Introduction

Immunizations represent one of the most significant public health achievements of the 20th century.1 Still, many severe illnesses and deaths in the United States can be attributed to vaccine-preventable diseases. Despite the availability of numerous vaccines approved for use across the age spectrum by the Food and Drug Administration, severe illnesses and deaths in the United States can be attributed to vaccine-preventable diseases. Despite the availability of vaccines, gaps persist in the area of immunizations. Supporting awareness of the currently recommended vaccines, ensuring recommended and appropriate use, and providing accurate information on vaccine safety and efficacy represents a critical unmet need and educational opportunity.

Design

PROTECT (Supporting AppRoiDrate Immunizations Across the Age SpanTrm) is a curriculum to improve clinician performance and patient health associated with immunizations. It includes a performance improvement CME (PICMCE) platform, with modules focused on childhood, adolescent, and high-risk adult immunizations. The PROTECT modules follow the AMA’s PI-CME 3-stage process:

- Stage A: clinicians assess their current practice patterns and performance
- Stage B: physicians participate in educational and quality improvement interventions to improve performance in specified areas
- Stage C: physicians reassess their performance

The modules are eligible for AMA PRA Category 1 Credit™ and maintenance of certification (MOC) part 4 credits (childhood and adolescent, American Board of Pediatrics and American Board of Family Medicine; adult, American Board of Internal Medicine and American Board of Preventive Medicine; Family Medicine) and point of care tools and resources including systems-based approaches and point of care access to immunization schedules and recommendations was addressed, point of care access to immunization schedules and recommendations was improved.

The overarching goal of the adolescent PI-CME module was to provide education, resources, and tools to help clinicians improve immunization rates in the adolescent patient population. The chart review/survey and analysis includes data for physicians who completed Stages A, B, and C between August 1, 2011 and June 30, 2014. The self-assessment survey also indicated a change in the delivery of recommended vaccines between Stage A and Stage C.

Stage B interventions consisted of a mix of media (CME-certified webinars, peer-to-peer dialup, and simulated patient-clinician videos) and tools to point of care resources including systems-based approaches to help address common barriers to improve immunization rates. These educational interventions align with the clinical gaps and learning objectives that serve as the framework for the overall initiative and focus on the issues and challenges relevant to the adolescent patient population.

Stage C chart review results indicated a significant improvement over Stage A for each of the adolescent performance measures, except HPV for females.

Outcomes

A total of 143 clinicians completed the adolescent PI-CME module. 94% MD, 6% DO; 96% ABP certified, and 97% indicating Pediatrics as their specialty. Results are based on data from 2867 patient charts in Stage A and 2878 charts in Stage C. The Stage B action plan shows that clinicians incorporated a range of systems-based strategies for improving immunization rates in their practice environments during this performance improvement activity.

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Stage B chart review results indicated a significant improvement over Stage A for each of the adolescent performance measures, except HPV for females.

The following responses on Stage C evaluation questions illustrate the impact of this PI-CME activity:

- “Although our clinic has always focused on the immunization status of our patients, this project enhanced our efforts. It was a team building experience that included screening at triage by our medical assistants and nurses, and improved communication with providers using an ‘immunization status sheet’ for every visit.”
- “I have learned we must communicate better to patients in regard to the influenza and HPV vaccines. We must also inform the parents that the myths with vaccines are inaccurate.”
- “It was surprising to find that our rates of vaccinations could increase so dramatically so fast with just personal recommendations.”

Conclusions

The PROTECT PI-CME MOC activity is directly applicable and clinically relevant for pediatric/adolescent practitioners. The outcomes associated with this module demonstrate the success that can follow from practice assessment. The following quote from a learner highlights the need for self-reflection: “I was initially skeptical about taking the online assessment and wasn’t sure what had to be completed for recertification for my boards. Yet I found this to be very useful and valuable both in increasing my knowledge for the recertification exam and providing a basis for improving immunization practices in my office. I have already recommended this to my partners who are embarking on their recertification process.”

Our results showed the value of implementing systems-based changes so critical toward improving the clinical care of patients. Nearly 80% of clinicians indicated that participation in this PI-CME activity enabled them to implement strategies to improve immunization rates. Through engagement of staff and the entire health care team, immunization barriers were identified and addressed, point of care access to immunization schedules and recommendations was improved, immunization documentation and reminder systems were improved, and patient/caregiver immunization education to address vaccine concerns was implemented. Furthermore, an unintended consequence of “team building” was noted by participants such as: “…this project enhanced our immunization efforts. It was a team building experience that included screening at triage by our medical assistants and nurses, and improved communication with providers using an ‘immunization status sheet’ for every visit.”