Policy Brief

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NONCOMMUNICABLE DISEASES AND YOUTH: A CRITICAL WINDOW OF OPPORTUNITY FOR LATIN AMERICA AND THE CARIBBEAN

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Deaths from NCDs disrupt family life and lower economic productivity and development.

81%

The percentage of deaths in Latin America and the Caribbean by 2030 attributable to four noncommunicable diseases.

Unhealthy behaviors among young people will have a direct effect on their risk of developing NCDs later in life.

Noncommunicable diseases (NCDs) are a global problem, and the burden they place on individuals and health systems is high and increasing.[1] While infectious diseases such as HIV/AIDS, malaria, and tuberculosis capture much of the world's attention and resources, the four major NCDs—cardiovascular disease, most cancers, diabetes, and chronic respiratory diseases—will account for approximately 81 percent of deaths in Latin America and the Caribbean (LAC) by 2030 and 89 percent of all deaths in high-income countries.[2] Over 200 million people are living with NCDs in LAC.[3] While death and disability from NCDs continues to increase, this trend could be slowed by paying more attention to four key risk behaviors.

NCDs affect large numbers of people under the age of 60 and exact a huge toll on health, the economy, and human potential. The prevalence of NCDs is related to unhealthy behaviors and practices typically initiated in adolescence. Given that one in four people in LAC is between the ages of 10 and 24, these unhealthy behaviors among young people will have a direct effect on their risk of developing NCDs later in life. Building a healthier future depends on effective interventions during this critical window of opportunity.

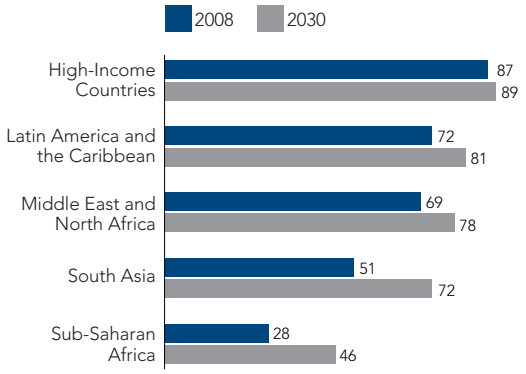
The four main NCDs are driven by four modifiable risk behaviors: tobacco use, excessive use of alcohol, unhealthy diet, and insufficient physical activity.[4] These behaviors can lead to overweight and obesity, high blood pressure, and high cholesterol—all directly related to NCDs. (The World Health Organization defines adults as overweight when their body mass index (BMI) is greater than or equal to 25 and obesity as a BMI greater than or equal to 30.)

NCDs in LAC

The LAC region is home to 29 low- and middle-income countries, and most are experiencing rapid increases in mortality from NCDs. As shown in Figure 1, more than 80 percent of deaths in the LAC region will be attributed to NCDs by 2030.

FIGURE 1

Percent of Total Deaths Attributed to NCDs by Region



Source: Irina A. Nikolic, Anderson E. Stanciole, and Mikhail Zaydman, "Chronic Emergency: Why NCDs Matter," World Bank Health, Nutrition and Population Discussion Paper (2011).

Compared to other developing regions, LAC has the highest percentage of deaths due to NCDs and trails closely behind the group of high-income countries. Within LAC, not only are NCDs on the rise, but currently, 29 percent of NCD deaths occur among people under age 60, compared to only 13 percent in high-income countries.[5] These deaths disrupt family life and lower economic productivity and development.

Almost half of the region's healthy, productive years are lost due to illness or disability arising from NCDs, although there is substantial variation within LAC sub-regions. A 2011 study predicted that the four main NCDs, together with mental illness (see Box 1, page 2), will cost low- and middle-income countries around the world US$21 trillion over the next two decades.[6] NCDs drain economic resources and affect the achievement of development goals including poverty reduction and social and economic development.[7] Countries still battling high rates of infectious diseases, as well as NCDs, face a "double burden of disease."

BOX 1

Mental Health

The World Health Organization did not include mental health in its recent report on NCDs. However, the effect of mental health on disability has been noted, along with the observation that mental health issues often get limited funding in national health systems.[1] Mental health problems, many of which emerge during adolescence, have a large influence on disability and figure into the analyses of disability-adjusted life years (DALYs), a measure of illness and death. For example, depression is the third leading cause of disability.[2] Mental illnesses do not have the same relationship to the four risk factors that are the drivers of the other NCDs, and are unlikely to be amenable to the same prevention interventions. Interventions to address depression, anxiety, schizophrenia, and other mental health issues are more likely to focus on treatment by the health sector rather than on primary prevention.

