

# Weight Management Matters

## Weight Management

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### CPEU ARTICLE

## Weight Bias from a Socio-Ecological Model Perspective

By: Colleen Tewksbury, PhD, MPH, RD, CSOWM, LDN



Weight biases are attitudes, beliefs, judgements, or stereotypes based on a person's weight.<sup>1</sup> This is most commonly experienced as a preference for thinness and fat-phobia, or

dislike of persons with obesity, and is pervasive throughout society. Paradoxically, the majority of US adults struggle with weight. Nearly 7 out of 10 US adults have overweight or obesity.<sup>2</sup> Prevalence is estimated to rise to 8 out of 10 by 2030 with the greatest increase in severe obesity to nearly 1 in 4 adults.<sup>3</sup> This poses a significant public health and societal challenge. Despite the prevalence of overweight and obesity, weight bias is equally prevalent throughout society.<sup>4</sup> Conflicting with popular belief that it will motivate systems and individuals to make positive changes, calling negative attention to weight has been shown to produce the opposite effect.<sup>5,6</sup> Nutrition professionals are not immune to this cultural bias, potentially undermining care and emphasizing the need to identify and surmount implicit and explicit forms of weight bias.<sup>7</sup>

The socio-ecological model was developed by Bronfenbrenner in the late 1970s as a way to view individuals within the environmental systems they inhabit, and serves to inform notions of bias

in our discussion.<sup>8</sup> Figure 1 is a visualization of weight bias within the socio-ecological model. There are five levels of influence: public policy, community, organizational, interpersonal, and individual. The individual is at the center of the model with nested levels of influence surrounding each other. The interpersonal level comprises the microsystem directly impacting an individual, or direct interactions. Organizational level includes specific policies and systems indirectly impacting the interpersonal and individual levels. Community level is primarily driven by culture, including language used and depictions. The macrosystem enveloping all of these levels is public policy. This article aims to summarize the levels of influence from the macro to microsystem in respect to weight bias and identify areas of needed research and potential solutions.

### Public Policy

One of the greatest challenges to addressing obesity is the lack of effective policies to prevent and treat obesity. Obesity is often viewed as a personal issue and a lack of will rather than a disease in need of treatment.<sup>4</sup> This perception of individual responsibility is reflected in policy approach. Effective treatments such as behavioral

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intervention, anti-obesity medications, and bariatric surgery are available but often not accessible due to policy challenges.<sup>9,10</sup> Although behavioral weight management treatment is a covered benefit under Medicare, it is not without limitations. This service can only be provided by primary care providers, not by weight management subspecialists such as bariatricians or registered dietitians. Additionally, reimbursement is often viewed as too little to make this care fiscally feasible. Although most US adults are insured privately, Medicare coverage is a model for most third-party payers including coverage by state Medicaid programs. Less than 1% of the clinically-eligible population actually receive anti-obesity medications, and nutrition counseling utilization is also suboptimal, with insurance coverage cited as the primary barrier.<sup>11,12</sup> The Treat and Reduce Obesity Act aims to rectify these gaps by expanding Medicare Part B coverage to include subspecialists as providers of Intensive Behavioral Therapy and anti-obesity medications.<sup>13</sup> However, the proposed bill has been in circulation for years and is in its third introduction to the legislative branch with limited traction. Unlike other comparable diseases and despite a demonstrated need for intervention, obesity has few public policy leaders championing this cause, leaving it to stall in legislative sessions.<sup>10</sup> This lack of access to obesity treatment is a form of structural weight bias by placing barriers in front of individuals that are not debated with other chronic diseases. Reduced utilization of treatment in turn exacerbates socioeconomic health inequities and will have a significant public health and financial impact if left unaddressed.

In addition to this lack of access to treatment, few to no legal protections exist for those with obesity. There are currently no federal protections around weight, and Michigan is the only state prohibiting weight discrimination.<sup>14</sup> Massachusetts currently has legislation proposing to make discrimination based on height and weight unlawful.<sup>14</sup> Employers from casinos to health systems have legally imposed weight restrictions on their staff.<sup>15</sup> Despite strong, non-partisan public support of laws prohibiting weight discrimination, widespread protections have yet to be enacted.<sup>16</sup>

## Continuing Professional Education Section



### Shelly Summar, MSEd, RD, LD is the CPEU Section Editor

Explicit and overt forms of weight bias are often easy for clinicians to identify. The more subtle and systemic forms of weight bias, including favoring thinness, are pervasive and have significant impacts on access and delivery of healthcare. Nutrition professionals are not immune to this bias. This article summarizes the levels of influence in respect to weight bias using a sociologic framework and identifies areas of needed research and potential solutions.

The primary action necessary to improve public policy is advocacy. Multiple organizations including the Academy, the Obesity Society, and the American Society for Metabolic and Bariatric Surgery have combined forces to form the Obesity Care Advocacy Network (OCAN).<sup>17</sup> Groups like OCAN have published policy agendas and advocated for advancing policies to address obesity and systemic forms of weight bias, including access to care and discrimination. Further work from groups such as OCAN is necessary to continue to change policies within the US. These changes would have downstream effects in each of the levels of influence described here.

### Community

Cultural norms around weight are a primary driver of societal implicit weight bias, or negative attitudes about weight that may not be explicitly stated. Thinness is the prevailing preference within Western culture and negativity towards excess weight is considered socially acceptable. This is best exemplified in media portrayals of individuals with overweight or obesity. Multiple studies have found overwhelmingly stigmatizing and negative portrayal of individuals with obesity in the media.<sup>18</sup> Heuer et al. found that the majority of news articles (72%) reporting on obesity including images included negative stigma-

tizing images.<sup>19</sup> These images often include individual with obesity inappropriately dressed or eating. Those with overweight or obesity in the photos assessed were more likely to have their heads cropped out of the photographs, effectively shaming those portrayed for their size and removing their personhood. Despite their popularity, "before and after" photos have also been shown to enhance weight stigma and perpetuate negative weight stereotypes.<sup>20</sup>

Portraying individuals with obesity in non-stigmatizing, non-stereotypical ways is an effective mechanism to minimize implicit bias. A study by Hinman and colleagues presented participants with images of persons with obesity in stereotypical situations (eating snacks, watching television) and non-stereotypical situations (preparing vegetables, exercising).<sup>21</sup> Using Implicit Association Tests (listed in Table 1), implicit weight bias was present among participants in both situations, but was greater in the stereotypical situations. Pearl et al. similarly found that viewing positive images of individuals with obesity was associated with reduced weight stigmatization.<sup>22</sup> Unfortunately, as anyone with a stock photography resource account will find with a quick search, stigmatizing images are the prevailing search yield. However, multiple resources are available to assist the public. The Obesity Action Coalition

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offers free stock photos for individuals to use portraying individuals in humanizing, respectful fashion. Normalizing these images not only in media, but also in presentations, clinical or otherwise, is imperative to impacting this level of influence. Additionally, Obesity Action Coalition, the American Society for Metabolic and Bariatric Surgery, the Obesity Society, and the Rudd Center for Food Policy and Obesity collaborated to create a guideline for appropriate portrayal of personas with obesity in the media. These resources and their corresponding links can be found in Table 1.

Similar to portraying all individuals in a humanizing light, speaking in the same manner is another mechanism to address community biases, especially among clinicians. This includes using person-first language in all forms of communication, such as “a person with obesity” rather than “an obese person.”<sup>23</sup> This verbiage is already commonplace in other areas of healthcare (the phrase “a cancerous person” is likely to receive some pushback), but is gaining traction within most subspecialties in an effort to emphasize that clinicians treat people, not problems. Changing the normal language to person-first can be accomplished by professional organizations adopting it as a requirement in their journals and presentations.

