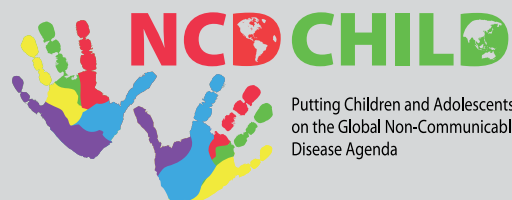


Young People and NCDs

HARNESSING THE CULTURE OF TECHNOLOGY



The theme of the 2013 ECOSOC AMR is 'Science, technology and innovation, and the potential of culture, for promoting sustainable development and achieving the MDGs'. NCD Child welcomes the opportunity to launch this Issues Paper at the ITU-IFPMA Ministerial Roundtable Breakfast, 'Mobile Worlds, Mobile Actions – mHealth: The Opportunity for NCDs' – Palais des Nations, Geneva, 2 July 2013.



DEFINITIONS

Ages and Stages

This Issues Paper respects the following definitions:

- The definition of 'child' as those persons under 18 years of age, as taken from the Convention on the Rights of the Child
- The WHO definition of 'adolescents' as those persons between the ages of 10-19 years
- The UN definition of 'youth' as those persons between the ages of 15-24 years.

This paper uses 'Young People' to encompass children, adolescents and youth.

Culture

Culture should be regarded as the set of distinctive spiritual, material, intellectual and emotional features of society or a social group, and that it encompasses, in addition to art and literature, lifestyles, ways of living together, value systems, traditions and beliefs. UNESCO, Universal Declaration on Cultural Diversity (2001) http://portal.unesco.org/en/ev.php-URL_ID=13179&URL_DO=DO_TOPIC&URL_SECTION=201.html

Digital Divide

Digital divide refers to the gap separating those individuals who have access to, and use of, new forms of technology from those who do not (1).

Life-Course

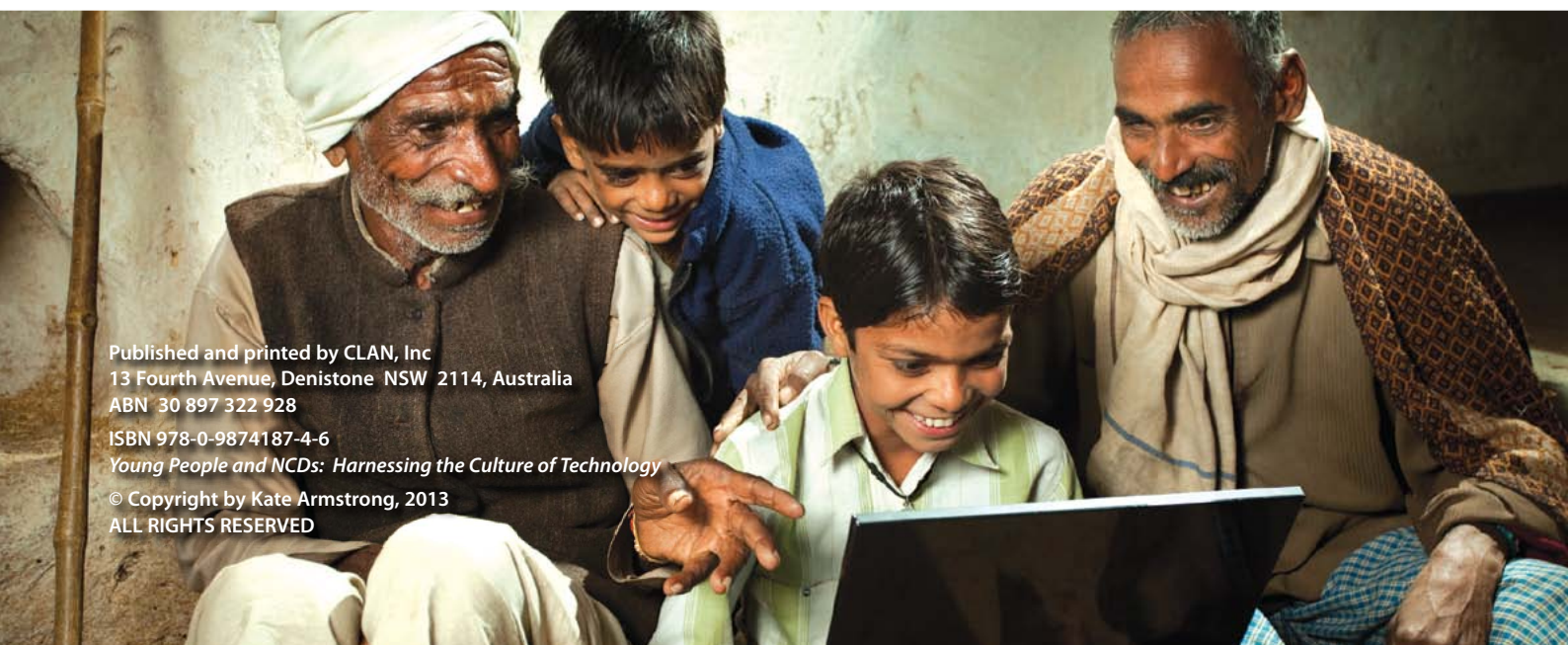
The life-course approach considers how multiple determinants interact and affect health throughout life and across generations. Health is considered as a dynamic continuum rather than a series of isolated health states. The approach highlights the importance of transitions, linking each stage to the next, defining protective risk factors, and prioritising investment in health care and social determinants, gender, human rights promotion and protection and ethnic/racial approaches in health. Moreover, the life-course approach emphasises the importance of the preconception period as this impacts later stages of life.

