

Vertical integration of nutrition at BUSM

Background

- Most common deaths in the United States are preventable and related to nutrition
- *Healthy People 2010* and the US Preventive Services Task Force recommend that physicians provide nutritional assessment and counseling to their patients
- Physicians recognize deficiencies in nutrition knowledge and lack of confidence in providing effective dietary counseling
- Medical school students should receive at least 25 hours of nutrition education as part of the standard medical curriculum (NRC, 1985; AMA 1996)

Surveys

1) A nutrition survey conducted in 2005 by Tiffany Ainsworth, B.S., M.A. & Rebecca Grochow, B.S., M.S in four medical schools (n=404), including data from BUSM (n=119), showed that:

- Most students at BUSM (92%) reported 20 hrs/y or less of nutrition education;
- Most schools had a recognizable nutrition course or sections except for BUSM;
- Medical students perceive to have some exposure outside of a nutrition course/section;
- Only 17% of students at BUSM felt well prepared to counsel in nutrition.

2) Data collected from the third year core conference in pediatric obesity (n=77) shows that:

- Students mean \pm SD scores for assessment of obesity were $71.9 \pm 13.9\%$, range 36-94%
- 10% of students had scores at or below 50% for this obesity test
- Scores for treatment of obesity were not included given the very low student response rate

Objectives

- To include nutrition at each year of training from pre-clerkship to clerkship years focusing on knowledge, attitude, and skills
- To enhance nutrition-related clinical skills through interactions with faculty and medical students knowledgeable in nutrition and/or committed to nutrition
- To pursue these efforts in post-graduate training

Methods

- at the request of Dr. Lenders, a Nutrition group was created by the Associated Dean ad Interim, Dr. Rogers, to vertically integrate nutrition in the medical school curriculum
- Assessment of the curriculum
- Establish a list of objectives/competencies
- Medical students involved in process evaluation, material development, and sustainability
- Collaboration with the school of public health
- Collaboration with other medical schools and societies

Accomplishments

1) At the medical school

- List of objectives/competencies available for 1st and 2nd year (Lenders, Apovian, Siegel)
- Pediatric obesity module - end of 1st year – 2008 (Students: Rao, Swonger, Humayan)
- Interactive nutrition assessment module - end of 2nd year – 2009 (Students: Suja and Rao)
- Case on fat soluble vitamins for BOD – 2nd year - 2008 (Student: S. Sohini)
- Physical activity tool - 2008 – to be integrated in a PA module (Student: Nawal Momami)
- Core conference on pediatric obesity for 3rd year – presently held for the rest of this year
- 4th year elective in advanced nutrition

- Presentations at AAP meetings, ASN meetings, sub-Committee on Nutrition Education at Harvard, four-schools nutrition education meeting at Harvard, BONRC, and McCahan's Education day
- 2) By the medical students
- Humayan N, Swonger J, and Rao G completed a module for BUSPH and BUSM
 - Sohini S completed a case on fat soluble vitamins for BOD
 - Fast M. was a task force member and is a co-author of an evidence based review of lipid screening for a urban pediatric safety net ambulatory center (2009)
 - Monami N. reviewed data on physical activity presented at the *Initiative on Obesity*, MCAAP
 - Rao G. was the recipient of the Clinical Nutrition Internship program from ASN (2008-9); a co-author on a chapter on The Community as a Resource to Support Positive Nutrition and Physical Activity Behaviors in Youth in our obesity guide (2006); and, was awarded the Masters Level Honorable Mention by Scientific Review Committee for her research presentation of a nutrition education intervention in the community (2004).
- 3) By Dr. Lenders
- associate of the *Subcommittee on Nutrition Education*, Harvard Medical School (2003-pres); member of the *Sub-Committee of Professional Nutrition Education (CPNE)* (2008-pres), American Society of Clinical Nutrition (ASN); and, member of the *Practice Analysis Task Force (PATF)*, Physician Certification Program in Obesity Medicine (2008-pres), The Obesity Society (TOS);
 - recipient of the Physician Nutrition Specialist award from ASN (2006-8) and the Medical Education Intervention award from the New Balance foundation (2004-pres); and,
 - co-editor of a clinical guide on obesity which received an outstanding review in JAMA (2007)

Short term plans

- Nutrition group meeting including faculty and students
 - Agenda:
 - review objectives/competencies for years 1 and 2;
 - review the grid for the integration of nutrition in the curriculum;
 - review material available;
 - discuss about material on the web;
 - identify priorities.
 - Start list of faculty, students, and residents for this academic year 2008-2009:
 - Associate Dean of Education: Levine
 - Physicians: Drs. Apovian, Harvey, Lamorte, Lowe, Safer, and Siegel
 - Psychologist: Dr. Marino
 - Dietician: Oliver
 - Resident: Dr. Grochow
 - Students: Rao (4th y), Mitchell (1st yr), Phoebe (MA, Behavior medicine 2010)
- Complete the interactive module on nutrition assessment
- List objectives/competencies for 3rd and 4th year
- Review appropriate modules from the web to include in 3rd and 4th year

Longer term plans

- Material for the first two years of medical school: nutrition clips in biochemistry; module on micronutrient deficiencies resulting from weight loss surgery; interactive module on physical activity; module preparatory for USMLE questions on nutrition
- Material for BOD: cases (CF case, DM case, cancer case)
- Tutorial for IP: weight management counseling (2 small group seminars)
- Write a curriculum for medical students – compare with that for family residents (AAFP, 2007)
- Web page on physician education at BUSM
- Request the creation of a Physician Education core at BONRC