### Organizational

Physical environment challenges for people with obesity are widespread. A common example is equipment. Within healthcare settings, individuals present for different types of care, not just for weight management. Therefore, it is recommended that structural support be in place throughout institutions. This includes having appropriately sized and weight-rated equipment to care for all patients including scales, beds, chairs, exam tables, and gowns.<sup>24</sup> Armless chairs and large blood pressure cuffs are easily modifiable environmental changes to help accommodate individuals of all sizes. The weight limit of equipment should be labeled in an accessible manner for all staff along with protocols in the event a patient exceeds a weight limit. For example, scales often do not clearly label a weight limit and may not be able to accommodate many patients with obesity. Less than half of providers report having a scale in their office that measures more than 350 pounds.<sup>25</sup> Not having weight-appropriate equipment available is often seen as a barrier to individuals seeking care.



These organizational biases can be addressed by establishments providing “weight friendly” spaces. Policies should be enacted for the built environment to provide appropriate equipment for individuals of different sizes, limiting stigmatizing imagery, and prohibiting discriminatory practices. This can include mandating training. Previous studies assessing the effects of weight bias have suggested implementing work, school, and medical policies to screen for and train individuals.<sup>5</sup> Explicit guidance on what constitutes “weight friendly” spaces in turn reduces the likelihood of individual biases to impact organization-level environment.

### Interpersonal

Persons with obesity often report experiencing interpersonal instances of bias. Patients report these interactions occurring most frequently with family members which is associated with greater levels of weight bias internalization.<sup>26,27</sup> Individuals with internalized weight bias are more likely to report binge eating behaviors, poor self-esteem, and depression.<sup>28</sup> A contributing factor of this bias is lack of education around the complex development and treatment of obesity. Many perceive weight gain as a character deficit or a lack of willpower, despite consistent reports that the vast majority of adults with overweight or obesity have attempted weight loss many times. Weight bias can also impact professional advancement. Individuals with obesity are less likely to be hired and more likely to receive worse performance evaluations.<sup>29</sup> Those who experience weight bias at work also exhibit higher levels of weight bias internalization.<sup>27</sup>

Behind family members, individuals with obesity report clinicians as the second most common individual they receive weight bias from, including nutrition and exercise professionals.<sup>26,30</sup> Puhl and colleagues found that patients reported experiencing multiple epi-

sodes of weight bias from practitioners.<sup>26</sup> This bias appears to be present prior to practice, as previous studies have found dietetic students express moderate amounts of fat-phobia.<sup>7</sup> These biases in turn impact clinical care. Nearly 4 out of 5 patients report eating as a coping mechanism in reaction to experiencing clinical weight bias and 3 out of 4 reported refusals to diet in response.<sup>26</sup> Additionally, those experiencing weight bias are more likely to inconsistently self-monitor, have increased caloric intake, decreased caloric output, and greater attrition in treatment.<sup>31,32</sup> Interpersonal weight bias, especially in response to bias in a healthcare interaction, has consistently shown to have a negative impact.<sup>33</sup>

The literature of effective weight bias reduction interventions, specifically for clinicians, is limited.<sup>34</sup> The primary mode of addressing weight bias within interpersonal interactions is identification and acknowledgement of the bias. There are multiple tools available for individuals, including clinicians, to assess their weight biases. Educating individuals on the complexity of the development of obesity can serve as a next step. Additionally, training for students and clinicians can be effective in reducing weight biases. This includes patient-centered counseling approaches such as motivational interviewing.<sup>35</sup> Within personal relationships, weight bias levels were greater among persons who reported not having any family members or friends who shared stories of experiencing forms of bias.<sup>36</sup> Greater communication and sharing of stories may be an intervention to address this.

### Individual

Each of these levels of weight bias contributes to the development of internalized weight bias. Individuals with a higher body mass index who report weight stigma internalization are

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more likely to report worse physical quality of life.<sup>37</sup> Experiencing weight bias also impacts care. Those who experience weight bias are less likely to seek preventative healthcare services, even if they have access and insurance coverage.<sup>38,39</sup> Individuals are also less likely to make a follow up appointment if they have gained weight since their last office visit.<sup>40</sup> Persons reporting “everyday” instances of weight bias also rate their motivation to lose weight lower.<sup>41</sup> Additionally, women who report internalized weight bias have been reported to be more likely to have episodes of binge eating and less likely to engage in weight loss dietary changes.<sup>42</sup> All of these relationships emphasize the impact weight bias has on weight- and health-related behaviors and highlight the difficulty of providing care in the context of weight bias.

Mechanisms to reduce internalized weight bias align with many of the interventions discussed here. For example, Pearl and colleagues found that individuals with obesity presented with vignettes portraying weight discrimination as illegal exhibited lower levels of internalized weight bias when compared to those presented with vignettes of legal weight discrimination.<sup>43</sup> Studies have suggested integrating weight stigma interventions into treatment as well.<sup>44</sup> A recent randomized controlled trial assessed the effects of a weight bias and stigma intervention within a cognitive behavioral therapy weight loss program versus a standard cognitive behavioral therapy weight loss program.<sup>45</sup> The authors did not find differences in weight loss between intervention and control groups. However, the authors did find reduced levels of weight stigma in the intervention group. This suggests that integrating interventions into treatment may also be a feasible approach to reducing internalized weight bias but may not have an effect on weight outcomes.

The presented explanation of weight bias within the socio-ecological model aims to provide a system in which to understand weight bias. However, it is important to note that weight bias does not occur in isolation; obesity bias intersects with other social determinants of health, such as sex, race, and socioeconomic status. Although both men and women report experiencing weight bias, researchers have suggested that men exhibit higher levels of bias and weight bias has a greater impact on females.<sup>36,46</sup> Women with obesity have lower quality relationships when compared to men.<sup>47</sup>

Weight stigmatizing experiences in pregnancy are associated with greater postpartum weight retention.<sup>48</sup> Puhl and colleagues found those with lower education and income more likely to exhibit weight bias internalization.<sup>6</sup> Black adults have reported lower levels of weight stigma internalization compare to White adults.<sup>49</sup> Gay men have also reported higher levels of internalized weight bias than their heterosexual counterparts.<sup>50</sup> The intersectionality of weight stigma compounds the challenges faced by persons with obesity.

Weight bias occurs at each level of influence within the socio-ecological model. Because of its pervasive impact, multiple levels of change are necessary to address this issue. Table 2 summarizes different methods to reduce weight bias. Continued advocacy, policy change, using person-first language, and respectful portrayals of those with obesity are appropriate steps to take. Specific to nutrition professionals, identifying and acknowledging individual bias and challenging it in individual practice can be an effective foundational first step. Clinicians can assess their biases through multiple online tools, some of which are listed in Table 1. Implicit bias is not fixed, so completing these assessments on a regular basis can help assess change over time. With individual actions and systemic change, weight bias can continue to be reduced and its subsequent impact minimized.

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#### CPEU Process

Log in to [www.wmdpg.org](http://www.wmdpg.org) and then link to the CPEU quiz [here](#).

Take the quiz. Quiz results are reviewed at the end of each month. If you score 80% or higher, your CPEU documentation will be emailed to you.

Figure 1. A socio-ecological model view of weight bias.



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Table 1.

