



Milken Institute School  
of Public Health  

---

THE GEORGE WASHINGTON UNIVERSITY

Sumner M. Redstone  
Global Center for  
Prevention & Wellness

Curating the Obesity Care Competencies

# FINAL REPORT 2019



*A product of the Strategies to Overcome & Prevent (STOP) Obesity Alliance at the  
Sumner M. Redstone Global Center for Prevention & Wellness*

✉ [obesity@gwu.edu](mailto:obesity@gwu.edu)  
➡ [stop.publichealth.gwu.edu](http://stop.publichealth.gwu.edu)

📍 950 New Hampshire Avenue NW  
Washington, DC 20052

Review of Progress for 2019 .....	4
Survey of Accredited Training Programs .....	7
Curricular Case Studies .....	8
Case Study Insights .....	30
Catalogue of Curricular Resources .....	32
Future Needs & Suggested Priorities .....	34

## Acronyms / abbreviations

STOP	Strategies to Overcome & Prevention Obesity Alliance
PTE	provider training and education
OSCE	objectively-structured clinical examination

A link to the PDF-version of the Competencies is here:

[\*Provider Competencies for the Prevention & Management of Obesity\*](#)

A link to the Competencies resource page is here:

<https://www.obesitycompetencies.gwu.edu>

INSTITUTIONAL APPROVAL. The George Washington University's IRB determined this research to be exempt from further review under DHHS regulation, category 2.

PROJECT FUNDING. Funding for this phase of the project was provided by an independent medical education grant from Novo Nordisk.

## EXECUTIVE SUMMARY

Despite the high prevalence of obesity among Americans, few health professionals receive [adequate training](#) in how to deliver effective care for people with obesity. Core concepts related to obesity are underrepresented on [licensing exams](#). While most educational institutions recognize the importance of improved provider training and education around chronic disease, fewer have integrated obesity-specific knowledge and skills into their curricula.

In recent years, the Strategies to Overcome and Prevent (STOP) Obesity Alliance and like-minded organizations have intensified efforts to close this obesity training gap. In 2017, more than a dozen health professions collaborated to develop and disseminate the [Provider Competencies for the Prevention and Management of Obesity](#) (“the Competencies”), the first-ever interprofessional obesity care competencies designed to equip frontline providers with a common set of knowledge, skills, and attitudes essential for optimal care of clients with obesity. In 2018, STOP interviewed and convened key stakeholders from each profession to identify and prioritize strategies for integrating competency-based training and education on obesity into existing curricula, continuing education, and licensing exams.

In 2019, STOP aimed to address curricular resource gaps that could hinder uptake of the Competencies. Key components of STOP’s 2019 efforts included identification and development of competency-aligned curricular materials and tools that can support organizational efforts to bolster provider training and education on obesity.

**Survey of Health Professional Training Programs:** Prior studies have identified gaps in the curricula of medical schools and residency programs, but less is known about how obesity is addressed in the formative training of non-physician providers. We conducted a nationwide curricular survey to assess how obesity is currently addressed in the pre-licensure training of various health professions that care for people with obesity. Programs that responded to the survey were most likely to address competencies related to core obesity knowledge (e.g. epidemiology of obesity) and least likely to address skills for interprofessional collaboration in obesity care. [LEARN MORE >>](#)

**Curricular Case Studies:** Msny stakeholders indicated that training programs would benefit from examples of how provider training and education on obesity can be integrated in prelicensure curricula. We developed an interprofessional curricular case series that showcases real-world obesity competency integration strategies. Each case study highlights a program or institution that has incorporated one or more of the Competencies

in its efforts to equip students, trainees, and/or practicing health professionals with the skills and knowledge needed to care competently and compassionately for persons with obesity. [LEARN MORE >>](#)

**Catalogue of Curricular Resources:** During our formative research, key stakeholders identified implementation toolkits with curricular frameworks and materials as resources that would most improve their profession's ability to adopt the Competencies. To address this need, we created a database of Competency-aligned curricular materials, studies, and other resources that can be used to improve health professionals' competence in caring for persons with obesity. [LEARN MORE >>](#)

The primary end users for the Competencies, the resource database, and the curricular case studies include educators, administrators, health professionals, policymakers, and other entities directly involved in the delivery or oversight of pre-licensure training for health professionals that care for persons with obesity. An important secondary target includes organizations and systems responsible for designing or delivering professional development and/or continuing education for current health professionals.

We hope that you find this report and related content useful in your efforts to improve provider training and education on obesity. We encourage you to share these resources with your colleagues and to reach out to the STOP Team ([obesity@gwu.edu](mailto:obesity@gwu.edu)) with questions, concerns, or comments. Constructive feedback that enhances our efforts to develop and promote high-quality, evidence-based curricular resources—or [submission of materials](#) for consideration—is welcome and appreciated.

*William Dietz, MD, PhD*

Director, STOP Obesity Alliance  
Chair, Redstone Center

## Background

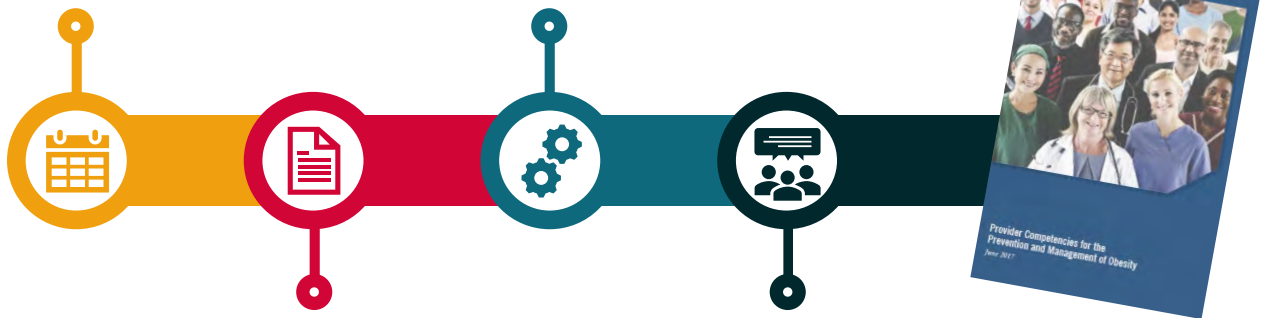
The U.S. has been facing a mounting obesity epidemic for over a generation, but the health care system has struggled to keep up. Few health professionals receive **adequate training** in how to deliver effective care for people with obesity. While innovative schools and training programs in some disciplines have prioritized obesity education, there have been no attempts to standardize the minimum level of obesity-related education and training that health professionals who treat obesity should receive. Many educational institutions recognize the importance of improved provider training and education around chronic disease, but many have failed to integrate obesity-specific knowledge and skills into their curricula.

## History of the Obesity Care Competencies

---

**2013:** The Bipartisan Policy Center, Alliance for a Healthier Generation, and American College of Sports Medicine sponsored a full-day public forum to explore innovations, opportunities, and barriers related to improving medical education and training on nutrition and physical activity.

**2015:** Members of an Innovation Collaborative (ICSSPMO) associated with the Roundtable on Obesity Solutions at the National Academy of Medicine published a paper highlighting the need for integrated approaches to obesity prevention and management.



**2014:** A white paper summarizing the 2013 forum established that a major barrier to closing the obesity training gap was lack of clarity on what exactly should be taught. The authors included development of a standard nutrition and physical activity curriculum among their key recommendations for action.

**2016:** The ICSSPMO Provider Training and Education Workgroup convened more than 20 leading health organizations representing a dozen health professions to establish the core competencies needed to prevent, address, and treat obesity across professions.

In 2015, the Bipartisan Policy Center, American College of Sports Medicine (ACSM), Alliance for a Healthier Generation (Healthier Generation), and representatives from the Roundtable on Obesity Solutions of Institute of Medicine (IOM, now the National Academy of Medicine [NAM]) collaborated to ensure that medical students, physicians, nurses, and other health professionals are equipped with the basic knowledge and skills necessary to deliver effective obesity prevention and treatment services. Their work focused on three recommendations for change:

- 1) developing and implementing core competencies to address, treat, and prevent obesity across health professions;
- 2) improving reimbursement policy to support health services that target lifestyle factors such as nutrition and physical activity; and
- 3) recognizing and rewarding innovation to drive continued funding and administrative support for reform efforts already underway.

To begin the process of implementing their first goal, the Provider Training and Education (PTE) Workgroup of the Integrated Clinical and Social Systems for the Prevention and Management of Obesity Innovation Collaborative (ICSSPMO) was developed as an *ad hoc* activity associated with the Roundtable on Obesity Solutions at the National Academies of Sciences, Engineering, and Medicine (the National Academies). Known as the PTE Workgroup, the group was made up of more than twenty leading health organizations representing fourteen health professions.

In 2017, the PTE Workgroup developed the [Provider Competencies for the Prevention & Management of Obesity](#) ("the Competencies"), a set of core competencies integral to the care of persons with obesity. These Competencies were developed to provide the many types of health professionals engaged in obesity prevention and management with a common set of core knowledge and skills essential for optimal obesity care that can be integrated into existing educational curricula, training programs, and care delivery practices. The Competencies establish a working knowledge of obesity and are best used together. Because the depth of knowledge or skill for a given competency will vary based on specialty and scope of training, organizations are expected to adapt the Competencies to the needs of their profession.

A website was developed to further disseminate the newly-published competencies and begin showcasing curricular resources and model programs, such as the winners of the Innovation Awards for Health Care Provider Training and Education. In 2018, the focus shifted to identification of strategies for integrating the Competencies into the curricula of health professional training programs. The STOP Obesity Alliance interviewed key

stakeholders to assess the processes by which each profession might adopt and adapt the Competencies for integration into their training accredited programs. This formative research provided insights into how the Competencies are likely to be implemented and will inform efforts to track changes in uptake over time. In September 2018, STOP convened members of the original PTE workgroup to clarify profession-specific training needs and determine profession-specific training requirements and related material needs.

In 2019, the STOP Obesity Alliance was awarded an independent medical education grant from Novo Nordisk to support the uptake of the Competencies. The primary goal of this phase was to build out the existing website with a curated collection of promising curricular materials and tools that support organizational efforts to bolster provider training and education. Primary objectives from this phase of the project are summarized below.

