Title
BATHING AS A POTENTIAL TARGET FOR DISABILITY REDUCTION IN THE OLDEST OLD

Journal
American Journal of Public Health, 101(2)

ISSN
0090-0036

Authors
Berlau, Daniel J
Corrada, Maria M
Peltz, Carrie B
et al.

Publication Date
2011-02-01

DOI
10.2105/ajph.2010.300020

great promise, this approach in and of itself is not a panacea and will require a coordinated multifaceted effort, attentive to the unintended consequences of testing, particularly in regards to human rights. ■

Kenneth H. Mayer, MD
Kartik K. Venkatesh, PhD

About the Authors

Both authors are with the Division of Infectious Diseases, Departments of Medicine and Community Health, Alpert Medical School, Brown University/Miriam Hospital, Providence, RI. Kenneth H. Mayer is also with the Fenway Institute, Fenway Community Health, Boston, MA.

Correspondence should be sent to Kenneth H. Mayer, MD, Division of Infectious Diseases, Department of Medicine, Miriam Hospital, 164 Summit Avenue, Providence, RI 02906 (e-mail: Kenneth_Mayer@brown.edu). Reprints can be ordered at http://www.ajph.org by clicking the "Reprints/Eprints" link.

This letter was accepted October 30, 2010.
doi:10.2105/AJPH.2010.300059

Contributors

K.H. Mayer originated the study. K.H. Mayer and K.K. Venkatesh synthesized analyses and wrote the letter.

References

1. Mayer KH, Venkatesh KK. Antiretroviral therapy for HIV prevention: status and prospects. *Am J Public Health.* 2010;100(10):1867–1876.

2. Granich R, Crowley S, Vitoria M, et al. Highly active antiretroviral treatment for the prevention of HIV transmission. *J Int AIDS Soc.* 2010;13(1):1.

3. Dodd PJ, Garnett GP, Hallett TB. Examining the promise of HIV elimination by 'test and treat' in hyperendemic settings. *AIDS.* 2010;24(5):729–735.

4. Montaner JS, Lima VD, Barrios R, et al. Association of highly active antiretroviral therapy coverage, population viral load, and yearly new HIV diagnoses in British Columbia, Canada: a population-based study. *Lancet.* 2010;376(9740):532–539.

5. Donnell D, Kiarie J, Thomas K, et al. ART and risk of heterosexual HIV-1 transmission in HIV-1 serodiscordant African couples: a multinational prospective study. Paper presented at: 17th Conference on Retroviruses and Opportunistic Infections; February 16-19, 2010; San Francisco, CA. Abstract 136.

6. Kurth A, Celum C, Baeten JM, Vermund SH, Wasserheit JN. Combination HIV prevention: significance, challenges, and opportunities. *Curr HIV/AIDS Rep.* 2010; Epub ahead of print.

7. Coates TJ, Richter L, Caceres C. Behavioural strategies to reduce HIV transmission: how to make them work better. *Lancet.* 2008;372(9639):669–684.

8. Dieffenbach CW, Fauci AS. Universal voluntary testing and treatment for prevention of HIV transmission. *JAMA.* 2009;301(22):2380–2382.

9. Crepaz N, Hart TA, Marks G. Highly active antiretroviral therapy and sexual risk behavior. *JAMA.* 2004;292(2):224–236.

10. Stephenson J. Scientists explore use of anti-HIV drugs as a means to slow HIV transmission. *JAMA.* 2010;303(18):1798–1799.

BATHING AS A POTENTIAL TARGET FOR DISABILITY REDUCTION IN THE OLDEST OLD

We know that functional disability increases with age, but the magnitude of specific limitations is still largely unknown in the oldest old (those aged 90 years or older). The 90+ Study, a population-based study of aging, examined disability in activities of daily living (ADLs; defined as bathing, dressing, feeding, toileting, walking, and transferring in and out of a bed or chair),[1] in the oldest old, the fastest growing age group in the United States. By examining the incidence of individual ADL disability, The 90+ Study determined the ADLs for which the most individuals were impaired; in addition, it sought to determine which ADLs make the best targets for potential therapeutics.

To determine incident disability in each ADL, participants in the study were asked to identify an informant who could best provide researchers with information about their functional abilities via postal mail. A questionnaire was mailed annually to this informant asking about the participant's abilities for each ADL.

