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# Gaps and Priorities in U.S. Contributions to Global Disease Challenges: What has the U.S. done well and not as well?

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## Vaccine Preventable Diseases

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# Challenges

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- ❑ 2.7 million death a year due to vaccine preventable diseases
- ❑ Poor EPI coverage
- ❑ Newer, effective vaccine not introduced in developing countries
- ❑ Decision makers not always aware of available tools
- ❑ Lack of human resources



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## Major Findings

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- ❑ Basic Science: Conjugate, recombinant vaccines
- ❑ Strategies to improve systems
- ❑ Promotes healthy development
- ❑ Impact on other diseases and mortality
- ❑ Developing countries have successfully introduced new vaccines
- ❑ Focused advocacy
- ❑ Cost effectiveness

S7

I left out mentioning that vaccine is one of the most effective interventions... everyone knows this

Sean, 6/18/2008



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# U.S. Contribution

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- Major Players
  - Financing: GAVI, PAHO. Technical support: Immunization Basics, CDC. Research: NIH, USAID, public and private institutes
- What the U.S. has done well
  - Financial support of PAHO elimination efforts. Basic vaccine research. Technical support
- Missed opportunities
  - New and underused vaccines
  - Transitioning from research to vaccine implementation
- Global cooperation is critical
  - UNICEF, WHO
  - GAVI's impact



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# Gaps in Knowledge

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- ❑ Basic research and epidemiology
  - ❑ Combination vaccines, temperature stabilization, rapid vaccine development technologies. Ex: DNA vaccines
  - ❑ Disease burden and surveillance
- ❑ Operational research
  - ❑ Transitioning new vaccines to developing world
  - ❑ Motivating companies to develop vaccines for neglected diseases
  - ❑ Technical assistance to developing world manufacturers
- ❑ Delivery
  - ❑ Integration of vaccination with other interventions
  - ❑ Translational research - scaling up existing programmatic knowledge
  - ❑ Guiding policy change



# Recommendations

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## □ Operational support

- Support for vaccination in fragile states
- National surveillance for vaccine preventable diseases
- Communication of disease burden and vaccine applicability for evidence based decision making
- Supporting transfer of knowledge and experience between countries
- Leverage immunization delivery systems for other key interventions
- Technical assistance aimed at improving system capacity

## □ Research priorities

- Support all stages of neglected and tropical disease vaccine development
- Develop innovative methods to reach neglected populations
- Develop innovative financing mechanisms (eg. AMC)



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# Strengthening Health Systems

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- ❑ Sustained universal immunization requires functioning health systems at all levels
- ❑ Spillover Effects of Recommendations
  - Integrating vertical vaccination programs increase impact of resources
  - Preventing disease reduces future burden on system
  - Vaccination can be used as a vehicle for other interventions
  - Strengthening national evidence based decision can improve all health decisions
  - Technical and managerial training expand to the general health system
- ❑ Physical infrastructure is crucial
  - Roads, transportation systems, communication