## Project Objectives

---

Monitor efforts to boost visibility of the Competencies through reference in published materials, conference presentations, social media, or member communications



Produce series of curricular case studies to showcase real-world competency integration strategies and inspire educators in each profession to prioritize obesity education across the continuum of training

Identify, publish, and disseminate competency-aligned curricular materials, studies, or other resources that support integration of the Competencies into each profession's pre-licensure training, program accreditation, continuing education, and/or licensure processes



## Findings from Nationwide Survey to Assess the State of Obesity Education in Non-Physician Professional Training Programs

Prior studies have identified gaps in the curricula of medical schools and residency programs, but less is known about how obesity is addressed in the formative training of non-physician providers. We assessed how obesity is currently incorporated into the curricula of various professions that care for people with obesity.

Data were obtained through online surveys of accredited U.S. nursing, physician assistant, dietitian, pharmacy, physical therapy, occupational therapy, dentistry, exercise physiology, social work, and public health training programs in May 2019. Respondents included deans, directors, and faculty with detailed knowledge of their program's curriculum.

Of the 343 responses to the survey, 87% of programs reported that their curriculum included education and/or training on obesity. Integration of obesity-related curricular content was highest for exercise physiology (100%) and lowest for social work (22%). Programs were most likely to address competencies related to core obesity knowledge (e.g. epidemiology of obesity) and least likely to address skills for interprofessional collaboration in obesity care. Considerable variation existed in the number of instructional hours. Classroom lectures, case-based learning, and clinical experiences were the most commonly reported instructional methods.

Demand for providers and organizations that can effectively leverage clinical and community resources to improve patient-reported outcomes (e.g. weight-related QoL) and mitigate obesity-associated medical complications will increase as value-based care increases. The integration of competency-based training and obesity education into existing curricula, continuing education, and/or licensing exams is essential to improve care for this highly prevalent disease.

- » The results of this survey were used to identify programs and key topics to cover in the case studies.
- » Findings were presented via poster presentation at ObesityWeek 2019.





## Curricular Case Studies

We developed a series of profession-specific case studies to highlight programs and institutions that have demonstrated a commitment to equipping students, trainees, and/or practicing health professionals with the skills and knowledge needed to care competently and compassionately for persons with obesity. The case studies are intended to provide examples of how the [Provider Competencies for the Prevention and Management of Obesity](#) can be integrated into the formative training and continuing education of nurses, physicians, physician assistants, dietitians, physical therapists, occupational therapists, pharmacists, dentists, psychologists, exercise physiologists, public health practitioners, and social workers in the United States. The case studies were authored by STOP Obesity Alliance staff using information obtained through material reviews and interviews.

While the curricula of all programs featured in the case studies included components that are reasonably expected to improve care quality and outcomes for persons with or at risk for obesity, not all programs had the resources to formally evaluate the impact of obesity-specific learning activities on trainees' attitudes and practice behaviors. An evaluation plan or proposed outcome measures were accepted in lieu of data for newly implemented interventions (within the past 6 months) that employed novel educational or policy approaches.

Case studies were selected to reflect diverse experiences across professions, geographies, institution types, interventional approaches, and care settings. Eligible participants:

- were accredited health professional training programs *OR* other entities authorized to oversee and/or deliver provider education;
- addressed one or more of the [Provider Competencies for the Prevention & Management of Obesity](#);
- promoted evidence-based practices consistent with national obesity care guidelines (e.g. USPSTF, TOS, ENDO, AHA, CMS); and specified methods of learner assessment and/or curriculum evaluation.

### *Pre-Licensure Case Studies*

- » Villanova University, M. Louise Fitzpatrick College of Nursing  
Embedding Weight Sensitivity Training in the Nursing Care Practicum
- » Auburn University, Harrison School of Pharmacy  
Pharmacist-Driven Disease Management: Delivering an On-Campus Weight Management Pharmaceutical Care Service
- » Touro University, College of Osteopathic Medicine  
FOODS-C: A 3-year Integrated Obesity Curriculum for Medical Trainees
- » University of Texas Southwestern, School of Health Professions  
mHealth Curriculum: Training in Use of Medical and Patient Mobile Apps for Weight Management
- » University of Washington, School of Dentistry  
Obesity & Dentistry: Enhanced Oral Health Training Curriculum Addresses Early Childhood and Adults
- » Indiana University Bloomington, School of Public Health  
Obesity and Health: an Undergraduate Minor for Future Health Professionals
- » George Washington University, School of Medicine & Health Sciences  
Obesity-Focused Clinical Public Health Summit: Experiential Learning to Improve Community Health
- » Children's National Health System, Department of General & Community Pediatrics  
Healthy Homes, Healthy Futures: A Home Visitation Curriculum for Pediatric Residents
- » University of Southern California, Division of Occupational Therapy  
Lifestyle Redesign®: Preparing Trainees to Implement Occupational Therapy Interventions for Obesity

### *Post-Licensure Case Studies*

- » Council of the District of Columbia, Continuing Nutrition Education Amendment Act  
Improving Obesity Education through Policy: Continuing Education on Nutrition



# EMBEDDING WEIGHT SENSITIVITY IN THE NURSING CARE PRACTICUM



**VILLANOVA UNIVERSITY**

 Villanova, PA

*Nursing faculty and registered dietitian nutritionists with expertise in weight management designed and implemented a 14-week sensitivity training program to reduce weight bias among nursing students. The program could be integrated into any clinical practicum course where students gain repeated patient interactions over an extended period.*

## SCENARIO

There is growing recognition of the need for healthcare professionals to be more aware of the stigma experienced by persons with obesity, the negative impact weight bias has on health outcomes, and the role that providers play in perpetuating this problem. As the largest sector of health professionals in the United States, nurses have an unparalleled impact on obesity care and outcomes. Nursing students are an important target for weight sensitivity training that teaches about the complexities of obesity and imparts the skills to combat stigma in their future nursing practice.

Evidence suggests that skills related to preventing weight bias need to be identified and addressed early in the education continuum. Leaders from the M. Louise Fitzpatrick College of Nursing recognized the need to develop a weight sensitivity curriculum that could begin to fill the obesity knowledge gap and better prepare their students for career success as nursing professionals.

### Educational Objectives

*Program leaders prioritized obesity education within the nursing curriculum to position their trainees as competent, effective, and compassionate providers. Upon completion of the training, students will be able to:*

- ▶ identify personal bias towards individuals with obesity;
- ▶ articulate the importance of reducing obesity bias in healthcare for positive patient outcomes;
- ▶ discuss nursing strategies to reduce weight stigma while providing equal and excellent care; and
- ▶ explain healthcare providers' expanding role in weight management.

## About the Educators



**M. Louise Fitzpatrick  
College of Nursing**

*Undergraduate Curriculum*

**MacDonald Center for  
Obesity Prevention and  
Education (COPE)**



Tracy Oliver, PhD, RDN, LDN  
([tracy.oliver@villanova.edu](mailto:tracy.oliver@villanova.edu))

Rebecca Shenkman, MPH, RDN, LDN

Lisa K. Diewald, MS, RD, LDN

### KEY COMPETENCIES:

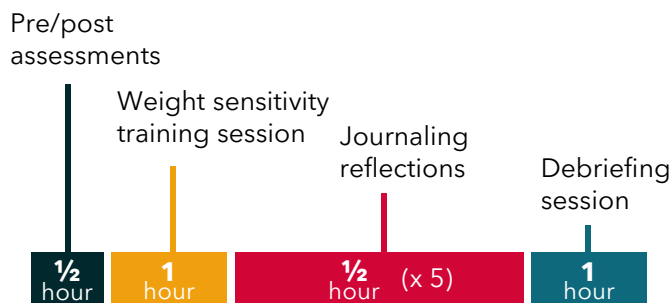
Weight Bias & Stigma  
Language for Obesity  
Strategies for Patient Care



# CURRICULUM

This 14-week program is embedded into the 144-hour Practicum in Nursing Care of Adults and Older Adults junior-level nursing student course curriculum. It focuses on weight bias sensitivity training and assesses and measures the change in students' attitudes and beliefs towards persons with obesity throughout the semester. Nursing faculty collaborated with registered dietitian nutritionists from the MacDonald Center for Obesity Prevention and Education (COPE) to design and implement the training.

## ✓ 5 hours of weight sensitivity training:



Throughout the semester, students participated in a variety of weight sensitivity exercises, including:

- ✓ watching a weight sensitivity training video (*Weight Bias in Healthcare*, Rudd Center)
- ✓ participating in group discussions
- ✓ completing five journaling activities
- ✓ participating in an end-of-semester debriefing and educational session

## OUTCOMES

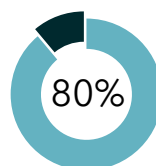
Weight bias questionnaires (ATOP + BAOP) were administered at the start of the first clinical class and again at the conclusion of the last clinical class, roughly 3 ½ months apart.

This curriculum was embedded in the clinical practicum course (144 hours) where students' application of acquired skills and knowledge was observed during patient encounters but not formally assessed.

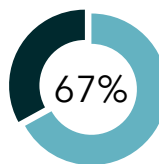
Methods of assessment:

- ✓ Pre/post Attitudes Toward Obese Persons Scale (ATOP)
- ✓ Pre/post Beliefs about Obese Persons Scale (BAOP)
- ✓ Qualitative journal reflections

»»» **200+ students** have completed the sensitivity training program as of 2019



of learners demonstrated a reduction in weight bias after completing the training, as indicated by difference between pre/post ATOP scores



of learners believed that participating in the weight sensitivity training program was beneficial to their future conduct as a nurse

\*percentages based on initial pilot cohort (n = 125)



“Offering educational opportunities for all healthcare providers on the detrimental effects of weight bias provides a foundation to eradicate weight bias and will ensure all patients receive the equal and unbiased care they deserve.”

– Dr. Tracy Oliver, Associate Professor



The MacDonald Center for Obesity Prevention and Education (COPE) offers a one-hour weight bias sensitivity training tailored for the nursing profession. Please contact COPE's Director, Rebecca Shenkman ([rebecca.shenkman@villanova.edu](mailto:rebecca.shenkman@villanova.edu)), for more information and to schedule this training at your site.



