



AUSTRALIAN
COUNCIL
FOR
INTERNATIONAL
DEVELOPMENT

Addressing the world's biggest killers: Non-communicable diseases and the international development agenda

ACFID RESEARCH IN DEVELOPMENT SERIES REPORT NO. 7

November 2013

Sam Byfield and Rob Moodie

Nossal Institute for Global Health, Melbourne School of Population and Global Health,
University of Melbourne

ISSN 1838 6326 (Print) ISSN 1838 6334 (Online)



Our Vision

A world where gross inequality within societies and between nations is reversed and extreme poverty is eradicated. A world where human development is ecologically and socially sustainable for the benefit of current and future generations. A world where governments lead their societies in striving to protect and realise all peoples' human rights. This vision will be achieved through the collective efforts of civil society, governments, business and all peoples who are concerned for the future of our collective humanity.

Authors¹

Sam Byfield works at the Nossal Institute for Global Health, where he undertakes technical assistance, research, policy development and teaching related to NCDs and the broader development context. Sam previously worked as the Global Advocacy Advisor at Vision 2020 Australia, was a member of the Australian Disability and Development Consortium's Executive Committee for three years, has worked as a foreign policy aid researcher at parliament, and publishes on a range of aid issues.

Rob Moodie is Professor of Public Health at the Melbourne School of Population and Global Health. Prior to this, he was the inaugural Chair of Global Health at the Nossal Institute. He is a member of WHO's Expert Committee on Health Promotion. He has particular interests in non-communicable diseases and HIV/AIDS and teaches a number of courses on public health leadership and health promotion. He has co-edited and co-authored four books including *Promoting Mental Health*, *Hands on Health Promotion* and his latest, *Recipes for a Great Life* written with Gabriel Gate.

The authors are grateful to Maeve Kennedy and Harry Jennens for research support; to the Ministry of Health, and AusAID, in Tonga for specific feedback on the Tonga case study; and to NCDFree for the use of photographs that were exhibited in September/October 2013.

Peer Review

ACFID would like to thank Ian Anderson for his time in peer-reviewing this publication. Ian has 25 years international development experience in the Asia Development Bank, AusAID, and World Bank. He has been an independent consultant on international economic development since 2010 and is currently completing his PhD at the Centre for International Health at Curtin University looking at the economics and financing of health in the Millennium Development Goals.

¹ Disclaimer: The views expressed in this paper are those of the authors and they do not reflect the views of ACFID and its wider membership.

Addressing the world's biggest killers: Non-communicable diseases and the international development agenda

Prepared by Sam Byfield
and Rob Moodie
(November 2013)

Nossal Institute for Global Health,
University of Melbourne



ISSN 1838 6326 (Print) ISSN 1838 6334 (Online)

Contents

02	Authors
04	ACFID Member List
05	Abbreviation List
06	Executive Summary
08	NCDs and Their Impact
14	The Global Policy Context
19	Responses to NCDs
27	Country Case Studies
38	Conclusion
41	Bibliography

ACFID member list

OUR MEMBERS (As at November 2013)

FULL MEMBERS:

- 40K Foundation Australia
- ACC International Relief
- Act for Peace - NCCA
- ActionAid Australia
- ADRA Australia
- Afghan Australian Development Organisation
- Anglican Board of Mission - Australia Limited
- Anglican Overseas Aid
- Anglican Aid
- Assisi Aid Projects
- Australasian Society for HIV Medicine
- Australian Cranio-Maxillo Facial Foundation
- Australia for UNHCR
- Access Aid International
- Asia Pacific Journalism Centre
- Asian Aid Organisation
- Australia Hope International Inc.
- Australian Business Volunteers
- Australian Conservation Foundation
- Australian Doctors International
- Australian Doctors for Africa
- Australian Federation of AIDS Organisations
- Australian Foundation for the Peoples of Asia and the Pacific
- Australian Himalayan Foundation
- Australian Injecting and Illicit Drug Users League
- Australian Lutheran World Service
- Australian Marist Solidarity Ltd
- Australian Medical Aid Foundation
- Australian Red Cross
- Australian Mercy
- Australian Respiratory Council
- Australian Volunteers International
- Beyond the Orphanage
- Birthing Kit Foundation (Australia)
- Brien Holden Vision Institute Foundation
- Burnet Institute
- Business for Millennium Development
- CARE Australia
- Caritas Australia
- CBM Australia
- Charities Aid Foundation
- ChildFund Australia
- CLAN (Caring and Living as Neighbours)
- Credit Union Foundation Australia
- Daughters of Our Lady of the Sacred Heart Overseas Aid Fund
- Diplomacy Training Program
- Door of Hope Australia Inc.
- EDO NSW
- Emergency Architects Australia
- Engineers without Borders
- Every Home Global Concern
- Family Planning New South Wales
- Foresight (Overseas Aid and Prevention of Blindness)
- FreeSchools World Literacy
- Fred Hollows Foundation, The
- Global Development Group
- Global Mission Partners
- GraceWorks Myanmar
- Grameen Foundation Australia
- Habitat for Humanity Australia
- Hagar Australia
- HealthServe Australia
- Hope Global
- Humanitarian Crisis Hub
- Hunger Project Australia, The
- International Children's Care (Australia) Inc.
- International Christian Aid and Relief Enterprises
- International Detention Coalition
- International Needs Australia
- International Nepal Fellowship (Aust) Ltd
- International RiverFoundation
- International Women's Development Agency
- Interplast Australia & New Zealand
- Islamic Relief Australia
- John Fawcett Foundation
- Kyeema Foundation
- Lasallian Foundation
- Leprosy Mission Australia, The
- Lifestyle Solutions (Aust) Ltd
- Live & Learn Environmental Education
- Mahboba's Promise Australia
- Marie Stopes International Australia
- Marsh Foundation
- Mary MacKillop International
- Mercy Works Ltd.
- Mission World Aid Inc.
- Motivation Australia
- MSC Mission Office
- Nusa Tenggara Association Inc.
- Oaktree Foundation
- Openaid 1000 Villages
- Opportunity International Australia
- Oro Community Development Project Inc.
- Oxfam Australia
- Partners in Aid
- Partners Relief and Development Australia
- People with Disability Australia
- PLAN International Australia
- Project Vietnam
- Quaker Service Australia
- RedR Australia
- Reledev Australia
- RESULTS International (Australia)
- Royal Australian and New Zealand College of Ophthalmologists
- Royal Australasian College of Surgeons
- Royal Institute for Deaf and Blind Children
- Salesian Society Incorporated
- Salvation Army (NSW Property Trust)
- Save the Children Australia
- Service Fellowship International Inc.
- Scarlet Alliance: Australian Sex Workers Association
- SeeBeyondBorders
- Sight For All
- SIMaid
- Sport Matters
- Surf Aid International
- TEAR Australia
- Transform Aid International
- Transparency International Australia
- UNICEF Australia
- Union Aid Abroad-APHEDA
- UnitingWorld
- University of Cape Town Australian Trust
- Volunteers in Community Engagement (VOICE)
- WaterAid Australia
- World Education Australia
- World Vision Australia
- WWF-Australia

AFFILIATE MEMBERS:

- Australian National University – School of Archaeology and Anthropology, College of Arts and Social Sciences
- Deakin University – Alfred Deakin Research Institute
- La Trobe University – Institute for Human Security Refugee Council of Australia
- Refugee Council of Australia
- University of Melbourne – School of Social and Political Sciences
- University of the Sunshine Coast – International Projects Group
- Vision 2020 (Also a Code Signatory)

Abbreviation list

ASEAN	Association of South East Asian Nations
DALY	Disability-Adjusted Life Year
FCTC	Framework Convention on Tobacco Control
GBD	Global Burden of Disease study
HLM	United Nations High Level Meeting on the Prevention and Control of Non Communicable Diseases
HLP	High-level Panel of Eminent Persons
HPV	Human papillomavirus
INGO	International Non-government Organisation
LMIC	Low and Middle Income Countries
MDG	Millennium Development Goals
NCD	Non-communicable Disease
NGO	Non-government Organisation
PEN	Package of Essential Non-communicable Disease Interventions for Primary Health Care in Low-Resource Settings
PICTA	Pacific Island Countries Trade Agreement
PNG	Papua New Guinea
STEPS	WHO STEPwise approach to chronic disease risk factor surveillance
UN	United Nations
WHA	World Health Assembly
WHO	World Health Organization
WTO	World Trade Organization

Executive Summary

Over the past 20 years, the world has experienced a public health transition that has profound ramifications for governments, non-government Organisations (NGOs) and other stakeholders working in health and international development. As is shown by their exclusion from the Millennium Development Goals (MDGs), non-communicable diseases (NCDs) were barely on the health and development agenda in low and middle income countries (LMICs) in the year 2000. NCDs are now, however, recognised as the world's major cause of death and disability. The Global Burden of Disease (GBD) study, the most authoritative source of estimates on causes of death and disability, found that in 2010 NCDs accounted globally for approximately 65.5% of all deaths, and 54% of disability-adjusted life years (DALYs).

For most countries, in the period 1990–2010 NCDs overtook other diseases as leading causes of death and disabilities. Furthermore, and contrary to a common misconception, the impact of NCDs is felt most strongly in LMICs; around 80% of all people killed by NCDs are in the developing world, and NCDs are a major cause of poverty and a substantial economic drain on health systems. In all regions except Africa, NCD-related mortality now 'exceeds that of communicable, maternal, perinatal, and nutritional conditions combined',² and in Africa NCDs are catching up.

This transition has changed the way people live and die, and has increased both the number of people with disabilities and the amount of time those people live with a disability. It is also cause for reflection about what exactly constitutes 'health' and 'public health'; NCDs are not merely a medical issue, and the necessary responses extend far beyond the purely medical. Instead, they cut across a range of sectors, including trade, law, sport, agriculture, food security, the

environment and livelihoods. The major risk factors of NCDs are tobacco use, unhealthy diets, harmful use of alcohol, and physical inactivity; while the underlying drivers of NCDs include globalisation, urbanisation, powerful transnational corporations, economic development and ageing populations. Given that premature mortality due to NCDs is largely preventable, prevention strategies need to be central to global efforts. And given that health ministries are in many countries already overburdened, and there are many other competing priorities on the international development and public health agenda, novel responses are needed, and we need to learn from what has worked and failed in other areas.

International Non-government Organisations (INGOs) and donors have been critical players in generating funding and awareness in areas such as climate change, gender, disability and HIV/AIDS. There is increasing international recognition of the health and economic costs of NCDs, as demonstrated by recent United Nations (UN) and World Health Organization

² WHO, *Global Status Report on NCDs*, 2011.

(WHO) commitment to reduce preventable NCD deaths by 25% by 2025. However, international development funding has not kept pace with these political aspirations, and international financing for NCDs remains low in absolute and relative terms. Armed with the available evidence, including that presented in this report, there is now an opportunity for the Australian Government and INGOs to play a leadership role in campaigning for change locally, nationally, regionally, and globally.

This report consists of five parts:

Part 1: An overview of the prevalence and impacts of NCDs in LMICs

Part 2: The global policy context that is emerging in response to NCDs

Part 3: The evidence base regarding the most effective responses to NCDs

Part 4: Case studies of NCDs in Tonga and Myanmar

Part 5: Conclusion: entry points in addressing NCDs

This paper concludes with a series of **recommendations** which aim to assist with guiding responses to the growing NCDs epidemic. These recommendations are for a range of development stakeholders and specialist public health support agencies. Some specific recommendations include:

1. That INGOs explore opportunities in their existing programs, including health, youth, nutrition and advocacy, to contribute to the prevention and control of NCDs.
2. That, where appropriate, INGOs seek to engage and partner with organisations working in the prevention and control of NCDs, including those indirectly working in this area such as those in sports, urban planning, transport, and agriculture.
3. That the Australian Government further build upon its international leadership in the prevention and control of NCDs, including through:
 - a. Continued, and where investments are proven to be successful, scaled-up programs in the Pacific
 - b. New programs in East and South Asia to address the growing burden of NCDs, underpinned by a clear research agenda
 - c. Applying an 'NCDs lens' to broader government policies, including trade.
4. That INGOs and the Australian Government be mindful of opportunities to advocate with other donors, governments, partners and forums to elevate NCDs as a global development priority.
5. That the Australian Aid Program prioritise education and training in NCD prevention and control as an essential element of overall development assistance.

NCDs and their impact

The framework of NCDs typically includes four key disease groups: cardio-vascular diseases, chronic respiratory diseases, cancers and diabetes. These four disease groups generally share the same risk factors and are largely preventable.

