Annex 3

Common Approaches for Healthcare Workforce Planning

Need-based Models

1. Need-based models allow for estimates of a population's healthcare need by considering changes in population health status and efficacy of healthcare services while adjusting for population size and characteristics including age, sex, household income, risk behaviour, and self-perceived health. These models project healthcare deficits as well as healthcare service need and can avoid perpetuating existing inequity and inefficiency within the healthcare delivery system. As need-based approaches have greater data demand than those based on supply or utilisation, the availability of epidemiological data is an important limiting factor. For these models, detailed information on the efficacy of individual medical services for specific medical conditions is required. The assumption of these models that healthcare resources will be used in accordance with relative levels of need is also not verified.

Demand/Utilisation-based Models

2. Demand/utilisation models project healthcare service need based on service utilisation data, under the assumption that healthcare workload remains constant over time, and that population growth directly leads to increased workload. These models commonly include (a) estimates of healthcare demand or historical utilisation patterns, (b) anticipated change in practice patterns, (c) impact of current and emerging technologies, and (d) policy change. The projections are often limited to age and sex, although other characteristics of the population, market conditions, institutional arrangements and patterns of morbidity may be included. Previous demand models often assumed that doctors were required for all demanded service, current demand was appropriate, age and sex specific resources requirements were constant, and that demographic change was predictable over time.

Benchmarking

3. Benchmarks refer to a current best estimate of a reasonable workforce. By way of benchmarking, manpower requirements are estimated on the basis of healthcare worker-to-population ratios and current healthcare services. Estimates by benchmarking are valid for comparison only if communities and healthcare planning parameters are comparable. Adjustments for differences in population demography, population health, health insurance, productivity and health system organisation are important for such models to be relevant.

Trend Analysis

4. Trend analysis uses observed historical population growth and ageing trends for predicting future trends based on aggregate level and time series historical data. It is a macro simulation based on the extrapolation of past trends, assuming (a) a causal relationship between economic growth and the number of doctors per capita, (b) that future requirements will reflect current requirements (e.g. the current level, mix, and distribution of providers are sufficient), (c) productivity remains constant, and (d) demographic profiles (such as population growth) are consistent with observed trends. Trend analysis is often useful for projecting likely growth particularly in the private sector. These models, however, do not consider the evolution of the demand for care, doctor productivity, and elasticity of labour supply for different provider groups.