



Preventing and Recognizing Anorexia Athletica – For High School Coaches and Athletes

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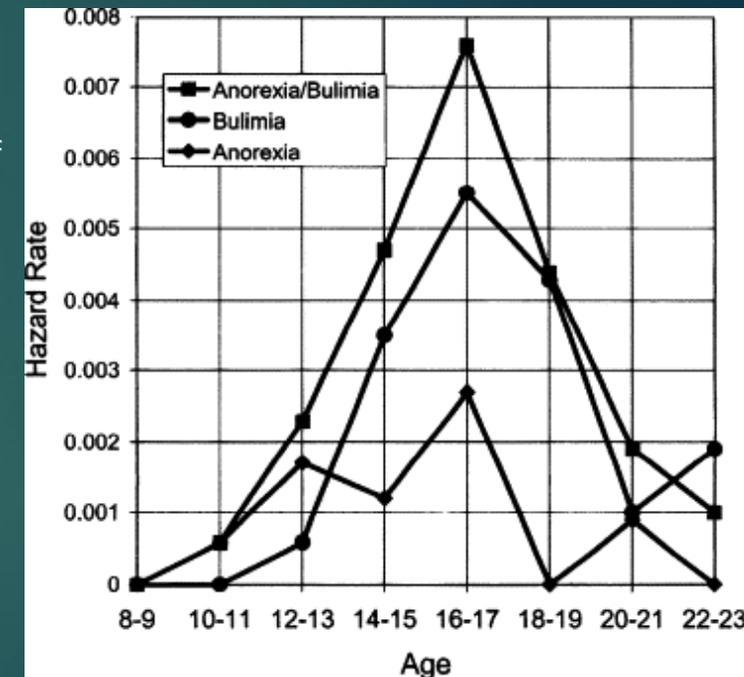
MAY/JUNE 2015 – ROTATION 2

THOMAS CHITTENDEN HEALTH CENTER – WILLISTON, VT

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2 – Problem Identification

- ▶ Research suggests that athletes have a higher incidence of eating disorders than the general population.
 - ▶ By DSM-IV-TR criteria, approximately 1% of the general population suffers from anorexia nervosa or bulimia nervosa
 - ▶ Depending on sport, incidence in athletes is much higher – near 30% incidence of disordered eating in endurance sports, 20% for ball game sports, and 17% for technical sports.
- ▶ High school and college athletes are most likely to be affected with 90% of new eating disorder diagnoses occurring in individuals under 25 years of age. Most new diagnoses occur in the middle high school years.
- ▶ Currently, coaches and athletes are peripherally aware of disordered eating but do not routinely receive education on sub-clinical eating disorders such as anorexia athletica.
- ▶ Coaches and athletes in VT public schools have pre-season requirements that currently include completing education on topics like concussions and sportsmanship. An opportunity exists to educate coaches and athletes on disordered eating if an appropriate vehicle can be developed.



3 – Public Health Cost

- ▶ Eating disorders that become severe enough may require residential style treatment, costing on average \$30,000/month
- ▶ Combined inpatient/outpatient care for a patient with an eating disorder averages between \$3,500 and \$6,000 per year
- ▶ Long term medical complications of anorexia athletica include hip fractures and atherosclerosis. Hip fracture repair secondary to osteoporosis (open reduction, internal fixation) \$26, 912. Patients with atherosclerosis cost on average \$436 more per month to keep healthy than patients without vascular disease.
- ▶ A high proportion, approximately 30%, of Chittenden County high school students participate in interscholastic athletics of some sort.



4a - Community Perspectives



- ▶ Thomas Chittenden Health Center serves primarily Chittenden County, VT
- ▶ Interviews conducted with individuals involved with high school athletics in Chittenden County
 - ▶ **Eric Barker** – Head Girls Varsity Soccer Coach, Head Nordic Ski Coach – Mt. Mansfield Union HS (MMU)
 - ▶ **Joe Bekaert** – Associate XC/Track and Field Coach – MMU. Physical therapy student – UVM
 - ▶ **Scott Bliss** – Head Girls XC Coach, Head Boys Basketball Coach, Associate Track and Field Coach – Champlain Valley Union HS
 - ▶ **Laurel Cole** – Former MMU 3 season student-athlete, current Exercise Physiology student – UVM
 - ▶ **Emma Hartswick** – Former MMU 3 season student-athlete, current pre-medical student – Dartmouth
 - ▶ **David Marlow** – Athletic Director – MMU
 - ▶ **Providers and Staff and Thomas Chittenden Health Center**, Williston, VT
 - ▶ H. Daniel Donnelly, MD – Jeffrey Haddock, MD – Adriane Trout, MD – Jena Medina, FNP – Patricia Towle, ANP