mHEALTH

mHealth or mobile health refers to medical and public health practice supported by mobile devices, such as mobile phones, patient monitoring devices, personal digital assistants (PDAs), and other wireless devices. mHealth involves the use and capitalization on a mobile phone's core utility of voice and short messaging service (SMS) as well as more complex functionalities and applications including general packet radio service (GPRS), third and fourth generation mobile telecommunications (3G and 4G systems), global positioning system (GPS), and Bluetooth technology.

Technologies

For this Issues Paper, technologies refer principally to information and communications technologies (ICTs), an umbrella term for any communication device or application, encompassing: radio, television, internet, cellular phones, computer and network hardware and software, satellite systems and so on, as well as the various services and applications associated with them, such as videoconferencing and distance learning.



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NCD CHILD AND A LIFE-COURSE APPROACH TO NCDs



It is with enormous gratitude that NCD Child and our many brilliant partners share this document *Young People and NCDs: Harnessing the Culture of Technology* with Member States at the 2013 ECOSOC Annual Ministerial Review. NCD Child thanks the International Telecommunication Union (ITU) and the International Federation of Pharmaceutical Manufacturers (IFPMA) for their leadership in hosting a ministerial roundtable at ECOSOC this year to explore the important topic *Mobile Worlds, Mobile Actions – mHealth: The Opportunity for NCDs*.

NCD Child is an international coalition of organizations committed to the meaningful integration of children, adolescents and youth within the global non-communicable disease (NCD), health and development discourse. We sincerely hope this publication will be a useful resource not only for Member States, but also for the foundations, multilateral and non-governmental organizations, civil society, private sector, academic and research institutions that strive to support collaborative action with governments and one another to achieve health for all beyond 2015.

The world took an enormous step forward in its quest for global health and equity with the September 2011 United Nations High-Level Meeting on NCDs, and continues to strive towards new and innovative solutions that will drive sustainable, scalable and integrated change in the fight against NCDs. Science and technology offer incredible hope for the future, and there is no doubt that young people are almost invariably at the forefront of this new frontier, connecting within a common culture of technology never witnessed before. That said, the NCD movement is only just beginning to embrace these opportunities, and there is an urgent imperative for all stakeholders to remain open to novel ways of connecting across platforms and sectors, especially if we are committed to embedding a life-course perspective as a fundamental of sustainable development.

