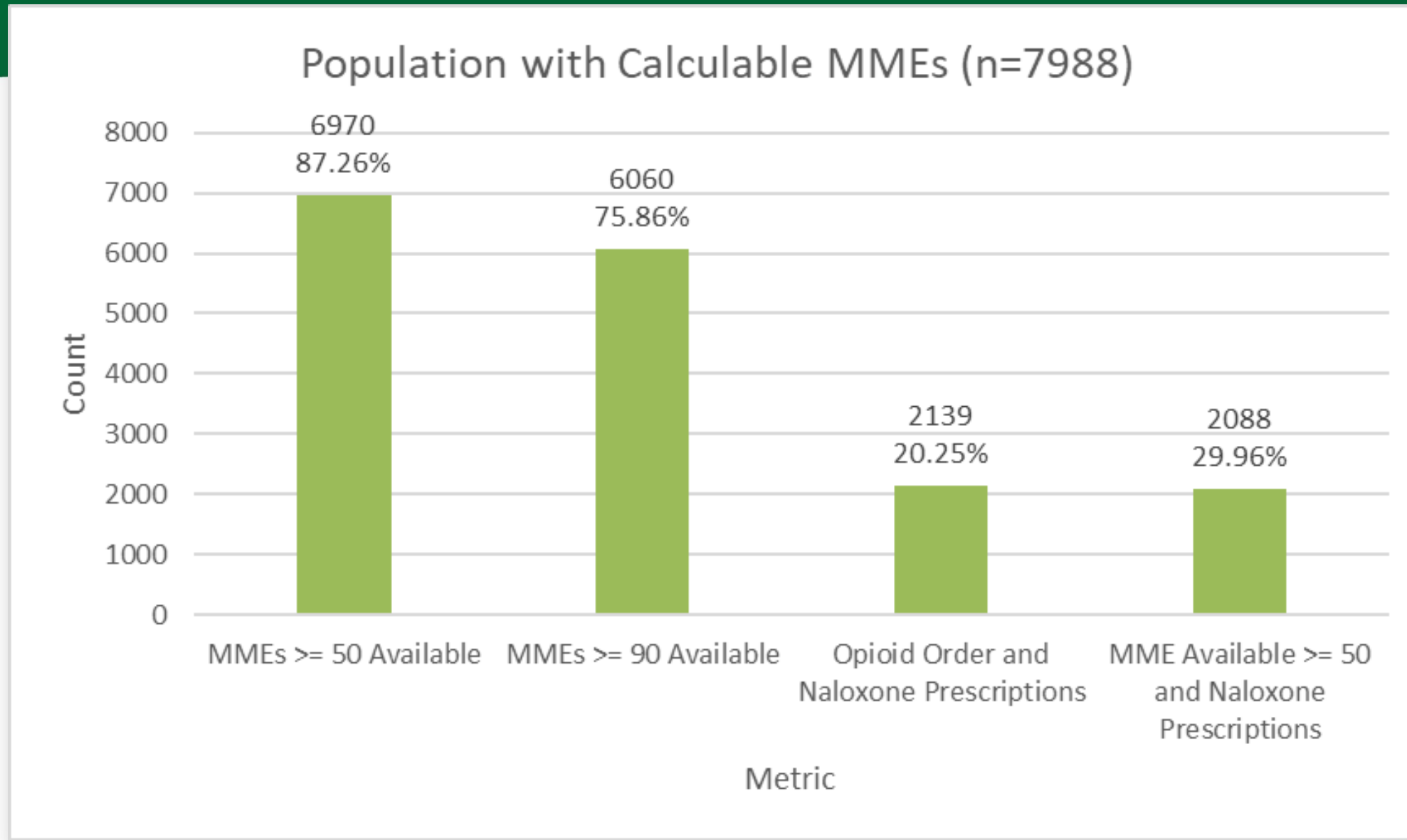
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Lessons Learned

1 Automation

Automation significantly improves the efficiency of identifying potential opioid harms.

