Obesity in the US: what is the best role for primary care?

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ABSTRACT

The increasing prevalence of obesity together with projected increases in diabetes over the next 20-30 years will put a substantial strain on the finances and resources of the US healthcare system. The best opportunity for broad scale treatment of obesity may lie in the primary care setting. This review assesses the evidence on the efficacy of treatment for obesity delivered in primary care in the United States. It summarizes an earlier systematic review, recent obesity treatment guidelines, and subsequent US based trials with a minimum follow-up of six months in which at least one member of a primary care team helped deliver comprehensive behavioral obesity treatment to adults with overweight or obesity. Overall, the evidence suggests that obesity treatment delivered in primary care has limited effectiveness. Questions remain about the optimal role of the primary care provider in the treatment of obesity and the prevention of weight gain, as well as potential systems approaches to the treatment of obesity.

Prevalence of obesity

The National Health and Nutrition Examination Survey (NHANES) sample of 2011-12 found that the prevalence of obesity, defined as a body mass index (BMI) of 30 or more, has increased to 34.9% of all adults. The increase in obesity has been even higher in certain subgroups of
Americans, with rates of 42.5% and 47.8% in Hispanic and black people, respectively.³ Although rates are higher for both men and women in these ethnic minority groups compared with white people, women within these minority subgroups are disproportionately affected. For example, more than half (56.6%) of black women have obesity and the prevalence of obesity is 44.4% in Hispanic American women.³ This is dramatically higher than the prevalence of obesity in non-Hispanic white women, which is 32.8%.

**Obesity and type 2 diabetes**

Obesity increases the risk of several chronic diseases (box), but it probably has its greatest effect on diabetes. The number of adults aged 20 years or more with type 2 diabetes has increased rapidly in the past two decades, coinciding with the obesity epidemic.¹ ⁶-⁹ Data from the Centers for Disease Control and Prevention (CDC) in 2012 indicate that 29.1 million or 9.3% of US adults aged 20 years or more had type 2 diabetes, and it is estimated that about 8.1 million of those adults are undiagnosed.¹⁰

By contrast, data from the Behavioral Risk Factor Surveillance System show that in the 1990s, when the prevalence of obesity was 11.1%, the prevalence of diabetes was 4.9% (fig 1).² Worst case scenario projections for the prevalence of diabetes by 2050 suggest that up to 33% of US adults will have type 2 diabetes if incidence continues to increase at current rates and mortality for those with diabetes remains relatively low owing to advances in preventive care and risk management.¹¹ More conservative scenarios still place the prevalence of diabetes in 2050 somewhere between 25% and 28%.¹²

The projected increase in diabetes could potentially overwhelm the healthcare system with high costs and use of medical services.¹³ In the US, diabetes accounts for about 246 000 deaths a year and a fifth of the money spent each year on healthcare.¹⁴ People with diabetes spend over $7000 (£4491; €5760) more on healthcare a year than to those without.¹² However, evidence suggests that interventions can prevent diabetes by modifying lifestyle behaviors and losing weight.¹³ Our ability to alter the projections and outcomes associated with diabetes and other chronic diseases related to obesity may hinge on engaging large populations in effective treatment for obesity.

**Primary care’s role in the treatment of obesity**

In 2008 there were 664 million visits to primary care providers in the US.¹⁵ More than 82% of adults had some type of encounter with a healthcare provider in 2012; in 2010, 55.5% of healthcare encounters were with primary care providers.¹⁵ The primary care network may be the only source of care that many adults receive, and it provides the scale needed to disseminate treatments widely. Because of the nature of the epidemic and the extent of the population involved, primary care could play a key role in treating obesity.

