

Implementing a Pediatric Emergency Department Car Seat Program at UMC

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BACKGROUND

According to the National Safety Council, "In 2021, 711 child occupants under age 13 died in traffic crashes; 226 were unrestrained."⁸ **A proper restraint will reduce the risk of fatality by 71%.** If a car seat had been used in these crashes, 160 of these children who died could have possibly survived the car crash.

In 2022, at the University Medical Center (UMC) Pediatric Emergency Department (ED), 550 pediatric patients were seen for motor vehicle crashes, and roughly 59% were reportedly unrestrained, meaning 325 pediatric patients could not access a car seat.

As a leader in our community, this project will allow us to provide a car seat, education, and resources to pediatric patients and their families at discharge, which will reduce pediatric injuries and fatalities. This specialized project is an extension to one of the largest and most successful car seat donation programs in the state. This unique collaboration will reflect the high-quality patient-oriented care that UMC provides, housing the only Level One Trauma Center in Nevada.

PURPOSE

This **performance improvement project** aims to provide car seats at no cost with the support of the Healthy Living Institute (HLI) for pediatric patients visiting the Pediatric ED who have been in a motor vehicle crash. Along with the seat replacement, the patient and family are provided additional resources and education and can follow up for a one-on-one car seat installation appointment with the HLI. This ensures a safe discharge.

METHODS

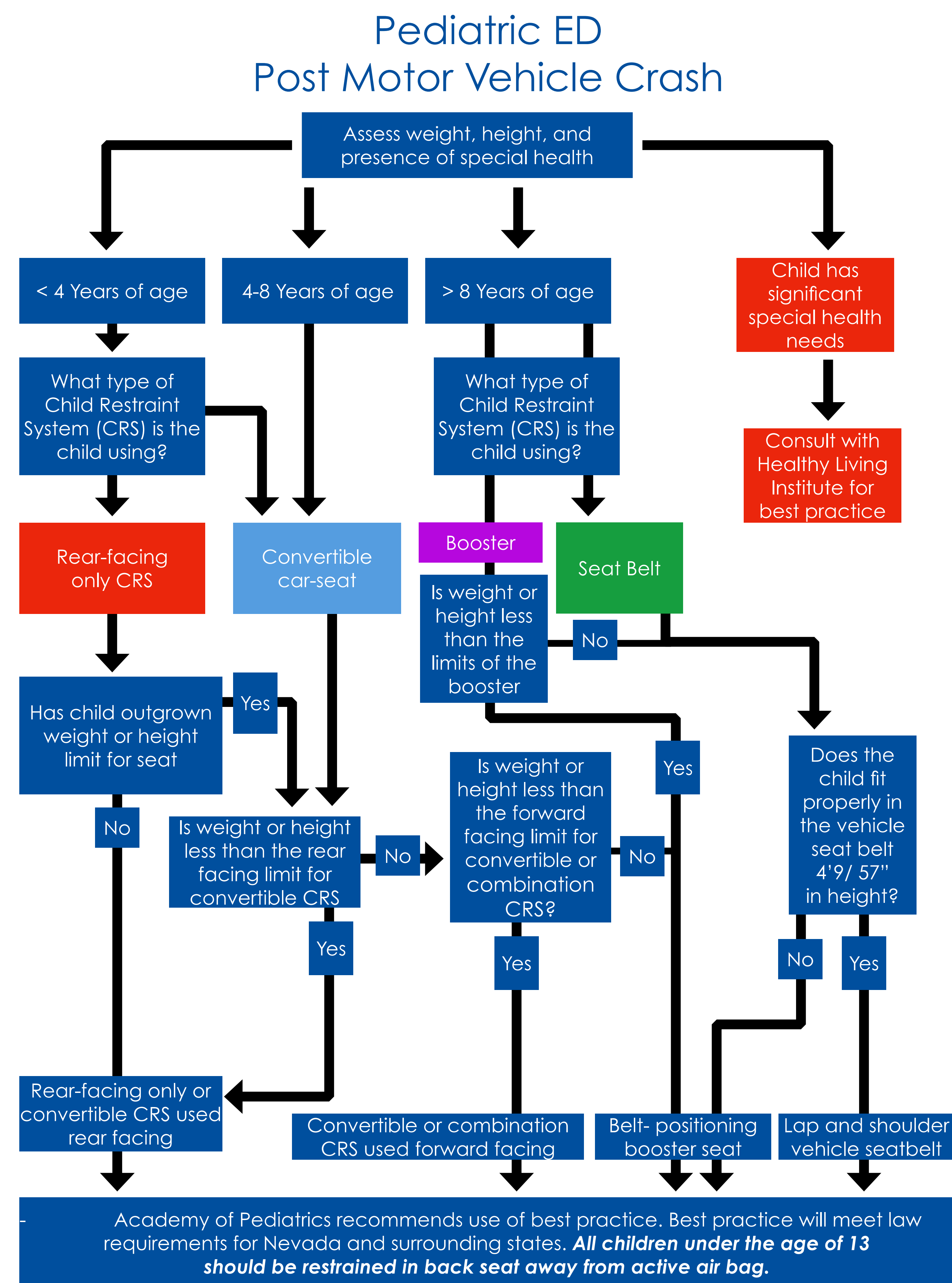
Using the **Plan, Do, Study, Act (PDSA) methodology**, a team consisting of two nurses from the Pediatric Emergency Department, a Clinical Nurse Specialist (CNS), a Child Life Specialist, Certified Child Passenger Safety Technicians (CPST) and nurses from the HLI the implementation of the Pediatric ED Car Seat Program was created. The distribution of car seats was simplified with the use of an algorithm designed by UMC CPST's. The population included in this performance improvement project were pediatric patients less than 57 inches involved in a motor vehicle crash.

