

# The AstraZeneca Young Health Programme

## What science can do: NCD Prevention in Youth



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## Introduction

**At AstraZeneca, science is at the heart of everything we do. We are driven by our purpose to deliver life changing medicines and use our values to guide good decision-making for the long term.**

We recognise there is an interconnection between business growth and the needs of society. Thus we have identified [Access to Healthcare](#) as a priority area, through innovative programming and initiatives. One of the largest global health issues on the access agenda today is the increasing burden of non-communicable diseases (NCDs). One way we are addressing this challenge is through investment in disease prevention with a specific focus on youth. We do this through the AstraZeneca [Young Health Programme](#).

**This paper outlines why we believe that when it comes to NCDs, an ounce of prevention is worth a pound of cure.**



# The Prevention Story

**NCDs: an invisible epidemic**

**Tobacco accounts for around 7.2 million deaths every year**

**More than half of the 3.3 million annual deaths attributable to alcohol use are from NCDs**

**About 1.6 million deaths annually can be attributed to insufficient physical activity**

**Today, more people die or become ill from diseases that could often have been prevented. The World Health Organization calls this trend an “invisible epidemic.” Should this trend continue, the economic toll on health systems is predicted to amount to trillions of dollars. This doesn’t include the emotional toll on individuals, families, communities and nations. We need to think critically about a response. We need to think about prevention.**

This “invisible epidemic” is non-communicable diseases (NCDs). The four main types of NCDs are cardiovascular diseases (such as heart attacks and stroke), cancers, respiratory diseases (such as chronic obstructed pulmonary disease and asthma) and diabetes [WHO 2015a]. These diseases are not passed from person to person and tend to be of long duration and slow progression.

Tobacco use, physical inactivity, unhealthy diet and the harmful use of alcohol increase the risk of contracting NCDs. Tobacco accounts for around 7.2 million deaths every year (including from the effects of exposure to second-hand smoke), and this is projected to increase markedly. More than half of the 3.3 million annual deaths attributable to alcohol use are from NCDs, including cancer; and about 1.6 million deaths annually can be attributed to insufficient physical activity [WHO 2015a].

These diseases are associated with wider societal developments such as rapid unplanned urbanisation and the globalisation of unhealthy lifestyles. Some of these behaviours may be acquired when relatively young.

We are committed to increasing and applying our understanding of what science can do to help to minimise the global burden of such diseases; and through our launch of the Young Health Programme in 2010 we have aimed specifically to address how they can be countered in youth and adolescence.

**The AstraZeneca Young Health Programme (YHP) is a disease prevention programme that works in partnership with other expert organisations to put theory into practice in tackling NCD risk factors.**

**The YHP takes a three-pronged approach:**

### Programmes



Delivering programmes which aim to reduce risk behaviours amongst young people

### Research



Funding research where there are gaps in existing knowledge

### Advocacy



Advocating for the prioritisation of adolescence in health policies and service provision

# The Impact of NCDs

**In 2012 68% of the world's deaths were caused by NCDs**

## **Mortality**

In 2012 68% of the world's deaths were caused by NCDs. For people under the age of 70, more than half of all deaths (52%) were caused by NCDs, compared to only about a third (34%) by communicable, maternal, perinatal and nutritional conditions – with injuries making up the balance [WHO 2014a].

## **Morbidity**

NCDs have a considerable impact on quality of life, as measured in Disability Adjusted Life Years (DALYs). One DALY can be thought of as one lost year of “healthy” life. The sum of these DALYs across the population, or the burden of disease, can be thought of as a measurement of the gap between the current health status and an ideal health situation where the entire population lives to an advanced age, free of disease and disability [WHO, 2016].

## **Economy**

Each 10 percent increase in the working-age mortality rates of chronic non-communicable disease is calculated to reduce economic growth rates by close to a half percent [Stuckler, 2008]. NCDs typically have their onset during a person's working years, when they are most able to contribute economically.

## **Poverty**

The rapid rise in NCDs is predicted to impede poverty reduction initiatives in low-income countries, particularly by increasing household costs associated with health care. Vulnerable and socially disadvantaged people get sicker and die sooner than people in higher social positions, especially because they are at greater risk of being exposed to harmful products, such as tobacco or unhealthy food, and have limited access to health services. [WHO, 2015a] Each year, millions are forced into poverty as a result of the need to seek treatment or because they cannot work for health reasons.

