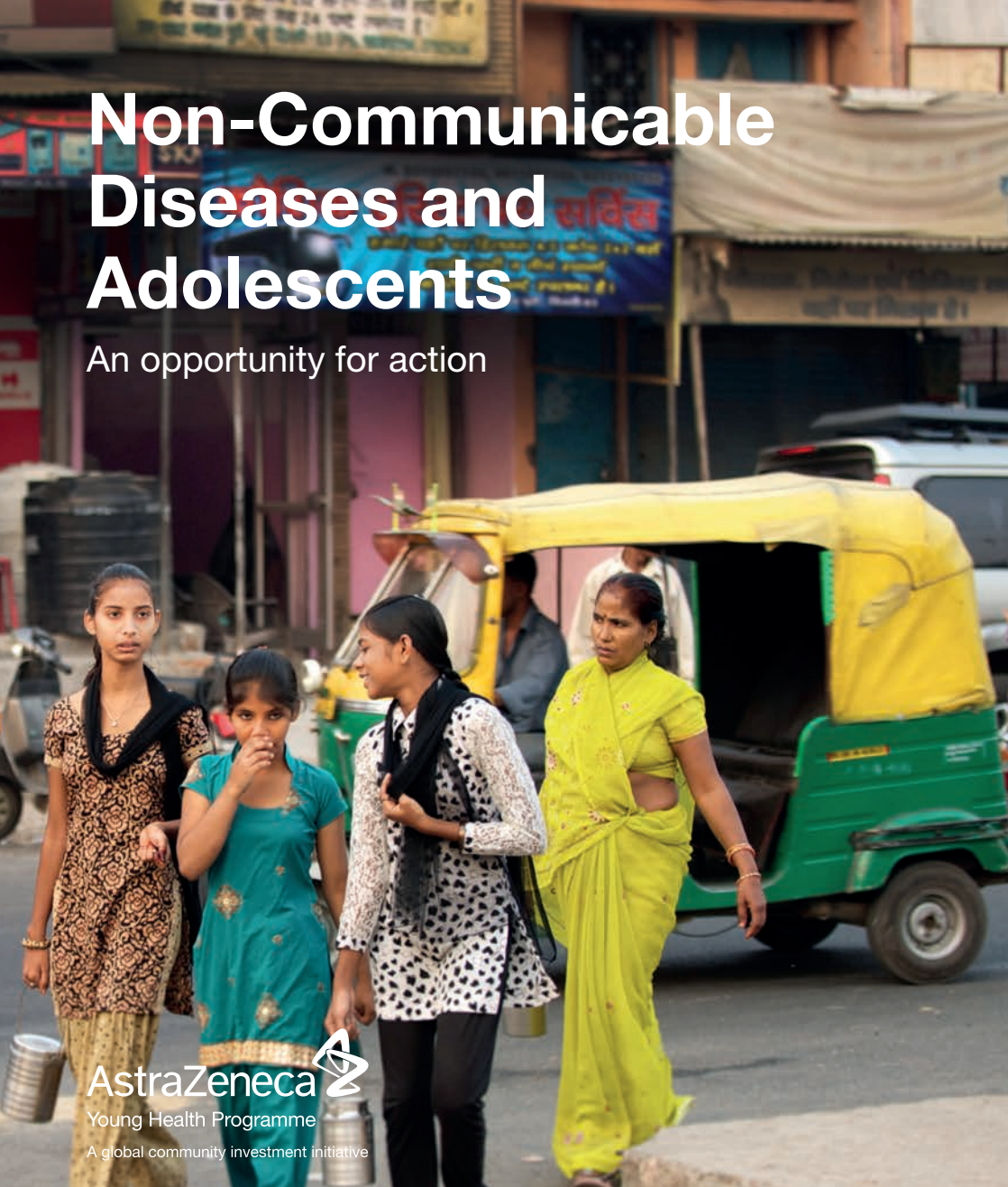


Non-Communicable Diseases and Adolescents

An opportunity for action



AstraZeneca 

Young Health Programme

A global community investment initiative

in partnership with

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN™



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NCDs and Adolescents

The Young Health Programme

This document is a product of the Young Health Programme, AstraZeneca's global community investment programme.

