



Implementing Leading Practices for High Alert Medication Delivery in Paediatrics



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*"Every day we are missing opportunities
to prevent harm
to children hospitalized in Canada"*

Matlow and Cronin; CAPHC 2007 Annual Conference presentation on patient safety.

Project Objectives

- To identify the top 3 high alert medications causing harm or potential harm in Canadian paediatric healthcare settings

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- To identify the common medication system issues, using, in part, a paediatric specific survey, that lead to adverse drug events; risks, challenges and barriers experienced by Canadian paediatric health care providers; and

Project Objectives

- To identify and analyze existing leading practices and develop solutions for Phase 2 of the SHN! Campaign – “Prevent Adverse Drug Events Related to High Alert Medications in Paediatrics”.

High Alert Medications

High Alert medications are drugs that bear a heightened risk of causing significant patient harm when they are used in error

Literature review

- 79 articles reviewed
- identified specific medications that were at highest risk for error
- strong representation from opioids, antibiotics, fluids and electrolytes (including TPN) and sedatives

Incident Data Analysis

Primary Analysis

Medication	Frequency	Overall Percentage (%) (n=294 incidents)
morphine	26	8.8%
Potassium chloride	14	4.8%
insulin	11	3.7%
Total (top 3 medications)	51	17.4%

Incident Data Analysis

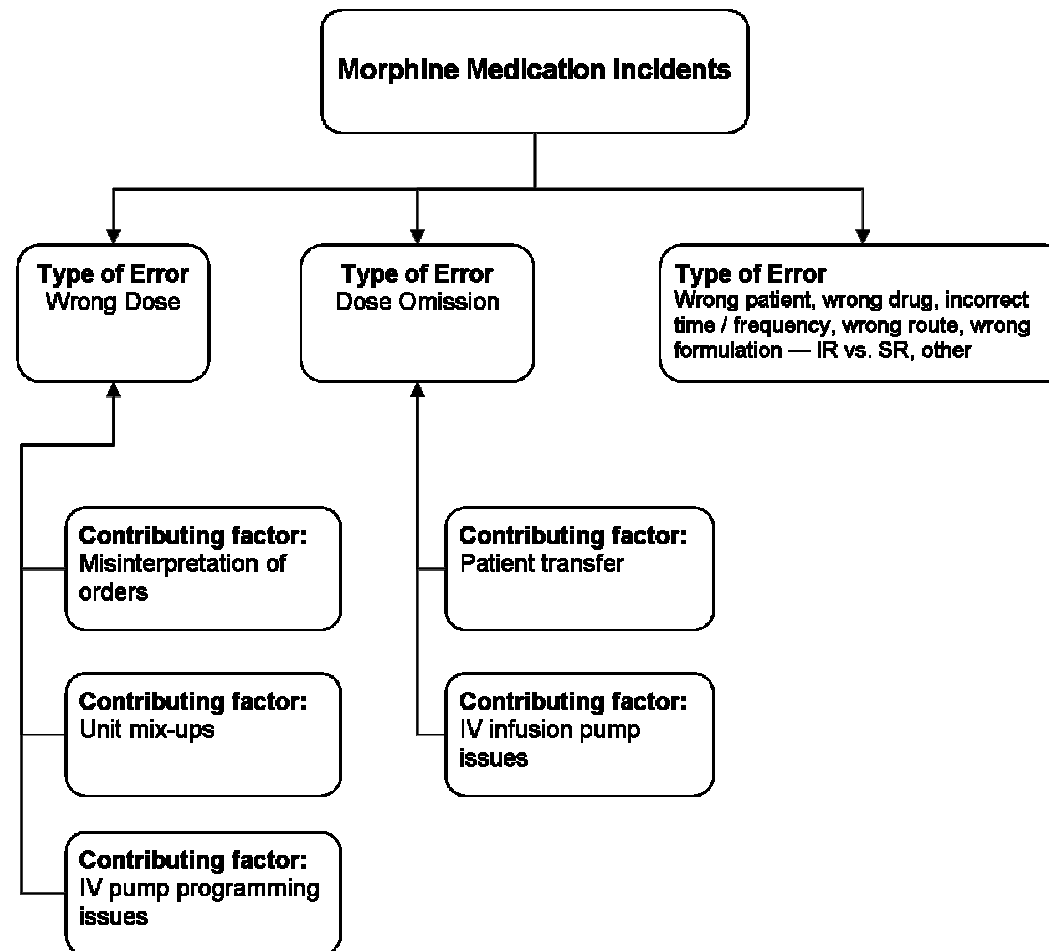
Secondary Analyses

Medication	Number of Detailed Medication Incidents (All Severities)
Morphine	176
Potassium Chloride	204
Insulin	41
Total	421