# PHARMACIST-DRIVEN DISEASE MANAGEMENT: DELIVERING AN ON-CAMPUS WEIGHT MANAGEMENT CARE SERVICE



**AUBURN UNIVERSITY**

 **Auburn, AL**

*Educators from Auburn University's (AU) Harrison School of Pharmacy developed an integrated PharmD professional curriculum that prepares trainees to deliver pharmacological and nonpharmacological obesity management services in community-based settings. This curriculum could be adapted by other schools of pharmacy with established on-campus or partner community clinics.*

## SCENARIO

Pharmacists are among America's most trusted and accessible health professionals. As such, they may be ideally situated to provide medication monitoring and disease management services for clients with obesity. In 2016, the American College of Clinical Pharmacy issued curricular guidance recommending that all pharmacy students receive education and training on obesity to prepare them to provide collaborative, patient-centered care upon graduation and licensure.

In 2014, the Harrison School of Pharmacy (HSOP) faculty developed a vision for the "Practice Ready Graduate" that outlines 10 broad categories of skills in which a Pharmacist entering the profession will need to be competent. Students learn and apply these skills in numerous contexts, including management of obesity and related conditions. The curriculum involves students in continuous patient care responsibilities starting upon entry into the School and offers additional opportunities to involve pharmacists in obesity management through training on motivational interviewing and appropriate pharmaceutical therapies.

## Educational Objectives

*The practice ready HSOP graduate should be able to:* [partial list]

- ▶ Assume responsibility for and provide evidence-based pharmacotherapy as a member of the healthcare team
- ▶ Develop and implement evidence-based pharmacotherapy plans considering patient specific factors
- ▶ Conduct health screenings and provide recommendations and referrals
- ▶ Provide effective patient centered counseling/education taking into consideration health literacy, motivation, and readiness for change
- ▶ Assess and promote medication adherence while identifying and resolving patient specific barriers to medication adherence

## About the Educators



**Harrison School of  
Pharmacy (HSOP)**



**Raj Amin, PhD**

**Kimberly Braxton-Lloyd, PharmD**

**Kimberly Garza, PharmD, MBA, PhD**

**Jan Kavookjian, MBA, PhD, FAPhA**

**Kristi Kelly, PharmD, FCCP, BCPS,  
BCACP, CDE, BC-ADM**

**Emily McCoy, PharmD, BCACP**

**Heather Whitley, PharmD, BCPS, CDE**

## KEY COMPETENCIES:

Obesity as a Disease  
Integration of Community Care  
Language for Obesity  
Person-Centered Communication  
Strategies for Patient Care



# CURRICULUM

The new, integrated PharmD professional curriculum includes obesity as a specific condition to be addressed. Students provide individualized care for patients with obesity focused on maximizing the efficacy and safety of medication use, improving disease control, identifying health risks, and providing preventative care. HSOP works closely with other units on campus to provide an integrated, interprofessional approach.

HSOP is working to develop a sustainable practice model for pharmacists that extends beyond the pharmacist's role in dispensing medications. Students are trained to provide direct patient care through required and elective experiences.

## Integrated Learning Experience (ILE) Courses 1-4

First-year students are introduced to obesity, diabetes, hypertension, and how lifestyle changes supplemented by drug treatments can be used to treat these conditions. The course includes a 5-day module on **obesity as a chronic disease**. Students acquire foundational knowledge of obesity management, diabetes mellitus, and common complications of pharmacological management (e.g. diarrhea and constipation) for future application in patient care.

## Person-Centered Communication Concepts and Skills Integration

Person-centered communication, including motivational interviewing skills training, is integrated **across the curriculum**. Students learn how to develop positive, therapeutic relationships with patients through application of communications skills (including listening and empathy, assertiveness, autonomy support, etc.) and other behavior change support strategies. There is significant coverage of how to communicate effectively with patients with or at risk for obesity.

## Community Care Rotations

Fourth-year pharmacy students rotate through the school's two on-campus pharmaceutical care clinics, where they gain experience caring for clients with obesity and other advanced patient care activities.



### AU Pharmaceutical Care Center (AUPCC)

- ✓ Students deliver high-intensity counseling to clients in the Healthy Habits Weight Management Program
- ✓ Students conduct biometric screenings for AU employees as part of the **Healthy Tigers Wellness Program**. Employees with obesity (BMI  $\geq 35$  kg/m<sup>2</sup>) can earn a health insurance premium discount by establishing a self-management plan and/or meeting with an AUPCC dietician.



### SEIB State Wellness Center

- ✓ Students learn how to properly manage obesity with medication and lifestyle changes by providing pharmacist-driven disease management for Alabama state employees
- ✓ Students practice coordinating with other primary care providers to optimize care and outcomes for patients with obesity and related conditions

# OUTCOMES

The Auburn University Pharmaceutical Care Center's Healthy Habits program has been successful in helping patients decrease total body weight, BMI, and risk of weight-related complications. The program has begun to establish the role of pharmacists in obesity care.



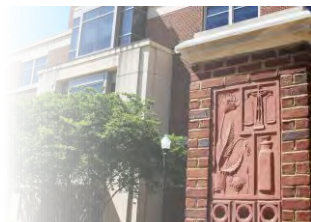
**70+**  
fourth-year  
pharmacy  
students

are trained annually by the Clinical Health Services unit on community pharmacy practices specific to obesity and disease management



“Pharmacists are really in a position to listen to patients about the role that obesity plays in their overall health. Community pharmacies and pharmacy-based clinics across the country are beginning to engage in advanced care services that incorporate weight loss for purposes of health and chronic disease management.

– Dr. Jan Kavookjian, Associate Professor



Additional information about this curriculum is available from: <http://pharmacy.auburn.edu/apply/curriculum.html>



# FOODS-C: A 3-YEAR INTEGRATED OBESITY CURRICULUM FOR MEDICAL TRAINEES



TOURO UNIVERSITY

San Francisco, CA

*Medical educators designed the Fundamentals for and Osteopathic Obesity Designed Study (FOODS) curriculum to provide a longitudinal, progressive delivery of the provider competencies for the prevention and management of obesity. The FOODS curriculum was integrated over 3 years of medical training and resulted in an improvement in students' attitudes toward and knowledge of obesity. This program could also be integrated into the pre-licensure training of physician assistants, nurse practitioners, and physical therapists.*

## SCENARIO

Medical professionals' awareness of their important role in defusing the obesity epidemic has increased. However, many practitioners demonstrate bias against people with obesity, and the number of practitioners who treat obesity problems continues to be low. In 2011, after the United States failed to achieve the Healthy People 2010 obesity goals, the American Osteopathic Association House of Delegates passed Resolution 435A, stipulating that all Doctors of Osteopathy (DOs) should address obesity in their practice.

Leaders from TUCOM responded by implementing the Fundamentals for an Osteopathic Obesity Designed Study (FOODS) curriculum, designed to prepare the osteopathic physician to appropriately engage the patient with obesity in order to optimize health care delivery. Program targets include:



**Undergraduate medical education:** develop a comprehensive series of obesity-related learning modules to increase student obesity knowledge and reduce weight bias.



**Graduate medical education:** distribute e-learning version of the curriculum for residency programs and other schools to integrate, possibly with flipped classroom format.



**Clinical Outcomes:** evaluate whether improved training and education on obesity improves clinical health outcomes for patients with obesity.

## About the Educators



**College of Osteopathic Medicine (TUCOM)**

Departments of Basic Sciences & Clinical Education

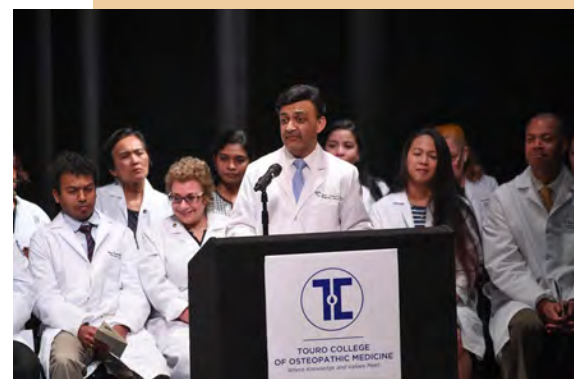


Michael Clearfield, DO

Greg Gayer, PhD  
(greg.gayer@tu.edu)

### KEY COMPETENCIES:

Disparities/Inequities in Care  
Integration of Community Care  
Language for Obesity  
Strategies for Patient Care  
Weight Bias & Stigma





# CURRICULUM

The FOODS curriculum includes 27 obesity-related modules delivered longitudinally over 3 years, provided as a series of lectures during the first and second years and by online case simulations in the third year. All obesity modules were integrated into broader courses or as part of clinical clerkship requirements. Learner weight bias was assessed each year.

## YEAR 1

6 hours

**series of 19** in-class, interactive sessions to improve core knowledge of obesity + knowledge exam

### Primary Topics Covered in Modules 1-27

- epidemiology of obesity
- pathogenesis & metabolic factors
- nutrition, diet, & physical activity

### Additional Topics (Year 1)

- obesity as a disease and associated chronic conditions (diabetes, hypertension, infertility, hepatic steatosis, sleep apnea, cancers)

## YEAR 2

4 hours

**series of 8** in-class, interactive sessions to review new findings and reemphasize selected topics + knowledge exam

### Additional Topics (Year 2)

- self-control & behavior modification
- pharmacologic & surgical therapies
- interaction through inflammation between obesity, metabolic abnormalities, and climate change
- osteopathic approach to managing obesity

## YEAR 3

self-paced

**virtual case presentations** covering obesity issues required in core rotations (delivered using Aquifer, formerly MedU)

### Case Examples

- Pediatrics  
8-year-old male well-child check
- Surgery  
bariatric surgery module
- Internal Medicine  
45-year-old man with obesity
- Obstetrics / gynecology  
45-year-old woman wellness visit

# OUTCOMES

Participation in the curriculum was associated with significant increases in medical knowledge and a significant reduction in bias sustained throughout all four years of training. Compared to peers who did not complete the FOODS curriculum, students who completed the first year of the obesity curriculum (n=528) showed significantly greater medical knowledge regarding:

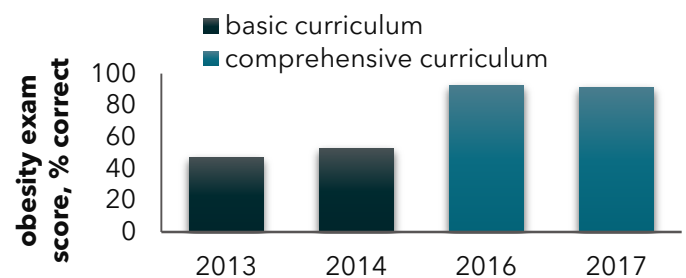
- ✓ obesity as a disease (etiology and epidemiology)
- ✓ nutrition, physical activity, and behavior modification
- ✓ pharmacologic and non-pharmacologic interventions for obesity and associated chronic disorders

The FOOD team includes clinicians, basic scientists, nutritional experts, and public health experts working interprofessionally to ensure continued sustainability.

