

Importance of Preparation: A Partnership Between Child Life and Radiology to Reduce Sedation, Increase Safety, and Improve Patient Experience

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Background

- Hospital leaders identified a need to reduce anesthesia use for radiology procedures, specifically MRI, to improve patient safety
- Certified Child Life Specialists (CCLS) are clinically trained in the developmental impact of illness and injury, focusing on improving patient and family care, satisfaction, and overall experience (ACLP, 2023)
- According to Rothman et al. (2016), patients who received procedural preparation by a CCLS had more success completing MRI scans, which resulted in a decreased use of general anesthesia
- Another study showed that children who were provided an informative MRI video for preparation had a high success rate completing an MRI without sedation (Waitayawinyu & Wankan, 2016)
- In 2019, the Kids Can program was created to provide outreach preparation via phone call and email to patients 12 and under scheduled for their first non-sedate MRI
- Kids Can initially began with one CCLS

Method

- Met with ordering providers to provide education on Kids Can program launch and role of child life
- Patients are referred to program based on age, complexity of MRI, developmental delay, and previous medical trauma
- CCLS reviews Kids Can referrals and MRI tech work list for potential outreach one week ahead of scan
- Outreach provides opportunity for CCLS to assess for developmental needs, previous medical experiences, and potential for program participation
- CCLS is present on day of MRI to continue to provide developmentally appropriate preparation and support

Materials

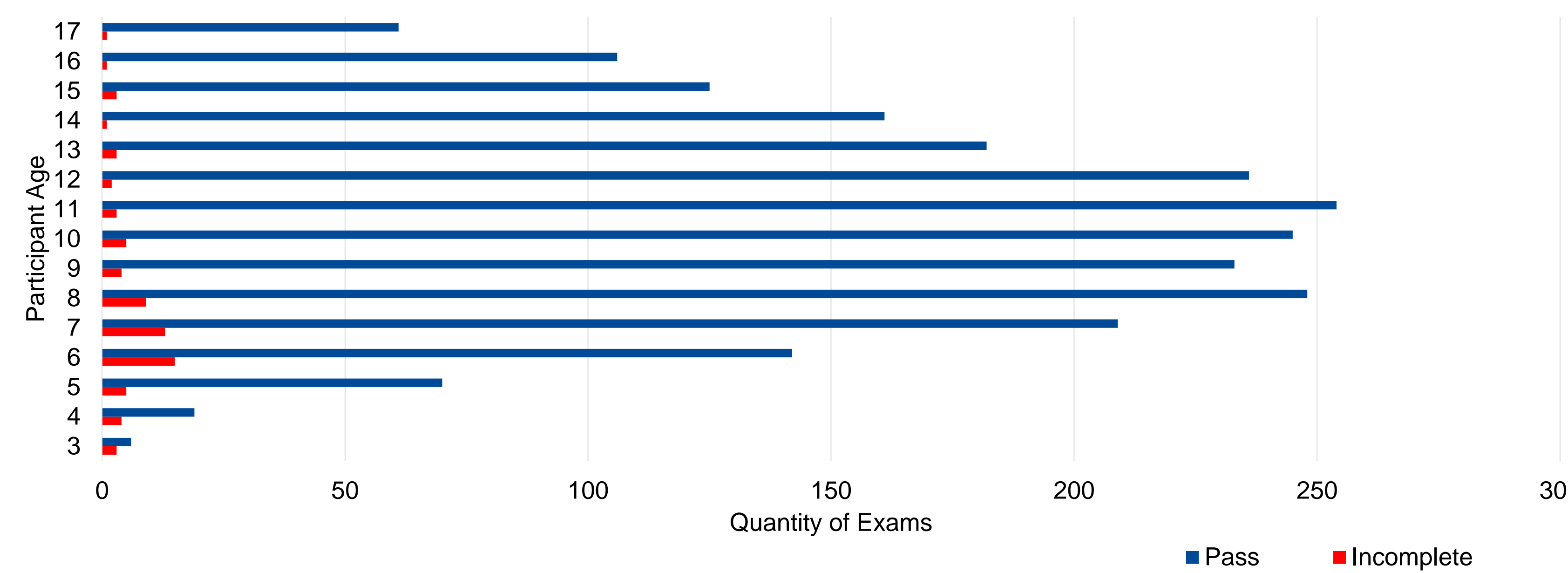
- Created education materials including a video and an MRI activity book focused on providing developmentally appropriate preparation and developing an individualized coping plan
- Scheduling decision tree implemented to assist schedulers with appropriate appointment type
- Implementation of full-size mock MRI scanner allowing for CCLS to engage in patient assessment and practice prior to scheduling appointment