### **The World Health Organization (WHO) Summary**

The World Economic Forum report on the Global Economic Burden of NCDs [WEF, 2011] delivered 5 key messages:

- 1** NCDs already pose a considerable burden with macroeconomic simulations that suggest a cumulative output loss of more than US\$ 47 trillion by 2030.
- 2** The burden of disease is shifting to low, and low to middle, income countries as they grow and become more developed.
- 3** The biggest contributors to the burden are mental health conditions and cardiovascular disease.
- 4** NCDs are more worrying for global business leaders than communicable diseases who expect at least 1 NCD will impact their bottom line over the next five years.
- 5** There is opportunity to change and slow the growth of NCDs, through implementation of ‘best buy’ policy approaches, and by thinking about prevention and behaviour change with specific focus on children and youth.

## Cultural and Gender Influences

**Males account for over 80% of all smokers**

**Men are more likely to be drinkers than women**

**Women are less active than men**

**84% of girls and 78% of boys do not meet the minimum recommendations for physical activity**

**Globally, 39% of adults aged 18+ are overweight**



**NCDs are sometimes referred to as ‘lifestyle’ diseases and the underpinning risk behaviours are heavily culturally influenced, both between genders and between national and local cultures. For example:**

### **Tobacco use**

Globally, in 2012, the prevalence of tobacco smoking was far higher for males aged over 15 (36.1%) than for women (6.8%), with males accounting for over 80% of all smokers. Egypt had an adult female cigarette smoking prevalence of 0.3% in 2015, but an adult male prevalence of 49.9%. Even for the, generally heavier smoking, adult male populations there were wide variations from 8.9% in Ethiopia to 76.2% in Indonesia [WHO-GHO 2015].

### **Alcohol abuse**

Men are consistently more likely to be current drinkers than women, and to drink more [Wilsnack, 2009]. In 2010 22.9% of adults in Europe indulged in heavy episodic drinking, compared to just 1.6% of adults in the South East Asia region. Overall 61.7% of the world population aged 15 years or older had not drunk alcohol in the past 12 months [WHO, 2015].

### **Unhealthy diet**

The availability of relatively cheap and widely available high calorie and high fat foods, and high calorie drinks, is not restricted to developed countries. Most countries that still have a substantial burden of undernutrition also have a substantial or emerging burden of overnutrition and its related NCDs in parts of the population. [Swinburn, 2011]. In Pakistan for example 4.8% of children were overweight, and 31.6% underweight, in 2012 [WHO-GHO, 2015]

### **Lack of exercise**

In all WHO regions and across all country income groups women are less active than men [WHO 2016a]. In some regions this is a result of religious or socially conservative concerns about female modesty. Whilst globally 27% of women and 20% of men are classified as insufficiently physically active there are considerable differences between, and within, countries. Malaysia has 52.3% of adults insufficiently active, whilst its neighbour, Thailand, has a rate of 14.8%. There can also be considerable variations between sexes – notably in the Caribbean where women in some countries tend to be significantly less active than the men, for example the Bahamas (56.3% for women 29.6% for men) or Saint Lucia (54.5% vs 27.9%) [WHO-GHO, 2015a]. Physical inactivity is alarmingly common among adolescents, with 84% of girls and 78% of boys not meeting minimum recommendations for physical activity for this age [WHO 2016a].

### **Obesity**

The combined effect of lack of exercise (whether individually chosen or culturally driven) and unhealthy diet has been an increase in obesity. In 2014, globally, 39% of adults aged 18 years and over were overweight, and 13% were obese. This represented 15% of women and 11% of men. This situation can be deeply influenced by cultural norms and acceptability. In Tonga an ‘obese’ female body size (Body Mass Index 30+) can be seen as positive, and 49% of women are estimated to be obese; in Japanese or South Korean culture it is generally not seen as positive and obesity is rare (2.9% and 4.9% respectively). [WHO, 2014a].

### **Differences between the sexes**

Some effects of these behaviours differ markedly between sexes. For example, men are more than four times as likely to die from smoking-related causes [WHO, 2003]; for women obesity carries significant risks for mother and foetus, which increases with the degree of obesity, [Sebire, 2001]

## NCDs in Low and Middle Income Countries

80% of 'premature' NCD deaths occur in low to middle-income countries

**Deaths from communicable diseases, maternal and perinatal conditions, and nutritional deficiencies were estimated to be 47% of the total in low income countries and just 6% in high income countries in 2008. [WHO 2014] For countries with limited resources, treating communicable and infectious diseases will often take priority over NCD prevention.**