3 Prescribing Trends and Analysis

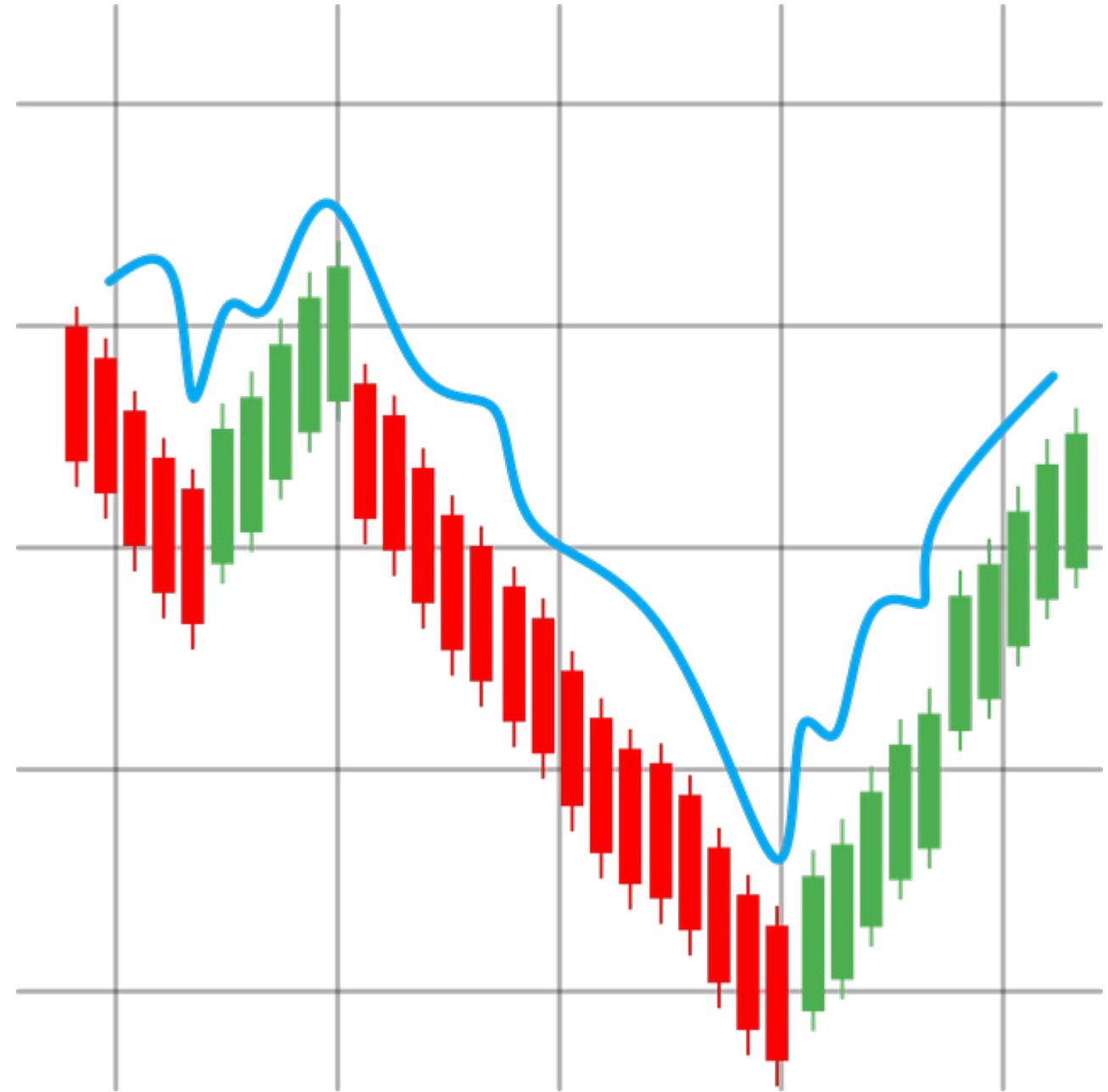
The open-sourced nature allows for implementation at other sites and assists in identifying provincial prescribing trends to promote high-level, systemic change.