Opioid Incident Data Analysis

Medication	Number of Detailed Medication Incidents (All Severities)
Morphine	176
Oral Opioids	77
Hydromorphone	31
Fentanyl	30
Miscellaneous	6
Total	320

Morphine: Types of Errors

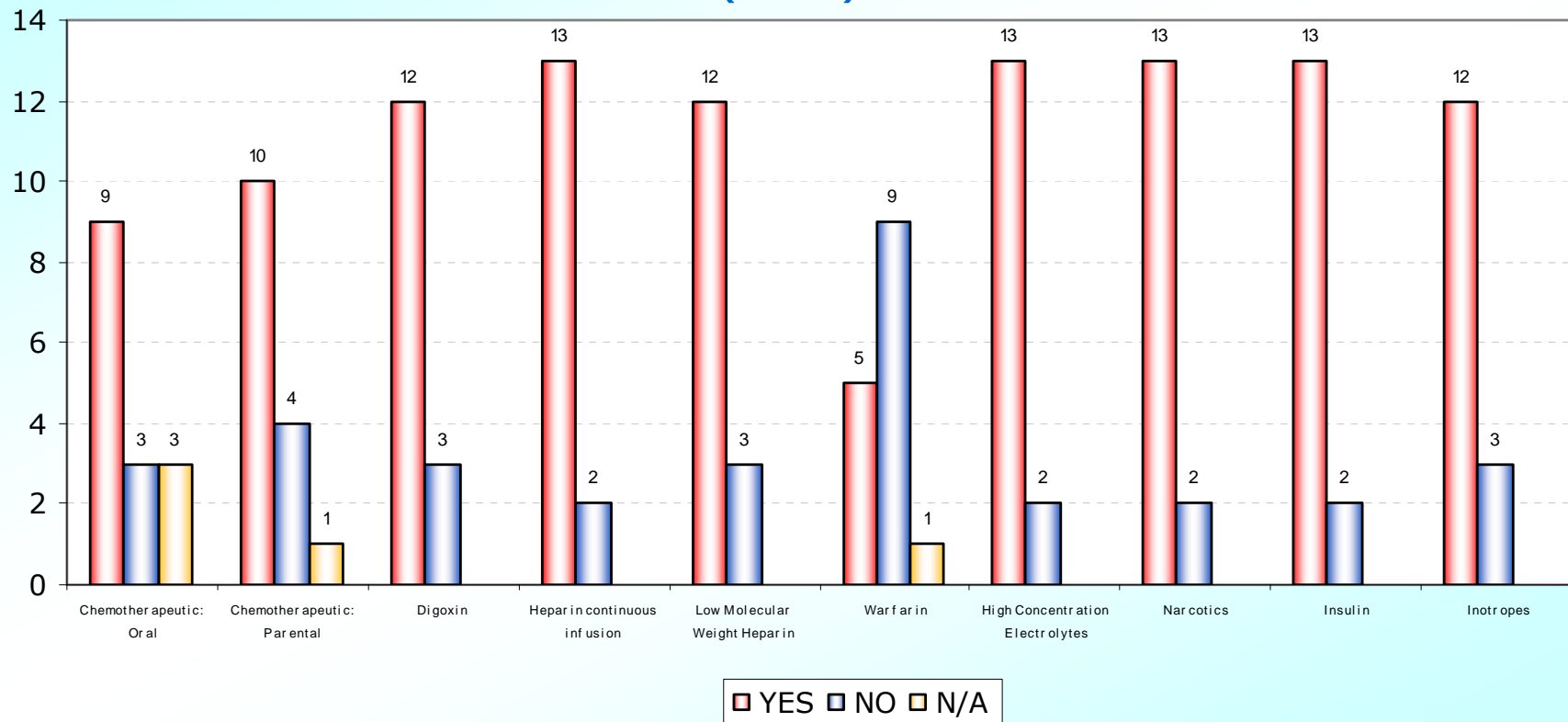


Survey

- 20 CAPHC member facilities invited to participate
- **75% participation** (15 facilities)
- Paediatric; Women & Child; Community Health centres serving women & children
- Bed size 6 – 400
- Telephone interviews: RN & pharmacist