The challenges to achieving a positive health outcome are also greater in low-income countries. In these countries, healthcare systems are evolving and access to services and medicines can vary widely depending on a person's location and/or socio-economic status. Similarly, access to school, and education, their conditions of work and leisure, their homes, communities, towns and cities contribute to creating more precarious situations where illness can push families into poverty within a month and disrupt lives significantly. [CSDH, 2008]

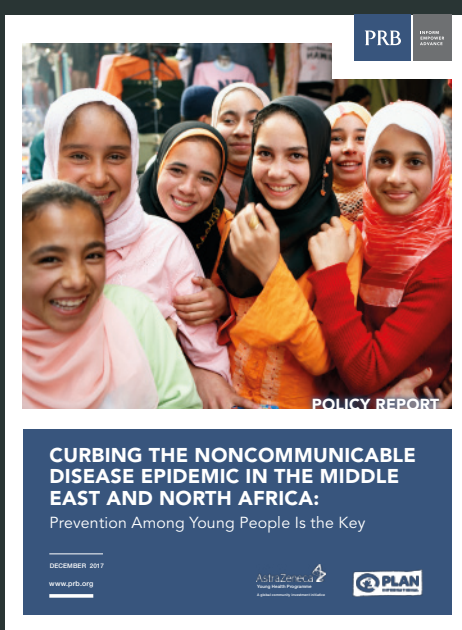
### The effect of rapid urbanisation

Some of these factors have been linked to rapid urbanisation. A study by Yusuf [2001] reported that, over two decades, India showed a nine-fold increase of coronary heart disease (CHD) in urban centres, compared with a two-fold increase in CHD rates among rural populations. Similarly the prevalence of diabetes in rural India was 2% to 3% but approximately 8% in urban areas.

### Effect of healthcare expenditure on family budgets

Payment for treatment and care is potentially ruinous for lower income groups in some countries. The proportions of households having to pay 40% or more of their disposable income in health care costs in a given year rise to above 4% for the worst affected countries, and the overall numbers of people are very considerable, with the costs estimated to push 100 million people over the poverty line each year [Xu, 2007].

The majority of the world's poor are women, who are less able to allocate funds for healthcare. Even if a household has money available, these funds often are spent at the discretion of the husband – for example 70% of decisions about a wife's health care are made by the husband in Malawi and 48% in Bangladesh [PRB, 2011]



**YHP Research**

*With funding from the YHP, the Population Reference Bureau (PRB) has produced a package of publications which describe the scale and scope of NCDs and their risk factors, across African and Asian countries, as well as examples of promising policy and programmatic interventions for young people. The data sheets include the latest available data on the four risk factors among young people in those countries. [PRB, 2015, 2016, 2017]*

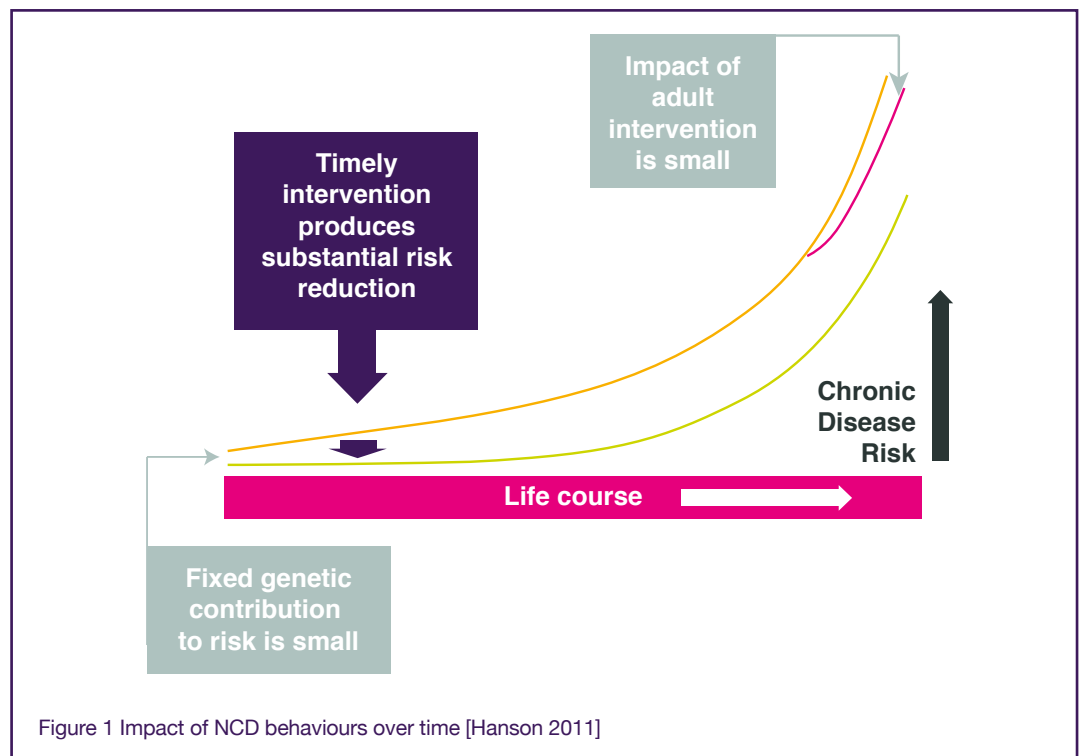
# The Central Role of Adolescence in NCD Prevention

