“Implementation of a Nurse-Empowered Renal Anemia Protocol in Children”

My Favorite Nursing Article

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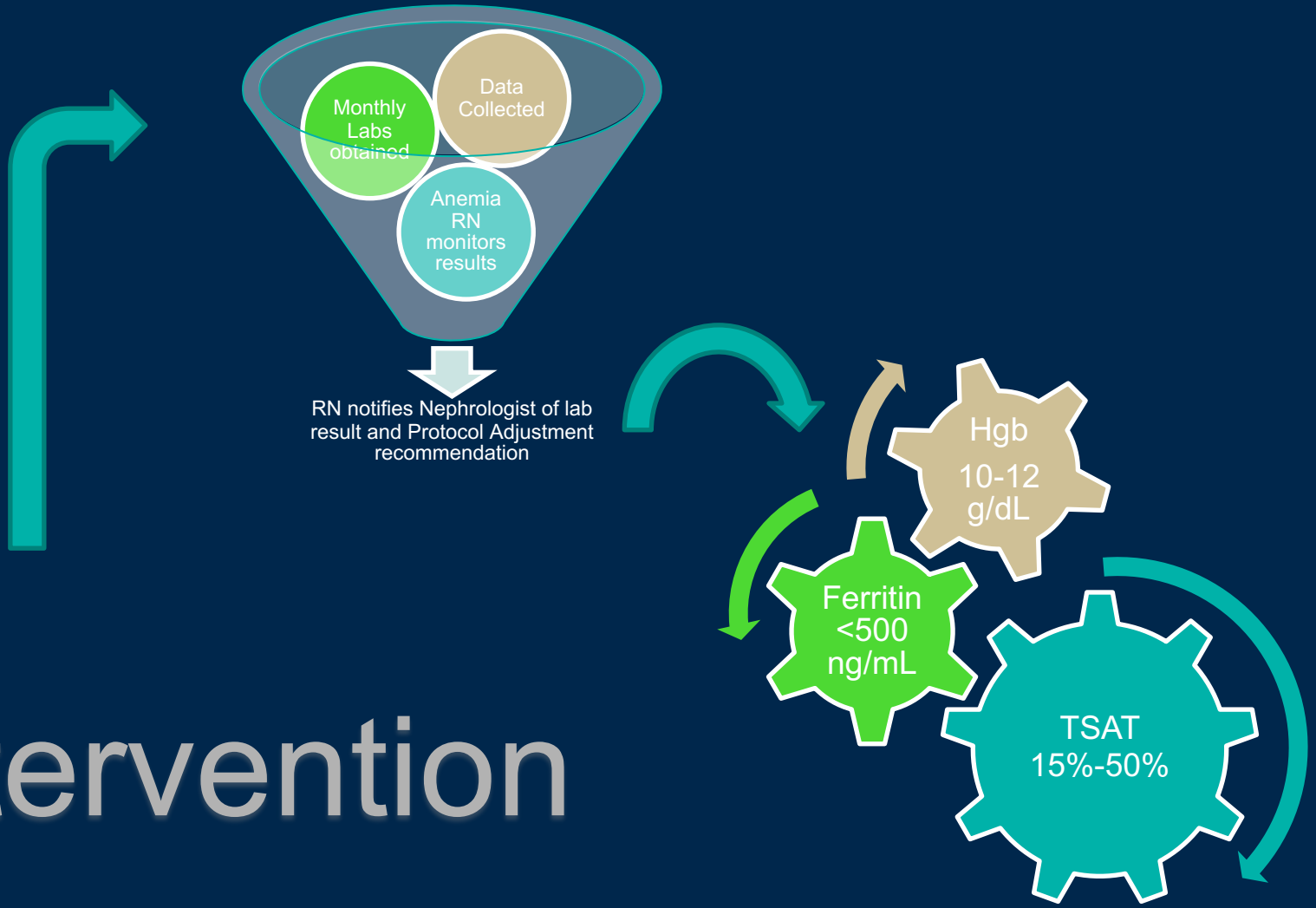
Anemia in CKD is Common