P: Develop a process for providing car seats to pediatric patients who visit the UMC Children's Hospital PED who have been in a motor vehicle crash.

D: Have car seats provided to the PED from the HLI.

S: Report data of how many car seats are distributed by the PED monthly.

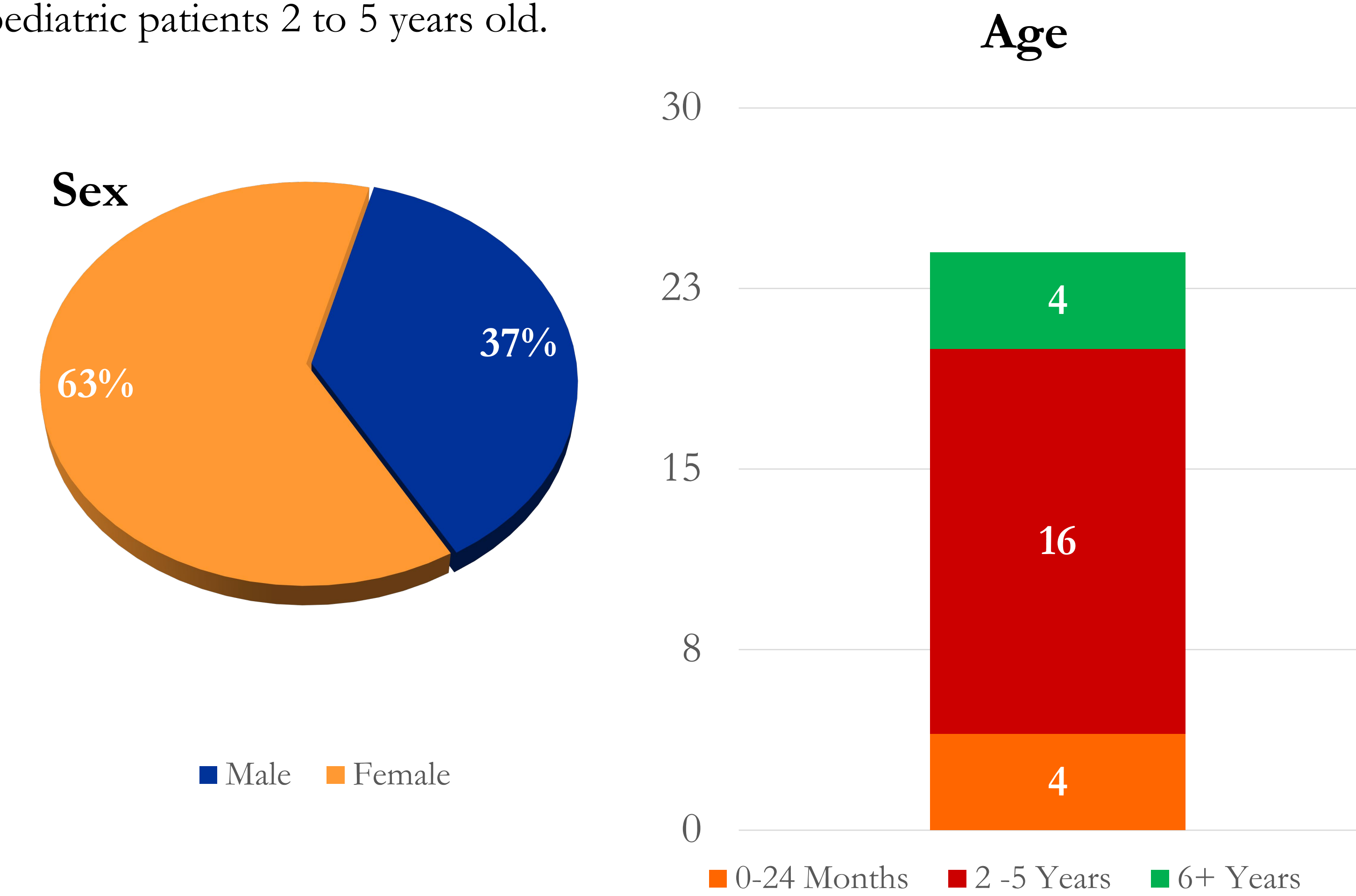
A: Implement the adopted algorithm.