NCDs are now accepted as both a health and a development issue. NCDs are integrally linked to the cycle of poverty – they are exacerbated by poverty and they exacerbate poverty – and the health and well-being of future generations will reflect the extent to which we are able to integrate a life-course approach to the prevention and management of NCDs. NCD risk factors and care must be actively targeted from preconception to end of life – whatever age the latter might occur. In this context, a rights-based approach to the management of NCDs must ensure a focus on all age groups, and NCD Child congratulates Member States for strongly endorsing this at the 66th World Health Assembly with the recognition that children can die from treatable NCDs, such as rheumatic heart disease, type 1 diabetes, asthma, and leukaemia, if health promotion, disease prevention, and comprehensive care are not provided.

NCD Child welcomes the opportunity ECOSOC 2013 gives to highlight examples of best practice from around the world, and demonstrate how stakeholders from the grassroots level in low- and middle-income countries to the highest echelons of power are now harnessing the culture of technology to effectively prevent and manage NCDs across the life-course. NCD Child thanks Member States for making especial efforts to respect, protect and promote the rights of young people, and involve them as much as possible in future actions and policies in the fight against NCDs. Young people are proving they have a rightful place as active participants and leaders in the NCD movement and have incredible contributions to make: they are particularly well placed to advise on the most appropriate ways to address behavioural risk factors during adolescence; and those living with NCDs and disability are the obvious experts to assist in the development of NCD policies. NCD Child thanks all partners and stakeholders who are actively empowering young people to tackle NCDs – they offer us all great cause for optimism. May we all continue to partner with one another in meaningful ways, and collectively explore new opportunities to harness the culture and power of technology and drive sustainable change that will benefit the whole of humanity into the future.

Yours sincerely

Dr Kate Armstrong
Executive Secretary, NCD Child
President, CLAN (Caring & Living as Neighbours)



RECOMMENDATIONS ON NCDs, YOUNG PEOPLE AND TECHNOLOGIES

A set of Specific Actions for Member States to Harness the Culture of Technology in Young People

1. Invest in a Life-course Approach to Prevent and Manage NCDs

Integrate and implement digital platforms and proven, cost-effective and sustainable technology-based strategies and programs for the prevention and management of NCDs within national child and adolescent health and NCD policies and plans, taking a health systems approach to address a range of health issues affecting young people.

Invest in research to provide a robust evidence base for innovative technology solutions for the prevention and management of NCDs that are affordable and culturally appropriate.

2. Build Capacity to Prevent and Mitigate the Impact of NCDs

Establish innovative partnerships with the private sector and civil society to promote scalability and sustainability of technology solutions including mHealth and create a policy and regulatory environment that drives standardization.

Develop a multi-sectoral agenda with involvement across education, health, labour, legal, and other sectors using a life-course approach that is equitable, gender-sensitive and rights-based.

Harness technology to address the gaps in the training of health workers and equip them with the skills and knowledge to effectively engage young people in the prevention and management of NCDs.

3. Give Young People a Stronger Voice

Engage young people as equal partners in the fight against NCDs creating an enabling environment that allows them to fully capitalize on their role as agents of change in attitudes and policies against NCDs.

4. Move to a Sustainable Approach to Life-long Learning

Re-orient formal, informal and non-formal education systems to enable equitable, culturally appropriate, quality education for all young people that includes training in digital literacy - unlocking many other barriers to social and economic development including poor health.

Re-orient the labour market and vocational training in technology to adequately prepare young people for the workforce and improve opportunities for employment; and to enable young people with NCDs to enter the work-force without fear of discrimination and in accordance with their capacity to function.

