



Breast cancer in the developing world: meeting the unforeseen challenge to women, health and equity
*An international meeting organized by the Harvard Global Equity Initiative, the Dana Farber Cancer Institute, Harvard School of Public Health, Harvard Medical School and the Brigham and Women's Hospital
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Interviews with Felicia Knaul, Ph.D., Director, Harvard Global Equity Initiative and Lawrence Shulman, M.D., Chief Medical Officer at Dana Farber Cancer Institute are available on November 2nd and 3rd by calling Marshall Hoffman.

B-roll is available in English and Spanish for TV producers.

Conference Agenda and Information: <http://www.hsph.harvard.edu/breastandhealth/>

Breast Cancer: Confronting the Global Epidemic

Breast cancer is reaching epidemic proportions throughout the world and a Harvard-led team of experts is doing something about it by undertaking relevant research, expanding work on-site and establishing a Global Task Force to address the problem.

Globally, 1.35 million new cases of breast cancer will be diagnosed this year, accounting for 10.5 percent of all new cancer cases, second only to lung cancer. Many of these new cases will come to the attention of doctors when it is too late to help.

The incidence is projected to increase and the majority of cases will come from the developing world. Some 1.7 million new cases of breast cancer will be diagnosed in 2020—a 26 percent increase from current levels—according to estimates by Harvard School of Public Health.

The new Harvard statistics on breast cancer show that middle and low-income countries are catching up with the developed world, as infectious diseases and malnutrition decline and life spans improve. More than 55 percent of the more than 450,000 deaths expected this year from the disease will occur in these

countries, as these nations lack resources either to diagnose the disease at early, treatable stages or to treat it effectively.

“We used to think breast cancer was a problem of only wealthy women, but now we know breast cancer shows no favorites: It strikes rich and poor women alike,” says Felicia Knaul, Ph.D., who heads the Harvard Global Equity Initiative and has produced a body of research on the issue. “The big difference is that by the time the disease is diagnosed in poor women, it is often too late for effective treatment.”

Early research suggests that breast cancer is being detected on average in younger women in the developing world and in poorer population groups in some developed countries. Existing data from a number of countries, including Mexico, indicate that the average age at detection –despite late-stage diagnosis– is up to 10 years earlier. In many countries 50 percent or more of cases are identified in pre-menopausal women, reports Dr. Knaul. “More research is urgently needed to better understand the array of possible underlying causes. This will facilitate a more effective response to the disease,” she says.

Epidemiologists estimate that 4.4 million women now live with diagnosed breast cancer -- the most prevalent cancer in the world. Dr. Knaul is one of the millions who live with breast cancer. No one knows how many million more may be living with undiagnosed breast cancer, especially in the developing world.

The United States is number one with 240,721 new cases of breast cancer expected this year. One in eight U.S. women will develop breast cancer at some time in their lives. The majority of these cases are detected and treated in early stages, when the 5-year survival rates are 98 percent, according to the American Cancer Society.

Other countries with high numbers of breast cancer cases are China –145,472, India –99, 397, Germany –59,864, Brazil –47,343, France –46,192, Russia –46,031, the United Kingdom –43,629, Italy –39,561, and Japan –33,619. This is partly a reflection of population size, but also depends on screening prevalence, underreporting and unstudied differences in risk and genetic factors.

Though the absolute numbers are smaller, the countries where the greatest percentage increase in breast cancer cases is projected over the next decade are: United Arab Emirates, 78 percent; Qatar, 60 percent; and Saudi Arabia, 57 percent, according to data from the Harvard School of Public Health.

The largest absolute increases will be in Asia with almost 180,000 new cases in China in 2020 and 131,000 in India.

Based on the report and calculations from the Mexican Health Foundation, in Latin America and the Caribbean alone, more than 40,000 women die each year of breast cancer and more than 117,000 cases are reported, though epidemiologists believe those numbers are underestimated. By 2020, there will be almost 154,000 new cases representing an increase of 31 percent, and a projected 52,500 deaths. The breast cancer mortality rate per 100,000 women in Argentina is 22; in Brazil is 14; and in Uruguay is 24.

