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Assessing the Scale-Up of a Weight Loss Program:

Narrowing the Gap Between Research and Practice

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The current obesity epidemic in the U.S. has led to decreased life expectancy, increased morbidity, loss of job productivity, and increased healthcare costs—with no end in sight.^{1,2} Although there is mounting evidence of efficacious strategies to promote regular physical activity, healthful eating, and sustained weight loss, surprisingly little is known about the generalizability and potential for widespread implementation of these through clinical or community organizations.³ Still there are examples of successful programs, such as the Veterans Health Administration (VHA) MOVE! weight management program for veterans, which was implemented in 153 VHA hospitals and 956 VHA outpatient clinics and, within 2 years, enrolled more than 100,000 patients.^{4,5}

The MOVE! program was developed centrally at the VHA National Center for Health Promotion and Disease Prevention using evidence-based guidelines established by the NIH,⁶ VHA,⁷ the U.S. Preventive Services Task Force,⁸ and the research-tested strategies used in the Diabetes Prevention Program.⁹ After piloting the program in 17 clinics and gaining leadership support, the VHA issued a policy requiring all medical facilities nationwide to implement the MOVE! program. VHA facilities were offered a variety of tools and support to implement the program, including national conferences, manuals, online materials, and telephone support. However, the effectiveness of the program varied greatly between facilities, with some achieving large weight loss whereas others did not. Herein lies an important and pragmatic research question: What conditions were necessary and/or sufficient to achieve weight loss success (or changes in any outcome) when an evidence-based intervention is made available to a clinical or community program delivery organization?

The work presented by Kahwati and colleagues¹⁰ in this issue of the *American Journal of Preventive Medicine* is a compelling and timely evaluation that begins to answer that question. Key to this assessment was identifying the exposure to different program conditions; setting level characteristics (both internal to the clinic and external to it); and changes in the outcome of interest—weight loss—across local participants. Using a qualitative comparative analysis approach, they were able to determine if there were individual or sets of conditions that were necessary and sufficient to predict successful programs (those with the highest percent of participants losing at least 5% of their body weight). The qualitative comparative approach is innovative in that it acknowledges that determining potential causal factors of program effectiveness is complex, and that there is no a priori hypothesis that any single factor will always be necessary or that any set of

factors will always be sufficient. This is a step toward specifying many of the meta-theoretical models that have been developed to guide implementation research, as exemplified in Damschroder et al.¹¹ The variation in necessary and sufficient conditions for success also underscores the potential problems with developing RCTs that test single- or multi-factor implementation interventions; clearly a noncontextual approach would not have produced the same rich results or conclusions of the Kahwati study.

It is noteworthy that the MOVE! initiative was adopted in almost all of the VHA facilities; alignment of leadership, policy, program, training, and materials were all in place, making scale-up and spread possible. Adopting a weight-loss program within a healthcare organization was bold, as there is scant literature to support the effectiveness of healthcare system–delivered behavioral weight-loss interventions, and the few available studies have had small numbers and short follow-up.¹² It would be of great interest to learn about the degree to which the pilot intervention was used to present a business case to support implementation—or if a business case was necessary. The fact that in 2008 patient copayments for this service were eliminated suggests that there was some organizational consideration of cost and cost effectiveness. Although Kahwati¹⁰ focused on the local strategies and context that led to the most successful programs, one cannot underestimate the influence of top–down policy, with the VHA mandating that the program be implemented in all facilities. It was likely that the combination of strong policy and local strategies and factors were both necessary.

So, is the MOVE! program ready for prime time outside of the VHA? The answer is likely yes, if you have a setting that can use a standardized program curriculum, offer a group-care delivery format, and meet one of the four sufficiency criteria outlined in the paper.¹⁰ It should be pointed out however, that veterans who receive care at VHA facilities are predominantly male, older, and more likely to be obese and have other comorbid conditions than the general U.S. population.¹³ Information as to whether there were specific subgroups for whom the program was most successful would be useful.

There are still a number of additional lessons that could be learned from the MOVE! program. For example, although the widespread adoption of the program was outstanding, there were many clinics that were not included in this study because of low levels of patient participation (i.e., <30), suggesting that clinics varied not only on effectiveness but also on reach. An identical qualitative comparative approach could be conducted to determine the conditions that are necessary and sufficient to engage a large proportion of eligible patients to participate. Indeed, as the initiative selected the RE-AIM (reach, efficacy/effectiveness, adoption, implementation, maintenance) framework as a guiding evaluation model, it would be helpful to examine the degree to which clinics varied on reach by effectiveness—and to identify necessary and sufficient conditions that maximize both.¹⁴ The MOVE! initiative also raises a number of pragmatic research questions, such as the following: Was a one-time intervention sufficient to maintain weight loss, or would some people need booster interventions, and others something else? What did the program cost and what was the value equation in terms of treatment outcomes (e.g., blood pressure, diabetes control), patient quality of life, and healthcare costs?

And finally, it is clear from the research literature and public surveillance data that the treatment and prevention of obesity are not just about individual behavior change; social determinants of health and environmental factors also need to be addressed. However, the MOVE! program is a wonderful example of how a program can be scaled up, spread, assessed, and possibly improved. Programs like this are likely to be an important part of multilevel interventions to combat the obesity epidemic.

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