Pre-participation physicals: Education on supplements and nutrition
Lisa Lake, BSN, RN, DNP Student
Wellman Family Practice

Introduction
- Athletes are always looking to achieve an advantage over their opponents; high school (HS) athletes are no exception.
- These HS athletes want to emulate professional athletes, relating supplements to equal success, regardless of the associated risk.
- These supplements are easy to access, purchase, and use, making them appealing to high school students.¹
- No federal regulations, rigorous testing or screening for efficacy and safety.
- In 2006 it was estimated that more than 23% of HS athletes used supplements and has since risen to as high as 50% in 2012.² ³
- Athletes have unique nutritional needs that include sufficient caloric intake, adequate hydration and timing of meals and often have misconceptions or misinformation about these topics.⁴

Purpose
- The purpose of this quality improvement project is to develop a standardized protocol in which student athletes are educated during pre-participation physicals.
- Objectives:
  - Improve the process by which student athletes are educated on supplementation and nutritional needs during athletic events.
  - Development and implementation of a new protocol for how education is delivered during pre-participation physicals.
  - Increase nurse and nurse practitioner (NP) proficiency on the new guideline through ongoing evidence-based education on supplementation and nutrition.

Methods
- IRB approval was not required
- Setting: Wellman Family Practice (rural Iowa)
- Recipients of care: Student athletes grades 9-12
- Evidence-based quality improvement project
- Educational tools developed
- Pre-implementation survey
- Education
- RN and NP education
- Implementation
- Post-implementation survey
- Students educated during physicals
- Pre-physical survey about current use and knowledge
- Post survey to determine if education was delivered

Evaluation
- RN and NP felt more comfortable delivering education on supplements and nutritional needs for high school athletes after education was given.
- All 22 student athletes received education on supplementation and nutrition and felt it was applicable and valuable to them.
- After implementation the RN and NP strongly agreed that the standardized material was useful in helping deliver education to high school athletes.
- The RN at the clinic will continue this project and do random chart audits to ensure that the students are receiving the information.
- Barriers:
  - Limited time to educate patients
  - Small rural clinic that did limit number of pre-participation physicals

Outcomes
- 22 students: 14 males (M = 15.14 yrs), 8 females (M = 16.13 yrs)
- Top 3 sports for males: Football, baseball, basketball.
- Top 3 sports for females: Softball/volleyball (tie), track, cheerleading.
- None of the athletes self reported using steroids, creatine, or stimulants but report knowing someone who did.
- 28 physicals were performed at the clinic with 22 receiving information on nutrition and supplementation (79%).

Conclusions
- The implementation of this quality improvement project has changed the way the clinic delivers education to student athletes during pre-participation physicals.
- By developing, implementing, and evaluating a protocol for delivering standardized education for this population during pre-participation physicals will help educate these athletes to make better-informed decisions about the use of supplementation.
- The RN and NP were more comfortable with education of high school athletes during pre-participation physicals.

Practice Implications
- The implementation was successful at this clinic and can be implemented at other clinics where pre-participation physicals are provided.
- Increased education as a result of the process improvement it can increase patient knowledge, improve patient outcomes and potential adverse events related to poor nutrition and supplement use.

References

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