



CANADIAN ASSOCIATION OF PAEDIATRIC HEALTH CENTRES  
ASSOCIATION CANADIENNE DES CENTRES DE SANTÉ PÉDIATRIQUES



**CAPHC Patient Safety Collaborative  
Paediatric Patient Safety Workshop**  
*Advances in Paediatric Patient Safety in  
Canada*

*CAPHC-SHN Paediatric Medication Reconciliation Collaborative*  
**The Evidence for Safer Patient Care - Two Years Later**

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# Key Challenges in Child and Youth Health Care



- *Myth: Children are “Little Adults”*
- ***Child and youth health issues must be recognized and integrated within the overall health reform agenda***

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# CAPHC - WHO WE ARE

- The Canadian Association of Paediatric Hospitals was co-founded in 1968 by the leaders of Children's Hospitals across Canada. Over the subsequent three decades, with child healthcare organizations undergoing fundamental structural changes, CAPHC reemerged in 2001, as a result of an organizational renewal, in order to better respond to ongoing healthcare challenges and the shifting landscape of child and youth health service delivery in Canada
- Today, CAPHC is proud to support its forty-two member organizations, representing multidisciplinary health professionals that provide health service delivery to children, youth and their families within acute care hospitals, community health centres, rehabilitation centres and home care provider agencies across Canada - <http://www.caphc.org/membership.html>.
- All Children's Hospitals and their respective Children's Hospital Foundations in Canada are members of CAPHC, thereby providing strong linkages to clinical care, education and research.

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# CAPHC - WHO WE ARE

- As a national organization representing health professionals and organizations across the continuum of care, CAPHC is uniquely positioned to influence system-wide change at a national level by advocating for child and youth health service delivery at key and influential tables. In addition, because a large part of CAPHC's membership is situated at the grass roots level, we are also able to effect change at the point of service delivery.
- CAPHC supports a communication network that enables knowledge transfer of leading-edge research from contributors across the globe. Along with our members and partners, CAPHC is a strong national advocate for change and improvement to enhance the health and safety of all children and youth.
- ***Patient safety is one of CAPHC's national priorities.*** Under the direction of the CAPHC Board of Directors, CAPHC's National Patient Safety Collaborative provides a national forum to unite individuals, groups, and organizations to facilitate partnerships, improve communication, and, when appropriate, undertake collective action to improve patient safety for all children and youth. Membership in the collaborative is open to all members of CAPHC, Health Canada, the Canadian Patient Safety Institute (CPSI), ISMP Canada, as well as other provincial and national organizations with a specific expertise and/or interest in patient safety. The Collaborative membership represents multidisciplinary child and youth health organizations from coast to coast.

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# Advances in Paediatric Patient Safety

- Today's workshop will highlight several paediatric patient safety initiatives
  - The key learnings from the Paediatric Medication Reconciliation Collaborative
    - The audit data
    - The challenges of implementing the practice change
    - The strategies for sustainability and spread
  - The Business Model for Quality Improvement Initiatives
  - Critical Incidents and Near Misses – Catalysts for Change
  - Reducing Harm in Paediatric Care – Identifying and Quantifying Adverse Events in Hospitalized Children and Youth

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# The CAPHC-SHN Paediatric Medication Reconciliation Collaborative (PMRC)

- In June 2005, CAPHC established an important patient safety partnership (Paediatric Clinical Support) with the Safer Healthcare Now! Campaign
- Among the six SHN! campaign interventions, CAPHC's Patient Safety Collaborative identified Medication Reconciliation as their national priority.
- The Canadian Association of Paediatric Health Centres – Safer Healthcare Now! Paediatric Medication Reconciliation Collaborative (PMRC) was initiated in August 2005, when seventy-five interdisciplinary child and youth health professionals from across Canada participated in an introductory Orientation and Training Workshop.
- The PMRC has been working in partnership with SHN, ISMP Canada and implementation teams across the country to expedite change and quality improvement in medication reconciliation at all paediatric centres and other related organizations across Canada.
- The implementation of MedRec has been complex and challenging however there has been tremendous collaboration from teams across the country
- Over the last two years, through the PMRC, the implementation teams have learned from each other, sharing challenges, strategies and successes