Figure 1: NCDs and their modifiable risk factors³

		Modifiable common risk factors for NCDs			
		Tobacco use	Unhealthy diets	Physical inactivity	Harmful use of alcohol
Noncommunicable diseases	Heart disease and stroke	✓	✓	✓	✓
	Diabetes	✓	✓	✓	✓
	Cancer	✓	✓	✓	✓
	Chronic lung disease	✓			

If those at risk of developing NCDs are identified early enough, a combination of behaviour change and primary care can help control the risk factors and prevent the onset of these chronic conditions. It is estimated that up to 80% of all heart disease, stroke and diabetes cases could be averted, as well as more than 40% of the cancer burden, through four key lifestyle changes:

1. Ceasing the use of tobacco products
2. Increasing the consumption of fruits and vegetables, and reducing consumption of fats, sugars and salt
3. Increasing regular physical activity
4. Avoiding excessive intake of alcohol

The GBD study demonstrates that from 1990–2010, the leading causes of premature death and disability evolved dramatically. On average, communicable, newborn, and maternal diseases fell in the overall ranking, while NCDs increased in ranking. In 2010, the two leading risk factors causing global mortality and disability by far were smoking and high blood pressure, and the two major diseases that caused death and disability were NCDs – stroke and heart disease. Lung cancer and diabetes now each kill as many people as HIV and diarrhoea, and more than childhood malnutrition and underweight.⁴

³ WHO, *Global Status Report on Noncommunicable Diseases*, 2010.

⁴ Institute for Health Metrics and Evaluation, 'The Global Burden of Disease: Generating Evidence, Guiding Policy', 2012.

NCDs in the Pacific

The situation is particularly serious in the Pacific. For the 12 countries where data is available, NCDs cause around 70% of all deaths. Pacific Islands Forum leaders have recognised the link between NCDs and development, declaring at the 42nd Pacific Islands Forum Communique in 2011 that NCDs have 'reached epidemic proportions in Pacific island countries and territories' and have become a 'human, social and economic crisis requiring an urgent and comprehensive response'.⁵

Across the Pacific, 60% or more of the adult population is overweight, and in several countries, more than half the adult population is obese. Obesity and overweight are frequently occurring at young ages: In Tonga, 61 % of boys and 58% of girls aged 13-15 have been

found to be overweight and nearly one in four boys and one in five girls were obese. Over 70% of people in Cook Islands are reported to be physically inactive. In Vanuatu, only 5% of adult females and 10% of adult males are free from the preventable risk factors for acquiring NCDs.⁶ One of the most reliable methods for measuring NCD risk factors is the STEPwise approach to chronic disease risk factor surveillance (STEPS) survey.⁷ Designed by WHO, the STEPS survey enables assessment of the prevalence of NCDs and their risk factors in a population. This evidence base is continuing to improve. In 2013, four countries will publish their first STEPS reports (Federated States of Micronesia, Niue, Papua New Guinea (PNG) and Vanuatu), and several others will publish their second STEPS survey.⁸

NCDs in South Asia and South East Asia

Countries across Asia are experiencing a rapid demographic transition that is characterised by a reduction in deaths from communicable diseases, an increase in average life expectancy, and a rise in NCDs. Take Bangladesh and Cambodia, for example, which exemplify the emerging 'double burden' of communicable diseases and NCDs and which are both among the top 10 recipients of Australian aid. In Bangladesh, GBD studies estimate that NCDs now constitute half of the top 20 causes of death. In Cambodia, heart disease and stroke are estimated to be the second and third largest killers. In both countries, as is commonly the case across LMICs, in the period 1990–2010 NCDs rose dramatically, while common communicable diseases fell as causes of premature mortality.⁹

⁵ Pacific Islands Forum, *Forum Communique – 42nd PIF*, 2011.

⁶ Secretariat of the Pacific Community, *NCD Statistics for the Pacific Islands Countries and Territories*, 2010.

⁷ The STEPS approach to surveillance is a simple, standardised method for collecting, analysing and disseminating data in WHO member countries. By using the same standardized questions and protocols, all countries can use STEPS information not only for monitoring within-country trends, but also for making comparisons across countries. The approach encourages the collection of small amounts of useful information on a regular and continuing basis. There are currently two primary STEPS surveillance systems: encompassing risk factor surveillance and stroke surveillance respectively.

⁸ WHO and Secretariat of the Pacific Community, *Towards Healthy Islands: Pacific NCDs Response*, PIC 10/3, 2013.

⁹ Institute for Health Metrics and Evaluation, *GBD Profile: Bangladesh, 2012; GBD Profile: Cambodia, 2012*.

Tobacco use is a major driver of NCDs across Asia. The Association of South East Asian Nations (ASEAN) Tobacco Control Atlas, released in August 2013, provides stark evidence concerning rates and impact of tobacco use in the ASEAN region.

- Almost 30% of the adult ASEAN population are current smokers (approximately 125 million people).
- Tobacco companies are continuing to expand their business in the region, including targeting children and interfering at all levels of tobacco control policy development and implementation.
- In Indonesia, male smoking prevalence is 67.4% and prevalence among boys aged 13–15 is over 40%.
- In Singapore, Vietnam, Philippines and Malaysia, over 15% of annual deaths are attributable to tobacco.
- In Vietnam, average spending on cigarettes by each smoker is 20% higher than average expenditure on health.
- In Thailand, annual national expenditure on tobacco is estimated to be three-quarters of total expenditure on education.¹⁰

Tobacco use is equally harmful in South Asia. In India, tobacco kills around 1 million people each year, and in 2004 the direct healthcare costs of tobacco were approximately US\$1.2 billion.¹¹ A 2001 study in Bangladesh showed that over 10.5 million malnourished people

could have an adequate diet if money spent on tobacco was instead spent on food, saving the lives of 350 children under the age of five years each day. The poorest households in Bangladesh spend almost 10 times as much on tobacco as on education.¹² Numbers of tobacco users in Bangladesh have risen dramatically over the past decade, with a recent study finding that 43% of people now use tobacco products.¹³

IN INDIA TOBACCO KILLS AROUND 1 MILLION PEOPLE EACH YEAR

Other risk factors are also proliferating across the region. For instance, studies have shown increases in calorie intake from sugar-sweetened beverages, with a 2000% increase in non-alcoholic, sweetened or flavoured water imported into Vietnam, Myanmar and Cambodia between 2006 and 2011.¹⁴ More than 80% of South East Asia's population consumes fewer than five servings of fruit and vegetables per day.



PHOTO: Anirudh Kumar:
Jamkhed Comprehensive Rural Health Project
Physical activity plays a vital role in preventing NCDs

¹⁰ Southeast Asia Tobacco Control Alliance, *The ASEAN Tobacco Control Atlas*, 2013.

¹¹ John, R et al., 'Economic cost of tobacco use in India, 2004', *Tobacco Control*, p. 18, 2009.

¹² Efroymson, D et al., 'Hungry for tobacco: an analysis of the economic impact of tobacco consumption on the poor in Bangladesh', *Tobacco Control*, p. 10, 2001.

¹³ Shoeb, S, 'Tobacco consumption in Bangladesh sees record rise', *Dhaka Tribune*, 21 May 2013.

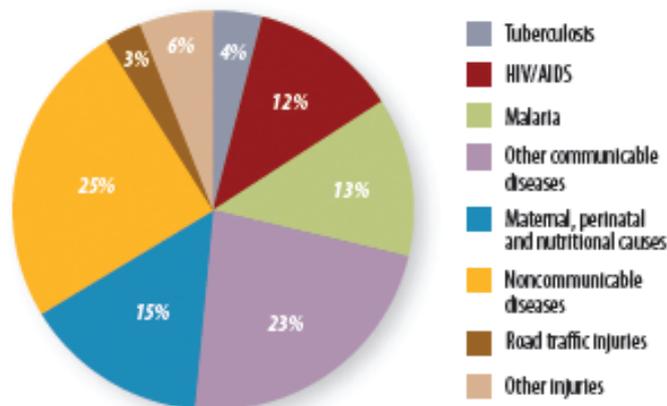
¹⁴ Dans, A et al., 'The Rise of Chronic NCDs in Southeast Asia: time for action', *The Lancet*, p. 377, 2011.

NCDs in Africa

In Africa, much of the funding and policy focus has tended to be directed towards communicable diseases, maternal, perinatal, and nutritional causes of sickness, death and disability. As figure 2 shows, in 2010 NCDs accounted for 25% of mortality in Sub-Saharan Africa, the same figure as HIV/AIDS and malaria combined. In the 46 countries that make up WHO's Africa Region, NCDs are

expected to account for 46% of preventable deaths by 2030, an increase from 25% in 2004,¹⁵ and tobacco use is the region's largest cause of preventable death. The burden from cancer alone is expected to double between 2008 and 2030, largely driven by an expected doubling of the population of elderly persons in many African countries during this time.¹⁶

Figure 2:
Proportion of deaths by cause in Sub-Saharan Africa, 2010.¹⁷



NCDs and human and economic development

The available evidence provides the aid community with a fundamental challenge: it is not possible in the 21st century to eliminate poverty without reducing the prevalence and impacts of NCDs. The economic impacts of NCDs are significant. According to the World Economic Forum, NCDs were ranked by members as posing a greater threat to economic development than that posed by natural disasters, corruption, fiscal crises or infectious diseases.¹⁸ In a scenario where intervention efforts remain stable and rates of NCDs continue to increase as populations grow and age, cumulative economic losses to LMICs from the four diseases are estimated to surpass US\$7 trillion over the period 2011–2025 (an average of nearly US\$500 billion per year). On a per-person basis, the annual losses amount to an average of US\$25 in low-income countries, US\$50 in lower middle-income countries and US\$139 in upper middle-income countries. This yearly loss is equivalent to approximately 4% of these countries' current annual output.¹⁹ One factor contributing to this macro-economic impact is that almost 30% of NCD-related deaths in LMICs occur in people under 60 years of age.

¹⁵ WHO, 'WHO launches new tobacco control effort in Africa', http://www.who.int/mediacentre/news/notes/2009/tobacco_20091204/en/, accessed 17 October 2013.

¹⁶ See McCormack, V and Schüz, J, 'Africa's growing cancer burden: environmental and occupational contributions', *Cancer Epidemiology* 36, 2012.

¹⁷ Marquez, P and Farrington, J, 'The Challenge of NCDs and Road Traffic Injuries in Sub-Saharan Africa', World Bank, 2012.

¹⁸ World Economic Forum, *Global Risks Report 2010*.

¹⁹ WHO and World Economic Forum, *From Burden to "Best Buys": Reducing the Economic Impact of Non-Communicable Diseases in Low- and Middle-Income Countries*, 2011.

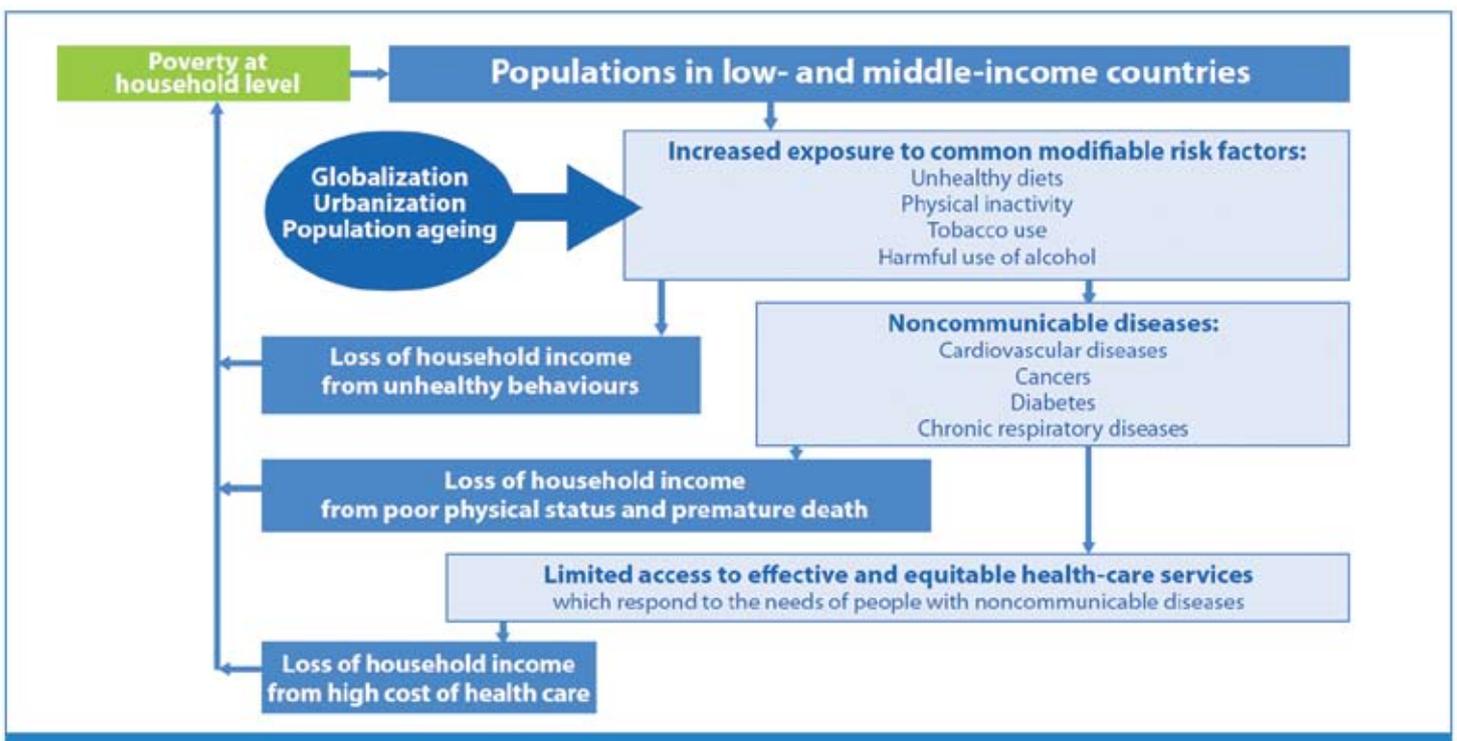
At the individual, family, community and country level, there is strong evidence that NCDs are both a cause and a consequence of poverty. People of lower social and economic positions are affected more by NCDs in countries at all