Methods of assessment:

- ✓ Obesity knowledge exam (30 questions, multiple choice)
- ✓ Pre/post weight bias survey (Fat Phobia Scale)

### Medical student scores on year-one obesity examination, basic vs. comprehensive curriculum



J Am Osteopath Assoc. 2017;117(8):495-502.



*With an improved diet, we can get measurably healthier in just 7 to 10 days. From an osteopathic perspective, we need to acknowledge the importance of those small steps so physicians don't give up on patients and patients don't give up on themselves.*

– Dr. Michael Clearfield, Dean of TUCOM



**Additional outcomes data and information about this curriculum are available from:**

J Am Osteopath Assoc 2017;117(8):495-502. doi: 10.7556/jaoa.2017.099





# mHEALTH CURRICULUM: TRAINING IN THE USE OF MEDICAL & PATIENT MOBILE APPS FOR WEIGHT MANAGEMENT

**UTSW**

**UNIVERSITY OF TEXAS SOUTHWESTERN**



**Dallas, TX**

*Educators from the University of Texas Southwestern Medical Center developed an mHealth curriculum to prepare physician assistant and clinical nutrition students to deliver weight management counseling in primary care settings. The expanded Life Habits curriculum could be integrated at any point in prelicensure physician assistant training or adapted for use in other health professional training programs.*

## SCENARIO

Mobile health technology (mHealth) is increasingly used to support lifestyle recommendations for weight management through the measurement and tracking of nutrition, physical activity, blood glucose, and sleep. However, few health professionals receive training in how to critically evaluate or deliver effective patient education on the use of mHealth for obesity. To address this training gap, educators from UT Southwestern incorporated weight management mHealth training into the interprofessional nutrition curriculum for physician assistant (PA) and clinical nutrition (CN) students.

### Educational Objectives

*After completing the Smart-Life Habits curriculum, learners should be able to:*

- ▶ Recall (i) BMI cut point which defines obesity and (ii) recommended initial 6-month weight loss
- ▶ Recall what clinically-meaningful health improvements are associated with 3-5% sustained weight loss
- ▶ Recall the three components of a comprehensive lifestyle program for weight loss
- ▶ Assess readiness of individual patients to make lifestyle changes to achieve weight loss
- ▶ Prescribe and thoroughly explain diets for weight loss (tailored for individual activity level, goals, comorbidities)
- ▶ Know when to refer patients for a nutrition consult and be knowledgeable about other community-based resources
- ▶ Evaluate mobile apps that reflect evidence-based information using the smartphone application appraisal tool (SAAT)
- ▶ Educate patients on how to download and use mHealth for weight management
- ▶ Educate patients on how to relay mHealth app information to healthcare provider

## About the Educators



### UT Southwestern School of Health Professions

Department of Physician Assistant Studies

Department of Clinical Nutrition



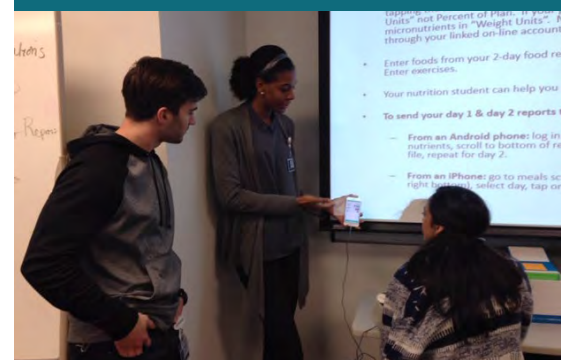
Susan Rodder, MS, RDN, LD  
[susan.rodder@utsouthwestern.edu](mailto:susan.rodder@utsouthwestern.edu)

Venetia Orcutt, PhD, PA-C Emeritus  
[venetia.orcutt@utsouthwestern.edu](mailto:venetia.orcutt@utsouthwestern.edu)

Tiffany Kindratt, PhD, MPH  
[tiffany.kindratt@uta.edu](mailto:tiffany.kindratt@uta.edu)

### KEY COMPETENCIES:

Strategies for Patient Care  
Integration of Community Care



*Clinical nutrition student teaches PA students how to use phone app*



# CURRICULUM

The *Smart-Life Habits* curriculum was developed to improve physician assistant and clinical nutrition students' abilities to use mobile medical applications and smartphone apps to provide lifestyle counseling for weight loss. The mHealth training was integrated as an expansion of UTSW's existing *Life Habits* curriculum, summarized in part below.

## Experiential Activities in the *Smart-Life Habits* Curriculum



**Nutrition Station Health Fair:** takes place during the Smart-Life Habits class and allows students to practice applying skills in obesity screening and patient education pertaining to topics that directly affect weight, e.g., grocery shopping, cooking, eating out, snacking, and MyPlate portions



**Heart-Healthy Lunch:** students are provided a heart-healthy meal that introduces them to the 2013 AHA/ACC Guidelines on Lifestyle Management to Reduce Cardiovascular Risk



**Nutrient Analysis:** PA students complete a two-day food record and receive individualized dietary recommendations from CN students, demonstrating how patients can be educated to make dietary improvements



**mHealth Training:** students are instructed on the critical appraisal of mobile apps, the use of two apps (MyNetDiary, Withings Health Mate), and the delivery of effective patient education regarding the use of mobile app technology

### EX: Obesity-Focused mHealth OSCE

*You are about to see to Bob Nob for a follow-up appointment. Your patient's weight is up.*

Use your phone to demonstrate how to download and use the mobile app MyNetDiary

- ☐ Locate app store, search *MyNetDiary*, pretend to install
- ☐ Open app, select a meal, enter a food, and save
- ☐ Have the patient select a meal, enter food, and save 2-3 foods

## OUTCOMES

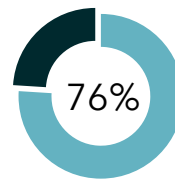
To evaluate the efficacy of the *Smart-Life Habits* curriculum, UT Southwestern faculty conducted a quasi-experimental study with PA students (n = 173) who completed the training from 2015 to 2018.

Methods of assessment:

- ✓ Pre/post-didactic curriculum surveys to evaluate student confidence in nutrition education and counseling skills
- ✓ Objectively-structured clinical examinations (OSCEs) to evaluate skills in counseling and mHealth communication

**+2 unit increase**

in median student confidence regarding their ability to thoroughly explain eating patterns for weight loss tailored to the patient's activity level, comorbidities, and goals (*increased from pretest score of 2 "little confidence" to posttest score of 4 "confident"*)



of trainees used the teach-back method by asking the standardized patient (SP) to teach back to them how to enter food in the app, and 34% asked the SP to verbalize benefits of using the app at close of the encounter.



**“** With mHealth being increasingly utilized to support lifestyle recommendations, health professions education should provide the knowledge and skills to appraise and recommend mobile apps as part of lifestyle recommendations.

**– Susan Rodder, MS, RDN, LD**  
Associate Professor



Additional outcomes data and information about this curriculum are available from:  
<http://www.educationforhealth.net/text.asp?2018/31/2/95/246752>





# ENHANCED ORAL HEALTH TRAINING CURRICULUM TO ADDRESS OBESITY IN EARLY CHILDHOOD & ADULTS



UNIVERSITY OF WASHINGTON

 Seattle, WA

*Through a revised curriculum and workforce training grant, educators from the University of Washington are capitalizing on opportunities to address obesity in the predoctoral oral health curriculum. In the future, some of the educational content developed by UW faculty will be available for training predoctoral dental students and prelicensure dental hygiene students at other institutions.*

## SCENARIO

Obesity is related to several aspects of oral health, such as caries, periodontitis, and xerostomia. There is concern about how best to manage oral hygiene and preventive measures (e.g. fluorides) given the poor quality and increased frequency of food consumption among Americans. Dental visits are a prime opportunity to identify and initiate care for nutrition and weight-related diseases among pediatric and adult populations. There is increasing agreement that oral health professionals should play an active role in identifying children at risk for obesity and dental caries and providing education and referrals as appropriate to reduce these risks.<sup>1</sup>

Although most dentists offer information or interventions to address consumption of sugary drinks, only 1 in 5 pediatric providers offers obesity interventions.<sup>2</sup> Surveys of U.S. dental schools and pediatric dentistry residents indicate that obesity is often inadequately addressed in predoctoral dental school and dental hygiene program curricula.<sup>3,4</sup> Support for formal training in this area is encouraged in part by findings that providers from programs with formal curriculum on managing obesity report feeling more prepared care for patients with obesity in clinical practice.<sup>4,5</sup>

When faculty redesigned the curriculum for the *Dentists of the Future*, leaders from the UW School of Dentistry broadened the focus beyond dental procedures to include instruction on disease prevention, empathic communication, and behavior-change strategies that improve oral and overall health. Furthermore, in 2017 the UW School of Dentistry received a grant from the Health Resources and Service Administration (HRSA) – known as the **Early Childhood Oral Health Training Program (EChOTrain)** – that includes supplemental funding to explore how oral health professionals can play a role in addressing the challenge of childhood obesity.