Material and Methods

- Pediatric Hemodialysis Unit
- Prospective Quality Initiative aiming to improve iron status and increase Hgb in children
- Nurse driven anemia protocol
- Measured the proportion of patients hitting target TSAT and Hgb, before and after implementation, and comparing the results

Prior to Intervention

Intervention



Roles

Anemia Nurse

Nursing

- Monitors Labs
- Reviews anemia protocol
- Notifies Nephrologist the day labs come back that warrant change via the protocol

Pediatric Nephrologist

Provider

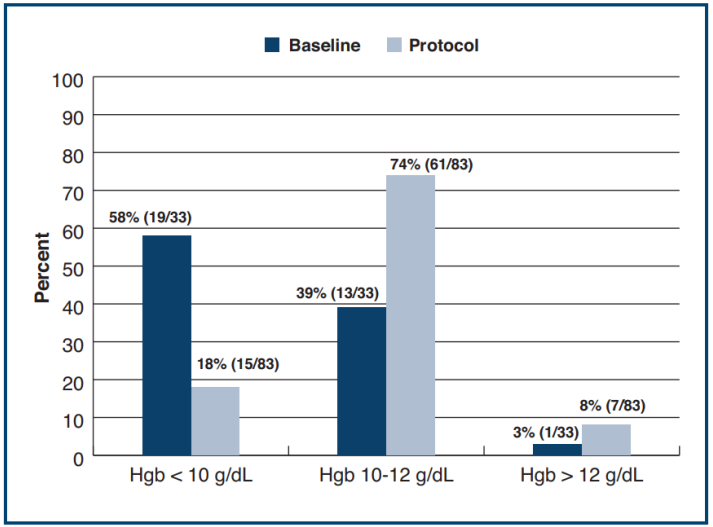
- Prescribes changes to the patient's anemia treatment the day it is reported
- Provides monthly follow-up

Anemia Management Task Force

- Monitors clinical outcomes
- Quarterly Reports to the Pediatric Dialysis Quality Team Steering Committee

Results

Figure 1
Hemoglobin Proportion



Notes: Hgb = hemoglobin.

Castano-Jaramillo LM, Bos A, VanSetters J, Czarnecki L, Cai Y, Chand AQ. Implementation of a Nurse-Empowered Renal Anemia Protocol in Children. Nephrol Nurs J. 2020 May-Jun;47(3):253-267. PMID: 32639127.

Results

Table 1
Compared Values in Baseline and Protocol Groups

	Baseline	Protocol	Ratio (95% CI)	*p*-Value
Target hemoglobin	13/33 (39.4%)	61/83 (73.5%)	4.3 (1.2 – 14.6)*	0.042
Hemoglobin [g/dL] †	9.38+1.8	10.87+1.1	1.48 (0.2 – 2.8) ‡	0.033
Target TSAT	20/33 (60.6%)	74/83 (89.2%)	5.3 (2.1 – 13.6) *	<0.001
Transferrin saturation [%] †	19.0+8.4	25.3+11.2	6.3 (-0.6 – 13.1) ‡	0.068
Ferritin [ng/mL] §	84.0	156.1	1.9 (0.9 – 3.9) **	0.091
Left ventricular hypertrophy	5/10 (50.0%)	5/15 (33.3%)	0.5 (0.1 – 2.6) *	0.407
Sodium ferric gluconate [mg/kg/month] §	6.6	4.3	0.7 (0.2 – 2.2) **	0.454
Epoetin alfa dose [Units/kg/week] §	380	196	0.5 (0.0 – 7.2) **	0.594

Notes: CI = confidence interval, TSAT = transferrin saturation.
* Odds ratio, with the 95% CI in parentheses.
† Baseline and protocol values are expressed as the mean±SD.
‡ (Protocol mean – Baseline mean), with the 95% CI in parentheses.
§ Baseline and protocol values are expressed as the geometric mean.
** Protocol geometric mean/Baseline geometric mean, with the 95% CI in parentheses.