YHP aims to positively impact the health of adolescents in marginalised communities worldwide through research and evidence generation, advocacy and on-the-ground programmes which are focused on Non-Communicable Disease (NCD) prevention.

The Programme is a partnership between AstraZeneca, Johns Hopkins Bloomberg School of Public Health and Plan International.

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Authorship

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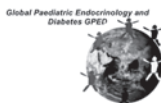
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All changes and updates to this publication were made by AstraZeneca and not by the original authors. The changes and updates are marked *.


Our co-sponsors



Behaviours established during adolescence have lifelong consequences for NCDs: A focus on adolescents in national programmes is essential for preventing NCDs

In 2008, 36 million people died from NCDs. NCD-related deaths are increasing, especially in low and middle-income countries ⁽¹⁾ and over half are associated with behaviours that begin or are reinforced during adolescence, including tobacco and alcohol use, poor eating habits, and lack of exercise ⁽²⁾. Global trends indicate that these NCD-related behaviours are on the rise among young people, and that they establish patterns of behaviour that persist throughout life and are often hard to change. In 2011, the World Health Assembly endorsed a resolution calling upon member states to address the needs of youth in the context of NCDs ⁽³⁾. Evidence points to adolescence as a crucial period in the development of adult NCDs:

- **Diabetes:** More than 25% of obese adolescents have signs of diabetes by age 15 ^{(4)*}.
- **Diabetes, stroke and cancer:** Nearly three out of four obese adolescents remain obese as adults, increasing their risk of heart disease, type 2 diabetes, stroke and cancers ⁽⁵⁻⁸⁾.
- **Cancer:** Early unprotected sexual intercourse increases the risk of HPV and thus the risk of adult cervical cancer ⁽⁹⁾.
- **Cardiovascular disease:** Between 20 to 40% of adolescents are overweight ⁽¹⁰⁾. When they become adults, overweight adolescents are twice as likely to develop cardiovascular disease and have seven times greater risk of developing atherosclerosis ⁽¹¹⁾. They also face an increased risk for cancer, stroke, hypertension, and type 2 diabetes ⁽¹⁰⁾.
- **Chronic lung disease and cancer:** 90% of adult smokers begin before age 18 ⁽¹²⁾. Globally, between 80,000 and 100,000 young people start smoking every day ⁽¹³⁾ and one in four adolescents who smoke started using tobacco before the age of ten ⁽¹⁴⁾. Similarly, one out of two young people who start and continue to smoke will die of tobacco-related illness ^{(15)*}.
- **Alcohol dependence:** Adolescents who start to drink before they are 15 years old are five times more likely to abuse alcohol as adults than those who start drinking at age 19 or older ⁽¹⁶⁾. Worldwide, 5% of all deaths of young people between the ages of 15 and 29 are attributable to alcohol use ^{(15)*}.
- **Cardiovascular disease and diabetes:** Adolescent mothers are more likely to have low birth weight infants, which is associated with increased risk of adult coronary artery disease, hypertension, and diabetes ⁽¹⁷⁾.
- **Chronic Lung Disease:** Two million children under five die annually from pneumonia caused from indoor open stoves ⁽¹⁸⁾ and exposed young people have two to three times the risk of asthma and lower respiratory conditions ⁽¹⁹⁾.



Addressing Adolescent NCDs and Predisposing Behaviours

Interventions aimed at reducing the burden of NCDs must include addressing risk factors during adolescence. There are many examples of effective policies and programmes from around the world:

YHP Romania ^{(31)*}:

Tackling physical inactivity among adolescents in Romania:

YHP Romania is working in partnership with the Ministry of Education and local NGOs to educate young people regarding healthy life-style habits and promote physical activity.