## About the Educators



**UW School of Dentistry**



**Amy Kim, DDS**  
(akim3@uw.edu)

**Sara Gordon, DDS, MS**  
(gordons@uw.edu)

Frank Roberts , DDS, PhD  
Travis Nelson , DDS, MSD, MPH  
Marilynn Rothen , RDH, MS  
Donald Chi, DDS, PhD  
Michelle Averill, PhD, RD

### KEY COMPETENCIES:

Obesity as a Disease  
Disparities/Inequities in Care  
Integration of Community Care  
Weight Bias & Stigma  
Strategies for Patient Care  
Respectful Accommodations



# CURRICULUM

The revised curriculum and EChOTrain grant begin to close an important training gap by capitalizing on opportunities to address obesity in the predoctoral oral health education through experiential learning approaches.

## Dentists of the Future: Obesity-Related Objectives

Graduates should be able to:

- ▶ apply fundamental principles of behavioral sciences as they pertain to patient-centered approaches for promoting, improving and maintaining oral health
- ▶ provide care within the scope of general dentistry, including health promotion and disease prevention
- ▶ demonstrate the ability to apply the principles of population and public health to patient care
- ▶ relate basic concepts of nutrition to maintenance of health and development of disease states
- ▶ describe the etiology and clinical manifestations of the major diseases that affect the gastrointestinal tract, liver, and endocrine system

**Obesity & Dentistry:** The revised curriculum also includes an optional, adult-focused module on the causes and complications of obesity, how common obesity treatments may affect oral health and dental care, consequences of weight bias and stigma, treatment strategies for dental patients with obesity in general practice, and tips on welcoming office design.



## EChOTrain

This pediatric-focused program will enhance the training of UW dental students through a new video series, five learning modules, and community-based pediatric clinical rotations that address childhood obesity prevention and nutrition, interprofessional team care, and cultural competence. The EChOTrain team will also develop learning modules for possible nationwide dissemination to dental and dental hygiene students at other schools.

**UW School of Public Health faculty** developed learning modules to show students how to present nutrition information to children and families. Students learn counseling skills, how to take body mass index readings, and how to do focused interventions.

**UW School of Dentistry faculty** developed material on cultural competence and social determinants of health. Students are introduced to the concept of social determinants of health to gain a more in-depth understanding of the epidemiology of the disease of early childhood caries and preventive strategies.

## OUTCOMES



See the online version of this case study for other highlights from the revised predoctoral curriculum:

[obesitycompetencies.gwu.edu/case-studies/UW](https://obesitycompetencies.gwu.edu/case-studies/UW)

Although the obesity-related components of UW's updated predoctoral curriculum have not been evaluated comprehensively, these enhanced training opportunities expected to improve future dental professionals' ability to care optimally for both adult and pediatric dental patients with or at risk for obesity.

The HRSA grant provides important funding to support ongoing evaluation and improvement of EChOTrain activities, with metrics developed and overseen by faculty from the Department of Biomedical Informatics & Medical Education and School of Pharmacy.

Future outcomes of interest may include :

- ✓ Perceptions regarding respondents' level of preparedness to care for patients with obesity
- ✓ Experiences involving the clinical treatment of pediatric and adult dental patients with obesity



*There is an urgent need to increase access to oral health care for young children through new approaches to training an oral health workforce that is culturally competent and knowledgeable on public health and social determinants of health issues.*

– **Dr. Amy Kim**, Clinical Associate Professor of Pediatric Dentistry



<sup>1)</sup> Garcia et al. *J Public Health Dent.* 2017;77 Suppl 1:S136-S140. <sup>2)</sup> Wright & Casamassimo. *J Public Health Dent.* 2017;77 Suppl 1:S79-S87.

<sup>3)</sup> Divaris et al. *J Public Health Dent.* 2017;77 Suppl 1:S96-S103. <sup>4)</sup> Hisaw et al. *Pediatr Dent.* 2009;31(7):486-91. <sup>5)</sup> Yuan et al. *J Dent Educ.* 2012;76(9):1129-36.





# OBESITY & HEALTH: AN UNDERGRADUATE MINOR FOR FUTURE HEALTH PROFESSIONALS



**INDIANA UNIVERSITY BLOOMINGTON**

**Bloomington, IN**

Educators from Indiana University Bloomington developed a 15-credit "Obesity and Health" minor for undergraduate students wishing to add education and training on obesity to their studies. Coursework addresses the etiology, assessment, social determinants, and treatment of overweight and obesity in both adults and children. Behavioral strategies important in prevention are explored. A similar minor program could be offered for students at other undergraduate institutions with the necessary faculty expertise.

## SCENARIO

Despite widespread recognition of obesity as a public health crisis, few U.S. health professionals report adequate training in obesity prevention and management. Health professional training programs cite lack of time and space in the curriculum as major barriers to addressing obesity comprehensively. In contrast, the relative curricular flexibility of many 4-year undergraduate programs presents an opportunity to connect students with obesity-related education and training early in their careers.

Recognizing that the high demand for professionals with expertise in obesity would give their students a competitive edge upon graduation, leading medical, public health, nutrition, and physical activity educators from Indiana University Bloomington developed the *Obesity & Health* minor.

## Educational Objectives

Prepare future health professionals to:

- share current obesity facts and guidelines;
- examine the evolution of human culture related to obesity;
- describe the complex etiology of obesity and related complications;
- identify appropriate methods used to assess body fat;
- identify possible health risks that arise from excess body fat;
- discuss the relationships between diet, physical inactivity, and obesity;
- apply behavioral techniques regarding healthy eating and physical activity;
- communicate effective and supportive principles of healthy weight management to others; and
- apply the latest in evidence-based obesity research regarding physical activity, nutrition, psychology, behavioral theories, and medicine.

## About the Educators



**IU School of Public Health**  
Department of Applied  
Health Science



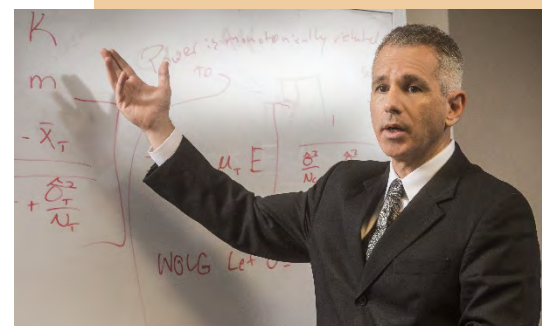
David Allison, PhD

Andrew Brown, PhD  
(awb1@iu.edu)

Mary Yoke, PhD, FACSM  
(mmyoke@indiana.edu)

## KEY COMPETENCIES:

Obesity as a Disease  
Disparities/Inequities in Care  
Integration of Community Care  
Language for Obesity  
Strategies for Patient Care





# CURRICULUM

Coursework broadly addresses the etiology, assessment, prevention, treatment, and behavioral aspects of overweight and obesity in both adults and children. Additional topics covered in the curriculum include:

- physiological, behavioral, and cultural aspects of weight management
- the impact of obesity on individual, family, and community health
- promising trends in obesity treatment

## Obesity & Health Undergraduate Minor

✓ **15 credits** of obesity-related coursework

✓ **Core courses:**

- Obesity and Health\*
- The Nature of Cancer
- Heart Health & Diabetes
- Nutrition for Health (or Human Nutrition)

\* can be taken as a stand-alone course to satisfy IUB's Social & Historical Studies general education requirement

### "Obesity & Health"

*This course aims to broaden student understanding of the myriad aspects of obesity and health.*

*Key components of the course:*

#### Personal Goal Setting

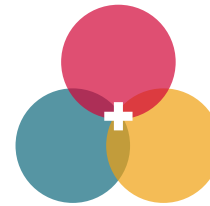
As students learn about nutrition, reduction of sedentary behavior, and weight management, they directly experience obesity-related challenges via weekly healthy eating and physical activity goal setting, followed by personal reflection.

#### Letter to the Editor

Students write to an editor or relevant thought leader to raise consciousness about an obesity-related issue in the community and suggest local actions that can be taken to address obesity.

#### Active Learning

In-class group discussions, group presentations, peer reviews, case studies, and taking breaks from physical inactivity keep students engaged in addressing the complexities of obesity prevention.



# OUTCOMES

» **500+ students**

completed the "Obesity and Health" course for credit between 2013 and 2019. Most students (about 75%) were from majors outside of public health.

The *Obesity & Health* minor is available to students in any degree program who wish to add an obesity and health specialty to their studies. The minor requires:

- successful completion of 15 credit hours, including the core courses noted above and one elective;
- a minimum grade of C- in each course and cumulative minor GPA of 2.0.

## BONUS: INTENSIVE OBESITY TRAINING OPPORTUNITIES

IU faculty and staff are at the forefront of obesity education and training for Indiana's future and current health professionals. In addition to the *Obesity and Health* minor, they have pioneered several regionally-tailored, high-intensity obesity education programs:

- **IU School of Medicine Obesity Symposium**
- **Indiana CTSI Retreat at IU Bloomington**
- **Obesity Research Short Courses**

Academic institutions and professional organizations across the country should seek to replicate these opportunities for trainees and providers in their states.



*I think when [educators] are successful in getting young people involved [in the field of obesity research], and helping those new people achieve, it is a great success.*

– **Dr. David Allison**

Dean of the IU School of Public Health-Bloomington



SEE ALSO: All nine modules of the 2019 "Causal Inference in Behavioral Obesity Research" short course are now available as free educational resources through IU Expand. The curriculum provides rigorous exposure to the key fundamental principles of causal inference in behavioral obesity research and techniques for applying those principles in research.







# AN OBESITY-FOCUSED CLINICAL PUBLIC HEALTH SUMMIT: EXPERIENTIAL LEARNING TO IMPROVE COMMUNITY HEALTH



THE GEORGE WASHINGTON UNIVERSITY



Washington, DC

Educators from the School of Medicine and Health Sciences developed an immersive, 3-day experiential learning summit to teach third-year medical students about the social cultural influencers of obesity and what clinicians can do to mitigate them. This curriculum could be adapted by other professions and/or programs with interest in fostering clinical-community linkages.

## SCENARIO

It is essential that physicians not only learn effective strategies to understand and manage obesity in the clinical setting but also be equipped to act as agents of change in communities grappling with food deserts, health inequity, and other social determinants of obesity.