Available resources to identify and address weight bias
<p>Obesity Action Coalition <a href="https://www.obesityaction.org/">https://www.obesityaction.org/</a></p> <ul style="list-style-type: none"> <li>• Guidelines for Media Portrayals of Individuals Affected by Obesity</li> <li>• Education Materials</li> <li>• People First Language Recommendations</li> <li>• Image Gallery</li> <li>• Reporting Weight Bias Issues</li> </ul>
<p>The Rudd Center for Food Policy and Obesity <a href="http://www.uconnruddcenter.org/weight-bias-stigma">http://www.uconnruddcenter.org/weight-bias-stigma</a></p> <ul style="list-style-type: none"> <li>• Media Gallery</li> <li>• Video Modules</li> <li>• Guidelines for Media Portrayals of Individuals Affected by Obesity</li> </ul>
<p>Harvard Project Implicit <a href="https://implicit.harvard.edu/implicit/takeatest.html">https://implicit.harvard.edu/implicit/takeatest.html</a></p> <ul style="list-style-type: none"> <li>• Implicit Association Test</li> </ul>
<p>Obesity Care Advocacy Network <a href="https://obesitycareadvocacynetwork.com/">https://obesitycareadvocacynetwork.com/</a></p> <ul style="list-style-type: none"> <li>• Federal and State Policy Tools and Resources</li> <li>• Fact Sheets</li> <li>• Position Statements</li> </ul>
<p>Weight Management Dietetic Practice Group <a href="https://www.wmdgp.org/">https://www.wmdgp.org/</a></p> <ul style="list-style-type: none"> <li>• Quick Guide on Weight Bias</li> </ul>

Table 2.

Methods to reduce weight bias
Educate yourself and others on obesity development and treatment
Use person-first language
Advocate for public policies to reduce weight bias and improve access to care
Promote a “weight friendly” environment in work, school, and clinical settings
Portray individuals with obesity in a positive, respectful manner
Encourage individuals with internalized weight bias to seek care and/or integrate weight bias interventions into obesity treatment care plans

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# WM DPG's Investments in Our Academy Foundation Builds Critical Research Evidence

## Focus: Evidence Analysis Center's Weight Management Project

By: Hope Warshaw, MMSc, RD, CDE, BC-ADM

### Welcome to a new column!



The seed for this new column grew from an observation by me, a current member of the Academy Foundation Board and founding and longtime WMDPG member, and your

WMDPG leaders. We realized that WMDPG members (YOU!) need a deeper and consistent level of information about the investments your DPG has and continues to make in the Academy Foundation with the overarching goal of building the critical research evidence to support what we do as nutrition professionals.

#### The three goals for this column are straightforward:

1. Let WMDPG members know about the research initiatives their DPG has funded, over the years, and continues to support.
2. Promote wider knowledge about the remarkable work, since 1966, of the Academy's Foundation and how it supports our profession through scholarships, awards, grants, fellowships, and much more.
3. Encourage WMDPG members to individually contribute to the Academy's Foundation by setting up (at any point in your career) a long term giving plan. (More about this below.)

Regarding goal number one, in each of these columns I will put the spotlight on one of the four initiatives WMDPG has contributed to and continues to invest in. The focus of this column is the *Evidence Analysis Center's Weight Management Project*.

- **Project goal(s):** The objectives of this evidence scoping review were to identify and characterize studies examining weight management interventions provided by an RDN among adults with overweight or obesity. The associated research question was: among adults with overweight or obesity, what is the availability of literature examining weight management interventions provided by an RDN to improve nutrition-related outcomes? The results from this scoping review can reveal the availability of literature in this area, which in turn could help researchers to determine the need and scope for a systematic review and evidence-based guideline.

- **Background:** In December 2018, WMDPG collaborated with the Academy's Evidence Analysis Center (EAC) to conduct a scoping review and a systematic review on the topic detailed under the project goal(s) above. The scoping review was Phase I. The literature search resulted in 30,551 records with 16 additional records identified through other sources. The first step of screening resulted in excluding a total of 29,756 records due to duplication or irrelevancy. Of the 811 articles eligible for full text screening, 139 met the criteria for inclusion. The majority of the included (n=139) studies were conducted in U.S or Canada and in community settings. The majority of these studies were clinical or quasi-experimental trials (97%). RDNs delivered weight management intervention in all studies but some studies (61%) also included other interdisciplinary team members. Six types of intervention modes were identified, which resulted in 22 combi-

nations of modes of delivery. In the included studies, the average length of intervention was about 10 months with a follow-up that ranged from 0 to 9 years. Based on the findings from this scoping review, it was clear that conducting a systematic review and developing an evidence-based practice guideline on adults weight management interventions provided by an RDN will be beneficial.

- **WMDPG's investment:** WMDPG made an investment of \$62,000 to be paid over two years to support this project.
- **Publications and presentations:** A manuscript describing the scoping review findings has been submitted to JAND for publication.
- **Project benefit to members:** This scoping review identified a few systematic reviews and evidence-based practice guidelines on weight management interventions but none of them met the previously defined eligibility criteria. Thus, from the results of this scoping review we can convincingly report that it would be beneficial to conduct a systematic review and develop an evidence-based practice guideline on adult weight management interventions provided by an RDN to guide practitioners and to evaluate their effects on nutrition-related outcomes.
- **Significance:** The findings from this scoping review and future systematic reviews will provide an evidence base that focuses on a variety of successful nutrition intervention strategies for this population. The results will help RDNs improve person-centered care and clinical outcomes.

(Continued on page 9)

- **Project status:** An expert panel for systematic review process has been selected and very soon Phase II, that is conducting a systematic review, will be initiated.

It's my hope that with greater awareness of and insights into the breath and impact of the WM DPG supported Academy Foundation projects it will encourage YOU, as an Academy member, to invest directly in the Academy Foundation. Since I joined the Foundation Board in 2018, I've been awed by the impressive direct impact generous contributions to the Foundation from members and other organizations are making to put our profession on firm footing well into our second century (started in 2017).

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nutrition professionals are benefitting from the Foundation's efforts. Over the last three years, the Foundation has provided \$182,500 to WMDPG members through scholarship, award, grant and fellowship programs. These have been made possible through the generosity of Foundation donors.

I know of no better way to invest in the future of our profession than with a gift to the Foundation. Please consider making an annual contribution. Your gift can be made online at [www.eatrightfoundation.org](http://www.eatrightfoundation.org) online or pledged over a longer time period by using the attached pledge form. Please consider making a contribution today and annually!

**Acknowledgements:** The author appreciates the input from Academy staff members Beth Labrador, Development Director for the Academy of Nutrition and Dietetics Foundation and Deepa Handu, PhD, RDN, Sr. Scientific Director, Evidence Analysis Center at the Academy of Nutrition and Dietetics.

**Hope Warshaw, MMSc, RD, CDE, BC-ADM** is a Registered Dietitian and Certified Diabetes Care and Education Specialist (CDCES) who has been involved in weight management and diabetes care, education and support for over forty years. She applies her credentials as a consultant, book author, freelance writer and media spokesperson within her business, Hope Warshaw Associates, LLC, a consultancy based in Asheville North Carolina. Hope is the author of numerous consumer diabetes-focused books published by the American Diabetes Association and many consumer- and clinician-focused publications. During her career Warshaw has served in several volunteer roles with the Weight Management DPG including being a founding member and working on several symposiums. In leadership roles Hope served as chairperson of the Diabetes Dietetic Practice Group (DDPG) and was president of the Association of Diabetes Care and Education Specialists (formerly AADE). She currently serves on the Academy of Nutrition and Dietetics Foundation board in the role of secretary. It is in this role that she is writing these articles for WMDPG.

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# Preventing Obesogenic Acculturation of Refugees

By: Natalie Love RD, LD, CLS



America is a melting pot of cultures from around the world. We welcome people from all nations that come seeking asylum, refuge, or a better life. According to the US Department of State, America has taken in more than 3.7 million refugees and asylees since the passage of the Refugee Act in 1980.<sup>1</sup> A refugee is someone who has been forced to flee their country due to persecution, war or violence and has a well-founded fear of persecution for reasons of race, religion, nationality, political opinion or membership in a particular social group.<sup>2</sup> Last year America accepted 30,000 refugees and in Fiscal Year 2020 a new refugee admissions ceiling has been set at 18,000.<sup>1</sup>

Registered dietitian nutritionists (RDNs) may work with refugees in a variety of environments. When refugees resettle in a new country they are exposed to new foods, new food cultures, new ways to obtain and prepare food, and often, completely different ideas about eating. In many ways, refugees will need to adapt to this new lifestyle. Unfortunately, that often involves adopting our obesogenic lifestyle.