5. Work Towards a Culture of Accessibility and Inclusion

Address inequities in affordable access to technology for young people with specific efforts to increase the use of technology for health by girls and other marginalized groups.

Unlock the barriers for young people living with NCDs and disabilities to participate in and be empowered by the educational system, including the provision of assistive technologies or specially-developed ICTs for young people with disabilities.



BACKGROUND AND RATIONALE

Non-communicable diseases (NCDs) – cardiovascular disease, cancer, chronic lung diseases and diabetes – have reached veritable epidemic proportions globally. According to the World Health Organization (WHO), NCDs are the world's #1 killer, bringing hardship to rich and poor nations alike. In 2008, NCDs accounted for 63%, or 36 million global deaths; 80% of these occurring in low- and middle- income countries (LMICs), and a higher proportion (48%) of the deaths in the latter countries are premature (under the age of 70), compared to 26% in high-income countries (2).

NCDs have a significant impact on children and adolescents. There were an estimated 1.2 million deaths from NCDs in people under the age of 20 in 2002, accounting for over 13% of all NCD deaths under age 60 years (3). More recent studies of 50-year mortality trends in children and young people show that while child-mortality rates have decreased, rates of mortality in adolescents have only marginally improved, with NCDs one of the leading causes of death (4). As a result of inequities in the level of care for NCDs between high resource and low resource countries children are dying from treatable NCDs, such as rheumatic heart disease, type 1 diabetes, asthma, and leukaemia. However, mortality is only part of the picture. The majority of behavioural patterns that underlie NCDs start during childhood and adolescence. Physical inactivity, tobacco use, unhealthy diet and the harmful use of alcohol are strongly associated with and causally linked to NCD-related morbidity and disability. Evidence indicates that these risk behaviours are spreading rapidly in young people, with associated immediate as well as long-term consequences. For example, with childhood obesity rates doubling, or even tripling over the past 20-30 years in most countries, many gains in child health would be reversed if present trends continue.

NCDs in children and adolescents are not just a health issue. Because of stigma, discrimination and limited or inadequate provision of appropriate medical and educational services and supplies, NCDs prevent children and adolescents from going to school and fully participating in education activities and life-long learning. This has a negative impact on young people's transition to adulthood and often leaves them at a disadvantage for life when compared with their peers. NCDs keep the bottom billion locked up in chronic poverty and place considerable strain on macro-economic development and the attainment of the Millennium Development Goals (MDGs).

The present cohort of young people worldwide is the largest it has ever been. Forty three per cent of the world's population is currently under the age of 25, reaching as much as 60% of populations in some developing countries (5). There is a crucial opportunity to address the global burden of NCDs through a life-course approach (from pre-conception to death – whatever age that may occur) with the ultimate consequence of maximizing healthy lives at all stages of life and reducing the social and economic burden of NCDs.

The international development community cannot promote inclusive development without making specific efforts to address NCDs in this population, curb their increase, and instigate the preventive and control measures that will be necessary to diminish and reverse their toll on individuals, families, communities and national productive capacity.

**In 2013, there are
6.8 billion mobile-cellular
subscriptions.**

**That is almost the same
as the world's population,
and more than those
who have access to clean
water.**

(International Telecommunication Union, 2013)

CASE STUDY 1: Access to Technologies – A Human-right

Member States are obliged to ensure that children and adolescents have the opportunity, and all information necessary, to be able to participate in decisions affecting their health, development and ability to meaningfully participate in society (6). This includes the right to enjoy the benefits of scientific progress and its application (7).

The Human Rights Council has acknowledged that the fulfillment of these rights requires that Member States and individuals stay abreast of new information and communication technologies, including the Internet and mobile technologies, for the exercise of the right to freedom of opinion and expression, including the right to seek, receive and impart information (8).

Member States have not only recognised this right, but acknowledged the importance of children and adolescents having access to appropriate information, thus providing the framework to create and promote cost-effective measures, including laws, policies and programs with regard to health-related situations including prevention of accidents and protection from harmful practices including the abuse of alcohol, tobacco and other substances (9).