By the end of May 2014, more than 50,000 teenagers and 675 teachers from 286 high schools in over 100 communities have been directly engaged in the Programme. A survey conducted among participants, reported a 25% increase in the number of students who practised sport for four to eight hours a week, and 87% of the total survey participants correctly identified the most frequent cardiovascular diseases and their causes and consequences.*

(31) YHP Romania. Available at: <http://www.younghealthprogrammeyhp.com/country-programmes/romania>, Accessed 2 July 2014.



YHP in India ^{(30)*}:

Preventing Smoking among Indian Youth:

In India, nearly 20% of young people report using tobacco. YHP India has established 15 health information centres (HICs) across five resettlement areas of New Delhi to bring young people together to learn, discuss and take action on key adolescent health issues. Young people expressing an interest in quitting tobacco use are referred onto health facilities to receive professional counselling. By 2013, the Programme had reached 89,493 young people through information/education/communication materials, community meetings, mass awareness and HIC activities.*

(30) YHP India. Available at: <http://www.younghealthprogrammehp.com/country-programmes/india>, Accessed 2 July 2014.

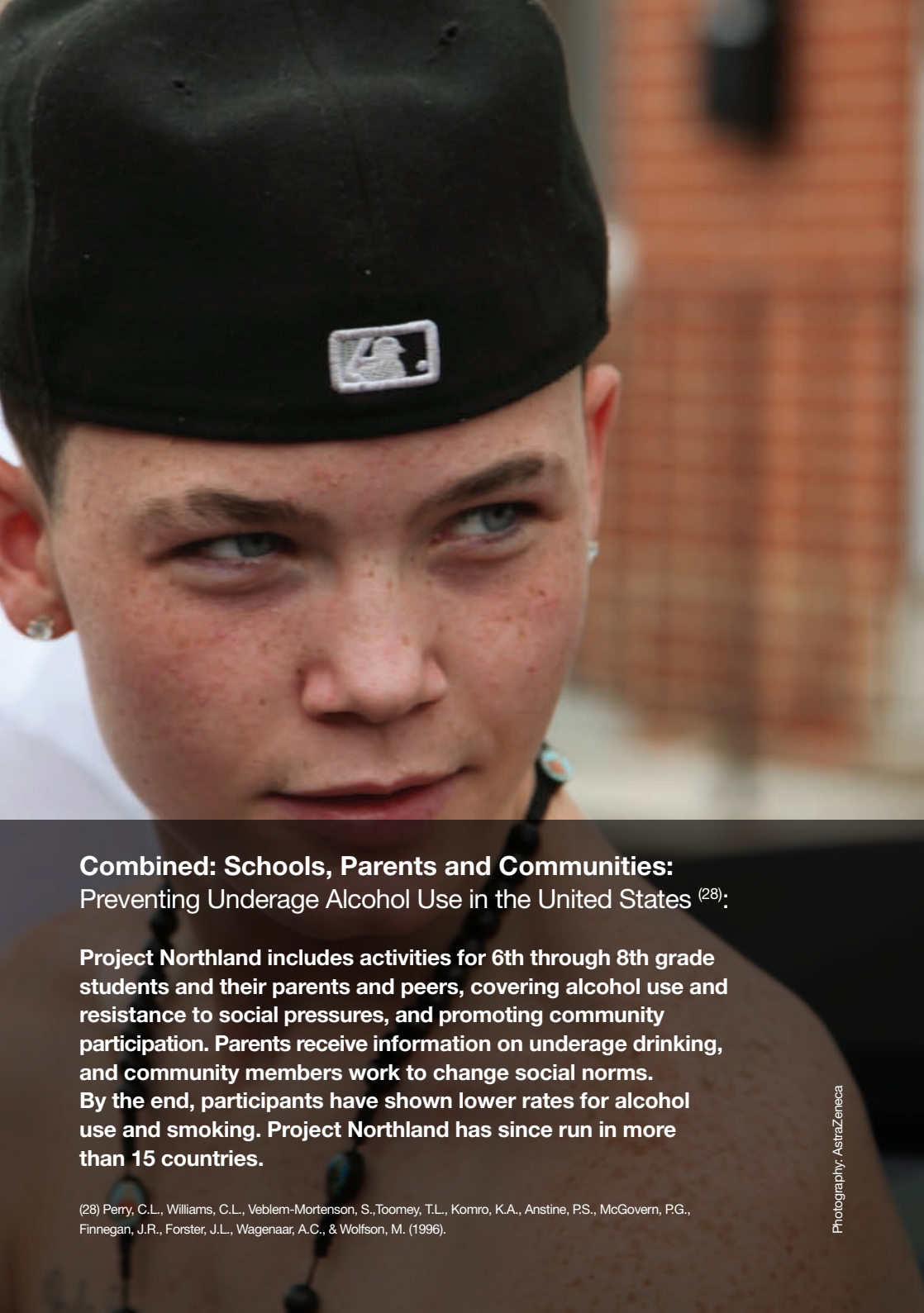
NCDs during adolescence

Adolescents are not immune to NCDs. Rather, the prevalence of cardiovascular disease, hypertension, diabetes and chronic respiratory conditions is substantial and increasing globally:

- Hypertension: The prevalence of hypertension among adolescents is 4.5% ⁽²⁰⁾.
- Diabetes: By the age of 15 more than 25% of obese adolescents have early signs of diabetes ⁽⁴⁾.
- Cardiovascular disease: Among obese youth, 70% have at least one risk factor for cardiovascular disease by the age of 20 ⁽²¹⁾.
- Chronic lung disease: Approximately one in ten young people have asthma ⁽²²⁾.
- Cancer: In Europe, for young people under 15 years, leukaemia is the most common malignancy with an incidence of 47 per million ⁽²³⁾.

Adolescents also suffer from chronic NCDs that have been mostly neglected by the international community. Diagnosing and treating NCDs and other chronic conditions during adolescence need to be incorporated into national programmes:

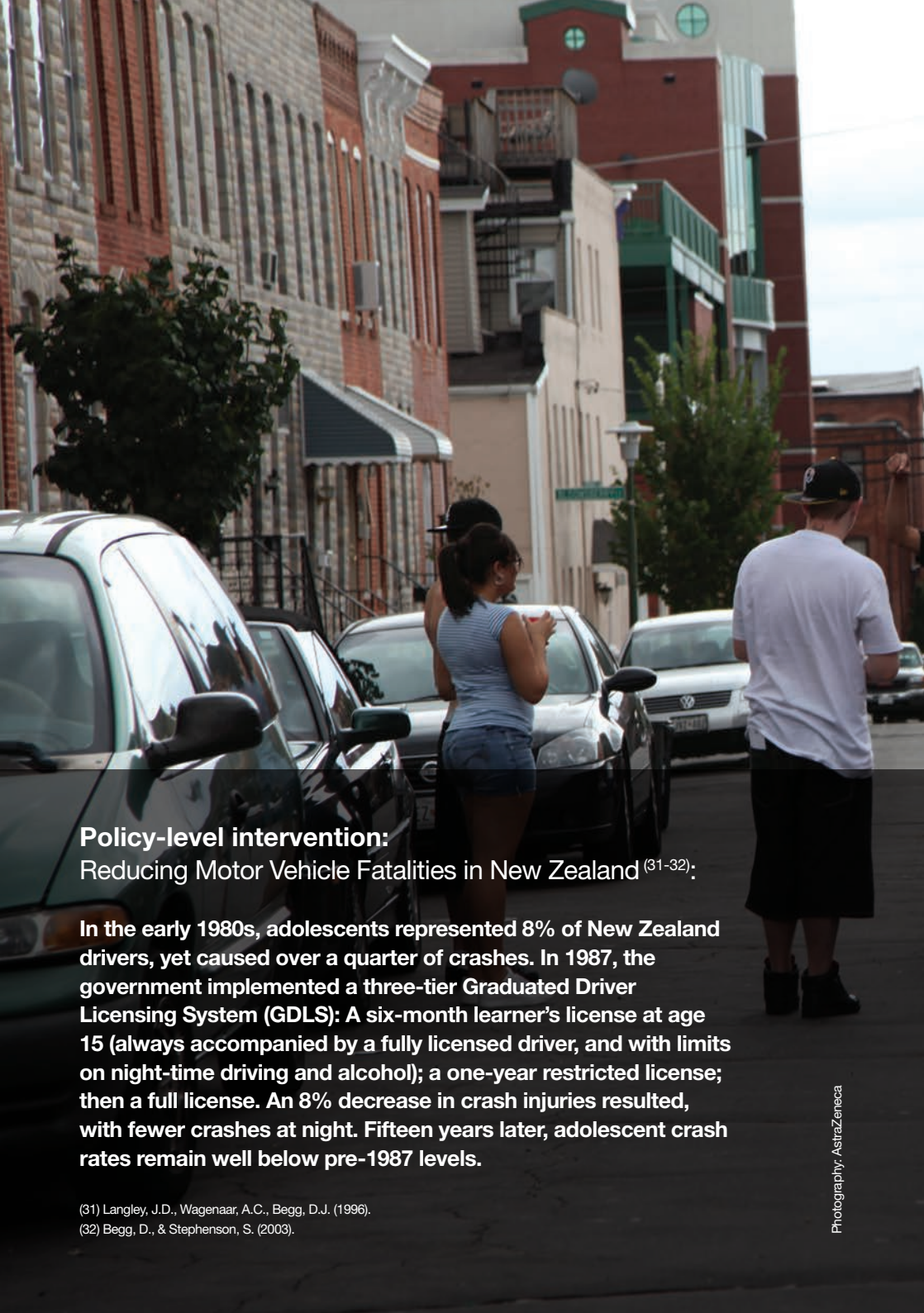
- **Mental health disorders:** By the age of 20, one in four young people will suffer from at least one mental health disorder. Three-fourths of all mental health diseases start before the age of 24 ⁽²⁴⁾.
- **Intentional and unintentional injuries:** Homicide, suicide and motor vehicle injuries account for 75% of all adolescent deaths in high income countries. So too, injuries from interpersonal violence and motor vehicle accidents are the major cause of disability among adolescents and youth, accounting for the greatest loss of Disability Adjusted Life Years (DALYs) ⁽²⁵⁾.
- **Violence:** Over 500 young people die every day due to interpersonal violence ⁽²⁶⁾.
- **Chronic anaemia:** Globally, one in four school age children aged between 5-15 years suffers from anaemia ⁽²⁷⁾.



**Combined: Schools, Parents and Communities:
Preventing Underage Alcohol Use in the United States ⁽²⁸⁾:**

Project Northland includes activities for 6th through 8th grade students and their parents and peers, covering alcohol use and resistance to social pressures, and promoting community participation. Parents receive information on underage drinking, and community members work to change social norms. By the end, participants have shown lower rates for alcohol use and smoking. Project Northland has since run in more than 15 countries.

(28) Perry, C.L., Williams, C.L., Veblen-Mortenson, S., Toomey, T.L., Komro, K.A., Anstine, P.S., McGovern, P.G., Finnegan, J.R., Forster, J.L., Wagenaar, A.C., & Wolfson, M. (1996).

A street scene in an urban area with brick buildings, parked cars, and people walking. The scene is captured from a low angle, looking down the street. On the left, there are several cars parked along the curb. In the center, a woman in a light blue striped shirt and denim shorts is walking away from the camera. To her right, a man in a white t-shirt and black shorts is walking towards the camera. The background features multi-story brick buildings with fire escapes and a street sign. The sky is overcast.

Policy-level intervention:

Reducing Motor Vehicle Fatalities in New Zealand⁽³¹⁻³²⁾:

In the early 1980s, adolescents represented 8% of New Zealand drivers, yet caused over a quarter of crashes. In 1987, the government implemented a three-tier Graduated Driver Licensing System (GDLS): A six-month learner's license at age 15 (always accompanied by a fully licensed driver, and with limits on night-time driving and alcohol); a one-year restricted license; then a full license. An 8% decrease in crash injuries resulted, with fewer crashes at night. Fifteen years later, adolescent crash rates remain well below pre-1987 levels.

