



## The Quest to Synthesize All of the World's Death and Disease

A Review of

*Epic Measures: One Doctor. Seven Billion Patients.*

by Jeremy N. Smith

New York, NY: HarperCollins, 2015. 331 pp. ISBN

978-0-06-223750-7. \$26.99

<http://dx.doi.org/10.1037/a0039952>

Reviewed by

Jay E. Maddock 

What kills people? What makes people sick? Is AIDS a bigger health problem in Indonesia than heart disease? These sound like straightforward questions that the field of public health should have answered long ago, yet amazingly until the last few years we didn't have the answer. *Epic Measures: One Doctor. Seven Billion Patients.* details the life of Dr. Christopher Murray in his quest to answer these questions.

In this fast-paced, well-written thriller, author Jeremy N. Smith follows the life of Dr. Murray and his colleagues in their development of the Global Burden of Disease (GBD) report. In the early 1990s, Murray and his colleague Alan Lopez developed the Disability Adjusted Life Year (DALYs) concept. Until then, demographers only considered mortality or dying early as measured by Years of Life Lost (YLL) as their main statistical outcome for global health. The inclusion of the DALYs shifted the focus from total lifespan to the number of healthy years that a person lived. Thus, someone who lived for many years with blindness, diabetes, or an amputation before dying at 70 would have a much lower DALYs than someone who was relatively healthy and died of a heart attack at the same age. As a psychology PhD student in the late 1990s, I was introduced to the concept of the DALYs in my first epidemiology class. What became clear to me was the huge contribution of poor mental health and health behaviors to DALYs. Even though few people die from depressive disorders, it ranked 3rd overall in contributions to DALYs ahead of HIV/AIDS, cancer, heart disease, and many other diseases (World Health Organization, 2008). A variety of health behaviors and diseases related to poor health behaviors also fell in the top 20 contributors to DALYs, including alcohol use disorders, road traffic accidents, diabetes, and self-inflicted injuries. It became clear to me that a public mental health approach was needed to make a difference in global health, and this realization has helped shape my career path in public health.

Over the next few years, Murray and others worked to develop the 1993 *World Development Report*, which introduced the concept of DALYs to the world. While many researchers embraced this new concept, the acceptance was not universal. Many government and nonprofit groups, which had been fighting to fund their specific disease,

saw the newly calculated burden of disease as a threat. Until 1993, many of the decisions about what to fund in global health had been decided by politics rather than data. Although DALYs had an impact on global health priorities, changes are still slow to happen. For instance, the Millennium Development Goals did not address 70 percent of the global burden of disease.

The book continues to cover the next two decades of Murray's life and work in his quest to better define the global burden of disease. Along the way there are continual fights with the World Health Organization and other global health researchers and nonprofits. A theme that rings true to many of us in academia is that personality characteristics and conflicts often shape the development and direction of the research. Jeremy N. Smith does an excellent job of capturing these moments along with the supporters and detractors of Murray and his work.

Murray is now located at the University of Washington, and he has developed a relationship with one of the Pacific Northwest's most famous residents, Bill Gates. Murray's new Institute for Health Metrics and Evaluation has received millions in funding from the Gates Foundation to create the *Global Burden of Disease 2010* report. The book details a race against time to complete the report with the high level of accuracy needed. Along the way, several surprising findings are shared, including how women fare much worse in DALYs even though their life expectancies are longer. Today, Murray's Institute offers a variety of visualization tools that allow readers to compare the burden of disease among countries and to compare DALYs among different age groups. One of the most interesting is a county-by-county analysis for every county in America. This is an extremely useful tool for anyone looking to easily assess risk factors in order to improve the health of his or her community. One of the great things about this book is how current it is and how useful the work is to our everyday lives.

I found this book to be an outstanding read. It is in the same vein as other outstanding nonfiction titles in public health, including *The Hot Zone* (Preston, 1994) and *The Great Influenza* (Barry, 2005). Anyone who can turn a book largely about data into a gripping thriller is clearly a gifted writer. This book will interest anyone who cares about global health or who wants to improve health outcomes in the United States or abroad. I will be integrating the book into our global health curriculum and using Murray's research as a background for my own.

## References

---

Barry, J. M. (2005). *The great influenza*. New York, NY: Penguin Group.

Preston, R. (1994). *The hot zone*. New York, NY: Random House.

World Health Organization. (2008). *The global burden of disease: 2004 update*. Geneva, Switzerland: World Health Organization.