Primary care is also where many of the comorbid conditions associated with obesity such as hypertension, hyperlipidemia, and diabetes are diagnosed and managed.¹⁶ Therefore, treatment for obesity would have a direct impact on many of the challenges faced by primary care providers. The Centers for Medicare and Medicaid Services (CMS) now provides reimbursement for delivery of intensive behavioral counseling for obesity in primary care.¹⁷ This decision, issued in November 2011, was based on a US Preventive Services Task Force (USPSTF) review, which concluded that all adults should be screened for obesity and those with obesity should be offered intensive behavioral counseling to promote sustained weight loss.¹⁸

USPSTF based this decision on a systematic review that concluded that behavioral interventions for weight loss were safe and effective, generally leading to 4-7 kg of weight loss after one year with 11-26 sessions of counseling.¹⁹ CMS used the USPSTF review to define intensive behavioral counseling as one weekly face-to-face visit for the first month, followed by visits every other week for another four months, then monthly visits up to 12 months. Although this may seem to be an ideal

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**Fig 1** | Age adjusted prevalence of obesity and diabetes by US state in 1994, 2003, and 2012. The area of the circles represents the number of obese people (BMI ≥30) in the specific states
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Available evidence on the impact of primary care based treatment

Several reviews and treatment guidelines have assessed the effectiveness of treatment delivered in primary care. The following sections review the evidence from three perspectives: a systematic review published in 2009, the 2013 AHA/ACC/TOS (American Heart Association/American College of Cardiology/The Obesity Society) obesity guidelines, and evidence published after these publications.

The 2009 systematic review

This systematic review included studies published from 1950 to 2009 that were US based clinical trials of practitioners providing weight loss counseling in primary care.21 Ten studies were included and grouped into three modes of intervention: counseling by a primary care provider only, counseling by a primary care provider plus pharmacotherapy, and treatment delivered by a non-physician (“collaborative” obesity care).

Counseling by a primary care provider alone

Four of the 10 studies looked at counseling by a primary care provider alone, and the range of treatment contacts available was 3-12 visits over the course of 6-12 months of treatment.22-25 The highest average number of contacts of the four studies was 9.7 visits in 12 months.

Weight losses for active treatment groups ranged from 0.1 kg at one year for quarterly counseling by a primary care provider only to 2.3 kg at one year for counseling by a primary care provider plus office support for delivery of the intervention. This last intervention was the only one to show any significant difference from the control intervention (fig 2; net of control −2.3 kg; P<0.001).23

Counseling plus pharmacotherapy

In three of the 10 studies, the intervention comprised counseling by a primary care provider plus pharmacotherapy, including orlistat (two studies) and sibutramine (which is no longer available).26-28 In the two studies that used orlistat, the drug was prescribed as either 60 mg or 120 mg three times daily in combination with brief lifestyle counseling. One trial reported average weight losses of 4.5-5 kg with orlistat versus 1.7 kg for brief counseling only at two years (P=0.001),27 and the other reported losses of 1.7 kg for both orlistat groups versus a gain of 1.7 kg for the control group at one year (P<0.001).28

Studies that used other professionals or support counseling

The last group of studies reviewed used other professionals to provide weight loss counseling or support counseling by primary care providers.29-31 One study tested three interventions—counseling every other week by a dietitian alone, counseling by a dietitian combined with provision of meal replacements, and counseling by a physician or nurse every other week plus provision of meal replacements.29 At one year, those counseled by the dietitian alone lost 3.4 kg and those who received counseling by a physician or nurse plus meal replacements lost 3.5 kg, whereas counseling with the dietitian plus use of meal replacements led to an average weight loss of 7.7 kg (P=0.03 compared with the other two groups).

A six month study compared an intervention that included eight telephone counseling sessions plus provision of educational materials to the patient and primary care provider with a control condition that provided the educational materials only.30 Those in the control group had average weight losses of 1 kg compared with 4.3 kg in the telephone counseling group (P=0.01). Another study compared two interventions that involved a dietitian with usual care over two years.31 Participants randomised to the active interventions were provided with either two annual visits to a dietitian for nutrition counseling alone or visits plus monthly phone calls from the dietitian. At two years, there was no significant difference in weight loss between the usual care (1 kg), in-person counseling (0.2 kg), or in-person plus phone counseling (0.4 kg) groups.