Healthcare providers have been struggling for decades with providing timely, appropriate care to refugees who are often unfamiliar with America's healthcare system and may have difficulty navigating day to day activities. Refugees who have spent time in refugee camps are at increased risk for infectious disease such as tuberculosis, HIV, hepatitis, malaria, intestinal parasites, etc.<sup>3,4</sup> They are also more likely to be malnourished due to limited food rations at refugee camps or conditions in their home country.<sup>5</sup> Some refugees face additional mental health challenges related to the trauma of fleeing their home, stress associated with violence or upheaval in their home country, the strain of leaving family behind, stress of travel and living in a refugee camp, the pressure of living in a new and unfamiliar country where they may not speak the language, the anxiety of settling and taking care of their family, financial stressors, as well as stressors associated with possible discrimination or racism.

## Pediatric Article

Patricia Novak, MPH, RD, CLE, LD

As obesity is a global pandemic we would expect to see obesity in refugees arriving to the US. For those refugees who arrive underweight or with an appropriate body mass, the risk of obesity looms through acculturation to American activity and eating patterns. This article provides an overview of the complexity of obesity prevention and intervention and suggests resources both for clients and professionals for greater success.

For more information on how trauma can influence counseling see Spring 2020 Weight Matters article [The Relationship between Traumatic Life Events and Pediatric Obesity: Enhancing Trauma Informed Care](#) By: Brenda Manzanarez, MS, RD, Mari Radzik, PhD, Brittany Kabakoff, LCSW.



Multiple studies have shown that when refugees resettle in a developed country, they are likely to eat more unhealthily and to also be less active.<sup>6</sup> There are a variety of reasons for this and, of course, each refugee family is different but there are some common themes that may influence refugee's diet and health decisions.

### Assessment of Risk

Acculturation is an important part of embracing life in a new country. Some acculturation is by choice and some is involuntary or unconscious. Unfortunately, acculturation has been found to increase risk of obesity and associated non-communicable diseases such as diabetes and hypertension due to weight gain and environmental and psychological stressors.<sup>7</sup> Some key points to consider regarding refugees and acculturation are listed below.

- Refugees often have a greater access to food, this includes both healthy foods, such as a wide variety of fruits and vegetables available year-round, wide varieties of whole grains, lean meats, dairy, etc. as well as junk foods, highly processed foods, and fast food.
- Reading nutrition labels and evaluating ingredients in prepared foods may be a completely new concept.
- History of food insecurities in their home country or refugee camp can lead to overeating foods that are calorie-dense, nutrient poor, and easy to obtain.<sup>8</sup>

- Older children in particular want to fit in with their peers and eat foods that they eat.
- Parents may prefer to continue cooking traditional foods from their home country but acquiesce to their children's demands for American foods. This may mean cooking traditional foods alongside American foods or by adding high sugar/high fat snacks, sweetened beverages, and fast food into their family's diet.
- Parents want to be assured that their children have plenty to eat and this may lead to unintended overfeeding and weight gain.
- Many cultures, particularly of African descent, believe that being overweight or obese is a sign of health, beauty, and prosperity.<sup>9</sup>

When refugees first arrive in a new country most are given limited assistance from various refugee resettlement programs. These programs are extremely helpful but often work with tight budgets and minimal staff to provide a multitude of services to large numbers of families. Services can include housing assistance, assistance with applications for documents and IDs, applications for temporary benefit assistance programs for food, cash, and medical support, getting children enrolled in school, helping employable adults prepare for their first job in a new country, English as a second language classes, and many other ser-

*(Continued on page 11)*

vices. Unfortunately, these programs can only help short term and in limited capacities. For many refugee families, finding employment and balancing a budget can be another factor that affects diet and lifestyle choices. These families often have very limited economic resources and may find it challenging or even intimidating to navigate a grocery store or large supermarket if this is not something they have been exposed to before. In addition to the unfamiliarity with grocery stores, refugees who receive food assistance in the form of Electronic Benefit Transfer (EBT) cards are often at a loss as to how to use these cards. Both the Supplemental Nutrition Assistance Program (SNAP), also known as food stamps, and the Special Supplemental Nutrition Program for Women, Infants and Children (WIC) typically provide their benefits via an EBT card. Well intending staff may or may not try to explain how to use this EBT card but ultimately it is up to the refugee to figure it out and these benefits may go unused amidst the overwhelming experience of navigating a supermarket and using the EBT card. Refugees may be worried they will exceed the card value leading to embarrassment at the checkout aisle. They may not be able to find the foods they are familiar with and hesitate to buy new foods or items packaged and printed with a language they cannot read. For example, I once told a refugee mother that she could only purchase fruits and vegetables that were either fresh or frozen with her WIC benefits and our interpreter explained that she didn't understand the term "frozen" because this was not available in their country. Refugees are eligible to receive WIC benefits but due to a variety of factors, refugee children are less likely to be enrolled in WIC compared to other children.<sup>5</sup>

Many studies have shown the correlation between low income and obesity.<sup>10-13</sup> Having limited financial resources may shift dietary choices toward a diet that consists of energy dense, highly palatable foods that provide the maximum amount of calories at the least cost.<sup>13</sup> These tend to consist of foods that are high in fat and/or sugar. While obesity rates in America and across the globe steadily increase, rates are highest among the most disadvantaged groups including those with low income, low education, higher poverty, and minority status<sup>14</sup> and refugees tend to be included in many of these categories. Combining limited economic resources with limited education of a whole new food culture often sets refugees up for failure in obtaining a healthful, balanced diet.

Another factor that can play a role in increasing prevalence of obesity in refugees is lack of physical activity. Due to limited financial resources refugees may live in poor housing conditions in neighborhoods where parents feel it is not safe for children to play outdoors thus increasing sedentary activities. In addition to older children often wanting to fit in with their American peers, the availability of electronic devices such as smartphones, tablets, computers, video games, etc. may cause children to choose these more sedentary activities.<sup>6</sup> Adult refugees may have more access to cars and public transportation than they did in their home country. Families may have modern conveniences and amenities that weren't as easily available in their country such as dishwashers, stoves, microwaves, vacuum cleaners, washing machines, dryers etc. All products that make life easier but also decrease physical activity and energy expenditure. Physical activity may have been more integrated in their day to day activities in their home country, whereas now it may be something they have to seek out and find time for.

### Counseling Considerations

Refugees may be referred to an RDN when these diet and lifestyle factors lead to increased BMI or associated disorders; diabetes, heart disease, hypertension, etc. Providing nutrition counseling to refugees may initially present more barriers than working with non-refugee patients but these barriers should not be seen as insurmountable. We will discuss some key recommendations when working with refugees. Being aware that a refugee patient may have a very different world view and may still be unaccustomed to American culture is a good place to start.

Some refugees do not see a connection between a diet related disease diagnosis and their diet and lifestyle choices. Horn of Africa refugees of Islamic faith often believe that their health is solely in "Allah's hands" and if they developed a disease it is "God's choice" and that they have very little control over the matter.<sup>9</sup> Many refugees are not familiar with the concept of "counseling" in general, whether it is medical counseling, mental health counseling, nutrition counseling, etc. and may not understand why it is desired, deeming it unnecessary. It is important to explain a bit about the counseling process, the purpose and potential benefits.

Using a linguistically and culturally appropriate approach to learn more about refugee patient's background and beliefs is a vital first step in providing nutrition services. Asking about food preferences, foods prepared at home and how those may have changed since arriving in America can provide insight on how they are adapting to the American food culture.