RESULTS

After two PDSA cycles of change, the Pediatric ED team of two nurses, one which is also a CPST distributed a total of 24 car seats to pediatric patients before being discharged home following a motor vehicle crash.

Out of the 24 car seats distributed, 62% were to female pediatric patients and 37% were male pediatric patients. Roughly 67% of car seats distributed were for pediatric patients 2 to 5 years old.



CONCLUSIONS

The team has designed a process, including an algorithm for the distribution of car seats to patients less than 57 inches involved in a motor vehicle crash.

In-services completed by the Pediatric ED project leads were completed in September 2023.

The process was written into the Pediatric ED Standards of Care and published on the Hospital's Policy Portal in September 2023.

Car seats provided by the HLI are now readily available for distribution in the Pediatric ED.

Smartphrases for the Electronic Healthcare Record were created to refer caregivers to the HLI for additional resources. Smartphrases can be tracked and trended for data collection.

REFERENCES

- American Academy of Pediatrics. (2021). *Car seats: Information for families*. Retrieved April 2022 from <https://www.healthychildren.org/English/safety-prevention/on-the-go/Pages/Car-Safety-Seats-Information-for-Families.aspx>
- American Academy of Pediatrics. (2018). Policy statement—Child passenger safety. *Pediatrics*, 142(5), 788–793. Retrieved April 2022 from <https://doi.org/10.1542/peds.2018-2460> (Level VII)
- Center for Disease Control and Prevention (CDC). (2022). Child Passenger Safety: Get the Facts. Retrieved August 2023, from https://www.cdc.gov/transportationsafety/child_passenger_safety/cps-factsheet.html
- Durbin, D. R., & Hoffman, B. D. (2018). American Academy of Pediatrics policy statement: Child passenger safety. *Pediatrics*, 142(5), Article e20182460. Retrieved April 2022 from <https://doi.org/10.1542/peds.2018-2460> (Level VII)
- Kuska, T. C., & Zinfirillo, M. R. (2017). Child Passenger Safety: An Assessment of Emergency Nurses' Knowledge and Provision of Information in the Emergency Department. *Journal of emergency nursing*, 43(3), 239–245. <https://doi.org/10.1016/j.jen.2016.06.016>
- National Highway Traffic Safety Administration. (n.d.). Car seats and booster seats. Retrieved April 2022 from <https://www.nhtsa.gov/equipment/car-seats-and-booster-seats/view=full>
- National Safety Council. (2023). Occupant protection: Child restraint. Retrieved August 2023, from <https://injuryfacts.nsc.org/motor-vehicle/occupant-protection/child-restraint/child>
- Smola, C., Sorrentino, A., Shah, N., Nichols, M., & Monroe, K. (2020). Child passenger safety education in the emergency department: teen driving, car seats, booster seats, and more. *Injury epidemiology*, 7(Suppl 1), 26. <https://doi.org/10.1186/s41021-020-00291-5>

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