

Immunization for all-a condition for health and development

Notes—October 19, 2005

- .Apology for immunization-Socratic
- .Barbadian and our role in development through immunization-George Washington NB. Crispus Attucks
- .Xavier Balmis-- his expedition filantrópica 1803 Puerto Rico
- Hypothesis—If we were to provide vaccines we already have to all who needed them, it will contribute to health and human development.
- Start at the end of the hypothesis—what do I mean by human development, then what is the role of health and then what is the role of vaccines in ensuring that health contributes to HD, and finally I will share some of my concerns about progress in this field
- Human Development Report of 1990-one of the most important documents of the past 50 years—the things I reread-this, Machiavelli the Prince--Fukuyama
- Excuse me –cite textually “ ***People are the real wealth of a nation. The basic objective of development is to create an enabling environment for people to live long and creative lives***” and it goes on “ ***Human development is a process of enlarging people’s choices. In principle, these choices can be infinite and change over time. But at all levels of development, the three essential ones are for people to lead a long and healthy life, to acquire knowledge and to have access to resources needed for a decent standard of living***”
- Thus the three first components were health , education and economic
- Focus mainly on health, economic growth and education-these were the three components of the HDI
- Health and economic growth—historical, Fogel, Suchit Arora
 - Micro-economic studies on mechanisms
 - Positive aspect—Human capital stock-productivity
 - Saving rates
 - Demographic dividend –Asian tigers-Mexico-Caribbean
 - Negative aspect—Ill health and the cost of illness-discipline of economics
 - William Petty-numerous studies showing the direct and indirect cost of illness- MOH of China-eastern part-poverty trap
- Well established that health leads to increased productivity-lag period
- Evidence that we underestimate the value of a long life or conversely the negative effect of mortality GDP per caput not a good measure of economic welfare-data from various places-value of the increased life span equal to the value of the production of goods and services as measured by the standard income and product accounts.
- The question is how immunization contributes to this.
- Simplistically, vaccines prevent deaths, therefore they must contribute to economic growth,(**COULD SAY THIS AND LET US HAVE DINNER**) but

let us examine this a bit further and separate the various functions of immunization

- Childhood vaccines prevent **infant** deaths-much of the increased life expectancy at birth due to immunization and nutrition-studies from Guatemala and Uganda recurrent periods of infection , usually beginning with measles send children into as spiral of malnutrition. Immunization against measles potent protector of nutritional state
- The relation of the decreased child mortality to the demographic dividend
- In these cases the major effect is to contribute to the quantity of the capital stock
- Even in USA, every dollar invested in childhood immunization against 9 vaccine preventable diseases saves \$17.70 in direct and indirect costs of illness averted.
- Vaccines against non-childhood/adult illnesses
 - Adult vaccines-influenza-decrease morbidity and mortality
 - HPV—decreased mortality
 - HIV--- decreased mortality , morbidity and transmissibility
 - Rubella
- The effect of immunization on education—clearly the reduction of cognitive ability as a result of infectious illnesses
- In the above examples, vaccination is contributing to both the quantity and well as the quality of the capital stock and in the case of adult vaccines increasing wealth at the micro level by reducing the direct and indirect costs of illness
- Some strange phenomena as regards illness and wealth—The Black Death-David Bloom on AIDS in Africa
- But the strangest thing is this
 - We know the impact of health on economic growth--we know the power of immunization and yet we are still contending with the two major over riding challenges
 - a) safe and effective vaccines are lacking for some old infectious diseases and for the new and emerging infectious diseases
 - b) even when we have the vaccines, they are not employed on the scale at which they should be.
 - I would posit three basic reasons. First-the seduction of success, second the obscenity of otherness and third the modesty of medicine—
 - ***Seduction of Success***
 - Smallpox-end of the disease-other vaccines-in general you have to continue vaccinating successive cohorts as the agent has not been eliminated-Polio vs hypertension
 - ***Obscenity of otherness***
 - No concept of global interrelationship—I am alright jack! Charity and not cooperation-our experience in PAHO the emphasis on the panAmerican approach-revolving fund etc.no concept that the health of the developing poor worlds is of strategic and commercial interest to the developed rich
 - ***Modesty of medicine.***

- When I look at most of the documents making the case for immunization, they are cast in welfare terms. Medicine and the advances it has made are solely for that aspect of development that speaks to a long and healthy life—when I read the material on vaccines it is mainly in the tear-jerk mode—what a noble thing it is to save the lives of millions of poor children. I read the brochure on the WHO/UNICEF vision and strategy—not one word about the economic benefit of increasing vaccination coverage from 60% in Africa—nothing about the benefit of averting the .1 million deaths that occurred in 2002 that were preventable by immunization. In the section on economic returns—nothing about returns, simply cost effectiveness of vaccines. In the brochure on the International Finance facility only a passing mention that healthy children mean better economic opportunities and a reduction of poverty. When I read of the efforts to make vaccines available to the poor, the emphasis is on the fact that there is no economic benefit to their production. Economic benefit to whom? Of course there is economic benefit if the diseases of the poor are addressed. Why are we in health so always apologetic and casting health solely as a high noble good? Note I say solely!!!
- Let me cite an example from Jeffrey Sachs's book speaking about investment in agriculture. **“Consider the case of fertilizers, which are currently unused—A fertilizer application of \$100 per hectare combined with or substituted with by improved fallows(as appropriate), could raise crop yields in a normal season from one ton per hectare to three tons per hectare with a marketable value of the increment of roughly \$200 to \$400 dollars per hectare”**

What is the solution if immunization for all is to be seen as a major contribution to human development and not simply a mechanism for achieving one of the MDG's? Much more aggressive advocacy for the reduction in the obscenity of otherness and certainly much less modesty on the part of people like ourselves who have not been brought up to believe that you get what you market. When these are done there will be no question about immunization remaining in the cold.

For a beaker full of the warm south
 Full of the true, the blushful Hippocrene
 With beaded bubbles winking at the brim
 And purple stained mouth