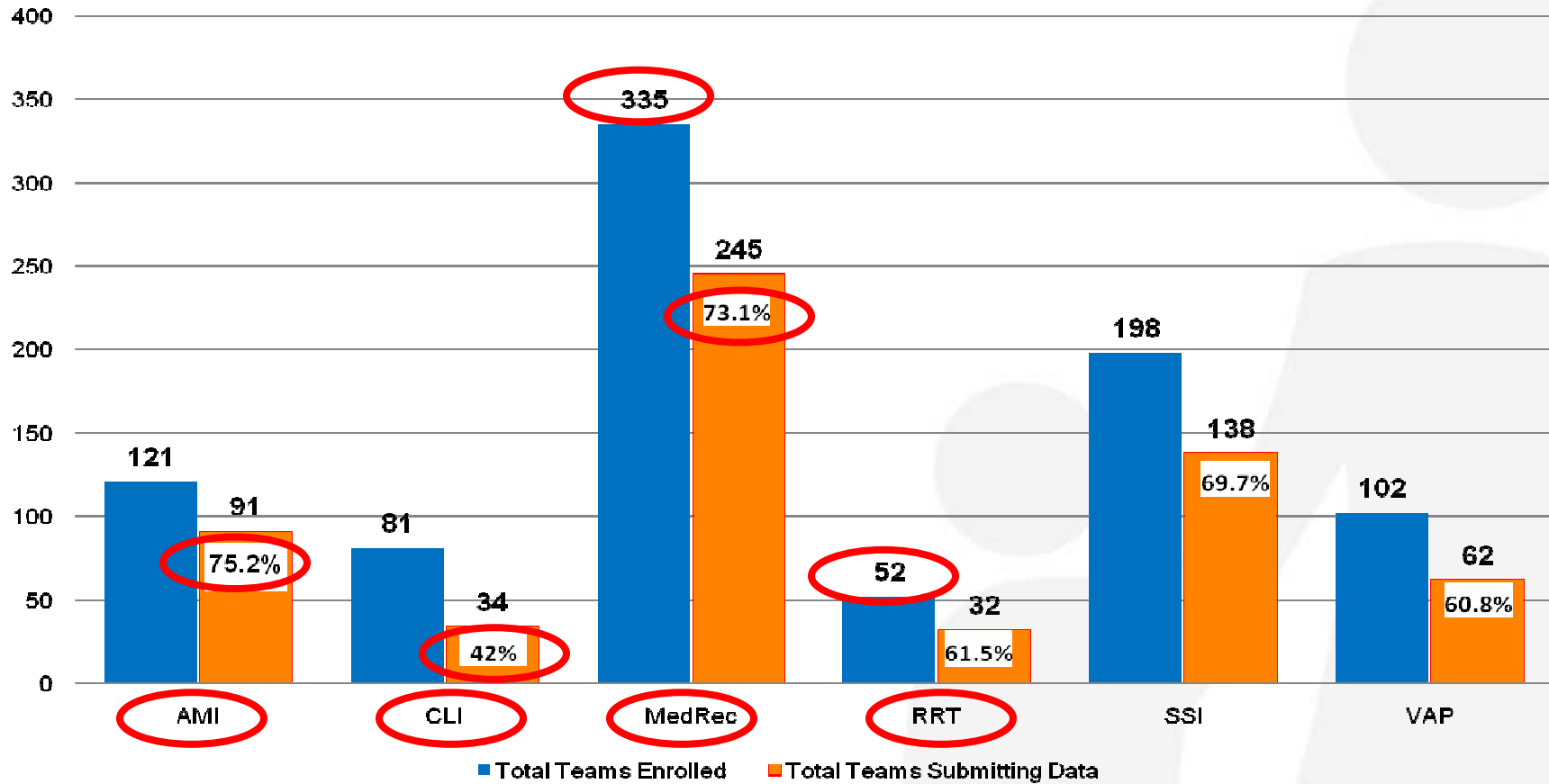
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# SHN National Data Submission

## Data Submission to CMT by Intervention



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# The CAPHC-SHN Paediatric Medication Reconciliation Collaborative (PMRC)

- 17 health centres from coast-to-coast representing seven provinces have established 21 paediatric medication reconciliation teams
- Patient populations vary across the teams from children admitted to paediatric wards in community hospitals to more complex populations including nephrology, mental health and respiratory medicine within acute care settings
- Collectively the teams have made significant progress in *implementing practice change and improving medication safety*

