

(improvements in anxiety, depression, and quality of life) experienced by the patients.³

If so, then another important variable is cost. Studies examining whether differences in costs between different modes of delivery of cardiac rehabilitation are statistically significant in addressing patient outcomes in this specific population should be undertaken. In addition, patient-specific factors such as income levels and insurance coverage plans may affect the choice of cardiac rehabilitation by the individual veteran. One may assume that a veteran who can pay out of pocket may choose a plan that is more convenient and personalized. The effects of socioeconomic status on patient preferences is another avenue that can still be explored.

It is alarming that among veterans, only 13.2% overall had participated in at least 1 cardiac rehabilitation session, especially given that cardiac rehabilitation is a class 1 recommendation from all the major cardiology associations in the world.¹ We agree that veterans deserve the opportunity to receive cardiac rehabilitation in a setting that would be the most beneficial to their long-term health and advocate for further research not only to increase participation rates in cardiac rehabilitation but also to study whether the long-term benefits are statistically significant among veterans.

Eric Y. Chang, MD
Anam Umar, MD

Author Affiliations: Department of Internal Medicine, Morehouse School of Medicine, Atlanta, Georgia.

Corresponding Author: Eric Y. Chang, MD, Department of Internal Medicine, Morehouse School of Medicine, 720 Westview Dr SW, Atlanta, GA 30310 (echang@msm.edu).

Conflict of Interest Disclosures: None reported.

1. Schopfer DW, Krishnamurthi N, Shen H, et al. Association of Veterans Health Administration home-based programs with access to and participation in cardiac rehabilitation [published online January 22, 2018]. *JAMA Intern Med*. doi:10.1001/jamainternmed.2017.8039

2. Anderson L, Sharp GA, Norton RJ, et al. Home-based versus centre-based cardiac rehabilitation. *Cochrane Database Syst Rev*. 2017;6:CD007130.

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In Reply We appreciate the response by Drs Chang and Umar regarding our Research Letter “Association of Veterans Health Administration Home-Based Programs With Access to and Participation in Cardiac Rehabilitation,”¹ which demonstrated higher participation rates at Veterans Health Administration facilities offering home-based cardiac rehabilitation (CR) compared with those without home-based CR available.

We agree that the impact of home-based CR programs on clinical outcomes is important and, as the authors have stated, there is now growing evidence that demonstrates home-based delivery of CR appears to be at least similarly effective. We are equally interested in understanding which patients in particular may benefit more from having a

home-based option while also recognizing that others may require more intensive monitoring for some period of time.

We are currently investigating the cost of delivering home-based CR to veterans to help understand the utilization costs of home-based vs traditional programs when considering staff workload, facility expenses, and downstream health care costs. To date, although other studies have included some, the variability in what is defined as a home-based CR program makes comparisons between studies more challenging.

Although overall participation was low in our study, we feel quite hopeful and excited about the delivery of CR among veterans because use has been increasing in recent years. Although the overall participation rate was only 13.2%, participation at facilities offering home-based CR was 4 times greater than in those offering only referral to traditional programs. Also, the Veterans Health Administration is a leader nationally in its support and implementation of this new home-based model in the United States, which we believe will catalyze its use more broadly by other health care systems throughout the country.

David W. Schopfer, MD, MAS
Mary A. Whooley, MD

Author Affiliations: University of California, San Francisco, San Francisco; San Francisco VA Health Care System, San Francisco, California.

Corresponding Author: David W. Schopfer, MD, MAS, San Francisco VA Health Care System, 4150 Clement St, Ste 111A1, San Francisco, CA 94121 (david.schopfer@ucsf.edu).

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1. Schopfer DW, Krishnamurthi N, Shen H, et al. Association of Veterans Health Administration home-based programs with access to and participation in cardiac rehabilitation [published online January 22, 2018]. *JAMA Intern Med*. doi:10.1001/jamainternmed.2017.8039

Voluntary Opioid Tapering— Barriers to Delivering Care

To the Editor We commend Dr Darnall and her colleagues for their recent investigation of voluntary opioid tapering.¹ Although the authors provided a novel model for care, we believe that there exists considerable ground that still needs to be broken.

It is particularly concerning that the study completers and dropouts started on extremely high doses of opioids, and end-of-study doses were well above those recommended in the recent CDC opioid prescribing guidelines.² Although an overview of Cochrane Reviews³ concludes that “no evidence-based argument can be made on the use of high-dose opioids, ie 200 mg morphine equivalent or more daily, in clinical practice,” adverse events still would be expected at levels in the posttaper 150 mg morphine equivalent daily dose (MEDD) range. The recent study by Darnall et al⁴ questions the degree to which its results can be extrapolated to primary care, where most chronic pain is treated and the fear of regulatory sanction provides an added barrier. Even a low dose of opioids can be daunting

for the primary care physician, for example Indiana's "trigger" dose of 15 mg MEDD for more than 3 months, which is considerably lower than the CDC recommendations.