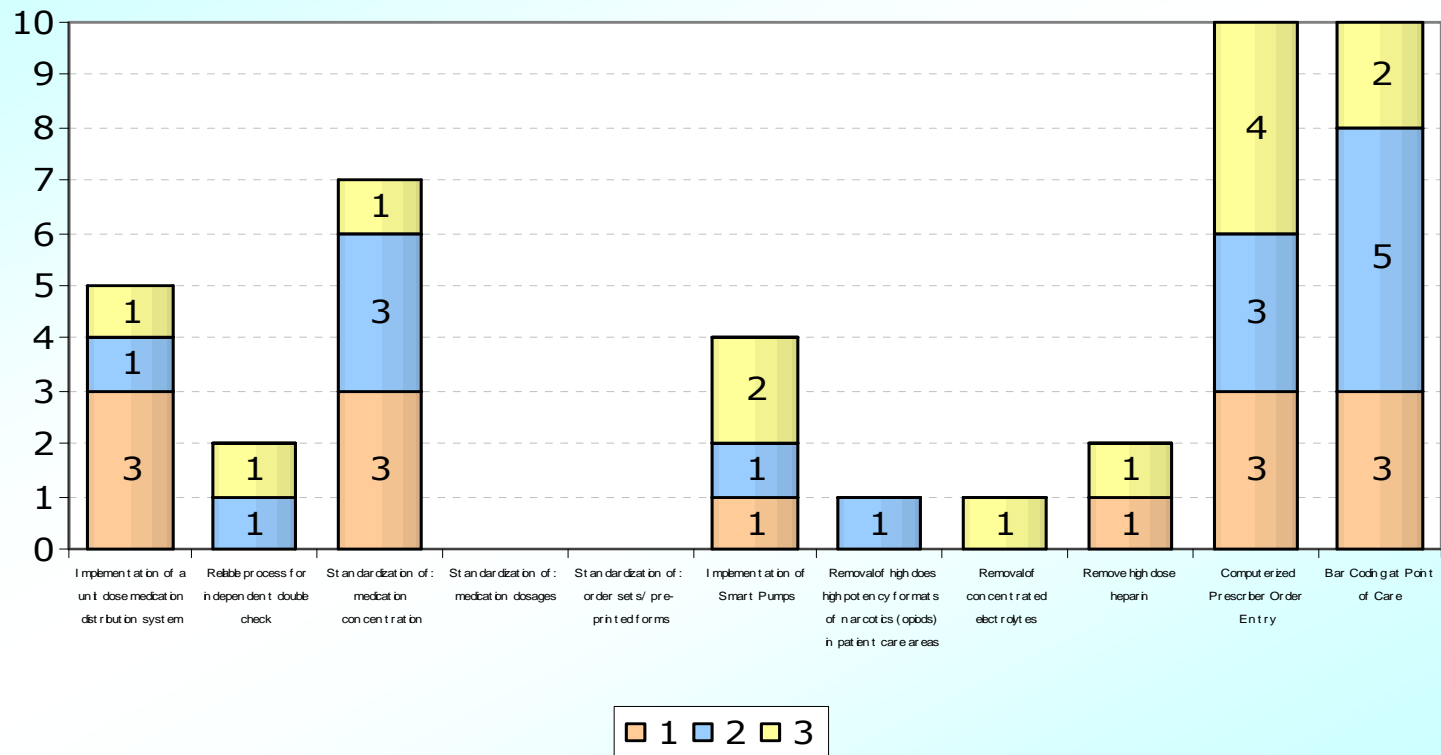
Best Practices Survey: Independent Double Check

Do you require an independent double check process for:
(n = 15)