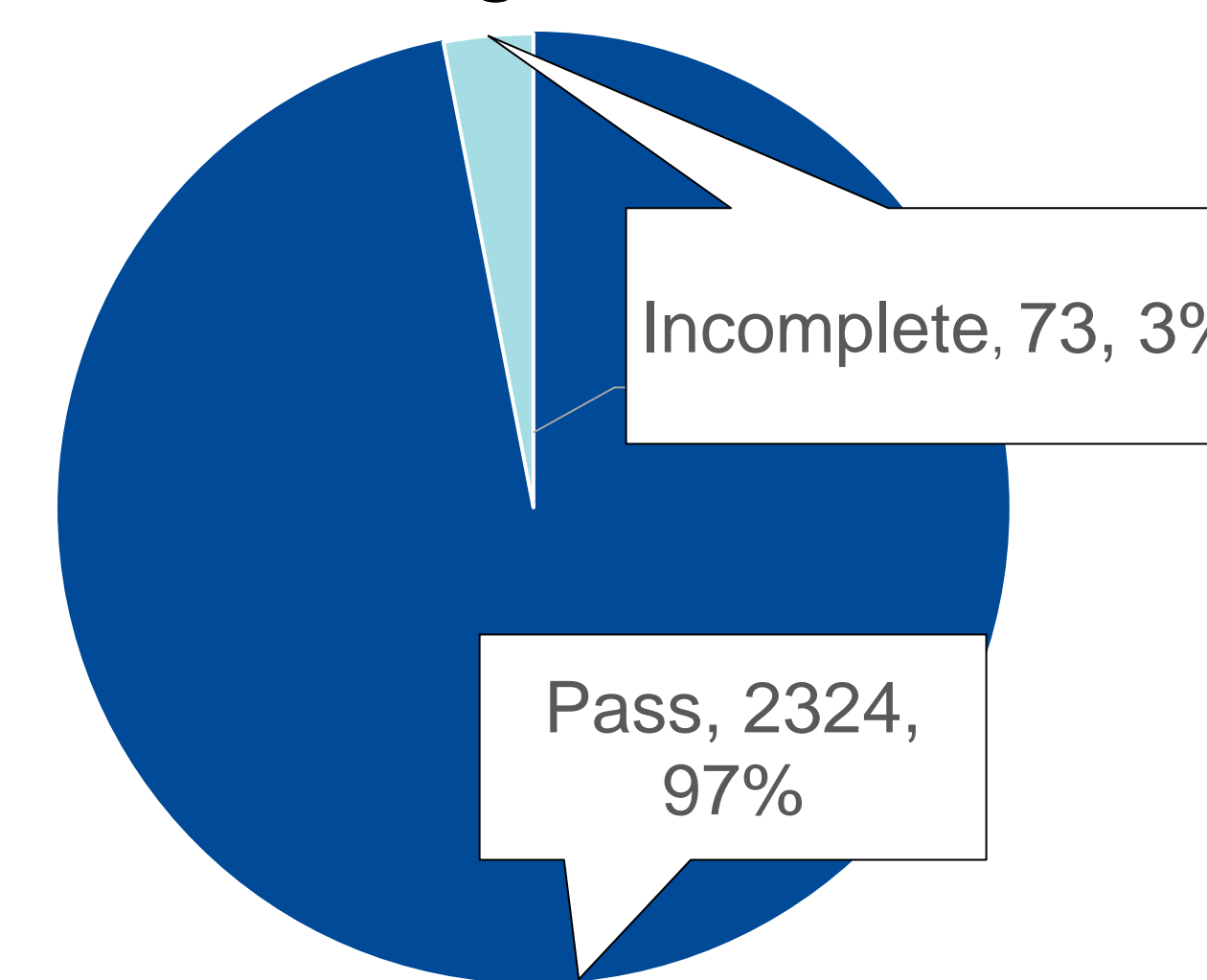
Scheduling Decision Tree Questions

- Who is calling to schedule the appointment for the patient?
 - Has your child successfully completed an MRI while awake?
 - Can the patient follow basic instructions from adults?
 - When instructed, would the patient be able to remain moderately still for 2-3 min increments for at least 30 minutes?