At the household level, unhealthy behaviours, poor physical status, and the high cost of NCD-related health care, all lead to loss of household income. In low-resource settings, treatment for cardiovascular disease, cancer, diabetes or chronic lung disease drain household resources, potentially driving families into poverty through high levels of out of pocket expenditures and debt. The odds of incurring catastrophic hospitalisation expenditure for cancer are 160% higher than for any communicable disease.²¹ Because of the chronic nature of NCDs, recurrent health costs increase the risk of more frequent catastrophic spending.²²

ALMOST 30% OF NCD-RELATED DEATHS IN LMICS OCCUR IN PEOPLE UNDER 60

levels of development. In each country in the ASEAN region, for instance, the prevalence of smoking is inversely related to socio-economic status, with smoking twice as likely in the least wealthy groups whether in Malaysia, Vietnam or Myanmar.²⁰

Figure 3: The mutually-reinforcing relationship between NCDs and poverty²³



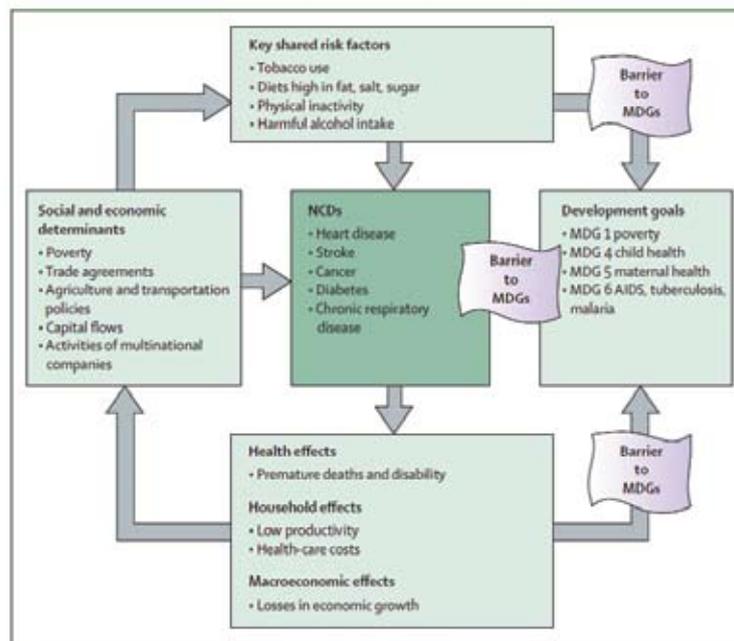
²⁰ Dans, A et al., 'The Rise of Chronic NCDs'.

²¹ World Bank, *Capitalising on the Demographic Transition: Tackling Noncommunicable Diseases in South Asia*, 2011.

²² Mahal, A et al., *The Economic Implications of Non-communicable Diseases for India*, World Bank Discussion Paper, 2010.

²³ WHO, *Global Status Report on NCDs*, p. 25, 2011.

Figure 4: Relationship between poverty, NCDs and the current MDGs²⁴



NCDs and disability

The World Report on Disability, published by WHO and the World Bank in 2011, suggests that more than a billion people (15% of the world's population) experience disability. Between 110 million people and 190 million have significant difficulties in functioning.²⁵ The increase in NCDs has already had a profound impact on disability worldwide, and the disabling impacts of NCDs underpin the rationale for enhanced action in this area across LMICs.

NCDs are now the world's leading cause of disability, and people with disability have a greatly increased likelihood of having an NCD. The rehabilitation needs of people with NCDs can be substantial. *The World Report*

on Disability provides the following example: the rehabilitation of a middle aged woman with advanced diabetes might include support to regain strength following her hospitalisation, the provision of a prosthesis and gait training after a limb amputation, and the provision of screen-reader software to enable her to continue employment.²⁶ Recent data from Tonga highlights these concerns. In 2009 and 2010, Tonga's Ministry of Health reported that there had been dramatic rises in diabetic limb loss in recent years, and that this now constituted the second most common cause of major emergency surgery. In 2009 there were 41 major amputations, and in 2010 there were 48.²⁷ In many LMICs, access to an appropriate prosthesis or wheelchair can be extremely

²⁴ Geneau, R et al., 'Raising the priority of preventing chronic diseases: a political process', *The Lancet* 376, 2010

²⁵ WHO and World Bank, *World Report on Disability*, 2011. 'Disability' and 'functioning' in this context is viewed as outcomes of interactions between health conditions (diseases, disorders and injuries) and contextual factors. Contextual factors include external environmental factors (including social attitudes, architecture, legal and social structures, as well as climate and terrain); and internal personal factors (including gender, age, coping styles, social background, education, profession, behaviour, character and other factors that influence how disability is experienced by an individual). See WHO, *Towards a Common Language for Functioning, Disability and Health*, 2002.

²⁶ *World Report on Disability*, p. 97.

²⁷ Government of Tonga, *Report of the Minister of Health 2009; Government of Tonga, Report of the Minister of Health 2010*.

limited or non-existent. Therapy (including by physiotherapists, occupational therapists, social workers and speech therapists), while often a necessary and effective part of rehabilitation, can also be extremely limited in low and middle income settings.

People with disabilities often lack access to health services and health promotion that are vital in preventing, diagnosing and treating NCDs. Several studies have found that women with disabilities receive less screening for breast and cervical cancer than women without disabilities, and men with disabilities are less likely to receive screening for prostate cancer.²⁸ In China, a study of caregivers found a need

for more information about stroke recovery and prevention, and for specific training.²⁹

PEOPLE WITH NCDs OFTEN EXPERIENCE MULTIPLE FORMS OF DISCRIMINATION

People with NCDs often experience multiple forms of discrimination, and this can have a gendered angle as well. Again using diabetes as an example, in many countries, women with diabetes are at risk of separation and divorce without support or compensation, and also at risk of losing their ability to work. In some cultures, girls with diabetes are unwanted for marriage, and parents may withdraw them from education.³⁰

The global policy context

The global community has been slow to recognise the severity of the NCDs epidemic in developing countries, and slow to develop comprehensive solutions for prevention and treatment. This has included the neglect of NCDs in the global international aid and public health architectures, and in the funding priorities of bilateral and multilateral aid donors. A key factor has been the lack of social mobilisation pressing for urgent action. One factor behind this has been the lack of a cohesive, self-identifying group lobbying for action on all NCDs. This has contrasted starkly with political momentum around HIV/AIDS, which was often driven by a core group of activists and volunteers — most often people living with HIV/AIDS. Rather than unify around a comprehensive strategy on NCDs, social movements have tended to splinter, raising consciousness about particular diseases but ignoring the commonalities that exist between diseases at the level of risk factor, prevention and necessary health system responses. This lack of social mobilisation has also allowed various myths around NCDs to remain unchallenged, including that they predominantly occur in developed countries, that they predominantly affect the elderly and the wealthy, and that they occur only as a result of individual choice.

²⁸ *World Report on Disability*, pp. 60–61.

²⁹ *ibid.*, p. 147.

³⁰ Diabetes Leadership Forum, *Diabetes: the hidden pandemic and its impact on Sub-Saharan Africa*, p. 16.

WHO has traditionally been more focused on infectious diseases, but is increasingly taking the lead on international responses to NCDs. The adoption, in 2003, of the Framework Convention on Tobacco Control (FCTC), which provides a blueprint for national tobacco control policies, was a significant step. The FCTC is one of the most widely embraced treaties in the history of the UN, with 174 signatories. Other WHO initiatives have included the Global Strategy for the Prevention and Control of NCDs (2000), the Global Strategy on Diet, Physical Activity and Health (2008); and the Global Strategy to Reduce the Harmful Use of Alcohol (2010).

These initiatives were important, but did not elevate NCDs on the global and national

political agendas in the same way that HIV/AIDS did. An important step on the road to political recognition came in September 2011, when the UN General Assembly convened a High Level Meeting (HLM) on NCDs in New York – analogous to the UN General Assembly Special Session on HIV and AIDS in 2001. The HLM's Political Declaration, unanimously adopted by all member states, noted the urgency of the global NCD challenge and committed countries to a global response that focuses on both prevention and treatment of NCDs. It also gave priority to assisting LMICs to take action. The Political Declaration called specifically for the continued development of a comprehensive global monitoring framework with indicators, and for the establishment of voluntary global targets.³¹

Action Plan and Monitoring Framework

At the 65th World Health Assembly (WHA, WHO's decision-making body) in May 2012, member states progressed the goals of the Political Declaration by adopting the overall target of a **25% reduction in premature mortality from NCDs by 2025**. In the following 12 months, the global NCD policy architecture was further developed through consultation and negotiation, and at the 66th WHA in 2013, several major policy documents relating to NCDs were endorsed. Particularly significant were the Action Plan for the Prevention and Control of NCDs 2013–2020,³² and the Comprehensive Global Monitoring Framework and Targets for the Prevention and Control of NCDs.³³ NCDs were also prominent elsewhere: a report into the Post-2015 Development Agenda noted the importance of the inclusion of NCDs in a post-2015 framework, and other documents indirectly or partially dealt with NCDs including draft action plans addressing blindness prevention and mental health, and reports on disability and the social determinants of health.³⁴

³¹ *Political Declaration of the High Level Meeting of the General Assembly on the Prevention and Control of Non Communicable Diseases*, A/66/L/1, 19 September 2011.

³² WHO, *Action Plan for the Prevention and Control of NCDs 2013–2020*, A66/9, 2013.

³³ WHO, *Comprehensive Global Monitoring Framework and Targets for the Prevention and Control of NCDs*, A66/8, 2013.

³⁴ Byfield, S, 'NCDs, WHA and the International Development Agenda', *Development Policy*, 21 June 2013.

The Action Plan's vision is 'a world free of the avoidable burden of NCDs', and consists of the following objectives:

1. To raise the priority accorded to the prevention and control of NCDs in global, regional and national agendas and internationally agreed development goals, through strengthened international cooperation and advocacy.
2. To strengthen national capacity, leadership, governance, multisectoral action and partnerships to accelerate country response.
3. To reduce modifiable risk factors for NCDs and underlying social determinants through creation of health-promoting environments.
4. To strengthen and orient health systems to address the prevention and control of NCDs and the underlying social determinants through people-centred primary health care and universal health coverage.
5. To promote and support national capacity for high-quality research and development for the prevention and control of NCDs.
6. To monitor the trends and determinants of NCDs and evaluate progress in their prevention and control.

The Global Monitoring Framework consists of 25 indicators grouped under the headings of mortality and morbidity; behavioural and biological risk factors; and national systems response. The Voluntary Global Targets, grouped under the same headings, are as follows:

- A 25% relative reduction in overall mortality from cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases.
- At least a 10 % relative reduction in the harmful use of alcohol, as appropriate, within the national context.
- A 10% relative reduction in prevalence of insufficient physical activity.
- A 30% relative reduction in mean population intake of salt/sodium.
- A 30% relative reduction in prevalence of current tobacco use in persons aged 15+ years.
- A 25% relative reduction in the prevalence of raised blood pressure, or contain the prevalence of raised blood pressure according to national circumstances.
- Halt the rise in diabetes and obesity.
- At least 50% of eligible people receive drug therapy and counselling (including glycaemic control) to prevent heart attacks and strokes.
- An 80% availability of the affordable basic technologies and essential medicines, including generics, required to treat major NCDs in both public and private facilities.

Australia itself has signed up to these ambitious and comprehensive targets, and has an obligation therefore to ensure that efforts are made domestically to reach these goals, and that appropriate

support is provided through Australia's aid program to elevate efforts in developing countries.

