ized to TV restriction compared with the control group, the authors also found a nonsignificant decrease in energy intake in both groups. However, the analysis of TV viewing time was carried out using multivariate models that did not account for effects of varying time displacement and relative time substitution, nor did it control for the confounding effect of total activity time. An analysis of reducing TV watching time without considering these issues may lead to bias and incomplete interpretation of the effects of decreasing TV watching time.  

Because time per day is finite, engaging in one activity type is done at the expense of not engaging in another. Hence, the exact causal effects of reducing time spent watching TV is not only limited to the direct effects of decreasing this sedentary activity per se, but is also dependent on the effects of the alternative activity used to substitute for TV viewing. For instance, whereas reducing 30 min/d of TV watching may be efficient for an active person if it is replaced by 30 min/d of walking, this same reduction may be less efficient for a sedentary person if it is replaced by 30 min/d of book reading. The isotemporal substitution paradigm facilitates investigation of the relative effects of time engaged in different activities and varying displacement of other activities. This concept is akin to what has been done in the nutrition epidemiology field, in particular, the varying substitution effects of dietary fat and carbohydrate intake in which total calories per day is finite (ie, saturated fat may have heterogeneous effects on coronary heart disease risk based on whether intake was isocalorically substituted for polyunsaturated fat or carbohydrates).

Only via a time substitution approach can one properly examine the true relative effects of reducing TV watching time on energy intake and expenditure.

Rania A. Mekary, PhD
Eric L. Ding, ScD

Author Affiliations: Department of Nutrition, Harvard School of Public Health, Boston, Massachusetts.

Correspondence: Dr Mekary, Department of Nutrition, Harvard School of Public Health, 665 Huntington Ave, Bldg 2, Boston, MA 02115 (RMekary@hsp.harvard.edu).


Our study was a small (n=36) randomized controlled trial with a TV reduction intervention. As such, we compared change in outcome measures (energy intake, energy expenditure, energy balance, body mass index, and sleep time) between a control group and an intervention group. Without prescribing specific activities to replace TV viewing time, energy expenditure in intervention subjects increased significantly and in a meaningful amount (+119 kcal/d). A sub-analysis of our data suggests that the percentage of time spent engaged in light physical activity significantly increased when the percentage of time spent in sedentary activities decreased in intervention subjects. In addition, we were able to use objective data from accelerometers, which makes our findings stronger than using the hypothetical activities suggested by Mekary and Ding. More importantly, this suggests that TV restriction may have broad usefulness even for those subjects unwilling or unable to engage in specific alternative activities.

Jennifer J. Otten, PhD, RD
Benjamin Littenberg, MD
Jean Harvey-Berino, PhD, RD

Author Affiliations: Stanford Prevention Research Center, Stanford University School of Medicine, Palo Alto, California (Dr Otten); and Departments of Medicine and Nursing (Dr Littenberg) and Nutrition and Food Sciences (Dr Harvey-Berino), University of Vermont, Burlington.

Correspondence: Dr Otten, Stanford Prevention Research Center, Stanford University School of Medicine, 1070 Arastradero Rd, Ste 100, Mail Code 5541, Stanford, CA 94304 (jotten@stanford.edu).


The Value of Multidisciplinary Rounds

The US health care system faces serious challenges in delivering value to patients and payers. Kim et al2 provide us with a valuable investigation reinforcing the importance of competence, collaboration, and communication in the intensive care unit (ICU) through multidisciplinary rounds. Specifically, they dissect the contributions of intensivists and multidisciplinary care and demonstrate a marked reduction in risk-adjusted mortality (12%-22%) associated with both. On initial inspection, this is “common sense,” but as we know, common sense is not so common, particularly when trying to change cultures and reallocate resources in complex systems.