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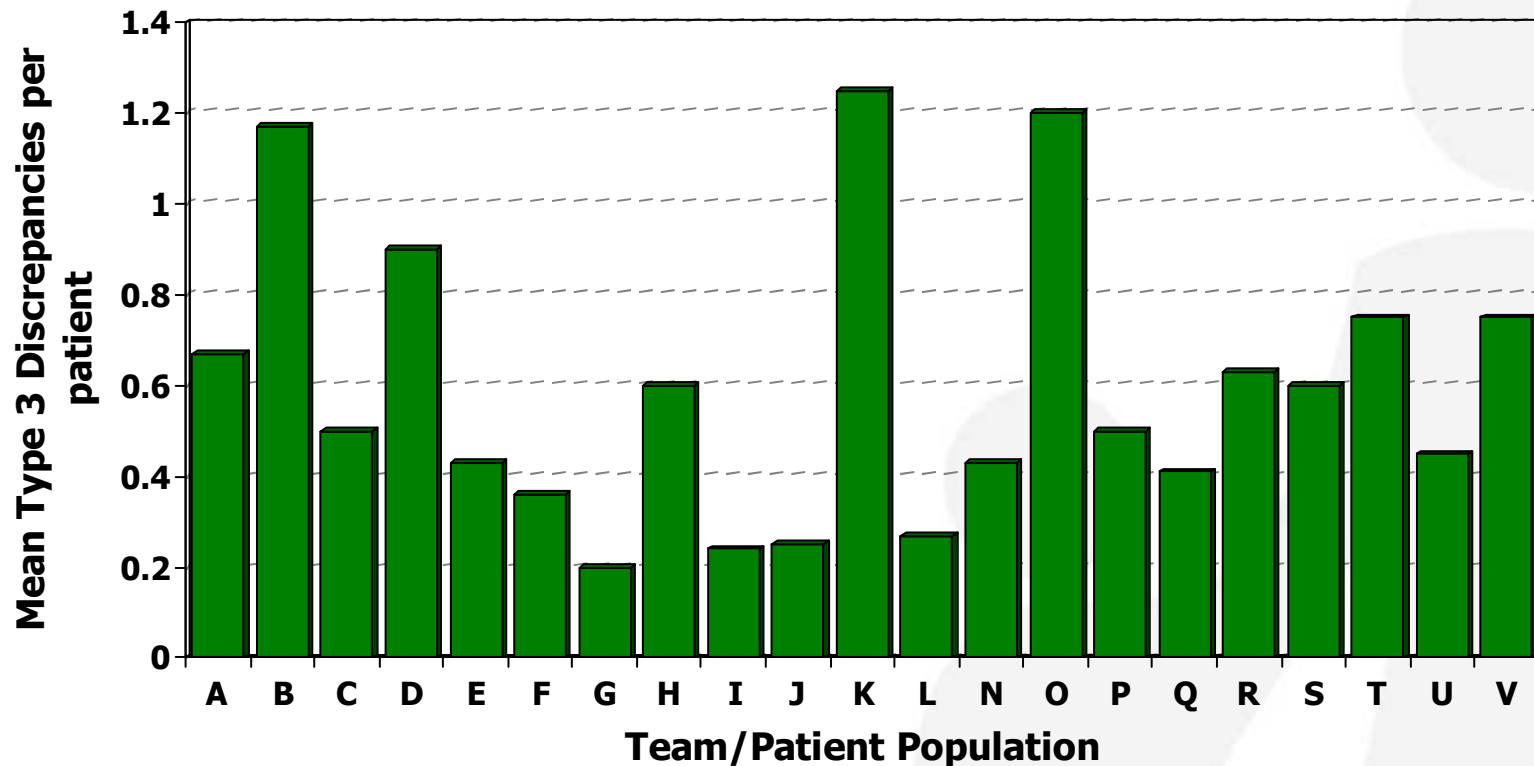
## PMRC: Baseline Data Submissions

- Following the inaugural August 2005 workshop, teams began to collect and submit baseline data;
  - By July 2006, 17 teams had submitted baseline data
  - In 2007, another 4 teams submitted baseline data
  - As of December 2007, 21 teams have submitted baseline data
- 44 monthly submissions of baseline data
- Data collected on a median of 20 patients (range 10 to 94 patients per team ) and a total of 556 patients were reviewed

# PMRC: Implementation Data Submissions

- Teams began submitting partial implementation data in January 2006
- By December 2007, 20 teams had submitted partial implementation data
  - 155 monthly submissions of partial implementation data
  - Teams have submitted a range of 1 to 22 months of audit data
  - Data collected on a median of 50 patients (range 13 to 375 patients per team) and a total of 2030 patients were reviewed
- 4 teams are submitting full implementation data
  - 32 monthly submissions of full implementation data
  - Data collected on a median of 69 patients (range 7 to 154 patients per team) and a total of 299 patients have been reviewed to date

