IFMSA
International Federation of Medical Students' Associations

Noncommunicable Diseases

and the 4 most common shared risk factors

Proposed by the Team of Officials
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Policy Statement

Introduction

Noncommunicable diseases (NCDs) represent the largest and even growing proportion of the global burden of disease. In addition to their mortality burden, NCDs have major economic consequences worldwide. Premature deaths from NCDs are largely preventable, and many are mainly driven by four big risk factors: physical inactivity, unhealthy diets, tobacco use, and the harmful use of alcohol. These risk factors are interrelated, and rooted in social, political, economic, cultural, environmental and commercial factors that are often outside of an individuals' control. Underfunding, lack of social mobilization, and conflicts of interest with the private sector make NCDs a challenging public health space, but also creates an interesting opportunity for coordinated and multi-sectoral action.

IFMSA position

The International Federation of Medical Students' Associations (IFMSA) affirms that urgent action is needed in preventing, controlling and managing NCDs and that this action should be multi-sectoral by nature. Because the four main categories of NCDs – cardiovascular diseases, chronic respiratory diseases, cancers and diabetes - share common risk factors there is a potential for coordinated preventive action to tackle them as a group. The World Health Organization NCD Action Plan 2013-2020 has set concrete steps to achieve meaningful progress in NCD prevention and control. Last, the global youth has a powerful role to play in regards to NCDs, both as a vulnerable and powerful group.

Call to Action

The IFMSA calls upon:

National and state governments to:

1. Recognize NCDs as a major public health threat, particularly in Low- and Middle-Income Countries;
2. Take affirmative steps to rectify social and economic disadvantages, with a view to reducing the burden of NCDs;
3. Shift towards a preventive health model that addresses upstream determinants of health;
4. Invest more strongly in the prevention, control and management of NCDs, to correspond accurately with their disease burden;
5. Ensure that action taken is multi-sectoral by nature;
6. Prioritize the prevention of NCDs in youth;
7. Adhere to the WHO *Framework Convention for Tobacco Control* and adopt the WHO's *Global Strategy to Reduce the Hazardous and Harmful Use of Alcohol;*
8. Regulate the marketing, advertising and sale of alcoholic beverages, tobacco products and unhealthy food products;
9. Consider re-evaluating pricing and taxation policies including, but not limited to:
    a. Enforcing alcohol taxes on all alcoholic beverages.
    b. Implementing an effective tax on sugar-sweetened beverages, ideally based on sugar content, rather than volume;
    c. Providing subsidies for fresh foods where economically feasible. This may be restricted to low-socioeconomic status or rural/remote areas within nations.
10. Consider policies including but not limited to banning or limiting the sale of unhealthy products in government-run institutions, such as public hospitals and schools;

11. Establish smoke-free environments by prohibiting public smoking;
12. Consider the above policy options in accordance with the WHO Action Plan 2013-2020 on prevention and control of NCDs, especially the set of cost-effective and evidence-based policies that can be adapted to meet the diverse needs of countries around the world.

Healthcare professionals to:

1. Adequately inform patients about the influence of risk factors and upstream determinants on the development and outcome of NCDs;
2. Actively engage in evidence-based strategies to screen, treat and prevent NCDs;
3. Practice multidisciplinary care in the prevention and treatment of NCDs.
4. Offer different alternatives to reduce NCDs risk factors, such as smoking and alcohol cessation programs, dietetic counseling and physical activity.

Private sector companies to:

1. Act in the interest of public health wherever and whenever possible;
2. Ensure advertising of potentially unhealthy products conforms to regulations;
3. Go forward with the labelling of all products that are harmful to health.

Universities and other providers of medical education to:

1. Incorporate NCDs and their risk factors comprehensively into the medical curriculum, promoting a holistic approach to their prevention and control;
2. Develop and implement training modules on how to take action on NCDs and their risk factors, involving different stakeholders including youth and medical students.

