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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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Non-Communicable Disease Intervention

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# Challenges

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▣ Deaths from NCD's (2005) in millions

		<u>Global</u>		
CVD -	18	Diabetes -	1	
Cancer -	6	Kidney -	1	
Chronic Resp -	4			

NCD's are overwhelming cause of death in both developed & developing countries (except Sub-Saharan Africa where they are about equal with CD's)

Diabetes and subsequent complications rising worldwide, especially in developing world

Challenges: early detection and intervention tertiary treatment of advanced diseases

high disproportionate cost of NCD's

WHO goal – reduce death rate from NCD's by 2%/yr



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# Major Findings

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What works for vascular disease (CVD, stroke, diabetes & kidney disease)

- ❑ Public awareness, early detection (high risk groups), key available lab tests, education, advertising, major funding, trained practitioners
- ❑ Highly effective: population screening (high risk population), lifestyle changes (weight reduction, smoking cessation, exercise, reduced salt intake), early therapeutic intervention,
- ❑ Cost-effective: BP control, glucose control, lipid control, preservation of kidney function (low cost)
- ❑ Therapeutic tools available: ACE inhibitors, anti-hypertensives (especially diuretics), lipid lowering drugs, antidiabetic drugs (i.e. metformin), aspirin
- ❑ Data supports 15M deaths averted over 10 years



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# U.S. Contribution

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- ❑ U.S. has done well with pharmaceutical development, basic & clinical research, clinical trials, publications, health education, internet, shared expertise, strategies
- ❑ How: Extensive funding of biomedical and health science research
- ❑ Solo efforts uneven because of health care systems. Globally have provided international leadership, again uneven
- ❑ US and other developed nations have made insufficient effort to encourage doctors and nurses to remain in their native country and have relied on them as a source of health professionals in their countries



# Gaps in Knowledge

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- Key gaps in knowledge
  1. Lack of public awareness of NCD's and their risk factors
  2. Better understanding of progression of chronic vascular diseases and cancer
  3. Research in broad prevention and intervention with issues in NCD's
  4. Improved knowledge of prevention of vascular disease
  5. Prevention/intervention delivery systems
  6. Training of adequate numbers of health professionals



# Recommendations

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## Priorities

1. Continued intensive basic and clinical research
2. Development of national & global strategies to prevent and intervene early in NCD's
3. To identify more accurately the global burden of NCD in various countries and regions
4. Create a care system for dealing with multiple chronic illnesses
5. Development of professional resources

## Recommendations

1. Shift health care system to prevention & early treatment but maintain research and practice more effective, evidence-based tertiary care
2. Emphasize development of health care system in developing countries, and assist targeted countries to improve health delivery
3. Consider integrated multidisciplinary model health care centres in developing world to trained health professionals and to be models of prevention/early intervention
4. More global aid – but more effective aid.

# Strengthening Health Systems

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Current structure of health systems in developing countries:

- ❑ Limits early detection and treatment/prevention largely to academic centres
- ❑ Recommendations for U.S. action would lead to health care for whole population & create sufficient US derived health professionals
- ❑ Economic development, alleviation of poverty, water, sanitation health care system development, all critical
- ❑ Increase in coverage of prevention/intervention resources to low/middle income individuals and countries.  
Increase involvement by governments, NGO's, food and drink industry, pharma, academic and global disease society networks