**70% of premature deaths in adults are largely caused by behaviours started in adolescence**

**The negative ‘risky’ lifestyle choices associated with smoking, drinking alcohol at elevated levels, overeating and lack of exercise can be taken up in adolescence and endure through later life: 88% of adults in the USA who smoke daily report that they started smoking by the age of 18. [USSG, 2012] It has been estimated that 70% of premature deaths in adults are largely caused by behaviours started in adolescence [Sawyer, 2012].**

### The impact of early interventions

Effective intervention at this stage to avoid such risky choices, or to prevent them from becoming an established part of their lifestyle, is likely to have a more significant benefit than interventions later in life. Inherited fixed genetic variation makes only a small contribution to later risk [Hanson, 2011].



This is, however, a generalised picture which masks the considerable complexity of assessing the effect of interventions in youth, a time of considerable physical and psychosocial change particularly in adolescence.

### YHP Research

*The YHP has provided funding to Imperial College London to analyse past and possible future trends in selected risk factors among adolescents; and model their impacts on NCD risk and mortality. This will provide detailed information on how time and birth cohort affect NCD risk factors, and the expected health impacts of current trends and alternative scenarios.*

*Core funding for the database on which this analysis is based was provided by the Wellcome Trust. [NCD-RisC, 2017]*

**1.6 billion young people aged 12-24 years (2012)**

**Changing behaviours of adolescents will have major implications for future health**



### YHP Advocacy

*The YHP brought together AAP, NCD Child, IAAH, JHSPH, Plan and the International Pediatric Association to develop and publish 'Non-Communicable Diseases and Adolescents, An Opportunity for Action' - making the case that a focus on adolescents is essential to preventing NCDs.*

[AstraZeneca, 2015]

### The number of adolescents

In 2012 there were 1.6 billion young people aged 12–24 years. They comprise more than a quarter of the world's population and a much larger proportion of the population in many low and middle-income countries (LMICs). In Africa young people aged 12-24 comprised 18% of the world's total population of that age group; by 2040 this has been estimated to be likely to rise to 28%. In Africa they comprise 43% of the working age population, almost double the rate in developed countries (23%)[UNDESA, 2012]

Understanding and changing the behaviour of this group, especially in LMICs, will have major implications on their future health and the resources required to control later health conditions. It will also shape the physical health, and the cultural and social 'scaffolding' of future generations.

### Clinton Global Initiative commitment 2011

AstraZeneca, in partnership with Plan International and the Johns Hopkins Bloomberg School of Public Health, made a public commitment through the Clinton Global Initiative to combat NCDs in young people by:

- 1** Advocating for policies and programmes that address the connection between youth and NCDs over the next decade;
- 2** Developing on the ground community programmes that address locally-pertinent health issues and risk factors for NCDs; and
- 3** Improving scientific research on the health needs of the most disadvantaged youth to address behaviors that have a direct impact on the later development of NCDs

[CGI, 2011]

**To achieve such a positive change requires an understanding of the neurological, environmental and social context of adolescent development.**



## Experimentation, Risk and Adolescence

Adolescence is associated with substantial changes to the structure of the brain

It is a period of 'storm and stress'

### Risk taking and experimentation in adolescence is not a new phenomenon, it's a natural part of growth and development.

#### Changes to the structure of the adolescent brain

Adolescence is associated with substantial changes to the structure of the brain. Synapses are developed and then 'pruned' and myelin sheaths form around nerves to provide more specialised pathways that speed nerve impulses between much-used areas of the brain, whilst reducing little used areas and pathways.