National Member Organizations to:

1. Promote healthy behavior among themselves and lead by example;
2. Raise awareness, especially among peers, and advocate towards the reduction of NCDs;

All major stakeholders of upcoming national and global processes and meetings relating to NCDs to:

1. Ensure comprehensive consultation and collaboration across sectors, including civil society organizations;
2. Actively campaign to promote the importance of a healthy lifestyle and life-course approach;
3. Recognize the importance of meaningful youth participation in processes related to the prevention and control of NCDs;
4. Ensure voices of young people are heard at all levels of society, recognizing that young people will be living in a world informed by decisions made today.

Position Paper

Background
Of 56.4 million global deaths in 2015, 39.5 million, or 70%, were due to noncommunicable diseases (NCDs). The four most common NCDs are cardiovascular diseases, cancers, diabetes, and chronic lung diseases. The burden of these diseases is rising disproportionately among lower income countries and populations. In 2015, over three quarters of NCD deaths - 30.7 million - occurred in low- and middle-income countries (LMIC), with about 48% of deaths in these countries occurring before the age of 70 (1).

The leading causes of NCD deaths in 2015 were cardiovascular diseases (17.7 million deaths, or 45% of all NCD deaths), cancers (8.8 million, or 22% of all NCD deaths), and respiratory diseases, including asthma and chronic obstructive pulmonary disease (3.9 million). Diabetes caused another 1.6 million deaths (1).

As for mental health, another notable and recognized area of non-communicable illness, the global burden of mental illness accounts for 32.4% of years lived with disability (YLDs) and 13.0% of disability-adjusted life-years (DALYs) (2). This group of illnesses also tends to target younger people, and remains an important cause of death in younger people in many countries.

The health, social, and economic burdens of NCDs are set to increase in the coming years and decades, and this group of largely preventable diseases threatens to undermine social and economic development in LMIC (3).

The causes of NCDs: direct and risk factors
The four major NCDs – cardiovascular- and chronic respiratory diseases, cancers and diabetes – share four main risk factors, namely tobacco use, harmful alcohol use, physical inactivity, and poor diets. These factors have been identified by WHO and numerous other health bodies and experts alongside factors such as high blood pressure and high cholesterol, which can be modified through these four factors (4). However, consideration of upstream factors is necessary if we are to effectively tackle NCDs – we must look at the roots of the causes (5). Adding to this, WHO estimates that air pollution is responsible for an enormous 7 million deaths annually. 4 million of these deaths are due to indoor air pollution, due primarily to open fires and biomass stoves being used to cook and heat homes without proper ventilation (6). The other 3 million are caused by the more obvious form of air pollution – outdoor air pollution. Indeed, in 2014, 92% of the world's population was living in places that did not meet WHO air quality guidelines, suffering poor health accordingly (7).

NCD processes
In order to tackle NCDs at the international level, WHO has developed an action plan (the WHO NCD Action Plan 2013-2020) to address NCDs, starting with a 4X4 approach, addressing the 4 most common NCDs and their 4 modifiable risk factors, followed by 9 voluntary targets for countries to achieve to overcome them. Appendix 3 of the Plan sets out evidence-based and cost-effective policies that can be implemented at the national level. In order to increase the achievement of these processes (8), WHO member states have adopted in 2014 a Global Coordination Mechanism (WHO GCM on NCDs) to accelerate the

implementation of the WHO Action plan supporting multi-sectoral action involving WHO member states, UN organizations and non-state actors (9).

In 2015 action on NCDs was furthermore implemented into the 2030 agenda for Sustainable Development, under Sustainable Development goal 3: healthy life and wellbeing for all. Target 3.4 aims to reduce the premature mortality from NCDs by one third by 2030 through prevention and treatment and by the promotion of mental health and wellbeing. Additionally, target 3.5 mentions the prevention of harmful alcohol use (10). Most recently, in October 2017, the Montevideo Roadmap 2018-2030 on NCDs as a Sustainable Development priority was launched to further commit to these targets (11).

Discussion

Social determinants of Health

The Social Determinants of Health are social, political, cultural and environmental factors which influence individual and group differences in health status. These health determinants are recognized as the major barrier to health equity, creating an urgent need to act upon those determinants to achieve better health for all. Below, a few social determinants specifically important to the NCD debate are highlighted.