The systematic review concluded that moderate to low intensity interventions (<1 visit/month) provided in primary care were not effective weight loss interventions.21 The two high intensity interventions produced more weight loss but attrition rates were high (32-48%). Although five of the 10 studies reviewed reported significant differences between an intervention and control group, none of the studies had average weight losses that were at least 5% greater than a usual care or control intervention (net of control range −0.2 to −4.3; fig 2). Overall, the quantity and quality of studies included was modest, suggesting that we still have a lot to learn about how to manage obesity effectively in primary care.

2013 AHA/ACC/TOS obesity treatment guidelines

The 2013 AHA/ACC/TOS obesity treatment guidelines reviewed the literature from 1998 to 2009, as well as some pivotal studies published between 2010 and 2011, and considered the impact of a comprehensive behavioral intervention delivered by primary care team members.32 A comprehensive behavioral intervention was defined as having three components: a prescription for calorie restriction, advice to increase physical activity, and behavioral counseling for lifestyle modification.

Four studies, two of which were also included in the 2009 systematic review,34,35 met the eligibility criteria to be included in the AHA/ACC/TOS review. One of the extra trials was conducted in primary care in the Netherlands in 2009.35 This study compared brief counseling by a nurse practitioner (four visits and one telephone call) with usual care provided by a general practitioner. Referral to a dietitian for counseling was available for those in the nurse practitioner intervention group. Weight losses at one year in this low intensity intervention were 1.9% of initial body weight in the active intervention group compared with 0.9% in the usual care group (P<0.05).

The remaining study included in the AHA/ACC/TOS review was published in 2011. This study had three arms: brief lifestyle counseling provided in monthly visits to an auxiliary healthcare provider plus quarterly visits to
**Fig 2** Weight change for previously reviewed primary care based interventions, 1991-2011. Net of control equals weight loss with the experimental intervention minus weight loss with the control intervention; weight change is shown as kilograms except where noted as percentage (%). *Significantly different from control (P<0.05). MD=medical doctor; PCP=primary care provider; RD=registered dietitian; RN=registered nurse.
a primary care provider, brief lifestyle counseling plus use of meal replacements or weight loss drugs (orlistat or sibutramine), and the control (quarterly primary care provider visits only). The AHA/ACC/TOS review only considered the non-pharmacologic treatment groups; however, for the purposes of this review, all groups are included. Participants were treated for 24 months and provided with diet and exercise prescriptions and an educational brochure on healthy lifestyle habits to achieve a lower weight. At 12 months, those in the brief lifestyle counseling group lost 3.5% of their initial body weight compared with 2.1% in the control group. At 24 months, there was no significant difference in weight change between these two groups (−2.9% vs. −1.6%). Because sibutramine was withdrawn from the market during the course of this trial (October 2010), data were analyzed only for those who used meal replacements or orlistat as part of their enhanced brief counseling intervention (85/129 participants). At 24 months, participants who received enhanced brief counseling with either orlistat or meal replacements achieved an average weight loss of 6.5% of their initial body weight, which was significantly greater than the usual care condition (P=0.003) but not significantly different from brief counseling alone (P=0.106). The evidence statement derived from the studies reviewed in the 2013 AHA/ACC/TOS guidelines stated that, to date, studies of low to moderate intensity lifestyle interventions for weight loss for obese adults provided by primary care practices alone have not been shown to be effective. This evidence statement was rated as being supported by a “high” strength of evidence. Although the number of studies included in the review for this key question was low (four), the quality of the studies included was rated as good (two) and fair (two). These trials were also primarily conducted in academic primary care practice settings or by experienced academic research teams, suggesting that they probably represented efficacy trials rather than effectiveness trials. Lastly, the general direction of the findings (low mean weight losses) with similar intervention characteristics and strategies, including low to moderate intervention frequency and mode of delivery, suggests that additional research using these same types of techniques is unlikely to produce different conclusions.

Effectiveness of other approaches

It is important to note the specificity of the concluding evidence statement from the panel when considering the implications of the review. The evidence statement stated that low to moderate intensity interventions provided by the primary care practice alone have not been shown to be effective, but it is still unclear what could be effective in the primary care setting. The panel underscored a notable research gap in this area—identifying an effective role for the primary care provider in managing obesity within the context of a comprehensive lifestyle intervention approach. Higher intensity interventions with greater frequency of contacts, combined with trained interventionists who support delivery in the primary care practice, may be a more effective approach. This was suggested in the conclusion of the 2009 review, but the two higher frequency intervention studies analyzed in the 2009 systematic review were not included in the AHA/ACC/TOS review because the quality of these studies was considered poor, owing to lack of intention to treat analyses and high attrition rates. Consequently, the evidence base to support alternative treatment strategies in primary care is limited.