We examined the incidence rates for each ADL using a person-years analysis. We defined disability in an ADL as requiring help from another person to perform it. At baseline, the mean age of the 216 nondisabled participants was 93.7 years; 56.9% still lived alone. Mean follow-up time was 2.7 years.

The incidence of bathing disability was 14.9% per year (95% confidence interval [CI]=12.0, 18.2), which was significantly higher than any other ADL (Figure 1). The ADL with the lowest incidence rate of disability was walking (6.9% per year, 95% CI=5.2, 9.0).

According to The 90+ Study, bathing is the ADL with the highest disability incidence in the oldest old. We are not the first to show that problems with bathing are especially detrimental to the elderly. Bathing is described as a "sentinel event in the disabling process,"[2] and those unable to bathe themselves without help are more likely to need long-term care.[3]

In the United States, there are more than 22 million unpaid informal caregivers for seniors, a number that is projected to double over the next 30 years.[4] Given that more than 51% of the oldest-old still require help from another person to bathe,[5] caregivers will be most often assisting with bathing despite the fact that bathing assistive devices are the most frequently used assistive devices in the

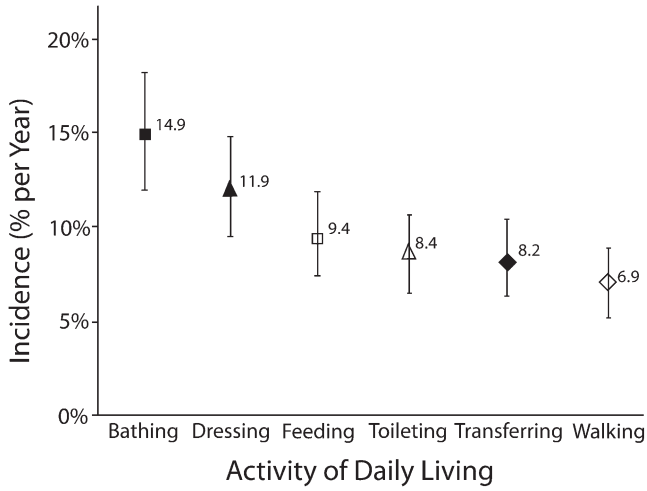

FIGURE 1—Incidence of problems with the activities of daily living among those aged 90 years or older: The 90+ Study.

oldest-old.[6] These current bathing assistive devices then appear to be ineffective at preventing dependency in the oldest-old. Developing effective assistive devices for bathing—like those available for walking—would likely have the greatest benefit in reducing caregiver need, and should be a focus of health care research. If these devices are effective, health care costs for the elderly may decline dramatically. ■

Daniel J. Berlau, PhD
Maria M. Corrada, ScD
Carrie B. Peltz, PhD
Claudia H. Kawas, MD

About the Authors

Daniel J. Berlau, Maria M. Corrada, Carrie B. Peltz, and Claudia H. Kawas are with the Institute for Memory Impairments and Neurologic Disorders, University of California, Irvine. Daniel J. Berlau, Maria M. Corrada, and Claudia H. Kawas are also with the Department of Neurology, University of California, Irvine.

Correspondence should be sent to Daniel J. Berlau, PhD 1515 Hewitt Hall University of California, Irvine Irvine, CA 92697-1400 (e-mail: danb@uci.edu). Reprints can be ordered at http://www.ajph.org by clicking the "Reprints/Eprints" link.

This letter was accepted September 6, 2010.
doi:10.2105/AJPH.2010.300020

Contributors

All authors took part in formulating the study concept and design; data acquisition, analysis, and interpretation; and critical revision of the letter for important intellectual content. D.J. Berlau wrote the initial draft of the letter. D.J. Berlau, M.M. Corrada, and C.H. Kawas performed the statistical analysis. M.M. Corrada and C.H. Kawas obtained funding, provided study supervision, and along with C.B. Peltz, provided administrative, technical, and material support.

Acknowledgments

This letter was funded by a grant from the National Institutes of Health (R01AG21055) and the Al and Trish Nichols Chair in Clinical Neuroscience. We thank all participants, their relatives, and the testers and examiners of The 90+ Study.