There are also significant alterations to the subcortical regions, especially in males, notably the basal ganglia. Alongside these regional changes are major adaptations to what might be called the 'circuitry' of the brain. The limbic system, which governs reward processing, appetite, and pleasure seeking, develops earlier in adolescence than the prefrontal cortex. The prefrontal cortex is believed to play an important role in the maturation of higher cognitive abilities, such as decision-making and cognitive control and is one of the last brain regions to develop. [Casey, 2008]



#### YHP Sweden

*The YHP sponsored a series of peer-reviewed articles on changes in the adolescent brain and the implications for youth behaviour and NCDs for a supplement to the Journal of Adolescent Health on Emerging Issues in Adolescent Health in 2013. [JAH, 2013]*

*In Sweden the YHP funded the creation of a video series, primarily for teenagers and their parents and teachers, that explained the development of the teenage brain and its influence on behaviour and making healthy choices. 10,000 copies of the series were distributed in DVD format and over a million people have viewed it either through this medium or online.*

#### Logical reasoning and impulse control

Logical reasoning achieves levels similar to that of adults at about the age of 16, whilst psychosocial capacities that improve decision making and moderate risk-taking—such as impulse control, emotion regulation, delay of gratification, and resistance to peer influence—continue to mature well into young adulthood. [Steinberg, 2008] These changes can manifest in a desire for more independence; rapid and profound changes in mood; and increased risk-taking. These, with wider environmental factors such as the greater availability of tobacco, drugs and alcohol, can lead to conflict with parents and other authority figures. As a result some experts have come to regard adolescence as a period of 'storm and stress', although this varies greatly between individuals. [Arnett, 1999]

#### Risk-taking behaviours

Overall experimental and risk-taking behaviours build towards a peak in late teens and early twenties in 'Western' countries; with crime peaking at age 18, substance use peaking at about age 20, and the contraction of sexually transmitted diseases in the early 20's - but there are significant cultural differences and variations between individuals in how these behaviours are manifested, if at all. [ibid]

Many of the health-related behaviours that emerge during adolescence tend to cluster in certain individuals. For example, adolescents who use tobacco are more likely to drink alcohol, and to become injured. This effect is more pronounced when the onset of tobacco use or drinking or sexual behaviour occurs in early adolescence, rather than after age 15 or 16. [de Looze, 2011]

**Risk-taking behaviours build towards a peak in late teens and early twenties**

**Unsafe environments have an influence on the behaviours and choices of adolescents**

### Homelessness

Psychological disorders and substance abuse can contribute to, and be reinforced by, homelessness – with runaway teenagers becoming homeless adults displaying higher rates of criminal behaviour and psychological and physical ill health. [Simons 1991] Poverty, insecure or inconsistent housing situations and unsafe environments all have an influence on the behaviours and choices young people make.



### YHP Research

*In the UK the YHP funded primary research to investigate the health issues affecting homeless young people, identify barriers to accessing relevant health services, and provide insight into the development of appropriate health interventions.*

*The study found that young homeless people often do not consider health-related issues to be a problem or priority only seeking medical help when in extreme need as other issues, such as the need for housing and employment, are considered more pressing. This has economic implications and demonstrates to policy makers and commissioners the need to improve the access to health services of homeless young people.*

*The study was followed by the 'Making it Matter: Putting it into Practice' toolkit developed by DePaul in collaboration with clinicians, directors of public health, local authority representatives, NHS managers and policy makers. This practical guidance aimed to help Health and Wellbeing Boards, commissioners and service providers to address the complex health needs of young homeless people.*

### Extension of adolescence

This period of development and experimentation is also becoming increasingly extended. In a study of 186 'traditional societies' 63% of girls were married within two years of the onset of puberty, and 64% of boys within 4 years. [Schlegel, 1991, cited in Dahl 2004] By contrast the age of puberty has been declining in developed countries, whilst the age of assuming full adult responsibilities has risen – for example the median age at first marriage in the USA had reached 28.7 for men and 26.5 for women in 2011. [USCB, 2017b]



### YHP Netherlands

*The YHP funded a review by Radboud University in the Netherlands of existing knowledge, data and programmes related to the health of adolescents and youth in disadvantaged situations. This provided a firm base for health interventions for homeless young people and models for health intervention.*

## Environmental Factors

The attraction of behaviours such as smoking, drinking alcohol at elevated levels, overeating and lack of exercise is influenced by environmental factors.

**Much research has been undertaken on easier to reach adolescents through schools and traditional family units in developed countries. To date there are limited data available on those young people who don't necessarily go to school or live in a typical home environment, especially in less developed countries.**

The extent to which potentially hazardous environments in varied regions and sites impact young people's health and their ability to obtain advice and assistance is an area of increasing focus.