Subsequent evidence

Studies published since the AHA/ACC/TOS review were identified with the search strategy outlined in the sources and selection criteria box. Of 258 studies retrieved, 217 were excluded on the basis of their inclusion and exclusion criteria. The remaining 41 studies were reviewed in further detail. Studies were excluded for the following reasons:

- Follow-up less than six months
- Studies were solely reports of study design and rationale
- Drug no longer available
- No primary care provider or team member involved
- Design was non-randomized
- Previously included in a systematic review
- Study was a systematic review
- Study included non-overweight people.

After these exclusions, six publications representing four studies were reviewed in detail and data abstracted (table).

The first study involved two academic primary care offices and used two medical assistants to provide behavioral counseling in this setting. Participants in the intervention group received eight 15 minute sessions of behavioral counseling over six months. The medical assistants were trained by the study investigators, who were experts in behavioral lifestyle interventions, to use an adapted version of the Diabetes Prevention Program (DPP) materials. These sessions were complemented by quarterly visits to the primary care provider, where written information about weight control strategies was provided to the patient. Those in the control group received only the written materials and the quarterly visit to the primary care provider. At six months, those receiving the brief counseling lost 5.1% of their initial body weight compared with 1% for those in the control group (P<0.0001). At 12 months there was no significant difference in weight loss between the groups (loss of 2.6% vs 1%).

The second study used a computer assisted intervention for obesity treatment in a primary care setting to enhance brief lifestyle counseling provided by physicians. This trial was conducted in two large urban community based health centers that served a population of patients, 50% of whom were Hispanic or Latino and 60% of whom came from lower income families (100% of the poverty level or below). Study participants were overweight clinic patients with at least two components of the metabolic syndrome. The intervention involved a baseline motivational assessment completed using the experimental computer program. On completion of the assessment, the computer program provided patients with a tailored 4-5 page handout that tackled barriers to
Primary care based obesity treatment studies not captured in AHA/ACC/TOS guidelines owing to publication date

<table>
<thead>
<tr>
<th>Study</th>
<th>Groups</th>
<th>Sample (n)</th>
<th>Contacts</th>
<th>Intervention provider*</th>
<th>Weight change (kg) 6 months</th>
<th>12 months</th>
<th>&gt;12 months</th>
<th>5% weight loss†</th>
<th>Attrition (%)</th>
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<td>Clinic visit every 4 months</td>
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<td>Brief counseling</td>
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<td>Clinic visit every 4 months for 12 months plus monthly coach visits</td>
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<td>18 phone calls and 12 optional monthly group sessions; at least 1 brief message about importance of participation; personalized behavior change prescription</td>
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<td>−1.37</td>
<td>−1.53</td>
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<td>17.8</td>
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Primary care based obesity treatment studies not captured in AHA/ACC/TOS guidelines owing to publication date

*PCP=primary care provider.
†Proportion of participants with 5% weight loss.

It was based in three community health centers in the Boston area that served a mainly minority (71.2% black, 13.1% Hispanic) and lower socioeconomic status population. Patients with hypertension and obesity were recruited. The study compared usual care with an intervention designed for a resource constrained setting that used community health educators to deliver behavioral counseling through 18 telephone calls and 12 group sessions over the 24 month study period. Community health educators were trained at baseline and annually during the study, while also receiving weekly supervision from the research team.† Primary care providers provided a standardized message that endorsed and encouraged participation. In addition, patients received a prescription that included the electronic signature of the primary care provider with tailored information on how to change their lifestyle behaviors. Participants were also provided with a self monitoring platform that was either web based or interactive voice response and delivered real time feedback. At 12 months, those in the intervention group lost 1.54% of their initial body weight, and this was maintained with a total loss of 1.68% of initial body weight at 24 months. In comparison, the control group lost 0.42% of initial body weight at 12 months and 0.67% at 24 months; at 24 months the difference between groups was significant (−1.02%, −2.02 to −0.005).

