



NCDs in Asia-Pacific

Rising Challenge, Mounting Response

Gauden Galea RA/NCD

March 21, 2005



The Central Issue

What Should a National Response to Chronic Disease look like in the Asia-Pacific Region?

- How to develop a pragmatic model that integrates health promotion and disease control in developing country settings?
- How to avoid the problem of structures in countries cloning the structures in development agencies?



NCD Determinants

BEHAVIORAL

- Tobacco
- Diet
- Physical Activity
- Alcohol

ENVIRONMENTAL

- Socio-cultural
- Policy
- Economic
- Physical

NON-MODIFIABLE

- Age, Sex, Genes

INTERMEDIATE RISK FACTORS

- Hypertension
- Blood lipids
- Diabetes
- Obesity

END-POINTS

- Ischemic Heart Dis.
- Stroke
- Peripheral Vasc. Dis.
- Cancer
- Chronic Respiratory D

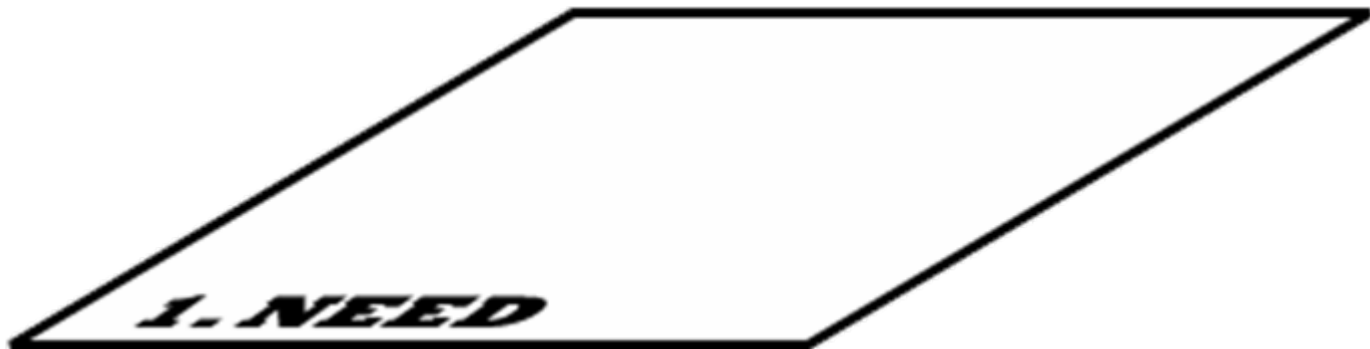


Levels of Analysis





Levels of Analysis: Burden and Scope





Number of Deaths **Daily**

(WHO Estimates for 2002; Thousands of Deaths)

Broad Cause of Death	Africa	Western Pacific		
	All Countries	V. Low Mortality Countries	Low Mortality Countries	All Countries
Communicable, Deficiency, Maternal	21.0	0.3	4.3	4.7
NCD, MNH	6.2	2.6	22.1	24.7
Injury	2.0	0.2	3.1	3.4
TOTAL	29.2	3.1	29.6	32.7
Pop (000,000)	672	155	562	1,717

Source: World Health Report 2004; Statistical Annex 2

Note: Due to presentation in 000's and 000,000s there are rounding errors and totals do not tally