One paper describes the '25% by 2025' framework as follows:

Some would argue that while they remain voluntary, the targets will always lack teeth. Another view would be that, given the complexity and fragmentation of the issues involved in NCD control, they represent a remarkable degree of consensus across countries in a relatively new policy process.³⁵

Post-2015 Development Agenda

Health and development are inexorably linked – one cannot be achieved without the other. As a result, three of the current MDGs specifically address health: MDG 4 (reducing child mortality), MDG 5 (improve maternal health), and MDG 6 (combat HIV/AIDS, malaria, and other diseases). However, none of the MDGs currently specifically mention NCDs, either collectively or as single diseases. While development assistance for health has grown over the past decade, analyses have consistently shown that it is not being allocated in a manner that reflects the burden of disease. The HLM *Political Declaration* recognised that resources are not 'commensurate with the problem' and encourages funding increases by governments, bilateral and multilateral donors, but we are yet to see a major shift in resources.

Studies have shown that the exclusion or inclusion of particular health conditions from the MDGs has a substantial impact on levels of funding. A 2009 study estimated that less than 3% of total donor funding for health was directed to addressing NCDs,³⁶ and another found, in a comparison of funding for HIV and

NCDs in the Pacific, that 'despite much higher mortality rates from NCDs, external funding for HIV is higher than for NCDs'.³⁷

Discussions and negotiations concerning the post-2015 iteration of the MDGs have included a focus on NCDs, though this has been uneven. NCDs were prominent at the Rio+20 Sustainable Development Conference in 2011, with the *Outcomes Document* stating:

We acknowledge that the global burden and threat of non-communicable diseases constitutes one of the major challenges for sustainable development in the twenty-first century. We commit to strengthen health systems towards the provision of equitable, universal coverage and promote affordable access to prevention, treatment, care and support related to non-communicable diseases, especially cancer, cardiovascular diseases, chronic respiratory diseases and diabetes. We also commit to establish or strengthen multi-sectoral national policies for the prevention and control of non-communicable diseases.

³⁵ Robinson, R and Hort, K, 'Non-communicable Diseases: an update and implications for policy in low and middle income countries', *Health Policy and Health Finance Knowledge Hub Working Paper #30*, Nossal Institute for Global Health, June 2013.

³⁶ Nugent, R and Feigl, A, *Donor responses to Chronic Disease in Developing Countries*, Centre for Global Development, 2009.

³⁷ Negin, J and Robinson, H, 'Funding for HIV and Non-Communicable Diseases: Implications for Priority Setting in the Pacific Region', *Health Policy and Health Finance Knowledge Hub Working Paper #1*, Nossal Institute for Global Health, January 2010.

Non-communicable diseases (NCDs) have been prominent in each of the four main reports feeding into the development of a post-2015 development framework: reports by the High-level Panel (HLP) of Eminent Persons on the Post-2015 Development Agenda; UN *Sustainable Development Solutions Network*; UN *Global Compact*; UN *Development Group (UNDG)*. The HLP's report highlights that while NCDs are now on the agenda, they are still surrounded by some worrying misconceptions. The report outlines possible universal sustainable development priorities for the post-2015 era. One of its recommended goals, 'to ensure healthy lives', focuses on overall health outcomes and shifts from a focus on mortality to one on morbidity and disability. The goal aims to 'reduce the burden from HIV/AIDS, tuberculosis, malaria, neglected tropical diseases and priority non communicable diseases'.

Unfortunately, however, the report continued to promulgate a common misconception surrounding NCDs, that they are solely or primarily a developed country problem.

In high income countries, rising health costs are a major threat to fiscal stability and long-term economic growth. Obesity is a growing problem. When people live longer, they face increased rates of cancer, heart disease, arthritis, diabetes and other chronic illness. On average, people lose 10 years of their lives to illness, mostly to non-communicable diseases;

and

in developed countries, the lack of a nutritious diet in childhood increases the risk of obesity, diabetes and cardiovascular disease.

Overall, the inclusion of NCDs in the post-2015 agenda is vital. In the future, all countries should be provided with appropriate support to implement, for instance, measures in the post-2015 goals and WHA's Action Plan and Monitoring Framework, as well as frameworks

MANY COUNTRIES ARE LIKELY TO REQUIRE CONSIDERABLE TECHNICAL SUPPORT TO ESTABLISH BASELINE DATA

such as the FCTC. It is also important that consistency is achieved between these frameworks, in order to reduce confusion and streamline monitoring and evaluation processes in LMICs. One challenge facing LMICs in this context is that of establishing appropriate baseline data. Many countries are likely to require considerable technical support to establish baseline data, and monitoring and evaluate targets and indicators as expressed in the various frameworks. This is an area where enhanced donor commitment would have a real and much needed impact. As Robinson and Hort suggest,

The tracking of resources dedicated to surveillance and the consequent reporting of national data sets will be important indicators of global commitment to tackling NCDs in LMICs.³⁸

³⁸ Robinson, H and Hort, K, 'NCDs: an update and implications for low- and middle- income countries', *Health Policy and Health Finance Knowledge Hub Working Paper 30*, Nossal Institute for Global Health, 2013.

Responses to NCDs

'Best buys'

There is a substantial and growing body of knowledge about what works in the prevention and control of NCDs. Even in wealthy countries, resources available for health are limited, and interventions need to be prioritised. A number of criteria enter into such decisions, including the current and projected burden of disease, cost-effectiveness, the practical and political feasibility of interventions, and cultural acceptability.

In recent years, efforts have been made to identify effective and cost-effective interventions for NCD prevention and control, and to determine how much these interventions would cost. In the lead up to the HLM in 2011, WHO identified a set of evidence-based 'best buy' interventions that are potentially highly cost-effective, and feasible and appropriate to implement at the primary health care level within the constraints of LMIC health systems. The following table provides an overview of WHO's 'Best Buys'.

Figure 5: 'Best buy' interventions³⁹

Risk factor/disease	Interventions
Tobacco use	<ul style="list-style-type: none"> • Tax increases • Smoke-free indoor workplaces and public spaces • Health information and warnings • Bans on tobacco advertising, promotion and sponsorship
Harmful alcohol use	<ul style="list-style-type: none"> • Tax increases • Restricted access to retailed alcohol • Bans on alcohol advertising
Unhealthy diet and physical inactivity	<ul style="list-style-type: none"> • Reduced salt intake in food • Replacement of trans fat with polyunsaturated fat • Public awareness through mass media on diet and physical activity
Cardiovascular disease and diabetes	<ul style="list-style-type: none"> • Counselling and multi-drug therapy for people with a high risk of developing heart attacks and strokes (including those with established cardiovascular disease) • Treatment of heart attacks with aspirin
Cancer	<ul style="list-style-type: none"> • Hepatitis B immunisation to prevent liver cancer • Screening and treatment of pre-cancerous lesions to prevent cervical cancer

³⁹ WHO and World Economic Forum, *From Burden to "Best Buys": Reducing the Economic Impact of Non-Communicable Diseases in Low- and Middle-Income Countries*, 2011.

At around the same time, *The Lancet* NCD Action Group⁴⁰ and the NCD Alliance⁴¹ proposed five overarching priority actions for the response to the crisis: leadership, prevention, treatment, international cooperation, and monitoring and accountability; and the delivery of five priority interventions: tobacco control, salt reduction, improved diets and physical activity, reduction in hazardous alcohol intake, and essential drugs and technologies.⁴² Harm caused by tobacco,

alcohol, and the food and drink industries has been described as 'industrial epidemics'. Unlike infectious disease epidemics, the vectors of disease spread are not biological agents but transnational corporations, who 'implement sophisticated campaigns to undermine public health interventions'.⁴³ Figure 6 highlights the increasing market infiltration by transnational corporations in LMICs, compared to high income countries.

Figure 6: Annual growth rate of volume consumption per person in low-income and middle-income countries, and high-income countries between 1997 and 2009⁴⁴

	Low-income and middle-income countries	High-income countries
Packaged food	1.9%	0.4%
Soft drinks	5.2%	2.4%
Processed food	2.0%	1.4%
Oil and fats	1.6%	-0.1%
Snacks and snack bars	2.4%	2.0%
Alcohol	2.8%	1.1%
Tobacco*	2.0%	0.1%

⁴⁰ *The Lancet* NCD Action Group is an informal collaboration of leading academics, practitioners, and civil society organisations.

⁴¹ The NCD Alliance is comprised of the Union for International Cancer Control, the International Union against Tuberculosis and Lung Disease, the International Diabetes Federation, and the World Heart Federation.

⁴² Beaglehole, R et al., 'Priority Actions for the NCDs Crisis', *The Lancet*, p. 377, 2011.

⁴³ Moodie, R et al., 'Profits and Pandemics: prevention of harmful effects of tobacco, alcohol, and ultra-processed food and drink industries', *The Lancet*, p. 381, 2013.

⁴⁴ *ibid.*

Tax increases are the single most cost effective intervention available to reduce tobacco consumption. A 10% price increase on tobacco in LMICs is expected to reduce smoking rates by 4–12% in most countries.⁴⁵ Smoking bans in indoor workplaces have been found to reduce the total population exposure to second-hand smoke by 40%, and hospital admission rates for acute coronary events by 10–20%.⁴⁶ Health warnings on cigarette packets and mass-media counter-advertising have succeeded in reducing cigarette consumption in developed countries, and in prompting smokers in developing countries to consider quitting.⁴⁷

In Thailand, collaboration between public health professionals and law makers has had tangible impacts on tobacco control. In addition to marketing and media campaigns, and implementation of health warnings, government levies were increased on cigarettes to 83.5%, representing 57% of the actual retail pack price. These strategies reduced smoking rates from 30% in 1992, to 18% in 2007, and prevented over 30,000 deaths in 2006.⁴⁸ A particularly important new finding is that – contrary to the repeated claims of the tobacco industry – raising the price of tobacco through increased excise taxes is not regressive. On the contrary, the poorest quintiles bear the least share of the increased costs because they are price-sensitive and so quit, or do not take up, tobacco use.⁴⁹

Recent systematic reviews have demonstrated that increased taxes on alcohol sales lead to decreased alcohol consumption and decreased alcohol-related harm (both directly and from associated violence and accidents) in developed countries.⁵⁰ They have also been

INCREASED TAXES ON ALCOHOL SALES LEAD TO DECREASED ALCOHOL CONSUMPTION AND DECREASED ALCOHOL-RELATED HARM

shown to reduce consumption in developing countries, though further studies are needed to assess their consequent effects on morbidity and mortality. Increased exposure to alcohol marketing has been shown to increase alcohol consumption among young people in developed countries, and more recently in Thailand. Accordingly, comprehensive bans on alcohol advertising, promotion and sponsorship are recommended by WHO.

Taxation on tobacco and alcohol has the additional benefit of generating further government revenue, which can then be reinvested in public health. The establishment of VicHealth in Australia in 1987 illustrates this point. After considerable debate, the Victorian

⁴⁵ Ranson, M et al., 'Global and regional estimates of the effectiveness and cost-effectiveness of price increases and other tobacco control policies', *Nicotine and Tobacco Research*, p. 4, 2002.

⁴⁶ International Agency for Research on Cancer, 'Evaluating the effectiveness of smoke-free policies', *IARC Handbooks of Cancer Prevention Volume 13*, 2009.

⁴⁷ Centers for Disease Control, 'Cigarette package health warnings and interest in quitting smoking – 14 countries, 2008–2010', *Centers for Disease Control and Prevention Morbidity and Mortality Weekly Report 60* 2011; Mullin S et al., 'Increasing evidence for the efficacy of tobacco control mass media communication programming in low- and middle-income countries', *Journal of Health Communication*, p. 16, 2011.

⁴⁸ Dans, A et al., 'The Rise of Chronic NCDs'.

⁴⁹ Asian Development Bank, *Tobacco taxes: a win-win measure for fiscal space and health*, 2012.

⁵⁰ Wagenaar, A et al., 'Effects of alcohol tax and price policies on morbidity and mortality: a systematic review', *American Journal of Public Health*, p. 100(11), 2010

Parliament agreed to fund VicHealth through a dedicated (or 'hypothecated') tax, which in this case was a levy of 5% on top of existing State tobacco fees. This kind of tax is generated for a specific purpose and does not become part of a government's general consolidated revenue. Similar models have been pursued elsewhere. The Thai Health Promotion Foundation is funded by a 2% surcharge on tobacco and alcohol excise taxes, while South Korea's Health Promotion Fund (with an annual budget of more than \$US30 million) is financed by a progressively increasing tax on cigarettes.⁵¹ The International Network of Health Promotion Foundations now has nine full and six associate members, and countries such as Vietnam and South Africa are actively seeking to develop new health promotion foundations.⁵²

As was highlighted by World Health Day 2013's focus on hypertension, 18% of deaths worldwide (9.4 million) are attributable to raised blood pressure, which substantially increases the risk of stroke and cardiovascular disease.⁵³ This is partly driven by excess salt intake. In most populations, average daily sodium intake is substantially above the amount recommended by WHO. Excess salt intake is attributed in some countries to processed foods, and in others to the use of soy and other sauces.⁵⁴ Salt reduction programs have been successful in several developed countries, and it has been estimated that reducing salt intake by 15% across 23 developing countries would avert 8.5 million deaths over 10 years at a cost of \$0.04 to \$0.32 per person.⁵⁵

Consumption of industrially produced trans unsaturated fats increases the risk of coronary heart disease. Several countries have succeeded in reducing trans fat consumption

through a variety of product labelling, trans fat content limits, and bans.⁵⁶ In 2006 the *Disease Control Priorities Project* estimated that implementing mandatory labelling alone would save one DALY for each US\$25 to \$73 spent, depending on region.⁵⁷

A recent systematic review found that multi-drug therapy (aspirin, a cholesterol-lowering medication and a blood pressure-lowering medication) for those at high risk of cardiovascular disease was cost effective in the majority of LMICs studied. Cost effectiveness increased when populations at higher risk were targeted.⁵⁸ WHO recommends as a 'best buy' counselling and multidrug therapy for those with at least a 30% risk of acute myocardial infarction over the next 10 years. Aspirin for the treatment of acute myocardial infarction is also very cost effective, estimated to cost under \$25 for every DALY saved across all regions.⁵⁹

⁵¹ Bonita, R et al., 'Country actions to meet UN commitments on NCDs: a stepwise approach', *The Lancet*, p. 381, 2013.