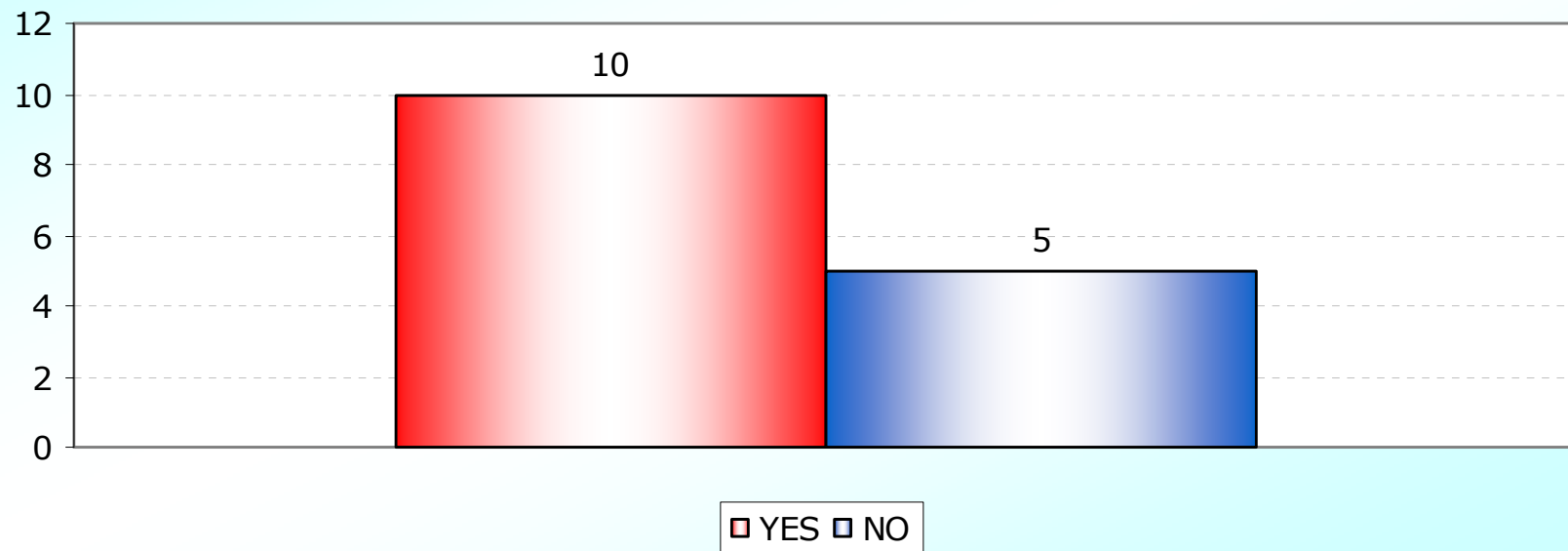
Best Practices Survey: Safety Priorities

