

# Improving Obesity Management in Adult Primary Care


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**STOP**  
STRATEGIES TO  
OVERCOME & PREVENT  
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## Improving Obesity Management in Adult Primary Care

The United States is experiencing an obesity epidemic. According to the Centers for Disease Control and Prevention (CDC), nearly 34 percent of American adults are obese, and an additional 34 percent are overweight.<sup>1</sup> In nearly two-thirds of states, more than 25 percent of the adult population is obese.<sup>2</sup> Obesity rates have contributed to worsening health outcomes and an explosion of health care costs, as overweight and obesity significantly increase the risk of developing more than 20 different diseases and health conditions, including Type 2 diabetes, hypertension, metabolic syndrome, cardiovascular disease, specific cancers, and osteoarthritis.<sup>3</sup> A recent study published in the journal *Health Affairs* estimates that obesity accounts for 9.1 percent of annual health care spending in the United States, costing our nation up to \$147 billion in 2008 alone.<sup>4</sup> With national attention increasingly focused on the health and economic costs associated with obesity, efforts to reduce obesity and its related diseases have become a priority for both policymakers and the medical community.

To discuss the evolving state of the screening, treatment and management of obesity, the Strategies to Overcome and Prevent (STOP) Obesity Alliance hosted a roundtable of experts in August 2009 to discuss effective and innovative obesity treatment practices in the primary care setting. Attendees were leading health experts, academics and providers from a cross-section of organizations, including the Centers for Disease Control and Prevention, Harvard Medical School, Geisinger Health System, Holston Medical Group, CalorieKing Wellness Solutions, Inc., University of Maryland, Society for Women's Health Research, The University of Vermont College of Medicine, and several Alliance Steering Committee and Associate Members, including American Heart Association, The Obesity Society, American Medical Group Association, Obesity Action Coalition, American College of Sports Medicine, Association for Metabolic and Bariatric Surgery, American College of Sports Medicine and the Commissioned Officers Association of the U.S. Public Health Service. Topics of discussion included barriers to appropriate care for obese and overweight individuals, potential solutions to these barriers, and innovative approaches to obesity care. Following the roundtable, STOP Obesity Alliance staff members conducted follow-up interviews with a small number of participants to further develop ideas discussed at the roundtable.

This paper summarizes central themes from the literature review, the roundtable and key informant interviews that can help inform ongoing efforts to improve the integration of obesity screening, counseling and treatment into primary care practice. If we are to reduce the rates of obesity in the United States, we must focus our efforts on both prevention and treatment to ensure a comprehensive approach that addresses the needs of all patients, regardless of their weight or body mass index (BMI).

## Key Lessons from the Literature

In advance of the roundtable, STOP Obesity Alliance staff examined the existing literature on obesity management in primary care settings. While a broad variety of concepts were covered in the literature, the topics selected for this paper were those most frequently raised at the roundtable.

In the context of broad public discussion of obesity, clear definitions are crucial. The CDC states: *Overweight and obesity are both labels for ranges of weight that are greater than what is generally considered healthy for a given height. The terms also identify ranges of weight that have been shown to increase the likelihood of certain diseases and other health problems.*<sup>5</sup>

BMI is generally used to indicate ranges related to health risk, dividing the population into four categories: underweight (BMI <18.5); normal weight (BMI = 18.5-24.9); overweight (BMI = 25-29.9); obese (BMI ≥ 30). While BMI is useful as an easily calculated indicator of risk, it should be used in conjunction with other methods of estimating body size, composition, and risk.<sup>5,6</sup>

Primary care practices, including family and internal medicine, pediatrics, and obstetrics and gynecology, appear to be an important part of obesity management, since they often serve as the patients' primary point-of-contact with the health care system. However, most studies show that screening and counseling for obesity is not occurring regularly during primary care office visits. Recent literature indicates nearly 50 percent of visits did not include a record of the height and weight data necessary to calculate BMI.<sup>7</sup> For clinically obese patients (BMI ≥ 30), 70 percent did not receive a diagnosis of obesity and 63 percent did not receive counseling from their physician.<sup>7</sup> Lack of provider documentation of obesity is linked to the absence of counseling patients about weight loss and the health risks of obesity.<sup>8</sup>

While studies have shown that basic counseling about healthy behaviors takes less than five minutes, physicians often do not incorporate it into the visit.<sup>9,10</sup> The odds of receiving weight loss counseling are best in severely obese patients, patients with documented diagnoses of obesity, and those with weight-related co-morbidities.<sup>8</sup> Patients with co-morbid conditions linked to obesity tend to receive counseling more often than their equal weight counterparts, indicating that primary care physicians do not manage obesity as an independent medical condition. Even for patients with documented obesity, physicians only discuss weight 65 percent of the time, recommend exercise 62 percent of the time, and refer patients for nutritional counseling 25 percent of the time.<sup>8</sup> These low levels of counseling and referral indicate that there are barriers preventing physicians and patients from successfully initiating discussions about weight.