⁵² <http://www.hpfoundations.net/about-us/inhpf-profile>, accessed 17 October 2013.

⁵³ Lim et al., 'A comparative risk assessment of burden of disease and risk attributable to 67 risk factor clusters in 21 regions, 1990–2010: a systematic analysis for the Global Burden of Disease Study 2010', *The Lancet*, p. 380, 2012.

⁵⁴ Brown, J et al., 'Salt intakes around the world: implications for public health', *International Journal of Epidemiology*, p. 38, 2009.

⁵⁵ Asaria, P et al., 'Chronic disease prevention: health effects and financial costs of strategies to reduce salt intake and control tobacco use', *The Lancet* 370, 2007.

⁵⁶ Downs, S et al., 'The effectiveness of policies for reducing dietary trans fat: a systematic review of the evidence', *Bulletin of the World Health Organization*, p. 91, 2013.

⁵⁷ Willet, W et al., 'Prevention of chronic disease by means of diet and lifestyle change', in World Bank, *Disease Control Priorities in Developing Countries* (2nd ed.), 2006.

⁵⁸ Shroufi, A, 'Cost effective interventions for the prevention of cardiovascular disease in low and middle income countries: a systematic review', *BMC Public Health*, p. 13, 2013.

⁵⁹ Gaziano, T et al., 'Cardiovascular Disease', in World Bank, *Disease Control Priorities in Developing Countries* (2nd ed.), 2006.

Universal immunisation against hepatitis B, which has been found to result in marked reductions in liver cancer, has been adopted into the programs of 179 countries, and in 2010 global coverage was estimated at 75%.⁶⁰ It has been found to be highly cost-effective in China, Taiwan, Gambia and Mozambique. Screening and treatment for precancerous cervical lesions has been found to be very cost effective, when considered in conjunction with human papillomavirus (HPV) vaccination.⁶¹

The acceleration of NCD responses in the Pacific has focused on 'best buys'. In 2012, a Pacific-wide forum on NCDs was convened in Auckland, and following this, 13 Pacific countries have developed and commenced implementation of a Crisis Response Package, within the context of their national NCD strategies. The majority of Pacific countries have passed tobacco control legislation, and have made progress in meeting requirements of the FCTC. In 2013, four countries (Cook Islands, Fiji, PNG and Tonga) have raised tobacco taxes in their budgets, while national plans incorporating salt reduction have been developed and initiated in 13 countries.⁶²

Health systems integration

Responses to NCDs require inputs from the whole health sector, and differ in some key respects from responses to communicable diseases. The chronic nature of NCDs means that:

- There are strategic advantages in terms of health benefits and cost savings to Government in having effective primary and secondary prevention.
- Patients need long-term sustained health services from health professionals with different skills, including different skills from the communicable disease focus they may have originally trained in.
- Diagnosis and treatment can be technologically intensive.
- Drugs and technologies must be sustainably supplied over the long term.
- Community involvement is a key ingredient for promoting access to services and for advancing self-care.⁶³
- There are health benefits to patients and cost-savings to Government in treating high risk NCD patients early on in the disease (rather than awaiting complications) and treating them at health centres and district hospitals, rather than at tertiary hospitals).

⁶⁰ Lavanchy, D, 'Viral hepatitis: global goals for vaccination', *Journal of clinical virology*, p. 55, 2012.

⁶¹ Shi, J, 'Evaluation of primary HPV-DNA testing in relation to visual inspection methods for cervical cancer screening in rural China: an epidemiologic and cost-effectiveness modeling study', *BMC Cancer*, p. 11, 2011.

⁶² WHO et al., *Towards Health Islands: Pacific NCDs Response*, 2013.

⁶³ Robinson, H and Hort, K, 'Non-communicable diseases and health systems reform in low- and middle-income Countries', *Health Policy and Health Finance Knowledge Hub Working Paper #13*, Nossal Institute for Global Health, 2011.

Integration of NCD interventions into existing health systems may strengthen efficiency and equity of the whole health system. Access to essential medicines and technologies is an important element of this systemic approach. Access to medicines to prevent and treat NCDs remains lower than for infectious and acute diseases. In each of its four reports since 2008, the MDG Gap Taskforce, which reports on progress against MDG 8's access to essential medicine target, has highlighted the need for increased attention to access to medicines for NCDs, and has contrasted the low level of support given to NCD medicines compared to other diseases.⁶⁴ The UN's *Political Declaration* and Rio+20 *Outcomes Document* both highlight the need for enhanced access to medicines, technologies and vaccines to address NCDs, while the NCDs Action Plan and *Global Monitoring Framework* both specifically target access to medicines.

To assist with strengthening the efficiency and equity of primary health care for NCDs, in 2010 WHO launched the *Package of Essential Non-communicable Disease Interventions for Primary Health Care in Low-Resource Settings (PEN)*. PEN is 'the minimum standard for NCDs to strengthen national capacity to integrate and scale up care of heart disease, stroke, cardiovascular risk, diabetes, cancer, asthma and chronic obstructive pulmonary disease in primary health care in low resource settings'.⁶⁵ PEN outlines interventions that can be integrated in primary healthcare, and

the essential medicines, technologies and tools needed to facilitate this integration. In the Pacific, 10 countries have commenced implementation of PEN, and five are moving from the feasibility phase to national rollout phase. Seventy-two health facilities across the region participated in the initial feasibility stage, with population coverage of between 10% and 66% in Pacific countries.⁶⁶

THERE IS A RANGE OF OTHER WAYS IN WHICH NCD INTERVENTIONS CAN POTENTIALLY BE INTEGRATED INTO BROADER HEALTH SYSTEMS

Drawing upon efforts made in preventing and controlling other diseases – particularly HIV and tuberculosis, which have benefited from high levels of international financing and which have strong links with NCDs – there is a range of other ways in which NCD interventions can potentially be integrated into broader health systems (recognising, however, that these may be overly ambitious at this stage in some contexts). These include:

- For patients who come into contact with the medical system multiple times (for instance for HIV/AIDs and tuberculosis in areas with high prevalence of those diseases, and for reproductive health and pregnancy care in all areas), key NCD risks can be identified and risk mitigation interventions delivered.

⁶⁴ Hogerzeil et al., 'Promotion of access to essential medicines for non-communicable diseases: practical implications of the UN Political Declaration', *The Lancet*, p. 381, 2013.

⁶⁵ WHO, *Package of Essential Noncommunicable Disease Interventions for Primary Health Care in Low-Resource Settings*, p. 10, 2010.

⁶⁶ WHO et al., *Towards Healthy Islands*, 2013.

- Integrated monitoring and evaluation systems.
- Integrated approaches to service delivery to establish a single point of entry to manage multiple diseases.
- Procurement and supply chain platforms for existing medicines (for HIV and malaria, for instance) can be used for NCDs.⁶⁷

Comparing the NCDs epidemic with the HIV response, Atun et al. note that 'in embracing integration opportunities for ... prevention and care, the challenge will be less clinical, but more managerial and political to create the right incentives in realisation of synergies to achieve greater health and equity'.⁶⁸



PHOTO: Anirudh Kumar: Jamkhed Comprehensive Rural Health Project - Mixing an indicator solution with the patient's urine, and then heating the solution, provides low cost screening for diabetes.

NCDs and trade

International trade agreements and foreign direct investment play an important role in the growth of NCDs, both by increasing risk factors and limiting capacity for health policy interventions. This is most notably evident in the trade of products that increase risk for NCDs, including unhealthy foods, tobacco and alcohol. These issues are particularly pronounced in the Pacific, where trade has recently influenced nutritional determinants of NCDs and the epidemiological transition is most pronounced. In the second half of the 20th century, production of traditional root crops in the Pacific declined in favour of the cultivation of cash crops for export. Since the early 1990s, trade liberalisation has led to increased importation and consumption of high-energy density cereals, fatty meats, cooking oils and processed food. Additionally, increased foreign direct investment has resulted in the expansion of supermarkets and fast food retailers, allowing greater access to unhealthy foods.⁶⁹

⁶⁷ Atun, R et al., 'Improving responsiveness of health systems to non communicable diseases', *The Lancet*, p. 381, 2013

⁶⁸ *ibid.*

⁶⁹ Thow, A and Snowdon, W, 'The effect of trade and trade policy on diet and health in the Pacific islands', in Hawkes C (ed.), *Trade, food, diet and health: perspectives and policy options*, 2010.

Trade agreements, such as those involved in accession to the World Trade Organization (WTO), and the *Pacific Island Countries Trade Agreement* (PICTA), often limit health policy space by requiring lowering of tariffs and other trade barriers. For example, as part of its bid to join the WTO, Samoa was required to lift a ban on imported high-fat turkey tails.⁷⁰ However, the WTO makes provision under the General Agreement on Tariffs and Trade for specific measures to protect health, as long as these (a) are non-discriminatory between local and imported goods, and (b) pass a 'necessity test' in that there are no less trade restrictive alternatives available. Samoa and Fiji (WTO members) have retained taxes on sugary drinks, as do non-WTO member countries such as Nauru, French Polynesia and the Cook Islands.⁷¹

As of July 2013, all Pacific Island countries are signatories to WHO's FCTC, which includes such binding measures as increased taxes on tobacco, warnings on tobacco packaging and prohibitions on advertising. Tobacco is also excluded from PICTA, which further preserves policy space.

While harmful use of alcohol is a major risk factor for NCDs, there is no current WHO Framework Convention on alcohol as there is for tobacco, although the prospect is being debated.⁷² However, as with tobacco, alcohol is excluded from PICTA. In a 2013 workshop on trade and NCDs held in Nadi, Fiji, government delegates from Kiribati, Vanuatu and Fiji identified taxes on alcohol as achievable health policy priorities.⁷³

Pacific island countries are currently negotiating trade agreements such as the *Pacific Agreement on Closer Economic Relations Plus*, and *Economic Partnership Agreements* with the European Union. In the Nadi workshop it was also emphasised that these negotiations should include impact assessments on health, social issues and human rights, and consult multiple sectors including health and civil society. These processes can assist in ensuring coherence between trade and health policies, and may be equally useful in other parts of the world to safeguard public health. Collaboration between trade and public health stakeholders, and effective governance mechanisms to facilitate this engagement, is vital in ensuring that the right to health is expressed in all relevant trade mechanisms.

⁷⁰ WHO, Secretariat of the Pacific Community, Pacific Research Centre for the Prevention of Obesity and Non-communicable Diseases, and UNDP, *Trade, trade agreements and non-communicable diseases in the Pacific Islands: intersections, lessons learned, challenges and way forward*, 2013.

⁷¹ WHO et al., *Trade, trade agreements and NCDs*, 2013.

⁷² Liberman, J, 'Alternative legal strategies for alcohol control: not a framework convention – at least not right now', *Addiction*, p. 108, 2013.

⁷³ WHO et al., *Trade, trade agreements and NCDs*, 2013.

Country case studies

Tonga

Small island nations in the Pacific experience the greatest burden from NCDs. To better understand the nature of this crisis, the ways in which countries can respond to it, and some of the challenges experienced, it is illustrative to look at progress in Tonga. Tonga's *NCD Risk Factors STEPS Report*, based on data collected in 2004, found an alarming prevalence of risk factors in the population. Notable NCD risk factors included hypertension (23.1%); raised blood cholesterol (49.7%); daily tobacco use (27.6%); and fewer than five combined servings of fruit and vegetables consumed each day (92.8%). Overall, 99.9% of the population was found to be at a moderate or high risk of developing an NCD.⁷⁴

99.9% OF THE POPULATION WAS FOUND TO BE AT A MODERATE OR HIGH RISK OF DEVELOPING AN NCD

Tonga was the first Pacific country to develop a *National Strategy to Prevent and Control NCDs* (covering 2004–2009). In 2010 the follow-up *National Strategy (2010–2015) – Hala Fononga* – was launched. Numerous factors in the national and regional policy context helped establish an enabling environment for the development of this strategy.