**A consistent pattern of evidence**

Several observations become clear when all of the literature reviewed above is considered. Despite doubling the number of studies reviewed in the 2013 AHA/ACC/TOS obesity guidelines, the results remain consistent. On average, these primary care based interventions do not produce clinically significant weight loss (≥5%). This may be because the interventions used were still relatively low to moderate intensity, with a frequency of contacts ranging from one per six months to 1.5 per month.

Two of the recent trials used DPP based interventions and had two to four hours of intervention contact time over the course of a year.‡ By comparison, the DPP provided 8-16 contact hours over the first six months. This difference may be important, but it seems that it

improving diet and physical activity. The program also provided the primary care provider with a companion guide to help with behavioral counseling on the basis of input from the patient. Primary care providers participating in this intervention underwent a three hour training session on the use of the guide sheets and on how to use motivational interviewing to help patients make lifestyle changes to improve diet and physical activity. Control group participants were only provided written materials on diabetes, diet, and exercise; otherwise they continued with their usual primary care routine. Weight loss at 12 months in the intervention group was −1.5 kg (1.6% of initial body weight), whereas the control group gained 0.15 kg (0.16% of initial body weight; P=0.002). In the intervention group, 26.3% lost at least 5% of initial body weight (8.5% met this goal in the control group; P<0.01) and 7.5% lost at least 10% of initial body weight (2.3% met this goal in the control group; P=0.02).

The Think Health! study in 2012 tested two interventions in five primary care practices in the Philadelphia, PA area.70 71 The primary comparison was between a usual care intervention of four visits by a primary care provider annually versus this standard of care augmented with monthly lifestyle coaching provided by auxiliary office staff. Primary care providers gave brief counseling for lifestyle change during scheduled quarterly visits, using adapted materials based on the DPP. Counseling by lifestyle coaches was based on lesson materials provided to the patient for that month. Physicians and lifestyle coaches participated in separate three hour training sessions to learn general concepts about obesity, behavioral weight management, and the details of the intervention.72 The intervention was designed to provide a total of two to four hours of contact over the one year intervention. At one year, there was no significant difference in weight loss between the groups (1.61 kg in the intervention group v 0.62 kg in the control group; difference 0.98 kg; P=0.15). However, there was a significant difference in the proportion achieving at least 5% weight loss (22.5% v 10.2%; P<0.022).

The last study was an effectiveness trial of a primary care based obesity intervention published in 2012.73 It was based in three community health centers in the Boston area that served a mainly minority (71.2% black, 13.1% Hispanic) and lower socioeconomic status population. Patients with hypertension and obesity were recruited. The study compared usual care with an intervention designed for a resource constrained setting that used community health educators to deliver behavioral counseling through 18 telephone calls and 12 group sessions over the 24 month study period. Community health educators were trained at baseline and annually during the study, while also receiving weekly supervision from the research team.73 Primary care providers provided a standardized message that endorsed and encouraged participation. In addition, patients received a prescription that included the electronic signature of the primary care provider with tailored information on how to change their lifestyle behaviors. Participants were also provided with a self monitoring platform that was either web based or interactive voice response and delivered real time feedback. At 12 months, those in the intervention group lost 1.54% of their initial body weight, and this was maintained with a total loss of 1.68% of initial body weight at 24 months. In comparison, the control group lost 0.42% of initial body weight at 12 months and 0.67% at 24 months; at 24 months the difference between groups was significant (−1.02%, −2.02 to −0.005).