Since it is clear that physician counseling can increase the rates of attempted weight loss among obese patients,<sup>11</sup> it is important to understand the factors that contribute to the lack of counseling for these people in a primary care setting. Physicians' views on both obesity and the effectiveness of counseling impact how often they provide weight loss counseling to their patients.<sup>12</sup> Physicians cite lack of effective treatments, appropriate reimbursement,<sup>13</sup> and the belief that patients would not succeed, as well as opinions about the origin and responsibility for obesity as factors influencing their decision not to begin a discussion.<sup>12,14</sup> Physicians also tend to give low ratings to their ability to treat obesity because they might lack confidence in their weight counseling skills. As much as 44 percent of physicians in one study did not feel qualified to treat obesity.<sup>15</sup> Additionally, some physicians believe weight loss to be futile and dieting cycles dangerous for obese patients without co-morbidities.<sup>16</sup> Physicians with these beliefs prefer to treat the resulting health conditions rather than encourage patients to lose weight, under the assumption that any weight loss, and the resulting health improvement, cannot be maintained over time.<sup>16</sup> All of these factors contribute to "clinical inertia," a situation in which physicians do not counsel for weight because they feel there is nothing they can do to address the problem or that available treatments are ineffective.<sup>17</sup>

The dynamics of the physician-patient relationship can also have a dramatic effect on the likelihood and success of counseling for weight loss during a physician visit. Several studies have found stigmatizing attitudes toward obese patients among physicians,<sup>18</sup> which lessen the probability of positive physician-patient interactions. In addition, physician attitudes, and their consequent decisions on treatment, appear to be strongly influenced by the gender of the patient, further complicating efforts to address the problem as a whole.<sup>19</sup> Indeed, even the frequency of physician discussions related to weight may improve satisfaction with medical care related to weight issues.<sup>20</sup>

Overall, negative physician attitudes toward obese patients have the potential to drive them away from treatment—including care that is not weight-related—regardless of its effectiveness. Several studies have shown that obese patients are less likely than their non-obese peers to receive preventive screenings, including those for colorectal, cervical, and breast cancer.<sup>21,22,23</sup> As discussed below, the patient-physician relationship is crucial to the physician's ability to motivate the patient for weight loss and behavioral change, making the issue of stigma very important for discussions about improving primary care.

While much of the literature on obesity in primary care focuses on clinical relationships between patients and providers, discussions of chronic disease care in general often examine the importance of health care systems, multidisciplinary teams,<sup>24</sup> and care integration for disease management.<sup>25,26</sup> In general, care coordination mechanisms can take a variety of forms, many of which may be useful for improving primary care practice around obesity. Providers make decisions in the context of health care systems (e.g., care settings, payment structures and arrangements) and patient access depends on the system structure and ease of navigating health care resources.

The concept of “medical homes” was first discussed in the 1960s as a way to address scattered pediatric medical records and ensure consistent care for children.<sup>27</sup> Since that time, the concept has been refined and discussions have expanded to include the ways medical homes may also help to improve care for adults. The literature suggests coordination of care, through medical homes or other methods, may reduce costs, enhance quality of care, increase access, and improve record keeping.<sup>28</sup> A large body of literature discusses the possible benefits of the medical home model for primary care, including potential improvements in patient care,<sup>27,29</sup> patient satisfaction, and long-term medical costs.<sup>28</sup> Discussions of the potential for advancement in patient care have frequently focused on improvements in chronic disease treatment and management.<sup>28, 30</sup> Highly coordinated care may be easiest to provide through integrated medical systems, due to the reduction in time spent processing referrals and the lower staff cost of coordination.<sup>29</sup>

Another coordination mechanism that has received significant attention in national health reform discussions is health information systems, more specifically electronic medical records (EMRs). The literature suggests that electronic medical records have the potential to provide improved care coordination, patient tracking, consistency throughout patient records, and practice evaluation.<sup>31</sup> Many authors have explored the possible benefits of coordinated care for diabetes, obesity, and other chronic diseases,<sup>32,33</sup> increasing discussion of which methods would most improve obesity management in primary care practices.