- In 1995, 1997, 1999, and 2001, meetings of the Ministers of Health for the Pacific Island Countries adopted and refined the 'Healthy Islands' concept, which recognised NCDs as centrally important. This concept was further developed in the 2002 WHO *Report on Risks to Health and the Healthy Island Vision*.
- In 2002, STEPS surveys were completed in Federated States of Micronesia, the

Marshall Islands, Fiji and Samoa, enhancing the evidence base regarding NCDs in the Pacific.

- In November 2002, a *Consultation on Food Safety and Quality in the Pacific* was convened in Fiji, raising awareness about obesity in the Pacific and the multi-sectoral responses required.
- In 1999, Tonga's Minister for Health, Lord Viliami Tangi, attended the first major consultation in the development of the FCTC. This process provided impetus for tobacco control in Tonga, and within one year, a comprehensive Tobacco Act was drafted. In September 2001, the *Tobacco Control Act* was passed, a notable effort given that over half of Government Ministers smoked at that time.

⁷⁴ Kingdom of Tonga and WHO, *Kingdom of Tonga NCD Risk Factors STEPS Report*, September 2012.

- In May 2003, the FCTC was adopted at the WHA. Pacific islands including Tonga were vocal during the development and adoption of the FCTC.
- In 2003 Tonga hosted the fifth Pacific Health Ministers Meeting, which culminated in the *Tonga Commitment to Promote Healthy Lifestyles and Supportive Environment*. The *Tonga Commitment* recommended that countries should develop national strategies to address NCDs. This was the first time that NCDs had been placed at the top of the health and development agenda in the region, with ministers recognising the magnitude of the problem and committing to address it.⁷⁵

Following the Fifth Pacific Islands Health Ministers' Meeting, consultations were undertaken by the Ministry of Health with

government ministries, NGOs, Church groups, donors, youth groups and other stakeholders. This process recognised that any effort to address NCDs needed broad buy-in and support from different sectors and groups. For instance, support from the Ministry of Education, Youth and Sport was important in order to integrate healthy food and exercise into school programs.

Following this consultation, the Ministry of Health led the drafting of Tonga's first *NCD Strategy*, covering the period 2004–2009. The Strategy included frameworks to address physical activity, misuse of alcohol, tobacco control and healthy eating. Following development of the strategy, legislation was developed to enable implementation of specific activities (including tobacco and alcohol) within the strategic plan.

IMPLEMENTATION

A notable step in Tonga has been the inclusion of NCDs as a major national development issue, including reporting on NCDs as part of the country's reporting against the MDGs, despite NCDs not being specifically included in this international framework.⁷⁶

Tonga's response so far to the NCD epidemic highlights the multi-disciplinary and multi-stakeholder approaches required to address these public health challenges. As noted in the *Tackling the NCDs Epidemic* background paper from the Ninth Pacific Health Ministers Meeting in 2011,

⁷⁵ Background outlined in Government of Tonga, *Hala Fononga: Tonga National Strategy to Prevent and Control Non Communicable Diseases (2012–2015)*.

⁷⁶ See <http://www.finance.gov.to/mdg>, accessed 17 October 2013.

To ensure whole-of-government and whole-of-society actions, a favourable environment for multi-sectoral policies must be adopted. The leadership for policy development must come from the highest levels of government, and be sustained by multi-sectoral coordinating mechanisms that include nongovernmental organizations and the private sector.⁷⁷

One way that Tonga has sought to address these challenges is by establishing committees and sub-committees. A high level National NCDs Committee has been convened, along with four Sub-Committees that focus on Physical Activity, Alcohol, Tobacco and Healthy Eating. Current membership of the NCD Committee and Sub-Committees demonstrates the diversity of stakeholders engaged in prevention and control of NCDs, with members including Ministry of Health; AusAID; Tonga Health; WHO; Secretariat of the Pacific Community; Australian Sports Outreach Program; Church; Ministry of Education,

Women's Affairs and Culture; Ministry of Police; Ministry of Training, Employment, Youth and Sports; Ministry of Finance; the Salvation Army; Tonga Family Health Association; Tongan Red Cross; and business groups.

A key element of efforts to address NCDs in Tonga has been the adoption of the 'settings approach'. According to WHO,

A setting is where people actively use and shape the environment; thus it is also where people create or solve problems relating to health. Settings can normally be identified as having physical boundaries, a range of people with defined roles, and an organizational structure.⁷⁸

In Tonga, this approach has been manifested through the establishment of the *Health Promoting Churches Partnership*, *Health Promoting Schools*, and *Health Promoting Workplaces*. These settings are supported by designated staff within the Ministry of Health's Health Promotion Unit.

A KEY ELEMENT OF EFFORTS TO ADDRESS NCDs IN TONGA HAS BEEN THE ADOPTION OF THE 'SETTINGS APPROACH'.

⁷⁷ *Tackling the Noncommunicable Disease Epidemic*, PIC0/5 Rev 1, Ninth Meeting of Minister of Health for the Pacific Island Countries, 2011.

⁷⁸ WHO, 'Introduction to Healthy Settings.' http://www.who.int/healthy_settings/about/en/, accessed 17 October 2013.

IMPROVING HEALTH THROUGH SPORT

One of the more significant programs addressing NCDs in Tonga is the AusAID-funded program *Kau Mai Tonga: Netipolo*. This program is a partnership between AusAID and the Tongan Ministries of Health and Sport, and the Tongan Netball Association, and particularly targets women, who are often excluded from sport and exercise due to a range of cultural and socio-economic factors. The governments of Australia and Tonga are working together through the *Australian Sport Outreach Program* to reduce levels of physical inactivity and related health problems among women. *Kau Mai Tonga* was designed to specifically implement strategies outlined in the NCDs Strategic Plan, and is an example

of an effective multisectoral NCD intervention that can be drawn upon in strengthening and expanding delivery of other NCD activities. *Kau Mai Tonga* also includes a social marketing campaign to influence Tongan women's attitudes to exercise and health

Netball Australia provides support to the Tonga Netball Association to ensure that women have access to fun, safe and accessible physical activity options. This approach has effectively building demand, with more than 300 teams registering for the first *Kau Mai Tonga tournament*. Increasing women's involvement in exercise has also enabled the promulgation of important health messages.

TONGA HEALTH PROMOTION FOUNDATION

A central element of Tonga's efforts has been the establishment of the Tongan Health Promotion Foundation ('Tonga Health'). During the development of the first NCDs Strategic Plan, it was thought that an autonomous body was needed to provide grants to fund health promotion activities, and work with the Health Ministry and other stakeholders to keep NCDs high on the policy agenda. The Victorian Health Promotion Foundation (VicHealth) in Australia was viewed as a model for this process.

Tonga Health was launched in 2007, and 'acts as a link between the community, NGOs, and the Government to promote health by fighting NCDs'.⁷⁹ One of Tonga Health's main activities is the provision of grants and sponsorships. Funding has been provided to community groups, NGOs and government stakeholders for activities including health education and promotion around tobacco use and exercise; the development of vegetable gardens in schools and communities; and research around the use of salt and tobacco.

⁷⁹ <http://www.tongahealth.org.to/>, accessed 17 October 2013.

POLITICAL LEADERSHIP

The *Political Declaration* from the 2011 HLM emphasises the importance of strong and consistent national leadership by heads of state or governments to ensure that NCDs are a whole-of-government priority. Such political support has been a notable strength and enabler of Tonga's NCD efforts so far. For instance, Bill Tangi, the Health Minister and Deputy Prime Minister at the time, played a lead role in developing Tonga's NCDs Strategic Plan (2006–2010), advocating for NCDs to be taken seriously, and passing legislation. As a medical practitioner with an understanding of the NCDs epidemic and a personal commitment to addressing it, Minister Tangi's close involvement also helped secure the support of important groups such as the Tongan Medical Association, relevant Government Ministries such as Finance and Education, and Church leaders.

Tonga's Royal Family has also advocated for healthy living and the reduction of NCD risk

factors. His Majesty Taufa'ahau Tupou IV was known as an enthusiastic sportsperson, and frequently delivered speeches emphasising the importance of healthy lifestyle. Tonga's subsequent King, His Majesty George Tupou V, engaged in efforts to address diabetes, and instigated research collaborations between Tonga and other nations. In his first major public speech in June 2012, the current King, His Majesty Tupou VI, noted the importance of health.

Political support is particularly important in this area of public health given the multisectoral complexities of NCDs control, and the existence of powerful lobby groups (including from food and tobacco) with a vested interest in maintaining the status quo. In Tonga, however, ongoing worsening of the NCDs epidemic demonstrates the gap between political support, government mobilisation and individual behaviour change; bridging this gap will take time.

LEGISLATION

In the area of tobacco control, the *Tobacco Control Act 2000* has been updated twice, in 2004 by the *Tobacco Control (Amendment) Act 2004* and in 2008 by the *Tobacco Control (Amendment) Act 2008*. Additionally, the FCTC was ratified by Tonga on 8 April 2005, and came into effect in July 2005. These are positive steps. There have been no regulations made under the Tobacco Control Act, however, and there are several provisions under the Act that will not be fully operative unless regulations are introduced.⁸⁰ In addition, while the Tobacco Sub-Committee's 2011 Plan included the establishment of a Tobacco Control Compliance Unit (within the Ministry of Health), delays in establishing this Unit have limited enforcement measures under the Tobacco Act.

In 2013, further legislation was passed to reduce the number of cigarettes that can be imported by returning residents and visitors into Tonga from 500 to 250; to increase import tax on unhealthy products such as animal fats and sugar-sweetened waters; and to reduce import tax on healthy foods such as fish.

LESSONS LEARNT IN GOVERNANCE

Globally, governance of policy and programs and the inter-relationships between different organisational structures with NCD related functions is an important influencer of levels of success in preventing and controlling NCDs.⁸¹ Implementation of Tonga's NCDs Strategy has highlighted some of the challenges associated with multi-sectoral public health governance. Evidence suggests that the committee and settings approach underpinning the NCDs Strategy has provided an important framework, but that effective communications and partnership management between the Ministry of Health and leaders in each of these settings needs to be carefully managed. One challenge is that of aligning a settings-based approach with a Strategic Plan and committee system based on the main NCD risk factors. These convergent approaches highlight the

need for coordination and effective functioning of committees, as well as the development of clear workplans.

Potential areas of confusion in the use of these sub-committees relates to the roles of sub-committees (particularly whether their purview is limited to playing an advisory role, or whether they are intended to implement activities); uncertainty around budget processes and funding allocations to support committees; a lack of capacity among committee members to develop funding proposals; a lack of incentive for committee participation (a particular challenge in a resource constrained setting); a lack of capacity building opportunities for committee members; and a lack of capacity in the Ministry of Health to support these committees.

⁸⁰ Taumoepeau, A, *Review of the Tobacco Legislation in Tonga*, November 2012.

⁸¹ Rani et al., 'A qualitative study of governance of evolving response to NCDs in low and middle income countries: current status, risk and options', *BMC Public Health*, p. 12, 2012.

MONITORING AND EVALUATION

Background papers from the Ninth Meeting of Pacific Island Health Ministers noted that:

An important component of NCD programmes, including the multi-sectoral contributions, is to ensure monitoring of a small number of selected indicators and reporting of the results in a timely fashion ... National accountability mechanisms for reporting progress should be developed.

Monitoring and evaluation of the overarching NCDs Strategy, and of specific programs and activities, has proved challenging in Tonga. This is partly due to the governance and coordination challenges noted above, the confusion of roles among the various stakeholders, and the fact that there has not been a person or group clearly mandated with undertaking a monitoring and evaluation role. Consequently, there has been a lack of clarity around what activities are being implemented, and how they contribute to the Strategic Plan. This situation has increased the risk of activity duplication, reduced efficiency, and has

posed challenges for operational planning and budgeting.

The launch of Tonga's STEPS report in 2012 is an important contribution and provides a baseline against which future evaluations and surveys can be compared. It is important that this is complemented with a focus on capturing lessons learnt from individual activities, and sharing these lessons with other stakeholders within Tonga and across the Pacific. This is also an important consideration with reference to the *WHA Action Plan and Monitoring Framework*, and likely inclusion of NCDs in the post-2015 development framework. These new international frameworks, and their application in Tonga, further increase the need for strong monitoring and evaluation and governance mechanisms, and emphasise the importance of developing countries being given appropriate technical support and capacity building opportunities from the international community.

Myanmar⁸²

PREVALENCE

Myanmar has the second lowest Human Development Index rating in East Asia and the Pacific, and is still heavily impacted by communicable, and maternal and child, diseases – under five mortality rates are higher than the regional and global averages; while tuberculosis prevalence rates are almost twice the regional average and three times the global average. However, Myanmar now faces a ‘triple burden of disease’, with NCDs and their risk factors growing rapidly.