BEYOND BUSINESS AS USUAL

The unprecedented rate of change in the way information is accessed and transferred across geographical borders and cultural boundaries is having rapid and wide-ranging impacts on culture (10). The scale and speed of information exchange of today's communication technologies serves to support societal norms and culture but is also creating a subculture much larger than the societal one – a new technologically driven and innovative culture that is universal, multicultural and young (11).

For many young people, this hyperconnected world is the only one they will know. Mobile-cellular penetration rates are now at 96% globally and 89% in developing countries; and almost 40% of the world's population is on-line (12). The World Economic Forum reports that, *"Twitter has attracted over 500 million active users in seven years, while Sina-Weibo, China's dominant micro-blogging platform, passed 400 million active accounts in summer 2012"* (11). One of the greatest advances lies in the ability of these platforms to facilitate participatory information sharing and collaboration in the creation of content. Individuals are no longer passive recipients, but also active publishers of information.

The opportunity exists to use technology to mitigate the future social and economic burden of NCDs in both developed and developing countries. While technology on its own is not sufficient, leveraging the unifying culture of technology of this generation of young people to develop and implement evidence-based solutions against NCDs and adapting these at a national level to local resources and culture have the greatest chance of success.

Innovations in information and communication technologies (ICTs) are already having positive impacts on the prevention and

management of NCDs through improvements in access to health promotion and health information on behavioural risk factors; and improving quality and access to health services (13, 14). The evidence base is building to support m-Health solutions and services that are at once cost-effective, scalable and sustainable (13). The experience of others, particularly in maternal health, is now a platform to take a health systems approach to child and adolescent health and integrate solutions through technology that aim to address a range of issues that affect the health and well-being of young people.

Member States are urged to consider the specific set of life-course focused recommendations presented in this Issues Paper and to adopt a human-rights based, inclusive approach to NCDs through the lens of the culture of technology in young people.

“What matters is not just having technology, but understanding how to use it well and locally”

The Report of the High-Level Panel of Eminent Persons on the Post-2015 Development Agenda, 2013



A LIFE-COURSE APPROACH: NCDs, YOUNG PEOPLE AND TECHNOLOGY

SECTION 1: Harnessing the Culture of Technology for NCD Prevention Across the Life-course

There is a growing recognition for the need of a life-course approach to policy and program development if the international development community is to affect sustainable, equitable and inclusive change and achieve the impact envisioned by the UN High Level Meeting and Political Declaration on NCDs (15).

A life-course approach to prevention (primary, secondary and tertiary) that pays greater attention to adolescence and acknowledges major cultural drivers of change in young people's attitudes and actions is central to mitigating the effects of NCDs in individuals, communities and societies now and in the future. Even while acknowledging that the digital divide exists and must be addressed, the culture of technology has been set for most young people and a failure to engage youth through these channels will both further marginalize young people and fail to create the changes needed to reduce the future toll of NCDs predicted for all countries but for which LMICs will bear a disproportionate burden.

Young people are interconnected through technology more than ever before. Facebook has reached more than 1 billion active users and every minute, 48 hours worth of content is uploaded to YouTube (11). For many young people, access to these technologies provides the opportunity to voice opinion and share experiences in a relatively safe environment, and in many cases, with a degree of anonymity.

Harnessing existing technology to communicate messages and support, particularly around health behaviours in young people is gaining momentum with the potential to leverage a diverse range of interactive media including digital storytelling, social media, mobile technologies and gaming to deliver health education and prevention messages anywhere and at the most relevant times, and often delivered by peers (see Case Studies 2, 3 and 4). For example, interventions are already being used that reinforce positive health behaviors, such as sending smokers who are trying to quit regular text messages to sustain their motivation. These can also be made interactive to enable users to send text messages to request extra support when it is needed. This has been proven in some high-income settings to be effective on its own and when used alongside other smoking cessation interventions, as well as being cost-effective (16, 17). This approach is now being developed further as mHealth initiatives in developed and developing countries to deliver low-cost, personalised and interactive mHealth interventions to reduce tobacco use (see Case Study 7). Additionally, the omnibus resolution on NCDs adopted at the 66th World Health Assembly encourages governments to conduct evidence-informed public campaigns and social marketing initiatives to inform and motivate young people about healthy behaviours and to link these to supporting activities through nutrition education in schools, child care centres and other educational institutions (18).