# Baseline data; Distribution of Type 3 Discrepancies



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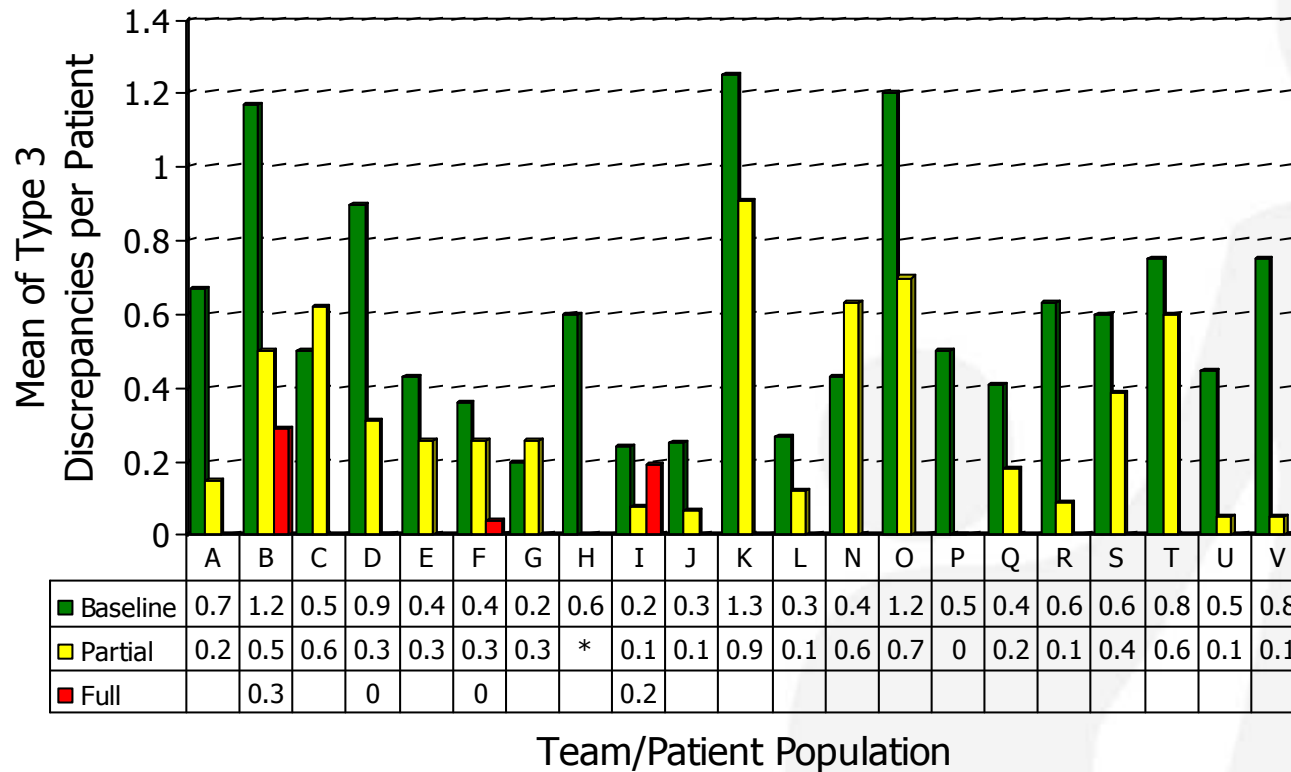
# Unintentional Discrepancies – the stories

A school-aged patient with chronic renal failure received a regular anti-hypertensive at home. Admission medication history documentation indicated “no medications at home.” No anti-hypertensive was ordered on admission.

A school-aged child diagnosed with Hartnup disease had Levocarnitine 4.7mL OD, Singulair prn and Ventolin prn ordered on admission.

Medication reconciliation found **six** unintentional (Type 3) discrepancies. With reconciliation the meds were clarified to be: Levocarnitine 470 mg po TID, Singulair (Montelukast) 4mg po OD, Salbutamol MDI 2 puffs as needed, Levothyroxine 25 mcg po od, Beclomethasone 100mcg 2 puffs bid, Chewable Poly-vi-sol po od.