Maintaining a sense of cultural identity is important to many refugees and should be considered. Refugees may want to continue preparing foods they like and are familiar with from their home country as well as maintain activities or rituals that are familiar. Some refugees are fortunate to live in or find a community of refugees from their home country that can both aid in the acculturation process as well as maintain their cultural identity. Some studies have found that providing group programs, family counseling, community education or peer to peer education can be more effective and is often preferred by refugee patients.<sup>15-17</sup> Keep in mind these patients are likely to have limited resources and may not know how to access available resources. Making recommendations that are simple and concise as well as culturally appropriate can aid in motivating change. Flexibility, compassion and innovation are necessary when working with refugees to make diet and lifestyle changes to improve health.

**Natalie Love** is a Nutrition Service Specialist with more than ten years of experience working with refugees through the WIC program in Louisville, Kentucky. Natalie aided in the development and execution of refugee specific WIC programs at refugee resettlement centers throughout the Louisville metropolitan area. Natalie specializes in lactation support and holds a Certificate of Training in Childhood and Adolescent Weight Management. She enjoys the challenge of working with a wide range and diverse group of clients. An area of particular interest is working with new mothers and inspiring parents to provide the best nutrition for their families. Natalie received her Bachelors of Science in Nutrition and Dietetics from Eastern Kentucky University and completed her Dietetic internship with Aramark in Baltimore, Maryland. Natalie now resides in Southern Indiana where she enjoys spending time outdoors hiking and camping, playing with her highly energetic dog, and reading novels.

(Continued on page 12)

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# How to Grow Motivation to Exercise in Patients: A Self-Determination Theory Approach

By: Kira Werstein, PhD



When patients do not exercise, healthcare providers often assume their inactivity is due to a lack of knowledge and proceed to provide education. In an era where information is readily accessible to all, an education-based conversation with the patient may be a dated approach. In fact, research shows that most people are not inactive due to a lack of knowledge.<sup>1</sup> This can be seen in that the reasons people report for physical inactivity suggests a lack of motivation to overcome intrapersonal (e.g. time) and environmental barriers (e.g. social support).<sup>2</sup> Therefore, Motivational Interviewing a new approach to the practitioner-patient conversation based on the Self-Determination Theory (SDT),<sup>3,4</sup> has increasing evidence to support that growing patient engagement and motivation may be more effective in promoting exercise adherence than an education-based approach.<sup>5,6</sup>

The SDT posits that a person will be most motivated in the long-term when exercise is self-determined, enjoyable, and when they feel a sense of belonging. Practitioners can thwart motivation in their practice through a lack of integration, defense, or fulfillment of these needs with unhealthy substitutes. Conversely, practitioners can support patient motivation when they use the SDT framework to guide the practitioner-patient conversation.

This article is not intended to provide a comprehensive script for every type of situation and patient condition that a practitioner may encounter. It is written to introduce a new approach to growing patient motivation by supporting the patient's basic needs (i.e. self-determination, competence, relatedness) and to consider the effects the use of various reasons on long term motivation.

## Self-Determination

People may start exercising for reasons that are not self-determined (e.g. avoid medication, guilt), but motivation typically doesn't last long when they feel pressured, manipulated, or oth-

## Physical Exercise

Felicia Steger, PhD, RD

The breadth and depth of the beneficial effects of exercise for health and well-being are profound but not surprising to those in healthcare or science. However, effective techniques for encouraging our patients and clients to move more often fall short. In this edition, Dr. Kira Werstein discusses using the self-determination theory of exercise to build exercise motivation with our patients. Moving from conversations where we are simply telling patients to move more and discussing the benefits of exercise to a dialogue that supports autonomy by supporting and nurturing individual interests and internal reasons for change. From there, the practitioner can set personalized goals for activity and facilitate more exercise through addressing individual barriers.



erwise controlled externally. As such, the traditional approach to promote exercise behavior change in healthcare through educating and controlling has shown poor adherence.<sup>5</sup>

Instead, a person has the highest level of lasting motivation when exercise is autonomous (i.e. self-determined). As such, practitioners can provide autonomy support by facilitating, supporting, and nurturing. Specifically, motivation can grow from a variety of sources and has varying effects depending on whether it is controlled or autonomous.

Exercise is experienced with low self-determination when it is perceived as the means to an end. Therefore, practitioners can support autonomous motivation when they focus on behaviors (e.g. exercise) instead of outcomes (e.g. weight loss). For example, people with low self-determination may report that they exercise because:

"...my doctor told me to, otherwise I have to go on blood pressure medication," a form of external motivation.

"...my wife has been nagging me," a form of introjected motivation.

"...I want to lose weight" a form of identified motivation.

Exercise is autonomous when it reflects a personal interest and is enjoyable and fulfilling in-and-of itself. For example, people with high self-determination exercise for intrinsic and introjected reasons and may report that they exercise because:

"...I know it's good for my health and my health is important to me (integrated motivation)."

"...I enjoy it and it makes me feel good (intrinsic motivation)."

While health care practitioners are the experts in health, they may impede autonomy and thwart motivation with an authoritarian approach such as, "you should....and here's how..." Instead, practitioners can better support autonomy by recognizing what the patient already knows and supporting how it best fits into their lifestyle. For example, a provider could ask, "tell me what you already know about diabetes management..." and, "...how do you think exercise would work best in your lifestyle?"

(Continued on page 14)

Practitioners may feel that they are saving time or are giving a new perspective to their patient when they provide reasons why their patient should start exercising. However, as the saying goes, “a person convinced against their will is of the same opinion still.” Therefore, practitioners will best support exercise autonomy and behavior change when they determine why exercise is important to their patient. A practitioner could ask, “...it sounds like you’ve already thought about starting an exercise program, tell me about why exercise is important to you.” When a practitioner draws out motivations that are already within their patient, they directly support autonomy and fuel exercise motivation.

Furthermore, the current paradigm of the culture is that exercise is primarily a tool for weight loss and body weight regulation. Conversely, research is clear that the benefits of exercise extend well beyond body weight regulation. Regardless of whether a person loses a single pound, exercise independently reduces risks for disease, increases life expectancy, improves mental health by decreasing anxiety and depression, enhances mood, and improves physical function and quality of life.

Promoting exercise as a tool for weight loss is an extrinsic reason that is low in self-determination. As such, exercising primarily for weight loss is not a reason that maintains long-term motivation.<sup>7</sup> Instead, a practitioner could ask, “...what types of exercise have you enjoyed in the past?” and, “it sounds like you’ve enjoyed walking in the past.” Therefore, practitioners support lasting exercise behavior change when they evoke and affirm intrinsic reasons that patients report.

## Competence

Motivation and persistence to exercise also increases when we feel competent, which is the belief that we are capable. Practitioners are in a unique position to support or hinder a patient’s exercise competence. To best grow patient competence, practitioners can meet patients where they are in their current health status and support realistic steps for growth. For example, a patient who is currently inactive may find the physical activity guidelines to achieve 150 minutes per week of moderate intensity activity unattainable. Therefore, patients should be supported in starting with an appropriate duration of exercise given their current fitness level and increase activity and intensity gradually.

Practitioners can further affirm exercise competence in their patients by recognizing previous exercise success. For example, a practitioner affirms competence and supports the design of an exercise program by saying, “It sounds like you’ve had success with walking in the past, tell me more about a walking regimen that you think would work well in your schedule.”

## Sense of Belonging

Another basic assumption of the SDT is that humans are relational beings that are more motivated when they feel that their well-being is genuinely supported by significant others. Practitioners can support a sense of relatedness by showing sincere interest and warmth, expressing empathy and non-judgmental support, and avoiding confrontation or criticism.

For example, if a patient set a goal to walk for 30 minutes three times per week, but reported that they only walked once last week. The practitioner who responds with, “well, if you’re going to lower your cholesterol you need to figure out how to exercise regularly,” leaves their patient feeling judged and criticized. Instead, a practitioner who responds with, “it sounds like you had a really busy week, yet you still managed to walk once. Tell me more about how you were able to fit your walking in that day,” shows support and compassion for the reality of the client’s situation, affirms their accomplishment without judgement, and demonstrates genuine understanding.