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Two of the recent trials used DPP based interventions and had two to four hours of intervention contact time over the course of a year.‡ By comparison, the DPP provided 8-16 contact hours over the first six months. This difference may be important, but it seems that it
may be difficult to replicate this frequency (or a suitable alternative) in primary care. Two studies noted that provider groups raised concerns about the ability to provide interventions that were more than moderate intensity because of time and resource constraints. As a result, researchers probably sought to accommodate the needs of the providers, and in all four studies the role of the primary care provider is circumscribed. In three of the four interventions, the intervention was delivered by someone ancillary to the primary care provider. In two of the studies, the study design essentially tested the addition of an ancillary provider based in the clinic to brief counseling by the primary care provider. With varying degrees of training and resources, medical assistants or community health educators seem capable of engaging patients in these primary care based interventions for weight loss; however, the impact of involving the primary care provider is less clear. Indeed, a focus group study of primary care providers suggests that, rather than directing the weight loss intervention, primary care providers prefer a peripheral role.

What new approaches for treating obesity could effectively involve primary care?

If the evidence to date suggests that it is not effective to treat obesity in primary care using currently available strategies, should we continue to pursue this strategy? Perhaps. In most instances the absolute amount of weight loss achieved in these studies was on average not sufficient to be classified as clinically meaningful (≥5%). However, with modest investment of resources and time, both of which are rate limiting steps for broader dissemination of effective obesity treatment in primary care, a moderate proportion of people were “responders”—they seemed to be able to lose weight even with these low intensity interventions. The proportion of patients who achieved a clinically meaningful weight loss ranged from 20% to 48%. Therefore, it could be argued that primary care based interventions for obesity are useful for certain patients. As an initial approach, primary care interventions may represent a low barrier entry point for tackling the problem of obesity in broad audiences.

Stepped care approach

Conceptually, primary care interventions could be part of a larger stepped care approach to treating obesity, where a low intensity intervention in primary care might be effective for up to 20% of people (the lower estimate of those with clinically meaningful weight loss in the studies above). Resources can then be used to intensify treatment for those who have a less than adequate treatment response. A randomized controlled trial showed that a stepped care approach for behavioral treatment of obesity in adults produced weight loss of 6.9% of initial body weight at 18 months. This intervention provided monthly group sessions with mailed intervention material on weeks where a group session was not offered as the first step of treatment. Subsequent treatment steps included 10 minute phone contacts, up to twice monthly, followed by the addition of individual in-person counseling, and finally by meal replacements to be used twice daily. Treatment intensity was escalated if the participant did not meet per cent weight change goals at defined intervals of three months. The comparator intervention, a standard high intensity behavioral weight loss program, produced a statistically similar 8.1% weight loss of initial body weight during the same time frame but at a higher total societal cost ($1357 v $785). Of note, 22.2% of the study group in the stepped care intervention needed only the initial step of the program to meet study goals of 10% weight loss by 18 months.

What is happening in other countries?

Although primary care provision in other countries may be structured differently, recent trials performed elsewhere provide important lessons for the US health system. One strategy that has shown modest effectiveness in other countries is primary care referral to evidence based commercial programs for weight loss treatment. A multicenter trial of 772 overweight and obese adults from Australia, Germany, and the United Kingdom randomly assigned participants to receive 12 months of standard care treatment defined by national treatment guidelines or 12 months’ free membership of Weight Watchers. Using baseline observation carried forward for those who dropped out of the trial early (39-46% attrition), those in the commercial group lost an average of 4.1 kg, whereas those in the standard care group lost 1.8 kg. Another trial in England, which studied several interventions compared with an exercise only control group, also suggested that a commercial weight loss program (Weight Watchers) was more effective than counseling provided in primary care at one year of follow-up. After 12 weeks, average weight loss was 1.4 kg in 70 participants in the primary care group compared with 4.4 kg in the 100 participants in the commercial program group. Only the Weight Watchers group differed significantly from the exercise only control group, which lost 1.9 kg by 12 weeks (difference = -2.34; P=0.001). At one year after randomization, those who completed the 12 week Weight Watcher program had lost 2.5 kg more than the exercise only control group (P=0.024), whereas those in the primary care group did not differ from the control group.