WHO estimates that around 40% of all deaths in Myanmar are due to NCDs.⁸³ The GBD study confirmed the growing impact of NCDs: in Myanmar in 2010, stroke was the second biggest killer, and four of the top 10 causes of death were NCDs. GBD also demonstrated that, in the period 1990–2010, stroke had risen from 3.9% of all deaths to 6.9%, and deaths due to heart disease, diabetes and kidney disease had approximately doubled.⁸⁴ Risk factors including tobacco consumption, high blood pressure, and household air pollution are the major sources of DALYs in Myanmar, with each accounting for over 6% of total share. By contrast, sub-optimal breastfeeding and childhood underweight account for less than 3% of share of DALYs.⁸⁵

DRIVERS AND RISKS

Over the past few years, political and economic developments have created an environment in which risk factors for NCDs could quickly rise. For instance, while alcohol consumption in Myanmar has historically been low compared to other South East Asian nations,⁸⁶ recent legislative changes to encourage foreign investment have led to an increase in breweries operating in the country. Since mid-2012, the Myanmar Investment Commission has approved the establishment of at least six new breweries, including granting licences for four joint ventures in January 2013 which involve multinational corporations such as Heineken and Carlsberg. Additionally,

the highest tax payer in the country for the 2011–12 financial year was Myanmar Brewery Limited, raising the potential of conflict between economic growth and long-term health outcomes.⁸⁷

The same story is playing out with “Big Tobacco”. In July 2013 British American Tobacco, the world’s second largest cigarette manufacturer, unveiled a \$US50 million investment over five years to produce, market and sell its brands in Myanmar. Its factory, to be built on the outskirts of Yangon, will create about 400 jobs. Japan Tobacco, number three globally, forged a joint venture partnership in

⁸² A modified version of this case study was published in *New Mandala*, October 2013.

⁸³ WHO, NCD Country Profile: *Myanmar*, 2011.

⁸⁴ Institute of Health Metrics and Evaluation, GBD Profile: *Myanmar*, 2010.

⁸⁵ *ibid.*

⁸⁶ WHO, *Global Status Report on Alcohol and Health*, 2011.

⁸⁷ ‘Myanmar’s Beer and Cigarette Investment Boom Raises Alarm’, *Eleven*, 26 February 2013; ‘Myanmar ready to sweeten terms for foreign brewers’, *Bangkok Post*, 13 May 2013.

2012, while China's largest tobacco producer is also setting up a multi-million dollar joint venture.

On top of this, a joint venture was recently approved between Coca-Cola and a local company to resume the domestic production of Coca-Cola. Coca-Cola's explicit objective of market expansion has raised concerns that both the prevalence of soft drink consumption and the level of consumption by existing consumers will increase. There is again a significant potential for a conflict of interest between health and economic priorities. According to the O'Neill Institute for National and Global Health Law, Myanmar's Government could have refused to approve the Coca-Cola joint venture on health grounds (one can of Coca-Cola contains 10 teaspoons of sugar). Instead, the venture will bring revenue and employment opportunities. The current investment incentive structure in Myanmar also allows tax breaks for foreign investors for five years, which has implications for government revenue and also for health outcomes as this may create space for Coca-Cola to set a low price for its products to stimulate demand.⁸⁸

While these companies bring revenue and employment opportunities, as has been seen in other developing countries the long term health costs of these 'industrial vectors' outweighs the short term economic benefits. Myanmar's transition creates a real opportunity to learn from the public health and development mistakes made elsewhere, but indications are

at present that the rush towards short term economic opportunities is taking precedence.

Another factor that has the capacity to be both a problem and an opportunity at this stage of Myanmar's development relates to the manner of its urbanisation. Thomas and Gostin note that, worldwide, 'processes of globalisation have ... [exacerbated] many of the risk factors for NCDs in the process. The health effects are exacerbated by urbanisation, often linked to increased reliance on cars, polluted air, and fewer options for physical exercise'.⁸⁹ This phenomenon is now starting to play out in Myanmar. Significant and continuing growth in the automobile industry, such as the recent establishment of operations by Ford, Tata and Suzuki, as well as the importation of motor vehicles and motorcycles from China, has led to increased availability of automobiles and motorcycles and is likely to lead to decreased prices for these goods.⁹⁰ Additionally, increases in incomes are likely to lead to the increased purchase and use of automobiles, a reflection of their role as a status symbol. However, levels of physical activity in cities in Myanmar may remain higher than is typical for urban areas, at least in the short term, as motorcycles have been banned since 2003 in Yangon. This is likely to increase the activity levels of those living in the city and as such, physical activity levels may be higher than is typical for urban areas. It's important, as economic development progresses, that a balance is achieved in promoting sustainable urbanisation and the use of active transport.⁹¹

⁸⁸ McGrady, B, 'Health implications of Coca-Cola investment in Myanmar?', *Trade, Investment and Health*, O'Neill Institute for National and Global Health Law, 10 June 2013.

⁸⁹ Thomas, B and Gostin, L, 'Tackling the Global NCD Crisis: Innovations in Law and Governance', *Journal of Law, Medicine and Ethics*, p. 22, Spring 2013.

⁹⁰ Phillip, S, 'Ford enters Myanmar with Yangon dealer as US relations improve', Bloomberg, 30 April 2013.

⁹¹ Long, D, 'Cycling Yangon's gridlock apocalypse', Myanmar Times, 25 March 2013.

RESPONSES

Current levels of NCDs in Myanmar – and expected acceleration in coming years – necessitate a range of responses by a range of public health and development stakeholders. The National Health Plan 2011–2016 prioritises NCDs, outlining actions for their prevention and control and for the provision of care for those with diseases. There have been a number of surveillance mechanisms implemented in the past decade to track the progression of NCDs and the prevalence of key risk factors, including the *Global Youth Tobacco Survey* in 2001, 2004 and 2007. However, the Ministry of Health recognises the need for a comprehensive NCD surveillance system to be established, and is ‘promoting collaborative and multisectoral actions that involve integrated epidemiological surveillance and comprehensive environmental, policy and programme interventions for major risk factors’.⁹²

The 2012 *Health in Myanmar* report from the Ministry of Health outlines a number of activities that respond to NCDs including a multisectoral meeting to finalise national policy on NCDs, a workshop for WHO’s PEN for NCDs, and a national policy on tobacco control. Implementation of PEN began in 2012, with a pilot phase in three areas within the Hlegu and Hmawbi townships. This program receives technical support from WHO and following evaluation is planned to be rolled out across the country. Additionally, some long term projects are already in operation, including the *Cardiovascular Disease Project* which was established in 1981. This project currently operates hypertension clinics in 43 townships in the Yangon division, and plans are being developed to expand it into more districts.⁹³

⁹² New, N, ‘Assessment of Cardiovascular Risk in Myanmar, *WHO Regional Health Forum*, p. 17, 2013.

⁹³ *ibid.*

Public sector resource constraints are a significant issue in the context of low government revenue and competing health and development priorities, including the continuing burden of communicable diseases. Another challenge will be competing priorities within government. Human rights concerns are still raised concerning the current government and in particular, their treatment of certain

Civil society potentially has a large role to play in addressing NCDs in Myanmar. Historically, the country has a relatively strong civil society sector and there is a core group of local and international NGOs that have been operating in the country for decades. In response to recent changes in the political environment, the number of NGOs is significantly increasing.⁹⁵ There are a number of NCD-

CIVIL SOCIETY POTENTIALLY HAS A LARGE ROLE TO PLAY IN ADDRESSING NCDs IN MYANMAR

populations such as the Rohingya people. These tensions will have implications for the provision and availability of universal healthcare. A recent development that might contribute to improved health outcomes is the trend towards governance decentralisation. This could have positive implications for primary health care and treatment and prevention of NCDs, as local government officials have generally been found to place more emphasis on development priorities.⁹⁴

specific organisations and initiatives currently operating in Myanmar, although their activities are not yet widespread. These organisations include a number of medical associations, particularly the Myanmar Medical Association, the Doctors and Cancer Foundation, and the Myanmar Cardiac Society. In addition, the World Heart Federation's 'World Heart Day' has been operating annually since 2009. There is also a significant number of local NGOs operating at the grassroots level in healthcare and community development who could be mobilised to play a role in addressing NCDs.

⁹⁴ Saha, S, *Working through Ambiguity: International NGOs in Myanmar*, 2011.

⁹⁵ *ibid.*

Conclusion

This report demonstrates that NCDs are now the world's dominant cause of mortality and disability. Their rapid emergence over the past two decades has, in large part, been met with ambivalence by the international community, a situation driven in part by the absence of NCDs from the MDGs and broader global development dialogue.

Over the past decade, the international development community has embraced the need for action on public health issues including HIV/AIDS and malaria. There is now a substantial need, and real scope, for the international development community (both donors and INGOs) and national governments to work towards reducing the prevalence and impacts of NCDs, particularly, but not only, in the Asia Pacific. If the ultimate goals of international development are to reduce poverty and save lives, **then addressing NCDs needs to be a core element of efforts over the coming decade.**

The following is a list of potential entry points for donors and NGOs to commence, or enhance, their engagement in this important area of public health and development. It is by no means exhaustive, and is intended to encourage dialogue and partnership building in this space, and demonstrate some of the practical ways in which all stakeholders can contribute.

INTEGRATION OF NCD ACTIVITIES IN EXISTING PUBLIC HEALTH PROGRAMMING

The global aid community still faces ongoing challenges in maternal and child health, and communicable diseases. Funding for health and development is finite, and it's important that opportunities are sought to contribute to preventing NCDs, and improving the lives of people with NCDs, through existing health programs. This approach also recognises that communicable and non-communicable diseases are often present in the same person, and that they often share the same risk factors. This approach also recognises that NCDs can be major barriers to safe pregnancies, and to healthy childhoods.

This paper outlines some of the ways in which health systems can cost-effectively address NCDs. INGOs can contribute to this approach through their engagement in health systems. INGOs can also support education concerning the impacts of alcohol and tobacco, and the importance of exercise and healthy diet. Furthermore, they can also implement programs to reduce stigma against people (particularly women) with diseases such as diabetes and cancer, in a similar way to programs that aim to reduce stigma and discrimination against people with HIV/AIDS.

DISABILITY INCLUSIVE DEVELOPMENT

In part driven by the leadership of the Australian Government and INGOs in this area, the international aid community is increasingly aware of the importance of disability inclusive development. Aid activities should address the particular needs and rights of people who have a disability caused by an NCD, such as diabetic blindness or limb loss, a brain injury caused by stroke, or rehabilitation needs following heart surgery. There are also substantial opportunities for engaging directly with (and providing funding/support for) organisations who are comprised of, or represent, people with NCD-related disabilities.

It's also important to note that a focus on preventing NCDs has a major role to play in contributing to the prevention of avoidable disability – already a major theme of Australia's aid program. Expanding this preventative approach will directly reduce the number of people with disabilities in LMICs, improving lives and reducing poverty.

YOUTH

NCDs are increasingly occurring in younger age groups. This is the result of lifestyle changes, and the direct targeting of children by tobacco, food and alcohol transnational corporations. There are a number of ways in which the aid community can help combat these trends. As with the above section of health program integration, healthy education for young people can play an important role in reducing exposure to risk factors. Settings in which such health messaging can take place include within the context of existing health services, through community development programs, and through school curricula.

Physical activity is also an important element of reducing NCD risk. Through their engagement at community level, NGOs can contribute to raising awareness about physical activity, and enhance access to organised sport. The netball program in Tonga is an example of the effective mobilisation of a community to play sport. Providing nutritious alternatives to unhealthy food – or the means to grow healthy foods – is also important to reducing risk factors among young people, and will contribute to ensuring that the gap in available foods isn't filled by unhealthy products.

PARTNERING WITH APPROPRIATE ORGANISATIONS

In LMICs there are a range of organisations already committed to reducing the prevalence and impacts of NCDs. These organisations sometimes focus on specific diseases (such as heart disease, cancer or stroke), or more broadly on health promotion. They differ greatly in scope and capacity. Their focuses can include prevention, treatment, provision of support for those with diseases, and advocacy to raise awareness and elevate NCDs on policy agendas and protect the rights of people with NCDs. There are substantial opportunities for mutual learning: for NCD agencies to learn about development, and for INGOs to learn about NCD prevention and control (in a very similar way that the AIDS-specific organisations

and INGOS created many mutual learning opportunities in the 1990s).

In the same way that INGOs partner with organisations in tackling HIV/AIDS and other diseases, there is great scope for partnering with NCD organisations. Doing so will expand the scope of NCD efforts, combine the respective strengths of local and international stakeholders, and involve people affected by NCDs in responses. Such partnerships are also important in undertaking research to expand the evidence base around the impacts of NCDs, and the most effective available interventions.