This sophisticated study complements that of Cardarelli et al,2 who demonstrated that the median rounding time in a cardiac ICU was 15 minutes and the median cost in salaries per patient was $140.87. If ICUs garner 25% to 33% of total hospital costs and an average ICU bed costs more than $2500 per day, one does not need to be Warren Buffet to know that twice-daily multidisciplinary rounds (30 minutes and approximately $300)
would be a wise investment. Should one be skeptical of the value of multidisciplinary rounds? Consider that treatment of severe sepsis with drotrecogin alfa (Xigris; Eli Lilly and Company, Indianapolis, Indiana) costs about approximately $8000 per patient, while reducing 28-day mortality by only 6.1% by comparison.3

We must scrutinize our efforts and allocation of resources in novel ways, like Kim et al1 have, and provide more value to our patients and payers. This analytic approach will be a cornerstone in reforming our health care system. Investigations such as this should assist in putting an end to the “penny wise and pound foolish” approach known as “that is the way we have always done it.”

Kevin W. Lobdell, MD

Author Affiliation: Sanger Heart and Vascular Institute, Charlotte, North Carolina.
Correspondence: Dr Lobdell, Sanger Heart and Vascular Institute, 1000 Blythe Blvd, Second Floor, Administration, Charlotte, NC 28203 (kevin.lobdell@carolinashc.org).


President Obama’s Coronary Calcium Scan

Dr Redberg’s editorial addressing President Obama’s physical examination1 takes issue with the computed tomographic (CT) scan for coronary calcium he reportedly received, citing the potential associated cancer risk and the lack of proven benefit in low-risk persons.2 The implications of coronary artery disease screening with CT for health care cost are important, but the discussion of risks and benefits for President Obama deserves clarification.

The projected cancer risk of 9 (range, 3-42) per 100,000 persons3 cited in this editorial is a point estimate, associated with considerable uncertainty, for a 40-year-old man, imparted by the median dose of a range of multidetector-row CT scan protocols. By contrast, President Obama is 48 years old and reportedly underwent electron-beam CT (EBCT).1,2 An older technology no longer manufactured or sold by the major CT vendors but still used in a number of institutions for calcium scoring, EBCT has a more standardized scan protocol that imparts a considerably lower radiation dose. Thus, the risk from such an EBCT scan would be approximately a third of that cited, without the potential for being much higher.

Moreover, as stated by Jeffrey Kuhlman, MD, Physician to the President, the purpose of the president’s physical examination indeed differs somewhat from that of a routine examination for the general public, having the 2-fold purpose of providing President Obama “every opportunity to enjoy the benefits of good health,” and also “to provide the public with a candid medical assessment of the President’s ability to carry out the duties of his office, now and for the duration of his tenure.”1 The extremely small increased risk of cancer from cardiac CT would almost entirely be after a latency period of at least 10 years,4 beyond the end of the Obama presidency, whereas any potential benefit in terms of decreasing the risk of a disabling cardiovascular event or providing risk assessment for the public would be derived in the shorter term. One could envision a scenario in which cardiac CT findings could tip Dr Kuhlman to recommend pharmacologic lipiodlowering therapy for this smoker with a low-density lipoprotein cholesterol level of 138 mg/dL (to convert to millimoles per liter, multiply by 0.0259) (10-year Framingham risk score,5 7%), eg, if a very high calcium score were found.6 Admittedly, such a recommendation would not be based on evidence derived from prospective randomized trials but would much more likely be beneficial than harmful, at least in the short term. Routine coronary disease screening for coronary calcium or noncalcified coronary plaque by any type of CT is not advisable for asymptomatic members of the general American population, for which no evidence demonstrates that the potential risks and costs are outweighed by the potential benefits. However, I would respectfully suggest that such testing is not necessarily inappropriate as a component of the physical examination of the President.

Andrew J. Einstein, MD, PhD

Author Affiliation: Cardiology Division, Department of Medicine, Columbia University, New York, New York.
Correspondence: Dr Einstein, Columbia University Medical Center/New York-Presbyterian Hospital, 622 W 168th St, PH 10-203A, New York, NY 10032 (andrew.einstein@columbia.edu).


In reply

I appreciate Dr Einstein’s interest in my editorial “First Physical” and agree that it is difficult to estimate the exact cancer risk for any particular CT scan. Indeed, for a routine chest CT scan without contrast, the radiation dose when measured at 4 San Francisco Bay area institutions ranged from 1.7 to 24 mSv, with a median dose of 8.2 mSv.1 I also agree that a coronary calcium scan done using EBCT would likely have a lower radiation dose than one done using newer technology. However, no risk, even a small one, can be justified.