2 Data-Driven Interventions

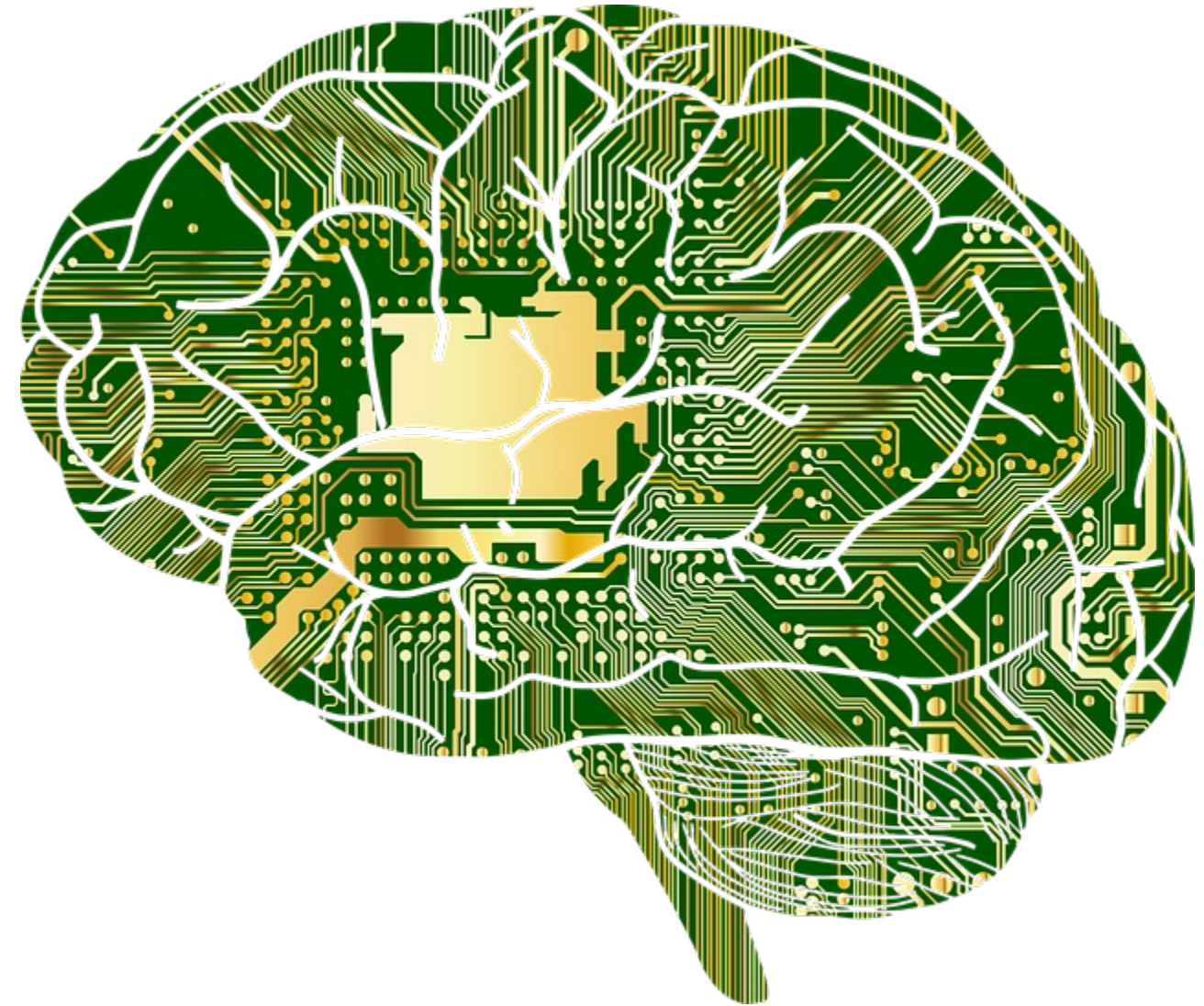
PAR Tool allows us to identify trends in the data to direct and plan our interventions to where they will have the greatest impact.

Limitations and Future Research

- Clinical Evaluation
- Passive Evaluation
- Standardized Report Structure



In Conclusion...



Thank You