Socioeconomic determinants

Contrary to popular belief, the biggest toll from NCDs is in LMIC. More than three quarters of all deaths, and over 80% of premature deaths, occur in these countries (12). This disproportionate disease burden is not just felt on a global scale, however. People of low socioeconomic status in all countries suffer more from NCDs, and are more likely to exhibit many of the causes of these diseases. Smoking rates, poor diets, and, increasingly, physical inactivity are more common in these populations, and the burden increases along the social gradient (13).

It is worth noting, however, that a large proportion of deaths in many low-income countries are still caused by communicable diseases – predominantly lower respiratory diseases and diarrheal diseases. Despite the larger absolute burden of NCDs in LMIC than in higher income countries, the proportion of deaths due to these conditions decreases steadily as income drops (14). Nonetheless, many countries are now facing a double burden of communicable and noncommunicable diseases, which may place already fragile healthcare systems under greater pressure (15). Further, this trend is increasing rapidly – by 2020 it is predicted that 70% of deaths in these countries will be due to NCDs (16). NCDs are becoming more common, while rates of communicable diseases are dropping. To prevent this from reaching a breaking point, investment in prevention is needed, and attention must be focused first and foremost on LMIC if we are to see the greatest benefits.

The vast differences in prevalence of NCDs between and within communities and countries of differing socioeconomic status and income is striking. Rather than being ‘diseases of the rich, old and lazy’, NCDs cause and perpetuate inequality, and will continue to do so without coordinated action.

Commercial determinants

Beyond the social determinants, there has always been critical public health analysis of the power of the corporate sector and attention has turned to other areas in recent years, including profit-driven and corporate practices harmful to health. The focus on NCDs as just

a consequence of lifestyle choices has also been extensively critiqued, especially in relation to marketing to children (17).

A growing argument is that these choices are largely driven by the so called commercial determinants of health. As others we use the definition of the commercial determinants of health as “strategies and approaches used by the private sector to promote products and choices that are detrimental to health”. This concept unites consumer and health behavior, individualization, and choice on the micro-level and the global risk society, the global consumer society, and the political economy of globalization on the macro level (18).

Corporations gain influence through four channels:
i) marketing, which makes the desirability and acceptability of unhealthy commodities grow;
ii) lobbying, which can limit policy barriers such as plain packaging and minimum drinking ages;
iii) corporate social responsibility strategies, which can rebuilt reputations and redirect attention; iv) and extensive supply chains, which amplifies company influence around the globe (18). Health outcomes are determined by the influence of corporate activities on the social environment in which people live and work: namely the availability, cultural desirability, and prices of unhealthy products. The environment shapes the so-called lifeworlds, lifestyles, and choices of individual consumers—ultimately determining health outcomes (19).

Urbanization and its impact on NCDs

Over the last few decades, traditional societies in many developing countries have experienced rapid and unplanned urbanization, which has led to lifestyles characterized by unhealthy nutrition, reduced physical activity and tobacco consumption (20). The United Nations (UN) recognizes that urbanization has implications for health including increased pollution and higher rates of both communicable non-communicable diseases (21).

Throughout the process of development and urbanization, national economies furthermore shift away from physically active economic activities such as farming, mining, and forestry, and move towards more sedentary occupations, many of which are office-based. Technological innovation leads to decreased activity in previously physically demanding jobs (22). Studies found negative associations between urbanization and the prevalence of NCDs, especially in developing countries (23).

Tobacco

Tobacco remains one of the leading risk factors for non-communicable diseases both as the result of tobacco use and as the result of exposure to secondhand smoke. It is responsible for over 7 millions deaths around the world each year and this number will even increase to more than 8 million if current trends continue (24). Tobacco use is also a significant contributor to health inequalities, with people from low and middle socio-economic groups representing 80% of cigarette consumers (25). In addition, nearly 40% of adults who are smokers or ex-smokers started smoking before the age of 16 (26). Therefore, we believe that the protection of young people and the fight against health inequalities must be the focus for any new tobacco control strategy. Further steps need to be taken in preventing young people from becoming addicted to this lethal habit. A step towards this goal is labelling of all tobacco products with warnings about associated health risks that cover at least 50% of the pack and plain packaging (27).

