

Evaluation of baseline pediatric readiness of emergency departments in Manitoba, Canada



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INTRODUCTION

- 1 in 5 visits to the general emergency departments (EDs) are children in Canada [1] and the US [2].
- Lack of pediatric readiness at EDs puts children at risk when immediate care is required.
- Recent evidence suggests an inverse association between pediatric readiness of EDs and mortality.

AIM

- To assess the baseline pediatric readiness of EDs across Manitoba to care for acutely ill and injured children.

METHODS

Study design

Cross-sectional survey study conducted in 2019-2020 using a validated pediatric readiness research checklist to obtain information on the 6 domains of EDs in Manitoba.

Sample eligibility

EDs that managed acutely ill and injured patients aged 0-17 years, except for psychiatric cases that was up to 18 years old.

Survey

Web-based assessment adopted from the National Assessment of Pediatric Readiness of EDs in the US [3] and the Provincial Council for Maternal and Child Health (PCMCH), Ontario, Canada.

Outcome assessment

Weighted pediatric readiness score (WPRS) (a 100-point scale) based on questions in 6 domains [3]: patient care coordination, ED staffing and training, quality improvement, patient safety, policies and procedures, pediatric equipment/supplies.

Data analysis

We performed a descriptive analysis and examined factors that are associated with WPRS in linear regression models.

RESULTS

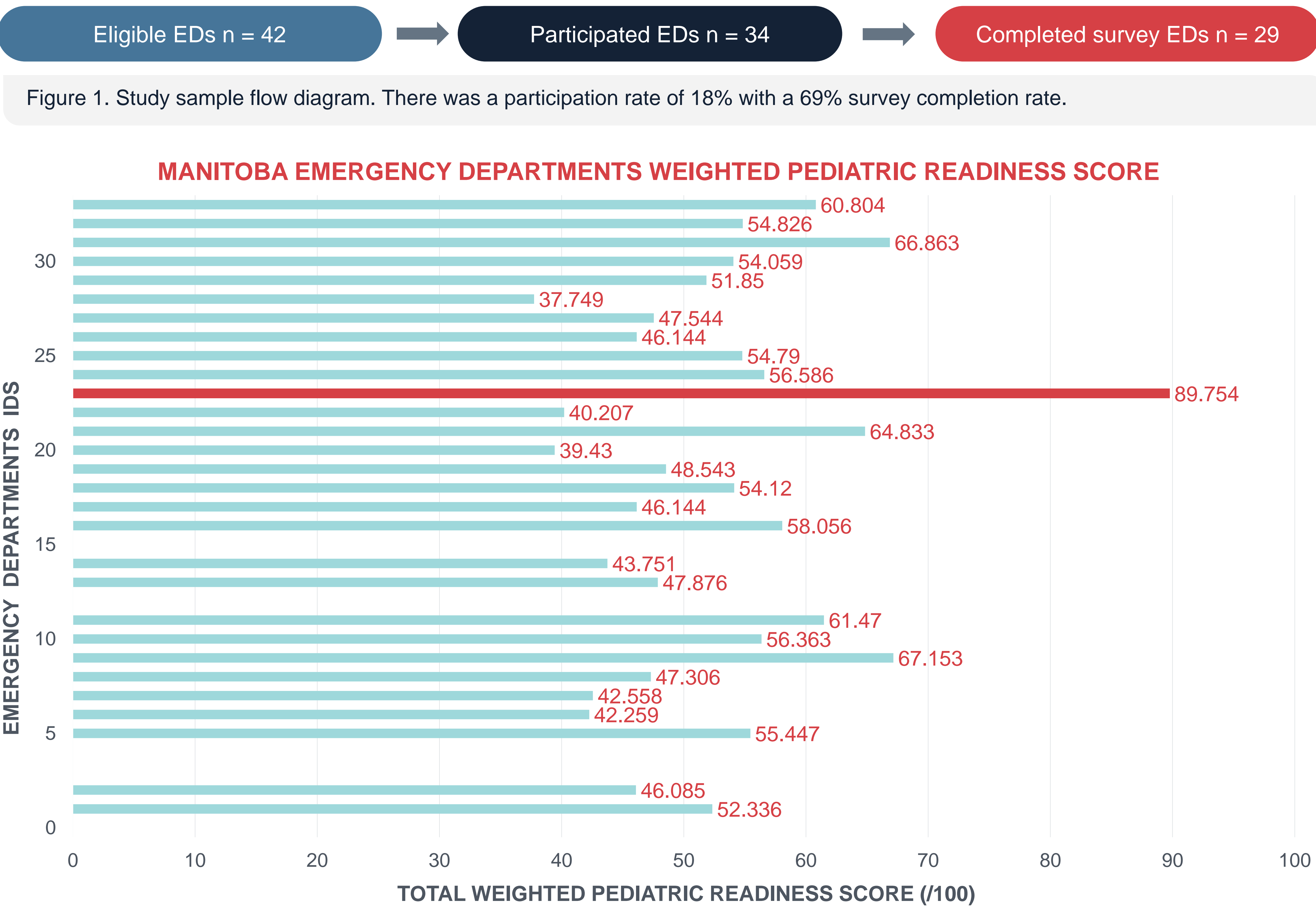


Figure 2. WPRS scores for each Manitoba ED with Health Science Centre Winnipeg Children's ED (highlighted in red) as the reference ED. Overall median WPRS (/100) was 52.34 (interquartile range [IQR] =10.44).

Table I. WPRS by domain for each Regional Health Authority

Domains	Total possible WPRS	Region A (EDs = 3)	Region B (EDs = 7)	Region C (EDs = 7)	Region D (EDs = 9)	Region E (EDs = 1)
Coordination of patient care	19.0	0.0	2.7	2.7	3.2	9.5
ED staffing and training	10.0	0.0	0.7	1.4	0.6	0.0
Quality improvement	7.0	2.0	2.4	0.7	0.0	0.0
Patient safety	14.0	11.4	11.1	12.5	11.5	10.5
Policies and procedures	17.0	3.2	6.3	9.8	9.6	2.1
Availability of pediatric equipment/supplies	33.0	32.8	27.6	27.9	26.0	30.2
Total Mean WPRS	100.0	49.5	50.7	55.0	50.9	52.3

WPRS ASSOCIATED FACTORS

Table II. WPRS associated factors linear regression results

Factors	β [95% CI low to high]
ED volume	0.21 [0.03 to 0.38]
Capacity to manage pediatric trauma patients after stabilizing	0.17 [0.02 to 0.33]
Capacity to receive pediatric patients from nursing station	0.20 [-0.13 to 0.17]
Capacity to admit pediatric patients that visited the ED	-0.02 [-0.19 to 0.14]

CONCLUSION

- Pediatric Readiness of EDs across Manitoba is mostly average.
- ED volume is strongly associated with WPRS.
- Pediatric care coordination, ED staffing/training and quality improvement require urgent attention.

There is a need to improve Manitoba EDs in 3 ED domains.

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