## Key Ideas from Roundtable Participants

### Monitoring Weight, Health Indicators, and Risk

Monitoring health status and explaining risk factors is an important part of patient engagement.<sup>34</sup> Measuring weight and reviewing trends over time are central to good clinical practice. In general, successful weight tracking depends on reliable gathering of both height and weight data over time, combined with the regular calculation of BMI to track long-term patient progress. However, as discussed above, the height and weight data necessary to calculate BMI is often missing from patient records.<sup>7</sup> Because the odds of receiving weight loss counseling are best in patients with documentation of obesity,<sup>8</sup> consistently tracking the height and weight data, including BMI, used to document weight status may generate more frequent weight management counseling.

At the roundtable, participants agreed that making BMI assessment a quality measure for physicians could lead to more consistent monitoring of weight status and also encourage them to engage their patients in discussions about weight. An important first step in this direction was the addition of adult BMI assessment as an effectiveness-of-care measure in the 2009 Healthcare Effectiveness Data and Information Set (HEDIS) measures, administered by the National Committee for Quality Assurance (NCQA).<sup>35</sup> Used by health insurance plans and purchasers to measure plan and provider performance, the HEDIS measures inform consumers and policymakers about the quality of the health care system and help drive improvements in certain areas.<sup>36</sup> Including adult BMI assessment as a HEDIS measure will offer valuable insight into the frequency with which providers record patient BMI and drive improvement in BMI assessment and recommended counseling.

One approach to ensure that height and weight are recorded reliably is to establish clear office procedures, such as determining at what point during a patient's visit they should be measured and which staff members are responsible for recording the measurements. Electronic medical records, discussed below in greater depth, also offer the potential to improve monitoring of weight.

Focusing on other health indicators, such as blood pressure, glucose, and cholesterol levels, is also an important aspect of clinical care, and may be an effective way for providers to bring up weight with patients. At the roundtable, many participants expressed that emphasizing the health risks of excess weight could motivate patients to manage their weight. Moreover, by tying improvements in health indicators, including vital signs, to weight loss and maintenance, primary care providers may help patients better appreciate the health benefits of their weight management progress. Physicians should also closely monitor weight gain caused by medication and choose weight-beneficial medications when possible to avoid exacerbating co-morbid conditions.<sup>37</sup>

Physicians at the roundtable emphasized that in order to effectively motivate patients by calling attention to health risks, providers must first ensure that patients understand what the measurements indicate. Physicians also conveyed the importance of taking time to explain the meaning of health indicators to patients. Many people have a limited level of health literacy,<sup>38</sup> which is an individual's capacity to find, understand, and use basic health information and services to make health decisions.<sup>39</sup> Tracking and displaying information in a way that patients can easily understand is essential for effectively communicating the significance of health information. Patients who understand health risks may be more motivated to undertake lifestyle changes.<sup>40</sup> Overall, roundtable participants agreed that discussion of steady improvement in these health measures is a good way to maintain patient motivation in the long term, even if significant weight loss is not achieved.

At the roundtable and in follow-up interviews, participants discussed several initiatives intended to help patients understand health indicators, such as blood pressure, glucose and cholesterol. Participants noted two examples of simple, operational tools used by providers to review changes in health indicators with patients. In one example, a physician gives patients a "report card" at every visit on which he records their beginning and current weight, blood pressure, hemoglobin A1c (HbA1c), cholesterol levels and triglycerides.

In a second example, primary care practices in Vermont are given a toolkit, “Promoting Healthier Weight Loss in Adult Primary Care” (described in further detail below) that includes a “prescription pad” on which providers can note and assess patient’s BMI, associated risk factors, readiness, and steps for change. Although use of the toolkit has not yet been formally evaluated, primary care physicians reported in pilot studies and through informal feedback that the toolkit complemented their work and that they were likely to continue integrating it into their practices.<sup>41</sup> Both the toolkit/prescription pad and the report card are designed to be taken home by patients.

