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# Making the case for cervical cancer prevention: what about equity?

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**Abstract:** *Cervical cancer is a major cause of suffering and premature death among women in the developing world, yet it is largely prevented in most higher-income countries. From an equity perspective, cervical cancer is unequally distributed globally in ways that are unnecessary, avoidable and unjust. Although cost-effectiveness analyses demonstrate that prevention measures are justified in low-resource countries, affordability and lack of prioritisation have contributed to a lack of progress. This paper describes the inequities in cervical cancer disease burden, barriers in access to and utilisation of services, and the underlying conditions of poverty and low socio-economic status that put women in a disadvantaged position. These social disadvantages are aggravated by the disease itself, with serious consequences for women, their families and communities. Remedies are available in the form of new prevention and treatment approaches, including vaccines against human papillomavirus (HPV), rapid HPV testing, visual inspection of the cervix with acetic acid (VIA) and cryotherapy. These technologies could help to overcome the social, economic, and political disadvantages that contribute to disparities in cervical cancer incidence and mortality through an optimal combination of vaccination, screening and treatment. In the long run, however, increasing women's access to care will also require societies to address structural barriers related to health systems and poverty.* ©2008 Reproductive Health Matters. All rights reserved.

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THE past decade has seen a significant emphasis placed on the efficiency of health interventions, as measured by DALYs (disability-adjusted life years), cost-effectiveness analyses and affordability.[1,2] Complementing these has been growing attention to equity in measurement of health systems performance and priority-setting in allocation of health care resources.[1,3,4] While it is essential to include these issues in health policy-making, other factors should also be considered.[5]

The meaning of equity in relation to health has evolved since Whitehead offered her classic definition of inequity as differences in health that are unnecessary, avoidable, unfair and unjust.[6] Although disparities are objective and evident in data, equity also involves values and individual judgement. To these principles has been added the idea that differences must be systematic rather than occasional or sporadic, and that they should result from and contribute to social disadvantage.[7] These differences may be evidenced in health status or health care availability or utilisation. Not all inequalities are matters of equity, since some are due to biology or geography. While every untimely death, illness and suffering is of concern, a widely accepted principle of social justice says those who are most vulnerable to illness or less able to access services, because of social or demographic characteristics over which they have little control, are entitled to special consideration.[6] Poverty is the most

commonly identified source of inequity, but other aspects include gender, ethnicity, religion, geography, age, education and social status,[8,9] especially when these cluster and magnify negative effects.[6]

These concepts of inequity, both in health status and access to health services, resonate strongly with regard to cervical cancer. This paper presents examples of disparities in who gets cervical cancer and the impact it has on those who are affected by it. In view of the unfair distribution of cervical cancer, it also points to promising new approaches that could help to overcome the social and political disadvantages that contribute to the disparities in cervical cancer burden. All women should be able to benefit from the preventative measures that have brought rates of cervical cancer down to the historic low levels now seen in Europe and North America.

## Unequal disease burden, service availability, utilisation of care and impact

### Incidence and mortality

The global burden of cervical cancer is significant, at nearly 500,000 new cases each year and about 274,000 deaths, and its unequal distribution is striking.[10] While relatively low incidence rates prevail in Europe, North America and Japan (generally about 10/100,000 women), rates in sub-Saharan Africa are many times higher, as are those for poorer countries in Latin America and the Caribbean, Melanesia, South and Southeast Asia. Countries in East and Southern Africa have some of the highest reported age-standardised rates per 100,000 women: Tanzania (68.6), Lesotho (61.6), Zambia (53.7) and Guinea (50.9).[11] In the Americas, Haiti has the highest estimated rate (87.3), but other countries in the region, such as Bolivia and Belize, also experience incidence rates above 50/100,000.[11] Simple geography does not explain the disparity in rates between North America and the rest of the Americas or Africa. In fact, the United States and Europe both experienced much higher rates of cervical cancer well into the 20th century until screening and treatment programmes were established. In the United States, for example, rates have fallen by 75% or more since the 1960s when screening was instituted.[12]

The difference in mortality due to cervical cancer parallels to some extent the difference in incidence rates, but the ratio of mortality to incidence further differentiates rich from poor countries. While the global average ratio of deaths to new cases is 55%, the ratios range from just 20% in Switzerland to more than 80% in most African countries, with countries in Latin America and South Asia having ratios of 40–55%.[11] The greater availability of services for early detection and cancer treatment in Latin America and India enable those areas to ameliorate the toll of cervical cancer, more like the wealthy countries, in a way that is not available to women in Africa. The advanced clinical stage at which most cervical cancers are identified and the inadequacy of treatment in many developing countries accounts for their much higher mortality rates.[13]

In additional to national and regional differences, there are disparities in disease rates within countries according to urban and rural residence and by class, race and ethnicity. In Mexico, for example, rural women had a three-fold higher risk of cervical cancer mortality than urban women.[14] In Australia, Aboriginal women living in metropolitan areas were more than four times as likely as non-Aboriginal women to die from cervical cancer, while Aboriginal women living in remote areas were more than 18 times as likely to die.[15]

A further disparity in the epidemiology of the disease is in age distribution, whereby women in developing countries are more likely to die from cervical cancer at younger ages than women in wealthier countries (Figure 1). The higher levels of access to and utilisation of screening services and of cancer treatment among younger women in wealthy countries probably explain most of the age differences. (Elderly women in both high and low-resource settings may be less likely to avail themselves of services.) However, the earlier onset of sexual activity and higher rates of early childbearing in low-resource countries may also contribute to differentials in age distribution. Overall, all these differences are largely due to socio-economic and health service issues related to underlying conditions of poverty and social status.

### Service availability

The differences in avertable disease incidence and mortality are due primarily to differential