Second-hand smoke, exposes the public to 4000 chemicals, 250 of which are harmful, including more than 50 known carcinogens (49). Every person should be able to breathe tobacco-smoke-free air. Smoke-free laws are an important part of the solution because they protect the health of non-smokers and encourage smokers to quit without directly harming the industry. Among smokers who are aware of the dangers of tobacco, most want to quit. Counselling and medication can more than double their chances of succeeding (50). Knowing that only 18% of the world's population is protected by national smoke-free laws and that 15% have access to comprehensive cessation services with cost-coverage, progress still needs to be made (24).

The WHO Framework Convention on Tobacco Control is one of the most rapidly embraced treaties in the history of the United Nations, with 186 signatories and Parties covering 95.8% of the world's population (28). It contains legally binding obligations for its Parties, addresses the need to reduce both demand for and supply of tobacco, and provides a comprehensive direction for implementing tobacco control policy at all levels of government. To help make the guidelines set by the FCTC MPOWER measures were introduced corresponding to the articles of the Framework Convention (29). In 2017 4.7 billion people are covered by at least one best-practice policy intervention from MPOWER, a steady increase from the 1 billion 10 years ago (30). Progress in the implementation has been steady since it entry into force, but varies uneven between different articles, ranging from 20 to 88% and there is a need for parties to accelerate their activities in order to reach the NCD target to reduce tobacco use by 30% between 2010 and 2025 (31).

The economical and legal stakes of the tobacco industry have a major impact on health. For instance, adding a tax to tobacco products, plain packaging, comprehensive bans on tobacco advertising restraining and implement mass media campaigns to educate the public about the harm of tobacco use are cost-effective measures, recommended by the WHO (32). Furthermore limiting purchase and consumption to a certain minimal age and eliminating all forms of illicit trade in tobacco products are important actions that need to be considered around the world (33).

The WHO and other relevant stakeholders recently drew attention towards the harmful impact of tobacco on the environment in terms of pollution of waters, deforestation, climate change, and the waste it produces (34, 35). Tobacco farming is a complicated process involving heavy use of chemical that can create environmental health problems, particularly in low and middle-income countries. For example, the industry in those regions frequently hires children, putting them in danger of green-tobacco sickness (nicotine absorbed through the skin) (35).

Alcohol

The harmful use of alcohol results in approximately 3.3 million deaths each year, accounting for 5.9% of all global deaths and 5.1% of the burden of injury and disease as measured in disability-adjusted life years (DALY) lost (36). Even though only half the world's population drinks alcohol, it is the third largest contributing factor to disease and premature death worldwide, almost equal to tobacco, and in developing countries with overall low mortality, it is now even the leading factor (37).

The level of at-risk alcohol consumption considered harmful by the WHO is defined as more than an average of 40 grams of pure alcohol per day for males, and 20 grams per day for females. Rates of hazardous and harmful alcohol use were generated on the basis of latest

estimates from the Global Information System on Alcohol and Health (GISAH) (36). It should however be noted that recommended alcohol consumptions implemented by governments vary across the world (38).

The harmful use of alcohol is one of the four shared risk factors for noncommunicable diseases (NCDs) (41). In addition to this, it is a causal factor in more than 200 disease and injury conditions (as described in Classification of Diseases and Related Health Problems (ICD) e.g. alcohol dependence, liver cirrhosis, cancers and injuries. Alcohol consumption can have an impact not only on the incidence of diseases, injuries and other health conditions, but also on the course of disorders and their outcomes in individuals. Drink–driving injuries are also strongly linked to the harmful use of alcohol. Moreover, there is a close relationship between drinking and violent crime, including domestic violence . Alcohol-related harm is determined by three related dimensions of drinking: the volume of alcohol consumed, the pattern of drinking and the quality of alcohol consumed (36).