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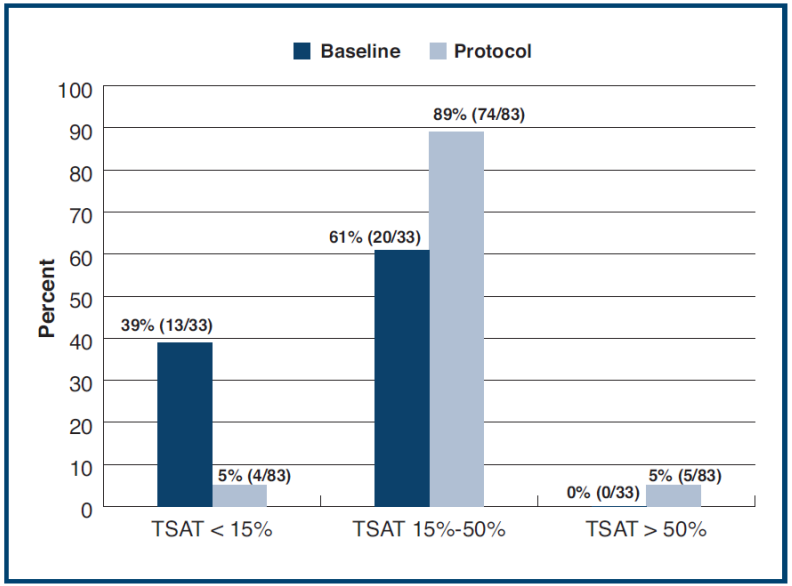
Results

Figure 2
TSAT Proportion



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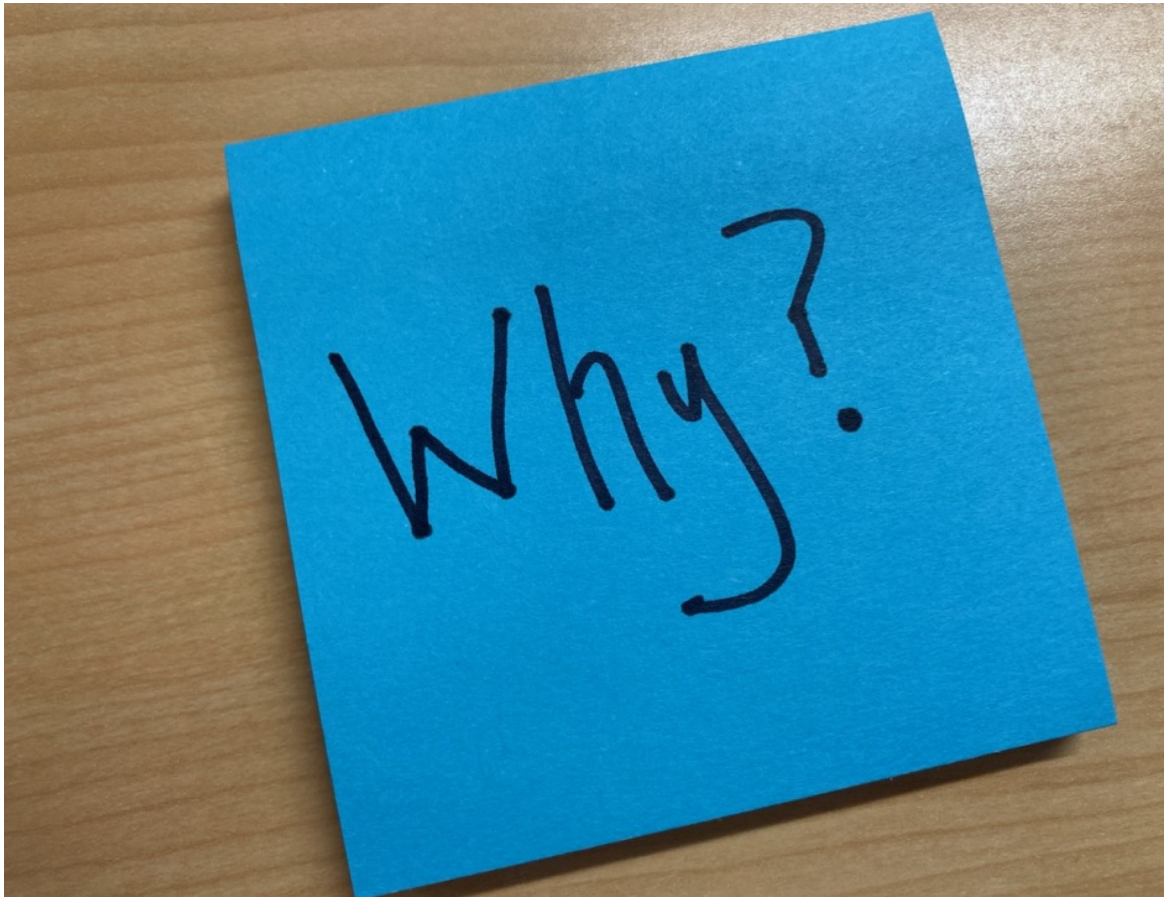
Results