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Involving Youth as Partners

Young people in LAC account for 26 percent of the population—approximately 162 million people. Adolescents and youth are a tremendous resource that are overlooked in the fight against NCDs, yet they are a natural partner for preventing NCDs. The World Health Organization estimates that 70 percent of premature deaths in adults are the result of behaviors begun during adolescence and youth. Research indicates that behaviors associated with two of the key risk factors for NCDs—tobacco and alcohol use—are likely to start or become established during adolescence. Other risk factors related to poor diet and insufficient physical activity may begin during childhood, but adolescence is an opportunity to reinforce the benefits of positive behaviors through appropriate messages and programs. Experts estimate that the projected burden of NCDs could be cut in half or more by focusing on health promotion and disease prevention.[8] Gender also plays a role in regard to risk factors and needs to be addressed. For example, while tobacco use is generally higher for males, rates are rising for females in some settings.[9] Instilling healthy behaviors among youth today will be easier than changing well-entrenched negative behaviors later in life.

Targeting Risk Behaviors

NCD risk behaviors are also related to social determinants that contribute to poor health, such as rapid urbanization, persistent poverty and inequality, lower educational levels, and increased consumption of tobacco and fast foods. To successfully lay a foundation for better health and fewer NCDs, countries must target the following four significant and modifiable risk behaviors.

TOBACCO USE

Worldwide, tobacco use is a major public health problem that kills 6 million people annually.[10] Smoking cigarettes causes approximately 71 percent of all lung cancer deaths, 42 percent of chronic respiratory disease, and 10 percent of heart disease. When people begin to use tobacco at an early age, addictions are especially hard to overcome later in life. Studies from the United States and LAC attest to widespread tobacco use among girls and boys.

- In the United States, nine out of 10 regular smokers started using tobacco by age 18.[11]
- In Argentina, Chile, and Uruguay, more than 30 percent of school girls ages 13 to 15 smoke cigarettes. In Chile, 48 percent of males and 42 percent of females ages 15 to 24 smoke cigarettes.[12]

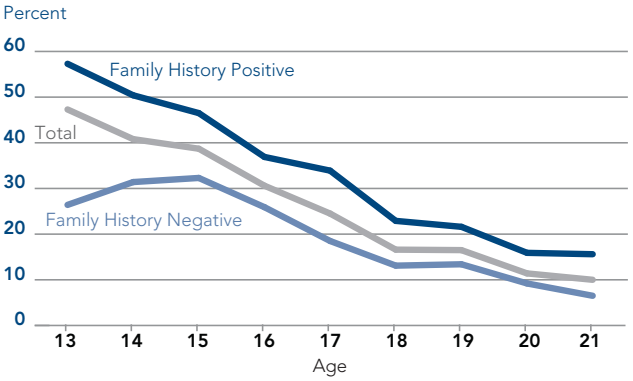
EXCESSIVE USE OF ALCOHOL

Excessive alcohol consumption is another risk behavior for NCDs and is associated with heart disease and some cancers. Drinking also contributes to increased risk of road traffic accidents, unprotected sex, intentional and unintentional injuries, poor mental health, and gender-based violence.[13]

- Young people who begin drinking in their early teens are more likely to become dependent on alcohol within 10 years than those who begin drinking in their late teens and early 20s. This relationship holds even when taking into account the family history of alcohol abuse (see Figure 2). In LAC, the highest levels of drinking alcohol in the last 30 days among

FIGURE 2

Onset of Alcohol Use and Alcohol Dependence in the U.S.