Globally, the economic cost of harmful alcohol use to individual nations ranges from 3.3% to 1% of GDP purchasing power parity (PPP) in both high and middle income countries. Most costs are incurred due to loss of productivity, direct health costs and direct law-enforcement costs (39). It is therefore evident that the harmful use of alcohol is detrimental to society on many levels and must be addressed with the highest level of urgency.

In 2010, The World Health Assembly (WHA) approved the *Global Strategy to Reduce the Harmful Use of Alcohol,* evidence-based recommendations to help countries tackle the scale of the alcohol problem within their respective countries (40). Recent research has attributed failures to adequately address the harmful use of alcohol to the lack of support given to the WHO to carry out its mandate in terms of the *Global Strategy to Reduce Harmful Use of Alcohol* and allied WHO resolutions (41). This has specifically limited the ability of the WHO to offer technical support to Low and Middle Income Countries (LMIC), where the problem is predicted to be worse than current estimates. This Public Health issue is heightened by the lack of adequate response to the harmful and abusive alcohol use.

Obesogenic environment

Many people today are faced with an environment that simultaneously promotes physical inactivity and unhealthy eating. This makes it difficult for people to make healthy choices, as it is often cheaper, easier, more accessible, and more convenient to take the unhealthy option. This is particularly true for people of low socioeconomic status, and those who are otherwise disempowered. The impact of environment on the development of NCDs, as for other risk factors, follows the social gradient. Shaping our environment, then, must be key in any effort to combat obesity and NCDs (19).

<u>Childhood Obesity</u>

In 2015, over 42 million children were overweight or obese, and this number is growing. Although childhood obesity is a global issue of concern to all nations, almost 75% of overweight and obese children live in Asia or Africa, creating a disproportionate burden on children living in LMIC (43).

Factors driving this rise include poor diet and lack of exercise, and are mainly driven by systemic factors such as a lack of fiscal policy discouraging intake of unhealthy food and drinks, poor access to healthy food and exercise-conducive environments, rather than individual choice (44). Many children, particularly in LMIC, are growing up in a society which promotes

high energy intake while encouraging physical inactivity. Consequently, many are becoming overweight or obese. Most of these children will remain above the recommended BMI into adulthood, which makes them more susceptible to develop NCDs (45).

Education plays a vital role in reducing obesity through its relationship with diet and physical activity. Education is also paramount in inculcating good lifestyle habits as well as providing teaching on health prevention (42). It is thus important for states and institutions to continue to promote physical activity and healthy dieting in schools, but also to raise awareness about a healthy lifestyle.

The nutrition transition

Economical and technical improvements have resulted in large-scale declines in unhealthy food prices, increased access to supermarkets and urbanization, in many countries (46). These developments have resulted in a change in diet and activity patterns and are responsible for the growth of the obesity epidemic, in which children and adults are both victims. The habitual food consumption changed into a diet dominated by higher intakes of fat, added sugars, animal source foods, refined and processed foods, in contrast with a fall in fiber and cereal intake (46,47). Despite the fact that access to supermarkets has been improved in many countries, there is still a lack of access to healthy and nutritious food for many people, especially in rural and poorer urban areas. Economically disadvantaged areas where there is relatively poor access to affordable and healthy food, because of the absence of modern supermarkets are called ‘food deserts’ (48). People living in these food deserts are not able to buy healthy and nutritious food and this results in malnutrition.

Food marketing and advertisements

Multinational food and beverage companies are an indisputable cause of the obesogenic environment, encouraging the over-consumption of unhealthy food and beverages for profits through industry tactics such as lobbying, undermining independent science and the threat of litigation. Besides, industry promoted voluntary guidelines, codes of conducts and cooperation with the government are often used to avoid governmental regulations (51). Multinational food corporations have billions of dollars available to block or manipulate governmental actions or regulations, with the overall aim to prevent a decrease in the consumption of their products.

