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EMR Templates for Age-Appropriate Well-Child Pediatric Visits

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Introduction to the problem

Pediatric well child visits are advised by the American Academy of Pediatrics (AAP) and Centers for Disease Control and Prevention (CDC) to ensure that children are being seen by a provider to perform a comprehensive assessment and to assess any developmental needs. During these visits, a provider can also educate about immunization schedules recommended by the AAP and CDC, offer anticipatory guidance for parents and care takers for the stage and development level of the child, and evaluate for any additional needs the child may have during development. EHR templates can be used to help facilitate well child visits and to ensure that all information being presented is up to date and easily accessible over the course of the child's care. By using an EHR template, providers can easily track and document the growth, developmental milestones, and health concerns throughout the many well-child visits. One suburban Midwest private, not-for-profit healthcare organization needed updated well-child check templates with current recommendations from the AAP and CDC to offer providers caring for the pediatric population a more efficient and effective care plan.

Literature Review

Pediatric well visits are recommended by the Centers for Disease Control and Prevention (CDC) and the American Academy of Pediatrics (AAP) for many reasons, including tracking growth and developmental milestones, openly discussing health concerns, providing proper anticipatory guidance, and getting scheduled vaccinations to prevent serious illnesses (CDC, 2022). The AAP recommends that patients, as soon as 1-3 days post-birth hospital discharge through 21 years of age, be seen regularly by their healthcare providers for wellness visits (Healthy Children, 2022). Bright Futures, a national health promotion and prevention initiative

supported by the AAP, allows healthcare providers to provide theory-based and evidence-driven guidance for preventative care screenings and wellness visits (Bright Futures, 2023). Bright Futures covers family wellness, development, feedings, dental health, safety, and what to expect at the visit. The CDC has also provided recommendations for vaccinations by age to ensure proper immunization against childhood diseases. Using the Bright Futures Guidelines and the CDC immunization recommendations to guide pediatric wellness visits ensures proper care and guidance for children of all ages.

Electronic Medical Records (EMR) are an example of health information technology (HIT) that allows providers to follow patients more closely and more accurately to have information readily available to ensure proper education and resources are provided to parents (Thaker et al., 2016). By using an EMR, providers can input information from the patient and have immediate feedback using an algorithm to ensure proper immunizations, anticipatory guidance, health screenings, and milestones are provided for the age and needs of the child (Thaker et al., 2016). This ensures proper coding and assures parents that information is tailored to the needs of their children. This DNP project aims to develop up to date EMR templates that include age-specific recommendations from the CDC and AAP/Bright Futures.

Several key points will ensure that the templates suit providers, parents, and pediatric patients in the clinic. The information gathered by the AAP/Bright Futures will ensure that the information provided is up-to-date and congruent with the age of the child being seen. These organizations will help to provide anticipatory guidance to parents and children. Knowing what to expect soon will keep parents and providers aware of any delays a child may experience for possible interventions if needed. CDC guidelines will be integrated into the templates to ensure patients are immunized according to schedule. HEDIS (Healthcare Effectiveness Data and

Information Set) will help set guidelines to provide care equally to all patients seen. EMR will guide providers to have easy-to-read and easy-to-follow information that will continue with the patients as they grow into adulthood. Additionally, techniques seen in QI projects, such as the "First Five," encourage continuity of care for pediatric patients to allow for continued monitoring of growth and development to allow providers to implement early intervention when needed.

The templates will provide information for children pulled from a variety of sources to allow for all aspects of care. Guidance, education, support, and resources will be available for children of all ages to ensure proper growth and development as they transition into adulthood.

Pediatrics is a specialized area with extensive information and education to be shared with the patient and the parents as the child grows and ages. New studies are constantly conducted to ensure best practices. The CDC, AAP, Bright Futures, HEDIS, and First Five work together to provide parents and providers with accurate, up-to-date pediatric information. By creating age based EMR templates, the providers at the clinic will have easy access to educate patients and parents on the proper immunization schedules, developmental milestones, and anticipatory guidance.