# Baseline and implementation data; Distribution of Type 3 Discrepancies

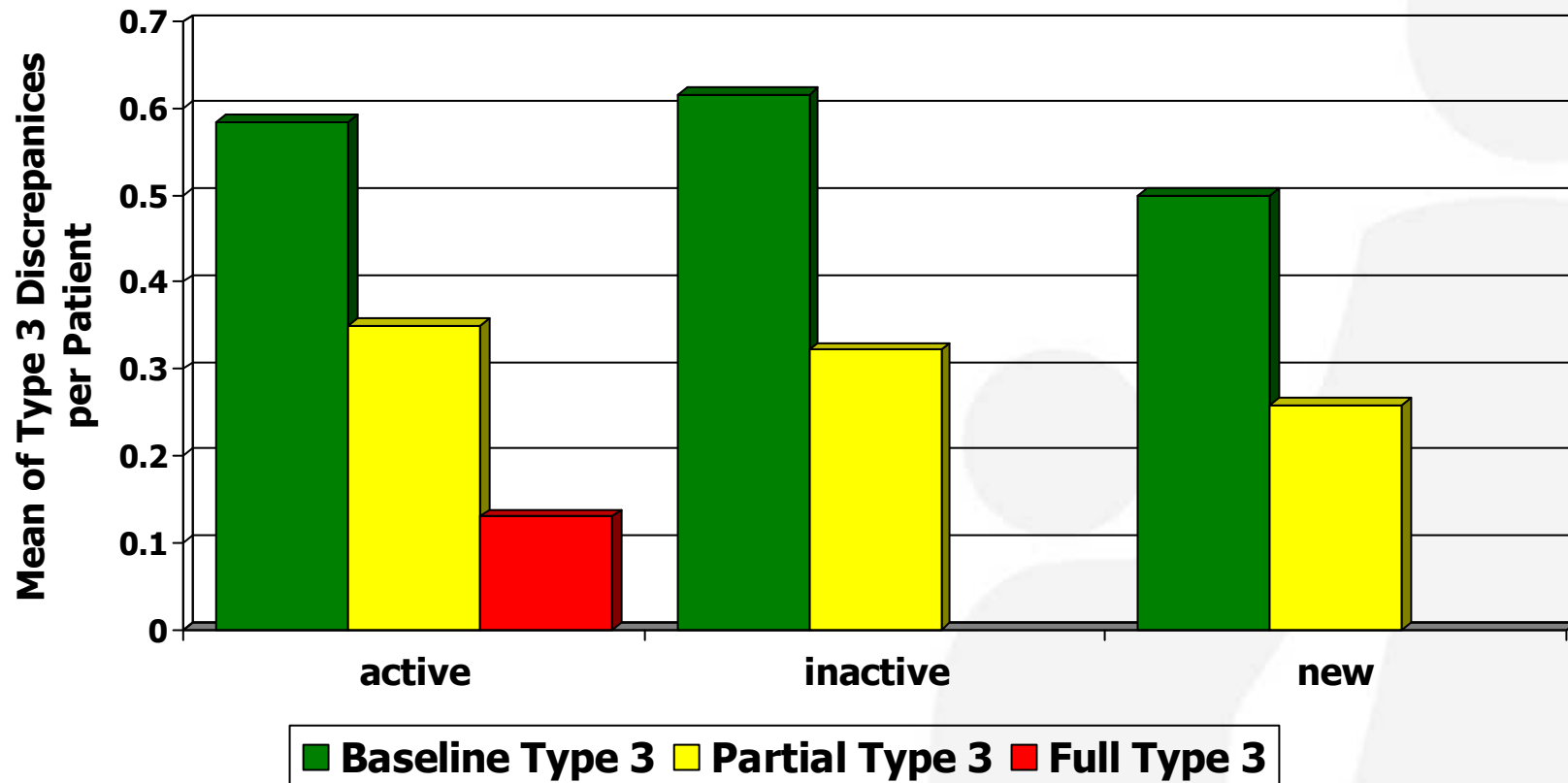


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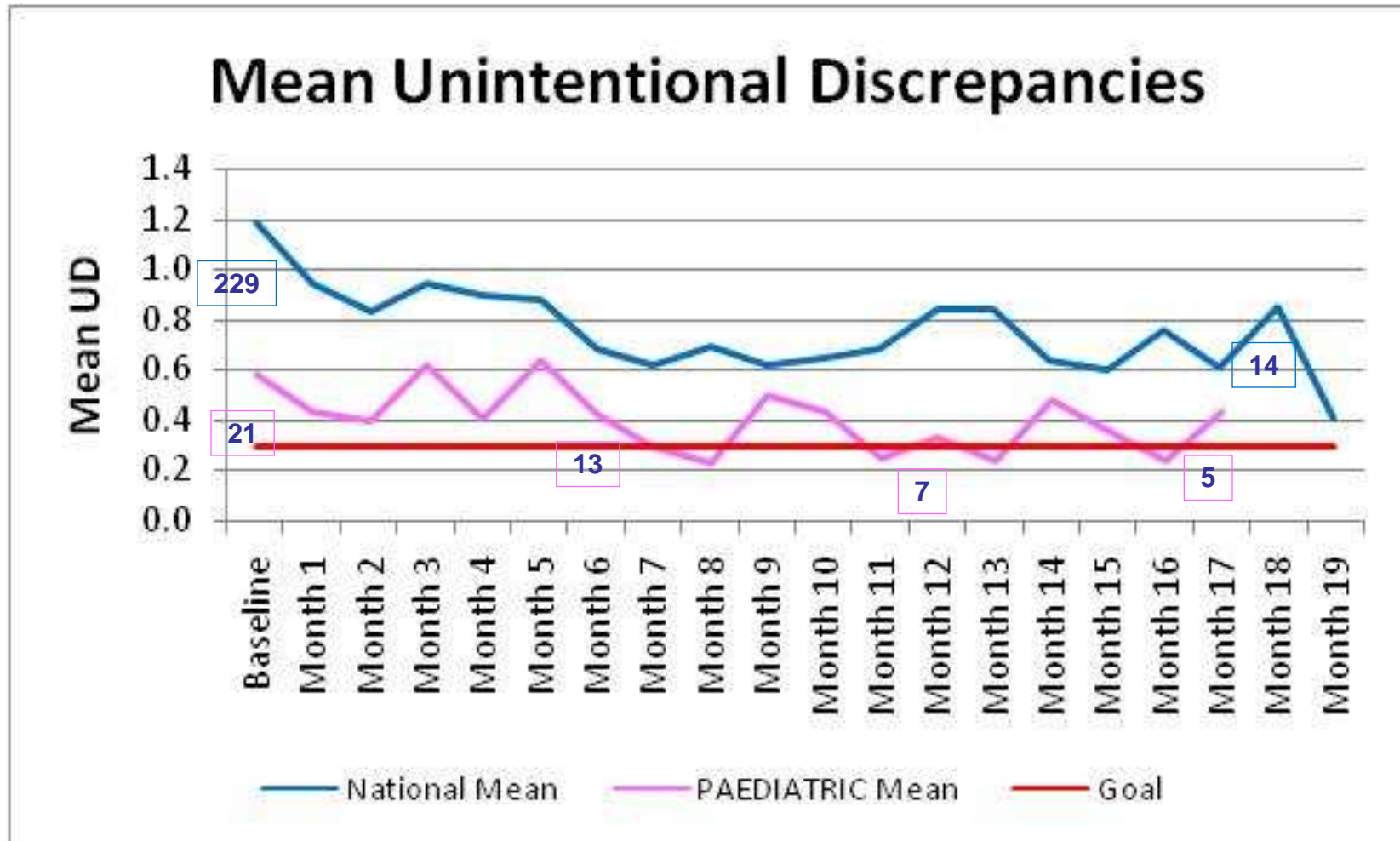
# Baseline and Implementation Data; *Decrease In Type 3 Discrepancies*