SMHS faculty sought to provide students with more opportunities to translate their developing health care knowledge into actions that address pressing population health issues like obesity. To this end, they developed and piloted a multi-day Summit during which third-year medical students are challenged to integrate their knowledge of the clinical aspects of obesity and recent patient experiences to devise ways to mitigate obesity at the community level.

### Preparing for the Clinical Public Health Summit on Obesity

Prior coursework and clinical experiences were important for preparing students to engage meaningfully in the Obesity Summit.



#### Didactic presentation on clinical aspects of obesity:

The initial phase focused on clinical aspects of obesity. Students learned how to translate their understanding of the health effects of obesity to public policy approaches.



#### Interviews to understand the patient experience:

During their first clerkship, students conducted patient interviews and gained a stronger understanding of patients' experience with obesity and barriers to healthier behaviors. These encounters encouraged students to recognize and begin challenging negative biases toward patients with obesity.

## About the Educators



**School of Medicine & Health Sciences (SMHS)**



Lawrence Deyton, MD, MSPH  
ldeyton@gwu.edu

Kofi Essel, MD, MPH  
kessel@gwu.edu

Karla Bartholomew, PhD, JD, MPH, PA

William Dietz, MD, PhD

### KEY COMPETENCIES:

Obesity as a Disease  
Disparities/Inequities in Care  
Integration of Community Care  
Language for Obesity  
Addressing Weight Bias & Stigma  
Strategies for Patient Care



# CURRICULUM

During an intersession shortly after beginning their clinical clerkships, medical students participated in a 3-day applied learning experience (“Summit”) focused on addressing obesity in the District through application of an **equity-oriented framework**. The Summit included presentations from experts in the field, participation in plenary sessions and break-out discussions, and community site visits. These experiences provided the foundation for students to develop and present proposals to mitigate obesity at both the clinical and community levels.

## SMHS Clinical Public Health Summit on Obesity

Students visited sites throughout the District, where they heard about the experiences of residents, local food experts, employers, policymakers, and community organizations. In interacting with leaders of the communities that surround the University, students saw first-hand the issues impacting their patients and what can be done to address them. Students also worked with the GW Office of Innovation & Entrepreneurship to learn and practice skills in human-centered design, enhancing their experience of working alongside communities and sparking innovation.



During plenary sessions and discussions led by representatives from local and national community organizations (e.g. YMCA of the USA, Common Threads, DC Greens, ASTHO), teams of students explored creative approaches to restructuring health systems, improving access to non-stigmatizing obesity care, promoting healthy eating, and improving physical activity habits.

Small student groups were partnered with Community-Based Organizations. Using information gleaned from their first two years of medical school, plenary sessions, and site visits, teams worked alongside their community partners using “upstream” intervention techniques focused on addressing social determinants of obesity to develop an innovative solution to mitigate obesity in children and adults.

## OUTCOMES

The Summit culminated in student presentation of their proposals to address population-level dimensions of obesity in Washington, D.C. Teams received immediate feedback from panels of experts on obesity, nutrition, physical activity, and policy.

In 2018, the winning team worked closely with their community partner – a local supermarket – to design a campaign that incorporated innovative marketing, community engagement, and environmental conservation to expand access to and consumption of healthy food options among residents in an underserved D.C. community.

Awards to honor student achievements:

- ✓ **Implementation Award:** Highest honor given at the Obesity Summit. In recognition of the academic team with the most outstanding community-based design selected as most likely for implementation.
- ✓ **Innovation Award:** In recognition of the academic team with the most novel design thinking community-based approaches to influence the health of their selected population
- ✓ **Best Presentation Award:** In recognition of the academic team with the most outstanding presentation of a community-based program/ policy intervention.



*GW students must learn how to be active participants in developing community and population-level interventions, programs, and policies that promote healthy weight in the communities they serve. And we must teach them how to do that.*

– **Lawrence “Bopper” Dayton, MD, MSPH**  
Senior Associate Dean for Clinical Public Health



Additional information about this curriculum is available from: <https://smhs.gwu.edu/academics/md-program/curriculum/clinical-public-health/clinical-public-health-summits>





# HEALTHY HOMES, HEALTHY FUTURES: A HOME VISITATION CURRICULUM FOR PEDIATRIC RESIDENTS



**CHILDREN'S NATIONAL HEALTH SYSTEM**



**Washington, DC**

*Educators from the District of Columbia's largest pediatric residency program developed a focused home visitation curriculum to improve residents' understanding of the social determinants of health, how these determinants relate to obesity, and critical obesity-management skills beyond the office setting. This program could be completed at any time during resident training.*

## SCENARIO

Washington, DC, consistently exceeds the national average in prevalence of obesity in children 10-17 years old. Although pediatric clinical guidelines suggest addressing the multifactorial causes of obesity through behavioral lifestyle modifications to create a healthy home environment, office-based counseling is often ineffective when delivered by providers who lack a working knowledge of the barriers that families face struggling with obesity face in their homes and neighborhood environments.

A needs assessment of pediatric residents in the Community Health Track indicated that they needed additional training on ways to discuss obesity management with families from different backgrounds than themselves. Program leaders endeavored to develop a program that would (1) improve residents' understanding of community resources and insights into families' perspectives and (2) cultivate tangible skills that could be used in future clinical encounters such as referrals and communication strategies.

### Educational Objectives

*Enable residents to:*

- ▶ discuss appropriate child nutrition recommendations;
- ▶ illustrate how social determinants of health affect obesity;
- ▶ apply motivational interviewing skills to guide a family struggling with obesity through choosing appropriate personal healthy living goals; and
- ▶ formulate personalized recommendations for a family struggling with obesity based on what is learned from a home and neighborhood assessment and discussions with the family.

## About the Educators



**Department of General & Community Pediatrics**  
Community Health Track



Kofi Essel, MD, MPH  
[kessel@childrensnational.org](mailto:kessel@childrensnational.org)

Sirisha Yalamanchi, MD  
Erin Hysom, RDN, MPH  
Cara Lichtenstein, MD

### KEY COMPETENCIES:

Disparities/Inequities in Care  
Integration of Community Care  
Language for Obesity  
Strategies for Patient Care  
Weight Bias & Stigma





# CURRICULUM

A **home-visitation curriculum** was developed and implemented in consultation with leaders from other residency programs with success in this area and several content experts, including two registered dietitians, the Director of Home Visiting for a local agency, and a community social worker. *Appointing a curriculum coordinator is highly recommended.*



## Self-Study Modules

Residents reviewed three 1-hour modules and an article on motivational interviewing.

- Home Visitation 101
- Nutrition & Health 101
- Social Determinants of Health 101

Optional: AAP Change Talk interactive module to practice motivational interviewing skills

## In-Home Visits

Residents selected a family from clinic to complete two home visits.

- Assessment Visit: scripts and checklists guide residents through obtaining patient history and assessing home environment
- Intervention Visit: residents review their Healthy Homes Intervention Recommendations and collaborate with the family to set goals and action plan for healthy living

## Windshield Survey

Residents completed Healthy Homes Windshield Survey to assess the family's neighborhood for play areas, safety, food availability, and demographic and socioeconomic factors affecting the neighborhood.

- Completed after first home visit
- Followed by 30-minute consult with local dietitian to discuss the patient's barriers and possible solutions to assist the family in making more healthy choices

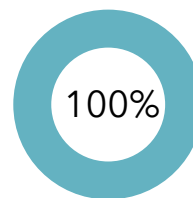
# OUTCOMES

Effective implementation of the program required 10 hours to fully complete the training and home visits. During post-curriculum qualitative interviews, residents described the experience as eye-opening and revealed that lessons learned from the visits will alter how they approach patients with obesity in future clinical practice.

Methods of assessment:

- ✓ Pre/post antifat attitudes questionnaire
- ✓ Pre/post comfort in lifestyle counseling
- ✓ Qualitative interviews with residents

**Twenty residents** who completed the curriculum reported improved counseling skills and improved understanding of the social determinants of health. Residents increased confidence in counseling families on physical activity, weight management, and healthy eating.



of residents felt that home visiting was a valuable experience and that they learned things about the family and neighborhood that they otherwise would not have known



*[This curriculum] made me feel more in touch with the community and have a better appreciation for their lives and what it means to live where they live and have the resources that they do and have the jobs that they have.*

– 1<sup>st</sup>-year resident



Resources and guidance needed to implement this curriculum – including scripts for the residents to use at each visit, resources for the family, and evaluation tools – are available from: <https://www.mededportal.org/publication/10480>



# LIFESTYLE REDESIGN®: PREPARING TRAINEES TO IMPLEMENT OCCUPATIONAL THERAPY INTERVENTIONS FOR OBESITY

**UNIVERSITY OF SOUTHERN CALIFORNIA****Los Angeles, CA**

Educators from the USC Chan Division of Occupational Therapy adapted the Lifestyle Redesign® curriculum to better prepare future and current professionals to design and deliver occupational therapy interventions for clients with obesity. This curriculum could be adapted and integrated into pre-licensure coursework at other occupational therapy professional training programs. Practicing clinicians can complete the online version of the course for continuing education credit.

## SCENARIO

Lifestyle change is central to any evidence-based obesity management strategy, but maintaining targeted health behaviors that influence weight can be difficult within the complex dynamic of everyday life. Occupational therapists are trained to address this issue. The profession's approach involves (re)establishing healthful performance patterns and preparing clients to solve daily occupational challenges in obesity management.

With expertise in home / workplace modification planning, compensatory strategies for activities of daily living, and the design of individually-tailored lifestyle interventions, occupational therapy practitioners are ideally positioned to improve clinical and psychosocial outcomes among adults with obesity across a variety of settings. Recognizing the need for additional obesity-related training opportunities within the profession, USC faculty developed a *Lifestyle Redesign* course with content on obesity management.