 - Does the patient have heightened sensitivity to loud noises or small spaces?
 - Does the patient have Autism, ADHD, or any other developmental delays?
- Scheduler: Based on previous responses, is the patient recommended for Kids Can?

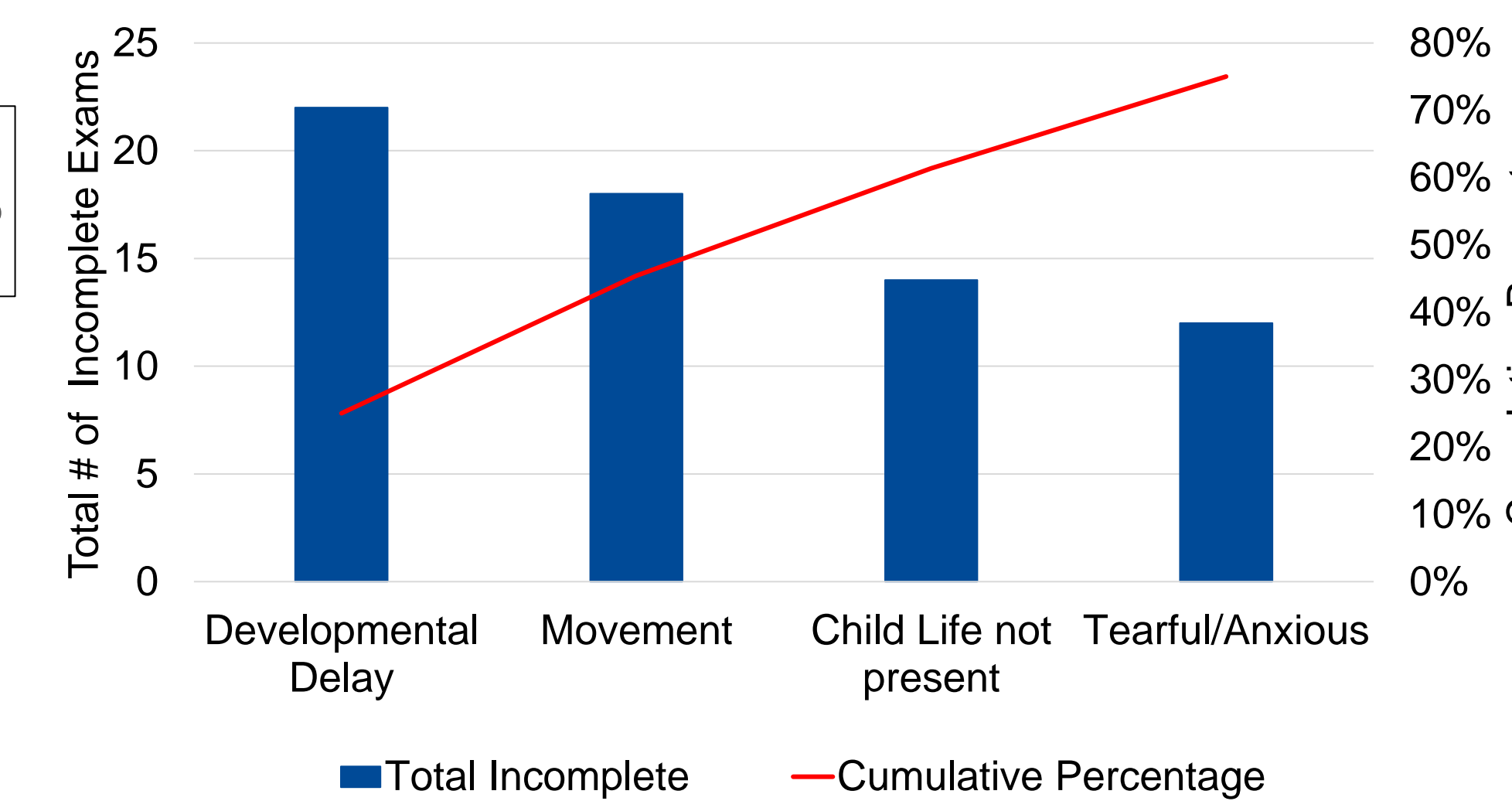
Pass Rates of Kids Can Program Participants by Age