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## Performance by Intervention – MedRec (National and Paediatric Teams)



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# Baseline and Implementation Data; *Type 3 Discrepancies (System-wide)*

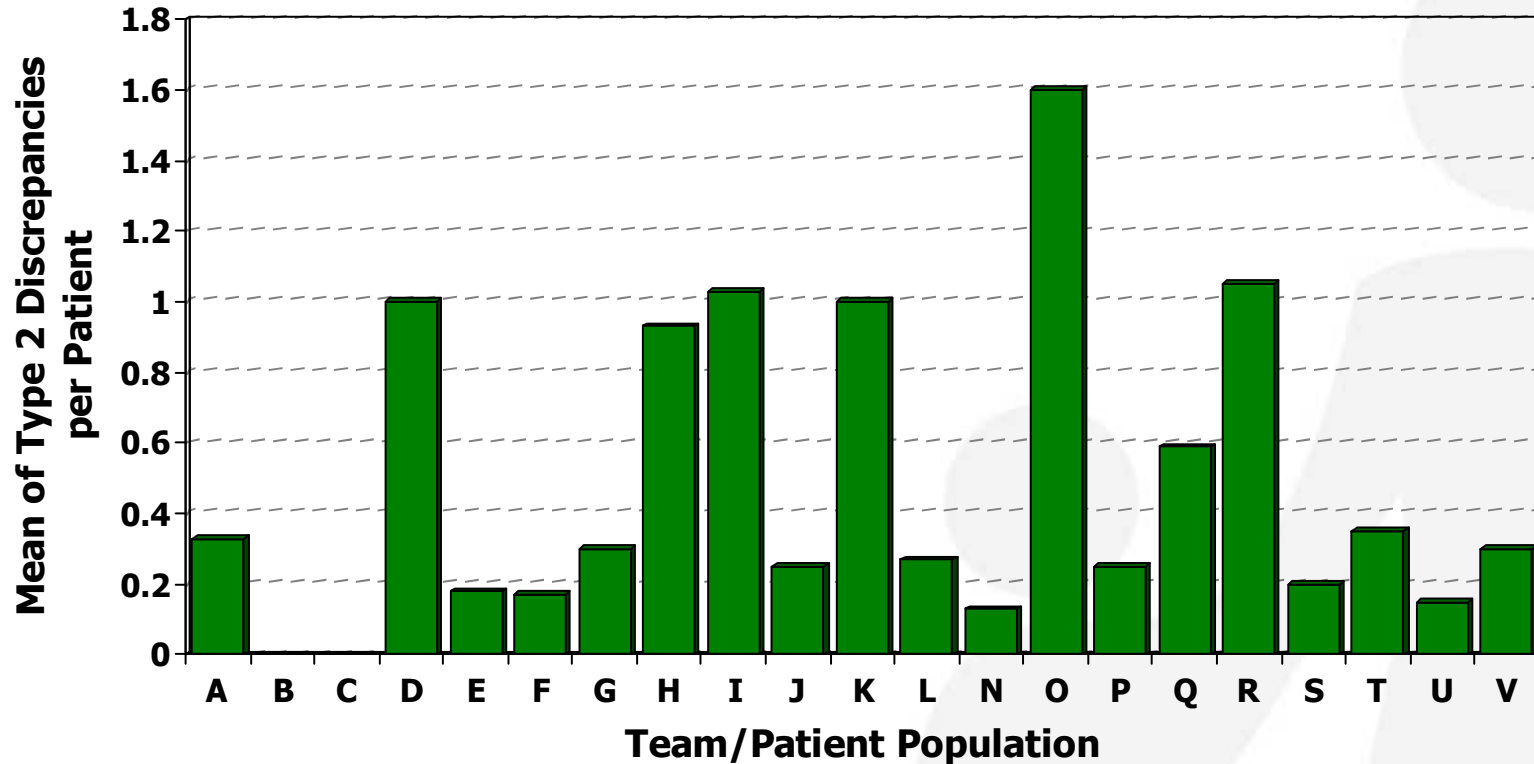
- From a system-wide lens there has been an overall decrease in Type 3 discrepancies
- Across the paediatric teams, a total of 556 patients were reviewed during the baseline phase and 316 Type 3 discrepancies were identified – a rate of **0.57** per patient
- During the partial implementation stage, a total of 2030 patients have been reviewed, to date, and 571 Type 3 discrepancies have been identified **0.28**
- Overall, for teams that have submitted partial implementation data, the mean number of Type 3 discrepancies per patient has decreased **50.8%**
- Based on the SHN! goal of reducing discrepancy rates by 75% we would expect this rate to drop to **0.14**