### Core components of the occupational therapy approach to obesity care addressed in the curriculum include knowledge and skills to:

- ❑ CREATE & PROMOTE - health promotion to prevent obesity or to promote weight loss
- ❑ ESTABLISH & RESTORE - remediation and restoration of function despite obesity and related complications
- ❑ MODIFY & MAINTAIN - compensation and adaptation to increase function and participation despite obesity
- ❑ PREVENT - prevention of obesity-related disability

## About the Educators



**Mrs. T.H. Chan Division of  
Occupational Science and  
Occupational Therapy**



Chantelle Rice Collins  
OTD, OTR/L, CDE  
[chantelr@chan.usc.edu](mailto:chantelr@chan.usc.edu)

Camille Dieterle  
OTD, OTR/L

### KEY COMPETENCIES:

Integration of Community Care  
Skills for Interprofessional Collaboration  
Strategies for Patient Care



Center for Occupation  
and Lifestyle Redesign®



# CURRICULUM

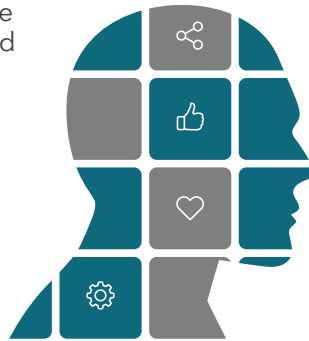
Obesity is integrated into the curriculum through core courses and specialty electives (Lifestyle Redesign®) for graduate occupational therapy students.

## OT 534 - Health Promotion and Wellness

Examination of the relationship of health and everyday activities. Critical thinking about lifestyle factors influencing occupational engagement and wellness through an occupational therapy lens.

## Clinical Internships and Residencies at the USC Occupational Therapy Faculty Practice

Students who complete a clinical internship or residency at the USC Occupational Therapy Faculty Practice during their graduate studies work alongside faculty members who are experts in Lifestyle Redesign for obesity. The evidence-based intervention is offered in both group and individual format.



## OT 583 - Current applications of Lifestyle Redesign®

Interactive practicum experience includes exploring the Lifestyle Redesign approach personally and with peers. Other topics include evidence-based clinical examples, therapeutic process, intervention design, and service delivery models.

*\*OT 583 is also required for the Pathways To Excellence program designed to help trainees deepen their knowledge and expertise in cutting-edge practice areas like obesity management.*

# OUTCOMES

Effective 2027, the Accreditation Council for Occupational Therapy Education (AOTA) announced a new mandate to elevate the entry level for all new occupational therapists from the master's to the doctorate degree (OTD). This additional year of training can be used to prepare clinical occupational therapists for cutting-edge practice areas like obesity management. Incorporating obesity management into required clinical experiences (ex: OTD residency with interdisciplinary obesity prevention team) will improve upon the quality of care and programs that future OTDs provide for clients with and at risk for obesity.

## ADAPTED FOR POST-LICENSURE TRAINING

Leaders from the USC Occupational Therapy Faculty Practice crafted an obesity-specific curriculum for delivery through a distance learning platform.

- *Introduction to Lifestyle Redesign®*
- *Lifestyle Redesign® for Weight and Diabetes Management*

As of 2018, there are **more than 430 USC Chan doctors of occupational therapy** in the workforce leading the profession forward in evidence-based specialty practices, graduate education, research, administration and policy.



“Occupational therapy practitioners have an ideal background and skill set to address obesity in multiple contexts. When obesity affects participation in meaningful life activities (i.e. occupations), occupational therapists can treat obesity as the primary condition or reason for referral.

– Dr. Camille Dieterle, Associate Professor



Additional information about this curriculum is available from: <https://chan.usc.edu/academics>





# IMPROVING OBESITY EDUCATION THROUGH POLICY: CONTINUING EDUCATION ON NUTRITION



**COUNCIL OF THE DISTRICT OF COLUMBIA**



**Washington, DC**

*Councilmembers proposed legislation to require that continuing education (CE) requirements for physicians, nurses, and physician assistants practicing in the District of Columbia include 2 credits of evidence-based instruction on nutrition. The legislation is expected to improve obesity prevention and treatment efforts by providing health professionals with the information and skills needed to incorporate nutrition counseling into clinical practice.*

## SCENARIO

Rates of diabetes, heart disease, and obesity-related cancers are projected to increase substantially in the District of Columbia by 2030.<sup>1</sup> Although nutritional intervention is considered a cornerstone of obesity management, few health professionals report receiving adequate training on nutrition during their formative education and most providers do not pursue continuing education on nutrition of their own volition.<sup>2</sup>

Many providers are unaware of how to assess nutritional status or unable to make appropriate referrals to community resources and health professionals as needed to address diet-related diseases like obesity. In communities like the District with high economic inequality, quality of care may be improved by additional training that ensures providers have a working knowledge of the barriers that families struggling with obesity face in their homes and neighborhood environments.

### Educational Objectives

*Provide information and skills to enable health professionals to incorporate nutrition counseling into clinical practice, which may include instruction on:*

- ▶ obesity treatment and prevention;
- ▶ nutrition assessment;
- ▶ food insecurity and its impact on health;
- ▶ nutrition topics related to medical specialties; and/or
- ▶ the role of nutrition in disease prevention and management.

## About the Legislation



**Continuing Nutrition Education Amendment Act of 2019** [B23-0360]

>> introduced June 4, 2019,  
amends existing law (D.C.  
Official Code § 3-1205.10)



### LEADERSHIP

- ▶ Councilmember Mary Cheh
- ▶ Councilmember Anita Bonds
- ▶ Councilmember Elissa Silverman
- ▶ Councilmember Trayon White

### KEY COMPETENCIES

- ▶ Disparities/Inequities in Care
- ▶ Strategies for Obesity Care





# MODEL LANGUAGE

Relevant text of the proposed amendment is reproduced below in an abbreviated format for the consideration of other policymakers that may wish to introduce similar legislation in their jurisdictions.

To view the full text of B23-0360 and track the status of this legislation, please visit the Council of the District of Columbia's website:

<http://lims.dccouncil.us/Legislation/B23-0360> ↗

## B23-0360: Continuing Nutrition Education Amendment Act of 2019

Sec. 2. Section 510 of the District of Columbia Health Occupations Revision Act of 1985 is amended as follows:

[R]equire that any continuing education requirements for the following practices include 2 credits of instruction on nutrition:

- (i) medicine;
- (ii) registered nursing;
- (iii) practical nursing;
- (iv) nursing assistive personnel; or
- (v) physician assistants.

The instruction required shall:

- (i) Be evidence-based;
- (ii) Not be financially supported, directly or indirectly, by any food, beverage, or dietary supplement manufacturer, company, or trade organization; and
- (iii) Provide information and skills to enable health professionals to incorporate nutrition counseling into clinical practice, which may include:
  - a. General nutrition throughout the lifecycle;
  - b. Nutrition assessment;
  - c. The role of nutrition in disease prevention, management, and treatment;
  - d. Nutrition topics related to medical specialties such as obstetrics and gynecology, cardiology, and oncology;

- e. Food insecurity and its impact on health;
- f. Obesity treatment and prevention.

Within one year after passage of the Continuing Nutrition Education Amendment Act of 2019, the Department of Health's DC Center for Rational Prescribing shall develop and offer continuing education courses, free to District healthcare professionals, meeting the requirements of this section.

SEE ALSO: Legislation introduced in New York ([A7695](#) / [S5887](#)) would require 6 hours of training on clinically-proven methods for the prevention and treatment of diet-related illnesses every 2 years – for physicians only.

## IMPLEMENTATION



### The DC Center for Rational Prescribing

In partnership with the Department of Health, the DC Center for Rational Prescribing (DCRx) will develop and offer continuing education courses needed to satisfy the nutrition CE requirements free to District providers. DCRx is led by the

George Washington University School of Medicine and Health Sciences with funding from the DC Department of Health. It provides non-commercial, independent continuing education, along with access to other educational resources.

Visit the online learning center: [gwcehp.learnercommunity.com/dcrx](http://gwcehp.learnercommunity.com/dcrx)

Policymakers should consider addressing the following components when drafting similar legislation:

- ✓ What provider types will be subject to new CE requirements
- ✓ What accredited entity, if any, will develop / provide CE activities
- ✓ How the development / provision of required CE activities will be funded
- ✓ What agency will be responsible for ensuring CE requirements are met



Heart disease, cancer, and stroke are leading causes of death in D.C. Nutrition should be a first-line prescription that doctors and nurses make to help turn around these epidemics.

– Susan Levin, MS, RD,  
Physicians Committee for Responsible Medicine



[1] <https://www.stateofobesity.org/states/dc/>

[2] Aggarwal M, et al. The deficit of nutrition education of physicians. *Am J Med* 2018;131(4):339-45.

## Case Study Insights

**Varied Approaches.** The case studies did not yield a definitive answer to questions of when or how obesity is best addressed in prelicensure training. Rather, the variety of curricular frameworks and instructional methods encountered suggests that there may be many viable approaches—some profession-specific and others generalizable—to improving prelicensure provider training and education on obesity. Additional practice studies are needed to determine whether certain methods of integrating the Competencies should be prioritized (e.g. required vs. elective, pre-clinical vs. clinical, integrated vs. standalone).

Common features of the exemplary obesity-focused curricula featured in the case studies included:

- » Vertical and horizontal integration of obesity-related learning objectives and activities within the program's broader curriculum
- » Use of didactic and interactive instructional methods
- » Emphasis on skills acquisition and application
- » Emphasis on clinical-community linkages and multidisciplinary care as core
- » Delivery of core components over extended period (e.g. days, weeks, or years)
- » Refinement of content and delivery based on outcomes and learner feedback

**Clinical Application.** Provider knowledge, values, attitudes, and skills all affect quality of care for patients with obesity and can be assessed during prelicensure training. Most programs emphasized the need to reinforce the application of obesity care competencies in clinical experiences, but few programs indicated that they have established formal standards for routine monitoring and evaluation of learner competence in the clinical domain. This finding is surprising given that common methods of assessment applicable to all health professionals are not necessarily time or resource intensive, such as inclusion of obesity management services as items in experience logs or required demonstration of safe-handling practices and care adjustments for patients with severe obesity (e.g. use of properly-sized equipment, respectful operation of assisted ambulation equipment). Some case study participants suggested that it may be easier to assess mastery of the Competencies in integrated curricular frameworks, where clinical experiences and didactic instruction are synchronized rather than chronological. In the interim, continuing to assess obesity-related knowledge and attitudes in didactic coursework will enhance students' valuation and acquisition of obesity-related clinical skills.