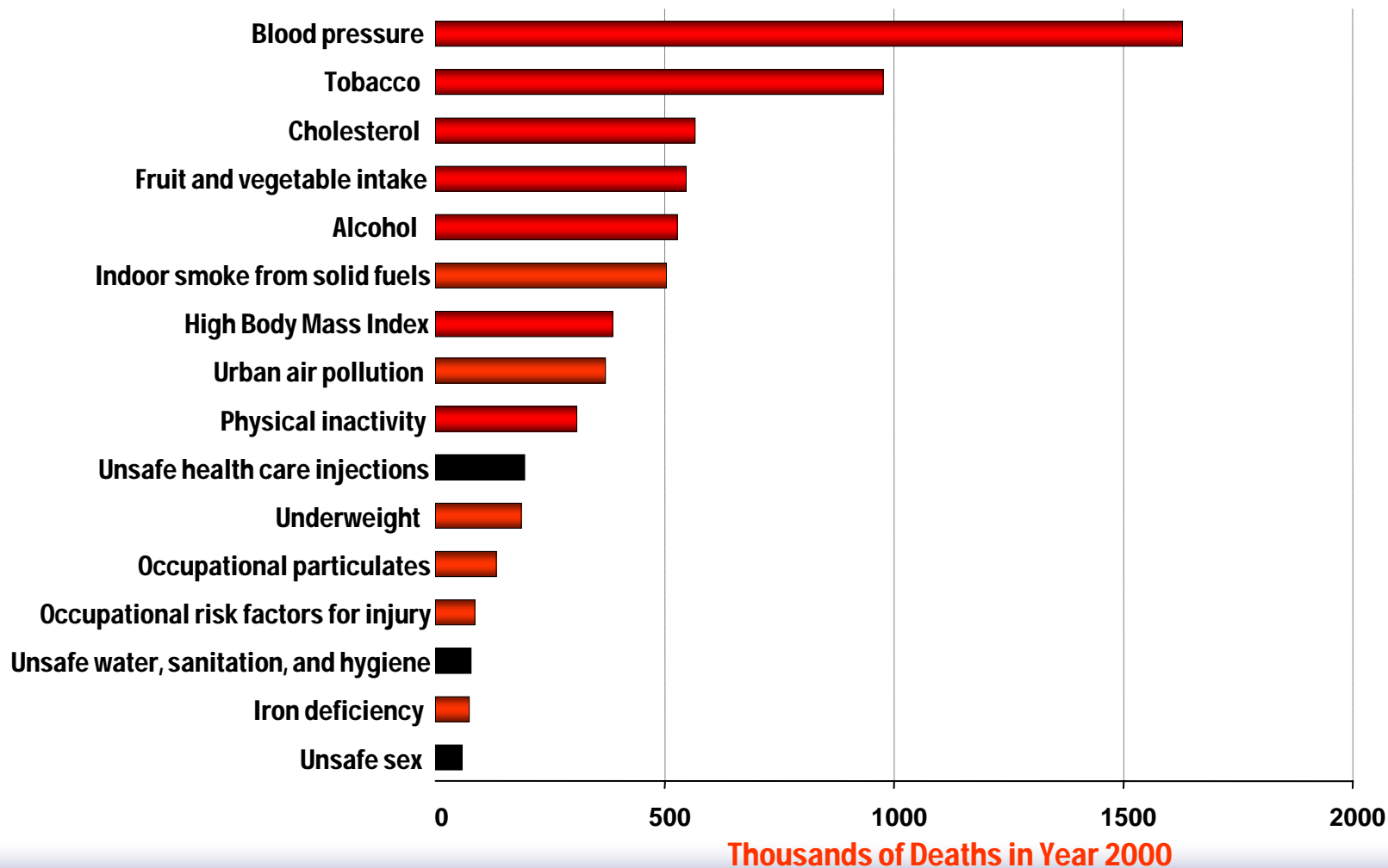


Top 10 Risk Factors by Level of Development

Developing Countries		Developed Countries
High Mortality	Low Mortality	
Underweight	Alcohol	Tobacco
Unsafe sex	Underweight	Blood pressure
Unsafe water	Blood pressure	Alcohol
Indoor smoke	Tobacco	Cholesterol
Zinc deficiency	Body mass index	Body mass index
Iron deficiency	Cholesterol	Low fruit & vegetable intake
Vitamin A deficiency	Iron deficiency	Physical inactivity
Blood pressure	Low fruit & vegetable intake	Illicit drugs
Tobacco	Indoor smoke	Underweight
Cholesterol	Unsafe water	Iron deficiency



Deaths attributable to selected leading risk factors (2000, Western Pacific)