References

1. Katz S, Ford AB, Moskowitz RW, Jackson BA, Jaffe MW. Studies of illness in the aged. The index of ADL: a standardized measure of biological and psychosocial function. *JAMA.* 1963;185:914–919.

2. Gill TM, Guo Z, Allore HG. The epidemiology of bathing disability in older persons. *J Am Geriatr Soc.* 2006;54(10):1524–1530.

3. Gill TM, Allore HG, Han L. Bathing disability and the risk of long-term admission to a nursing home. *J Gerontol A Biol Sci Med Sci.* 2006;61(8):821–825.

4. US Dept of Health and Human Services. The Future Supply of Long Term Care Workers in Relation to the Aging Baby-Boom Generation. 2003. Available at: http://www.aspe.hhs.gov/daltcp/reports/ltcwork.pdf. Accessed June 23, 2010.

5. Berlau DJ, Corrada MM, Kawas C. The prevalence of disability in the oldest-old is high and continues to increase with age: findings from The 90+ Study. *Int J Geriatr Psychiatry.* 2009;24(11):1217–1225.

6. Ivanoff SD, Sonn U. Changes in the use of assistive devices among 90-year-old persons. *Aging Clin Exp Res.* 2005;17(3):246–251.

GENDER EQUITY IN MARRIAGE AND CIVIL UNIONS

The October 2010 issue of the *American Journal of Public Health* adds 2 more substantial pieces to the growing body of literature regarding the negative public health consequences of the discrimination experienced by lesbian, gay, and bisexual adults in the United States.[1,2]

Of likely interest to readers of the *Journal*, at the annual meeting of the Indiana State Medical Association (ISMA) in Indianapolis on September 26, 2010, the House of Delegates became the first state medical society to pass a resolution supporting gender equity in marriage and civil unions[3]:

> Whereas, legal marriage status confers numerous financial and legal benefits upon married individuals that improve access to health care;
>
> Whereas, better access to health care results in lower overall mortality;
>
> Whereas, the Lesbian, Gay, Bisexual, Transgender (LGBT) community has diminished access to health care;
>
> Whereas, the LGBT community suffers from significantly worse mental and physical health outcomes compared with the community at large;
>
> Whereas, the American Medical Association, at the November 2009 convention, acknowledged that same-sex marriage bans do contribute to health disparities in the US;
>
> Whereas, evolving medical/social science literature attest to the health benefits conferred by the social and legal recognition of same-sex marriage;
>
> Whereas, the ISMA is a body that is to be guided in its decision-making by science, reason, and public policy standards that promote the health and well being of all Indiana citizens;
>
> Whereas, same-sex marriage equality has not been demonstrated to have any deleterious consequences for society in general;
>
> Therefore, be it resolved that the Indiana State Medical Association
>
> (1) recognizes that exclusion from civil union or marriage contributes to health care disparities affecting same-sex households;
>
> (2) will work to reduce health care disparities among members of same-sex households, including minor children; and
>
> (3) will support measures providing same-sex households with the same rights and privileges to health care, health insurance, and survivor benefits, as afforded opposite-sex households.

It is notable that this came from a state and a medical organization not generally known for taking socially progressive positions. ■

Rob Stone, MD

About the Author

Rob Stone is with Hoosiers for a Commonsense Health Plan, the Indiana State Medical Association, and the Indiana University School of Medicine, Bloomington.

Correspondence should be sent to Rob Stone, 3001 E Bethel Lane, Bloomington, IN 47408 (e-mail: rstone@hchp.info). Reprints can be ordered at http://www.ajph.org by clicking the "Reprints/Eprints" link.

This letter was accepted October 14, 2010.
doi:10.2105/AJPH.2010.300049

References

1. McCabe SE, Bostwick WB, Hughes TL, West BT, Boyd CJ. The relationship between discrimination and substance use disorders among lesbian, gay, and bisexual adults in the United States. *Am J Public Health.* 2010; 100(10):1946–1952.

2. Conron KJ, Mimiaga MJ, Landers SJ. A population-based study of sexual orientation identity and gender differences in adult health. *Am J Public Health.* 2010; 100(10):1953–1960.

3. Buffie W. Indiana State Medical Association Resolution 10–02A: Same-Sex Marriage: Public Health Implications. Indianapolis, IN: Indiana State Medical Association Annual Meeting; September 26, 2010.