(31) Langley, J.D., Wagenaar, A.C., Begg, D.J. (1996).

(32) Begg, D., & Stephenson, S. (2003).

1

**WHO Recommendations:
Preventing and responding
to NCDs must integrate a
focus on adolescents**

Policies and Legislation

Policies and legislation to protect adolescents from harmful substances such as tobacco, alcohol and foods containing high levels of saturated fats, trans-fats, sugar and salt, are the cornerstones of national programmes to respect and fulfil adolescents' rights and prevent behaviours that increase the risk of NCDs. Policies must target product design, advertising, marketing, sponsorship and promotion of harmful substances. Increasing taxes on unsafe products such as tobacco is another way to decrease demand, especially for adolescents who are particularly sensitive to price increases. Policies and legislation can limit young people's access to, and use of such products by creating and enforcing a minimum age of purchase, for example, on tobacco and alcohol and by mandating public places, schools and other places where adolescents congregate be 100% smoke and alcohol-free.

2

Schools

Schools and other educational establishments provide important opportunities to prevent the behaviours that underlie NCDs, and can contribute to the prevention and referral of mental illness and violence. They are well positioned to provide young people and their families with information and the life-skills that are necessary to use this knowledge to promote health, and to limit adolescents' access to tobacco and to harmful foods and beverages. They can create a health promoting culture by increasing access to healthy foods, teaching healthy choices and ensuring daily vigorous physical activity.

3

Health services

Health services also have a role to play when clinicians ask youth about tobacco and alcohol use, sexual behaviours and diet and physical activity as part of routine visits. Counselling and information can help young people avoid health risks. So too, clinicians are well positioned to identify mental health problems as well as behaviours that put the young person at risk for injury, providing early diagnosis and prompt and adequate access to treatment.