Behaviour: Changes in Traditional Food



“Popular” Type
458 kcal
Baseline



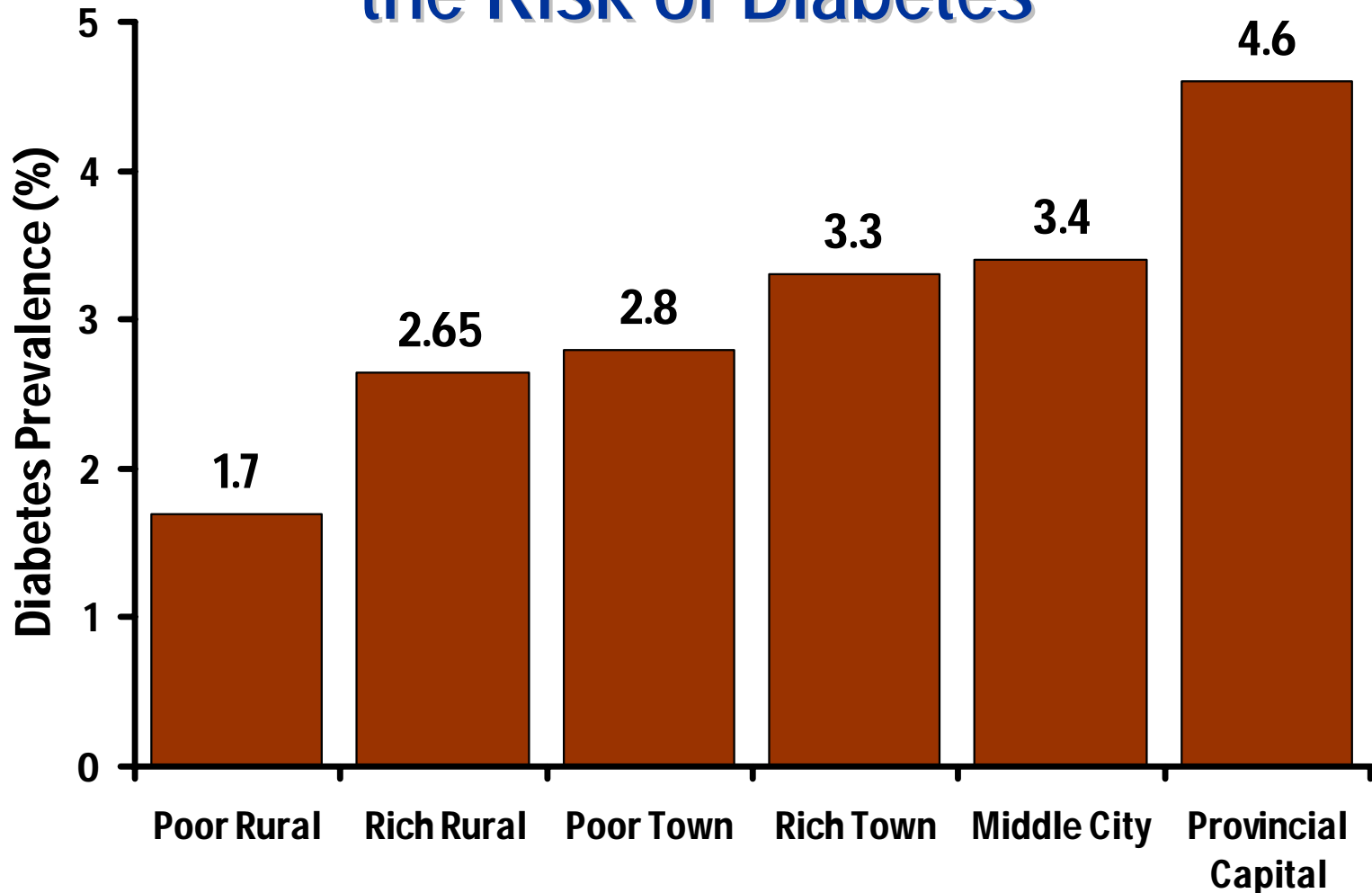
“Common” Type
483 kcal
+ 5.5% kcal



“Special” Type