ADVOCATING FOR CHANGE

We cannot ignore the fact that effective responses to the rapidly increasing burden of NCDs, and achievement of the global target of 25% by 2025 in the reduction of premature mortality, will require significant technical assistance, building of national capacity, and increases in government, donor agency and philanthropic agency investment. There is an opportunity for the pooling of funds among larger donors and philanthropic agencies starting with highly cost effective actions to reduce NCD burdens, including tobacco control, salt reduction or provision of cheap generic drugs for those at high risk of cardio vascular disease.

Bibliography

- 'Myanmar ready to sweeten terms for foreign brewers', *Bangkok Post*, 13 May 2013.
- 'Myanmar's Beer and Cigarette Investment Boom Raises Alarm', *Eleven*, 26 February 2013.
- Asaria, P et al., 'Chronic Disease Prevention: Health Effects and Financial Costs of Strategies to Reduce Salt Intake and Control Tobacco Use', *The Lancet*, Vol. 370, 2007.
- Asian Development Bank, *Tobacco taxes: a win-win measure for fiscal space and health*, 2012.
- Atun, R et al., 'Improving Responsiveness of Health Systems to Non Communicable Diseases', *The Lancet*, Vol. 381, 2013.
- Beaglehole, R et al., 'Priority Actions for the NCDs Crisis', *The Lancet*, Vol. 377, 2011.
- Bonita, R et al., 'Country Actions to Meet UN Commitments on NCDs: A Stepwise Approach', *The Lancet*, Vol. 381, 2013.
- Brown, J et al., 'Salt Intakes Around the World: Implications for Public Health', *International Journal of Epidemiology*, Vol. 38, 2009.
- Byfield, S, 'NCDs, WHA and the International Development Agenda', *Development Policy*, 21 June 2013.
- Byfield, S and Kennedy, M, 'On the Cusp of Disease Transition in Myanmar', *New Mandala*, 29 October 2013.
- Centers for Disease Control, 'Cigarette Package Health Warnings and Interest in Quitting Smoking – 14 Countries, 2008–2010', *Centers for Disease Control and Prevention Morbidity and Mortality Weekly Report*, Vol. 60, 2011.
- Dans, A et al., 'The Rise of Chronic NCDs in Southeast Asia: Time for Action', *The Lancet*, Vol. 377, 2011.
- Diabetes Leadership Forum, *Diabetes: The Hidden Pandemic and Its Impact on Sub-Saharan Africa*, Vol. 16, 2010.
- Downs, S et al., 'The Effectiveness of Policies for Reducing Dietary Trans Fat: A Systematic Review of the Evidence', *Bulletin of the World Health Organization*, Vol. 91, 2013.
- Efroymson, D et al., 'Hungry for Tobacco: An Analysis of the Economic Impact of Tobacco Consumption on the Poor in Bangladesh', *Tobacco Control*, Vol. 10, 2001.
- Gaziano, T et al., 'Cardiovascular Disease', in World Bank, *Disease Control Priorities in Developing Countries* (2nd ed.), 2006.
- Geneau, R et al., 'Raising the Priority of Preventing Chronic Diseases: A Political Process', *The Lancet*, Vol. 376, 2010.
- Government of Tonga, 'Hala Fononga: Tonga National Strategy to Prevent and Control Non Communicable Diseases', 2012–2015.
- Government of Tonga, 'Report of the Minister of Health', 2009.
- Government of Tonga, 'Report of the Minister of Health', 2010.
- Hogerzeil et al., 'Promotion of Access to Essential Medicines for Non-Communicable Diseases: Practical Implications of the UN Political Declaration', *The Lancet*, Vol. 381, 2013.
- Institute for Health Metrics and Evaluation, 'GBD Profile: Bangladesh', 2012.
- Institute for Health Metrics and Evaluation, 'GBD Profile: Cambodia', 2012.
- Institute for Health Metrics and Evaluation, 'The Global Burden of Disease: Generating Evidence, Guiding Policy', 2012.
- Institute of Health Metrics and Evaluation, 'GBD Profile: Myanmar', 2010.
- International Agency for Research on Cancer, 'Evaluating the Effectiveness of Smoke-Free Policies', IARC Handbooks of Cancer Prevention, Vol. 13, 2009.
- International Network Health Promotion Foundations, 2013, available online <http://www.hpfoundations.net/about-us/inhpf-profile>, accessed 17 October 2013.
- John, R et al., 'Economic Cost of Tobacco Use in India, 2004', *Tobacco Control*, Vol. 18(2), 2009.
- Kingdom of Tonga and World Health Organisation, 'Kingdom of Tonga NCD Risk Factors STEPS Report', September 2012.
- Lavanchy, D, 'Viral Hepatitis: Global Goals for Vaccination', *Journal of Clinical Virology*, Vol. 55, 2012.
- Legge, D et al., 'Trade, trade agreements and NCDs', 2013.
- Lieberman, J, 'Alternative Legal Strategies for Alcohol Control: Not a Framework Convention – at least not right now', *Addiction*, Vol. 108, 2013.
- Lim et al., 'A Comparative Risk Assessment of Burden of Disease and Risk Attributable to 67 Risk Factor Clusters in 21 regions, 1990–2010: A Systematic Analysis for the Global Burden of Disease Study 2010', *The Lancet*, Vol. 380, 2012.
- Long, D, 'Cycling Yangon's Gridlock Apocalypse', *Myanmar Times*, 25 March 2013.
- Mahal A et al., 'The Economic Implications of Non-Communicable Diseases for India', World Bank Discussion Paper, 2010.
- Marquez, P and Farrington, J, 'The Challenge of NCDs and Road Traffic Injuries in Sub-Saharan Africa', *World Bank*, 2012.
- McCormack, V and Shüz, J, 'Africa's Growing Cancer Burden: Environmental and Occupational Contributions', *Cancer Epidemiology*, Vol. 36, 2012.
- McGrady, B, 'Health Implications of Coca-Cola Investment in Myanmar?', *Trade, Investment and Health*, O'Neill Institute for National and Global Health Law, 10 June 2013.
- Moodie, R et al., 'Profits and Pandemics: prevention of harmful effects of tobacco, alcohol, and ultra-processed food and drink industries', *The Lancet*, Vol. 381, 2013.
- Mullin, S et al., 'Increasing Evidence for the Efficacy of Tobacco Control Mass Media Communication Programming in Low- and Middle-Income Countries', *Journal of Health Communication*, Vol. 16, 2011.
- Negin, J and Robinson, H, 'Funding for HIV and Non-Communicable Diseases: Implications for Priority Setting in the Pacific Region', *Health Policy and Health Finance Knowledge Hub Working Paper #1*, Nossal Institute for Global Health, January 2010.
- Nugent, R and Feigl, A, 'Donor Responses to Chronic Disease in Developing Countries', Centre for Global Development, 2009.
- Nwe, N, 'Assessment of Cardiovascular Risk in Myanmar', WHO Regional Health Forum, Vol. 17, 2013.
- Pacific Islands Forum, 'Forum Communiqué – 42nd PIF', 2011.
- Philip, S, 'Ford enters Myanmar with Yangon dealer as U.S. relations improve', Bloomberg, 30 April 2013.
- Rani et al., 'A Qualitative Study of Governance of Evolving Response

- to NCDs in Low and Middle Income Countries: Current Status, Risk and Options', *BMC Public Health*, Vol. 12, 2012.
- Ranson, M et al., 'Global and Regional Estimates of the Effectiveness and Cost-effectiveness of Price Increases and Other Tobacco Control Policies', *Nicotine and Tobacco Research*, Vol. 4, 2002.
- Robinson, H and Hort K, 'Non-communicable diseases and health systems reform in low- and middle-income Countries', *Health Policy and Health Finance Knowledge Hub Working Paper #13*, Nossal Institute for Global Health, 2011.
- Robinson, H and Hort, K, 'Non-Communicable Diseases: An Update and Implications for Policy in Low and Middle Income Countries', *Health Policy and Health Finance Knowledge Hub Working Paper #30*, Nossal Institute for Global Health, 2013.
- Saha, S, 'Working through Ambiguity: International NGOs in Myanmar', 2011.
- Secretariat of the Pacific Community, 'NCD Statistics for the Pacific Islands Countries and Territories', 2010.
- Shi, J, 'Evaluation of Primary HPV-DNA Testing in Relation to Visual Inspection Methods for Cervical Cancer Screening in Rural China: An Epidemiologic and Cost-Effectiveness Modelling Study', *BMC Cancer*, Vol. 11, 2011.
- Shoeb, S, 'Tobacco Consumption in Bangladesh Sees Record Rise', *Dhaka Tribune*, 21 May 2013.
- Shroufi, A, 'Cost Effective Interventions for the Prevention of Cardiovascular Disease in Low and Middle Income Countries: A Systematic Review', *BMC Public Health*, Vol. 13, 2013.
- Southeast Asia Tobacco Control Alliance, 'The ASEAN Tobacco Control Atlas', 2013.
- Taumoepeau, A, 'Review of the Tobacco Legislation in Tonga', November 2012.
- Thomas, B and Gostin, L, 'Tackling the Global NCD Crisis: Innovations in Law and Governance', *Journal of Law, Medicine and Ethics*, Vol. 22, Spring 2013.
- Thow, A and Snowdon, W, 'The Effect of Trade and Trade Policy on Diet and Health in the Pacific Islands', in Hawkes C (ed.), *Trade, food, diet and health: perspectives and policy options*, 2010.
- Tonga Health, 'Tonga Health Promotion Foundation - Promoting an Active and Healthy Tonga', 2013, available online <http://www.tongahealth.org.to/>, accessed 17 October 2013.
- Tongan Ministry of Finance and National Planning, 2011, available online <http://www.finance.gov.to/mdg>, accessed 17 October 2013.
- United Nations, 'Political Declaration of the High Level Meeting of the General Assembly on the Prevention and Control of Non Communicable Diseases', 19 September 2011, A/66/L/1.
- Wagenaar, A et al., 'Effects of Alcohol Tax and Price Policies on Morbidity and Mortality: A Systematic Review', *American Journal of Public Health*, Vol. 100 (11), 2010.
- Willet, W et al., 'Prevention of Chronic Disease by Means of Diet and Lifestyle Change', in World Bank, *Disease Control Priorities in Developing Countries* (2nd ed.), 2006.
- World Bank, 'Capitalising on the Demographic Transition: Tackling Non-communicable Diseases in South Asia', 2011.
- World Bank, 'The Economic Costs of NCDs in the Pacific Islands - a Rapid Stocktake of the Situation in Samoa, Tonga and Vanuatu', 2012.
- World Economic Forum, 'Global Risks Report', 2010.
- World Health Organization and Secretariat of the Pacific Community, 'Towards Healthy Islands: Pacific NCDs Response', PIC 10/3, 2013.
- World Health Organization and World Bank, 'World Report on Disability', 2011.
- World Health Organization and World Economic Forum, 'From Burden to "Best Buys": Reducing the Economic Impact of Non-Communicable Diseases in Low- and Middle-Income Countries', 2011.
- World Health Organization, 'Action Plan for the Prevention and Control of NCDs 2013-2020', A66/9, 2013.
- World Health Organization, 'Comprehensive Global Monitoring Framework and Targets for the Prevention and Control of NCDs', A66/8, 2013.
- World Health Organization, 'Global Status Report on Alcohol and Health', 2011.
- World Health Organization, 'Global Status Report on NCDs', 2011.
- World Health Organization, 'Introduction to Healthy Eating', available online http://www.who.int/healthy_settings/about/en/, accessed 17 October 2013.
- World Health Organization, 'NCD Country Profile: Myanmar', 2011.
- World Health Organization, 'Package of Essential Noncommunicable Disease Interventions for Primary Health Care in Low-Resource Settings', Vol. 10, 2010.
- World Health Organization, 'Tackling the Noncommunicable Disease Epidemic', Ninth Meeting of Minister of Health for the Pacific Island Countries, PIC0/5 Rev 1, 2011.
- World Health Organization, 'WHO Launches New Tobacco Control Effort in Africa', 2009, available online http://www.who.int/mediacentre/news/notes/2009/tobacco_20091204/en/, accessed 17 October 2013.
- World Health Organization, Government of Samoa, and Secretariat of the Pacific Community, 'Towards Health Islands: Pacific NCDs Response', 2013.
- World Health Organization, Secretariat of the Pacific Community, Pacific Research Centre for the Prevention of Obesity and Non-communicable Diseases, and United Nations Development Programme, 'Trade, Trade Agreements and Non-Communicable Diseases in the Pacific Islands: Intersections, Lessons Learned, Challenges and Way Forward', 2013.

united against poverty

ACFID unites Australia's non-government aid and international development organisations to strengthen their collective impact against poverty

The Australian Council for International Development (ACFID)

14 Napier Close, Deakin ACT 2600

Private Bag 3, Deakin ACT 2600 Australia

P: +61 2 6285 1816

F: +61 2 6285 1720

E: main@acfid.asn.au

www.acfid.asn.au