### **Assessing Patient Motivation**

Successfully motivating patients to lose weight is a fundamental challenge for physicians in obesity management. Broaching the subject of obesity can be a complex issue, and patients are at times unprepared to begin the dialogue and treatment program when necessary. While both roundtable and key informant interviews discussed the concept of “readiness for change,” the overall discussion frequently returned to the importance of the provider-patient relationship in both assessing and creating the readiness for change in overweight and obese patients. Obesity-specific studies have found that the provider-patient relationship is crucial to patient willingness to initiate and adhere to lifestyle changes and to the success of any such attempts.<sup>42</sup> However, obese patients, particularly females, were more likely to expect significant weight loss than their physicians.<sup>42</sup> Overall, many studies have indicated that health care providers of many types are fairly cynical about the possibility of significant and sustained weight loss among obese patients without undergoing bariatric surgery.<sup>15,43</sup>

With the literature in mind, the roundtable and key informant interviews were particularly important for forming a more nuanced view of patient motivation for obesity treatment. While evidence supports assessing “readiness for change” for behavior-sensitive conditions, such as tobacco dependence, roundtable participants and interviewees had wide-ranging opinions on the applicability of these approaches for provider-patient discussions on long-term weight loss. Key informants agreed that patient willingness to attempt small lifestyle changes, such as not drinking sugar-sweetened beverages, was a stronger indication of their readiness than the patient’s score on a formal readiness assessment (e.g., questionnaire). At the same time, roundtable participants felt the need for methods to motivate new patients and maintain motivation for existing patients. Many roundtable participants maintained that encouraging patients to focus on making a few small lifestyle changes, rather than completely overhauling current behaviors, sets patients on the right track for weight management. As discussed in the following section, concentrating on the benefits of modest weight loss may also motivate both providers and patients to think about obesity management in terms of health rather than appearance.

Participants also noted that another approach that may be useful for motivating some patients to make lifestyle changes is to be family-centered when counseling them about weight. Patient descriptions of the home environment may inform physicians about whether their family will be supportive of weight management efforts. Moreover, some patients may be motivated to control weight because they want to set a healthy example for their children.

Roundtable participants also discussed the need to take ethnic and cultural differences into account when assessing patient motivation and counseling about weight management. Designing weight management programs that adequately reflect ethnic and cultural differences is an essential aspect of motivating patients to lose weight. For example, common “diet” menu plans may not take into account patient preferences for certain ethnic or regional foods, making patients less likely to adhere to dietary recommendations. Finally, primary care physicians must be cognizant of the patient’s psycho-social state and the potential impact on weight and weight loss success.

Overall, roundtable participants and key informants agreed that patient motivation and maintaining momentum are important factors in successful weight loss. They also agreed that successfully motivating patients depends largely on the individual provider’s relationship with the patient, the

clinician's ability to explain the health risks and benefits of weight loss, and the ability to show steady improvement in health conditions over time.

## **Defining Success**

An important part of maintaining patient motivation is defining success in realistic, achievable terms. A modest weight loss of five to ten percent of total body weight significantly improves health outcomes, including reducing the risk of developing Type 2 diabetes, dyslipidemia, hypertension and cardiovascular disease.<sup>44,45</sup> However, obese patients beginning weight management routines indicate weight loss expectations of two to three times this amount.<sup>46</sup> In addition, there has not been a clear move among providers toward adopting incremental definitions of success in weight loss. In one survey in which physicians were asked to describe patient weight loss, the mean answer for "successful" weight loss translated to a 20 percent weight loss, while the mean for "acceptable" weight loss was 14 percent of body weight.<sup>46</sup> In the same study, however, 75 percent of physicians indicated that a 10 percent weight loss resulted in significantly improved health outcomes.

During the roundtable discussion, participants agreed that redefining success is essential in obesity management. Many patients embark on a weight loss regimen with high expectations of success, and then become discouraged after weight loss slows or plateaus. There is evidence that patients who set smaller weight loss goals have better weight loss outcomes than those who expect to lose a large amount of weight.<sup>47</sup> Physicians can help their patients set realistic expectations for weight loss by clearly defining an acceptable goal of five to ten percent of total body weight. Furthermore, several roundtable participants proposed that weight stabilization (i.e., not gaining additional weight) may be a good initial step for some patients. Explaining the clinical significance of modest weight loss may also help patients focus on health benefits rather than appearance.

## **Increasing Integration and Care Coordination**

As indicated by the literature, obesity is a complex condition caused by a combination of factors with no "one solution fits all" answer. Often, patients are best or more successfully treated by simultaneous interventions from health professionals in many fields. Integration and care coordination are intended to link physicians to a variety of health care providers, including nurses, dietitians, physical therapists, specialists, and sometimes community resources. Additionally, many obese patients have co-morbid conditions requiring treatment by primary care physicians and/or specialists. The complexity of the issue and the treatment make coordination of care and integration across providers essential.