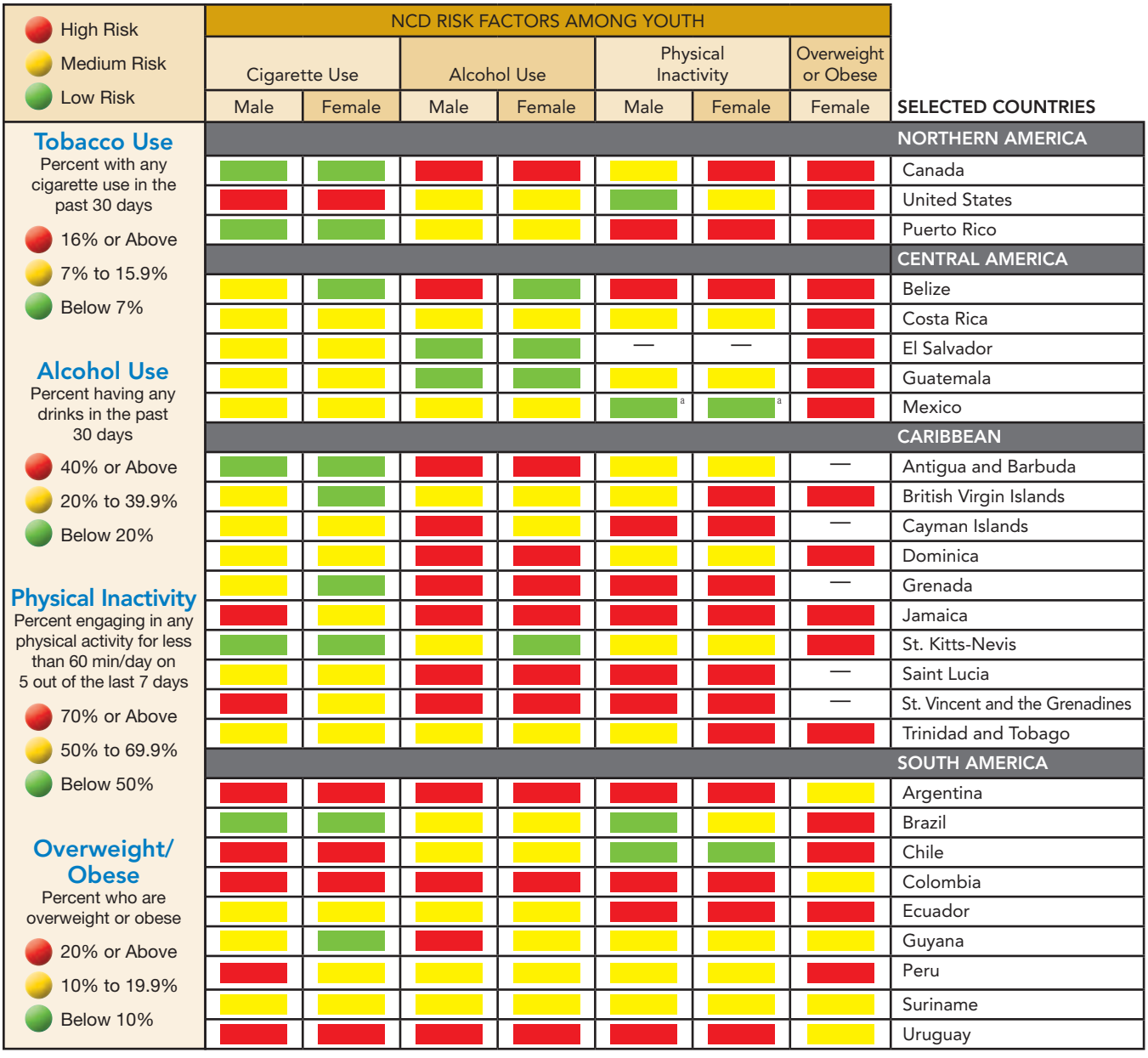
Notes: "Family History Positive" means there is a history of alcoholism in the family. "Family History Negative" means there is no history of alcoholism in the family.

Sources: Bridget F. Grant and Deborah A. Dawson, "Age at Onset of Alcohol Use and Its Association With DSM-IV Alcohol Abuse and Dependence: Results From the National Longitudinal Alcohol Epidemiologic Survey," *Journal of Substance Abuse* 9 (1997): 103-10; and Bridget F. Grant, "Impact of a Family History of Alcoholism on the Relationship Between Age at Onset of Alcohol Use and DSM-IV Alcohol Dependence," *NIAA's Epidemiological Bulletin* No. 39, vol. 22, no. 2 (1998): 144-48.

NCD Risk Factors Among Youth

The PRB data sheet *Noncommunicable Diseases in Latin America and the Caribbean: Youth Are Key to Prevention* complements this policy brief. The "dashboard" below appears on the data sheet. (Both publications are available at www.prb.org.)

Countries were selected based on availability of data on four key NCD risk factors among adolescents/youth: smoking, drinking, physical inactivity, and unhealthy diet as measured by overweight/obesity status. Only those countries with data on at least three of the four risk factors for any age group from 10-to-24-years-old, and from 2006 or later, are included in the data sheet.



— Data unavailable or inapplicable.