Despite this, it has been proven that government regulations such as taxes, labeling and marketing restrictions have a significant effect on the consumption of unhealthy food products. One specific sugar-control policy that has gained significant support and evidence in recent years is a tax on sugar-sweetened beverages (SSBs). Mexico implemented the tax in 2014, and the results suggests that taxation has a strong influence on purchasing patterns, which has the potential to greatly reduce obesity (52,53). Furthermore, it has also been proven that different front-of pack labeling systems guide healthier food choices amongst consumers (54). Countries like the United Kingdom, Ecuador and South Korea have adopted the so called ‘traffic light labelling system’, in which red, amber and green colors are used on food packages to represent low, medium and high amounts of each nutrient (55). Food marketing and advertisements towards children and young adults also contribute to the incidence of obesity. It has been demonstrated that children prefer branded packages over plain packages, and that they would prefer packages that feature characters from children’s movies (56).

Physical inactivity

Physical inactivity is the fourth major risk factor for NCDs and attributes to 3.2 million deaths globally (57). It is estimated that physical inactivity is implicated in 21–25% of breast and

colon cancers, 27% of diabetes and 30% of ischemic heart disease (58). Globally, 23% of adults and 81% school-going adolescents are insufficiently active (59).

Modern lifestyle patterns such as sedentary behavior at work and home, and insufficient participation in recreational sports has lead to an overall decreased level of physical activity. Urbanization has furthermore created an unfavorable environment of increased violence, high-density traffic, low air quality, pollution, and a lack of parks, sidewalks and sports/recreation facilities has discouraged participation in physical activity (60).

For the 10% relative reduction in prevalence of insufficient physical activity by 2025 agreed in WHA 66.10, key areas of the interventions namely Environment (urban design and transport), Schools, Healthcare, Sports, Community-wide programs, Workplaces and Public Education/awareness are recommended. Providing counseling as part of primary health care services and implementing community wide public awareness campaigns have been shown to be cost-effective measures (61).

Mental Health and other NCDs

While falling outside the banner of the four major NCDs discussed above, mental illness bears an enormous disease burden, and remains a neglected area of health worldwide. Mental, neurological and substance use disorders account for 13% of the global burden of disease, disproportionately affecting poorer people and poorer countries (62). Including other non-communicable diseases, such as digestive and kidney diseases, gynaecological conditions and musculoskeletal disorders, NCDs contribute 19.6% of deaths and over half of disability-adjusted life-years (DALYs) (63). Mental illnesses in particular are inextricably linked to socioeconomic disadvantage, and a complex array of factors including social environment, vulnerability, stigma, and financial security play an enormous role in their prevalence and outcome (64, 65). Though not as pronounced, the same is true for many of these 'other' NCDs, such as osteoporosis and fibromyalgia. Clearly, for any comprehensive strategy to be effective, such conditions must be adequately considered, prevented, and managed.

Finances

Globally, domestic and international funding for cost effective interventions for NCDs is grossly inadequate compared to the financial burden of disease. Consensus is growing that the SDGs will not be primarily financed from international aid budgets, and countries require catalytic funds to build national capacity to address NCDs. Despite the fact that NCDs account for almost 70% of global deaths (many of which are premature) (66), donor support for programs such as communicable disease and maternal and child health greatly outweighs that of NCDs (67).

Regulatory and fiscal policies such as taxation on health-harming products have been proven in many occasions to be an effective intervention, as part of a comprehensive strategy, to prevent and control NCDs. A financial incentive for individuals to avoid health-harming behaviors sends a strong message about the importance of preventing NCDs, and when combined with education about NCDs empowers individuals to feel confident in making the right choices for their health. Not only do regulatory and fiscal policies prevent NCDs, they are also highly cost effective for governments, and provide an opportunity to increase financing for health and development at the national level. A cost-benefit study showed that for every US dollar invested in implementing a tobacco price increase of 125% in a low or middle income country (LMIC) which would achieve a 50% reduction in tobacco

use, the government would get 10 US dollars in return (68). A meta-review on the effectiveness of fiscal policy interventions for improving diets and preventing NCDs showed that evidence was strongest for the effectiveness of sugar sweetened beverages (SSBs) taxes in reducing consumption, and of fruit and vegetable subsidies in increasing consumption (69). Money raised through taxation of health-harming products can be reinvested into other public health programs such as health education and promotion activities and subsidizing health-promoting behaviors.