Discussions of system integration and care coordination tend to fall into three categories: integrated practices, medical homes, and "health care plus" models. These types of system integration and/or care coordination concepts allow physicians to have access to a larger pool of resources for patients who do not succeed with initial treatments, which should increase the success rates for obesity treatment and management. Any of these models may help resolve issues of "clinical inertia" and allow for improved sharing of information, access to resources, and care coordination. In practice, not all models will be available in every geographic region, nor is any one model an appropriate one-size-fits-all approach to addressing coordination of care. Thus, the models discussed below are selected examples and not intended as an exhaustive list of care coordination options.

### *Integrated Practices*

Integrated systems are defined as geographically focused health care organizations in which all care providers are coordinated, incentivized, and managed through one system focused on patient care. Additional characteristics frequently include strong physician input into system decisions and the ability to shift internal resources as necessary.<sup>48</sup> Examples of integrated systems include the Kaiser Permanente Health System in California,<sup>49</sup> the Geisinger Health System in Pennsylvania,<sup>50</sup> and the Summit Medical Group in New Jersey.<sup>51</sup> These systems provide hospital access, primary care, and



specialist services, as well as conduct clinical research through integrated electronic medical records. This type of system mostly eliminates the need for referrals to outside resources, reducing the complexity of sending a patient to a specialized resource. Although these systems are not practical for all areas, nor accessible to all patients, their successes can provide lessons on the value of care integration for practices of many sizes.

Roundtable participants indicated they perceive significant benefits from integrated practices for the treatment of obesity. Because obesity is associated with serious health conditions, the treatment of obese patients often requires the involvement of specialists for conditions such as cardiovascular disease and diabetes. In addition, obesity management efforts in primary care may be complemented by the work of other health professionals, including dietitians and exercise physiologists. One obesity-focused practice discussed at the roundtable consists of a variety of professionals, including physicians, nurse practitioners, psychologists, dietitians, physical therapists, and bariatric surgeons. Another practice focuses on integrating physicians, nurses, dietitians, and pharmacists to provide consistent patient care. The participants expressed that these models of integration allow for discussion of individual patients among the full team and is most effective when all care providers coordinate their activities through meetings or EMRs. Both practices used EMRs to integrate patient records and ensure full-team awareness of all treatment plans.

There is considerable evidence from large, integrated medical systems that this model significantly improves the quality and cost effectiveness of care, holding significant promise to improve overall chronic disease management, specifically obesity. However, this model may not be practical in all regions, nor is it the only solution to integrating medical practice.

### *Medical Homes*

Similar to integrated systems, medical homes focus care coordination around a primary care physician with a continuously shifting team of specialists brought on board as needed. Unlike an integrated system, medical homes do not necessarily require that all specialists be within the same practice or office. Although the medical home model does involve some integration of services, the key aspect is an accessible primary care provider who coordinates all patient care to ensure consistency and completeness of disease treatment or management. Across all sizes or categories of medical home-type practices, the overseeing physician ensures the patient is sent to the correct specialists to receive additional care. The roundtable participants expressed the view that EMRs are a key aspect of continuous and consistent care coordination that assist in ensuring all care providers are aware of a patient's full treatment plan.

### *“Health Care Plus” Models*

Although integrated medical systems and medical home models appear to provide an advantage to patients, these models may not be a practical option in many areas of the country. For patients who live far from their primary care provider, obtain care at a small or independent practice, or who do not have access to the variety of resources available in densely populated areas, another approach must be utilized. In small or solo practices—currently more common than large integrated practices—participants said that providers should be encouraged to link to the wider community. Roundtable participants engaged in a robust discussion of a concept they termed the “Health Care Plus” model. In this model, the health care provider refers patients to community resources, technological resources (e.g., online or telephonic programs), or obesity specialty practices for weight management. Building or identifying community networks is a major facet of this model, as many physicians are either unfamiliar with community resources or unsure of their reliability and appropriateness.<sup>52,53</sup>

Several of the roundtable participants reported their organizations' involvement in establishing programs that fit this model. For example, the CDC is currently engaged in an initiative to link the medical setting with the community in the prevention of Type 2 diabetes. Under this initiative, patients who have pre-diabetes are identified by their physician and referred to qualified community

settings for participation in a structured lifestyle modification program. This and similar initiatives are designed to translate the clinical successes of the Diabetes Prevention Program into community settings.<sup>54,55</sup>