Second, the authors conclude that their effect is a result of a "reduction with a plan that reduces opioids more slowly than current tapering algorithms," although their design does not permit a comparison between programs of differing lengths. One of our authors was a contributor to the proposed algorithm that they reference, with Berna and colleagues⁵ conservatively concluding that "there is no published comparison of speed of tapers in patients with long-term opioid treatment for CNCP, although such research would be of great interest." Finally, the authors introduce a potentially cost-effective psychoeducational intervention, ie, a self-help book on reducing opioid use. Although the importance of self-help materials cannot be underestimated, the real challenges may occur as patients are tapered to lower doses, a process in which more targeted and intensive behavioral intervention remains critical.

Michael E. Schatman, PhD

David J. DiBenedetto, MD

Ronald J. Kulich, PhD

Author Affiliations: Boston PainCare Center, Waltham, Massachusetts (Schatman, DiBenedetto); Department of Public Health and Community Medicine, Tufts University School of Medicine, Boston, Massachusetts (Schatman); Department of Diagnostic Sciences, Tufts University School of Dental Medicine, Boston, Massachusetts (DiBenedetto, Kulich); Department of Anesthesia, Critical Care, and Pain Medicine, Massachusetts General Hospital, Harvard Medical School, Boston, Massachusetts (Kulich).

Corresponding Author: Michael E. Schatman, PhD, Research and Network Development, Boston PainCare Center, 85 First Ave, Waltham, MA 02451 (mschatman@bostonpaincare.com).

Conflict of Interest Disclosures: None reported.

1. Darnall BD, Ziadni MS, Stieg RL, Mackey IG, Kao M-C, Flood P. Patient-centered prescription opioid tapering in community outpatients with chronic pain [published online February 19, 2018]. *JAMA Intern Med*. doi:10.1001/jamainternmed.2017.8709
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In Reply We thank Drs Schatman, DiBenedetto, and Kulich for their letter and interest in our study. Their observation about the high opioid doses in the study patients¹ only underscores the need for effective methods to compassionately and voluntarily taper patients to safer doses, as well as the goal of our work, which is to begin addressing that need in outpatient settings with limited resources.

Regarding their question as to whether our results would generalize to primary care, we are currently addressing that very question in our 4-state, 5-clinic, pragmatic clinical trial

on patient-centered opioid tapering that will involve almost 1300 patients taking long-term opioids in primary care and pain clinics. This pragmatic study (funded by the Patient-Centered Outcomes Research Institute) launches in July 2018 and includes an embedded 3-arm randomized comparative effectiveness trial of evidence-based behavioral treatments for chronic pain (compared with an opioid taper only group that receives no behavioral treatment).² We are conducting this study across a mix of payer systems including open (Stanford Primary Care, Stanford Pain Management Center, and Stieg Pain Clinic) and closed networks (Intermountain Health Primary Care and the Phoenix Veterans Affairs Primary Care), and are following patient participants for 12 months.

With this multistate and practice-type study, we hope to provide evidence for the value of the more targeted and intensive behavioral interventions (but for which access remains limited³), and to demonstrate the value of these treatments in the context of opioid reduction. In short, not only do we heartily agree, as we speak we are conducting the clinical science needed to inform best practices for compassionate opioid reduction in multiple settings.

Beth D. Darnall, PhD

Maisa S. Ziadni, PhD

Richard L. Stieg, MD, MPH

Author Affiliations: Division of Pain Medicine, Department of Anesthesiology, Perioperative and Pain Medicine, Stanford University School of Medicine, Palo Alto, California (Darnall, Ziadni); Richard L. Stieg, LLC, Frisco, Colorado (Stieg).

Corresponding Author: Beth D. Darnall, PhD, Division of Pain Medicine, Department of Anesthesiology, Perioperative and Pain Medicine, Stanford University School of Medicine, 1070 Arastradero Rd, Ste 200, MC 5596, Palo Alto, CA 94304 (bdarnall@stanford.edu).

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1. Darnall BD, Ziadni MS, Stieg RL, et al. Patient-centered prescription opioid tapering in community outpatients with chronic pain [published online February 19, 2018]. *JAMA Intern Med*. doi:10.1001/jamainternmed.2017.8709
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3. Darnall BD, Scheman J, Davin S, et al. Pain psychology: a global needs assessment and national call to action. *Pain Med*. 2016;17(2):250-263.

CORRECTION

Caution of Conclusions of a Meta-analysis Including Problematic Trials: In the article titled, "Vitamin K and the Prevention of Fractures: Systematic Review and Meta-analysis of Randomized Controlled Trials,"¹ published in the December 2006 print issue of *Archives of Internal Medicine*, conclusions were based on data from trials that have since been indicated as problematic or retracted. Seven of 13 articles included in the meta-analysis reported fracture data, and of the 7 articles that reported fracture data, 3 articles were from a single center; the data from the trials from this center have since been found to be problematic or retracted. Because 3 articles provided data from a single center, the authors performed a sensitivity analysis in the original meta-analysis, and those data were included in Figure 4. Results from the sensitivity analysis have been added to the abstract of the original article,¹ and the authors request that readers only take into account the data presented in Figure 4. A Letter of Explanation² has also been published for further clarification.

1. Cockayne S, Adamson J, Lanham-New S, Shearer MJ, Gilbody S, Torgerson DJ. Vitamin K and the prevention of fractures: systematic review and meta-analysis of randomized controlled trials. *Arch Intern Med*. 2006;166(12):1256-1261. doi:10.1001/archinte.166.12.1256