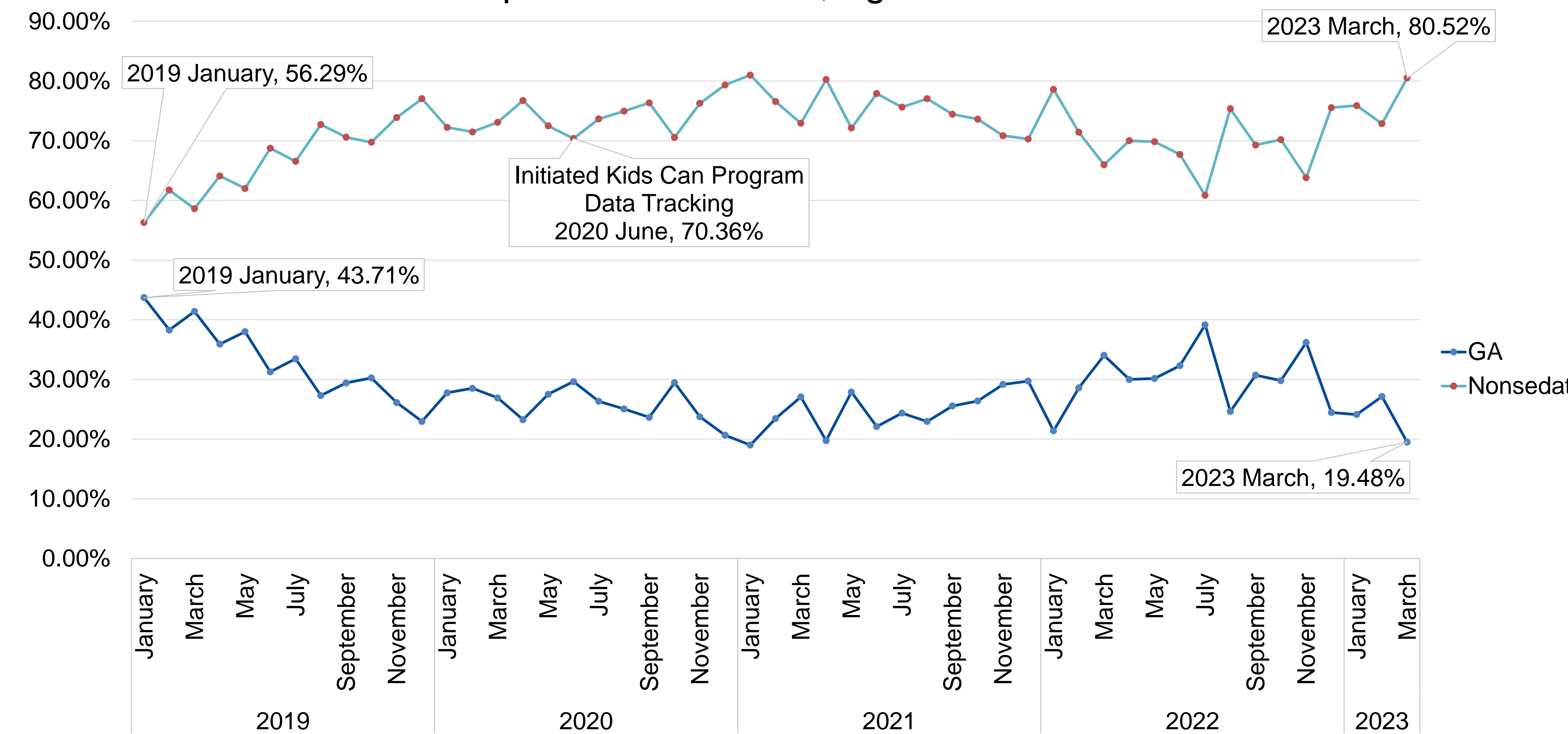
Kids Can Program Pass Rate



Top 4 Reasons for Incomplete Exams Pareto Chart



Outpatient MR Exams, Ages 5+ Years Old



Results

- Reduced sedation rate from 43.71% in 2019 to 19.48% in 2023
- Outpatient facility started providing only non-sedate scans due to program success
- Currently expanding outreach and child life services to other modalities including CT, nuclear medicine, fluoroscopy, ultrasound, and radiology anesthesia unit
- Program growth from 1 CCLS in 2019 to 7 fulltime CCLS and a program coordinator in 2023
- Decreased anesthesia cost by an average of \$2,550 per patient, a savings of \$2.04M/year with 800 patients
- Opportunity for more non-sedate patient appointments in schedule