In addition, one participant in the roundtable described a collaborative initiative to foster connections between primary care providers and community weight management resources in Vermont by the Vermont Area Health Education Centers (AHEC) program, the University of Vermont College of Medicine and Vermont Department of Health. The initiative, “Promoting Healthier Weight in Adult Primary Care,” is a toolkit for clinicians on weight management, and includes a list of suggested resources that providers can direct patients to use.<sup>56</sup> For physicians without access to such a toolkit, participants at the roundtable agreed that commercial weight loss programs may serve as a suitable resource for some patients, as long as the programs provide support, accountability through frequent weigh-ins, and a focus on meaningful lifestyle changes.

## **Implementing Electronic Medical Records**

Health information technology (HIT) and electronic medical records (EMRs) have been topics of intense discussion in both popular and professional circles throughout the health reform debate. Recent federal efforts to address issues in U.S. health care have included significant investment in Health Information Technology and Electronic Medical Records.<sup>31</sup>

Published discussions of EMRs have focused on their potential to improve the consistency and ease of care,<sup>32</sup> reduce costs,<sup>57</sup> and increase physician access to patient information.<sup>32</sup> While there has also been discussion of patient-maintained EMRs,<sup>57</sup> the roundtable focused on physician- and practice-maintained records. Several studies have shown the potential of EMRs to improve patient documentation and treatment consistency for both diabetes and obesity.<sup>33,32</sup> Overall, there has been significant investment in the development and implementation of EMRs, and they will likely continue to grow in importance for medical treatment and management of chronic diseases.

Several points about electronic medical records emerged from the roundtable and follow-up interviews with key participants. First, electronic medical records have the potential to improve the consistency of information gathering, BMI calculation, and trend information for individual patients. Second, use of EMRs allows the collection of patient data to examine treatment effectiveness for the patient population of an individual physician or across the practice as a whole. Third, for integrated practices, EMRs allow all physicians involved in a patient’s care to see the entire picture of that person’s health, not just the information on a referral form - improving coordination and potentially creating a better program for the patient. Finally, EMRs can ease the referral process outside of integrated practices and, for some systems, allow coordination with the receiving practitioner. While not all of these applications are possible for every practice, each has the ability to improve obesity care individually or in combination with the others.

### *Information Consistency*

Consistent gathering of patient vital signs and weight is very important for long-term management of obesity and chronic disease in general. The key informant interviews and roundtable discussion emphasized the importance of long-term tracking and consistent data-gathering on patient progress. Interviews with a large, integrated practice indicated that the use of EMRs enabled all medical professionals involved in a patient’s treatment to see measures such as BMI, blood pressure, glucose and cholesterol over time. This improved the providers’ ability to treat the patient by allowing for a better overall picture of their health. The nature of EMRs ensures information is readily available to practitioners during patient visits through real-time systems. EMRs also have the capability to highlight missing information in patient records. Consequently, EMRs can be used to encourage consistent tracking of data by giving practitioners reminders if information, such as height, is not included in a file.<sup>33</sup> Although these reminders have the potential to improve completeness of patient information, they are only useful if providers are willing to gather and input the missing data once notified. Finally,

some EMRs are capable of showing trends in patient vital signs and weight over time, allowing practitioners to focus on patterns in patient progress. This ability to ensure completeness of information and view trends would allow practitioners to better understand individual patients' medical histories and important health indicators during treatment.

### *Data Aggregation*

Both the roundtable discussion and key informant interviews indicated the importance of aggregating data across patients to examine the effectiveness of treatment methodologies and practice guidelines. Key informants indicated they found data aggregation useful for tracking general patient progress, evaluating their own performance, and improving treatment overall. The key informants discussed at length the ability of their system to allow research within the practice on many aspects of obesity treatment and management. Along with measuring general patient success, some large EMR systems allow practices to examine groups of patients with specific characteristics or treatment plans and evaluate the progress of the group as a whole. One key informant also discussed his practice's ability to publish research using these methods and successfully integrate a large medical practice with a research organization through EMRs. While research may not be the goal of many organizations, the patient benefits of progress tracking for the entire practice are clear.