[a] Data for both sexes.

Sources: For tobacco use: Estimates from Global Youth Tobacco Survey (World Health Organization and Centers for Disease Control and Prevention), Global School-Based Student Health Survey (WHO and CDC), and country-specific surveys. **For alcohol use:** Estimates from the Inter-American Drug Abuse Control Commission, Report on Drug Use in the Americas 2011 that presented data obtained from National Drug Commissions through their National Drug Observatories in each member state of the Organization of American States. Estimates for other countries from Global School-Based Student Health Survey (WHO and CDC), and country-specific surveys. **For physical inactivity:** Estimates from Global School-Based Student Health Survey (WHO and CDC), and country-specific surveys. **For unhealthy diet/obesity:** Estimates from Demographic and Health Surveys (ICF International), Global School-Based Student Health Survey (WHO and CDC), and country-specific surveys.

boys ages 13 to 17 were in Colombia (53 percent), Uruguay (53 percent), and Argentina (48 percent).[14]

- More than 40 percent of school boys ages 13 to 15 currently drink in some Caribbean countries including the Cayman Islands, Jamaica, and Grenada.[15]

UNHEALTHY DIET AND INSUFFICIENT PHYSICAL ACTIVITY

Insufficient physical activity and unhealthy diet can lead to high blood pressure and overweight/obesity and are widely associated with Type 2 diabetes, hypertension, and heart disease. As countries become wealthier and individuals grow older, physical activity levels decrease, especially among women.[16] However, even most school girls and boys (ages 13 to 15) in LAC countries today do not achieve the international guideline of 60 minutes of physical activity per day at least five days a week. The region has the most serious problem with obesity worldwide.[17]

Among young women, the data on obesity and overweight in several countries of the region are alarming:

- Among Chilean young women ages 15 to 24, one in four (25 percent) is overweight and more than one in eight (13 percent) are obese.[18]
- In Bolivia, among 15-to-19-year-old young women, almost one in four (23 percent) is overweight and one in 33 (3 percent) is obese. However, among women in their 20s, this NCD risk factor becomes much more common, with nearly one in two (42 percent) overweight and more than one in 10 (11 percent) obese.[19]

The problems of obesity and overweight are not restricted to young women. Data from six communities in Nicaragua show that among people in their 20s, 29 percent are overweight and 13 percent are obese.[20] Yet as people in these communities reach their 40s, 37 percent are overweight and 30 percent are obese. As the problem of obesity continues to grow, there are still significant pockets of undernutrition. For example, although Bolivia has high levels of overweight and obesity in young women, the prevalence of undernourishment throughout the population is among the highest in the region at 27 percent.[21]

Urbanization is also a driver of the NCD epidemic. Currently, four out of five people in the region live in cities. By 2025, LAC will have 315 million urban inhabitants. Residents of urban areas tend to be more sedentary; consume more processed, high sodium-content foods and sugary beverages; and have less access to fresh fruits, vegetables, and whole grains than their rural counterparts. Young people in urban areas are also challenged by limited outdoor recreation space, more frequent exposure to violence, high volumes of road traffic, limited availability of sidewalks, and poor air quality (see Box 2).

BOX 2

Injuries and Violence

Not all risks to health come from disease. Many of the biggest threats to the health of young people come from unintentional injuries and violence. For example, road traffic injuries are the leading cause of death among young people ages 15 to 29, and 80 percent of these deaths occur in middle-income countries.[1] Pedestrians and cyclists account for over a third of road traffic deaths in low- and middle-income countries, but less than 35 percent have policies that protect them.[2]

Intentional injuries resulting from violence are another public health problem that account for a high loss of life and disability among young people in the region.[3] Youthful years may bring generally good health, but also bring risks to life and well-being.

Excessive alcohol consumption is a key link associated with NCD risks as well as road traffic injuries and violence. To mitigate risk, policies and communities can play a role by providing safer roads and neighborhoods, preventing driving under the influence, and supporting interventions for domestic violence.

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Insufficient physical activity causes over 7 percent of heart disease, the leading cause of death in LAC. [22]

Focus on Protective Factors

Although much attention has been focused on the risky behaviors among youth, far less attention is paid to the protective factors that help explain why some young people are able to make healthy decisions despite adversity. Protective factors include a positive sense of self; strong life and decisionmaking skills that promote school attendance; engagement in sports or religious institutions; and the facilitation of close, positive relationships with peers and family. School and family bonds have been associated with significantly lower levels of alcohol and tobacco use, as well as less frequent involvement in violence and sexual activity. Strengthening adolescents' relationship with their family, school, and community promotes resilience and protective behaviors—enabling them to make healthy and informed decisions about sex, food, and substance use. Advancing the rights of adolescents should foster an array of protective factors, such as education.