Women in the developing world are more likely to die of the disease. The probability of death – the case fatality rate – reflects inequities in early detection and access to treatment. The ratio of deaths to new cases is 56 percent in low-income, 39 percent in low-middle income and 44 percent in high-middle income developing countries. In the developed world it is still high, but much lower than in the developing world: 24 percent.

A New Global Task Force

Dr. Knaul and colleagues at Harvard Medical School, Harvard School of Public Health and Dana-Farber Cancer Institute along with international experts in medical care, have convened an international task force to help procure and deliver necessary drugs for various cancers at affordable prices and to expand access to early detection, treatment and survivorship. This is an integrated approach: Patients in less developed countries also need timely screenings to ensure earlier detection and save more lives with better and more affordable treatments.

The new initiative aims to do for cancer patients what has been accomplished so successfully by advocates for HIV/AIDS, tuberculosis, polio, trachoma, and malaria patients, where support from developed countries, the pharmaceutical industry, World Bank, the Clinton and Gates Foundations, and others has provided a sustainable supply of affordable drugs for these diseases, according to Dr. Knaul.

“Our experience has shown us that treatment and care for many types of cancers not only can be but should be a reality in resource-poor settings” says Paul Farmer, M.D, Ph.D. of the Harvard Medical School who has built hospitals in developing countries. “We have found that despite a shortage of surgical and radiological services, several cancers—breast, Hodgkin’s and non-Hodgkin’s lymphoma,

rectal, head and neck, are treatable with high cure rates even in the reaches of rural Rwanda.”

To accomplish this, the task force must find ways to expand access to cancer education, detection and care in the developing world.

“We need to draw from the successful methods we’ve used in other diseases that might be relevant to breast and other cancers,” says Julio Frenk, M.D., Ph.D., Dean of Harvard’s School of Public Health. “Ten years ago the new drugs that turned AIDS from a death sentence into a manageable chronic disease were not available to poor countries. There was a global movement to change that. It took 10 years, but it happened.”

Currently, only 5 percent of the global resources for cancer are spent in the developing world.

To match the resources now spent on cancer in countries with the lowest fatality rates –the developed world— an additional \$217 billion would be required globally this year alone, writes David Bloom, Ph.D. who directs the Department of Global Health and Population at the Harvard School of Public Health. Dr. Bloom is the coauthor of the report on the Global Burden of Cancer that was recently published by The Economist Intelligence Unit and sponsored by the Livestrong Foundation. Of those \$217 billion that make up the global treatment expenditure gap, \$192 billion – almost 90% - would be required in the developing world.

The global cost of just the new cases of cancer in 2009 is an estimated \$286 billion, a figure that includes treatment, foregone income due to illness, and the costs of research. Breast cancer alone accounts for nearly \$28 billion, with costs in the United States alone topping \$16 billion. Thus, for breast cancer alone about \$26 billion additional would be needed in the developing world to bring low-survival country spending up to that of high-survival countries.

International Conference Scheduled

To meet the global challenge, cancer experts, government officials, and representatives of international organizations from many parts of the world will participate in an international conference, *Breast Cancer in Developing Countries; Meeting the Unforeseen Challenge to Women, Health and Equity*. The conference will be held November 3-5 at Harvard School of Public Health, Harvard Medical

School, Dana-Farber Cancer Institute and Brigham Women's Hospital. Dr. Knaul will be chairwoman of the conference.

"This is probably the first conference that actually deals with the problem of breast cancer in developing countries with this level of participation and visibility," says Dr. Frenk. "We need to raise awareness about this problem to challenge conventional wisdom about priorities in global health.

Conference planners intend to outline concrete steps for addressing the challenge. Those steps may be different for different countries, which is one reason for the broad international presence at the conference.

Many Different Approaches Needed

"To attack the breast cancer global problem, there is not a one-size-fits-all solution," explains Lawrence Shulman, M.D., Chief Medical Officer and Senior Vice President for Medical Affairs at Dana Farber Cancer Institute and a conference leader. "What works in rural Mexico is different from what is needed in Malawi or Haiti."