Prescribing pharmacotherapy

Earlier studies that evaluated protocols of weight loss drugs provided by primary care providers as adjunctive interventions showed promising results, so more studies of pharmacotherapy in primary care may be useful. Some of these studies used drugs that are no longer on the market, but the broader concept of using primary care providers to diagnose obesity and prescribe behavioral treatment along with pharmacotherapy has some evidence to support it. For example, the Louisiana Obese Subjects Study (LOSS) published in 2010 recruited people with a BMI of 40-60 to usual care or intensive medical intervention that included long term drug use (sibutramine, orlistat, or diethylpropion). At two years, about a third of those in the intensive medical intervention group had lost 5% of their initial body weight and one in 14 had lost 20%, compared with 9% and 1% meeting these goals in the control group (P<0.001).
A randomised trial assessed sibutramine used alone, sibutramine (15 mg) plus eight brief (10-15 minutes) counseling visits to a primary care provider, or 30 group counseling sessions. At one year, participants in the brief counseling plus sibutramine group lost 7.5 kg compared with 5.0 kg for those receiving sibutramine alone or 6.7 kg for those receiving group counseling alone. Although there were no statistical differences between the drug alone, brief counseling plus sibutramine, or group counseling alone, the authors noted that eight brief visits to a primary care provider may be a more efficient approach than 30 group sessions with similar efficacy.

These studies provide some evidence that primary care providers can deliver drug based interventions for obesity, but because sibutramine is no longer available further studies are needed to determine the efficacy of newer agents in this setting. The advantage of combining interventions that involve primary care and weight loss drugs is the potential longer term application of treatment. However, clinicians are often told that patients should be able to maintain their weight loss on their own or that long term use of drugs creates a “crutch” for the patient. Also, reports of adverse events with weight loss drugs and a high degree of caution regarding new drugs will further slow more effective and broader implementation of long term treatment. Ultimately, the inertia to provide treatment may be related to the fact that many providers find the treatment of obesity challenging, have low expectations regarding the effectiveness of treatment, and have several biases about people with obesity—for example, that they are not motivated to lose weight and will not adhere to treatment recommendations.

The role of primary care providers in preventing weight gain

The ideal would be for primary care providers to prevent obesity in the first place. Relatively little research exists on the prevention of weight gain in adults, with even less focused in primary care. A randomized controlled trial published in 2013 evaluated the effect of an interactive intervention delivered by a primary care provider an 194 premenopausal black women recruited from six community health centers in central North Carolina who were diagnosed with overweight to stage I obesity (BMI 25-34.9). This low intensity intervention to prevent weight gain used modest calorie restriction and increased physical activity goals to promote weight stability over 18 months. At 12 months, 62.1% of participants in the active intervention group were at or below their baseline weight; at 18 months, this proportion was 53.2% and statistically greater than in the control group (38.5%; P=0.04). However, the investigators intentionally did not use primary care providers to deliver this intervention because of concerns about engaging providers who are already busy and trying to provide care in under resourced communities. Additional work is needed to understand if and how primary care providers can overcome these barriers. Aside from being readily accessible, they may be ideally suited to prevent weight gain because of their unique understanding of an active presence during periods in life when weight gain is more likely (early adulthood, pregnancy, postpartum, menopause, and after smoking cessation).

Conclusion

Over the past three decades the rate of obesity has continued to rise in the US. Although prevalence seems to be leveling off, this is limited to a subset of the population. Best evidence suggests that the prevalence of obesity in black and Hispanic Americans is increasing and that older adults are living with obesity for longer. Concurrently, the rate of comorbid conditions is increasing. In the absence of an effective strategy, obesity will consume an ever growing proportion of national healthcare resources.

Studies of the treatment of obesity by primary care providers have shown little promise. Moving forward, interventions based in primary care may be best suited to a stepped care approach that intensifies treatment in those who partially respond to initial treatment. Interventions based in primary care may also be suitable for preventing weight gain, especially when combined with broader prevention strategies that focus on environmental changes and “small” individual changes that are implemented and supported at the primary care level. Further study is needed to ascertain whether this approach is effective, affordable, and sustainable.

Additional research is also needed to further define the most effective role for primary care providers, including diagnosis, initiation and monitoring of pharmacotherapy, referral to treatment specialists, and advocating for healthy environments and supportive policies. Ultimately, given the influence and reach of primary care providers we cannot afford for them to be sidelined in the treatment of obesity in larger populations.

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