561 kcal
+ 22.5% kcal



Environment: Living in Cities Increases the Risk of Diabetes

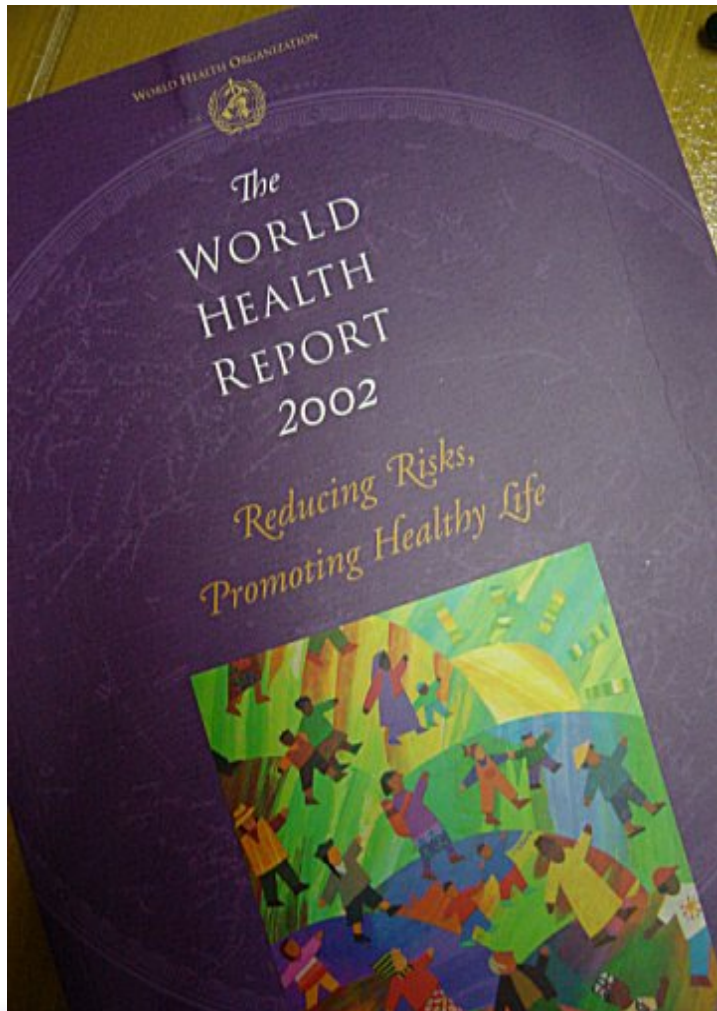


QIAN R-L et al, Chinese Diabetes Journal (Chinese National Diabetes Survey 1996)



Two Cost-Effective NCD Interventions

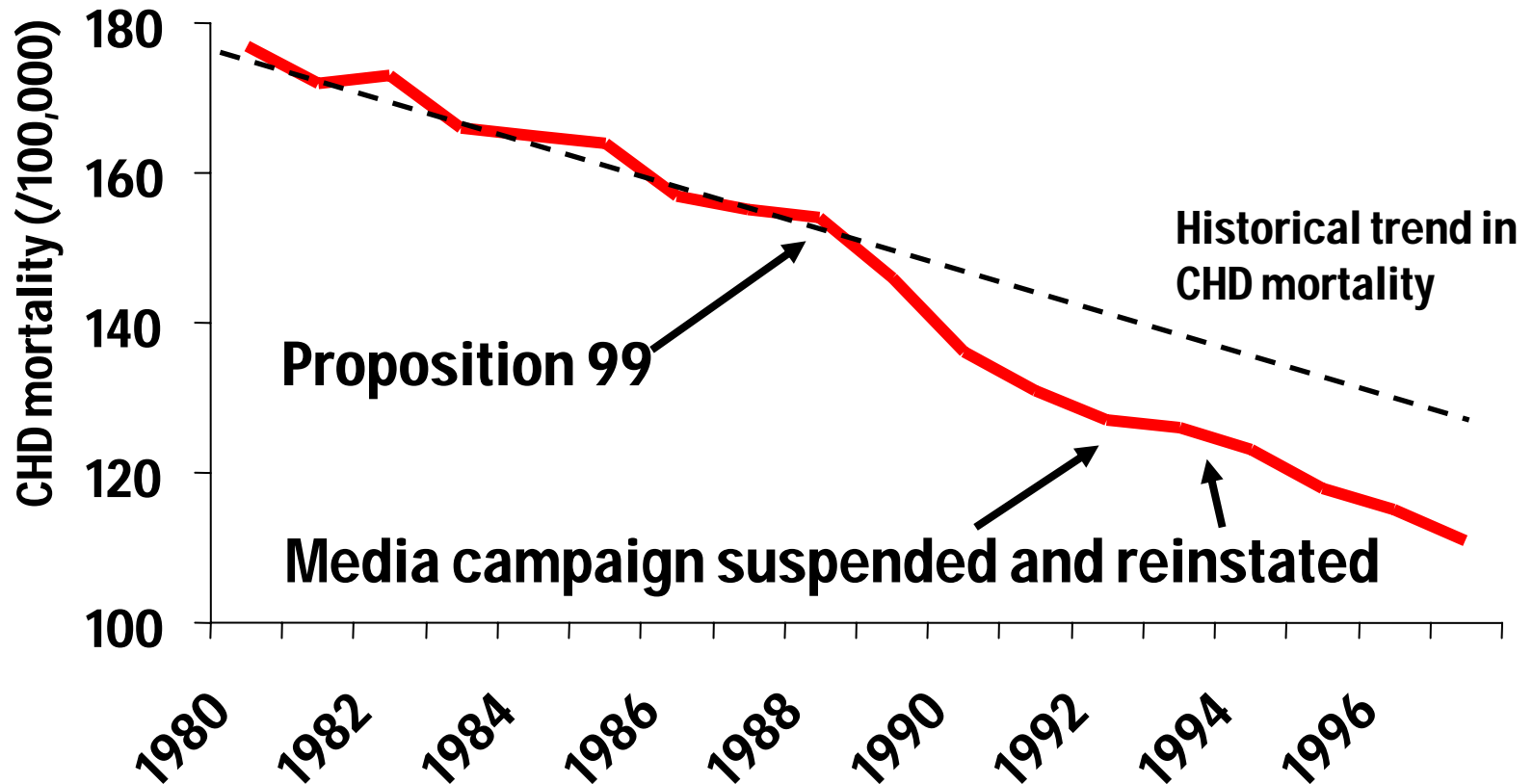
Rank Among the Top Five Risk Reduction Strategies