Methods

The purpose of this quality improvement project was to create age-based electronic medical record (EMR) templates for well-child visits for children ages 0 to 18. The goals for this project were for the templates to (a) follow the most up-to-date recommendations of the AAP and CDC, (b) include immunizations schedules, anticipatory guidance, and developmental milestones based on the child's age, (c) improve the quality of care for the patients and their families at this organization, and (d) assist the providers to provide proper, up to date education

to the child and parent to ensure they are hitting milestones and developmental goals. The DNP project took place from This healthcare organization has several locations in the state of Illinois. This project was piloted at one family practice location within this healthcare organization. There are two nurse practitioners who see pediatric patients at this location. Both nurse practitioners were given updated templates to use for their pediatric well child visits. They were both informed at that time that we would have follow up questions after the implementation to be able to evaluate the success and satisfaction of the updated templates. They were also informed that we would compare charts from the same time frame the year prior (2022) to assess the information gathered from and given to the patient during their visit. During the time of our implementation, the providers saw five pediatric patients for well child visits.

On April 28, 2023, the Institutional Review Board (IRB) of Southern Illinois University Edwardsville determined this to be a Quality Improvement Project and Not Human Subjects Research.

Evaluation

Two methods were used to evaluate the effectiveness of the updated templates. The first method was comparing charts from the updated templates to the templates in place before the DNP project implementation. We compared the information from previous templates to the current templates to assess if provider care and documentation is now up to date with current CDC and AAP recommendations for pediatric well-child visits. In performing a chart review, we chose patients with similar ages and visit types. Due to the limited number of pediatric well child visits, they did not exactly match up to age ranges but were within a close window.

The second method consisted of a questionnaire given to the providers that used the updated template to assess the usability and provider satisfaction with the updated templates. Based on their answers, we would be able to make any changes necessary and assess if the updated templates would be used in future practice. The questionnaire consisted of six questions. These questions were open-ended and allowed more detailed feedback of the updated templates.

The questions were as followed:

1. What did you like about the templates?
2. What would you change about the templates?
3. Were the templates easy to follow?
4. Was there anything you felt was missing from the templates?
5. Are you going to continue to use these templates for future well child visits?
6. Do you feel the templates were successful in providing the most up to date information?

Based on questionnaire feedback, providers were generally satisfied with the updated templates, but both providers agreed there was a limitation to the templates. The primary limitation of the implementation was that IT was unable to input the updated EHR templates to the charting system that is used by the providers at the facility. The templates provided therefore had to be hard copies which resulted in the nurse practitioners needing to resort to paper documentation, which was not their current practice and suboptimal. Another limitation included the limited number of pediatric patients this location encountered. During our implementation,

the healthcare organization set up a day at the facility dedicated to pediatric well-child visits and saw just five patients.

Feedback from the questionnaire included: “The templates provided up to date options to both use as reference and as a guide to the well child visits.” When asked, “What would you change about the templates?” one nurse practitioner suggested, “to guide the appointment even further, having the normal limit as a baseline, and alternative options as abnormal would be beneficial for providers who are not as familiar with the structure of the well child visit or the anticipated normal value.” The question, “Was there anything you felt was missing from the templates?” one provider responded, “More detail on the expected or anticipated norm would help to provide structure.” When asked, “Are you going to continue to use these templates for future well child visits?” one of the nurse practitioners responded, “I would if it was uploaded in our electronic medical records charting system.”

From the chart comparison, the charts from the summer of 2022 showed less information being given to the patients and less anticipatory guidance being shared. The updated 2023 charts that were reviewed offered more information for the patients and parents on recommendations from the CDC and AAP for each age group. Both sets of charts lacked the patient's vaccination records. However, the updated charts did provide recommended vaccinations based on the age of the child.

Impact on Practice

The direct impact on the practice was a newly revised and updated pediatric template that could be used immediately. However, due to the unfortunate circumstances of not being able to implement the updated templates to the charting system that is currently being used by the

practice, we are unaware of the usability of the templates currently. We are hopeful that IT will be able to use our updated templates and eventually add them to the charting system so they will be available for pediatric well child visits that will take place. Compared to the templates they were (and may currently still be using) all the information provided directly coincided with CDC and AAP recommendations on vaccinations, anticipatory guidance, and developmental milestones in the updated templates.

Conclusion

Pediatric well child visits are particularly important to monitor children's health, growth, development, immunization status, and to answer any questions parents may have about their children. The template created allows providers the assurance that the children they are caring for have the most up to date information provided to both the child and their parents. By using an EMR, the child's progress can be graphed over their lifespan to compare previous well child visits and see where more intervention would be used. The pediatric well child templates guide practitioners to meet the needs and goals of the children and parents they encounter.

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