Major obstacles include the lack of an adequate healthcare infrastructure so patients can be cared for; getting women to come in for screening; and overcoming the social stigma associated with breast cancer.

Much of the world lacks appropriate resources for dealing with breast cancer. "We have to come to terms with the fact that resources we take for granted in the United States and Canada don't exist in much of the world," says Dr. Shulman. "That includes mammography, the ability to do needed surgeries, and the availability of radiation."

"For much of the world, the approach to the disease has to be different," Dr. Shulman says. "We have to figure out what care we can feasibly put into place in the short term to accomplish what we need to accomplish as soon as possible. We are convinced that even with the limited resources we can garner, we can have a major impact on breast cancer survival."

Prevention

The causes of the growing breast cancer epidemic are complex and not well understood, which makes finding ways to prevent breast cancer elusive. Many experts blame the “westernization” of the developing world. “Westernization” has many positives, for it brings increased life expectancy, improved socioeconomic status, and greater freedom for women.

But it also has some negatives: changes in diet and, as more women take sedentary jobs, less exercise, early menarche, delayed childbirth, families with fewer children, less breast feeding, and hormone replacement therapy—all thought to increase the risk of breast cancer.

Reasons for the increase in the number of breast cancer deaths and the disproportionate number of deaths in lower and middle income countries are far easier to understand. They are a lack of awareness of the growing epidemic of breast cancer, little, if any, access to early detection and treatment, marginal health care, and social and cultural barriers to diagnosis and care.

“In Latin countries, the pervasive machismo culture means women are reluctant to seek a diagnosis that might involve breast surgery,” says Dr. Frenk. “Many women won’t seek care because they are afraid their husbands will abandon them.”

Another inequity relates to the allocation of resources for research. “The vast majority of the research has been done on Caucasian women from rich countries and very little—including clinical and intervention studies—on women from poor countries”, says Dr. Knaul.

Shortly, the task force will prepare a white paper on the new initiative laying out a specific well-researched plan for setting up a global scheme for expanded access to cancer education, prevention, detection and treatment in the developing world.

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About The conference

[Breast Cancer in Developing Countries: Meeting the Unforeseen Challenge to Women, Health and Equity](#)

Conference sponsors include the Harvard Medical School, Harvard School of Public Health, Harvard Global Equity Initiative, Dana Faber Cancer Institute, Brigham and Women’s Hospital, American Cancer Society, the Susan B. Komen Foundation and the LiveStrong Foundation.

Cancer experts from Harvard, Fred Hutchinson Cancer Research Center, the Breast Global Health Initiative, and Mexico’s National Institute of Public Health will attend.

Conference participants include Her Excellency Madam Tobeka Madiba Zuma, First Lady of South Africa, Director-General Margaret Chan of the World Health Organization, (who will participate by video), Princess Nikky Onyeri of Nigeria, and Harvard President Drew Gilpin Faust. Nobel Laureate Amartya Sen and Ambassador Nancy Brinker of the Komen Foundation will deliver keynote addresses.

Breast Cancer: Key Global Statistics

Breast Cancer	Most common cancer of women; accounts for 10.5% of all new cancer cases – second to lung
New cases in 2009	1.35 million
New cases in 2010 (estimated)	1.7 million
Deaths (estimate for 2009)	450,000
Women living with the illness (diagnosed)	4.4 million

New Breast Cancer Cases		
Low income	69,000	5%
Lower-middle income	415,000	31%
Upper-middle income	224,000	17%
High-income	615,000	46%
Total	1.35 million	100%

Breast Cancer Deaths (ratio of deaths to new cases, 2002)	
Low income	56%
Lower-middle income	44%
Upper-middle income	39%
High-income	24%

Sources:

- Nancy Beaulieu, David Bloom, Lakshmi Bloom and Richard Stein (2009). Breakaway: The Global Burden of Cancer – challenges and opportunities. The Economist Intelligence Unit. Sponsored by the Livestrong Foundation.
- Peter Boyle and Bernard Levin eds. (2008). World Cancer Report, 2008. Lyon, France: World Health Organization and International Agency for Research on Cancer