- Cardiovascular risk reduction
 - Population-based salt lowering
 - Health education on BP, cholesterol, overweight
 - Individual risk reduction approach
- Tobacco Control
 - Taxation
 - Comprehensive advertising bans
 - Information dissemination
 - Smoke-free public places

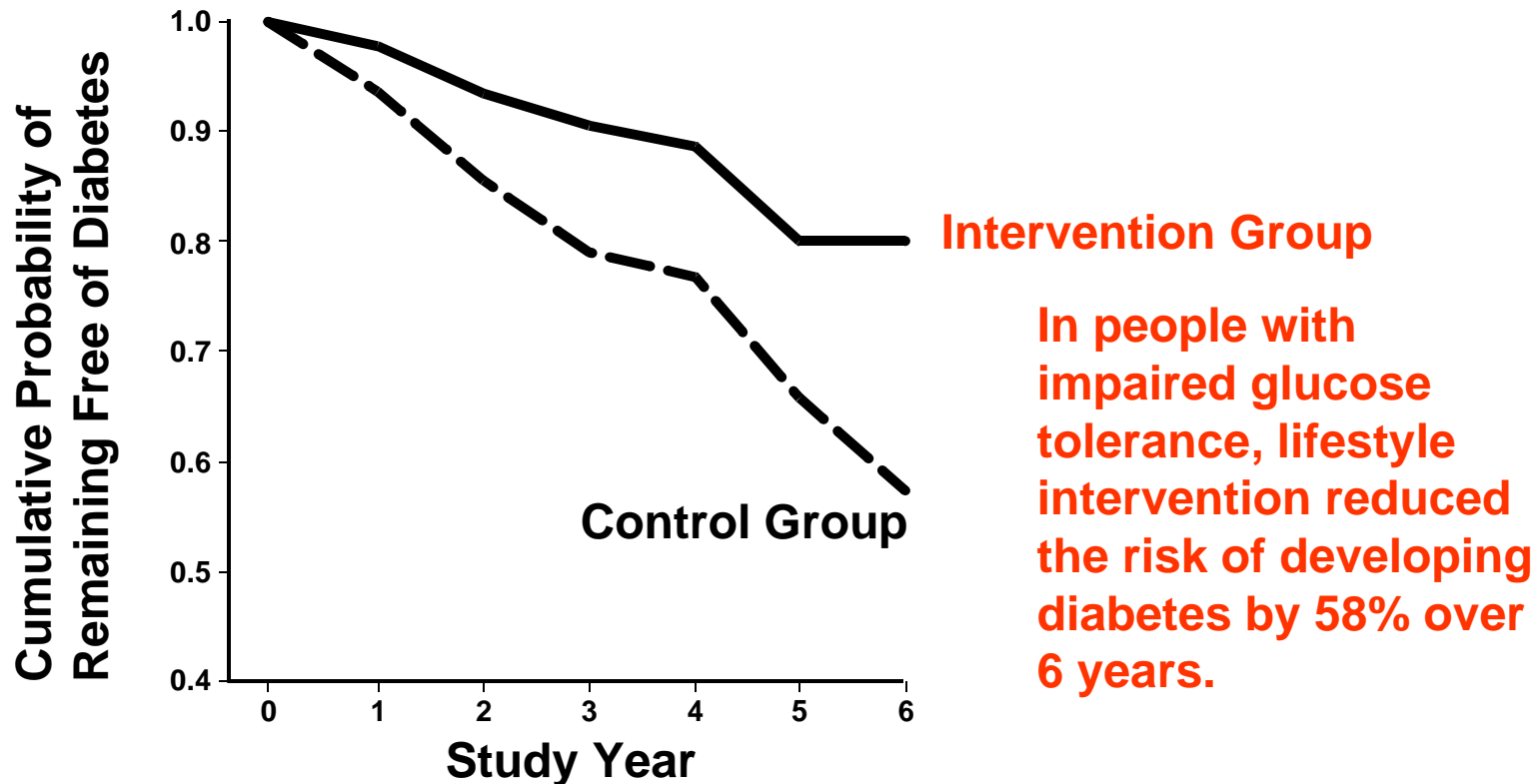


Coronary mortality, California





High-Risk Approach: Reducing Diabetes Incidence





Policy-Makers Largely Ignore Chronic Disease: A Balance Sheet

States	WHO	The Banks	Donors & NGOs
<input checked="" type="checkbox"/> Supported FCTC and Diet and PA Strategy	<input checked="" type="checkbox"/> Led FCTC, Diet & PA Strategies	<input checked="" type="checkbox"/> ADB mentions chronic disease in policy docs	<input checked="" type="checkbox"/> Supported FCTC strongly
<input checked="" type="checkbox"/> Have not followed up with investment; only GFATM exists	<input checked="" type="checkbox"/> Spends \$0.5 per death on chronic disease but \$7.5 per death on leading infections	<input checked="" type="checkbox"/> WB no chronic disease policy <input checked="" type="checkbox"/> ADB (1999) argued against subsidies for chronic disease	<input checked="" type="checkbox"/> No \$ thru Gates; little thru Soros, Rockefeller <input checked="" type="checkbox"/> Only 0.1% of ODA goes to chronic disease



The Health MDGs:

Addressing the World's Health Problems, No?

- Goal # 1: **Reducing Malnutrition**
 - Targets: 50% reduction in hunger between 1990 and 2015
 - Indicator: prevalence of underweight children
- Goal # 4: **Child Mortality**
 - Targets: 2/3 reduction in child mortality between 1990 and 2015
 - Indicators: infant and child mortality rates; measles immunization
- Goal # 5: **Maternal Mortality**
 - Target: $\frac{3}{4}$ reduction in maternal mortality between 1990 and 2015
 - Indicators: maternal mortality ratio; births attended
- Goal # 6: **Communicable Diseases**
 - Target: halt and reverse HIV/AIDS, malaria, other diseases by 2015
 - Indicators: HIV prevalence; malaria and TB prevalence and deaths; TB cure rates; others