## Summary

Ironically, like their patients, practitioners often display an initial resistance to behavior change specific to using a new approach to the practitioner-patient conversation. Maintaining an open mind to using a collaborative, SDT approach to patient engagement takes time and effort to learn. Yet, cutting edge research shows that motivation to maintain lasting behavior change can be reinforced by practitioners via support of autonomy, competence, and relatedness. Practitioners are uniquely positioned in the lives of their patients to provide a strong influence on the exercise behavior and ultimately health-related outcomes for patients. When practitioners support an intrinsically driven exercise regimen for their patients, they can help grow autonomy and enjoyment that fuel long-term motivation.

**Dr. Kira Werstein** is a teaching professor of exercise psychology at Iowa State University. She also writes articles for lay populations on exercise adoption and adherence on her blog, *Living the Exercise Circuit* ([www.kirawerstein.com](http://www.kirawerstein.com)), which may be a helpful resource for patients.

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# Member Services Update

Mary Gray Hutchinson, MPH, RD, LDN

## Happy Fall Weight Management DPG Members!



I hope that everyone has enjoyed a relaxing summer despite the limitations and changes that Covid 19 has brought about. For our veteran members- thank you for renewing your

DPG membership. And for our new members- Welcome! We are excited that you have joined our group and look forward to sharing all of the amazing resources developed to help you in your weight management profession. Make sure to check out our website to access the electronic mailing lists (EMLs), evidence based Quick Guides, past recorded webinars as well bariatric teleforums, and many more resources. You can find us at [www.wmdp.org](http://www.wmdp.org).

Thank you to our 2019/2020 Weight Management members who took time to complete our member survey in the spring.

We had a great response rate (10%) and heard some great feedback that we plan to use in the near future. We heard about resources and offerings that you, as members, were interested in having more information on in the future. You stated that you were interested in more virtual benefits, including virtual symposiums. We also received feedback on social media. We plan to become increasingly active and give you more. We listened and will continue to listen. We value your feedback and always welcome any insights you bring to our group.

Are you attending the virtual FNCE this year? Make sure to visit our website to learn more about FNCE events. We hope to "see" you there!

### CALLOUT FOR STUDENTS:

Are you a student member who would be interested in contributing an article to the Weight Management newsletter? Or, do you

know a standout student member that we could feature in an upcoming newsletter? We are looking for student members who are working on interesting and innovative work related to weight management. Perhaps they are teaching fitness classes, developing a strong Insta-following with healthy recipes & lifestyle habits, volunteering and teaching classes about nutrition to those interested in weight management...Anything goes. We want to hear what members are doing and highlight what they are offering to those around them. If someone comes to mind, please contact Heather Krawsek at [hkrawsek@yahoo.com](mailto:hkrawsek@yahoo.com).

Again, thank you for your membership and continued support. If you have any comments or questions, please feel free to reach out to me at [mghutchison@gmail.com](mailto:mghutchison@gmail.com).

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# New Treatments for Micronutrient Insufficiency among Bariatric Surgery Patients

By: Shannon Galyean, PhD, RDN, LD



Bariatric surgery is considered the most successful long-lasting treatment for severe obesity; however, micronutrient deficiencies are common despite

recommendations for high dose supplements.<sup>1</sup> Since many micronutrients control energy metabolism, deficiencies can result in an array of symptoms, ranging from anemia to neurological dysfunction.<sup>2,3</sup> Additionally, subclinical micronutrient deficiency can lead to increased risks for coronary artery disease, infections, age-related macular degeneration and oxidative damage.<sup>4,5</sup> Possible causes of micronutrient deficiencies after bariatric surgery are vomiting, decreased food intake, food intolerance, reduced gastric secretions, bypass of intestinal surface area for absorption, and failure to comply with recommended vitamin regimens.<sup>6,7</sup>

Multiple case series have reported post-operative, malabsorptive procedures to increase prevalence of micronutrient deficiencies.<sup>6</sup> For malabsorptive procedures, patients are recommended to take frequent and increased doses of micronutrient supplements daily.<sup>8</sup> In a cohort of adults who underwent bariatric surgery, 73% of the patients had at least one nutritional deficiency 5 years later even though they reported taking a dietary supplement.<sup>9</sup>

The factor that contributed most significantly to deficiencies was patient nonadherence, with only 33% of subjects who were consistently taking the recommended vitamin and mineral supplements.<sup>10</sup> Post-bariatric surgery patients must take several doses of vitamins/minerals frequently throughout the day to adequately maintain nutritional levels. Studies looking at medication adherence show that adherence is inversely proportional to frequency of dose, and that patients who take medication on a schedule of 4 times daily achieved adherence of about 50% of the time.<sup>11</sup> However, there are some patients, up to 47%, that may be non-responders to supplements even with compliance rates of about 86-93%.<sup>12</sup> What can

## Bariatric Surgery

Emily Thevis, RDN, LD, CSOWM, CDE

Bariatric surgery is clearly an effective and underutilized treatment for obesity, but like any medical procedure, it has associated risks. One of the most persistent, long-term risks is vitamin and mineral deficiencies stemming from many factors, including reduced food intake, malabsorption, and patient nonadherence. Here, Dr. Shannon Galyean, RD, looks at new treatments utilizing nutrigenomics, analyzing gut microbiota and micronutrient absorption, and different routes of delivery that can help reduce the risk of post-bariatric surgery deficiencies.



be done to improve micronutrient deficiencies among bariatric surgery patients? New treatments utilizing nutrigenomics, analyzing gut microbiota and micronutrient absorption, and different routes of delivery could be the future direction in this area of research.

### Genetics

Genetic variation among individuals could be the root cause for varying responses to the same regimen and explains why some individuals respond better to a certain regimen than others in the same environmental conditions.<sup>13</sup> Genetic testing can be a critical tool for health and medical diagnosis, treatment, and prevention. It may become one of the most useful tests regarding medical nutrition therapy (MNT).

Identifying gene-nutrient interactions is the underlying concept of personalized nutrition (PN).<sup>14</sup> Nutrigenomics is the study of the effect of specific nutrients on gene expression,<sup>14</sup> while nutrigenetics refers to the study of genetic variations of an individual that can provide some prediction for personalized dietary management.<sup>15</sup> Both nutrigenomics and nutrigenetics may be strategies to improve understanding of the gene-diet interaction and deliver individualized MNT to prevent chronic nutrition-related diseases.<sup>14,15</sup> However, it is influenced by a number of factors, including dietary consumption, physical/social stressors, and infections.<sup>16</sup> Furthermore, the impact of nutrition could vary among individuals

and specific population subgroups based on their molecular and genetic makeup.<sup>16</sup> Studying this complex nutrient-gene relationship can provide information on potential biomarkers of nutritional status, disease progression, and response to interventions. Identifying these nutrient-gene pathways and their variants can help predict those at-risk for deficiencies. This may help to provide earlier intervention pre-operatively and develop strategies to prevent micronutrient deficiency post-operatively.

### Gut Microbiota

The human gut microbiota (which has its own genome) can modulate signaling pathways and regulate gene expression.<sup>17</sup> Diet, lifestyle, medications, and environmental exposure can increase inflammation within the gut, causing dysbiosis that can contribute to chronic diseases and other illnesses.<sup>18</sup> Gut dysbiosis is characterized by enrichment of or decrease in specific bacteria and low microbial gene richness, which is restored after bariatric surgery but not fully.<sup>19</sup> The gut microbiota is very important to the metabolism of dietary components (example: the breakdown of polysaccharides and polyphenols and the synthesis of vitamins).<sup>20</sup> Interestingly, gut microbial contribution to vitamin metabolism has been recognized in whole-genome metagenomic studies, suggesting microbe-mediated vitamin metabolism.<sup>21,22</sup>

(Continued on page 17)

Pre- and probiotics, as well as diet, can alter the gut microbiome in a manner that improves human health.<sup>23</sup> Some gastrointestinal symptoms such as excessive gas, foul smell of flatulence, abdominal bloating or pain can be experienced after bariatric surgery and probiotics may improve these symptoms.<sup>24</sup> Probiotics have also been shown to improve bacterial overgrowth, vitamin B12 availability, and weight loss after gastric bypass surgery (GBP).<sup>25</sup> However, one study showed no significant effects in individuals that had GBP after 15 days of synbiotics (pre- and probiotic combined).<sup>26</sup> Investigating how the gut microbes can positively influence vitamin metabolism as well as the optimal timing for synbiotic supplementation, duration of treatment, type and dose to be used after bariatric surgery is warranted.