4b – Community Perspectives

- ▶ Outcomes of interviews – it was generally agreed that...
- ▶ A high proportion (30%+) of Chittenden County high school students participate in some form of interscholastic sport
- ▶ Coaches and administrators would like more education on disordered eating in athletes. Coaches all agreed that this is a very important issue facing athletes but they are unsure of what to look for, how to intervene, or where to go for more information.
- ▶ Pre-season provides a logical time to provide education about eating disorders. However, coaches and athletes already have a significant amount of information they are required to review (eg concussion certification courses) before each season. Any additional information would need to be entertaining, succinct, and directly relevant.
- ▶ An information delivery vehicle that could be widely accessed (such as web-based) and could be viewed by athletes and coaches together (if desired) is preferable.

5- Intervention

- ▶ Based on needs/preferences of coaches and athletic administrators, a 10 minute YouTube video was developed that addresses...
 - ▶ A functional definition of anorexia athletica in the context of high school athletics
 - ▶ Incidence/prevalence of anorexia athletica among sports teams
 - ▶ Best prevention methods, as identified by research
 - ▶ Possible intervention strategies for coaches and athletes
 - ▶ Where to go for more help or more information
- ▶ The video was uploaded to YouTube as a pilot project and the link provided to the aforementioned coaches/administrators as well as most high school athletic directors in Chittenden County. Feedback was welcomed and contact information provided for possible future follow up and improvement.
 - ▶ Video link : <https://www.youtube.com/watch?v=zcQodQuafqI>

6 – Results and response

- ▶ No new sports seasons began during this rotation but several athletic directors indicated plans to include the video in pre-season materials for students and athletes in the fall of 2015
- ▶ Copies provided the interviewed community stakeholders garnered positive initial feedback with several suggestions for future improvement...
 - ▶ Online nature and ease of access appreciated
 - ▶ General depth of information seemed appropriate to most. Some wished for more guidance on intervention strategies.
 - ▶ Short length appreciated in the context of multiple other pre-season requirements for coaches
 - ▶ More emphasis that this is an issue in both males and females
 - ▶ General “tone” felt to be positive
- More responses will be available around November 2015 and improvements to the video will be implemented at that time.

7 – Evaluation of effectiveness and limitations

- ▶ **Evaluating effectiveness**: Effectiveness could most readily be evaluated either by re-interviewing or surveying coaches and administrators after implementation of the video in Fall 2015. Questions should address – what schools and teams perceived the baseline culture surrounding eating disorders to be, baseline knowledge about anorexia athletica, how the video was used both at a school and team level, whether coaches, athletes or both together watched the video, whether any follow up work was done by teams after viewing the video (ie did they go to additional resources), did any team policies/attitudes/practices change
- ▶ **Limitations of video**:
 - ▶ Implementation ultimately up to schools and coaches
 - ▶ A one-time intervention, culture requires a longer time period to develop
 - ▶ Eating disorders themselves are difficult to study
 - ▶ Online/video nature makes dissemination easy but may not be engaging for all audiences

8 – Recommendations for future intervention

- ▶ Determine effectiveness of video at pilot Chittenden County high schools. Make adjustments as needed based on feedback.
- ▶ Select other Vermont high schools with similar demographics to pilot schools and evaluate baseline knowledge of eating disorders. Implement video and re-evaluate after trial season.
- ▶ Consider using video in a middle school (grades 5-8) setting. Research suggests that early intervention around ages 10-12 is effective in reducing risk of developing eating disorders.
- ▶ Determining true incidence of disordered eating among VT high school athletes for comparison against national level data would be challenging but would be particularly helpful in evaluating effectiveness of intervention.

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