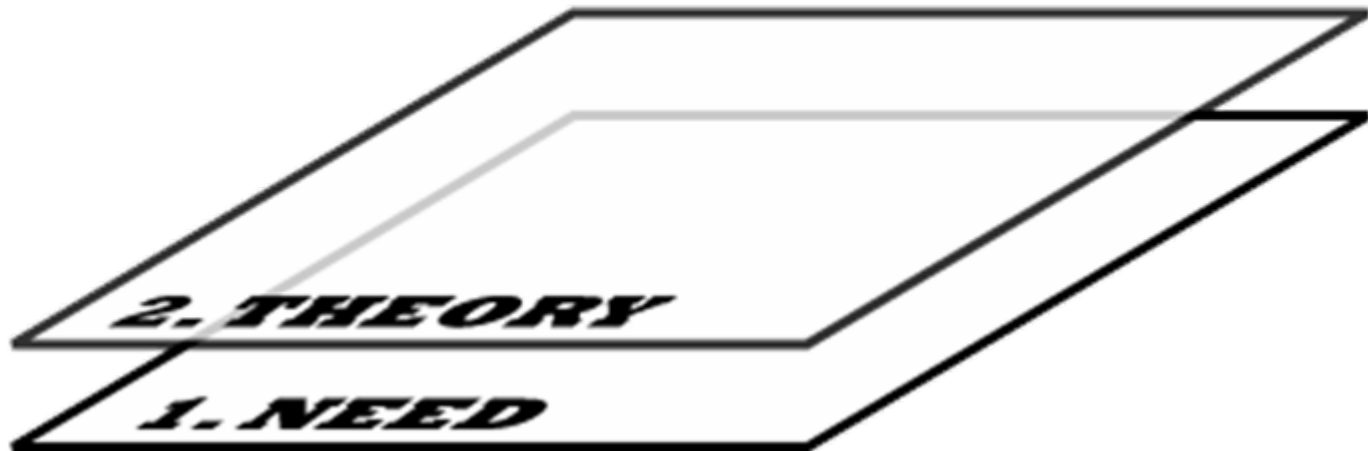


Consider

Should Papua New Guinea have a national NCD plan?

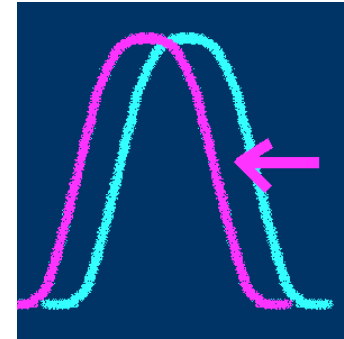
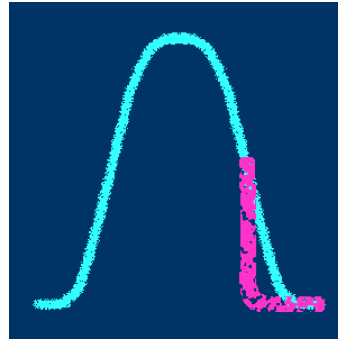


Levels of Analysis: Prevention and Control





High Risk vs. Population Approaches



	High-Risk Approach	Population Approach
Benefit is high for...	The individual	The whole population
Subject motivation	High	Low
Doctor motivation	High	Low
Benefit-risk ratio	"Favourable"	"Worrisome"
Screening costs	High	No screening costs
Depth of solution	Palliative, temporary	Radical
Behaviour-Context fit	"Inappropriate"	"Appropriate"



Disease Prevention and Health Promotion

A Clash of Two Cultures?

Science	← Nature →	Art
Thematic	← Perspective →	Holistic
Programme	← Application →	Ideology
High-Risk	← Strategy →	Population
Linear	← Causal Sequences →	Network
Downstream	← Entry points →	Upstream
Mono	← Disciplines →	Multi
Behaviours	← Focus →	Environments
Outcome	← Results →	Process
Quantitative	← Research →	Qualitative



The Ottawa Charter

The Charter	Disease Prevention	Health Promotion
Environments: <ul style="list-style-type: none">- Public Policy- Community Action- Supportive Environment	<ul style="list-style-type: none">• Regulation for specific risk e.g. FCTC	<ul style="list-style-type: none">• Healthy Settings• Social Determinants• HP Foundations
Lifestyles: <ul style="list-style-type: none">- Personal Skills	<ul style="list-style-type: none">• Targeted IEC• "Patient" education	<ul style="list-style-type: none">• Lifeskills, "health education", "social marketing"
Clinical Prevention: <ul style="list-style-type: none">- Reorienting Health Services	<ul style="list-style-type: none">• Case-finding• Smoke cessation• DM, BP control• Palliative Care	<ul style="list-style-type: none">• Self-care and self-help movements



Consider

Ten people in a room, writing a national
NCD plan and strategy.

What next?



Levels of Analysis

Soluble and Feasible





Stepwise Intervention Framework

- An effort to provide a matrix for planning national responses by explicitly considering:
 - Evidence-based interventions
 - Resource-based decisions

Table 6.1 A stepwise approach for prevention and control of noncommunicable diseases