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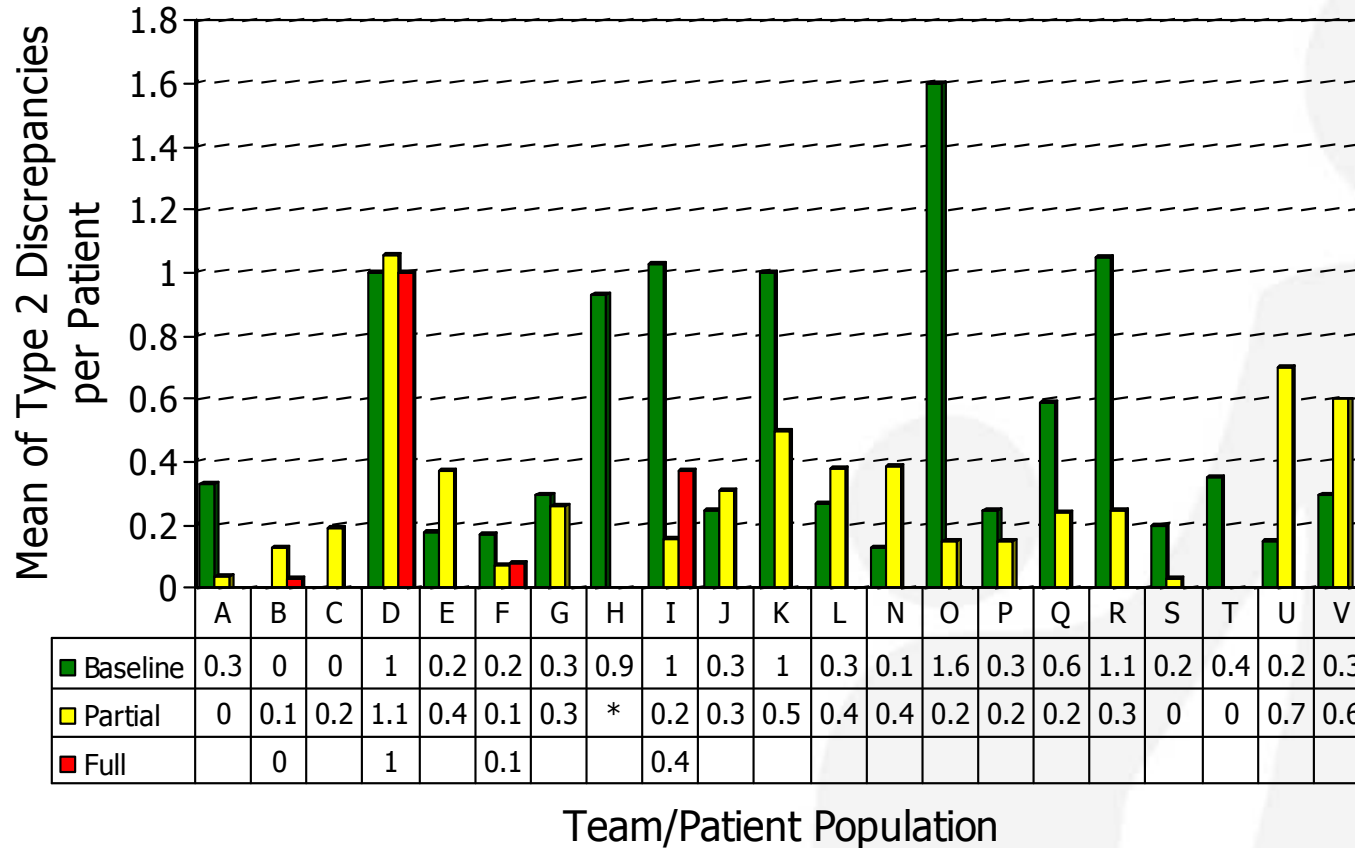
# Baseline data; Distribution of Type 2 Discrepancies



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# Baseline and Implementation Data; Distribution of Type 2 Discrepancies by Team