Recommendations

Several countries in the LAC region have made great strides in developing policies and programs that address risk behaviors. Valuable lessons can be learned from local and global efforts to prevent tobacco use, such as country-level bans on smoking in public places and advertising aimed at young people. Restrictions and taxation have also been common strategies in tobacco control, as well as educational programs that encourage people to adopt healthy behaviors. Collecting better and more uniform data on NCD risk factors will help inform policies and programs and allow comparisons throughout the region. The following recommendations reflect current and emerging efforts to reduce these poor health behaviors.

EXPAND POLICIES FOR NCD PREVENTION

Ministries and departments of finance can be enlisted to develop and enforce taxes on alcohol and tobacco. These actions have been shown to reduce consumption, especially among young people who often cannot afford the increased costs.[23] Additionally, governments and civil society organizations can call on the food industry to make processed foods with less salt and sugar as well as provide more user-friendly package labeling.

- In Mexico, an increase in the cigarette tax by 10 percent reduced consumption by 6 percent. In 2010, Mexican tobacco-control advocates worked with legislators to keep the tobacco industry from blocking an increase in the tobacco tax.[24]
- Many countries in LAC have adopted activities to reduce salt consumption. For example, Argentina established an initiative called "Less Salt, More Life," which includes voluntary agreements with 25 major companies in the food industry to reduce salt content by 5 percent to 18 percent in two years.[25]

ENFORCE LAWS AND POLICIES THAT PROMOTE HEALTHY LIFESTYLES

Countries should enforce existing laws and policies, such as bans on public smoking and support for school-based health education. Enforcement plans should address inspections, penalties, responses to complaints, and coordination among responsible agencies.

- Uruguay's President Tabare Vazquez launched a successful advertising campaign called "un millón de gracias" (1 million thanks) in 2006 to raise public awareness of the new smoke-free regulations and to thank Uruguay's smokers for following the new law.[26]
- Chile's First Lady Cecilia Morel pioneered a focus on improving lifestyles in Chile's health plan for 2011-2020 called "Elige vivir sano" (choose to live healthily), meant to motivate Chileans to commit to eating healthier, engaging in physical activity, and enjoying more time outdoors with family.[27]
- In Panama, training sessions were held for business owners affected by smoke-free laws in order to guarantee effective implementation.[28]

INVOLVE YOUTH, FAMILIES, SCHOOLS, AND COMMUNITIES

While ministries of health may be concerned that adding NCDs to their portfolios will be one more burden, in fact, involving other sectors beyond health and engaging various new stakeholders, especially young people, their families, and communities, can relieve pressure on overburdened health sectors. Schools can integrate NCD prevention-related content including physical education into their curricula or activities to reach young people with messages that support healthy behaviors. Civil society can play a key role by forming partnerships to educate enforcement agencies, decisionmakers, the media, and the public on the importance of limiting tobacco and alcohol use among young people. Social media can engage public figures who are popular with youth—from sports, entertainment, business, and the community at large—as positive role models and champions of healthy and fulfilling lifestyles. Tapping into the social media networks that youth rely on for information can be an effective way to share positive messages about health. Religious organizations and other community-based organizations can also sponsor programs that promote healthier lifestyles.

- In Brazil, a community-based, professionally supervised intervention that offered free exercise classes resulted in participants incorporating more physical activity into their own leisure time.[29] Brazil plans to expand these free exercise classes in community settings in more than 80 percent of cities by 2015.[30] The country's strategic plan to combat NCDs also involves working with other sectors such as the Ministry of Sports and the Ministry of Education.
- *Ciclovias* are city streets that are closed to motor vehicles for a few hours, usually on Sundays, for city residents to walk, bike, or skate. Dozens of cities throughout South America participate in *ciclovias*.[31] Rural and urban communities should provide safe environments where physical activity is possible through sports, dance, or places where people can walk or bike.
- Project Northland, developed in the United States, shows how a program that involves school youth, parents, peer education, and community involvement can lower alcohol use among young teens.[32] The curriculum has been translated into Spanish and other languages.