Top 3 Institutional Priorities



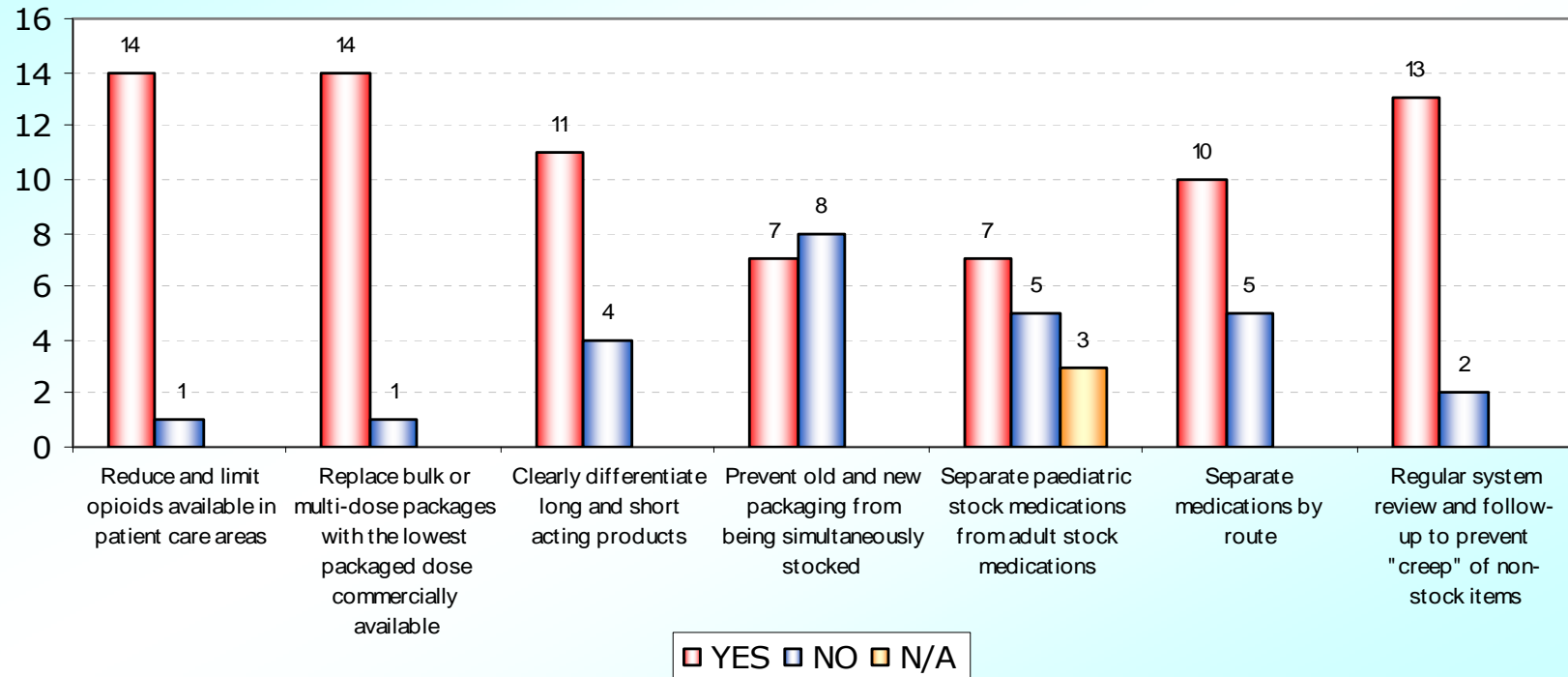
Best Practices Survey: RCA

Has your facility conducted a Root Cause Analysis on any incident involving a high alert medication?