The role of youth as a vulnerable group with an operational role

Adolescents and youth are a tremendous resource that are often overlooked in the fight against NCDs, yet they are a natural partner for preventing NCDs. WHO estimates that 70 percent of premature deaths in adults are the result of risk factor behaviors begun during adolescence and youth (70). As a result, two thirds of premature deaths in adulthood are associated with childhood conditions and behaviors. Behavior associated with NCD risk factors is common in young people: over 150 million young people smoke; 81% adolescents don't get enough physical activity; 11.7% of adolescents partake in heavy episodic drinking and 41 million children under 5 years old are overweight or obese. 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 (71).

Furthermore, young people are generally considered to be healthy, and a likely consequence of this misconception, adolescents benefited the least from the epidemiological transition as
represented by the smallest drop in mortality across all age groups since 2000 (72). Recently, there has been an increased focus on the specific needs, characteristics and potential contribution of young people in health, although, at the global level, this recognition has largely been confined to the area of sexual and reproductive health. However, non-communicable diseases (NCDs) and its risk factors have great importance to young people as well. For example, suicide is the third largest cause of death during adolescence, and depression is the top cause of illness and disability (73).

Apathy to change current behaviors and practices will add to the current and future NCD burden, with severe consequences for future populations and their health systems. Today's youth are today's and tomorrow's leaders and carers will bear the brunt of these costs, both financially and personally. Youth everywhere therefore have a vested interest in NCD prevention. Young people have the capacity to add value to solutions for NCDs. As part of the emerging 'New Power' crowd, young citizens are increasingly empowered and enthused to participate in shaping their everyday lives, including health, than generations before. Complementary to the technical expertise that older generations might offer, the voices of youth may offer new perspectives, media channels and solutions to NCDs.

Youth have a right to the highest attainable standard of health and well-being. However, they often lack access to relevant and reliable health information and to high-quality and youth-friendly health services without facing discrimination or other obstacles. Young people are often targeted by companies advertising unhealthy food, tobacco or alcohol use. Furthermore, many people grow up at the moment in environments that are not favorable to adopting healthy lifestyles, such as participating in sports and adopting and maintaining a balanced and healthy diet (74). Young people living in low- and middle-income countries

experience the greatest barriers (75). Young people are furthermore highly susceptible to marketing messages (76). An important aspect of NCDs prevention is therefore to limit the marketing of health compromising behaviors and products to youth.

Since youth spend much of their time at school, the school environment should also promote healthy lifestyles and reduce NCD risk factors, for example, by prohibiting smoking on school grounds, ensuring that nutritious meals are served, implementing physical activity programs, and teaching other important life skills for a healthy future.

NCDs in the medical curriculum

In the preparation for the IFMSA March Meeting 2017 and NCD Youth Caucus, Budva Montenegro, a survey was conducted within IFMSA National Member Organizations (NMOs) on current medical education practices around NCDs. There were 128 respondents of the survey, each representing the medical student population in their respective country. In the survey, around 75% of NMOs agreed or strongly agreed that more teaching was required on the topic of upstream determinants of health - that is, the social, cultural, environmental, and political conditions in which we are born, grow, study, work and age - at their medical schools. Only 7% believed that teaching on upstream determinants was adequate (77).

Another question revealed that perceptions are hugely variable concerning the perceived quality of teaching on preventive health, including the four main risk factors for NCDs. Encouragingly, almost 40% of NMOs thought the quality of their education on preventative health was good or excellent. However, 32% rated it as insufficient, and 5 countries rated the quality of their medical education on preventive health as very poor. These results demonstrate the need for new and innovative ways to incorporate important topics, such as the social determinants of health, into the medical curricula, such that future medical professionals are equipped to address NCDs in a holistic and effective fashion.

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