Schools are another important vehicle for reaching young people with information, programs, and activities that promote healthy lifestyles and reduce NCD risk factors. By receiving

training on healthy diet and exercise, educators can work with young people and provide reinforcing messages to ensure that they adopt behaviors to reduce their NCD risk.

- Structured physical education in schools can increase physical activity among young people outside of school.[33]
- Schools can limit access to cheap, highly refined fats, oils, and carbohydrates. A pilot program in Mexico City found that providing school girls with a breakfast of locally produced vegetables, fruits, cocoa, and grains reduced weight by an average 5 kg (more than 10 pounds) over six months, at a cost of less than 8 pesos (about 60 cents) per meal.[34]

Youth themselves have a critical role in addressing risk factors related to NCDs and promoting healthier lifestyles.

- The Truth Campaign in the United States provides facts and figures on tobacco-related risks via peer-to-peer advocacy and a youth-driven advertising campaign. This campaign educates and empowers young people to encourage each other to make healthy decisions.[35]
- Many countries have youth employment initiatives that could help young people develop business opportunities to foster active lifestyles such as bike shops, sports programs, or dance troupes.

IMPROVE AND OPTIMIZE HEALTH CARE

While most health services related to NCDs focus on diagnosis, treatment, and care of those diseases, there is also a role for sexual and reproductive health services (SRH). SRH services are at times the primary point of interaction between young people and the health sector. By integrating NCD information into SRH services, health care providers can reach a wider cross-section of young people and provide support for positive health behaviors (see Box 3). Integrating NCDs into SRH programs can present a more holistic approach to the health of youth and provide comprehensive services for their diverse needs. A broader approach to adolescent health may be beneficial in communities that are resistant to narrowly focused SRH programs. Efforts to address NCD risks in SRH programs could be low-cost additions to already funded programs. Broadening the scope of health programs directed toward youth could be appealing in many communities and help forge alliances among professionals who are concerned about the health and well-being of youth and adolescents.[36] Health professionals who are educated about NCDs can be valuable supporters of programs to lower risks for adolescents.

Excessive alcohol use and cigarette smoking affect both SRH and NCD outcomes in young people. Cigarette smoking has been associated with adolescent sexual activity (especially for males) and with early childbearing in girls and poor pregnancy outcomes.[37] Alcohol use has been linked to early or unintended childbearing, multiple sexual partners, and earlier and unprotected sex.[38] Alcohol use during pregnancy can also lead to fetal alcohol syndrome disorders. Not only do risk factors for adverse reproductive health outcomes and NCDs overlap, protective factors overlap as well. For example, participating in sports is associated with lower levels of sexual activity among youth.[39] Maintaining a healthy diet and a physically active lifestyle can improve self-worth and curb risky behaviors.[40]

BOX 3

HPV and Cervical Cancer

Although the World Health Organization included "most cancers" among the four major NCDs, some cancers are actually infectious in their origin, such as cervical cancer. Human papillomavirus (HPV), for which an immunization is now available, is a sexually transmitted infection that causes most cervical cancer—the second most-common cancer in women worldwide.[1] Addressing risky sexual behaviors such as early sexual debut, multiple partners, and lack of contraception could help decrease the number of cases and deaths due to cervical cancer, thus improving sexual health and reducing risk.

In LAC, sexual activity is beginning at an earlier age than in previous generations, which increases the risk of infection with HPV.[2] The intersection of SRH and NCD risks indicates that programs already working to improve sexual and reproductive health can address some of the risk factors for NCDs through SRH services, and without requiring a huge influx of resources. Indeed, protective factors that guard against NCDs can also support healthy SRH behaviors.

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A Clear Path Forward

NCDs represent an increasingly important cause of death and disability among the people of the LAC region. The negative consequences of four of the key risk factors for these diseases—tobacco use, excessive alcohol use, unhealthy diet, and insufficient exercise—are well understood and, unfortunately, tend to become ingrained as habitual behaviors during youth. Preventing unhealthy behaviors and establishing healthy behavior patterns among the growing number of young people, especially in urban areas, is essential to lowering the burden of disease from NCDs for individuals, families, and countries.

Many people can be engaged in supporting healthier youth. Parents, teachers, health and agriculture workers, and a broad swath of professionals can all contribute to efforts that help young people avoid these risk factors and live healthy, productive lives. Whether through supporting new tax policies, implementing existing laws, or taking advantage of potential synergies among programs, reaching young people with messages about health and fitness will require creative thinking—and the involvement of young people. Strong, healthy youth today will help reduce the health sector burden of NCDs in the future.

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