4

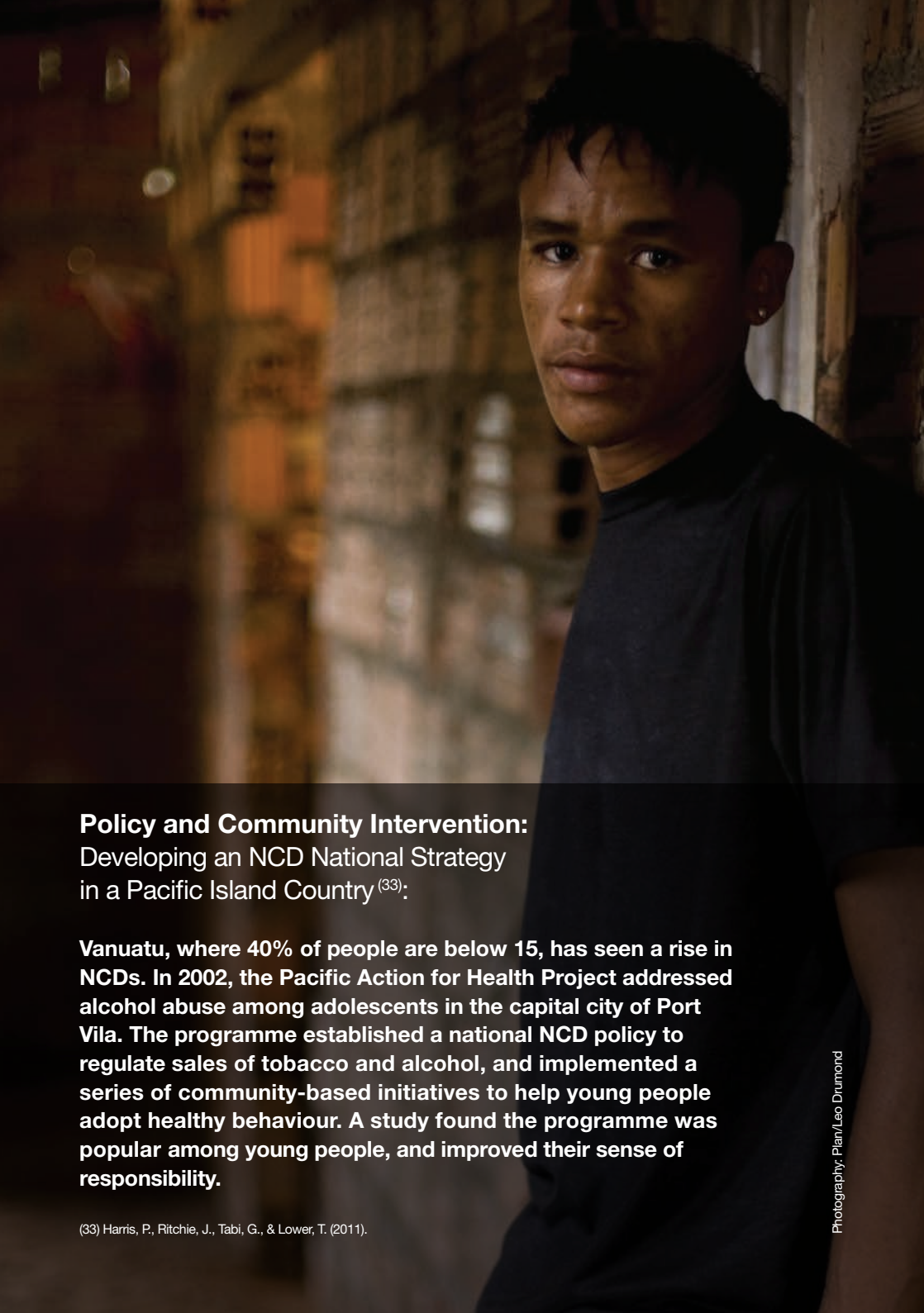
Families and communities

Families and communities play a key role in preventing and responding to NCD-risk behaviours during adolescence. Parental monitoring and expectations have substantial influence on adolescent behaviours. There is an on-going need to increase parent awareness about adolescent psychosocial development and to expand opportunities for young people to be engaged with their community, thereby improving mental health and reducing health compromising behaviours.

5

Information technology and the media

Young people are connected to media and new information technologies capable of reaching populations in ways never before possible. Those who work with youth need to harness these resources for health promotion and health monitoring. They are tools to reach the most disengaged as well as all other youth.



Policy and Community Intervention:
Developing an NCD National Strategy
in a Pacific Island Country⁽³³⁾:

Vanuatu, where 40% of people are below 15, has seen a rise in NCDs. In 2002, the Pacific Action for Health Project addressed alcohol abuse among adolescents in the capital city of Port Vila. The programme established a national NCD policy to regulate sales of tobacco and alcohol, and implemented a series of community-based initiatives to help young people adopt healthy behaviour. A study found the programme was popular among young people, and improved their sense of responsibility.

(33) Harris, P., Ritchie, J., Tabi, G., & Lower, T. (2011).

NCDs and Adolescents: A matter of rights

The Universal Declaration of Human Rights⁽³⁴⁾ emphasises that laws and regulations should help all people, including adolescents, enjoy the highest attainable standard of health. Similarly, the United Nations Convention on the Rights of the Child⁽³⁵⁾, which defines “child” as up to the age of 18 years, is very clear about the rights of adolescents to information, services, a safe and supportive environment, free from exploitation and abuse, and to have opportunities to participate in decisions that affect their lives⁽³⁶⁾. A human rights context emphasises that governments have an obligation to implement policies that respect, protect and fulfil adolescents’ rights to health and development. Thus, attending to NCDs among adolescents is an issue of rights as well as health.

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Glossary

Adolescents: 10-19 year olds

Youth: 15-24 year olds

Young People: 10-24 year olds

Non-Communicable Diseases in Adolescence: A non-communicable disease is a disease that is not infectious

HPV: Human Papillomavirus





Photography: Plan/Connely La Mar