Resource level	Population approaches	Community level	Individual high-risk approach
Step 1: Core	<p>WHO Framework Convention on Tobacco Control (FCTC) is ratified in the country.</p> <p>Tobacco control legislation consistent with the elements of the FCTC is enacted and enforced.</p> <p>A national nutrition and physical activity policy consistent with the Global Strategy is developed and endorsed at national level; sustained multisectoral attention to reduce fat intake and promote physical activity.</p>	<p>Local infrastructure plans include the provision and maintenance of accessible and safe sites for physical activity (such as parks and pedestrian-only areas).</p> <p>Health-promoting community projects include participatory actions to cope with the environmental factors that predispose to risk of noncommunicable diseases: inactivity, unhealthy diet, tobacco use, alcohol use, etc.</p> <p>Active health promotion programmes focusing on noncommunicable diseases are implemented in different settings: villages, schools and workplaces.</p>	<p>Context-specific management guidelines for noncommunicable diseases have been adopted and are used at all health care levels.</p> <p>A sustainable, accessible and affordable supply of appropriate medicines is assured for priority noncommunicable diseases.</p> <p>A system exists for the coordinated quality application of clinical guidelines and for the clinical referral.</p> <p>A system for diabetes self-management education and support is in operation.</p>



Stepwise Intervention: A Planning Tool

	Population Approach		High-Risk Approach
	Macro (National)	Micro (Community)	
Core	What can be done in the short term with available resources...		
Expanded	What can be done in the medium term with realistically augmented resources...		
Comprehensive	What must be done for complete response to chronic disease in the long term...		



Packaging it All Together...

National Plans	Surveillance	Healthy Lifestyle	Clinical Prevention
Intersectoral Committee	Local Data on Risk	Awareness Campaign	Guidelines Developed
Draft & Consultation	National Data on Risk	Demonstration Project	PHC staff is being trained
Decision & Budget	Repeat Surveys	IEC plus Env. Interventions	Quality is Audited



Selected Countries Project Status (2003)

	National Plan			Surveillance System		Lifestyle Change	Clinical Prevention	
Viet Nam	■	■	■	■			■	
Mongolia	■	■		■		■	■	
Philippines	■			■	■	■	■	
China				■			■	



Selected Countries Project Status (2004)

	National Plan			Surveillance System			Lifestyle Change			Clinical Prevention		
Viet Nam	█	█	█	█	█		█			█	█	
Mongolia	█	█		█			█			█		
Philippines	█	█		█	█	█	█			█	█	
China	█			█	█		█			█		



Ratification of FCTC

(As of Nov 3, 2004)

AMS	FIJ	KOR	MIC	BLA	TOK
AUS	FRP	LAO	MOG	PNG	TON
BRU	GUM	MAC	NRU	PHL	TUV
CAM	HKG	MAA	NEC	SMA	VAN
CHN	JPN	NMI	NEZ	SGP	VTN
COK	KIR	MSI	NIU	SOL	WAF

11 countries (32%) have ratified in Western Pacific out of 34 (100%) worldwide.



Survey of Policies and Practice

18 Pacific Islands responded: American Samoa, Cook Islands, Commonwealth of the Northern Mariana Islands, Federated States of Micronesia, Fiji, French Polynesia, Kiribati, Marshall Islands, Nauru, New Caledonia, Niue, Palau, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu and Vanuatu

Have integrated policies:	6 (out of 18)
Have Specific Policies for:	(out of 12)
Tobacco	8
Nutrition	5
Physical Activity	2
Alcohol	5
Hypertension	2
Diabetes	5
Cancer	3



Evidence of Long-Term Commitment?

Sources of funding for NCD Prevention

	Out of 18
Increase tax on cigarettes	6
Increase tax on alcohol	4
Increase tax on unhealthy imported food	1
External aid	12
Fund raising activities	3
Donations from health interested private groups	1



Surveillance: Pacific STEPS

Situation on March 14, 2005

Planning STEPS	Data Collection	Data Entry	Cleaning and Analysis	Draft Report
Papua New Guinea Solomon Islands Tuvalu Tokelau Vanuatu	Kiribati (Outer Islands)	Kiribati (Tarawa)	American Samoa Cook Islands Marshall Islands Micronesia Palau Tonga	Fiji Nauru Samoa



Health promotion

	Awareness	Community Demo	Published Report
Out of 18			
Tobacco	18	8	3
Nutrition	17	8	5
Physical Activity	14	11	2
Alcohol	16	8	2
Hypertension	16	8	2
Diabetes	17	10	5
Cancer	12	7	1
Stroke	14	6	0
Obesity	14	9	4
Other NCD	11	5	1



Clinical Prevention

Have implemented management guidelines.

	Out of 18
Diabetes Mellitus	14
Hypertension	9
Palliation for ESRD	7
Stroke/CVA	6
Heart Diseases	6
Cancer	5
Palliation for cancer	4
Others	4
Smoking Cessation	n.a.



Thank You!