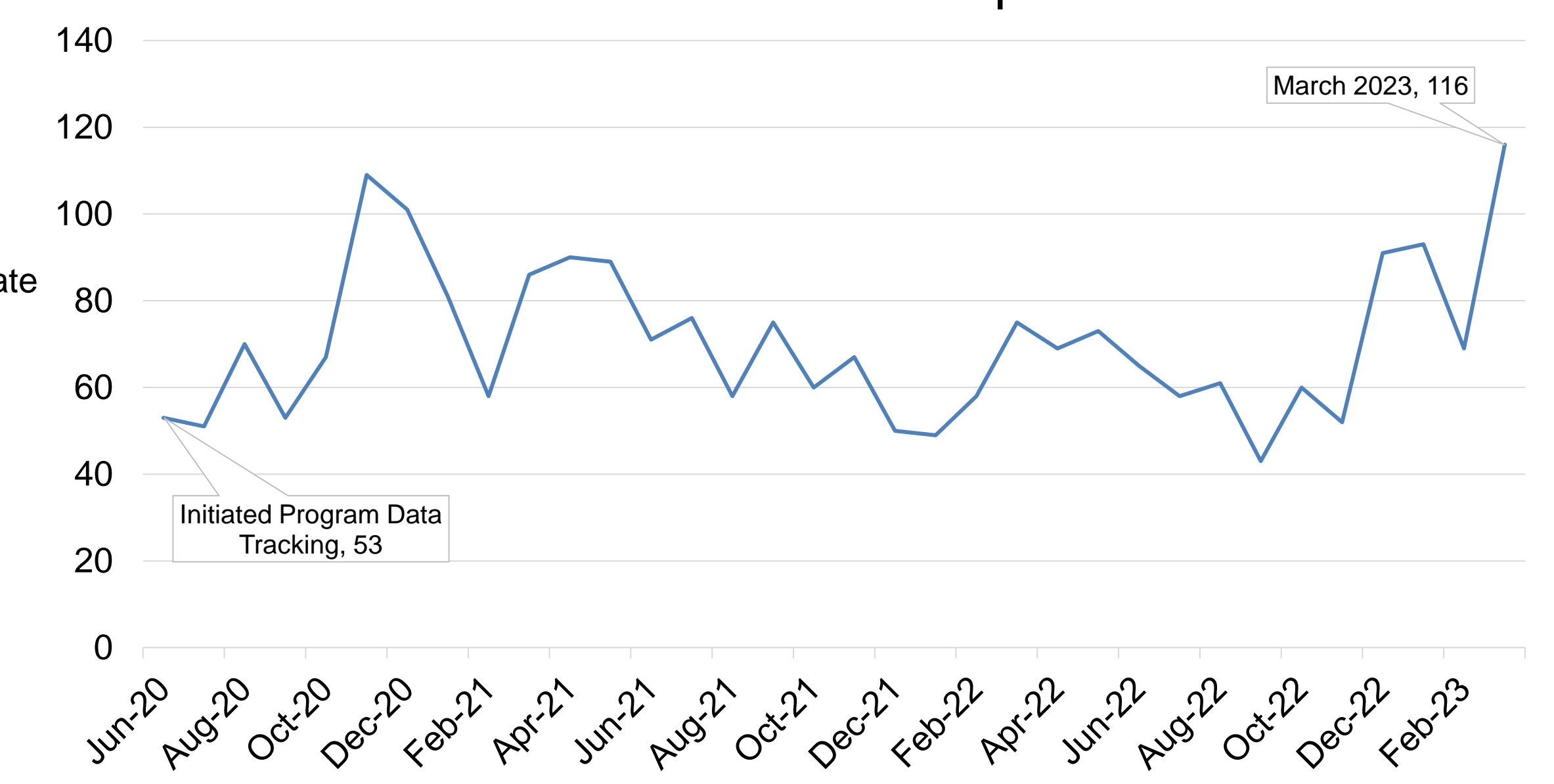
Conclusion

- Involvement of child life in MRI process reduces the need for general anesthesia, increases patient safety, decreases patient anxiety, and ultimately improves patient experience
- With the continual collaboration of radiology and child life, Children's Health strives to further reduce the use of general anesthesia for all imaging studies

Future Growth Opportunities

- Increase opportunity to provide further education regarding Kids Can program to ordering providers
- Child Life is developing a new process for CCLS assessment to occur prior to scheduling appointment
- Increase program enrollment of oncology patients scheduling frequent routine MRI exams

Total Kids Can Participants



Association of Child Life Professionals. (2023). *The Child Life Profession*. About Child Life. Retrieved from <https://www.childlife.org/the-child-life-profession>

Rothman, S., Gonen, A., Vodonos, A., Novack, V., & Shelef, I. (2016). Does preparation of children before MRI reduce the need for anesthesia? prospective randomized control trial. *Pediatric Radiology*, 46(11), 1599-1605. <https://doi.org/10.1007/s00247-016-3651-6>

Waitayawinyu, P., & Wankan, P. (2016). The success of MRI without sedations in 6-15 years old pediatric patients after watching MRI introductory video. *J Med Assoc Thai*, 99(5), 596-601.

About Children's Health

Children's Health is the eight-largest pediatric health care provider in the nation and the leading pediatric health care system in North Texas, providing a full spectrum of health care services – from daily wellness and primary care to specialty visits and critical care. Holding eight disease-specific care certifications from The Joint Commission, Children's Health has been consistently named one of the nation's top pediatric providers by U.S. News & World Report. The Children's Health system includes Children's Medical Center Dallas, as well as Children's Medical Center Plano, multiple specialty centers, physician services, and the Children's Medical Center Research Institute at UT Southwestern.