### YHP Research

*The YHP funded a research study undertaken by Johns Hopkins Bloomberg School of Public Health that focused on a very vulnerable segment of the adolescent population, young people who live in the poorest neighbourhoods of some of the world's largest cities.*

*The Well-Being of Adolescents in Vulnerable Environments (WAVE) study was run in five cities across the globe using innovative respondent-driven sampling to ensure that adolescents without stable homes or formal schooling were included.*

*The top health concerns for adolescent girls were sexual and reproductive health; for adolescent boys tobacco, drug and alcohol consumption predominated, associated with violence.*

*WAVE demonstrated that young people, both male and female, who grow up in vulnerable environments live with persistent fear, increased sense of vulnerability, less social capital and more environmental distress and that this increases the likelihood of:*

- chronic mental health disorders
- cigarette smoking and alcohol consumption
- precocious sexual behaviour with less protection against HIV, sexually transmitted infections (STIs) and pregnancy

*Adolescents who had the least amount of social support were also the least likely to know where and how to access help or services.*

*WAVE findings have been presented at global summits and congresses, including the World Health Summit 2012 in Berlin; American Public Health Association Meeting 2012; International Association of Adolescent Health World Congress 2013, and were used as the basis for a series of papers published in The Journal of Adolescent Health December 2014.*

[JAH, 2014]

**Cheap, easy-to-acquire alcohol and high calorie, high fat foods encourage excessive drinking and overeating**

**Rapid urbanisation can have an impact on physical activity**

#### Availability of alcohol and energy dense foods

The ready availability of relatively cheap, easy-to-acquire alcohol and high calorie and high fat foods have encouraged excessive drinking and overeating.

This is not always correlated to national prosperity. Whilst a moderately strong correlation has been identified between greater GDP per capita and consumption of 'unhealthy' products this link is far from universal. Prosperous countries such as South Korea, Finland, and Sweden have relatively low consumption of soft drinks whilst Mexico, with considerably lower rates of GDP/person, is a notable outlier with the average person consuming 300 litres of soft drinks a year. [Stuckler, 2012].

What is, however, clear is that whilst sales of 'unhealthy' foods and beverages appear to have plateaued in high-income countries, they remain on a steady and brisk growth trend in low and middle-income countries. [ibid]



#### YHP Romania

*The YHP in Romania is focused on encouraging young people to adopt healthy lifestyle habits and reduce the risks of cardiovascular events at an early age. Working with the Romanian Heart Foundation, the YHP has developed a national programme of educational materials validated by the Ministry of Education for use with students and teachers in schools across the country.*



#### Urbanisation and work patterns

Rapid urbanisation, and changing work patterns, away from more manual labour, have made physical activity more of a conscious choice rather than a requirement of everyday life. This choice is made more challenging in areas of lower socio-economic status (SES) – with for example higher levels of vehicular and human traffic, fewer open spaces and less attractive surroundings.

The result is less recreational physical activity - one Australian study for example showing that, whilst walking for transport was 33% higher in low SES areas compared to those in high SES areas, walking for recreation was 21% lower and participation in vigorous physical activity was 24% lower. Overall those living in low SES areas were 26% less likely to undertake sufficient activity compared with those living in high SES areas; and 50% less likely to undertake high levels of vigorous activity. [Giles-Corti, 2002].



#### YHP China

*In China the YHP is working to improve the ability of children to protect themselves from environmental harm caused by water and air pollution. The programme is targeting the children of migrant workers in 25 cities and 'left-behind' children in poverty-riven areas in rural China.*

## Access to Healthcare Facilities

**The desire for privacy and confidentiality affects adolescents' use of primary care services**

**Young peoples' often growing desire for privacy and confidentiality affects their use of primary care services, where they are available.**

### Youth-friendly facilities

Many of these facilities are not youth-friendly let alone youth-focused. Whilst 70-90% of young people access primary care at least once a year in developed countries it is mostly for respiratory and dermatological reasons. For other issues, especially those relating to mental well-being and sexual health, they tend to seek help from friends and family. [Tylee, 2007] Often, the adults around the adolescent decide whether or not health care needs to be sought, and if so when and from where.