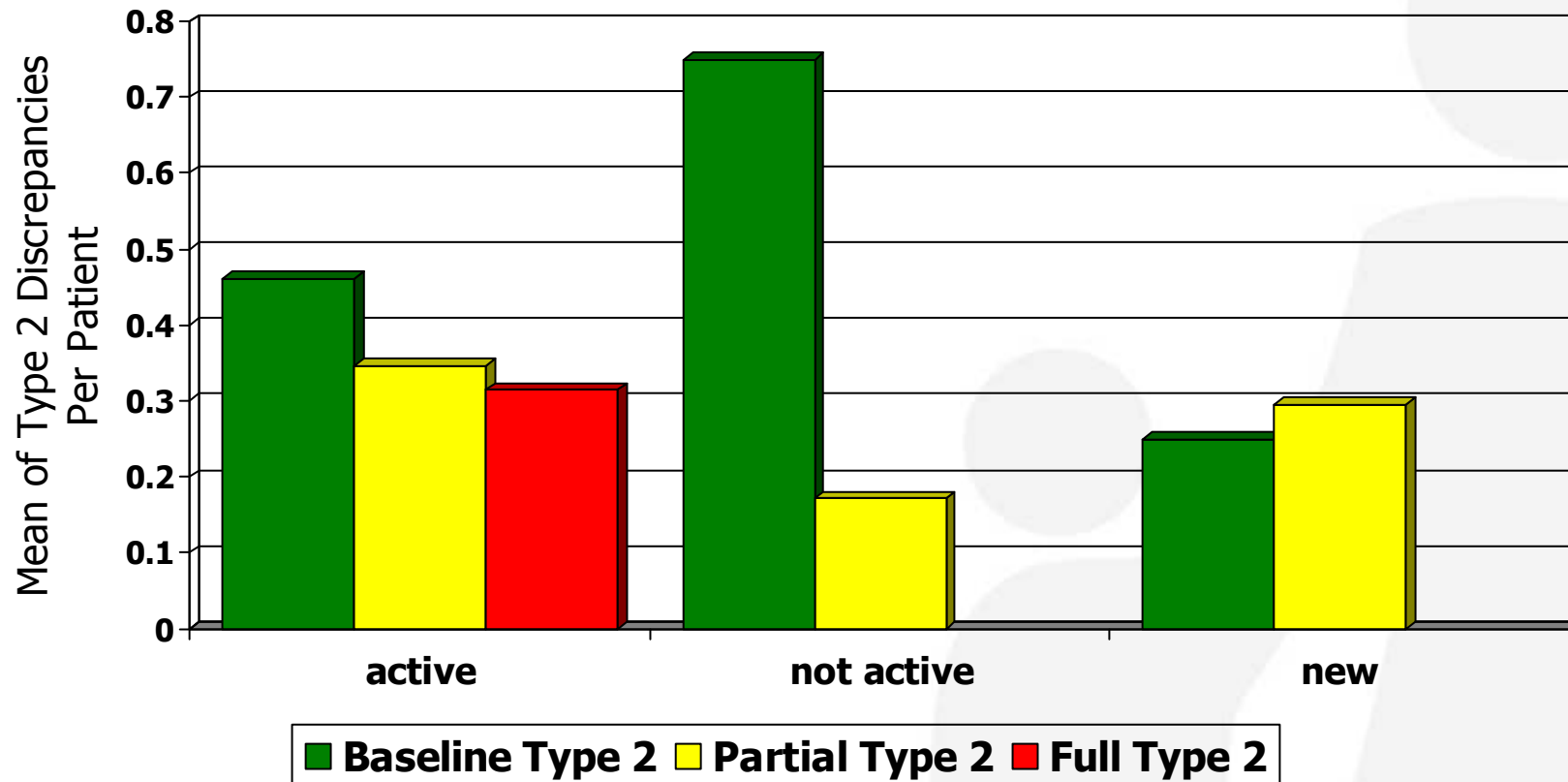


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# Baseline and Implementation Data; *Decrease In Type 2 Discrepancies Over Time*



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# Baseline and Implementation Data; *Type 2 Discrepancies (System-wide)*

- From a system-wide lens there has been an overall decrease in Type 2 discrepancies
- Across the paediatric teams, a total of 556 patients were reviewed during the baseline phase and 252 Type 2 discrepancies were identified – a rate of **0.45** per patient
- During the partial implementation stage, a total of 2030 patients have been reviewed, to date, and 615 Type 2 discrepancies have been identified **0.30**
- Overall, for teams that have submitted partial implementation data, the mean number of Type 2 discrepancies per patient has decreased **33.3%**
- Based on the SHN! goal of reducing discrepancy rates by 75% we would expect this rate to drop to **0.11**

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# Key Lessons Learned

- At a system-wide level, the efforts of the paediatric teams are making a difference in reducing discrepancies and validate the value of medication reconciliation.
- Overall, the mean rate of Type 2 discrepancies per patient has decreased 33.3%
- Overall, the mean rate of Type 3 discrepancies per patient has decreased 50.8%
- While the data shows significant progress in reducing discrepancies on a system level, it has been a challenging process for all teams to move MedRec forward to sustainability

# Key Lessons Learned

- The MedRec process, in theory, appears straightforward, however, the experience of the teams within the paediatric collaborative has shown that the system changes are complex and resource intensive.
- The teams within the paediatric collaborative have demonstrated a number of strategies that have been successful in moving the process forward.
- Today we will hear about the challenges but as well we will also hear about the critical factors that have contributed to the success of implementing this practice change

# As we continue our journey

*The CAPHC Patient Safety Collaborative would like to recognize the ongoing work of all of the participating centres, for without their commitment, extraordinary efforts and leadership, this work would not be possible!*

- **Children's & Women's Health Centre of BC**
- **Alberta Children's Hospital**
- **Stollery Children's Hospital**
- **Saskatoon Health Region**
- **Winnipeg Children's Hospital**
- **Bloorview Children's Rehab**
- **Children's Hospital of Eastern Ontario**
- **Children's Hospital of Western Ontario**
- **Credit Valley Hospital**
- **Grand River Hospital**
- **Hospital for Sick Children**
- **Kingston General Hospital**
- **McMaster Children's Hospital**
- **North York General Hospital**
- **Quinte Healthcare Corporation**
- **IWK Health Centre**
- **Janeway Child Health Centre**

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