- Significantly increased patients achieving HGB and TSAT target ranges

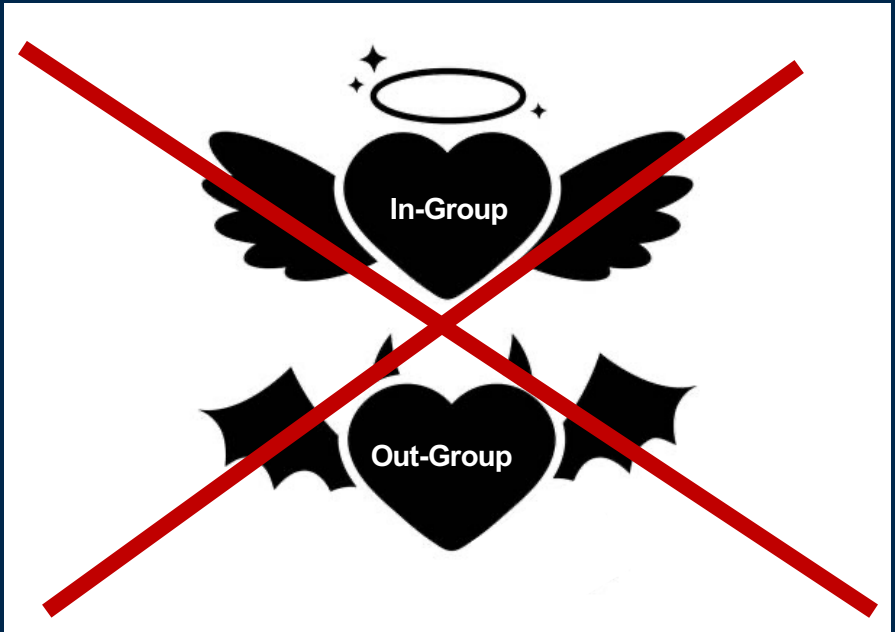
Limitations

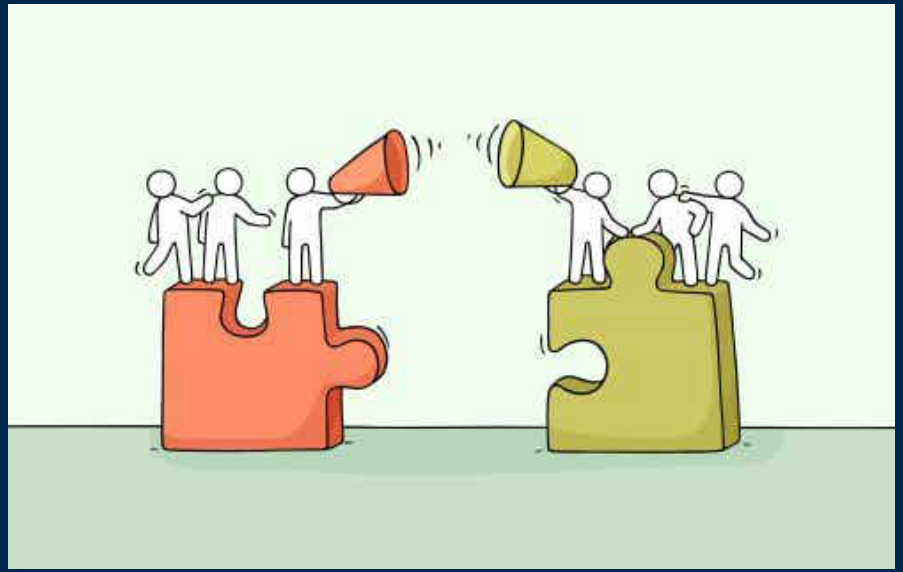
- Pediatric Dialysis Unit
- Census
- Length of treatment


Why?

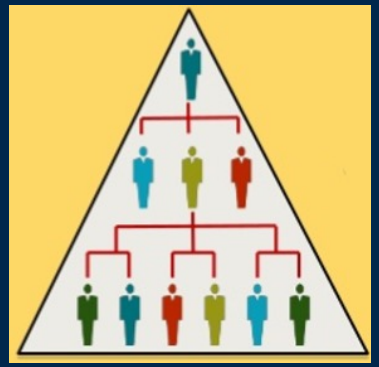
Barriers

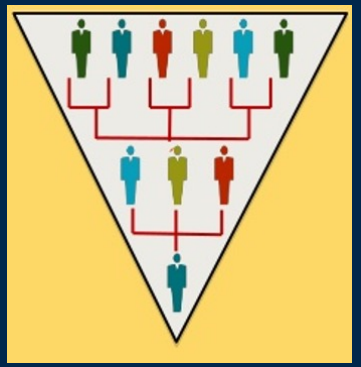
Barriers





Barriers





5 KEY DIMENSIONS OF EFFECTIVE TEAMS

Team leadership

a. Task coordination and development, team development, motivation, establishing a positive atmosphere

5 KEY DIMENSIONS OF EFFECTIVE TEAMS

Mutual performance monitoring

a. Sufficient understanding of the environment to enable monitoring of other team members to allow identification of lapses or task overload

5 KEY DIMENSIONS OF EFFECTIVE TEAMS

Backup behavior

a. Sufficient understanding of each other's tasks to enable supportive actions to be taken by team member, such as redistribution of workload or support

5 KEY DIMENSIONS OF EFFECTIVE TEAMS

Adaptability

a. Enables a team to respond to changes in the environment a change the plan for patient management

5 KEY DIMENSIONS OF EFFECTIVE TEAMS

Team Orientation

a. Willingness to take other's ideas and perspectives into account and a belief that the team's goals, which should be aligned with what is best for the patient, are more important than an individual's goals

HOW DO WE FOSTER THE TEAM?

1. Teach effective communication strategies
2. Train teams together
3. Train teams using simulation
4. Define inclusive teams
5. Create democratic teams
6. Support teamwork with protocols and procedures
7. Develop and organizational culture supporting healthcare teams

THANK YOU

Resources

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Castano-Jaramillo LM, Bos A, VanSetters J, Czarnecki L, Cai Y, Chand AQ. Implementation of a Nurse-Empowered Renal Anemia Protocol in Children. Nephrol Nurs J. 2020 May-Jun;47(3):253-267. PMID: 32639127.

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