### YHP India

*In parts of India adolescents often visit local unqualified doctors ('quacks') or try homemade remedies before attempting to access professional healthcare - especially as the majority of health service providers are not equipped to deliver adolescent-friendly services.*

*YHP India created Health Information Centres in five resettlement communities to serve as a forum for young people to learn, discuss and take action on key adolescent health issues. After feedback from users these were also equipped with health libraries and sports equipment.*

*With the support of members of the adolescent health team in the Ministry of Health and Family Welfare of the Government of Delhi, the YHP India Peer Educators devised a toolkit to assess the provision of adolescent friendly services.*

*YHP India was invited to share how its approach and materials could be scaled up with the Indian Government's Rashtriva Kishor Swasthya Karyakram (RKSK) programme, which is tackling poor nutrition, reproductive health, substance abuse and other behaviours that can negatively impact young people's life chances.*

*The YHP has supported NCD Child with the development of a series of regional workshops that provide an environment to create and support country-level teams consisting of clinicians, government officials, civil society organizations, and young leaders that collaboratively address the NCD agenda affecting children and young people.*

[NCD Child, 2016]



**Young people are more likely to access and accept advice and support from peers.**

One way to maximise the effectiveness of what contact there is between clinics and young people is to bring together a range of interventions at the same time. This may be particularly effective with young women around sexual and reproductive health. In Kenya cervical cancer screening has been integrated with family planning services, and work in Ethiopia, Ghana and elsewhere has demonstrated that identification of those in need of NCD prevention and treatment services could be integrated with family planning. Work is continuing to identify what is feasible, efficient, affordable and effective. [WHO 2016b].



**YHP Research**

*The YHP funded the development, and publication in 2017, of a report by the Population Reference Bureau 'Integrating Health Services for Young People' that examined challenges facing improving adolescent access to healthcare, and produced recommendations for action.*

[PRB, 2017]



**YHP Canada**

*The YHP Canada supported the Young Canadians' Roundtable on Health in researching and publishing a report by the University of Toronto 'Youth Health Rights in Canada: Discussion Paper' which examined the actual and perceived barriers to accessing appropriate youth-centred healthcare in the country.*  
[YCRH, 2017]

**Regardless of these efforts, it is likely that many young people will more readily access and accept advice and support from peers.**

## Peer Education

An effective delivery mechanism for adolescents

Several advantages have been proposed for approaching health education and behaviour change through peers: people of similar age, education or class.



Peer education has been claimed [Turner, 1999] to be:

1. More cost-effective than other methods
2. More credible as a source of information
3. Empowering for those involved
4. Based on an already established means of sharing information and advice
5. More effective as 'learners' identify with their peers
6. Effective at presenting peer educators as positive role models
7. Beneficial to those involved in providing it
8. More acceptable to beneficiaries
9. Able to access those who are hard to reach through conventional methods
10. Good at reinforcing learning through continuing contact

### YHP Australia

The YHP Australia developed an intervention rooted in a review and evaluation of scientific papers and grey literature conducted for NSW Health Board in Australia. The Sax Institute Rapid Review in 2010 found that initiatives were likely to be more successful if they adopted community-owned models of development and implementation. This led to the YHP Australia and delivery partner, The George Institute, developing an exemplary model to increase capacity and resilience among Aboriginal and Torres Strait Islander adolescents. [Sax 2010]

The perceived 'ownership' of the activity is central. If it is genuinely seen to be peer-to-peer then its likelihood of success is enhanced. This requires a full understanding of the community and their close involvement in programme development and delivery.

### YHP India

The 2,200 young people trained by YHP India's partner Plan as Peer Educators in the initial five Delhi resettlement communities, have shared key messages on adolescent health such as sexual reproductive health, lifestyle education and water and sanitation-related health infections with 199,387 young people and over 119,770 wider community members, in a range of ways from street plays to health fairs.



By mid 2017 a second phase of the YHP in a further five resettlement communities had trained 1,386 young people as Peer Educators and shared key health messages with 46,480 young people.

By mid 2017 a second phase of the YHP in a further five resettlement communities had trained 1,386 young people as Peer Educators and shared key health messages with 46,480 young people. [YHP India]

**For peer education to be successful it requires a full understanding of the community**

### YHP Brazil

*The YHP Brazil funded Plan's training of 527 young people as Peer Educators in the State of Maranhão. They in turn have reached over 93,427 young people and 631,178 people in the wider community with health messaging. This work is now continuing with communities in São Paolo.*



### YHP Kenya

*A slightly different model has been implemented by the YHP in Kenya, with a smaller number of salaried Peer Educators recruited from the Kibera settlement and trained in the provision of health education to young people in their community. To date 35 Peer Educators have reached over 22,253 adolescents.*