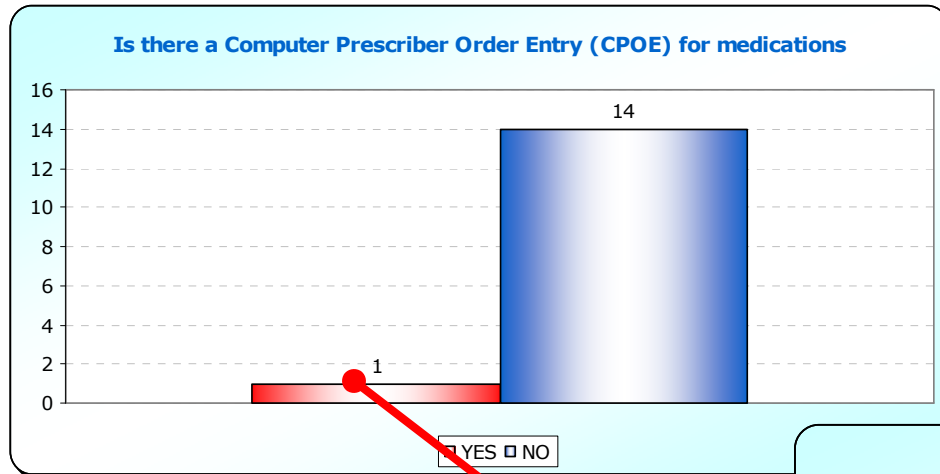


Best Practices Survey: Standardization of Opioid Storage

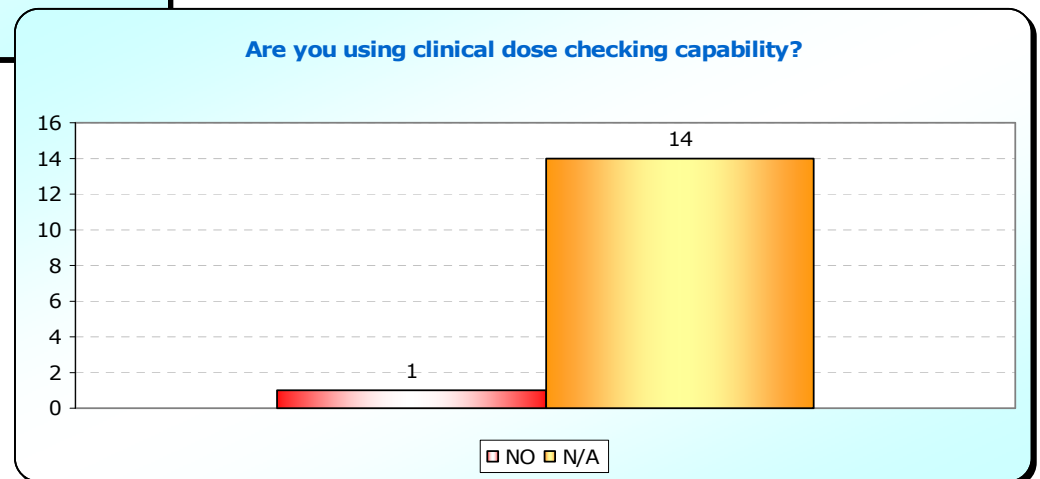
Standardization of Opioid Storage



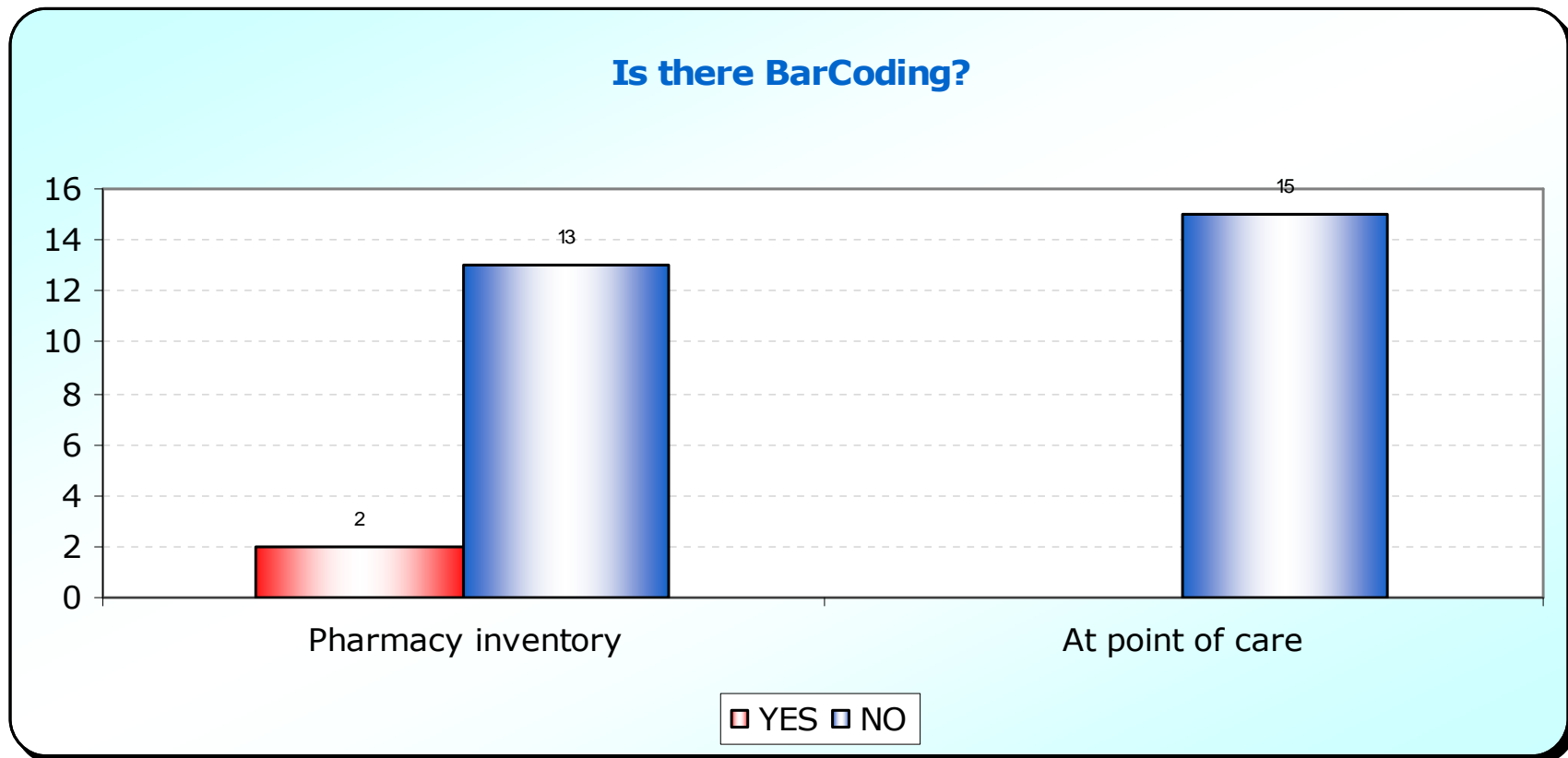
Best Practices Survey: CPOE



IF YES

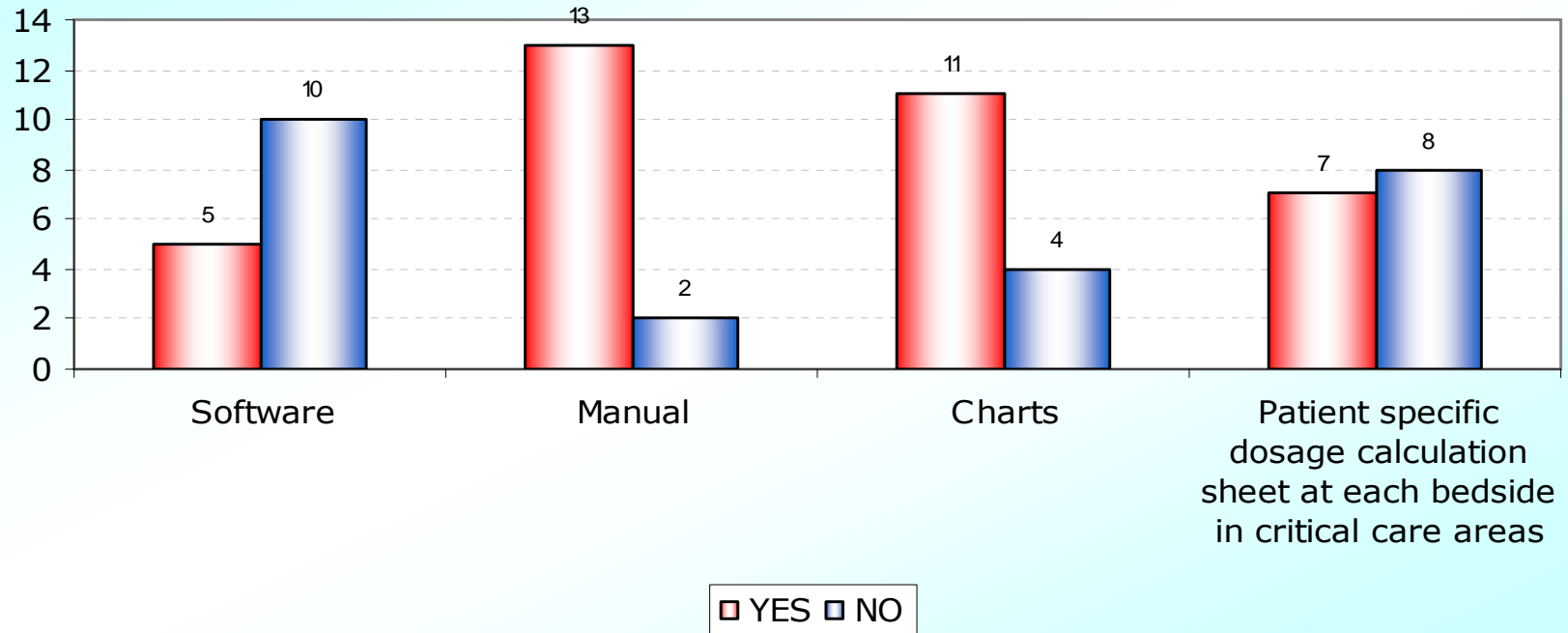


Best Practices Survey: Bar Coding



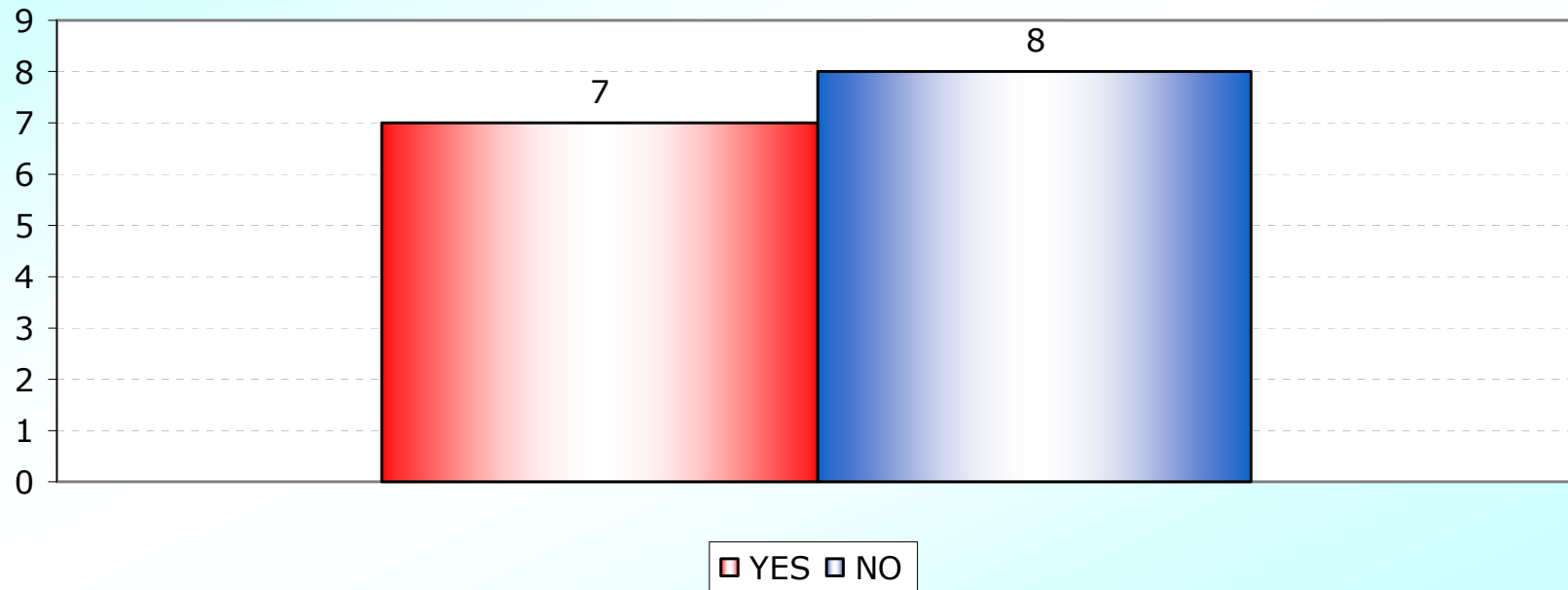
Best Practices Survey: Calculation Tools

Are there calculation tools for preparation of medication doses?



Best Practices Survey: Rule of Six

Have you eliminated the use of the rule of six?



Summary of Comments

Question?

How can we (CAPHC & ISMPC) best help you to accomplish a safety initiative in the area of medication management

Themes

- I. Best Practice
- II. Paediatric Database
- III. Indicators
- IV. Collaboration
- V. Support

Advisory Committee Decision

Consensus was reached on the following intervention:

To develop an intervention to assist facilities to implement safe medication practices in the delivery of opioids in paediatric settings. This includes all aspects of the opioid medication system from prescribing to storage and administration.