



Human Resources in Health in Africa: Needs-Based Measures for the Health Workforce

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The health workforce stands in the center of health systems. Medical equipment, supplies, facilities, and medication will be underutilized, without a trained workforce that is accessible to the community it serves. This paper estimates the number of health workers required to meet a country's or community's health care needs, as this will help governments and donors make prudent health systems spending decisions.

Health workforce requirements are estimated using a needs-based approach, which uses multi-variate regression models to estimate the extent that different health care needs are being met by the existing health workforce. Specifically, the needs-based approach regresses a health care service utilization measure (e.g., percent of births attended by a health professional) on the number of health workers per 1,000 population and other independent variables, such as the percentage of the country's population living in an urban area and the country's land area per capita. Twelve different utilization measures are used. The data are from the World Health Survey 2002, a World Health Organization survey that included approximately 4,000 adults per country, whose results are aggregated to the country level. The needs-based approach is applied to 53 countries, including 18 in Sub-Saharan Africa.

The number of health workers a country requires significantly varies, depending on the health care need that is used to generate the requirement, as well as the country's geographic population distribution. For example, the estimated number of health workers per 1,000 population required to achieve 80 percent coverage of births varies by a factor of four, because countries have different shares of their populations living in urban areas.

The number health workers that a country or community requires should be estimated using multiple health care need measures as well as country- or community-specific characteristics, such as the population's geographic distribution. The use of multiple measures, which can be designed for a country's or community's specific health care situation, will result in a more accurate estimate of the required number of health workers.