The benefits of peer education have proved difficult to quantify as, to enhance effectiveness; the interventions are often tailored to local circumstances and tend to be quite small scale. Robust evaluation is made more difficult by the variations in:

- Community level issues such as politics and funding
- Provider characteristics for example the level of skills available
- How adaptable the activity can be to local needs and circumstances
- Organisational capacity - staffing and leadership
- Training and support for the provider [Durlak, 2008]

### YHP Advocacy

*In 2015 the YHP was invited by Clinton Global Initiative NCD Action Network to present an overview of the programme and its strategies to integrate the prevention of NCD risk behaviours in adolescents and to promote sexual and reproductive health rights to those working in, or interested in, NCDs.*

*The YHP has supported numerous intervention programmes tailored to specific local adolescent health priorities and run in conjunction with NGO delivery partners across the world. Increasingly these programmes have addressed a range of risk behaviours as the risk behaviours of young people are intrinsically interconnected and are underpinned by wider socio-psychological concerns.*

*This approach enables sensitive subjects to be raised once confidence and trust have been built, not only by the young people, but also by parents and teachers.*

Crucially all such initiatives, and especially those in areas with high advertising penetration, vie for the attention of the audience against other very strong commercial and cultural messaging and influences that are likely still to be there once the activity has ceased.

*The YHP target of reaching 250,000 young people directly across at least 15 countries by the end of 2015 was exceeded, with 1.2 million young people reached (670,000 directly) through 18 country programmes across five continents.*

## Youth Advocacy

The enthusiasm and optimism of youth can be a powerful catalyst for change

Whilst education is important, rational discussion only plays a limited role in framing young people’s behaviours. There are strong arguments for involving youth voices in wider advocacy to change the wider debate, resources and influences that affect NCD-related behaviours.



The rationale for increasing the youth ‘voice’ in advocacy have been categorised [Millstein, 2011] as:

- 1 Young people are deeply and directly affected by the issues.
- 2 Decision-makers may be less cynical about their motives and less prone to reject their requests.
- 3 Engaging in advocacy can enhance self-esteem, self-efficacy, and feelings of empowerment.
- 4 Young people tend to possess enthusiasm and optimism that can be harnessed to enact changes in their school and community environments.
- 5 Efforts to reduce health disparities could benefit from emphasising youth advocacy as an additional tool, as those most affected tend to be the least empowered.
- 6 Youth naturally form groups, which can be convenient for training and can generate more powerful advocacy



### YHP Brazil

Since 2014, Peer Educators from the YHP Brazil have been consulted by the Health Secretariat Office in the State of Maranhão on the Plano de Trabalho e Avaliação – the state level guidance to municipal health service agencies. Recommendations from the young people were adopted by the Health Secretariat Office including addressing gaps identified in the current guidance including youth participation, gender, sexual and reproductive health, tobacco use, the harmful use of alcohol and other drugs, mental health and healthy eating. The young people are following up to ensure effective implementation of the guidance within these municipalities.

**The voice of youth is key in advocating change**



**YHP Advocacy**

*The YHP designed a scholarship package to enable 20 young people from around the world to attend the One Young World Summit in Bogota, Colombia. The young people who have been sponsored either work for, or are involved in, a non-governmental organisation, social enterprise, or community based organisation, or are already making an impact through advocacy or programme activities related to adolescent health (including the YHP itself). The scholars champion youth engagement in advocacy in their communities. [One Young World]*

**YHP India**

*Fifty Peer Educators from the YHP programme in India have been trained in leading participatory research into NCD risk behaviours. This is informing local health interventions and education messaging.*



## Future Directions

Improving the health  
of young people  
around the world

**The influences affecting behaviours in youth that become risk factors for non-communicable disease, then or in later life, are extremely complex and differ considerably between individuals, and the cultures and environments within which they live. However, it seems clear that effective interventions in early life can have profound benefits as young people grow into adulthood.**

The AstraZeneca Young Health Programme has been working to highlight some of the issues; to bring practitioners from the many different disciplines involved together to share their insights; and to communicate to a wider audience. There is much more still to do, with success depending on continued collaboration between all key stakeholders and engaging and including young people themselves. We want to continue this role to help evidence further what science can do to increase understanding of how the uptake of negative behaviours in adolescence can be mitigated and support our goal towards Sustainable Health..

**For more information about the AstraZeneca Young Health Programme visit:**  
[www.younghealthprogrammeyhp.com/home](http://www.younghealthprogrammeyhp.com/home)  
[www.astrazeneca.com/sustainability](http://www.astrazeneca.com/sustainability)





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