**Role Models.** Even the most well-planned, comprehensive curricula are sometimes derailed during implementation. In the case of provider training and education on obesity, unchecked weight bias and inadequately-trained clinical faculty are common obstacles that can thwart otherwise effective instructional methods. For example, the curriculum may

be undermined by practitioner behaviors displayed during clinical rotations (e.g. weight bias, not adhering to evidence-based CPGs). As one case study participant emphasized, students are not empowered to confront inappropriate conduct and may need additional opportunities to debrief on their experiences. Programs could then respond to student frustrations by offering obesity-specific professional development trainings for clinical educators. The “Weight Management Counseling Preceptor Score” pioneered by investigators of the new [MSWeight curriculum](#) is one example of an evaluation metric that could be used to assess and improve the quality of clinical instruction on obesity management during required clinical experiences (e.g. clerkship, practicum).

**Coordination.** The development and implementation of a comprehensive curriculum on obesity requires collaboration from multiple professions and institutional leaders. Notably, programs with access to faculty with obesity expertise, interdisciplinary university-sponsored obesity care clinics, and/or dedicated obesity research centers appeared more likely to offer, refine, and systematically evaluate obesity-related training opportunities. Programs employed innovative approaches to address the inherent challenge of coordinating curricular activities on obesity, such as establishing interdisciplinary obesity-specific institutional committees to provide guidance on the development of various curriculum components applicable to students across professional training programs (e.g. lectures, problem-based learning, teaching kitchens, OSCEs, apprenticeships). These committees addressed program-specific deficits by fostering learning activities that capitalized on the collective faculty expertise in caring for patients with obesity across programs and typically consisted of a curriculum coordinator and faculty from medicine, pharmacy, nursing, nutrition / dietetics, exercise science, psychology, and public health with special expertise or interest in obesity care.



## Catalog of Curated Curricular Resources

Educators need ready access to current, reliable curricular resources that can be easily tailored to meet the learning needs of trainees in their profession. We have previously identified and highlighted several publicly-available resources that may be useful for integration of obesity-related PTE into the curriculum of any profession. These included:

- *Change Talk: Childhood Obesity* motivational interviewing simulation
- Image banks from OAC, Rudd Center, World Obesity, Obesity Canada
- Implicit associations test (IAT) for weight bias
- *The Weight of Nation* (2012) HBO documentary series
- AAPA's Learning Central *Obesity Leadership Edge* curriculum

While a limited number of additional high-quality curricular materials related to care of adults with obesity are available through general repositories (e.g. [AAMC's MedEd Portal](#)), no central database houses obesity-specific curricular content. The curation and active promotion of these resources—and possibly production of additional materials—is necessary to ensure that relevant stakeholders with vested interest in improving obesity education successfully integrate competencies into PTE programs and practices.

Educators repeatedly identified implementation toolkits, profession-specific needs assessments, and profession-specific case studies of existing programs that demonstrate how obesity can be integrated into PTE as resources that would most improve their profession's ability to adopt the Competencies. Although we have begun to address these resource needs, additional technical assistance may be required to support integration of obesity in the curricula of relevant health professional training programs.

We pursued several strategies for identifying pre- and post-licensure curricular resources that could be used to improve health professionals' competence in caring for persons with obesity, including [1] direct outreach to training programs via the curricular survey, [2] an extensive review of published literature, and [3] targeted review of existing content in publicly-available databases. The table below highlights several of the curricular resources included in the database.

*Please see the APPENDIX for an overview of the criteria that we used to screen potential resources for inclusion in the database.*

Sample Resource	Summary
	<p><b>Obesity Learning Center</b> A collection of variable-length educational activities and supplemental resources that educators can assign to students or look to for inspiration on how to incorporate obesity into the curriculum.</p>
	<p><b>Obesity Video Series: A Practical Look at Obesity, Diabetes, and Current Strategies</b> A collection of variable-length videos and educational assessments focused on prevalent issues in obesity management.</p>
	<p><b>HOPE (Health Professionals Obesity Prevention Education) Curriculum</b> The HOPE Curriculum is a web-based, multidisciplinary curriculum that educates pediatric clinicians on health consequences of childhood obesity, screening techniques to identify those at risk, and weight counseling methods to educate families on ways to prevent childhood obesity.</p>
	<p><b>Clinical Advances in Treating Obesity as a Chronic Disease: Novel Insights and Strategies</b> The Clinical Advances in Treating Obesity as a Chronic Disease: Novel Insights and Strategies curriculum provides education on the latest clinical trial results and therapeutic strategies for obesity management.</p>
	<p><b>How to Incorporate Bariatric Training into Your Fellowship Program</b> Provides proposed objectives, curriculum content, training models, available resources and assessment of competence for obesity medicine and endoscopy training within gastroenterology fellowship programs.</p>
	<p><b>Medical Training to Achieve Competency in Lifestyle Counseling</b> This scientific statement provides guidance in defining fundamentals in medical education and training needed for future physicians to be proficient in lifestyle medicine, focusing on key learning objectives that can be implemented as each school sees fit.</p>
	<p><b>Resources for Improving Medical Nutrition Education and Training Curricula</b> Real-world examples of efforts to improve undergraduate and graduate medical education in nutrition by integrating formal learning with practical, experiential, inquiry-driven, interprofessional, and population health management activities are provided.</p>

# NEXT STEPS

## Future Needs and Suggested Priorities

Restructuring obesity education across the continuum of training in each profession will require a coordinated effort on the parts of educators, practitioners, trainees, accrediting bodies, academic institutions, professional organizations, patients and policymakers. Because the prevention and treatment of overweight and obesity are evolving fields, a commitment to critical appraisal and lifelong learning should be fostered. The scope of implementation should continue to extend beyond schools of education/training to target current providers through continuing medical education (CME) and health systems. Many of these partners can offer valuable resources and insights on workforce development, strategic partnerships, and scaling effective practices related to provider training and education on obesity. However, there is no consensus on the most appropriate methods for addressing obesity in licensure and continuing education requirements.

**Curriculum.** Tremendous variation exists in the number of instructional hours and most salient obesity-related curricular topics covered across professions and programs. Some methods of integrating competency-based training and education on obesity into existing curricula require substantial investment on the part of professional training programs. However, improving educators' access to high-quality curricular tools specific to obesity can address this barrier and was a focus of this project. Competency-based education rests on the ability to clearly define competencies and the level of student performance associated with the mastery of those competencies.

Our case studies identify several programs that have developed methods of assessment for one or more of the Competencies, but development of profession-specific comprehensive competency assessment frameworks that can be applied across programs is an important next step. The Obesity Medicine Education Collaborative (OMEC) has begun this process for physicians, NPs, and PAs, but not for other allied health professionals that provide much of the direct care for persons with obesity. To minimize duplication of efforts, each profession could use the OMEC's [Educator Instructional Guide](#)—which includes basic instructions for assessment of existing or planned curricula, learners in prelicensure training programs, and learners in non-training educational environments (e.g. CME)—and [Competency Assessment Form](#) as a starting point for customization.

Moving forward, additional collaborations are possible. For example, objective structured clinical examinations (OSCEs) are time-intensive to develop and require additional planning to implement. Opportunities could include a partnership with the Association of Standardized Patient Education (ASPE) to develop and freely distribute OSCEs on obesity. Both public and private funding sources should be dedicated to improving pre-licensure



training and education on obesity. On the public side, there are opportunities to advocate for obesity-specific workforce training grants and/or education funding (e.g. recent Health Resources Services Administration grants).

The value of prioritizing obesity in the curriculum will be established by longer-term evaluation studies that assess how incorporating enhanced training and education on obesity into providers' pre-licensure training impacts the quality and coordination of care for persons with obesity. Efforts should be made to establish obesity-specific outcomes / metrics of interest and methods for conducting impact evaluation across professions, populations, and settings. Furthermore, exemplars or studies highlighting disparities in required obesity education relative to training on other chronic conditions (e.g. diabetes, osteoarthritis, depression) could foster productive conversations about the adequacy and rationale of current educational frameworks used by each profession.

**Accreditation.** Most professions include broad requirements that accredited programs address domains of knowledge, collaboration, professionalism, and care delivery but do not dictate what disease states should be covered in the context of these domains. An important next step could be establishing a process to operationalize the Competencies. Profession-specific crosswalks can be used to demonstrate how curricula specific to obesity can help meet the more general competencies of the profession, rather than establishing new competencies. In the Resource Database, we have included examples of curricular frameworks cross-walked to accreditation standards for several allied health professions.

Professional societies that influence or oversee accreditation requirements may be important targets for future engagement (see Appendix). Although the American Medical Association formally promotes the inclusion of education on obesity prevention and the medical complications of obesity in medical school and appropriate residency curricula (D-440.980), most health professions involved in the care of persons with obesity have not issued directives urging accredited training programs to incorporate obesity into their curricula. Advocacy to encourage all professions to issue similar directives is warranted.

**Licensing Exams.** Coverage of obesity-related knowledge in licensing exams can be expected to meaningfully improve care for adults with obesity. However, this method of integrating the Competencies is not feasible for all professions, some of which administer several types of examinations for different levels of training or revise exam content based on practice audits. For advanced practice professionals, targeting inclusion of obesity content on licensing exams or maintenance of certification requirements may be a viable option. A deep dive using a methodology similar to Kushner (2017) would likely be required to explore inclusion of obesity-related content on licensing exams and/or to



determine how inclusion of educational topics on licensing exams influences breadth of coverage during training (i.e. extent that programs teach to the test).

**Professional Development.** Presently, there are few educators/trainers who can model appropriate care. Train-the-trainer courses and other professional development activities are needed for those faculty and clinicians that are expected to model evidence-based obesity care practices for trainees. Bias and stigma are central issues that need to be addressed. Bias among current providers and educators is a problem across all professions and leads to resistance to changing curriculum. Increasing the number of board-certified obesity medicine diplomates (ABOM) and interdisciplinary weight-management specialists ([CSOWM](#)) who serve on curricular committees may help to overcome inertia and facilitate positive change in curricula.

*Screening Criteria for Inclusion in Resource Database*