

The Development, Feasibility, and Effectiveness of The Pediatric Readiness for Discharge Tool (P-REDI)



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BACKGROUND

PICO: Was the creation of the P-Redi discharge score safe to use in a pediatric ambulatory surgical setting?

- Problem:**
- Assessment of readiness for discharge was subjective
 - Was the score safe for discharging patients
 - Discharge practices among Phase II PACU RNs were inconsistent.
 - Phase II PACU times wide-ranging.

Intervention:

- Review of the current literature.
- Created collaborative criteria for discharge (nursing, anesthesia and surgery).
- Survey nursing staff to determine baseline determinants for discharge and understanding of current institutional policies.
- Initial discharge tool put into practice in 2014 objectively assessing pediatric patient readiness for safe discharge to home from ambulatory setting.

Comparison:

- 2019 - team decided to attempt validation of tool.
- Can tool reliably predict safe discharge by evaluating the likelihood of hospital readmission, ED or unscheduled clinic visit?
- Do Phase II times reflect efficiency secondary to standardization?
- Do nurses show greater confidence of discharge by using tool?

Outcome:

- Comparison of primary outcomes revealed no differences in unscheduled clinic visits, ED visits or readmission to hospital
- The study demonstrated the tool increased nurses' comfort with discharging patients in Phase II PACU, while decreasing LOS without impacting patient safety.

METHODS

- Study setting is a 425-bed tertiary care academic level one trauma center of a free-standing children's hospital. Main setting is a 30 bed Phase 2 PACU unit which cares for approximately 3,500 patients per calendar year.
- An extensive chart review evaluating the literature and standards regarding the various essential physiological components.
- A quasi-experimental mixed methods approach including retrospective chart review comparing patient outcomes pre and post implementation in the 24-hour post-operative period and nurse surveys.

RESULTS

Discharge Criteria	Scoring Guidelines
Blood Pressure and Heart Rate	Score based upon the more abnormal of the two 0 = Within 20% of pre-op value and/or normal range for age 1 = +/- 20%-40% of pre-op value and/or normal range for age 2 = Less than/greater than 40% of pre-op value and/or normal range for age (A score of 1 may be acceptable if elevated due to agitation, crying, anxiety, etc.) **If unable to obtain BP due to lack of cooperation, cap refill should < or = 3
Respiratory Rate Work of Breathing	0 = Regular rate within normal range for age 1 = Less than 20% of normal rate for age and/or snoring 2 = Periods of apnea and/or obstructive pattern (Only a score of 0 is acceptable)
Sedation / Level of Consciousness related to Pasero Score	1 = Awake and alert 2 = Slightly drowsy, easily aroused 3 = Frequently drowsy, arousable, drifts off to sleep 4 = Somnolent, minimal or no response to verbal & physical stimulation (A score of 1 or 2 is acceptable)
Oxygen Saturations	0 = Maintains saturations at 92 or above on room air while awake, > = 90 while asleep 1 = Room air saturations 91-92 2 = Needs supplemental oxygen to maintain saturations at 90 or above (Take into consideration patient's baseline oxygen saturation and/or home oxygen need) (A score of 0 is acceptable, a score of 1 requires anesthesia consult prior to discharge)
Post-Operative Pain (use age-appropriate pain scales)	0 = No pain (Pain Score = 0) 1 = Mild pain (Pain Score 1-3) 2 = Moderate Pain (Pain Score 4-6) 3 = Severe pain (Pain Score 7-10) (A score of 0 or 1 is acceptable) (A higher score may be acceptable when accounting for the patient's pain goal, if the patient experiences chronic pain and input from parents)
Surgical Bleeding	0 = No bleeding 1 = Minimal bleeding 2 = Moderate bleeding 3 = Severe bleeding (A score of 0 or 1 is acceptable - Score of 2 or 3 requires a physician consult) * Must meet a score of less than or equal to 4. * Must meet each criteria acceptable score or consult anesthesia. Discharging a patient with score of greater than 4 requires notification of MD provider
Total Score	

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CONCLUSIONS

The P-Redi validation project is the first of its kind in Pediatric Peri Anesthesia Nursing, and an example of successful nursing research.

There were no differences in adverse events before, during and after implementing the tool but there was a significant decrease in discharge times.

Interdisciplinary collaboration in development of the tool and protocol assures patient safety.

The impact of the tool includes:

- Improved post-anesthetic and post-operative patient assessment using objective data in real time to safely discharge patients to home.
- The use of standardized physiologic assessment versus time-based assessment for safe discharge.
- Increased nursing confidence in assessing pediatric readiness for discharge to home.
- Decreased length of stay without impacting patient safety.

IMPLICATIONS

The P-Redi Discharge Tool could impact RN discharge practices, patient safety and hospital expenses.

Future testing with a multisite study is warranted.

LIMITATIONS

Study limited by types of patients excluded, specific diagnosis's and non-English as primary language.