### *Coordination*

Another function of EMRs is coordinating care across providers to improve the consistency of patient care and provider awareness of the complete treatment program. In interviews, key organizations discussed the use of EMRs as a tool to coordinate care between physicians, nurses, dietitians, physical therapists, and psychologists. The complexity of coordinating such a large care team for every individual patient requires careful planning and an efficient system for information management. EMRs provide a solution to the difficulties of disseminating information to a large group of professionals quickly and efficiently. Key informants opined that good EMRs allow continuous access to up-to-date patient information, including notes, test results and evaluations, to all professionals involved in patient care.

In one case discussed by the participants, a large system's EMRs were designed to take scanned information from outside practitioners to increase the amount of patient history available to the treatment team. Well-designed systems like this may provide significant improvements in patient care in large practices and increase the amount of information available to providers making decisions on how to treat patients. In the treatment of obesity, this is particularly important as patients attempt to manage their weight while simultaneously seeking treatment for co-morbidities and behavior changes.

### *Referral*

Informants indicated that practices with EMRs are often able to create electronic referrals for patients, though few places outside of some systems are willing to or capable of accepting them. Indeed, one critical issue affecting the widespread adoption of EMRs is that not all systems are compatible with others. Going forward, creating systems that are compatible will be necessary in order to fully exploit the utility of EMRs, particularly for use of referrals and capturing medical histories related to the referrals. Currently, some EMR systems do allow electronic tracking of referrals, so that practices are able to examine patterns and perhaps evaluate success based on patient results, regardless of their usefulness in coordinating care with out-of-system providers.

Overall, EMRs show great promise to improve medical practice and obesity treatment and management. While they are not an immediate fix to all problems in care coordination and consistency, they do provide some tools for busy providers to ensure record completeness and consistency. Finally, the potential for evaluation of patient outcomes and self-evaluation by providers and practices may be valuable for both treatment improvement and research purposes.

## Conclusion & Next Steps

### Conclusion

As the prevalence and costs of health conditions associated with excess weight continue to rise, efforts to treat and prevent these conditions have become increasingly important. And while community prevention efforts are necessary components to tackle obesity, recognition and treatment of obesity as a medical condition is also essential. Addressing these five areas for action would help ensure improvements across the health care delivery system in the quality of care for patients with obesity.

First, monitoring weight and health risks would generate a consistent, long-term picture of the patient's health status and improve the chances of early intervention. In addition, the measurement and explanation of health indicators to patients provides the opportunity for a discussion of weight focused on health improvement rather than appearance. It also allows the opportunity to clearly show an improvement in health over time or decreased risk of weight-related diseases as a result of sustained weight loss.

Second, assessing patient motivation is clearly a crucial aspect of primary care for obesity and one of the hardest aspects for many providers. Opinions about patient motivation vary widely, but roundtable participants generally agreed that the patient-provider relationship is a key factor. This suggests that research on stigma, patient-provider relationships in obese populations and the effect of these relationships on weight loss counseling is necessary for future improvement in primary care.

Third, clearly and sensibly defining success from a medical perspective is also very important for obesity treatment, both for the patient and provider. Patients and providers tend to expect significantly higher weight loss than is necessary for health improvement or practical as a short-term goal. The adoption of reasonable and evidence-based goals for weight loss in obesity treatment must be a priority for provider groups and the development of guidelines in the future.

Fourth, increasing integration and care coordination is particularly important for obese patients who may have multiple co-morbidities and require treatment by a team of professionals to effectively manage their health. Integrated practices and medical homes offer good models for geographic areas where large practices are present because both provide consistency of care for patients. For areas in which large practices are scarce or specialists unavailable, the "health care plus" model may be more appropriate, allowing greater flexibility in locating resources.

Finally, electronic medical records offer opportunities to improve both care coordination and the quality of care, by improving documentation and tracking of weight and other health indicators, easing the referral process, and aggregating patient information across practices. Overall, both practice coordination and information sharing through interoperable record systems provide significant opportunities for improvement in treatment of obesity in primary care.

### Next Steps

As a greater understanding of obesity and the effects of excess weight on health is achieved, disseminating tools and research to practicing physicians will be essential. Future research efforts should focus on maintenance as a critical phase of weight management, even though it receives much less attention than weight loss. In their practices, physicians are likely to confront patients struggling with maintaining weight loss and the disappointment of those who have regained weight. Large-scale, targeted research is needed to uncover successful methods for preventing weight gain, maintaining weight loss, and helping patients cope with the challenges of long-term weight management.

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