### Route of Delivery

Development of a one-time-dose vitamin supplement to provide adequate micronutrients could improve adherence and possibly absorption, depending on the route. Even if adherence were not an issue for vitamin and mineral levels after bariatric surgery, absorption could be. Research to determine the proper dosage and route of administration is encouraged.<sup>27</sup>

Transdermal delivery of micronutrients could be an option because it does not involve the stomach and intestines, which are altered after bariatric surgery, leading to malabsorption and/or intolerance to oral supplements.<sup>6</sup> A delivery mechanism using micro-needles (MNs) could provide a potential alternative to oral micronutrients.<sup>28</sup> Dissolving MN arrays (collection of microneedles) have been used for the delivery of many compounds, such as small proteins, and nanoparticles.<sup>28</sup> It is important that the device can permeate through the stratum corneum (skin's outermost layer), enabling the delivery of micronutrients into the deeper regions of the skin where they can be absorbed directly into the systemic circulation.<sup>28</sup> One study incorporated vitamin K into a dissolving MN array for neonatal prophylaxis of vitamin K deficiency and delivered a sufficient amount *in vitro*.<sup>28</sup> Another study used a transdermal delivery system for sustained vitamin D release using coated MN and found better performance for vitamin D release into plasma compared to an ointment-based transdermal method.<sup>29</sup> This could be one route of delivery to help micronutrient absorption after bariatric surgery.

Another route of delivery for micronutrients could involve a single intramuscular (IM) injection. Research looking at more effective ways to treat vitamin D deficiency has found that IM injections of cholecalciferol were effective in elevating vitamin D levels. Studies conducted in biliopancreatic diversion with duodenal switch (BPD/DS) patients, having hypovitaminosis D despite full oral supplementation, received a single injection of 600,000 IU of cholecalciferol that showed it to be a simple and highly effective treatment.<sup>30,31</sup> These studies failed to show an improvement in bone mineral density, which is a concern for bariatric surgery patients due to metabolic bone disease (MBD).<sup>32</sup> Research is necessary to identify an adequate dose of vitamin D in an injectable form after bariatric surgery to improve MBD as well as maintain vitamin D levels.

A multivitamin/mineral microneedle array patch or an injectable delivery of micronutrients could have a crucial impact in bariatric surgery populations by not having to take oral formulations. Further investigations are needed to determine effective delivery routes to treat micronutrient deficiency among the bariatric surgery population.

### Conclusion

Micronutrient deficiency is very common and is challenging to prevent and treat after bariatric surgery. These deficiencies represent a long list of possible side effects that necessitate identifying those at-risk and finding the most effective treatments. This could involve nutrigenomics and personalized nutrition, utilizing therapies to improve the gut microbiota to help micronutrient metabolism, and/or eliminate malabsorption issues by finding alternative routes to deliver micronutrients. These areas are novel and need further investigation to confirm their role in the bariatric surgery population; however, they are promising.

*Shannon Galyean is a PhD, RDN, LD and assistant professor in the Nutritional Sciences department at Texas Tech University. She is also a clinical dietitian at Texas Tech University Nutrition & Metabolic Health Initiative. Dr. Galyean's research investigated the use of a once monthly oral ergocalciferol supplement in post-bariatric surgery patients in order to improve serum Vitamin D levels. She is currently working on projects involving prebiotic/probiotic supplementation in bariatric surgery patients with severe obesity, the effectiveness of an injectable Vitamin D on bone health in bariatric surgery patients as well as predictive genetic testing as a tool for the bariatric surgery population.*

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# Interprofessional Simulations in Dietetic Education

By: Abigail Rider, MS student in public health nutrition/dietetic intern

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## The Interprofessional Approach

Interprofessional education, according to the World Health Organization, “occurs when two or more professions learn about, from and with each other to enable effective collaboration and improve health outcomes.”<sup>1</sup> A workforce that is educated using an interprofessional approach is more prepared to engage in collaborative practice, which occurs, “when multiple health workers from different professional backgrounds work together with patients, families, caregivers and communities to deliver the highest quality of care.”<sup>1</sup> Interprofessional collaborative practice has been

linked to improved patient outcomes and morbidity, increased satisfaction, safety, compliance, and reduced healthcare costs.<sup>2,3</sup>

## The RDN’s Role on the Interprofessional Team

The Academy of Nutrition and Dietetics recognizes the valuable role of a Registered Dietitian Nutritionist on healthcare teams.<sup>4</sup> Currently, nutrition students are underrepresented in interprofessional training literature.<sup>5</sup> One study on an interprofessional training simulation included nutrition and exercise physiology students on a type 2 diabetes case.<sup>6</sup> Students reported an increase in their clinical skills and ability to work on an interprofessional team, suggesting that simulations are an effective method of interprofessional training.<sup>6</sup>

## Student Article

Mary Gray Hutchison MPH, RD, LDN

Registered dietitians are key members in interdisciplinary healthcare teams. Not only do they bring the perspective of nutrition care into the discussion, they add the component of seeing the patient as a whole system. Patient care simulations help dietetic students learn the valuable interpersonal skills in working with other healthcare professionals. Innovative curriculums such as the one discussed in this article allow students to practice these skills in a structured way.



## Interprofessional Training Simulations at the university

At the University of Tennessee, Knoxville (UTK), a Health Resources and Services Administration (HRSA, award number 1UK1HP31710-01-00) supported a faculty team of primary care, interprofessional education, and content experts to develop the Transforming RN Roles in Community Based Integrated Primary Care (TRIP) program. Details of the TRIP program have been published elsewhere.<sup>7</sup> In brief, TRIP incorporates didactic, clinical, and simulation over 4 semesters (2 years). During simulations, nursing, pharmacy, and nutrition students engage in scenario driven activities addressing integrated primary care, population health, interprofessional practice and culturally competent care. In the simulation described below, undergraduate and graduate students from nutrition, pharmacy, and nursing collaborated to provide care to a simulated client – a child with asthma and obesity. For the nutrition students at UTK, this simulation was their first opportunity to interact on an interprofessional team.

Graduate nutrition students were offered the ability to participate in the simulation for extra credit in a nutrition counseling course. Interested students met with their professor who worked as a faculty member on the TRIP project before the simulation to prepare. Students reviewed relevant evidence-based guidelines related to childhood obesity and asthma to prepare for the simulation. During the simulation, students were divided into four person teams: one nutrition graduate student, one pharmacy graduate student, and two undergraduate nursing students. The teams were given instructions for the simulation by nutrition, nursing, and pharmacy faculty members. The teams were given 10 minutes to prepare and review the mock chart. As a team, the group discussed how they would structure the appointment and how each of the professions would interact together. When the team entered the appointment, the nursing student began the appointment followed by the pharmacy student and finally the nutrition student. The team used a client-centered approach to allow the patient to guide the appointment. Overall, the simulation went well. The team of

(Continued on page 20)

students addressed the patient's concerns and assisted the patient to make goals for herself to improve her health.

