

Yesterday

- Understanding population level burden of various disease states and the impact of control measures posed major challenges to policy makers.
- Diseases and associated risk factors including the biologic, genetic, environmental, socio-economical and behavioral factors vary widely in different populations throughout the world.
- Historically, the World Health Organization cited global disease figures without describing the great variation from region to region and the different measures needed to control disease in unique environments and situations.

Today

- Our understanding of the causes and risks of diseases among various populations continues to improve.
- The improved resolution of the distribution of diseases and risk factors on temporal, geographical and demographic scales allows us to evaluate the outcome of various health interventions.
- As investments are made towards the development and dissemination of tools to lessen infectious diseases- such as new drugs or vaccines- it becomes imperative to measure their expected impact in health and economic terms.
- An accurate assessment of health outcomes could help inform policy-makers to develop the most successful and cost-effective strategies.
- The NIH supports research to integrate biology, demographics, social studies, economics, operational management, and political sciences to measure health states, risk factors, and the outcome of interventions.

- This research is essential for the development of evidence-based disease control policies. For example:
 - The NIH tracks the patterns of spread of influenza and virus mutation rates based on analysis of international epidemiologic data and collaboration with virologists around the world.
 - By tracking the spread of viruses and evaluating the impact of various strategies of vaccine control implemented across the globe, we are better positioned to optimize influenza control strategies.

Tomorrow

- The NIH will continue to initiate and support international research and collaborations in the field of international epidemiology. NIH researchers will continue to make an important impact in this arena by:
 - Developing new tools to accurately measure disease burden and the impact of various interventions in a variety of distinct populations defined by unique host and environmental conditions.
 - Developing quantitative tools to identify barriers to improved health and establishing research agendas with regard to interventions and control of infectious diseases will assist policymakers in the United States and around the globe to develop population-specific strategies for disease control.

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