After the simulation, the students and faculty members met again to debrief. This was a helpful time to hear feedback from both peers and faculty members about the evidence-based information shared during the simulation, the ability to work together on an interprofessional team, and the ability to clearly communicate with the patient. The simulation was a helpful tool to learn how to navigate working on an interprofessional team. It provided an opportunity to practice collaborating with other professions on topics where both disciplines overlapped, for example the nutrition-related side effects of asthma medication. It takes skill to work efficiently as an interdisciplinary team, and the simulation provided an excellent opportunity to refine this skill.

## Conclusions for Practice

In conclusion, as healthcare continues to adopt an interprofessional approach, RDNs should be prepared to have a role on the interprofessional team. In order to prepare for working with other professions in this manner, dietetic students should seek out opportunities to gain practice working with an interprofessional team whenever possible during their educational careers.

Acknowledgement: This project/publication is supported by Grant Number UK1HP31710 from the Health Resources and Services Administration (HRSA), of the U.S. Department of Health and Human Services as part of an award totaling \$2,659,027. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of, nor an endorsement by HRSA, HHS, or the U.S. Government.

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**Abigail Rider** is pursuing a master's degree in Public Health Nutrition and dietetic internship at the University of Tennessee, Knoxville, where she also obtained her bachelor's degree in Nutrition in 2018. Abigail is interested in public health nutrition interventions aimed to reduce childhood food insecurity. Her thesis research focuses on the federal Summer Nutrition Programs. She hopes to work as a Registered Dietitian Nutritionist upon completing her degree in August 2020.

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**Lora Humphrey Beebe, PhD, PMHNP-BC, FAAN**, professor, University of Tennessee College of Nursing, Knoxville TN, USA is a psychiatric nurse researcher and nurse educator. Teaching responsibilities have included undergraduate and graduate didactic and clinical teaching in psychiatric mental health, research and health policy. At present, Dr Beebe is lead faculty on the Transforming RN Roles in Community Based Integrated Primary (TRIP) Care grant, an interprofessional collaboration including faculty and students from nursing, pharmacy and nutrition in didactic, clinical and simulation activities designed to foster interprofessional collaboration in primary care settings (HRSA funded, 2018-2022). Her areas of expertise include the care of community dwelling persons with schizophrenia and related disorders, as well as recovery based care and innovations in course delivery and interdisciplinary curricula.

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**Hollie A. Raynor, PhD, RD, LDN** is a professor in the Department of Nutrition and the Interim Assistant Dean of Research for the College of Education, Health, and Human Sciences at the University of Tennessee Knoxville. She has been involved in interprofessional training for the previous six years and is the Nutrition faculty member on the Transforming RN Roles in Community Based Integrated Primary (TRIP) Care grant. Dr. Raynor has been actively involved in the WM DPG for over 10 years and currently serves as the TOS Liaison for the Academy of Nutrition and Dietetics. Her research focuses on lifestyle intervention in children and adults and is funded by the National Institutes of Health.

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# Letter from the Chair

By: Becky Reeves, DrPH, RDN, FAND



Never could I have imagined that as I began my year as Chair of WM DPG that our country would be battling a deadly virus called COVID -19. But you play the hand you're dealt and keep moving forward. Your

Executive Committee has done just that, accepted the challenge that this situation demanded and has remained flexible and cooperative in every area. I am sure within your own practices and family life, you, too have made many adjustments to cope with this maelstrom of disease and I commend you on your effort. I especially want to recognize those members who are working in all types of healthcare facilities and perhaps performing duties outside of their practice area just to manage the workload that this pandemic has caused. We salute all of you who have adapted your practices to cope with this pandemic.

## So now the latest updates from WM DPG.

As you are well aware, FNCE® 2020 is now a virtual event scheduled for October 17-20, 2020. Please register for our annual meeting and trade show in this exciting new format. The Weight Management Spotlight session is planned for Monday afternoon, October 19 at 2:30-3:30 CT and is titled "Looking AHEAD: Putting Lessons Learned from the Action for Health in Diabetes Study into Practice". Our speakers are Delia West, PhD, SmartState Endowed Chair and Director, TechHealth Center, Professor of Exercise Science, Arnold School of Public Health, University of South Carolina, and Linda Delehanty, MS, RD, Chief Dietitian, Diabetes Clinic, Director of Nutrition

and Behavioral Research, Massachusetts General Hospital Diabetes Center and Associate Professor, Harvard Medical School.

Following the session at 7 pm ET is the WM Event for members titled "Lessons Learned: Celebrating WM DPG Award Recipients". During this live webinar the following WM award winners will speak on the motivations, methods, and mentors that have helped each of them find joy, meaning, and impact in their professional practice:

Ginger Cochran, MS, RDN, CEP-ACSM, CDCES (Emerging Practice)

Geeta Sikand, MA, RDN, FAND, CDE, CLS, FNLA (Outcomes Research)

Michelle Cardel, PhD, MS, RD, FTOS (Emerging Outcomes Research)

Shelly Summar, MSED, RD, LD (Practice)

Please register to join our webinar honoring our award recipients. Check your blast emails for the invitation.

Last fall, the Academy Quality Management team approached WM to revise the document Standards of Practice and Standards of Professional Performance for Registered Dietitian Nutritionists in Adult Weight Management that was published five years ago. We are excited to inform you that three WM members were selected as authors for this revised paper. They are Robin Nwankwo, MPH, RDN, CDE; Colleen Tewksbury, PhD, MPH, RD, CSOWM, LDN; and Janet Peterson, DrPH, RDN, RCEP WEMT, FACSM. Sarah Henes, PhD, RDN will serve as the Executive Committee Lead Reviewer.

Linda Gigliotti, MS, RDN, was appointed to lead a new project called the Healthy Weight Task Force. The charge of the task force is to "Organize a campaign to increase awareness of the power of weight management in contributing to the health of an individual". The members of the task force are Connie Diekman, MEd, RDN, FAND, Bert Herald, RDN and Courtney Luecking, PhD, RDN.. They are recommending to the Resource and Webinar teams materials on critical thinking for weight management including new Quick Guides and a webinar.

Weight Management has received a monetary gift from Linda Delehanty, MS, RD. One of the companies with whom she consults was willing to make a donation to an organization of her choice and she chose WM DPG. With these funds she is planning to develop a patient decision aid to facilitate shared decision-making to guide dietitians in the process of using a patient-centered approach to discuss weight loss and choices to reduce calorie intake (including choice to do nothing). Eileen Myers, MPH, RDN, FAND and Suzanne Brodney, PhD, RD will join her in developing this tool.

As I close this update with all of you, I have an exciting announcement. Weight Management will sponsor their first virtual symposium on April 1 and April 8, 2021. Save those dates and share with your friends. More information to come.

Stay healthy, wear your mask and be safe.

# Letter from the Editor

By: Lisa Paige, MBA, RDN, CSOWM, NBC-HWC



Hello from Western Colorado! I'm Lisa Paige, the incoming editor for our newsletter. I have been on the newsletter team for about 4 years. Living in a rural area means I've been an RDN in various

settings: school dietitian, ICU/acute, home care/hospice, SNF/Rehab/LTC, and private practice. I am a nationally credentialed Health and Wellness Coach, Certification in Obesity and Weight Management,

and a Level 2 Diabetes Educator. Recently, I enrolled in a Master's in Social Work program at University of Denver. Before all of this, I was an IT professional for about 25 years and mom to two incredible 30-something daughters.

In this issue, we hope to bring you up to date on the latest research and FNCE® happenings. For the budding authors in our DPG, please consider publishing in our newsletter. We love member authors and hope you will consider this opportunity.

There is a fantastic team of volunteers for our newsletter who put in the muscle for this membership perk. We hope you enjoy the newsletter and we look forward to bringing you three more issues this year.

Thanks again very much for your membership! Please let us know any great ideas you have for new articles. My email address is [lisa@redrunnercoaching.com](mailto:lisa@redrunnercoaching.com).