In some cases, combining a social media approach with conventional social mobilization strategies is the most effective way of changing knowledge, attitudes and practices of young people. National youth-led organisations such as Chanan Development Association (CDA) in Pakistan have shown the effectiveness of broadening access and reach of health promotion messages using traditional and digital storytelling through a combination of interactive/street theatre and media/videos.

Similar approaches adopting visual images and music to promote prevention messages for NCDs are becoming more widely utilised (see Case Study 3). These have the benefits of both reaching communities where access to the internet may be poor or not available but also using social media platforms to widely disseminate images and communicate messages related to NCDs and young people to a global audience.

Utilising the same platforms but in a co-ordinated way can also be effective in changing activities and policies that endorse risk behaviours. Targeted social media campaigns directed at the tobacco, alcohol and the food and beverage industries have had some success in changing attitudes and advocating for legislation to protect young people from adverse impacts of marketing (Case Study 2). These seek to counteract the increasing use of digital media marketing used by some industries, including the alcohol industry that in most countries is not subject to legislated advertising prohibitions despite the evidence of alcohol-related harms in increasingly younger age groups.

An inability to demonstrate the positive effects of different behaviour change tools on behaviours and cost-effectiveness and optimisation of interventions for use in different settings – particularly in LMICs – are some of the current barriers to broad implementation of many of these measures that show early promise (17). Many interventions are implemented as small, pilot projects with insufficient attention to the feasibility of scaling up effective interventions from pilot to national scale; as well as addressing issues of sustainability (see Section 2). The use of these technologies in health is still in its infancy and investment in research is needed now to evaluate impact on health outcomes using standardized measures of success. Identifying the most effective and sustainable mHealth and other digital approaches has the potential to greatly reduce the future social and economic impact of NCDs that are predicted if business continues as usual.

Improvements in the surveillance of health behaviours in young people are another potential key outcome of innovations in technology including mHealth. Globally, data surveillance and coordination for NCDs and NCD risk factors in children, adolescents and youth are variable. NCD prevalence and mortality in those aged 10-24 is not measured systematically. In developed countries, there are some statistics now being collected regularly on the incidence of cancer, diabetes, cardiovascular disease and lung disease (including asthma) in children and adolescents, while coverage for health-risk behaviours in adolescents ranges from 41-86 countries, and is highly variable both across and between regions with Oceania, Eastern and Central Asia and parts of sub Saharan Africa having some of the lowest percentage of population coverage (19). mSurveillance is already being used in some settings to survey tobacco use and other NCD risk factors (14), however, this approach remains largely disconnected from the traditional statistics community at both global and national levels. The post-2015 process needs to bring these complementary processes together to improve monitoring of the health and well-being of children, adolescents and youth, and to use these data for the formulation and implementation of national policies.

CASE STUDY 2: Tune Out Tobacco



The TUNE OUT TOBACCO campaign is an initiative led by *The Campaign for Tobacco-Free Kids* aimed at stopping marketing of tobacco at major international music venues. The campaign has a particular focus on Indonesia where concerts popular with young people are regularly sponsored by cigarette brands with alarming success – an estimated 78 per cent of current Indonesian smokers started before the age of 19 years.

Many top musicians have already refused to perform at tobacco-sponsored events. For example, in April 2010, Kelly Clarkson and the organiser of her Indonesia concert withdrew sponsorship by the LA Lights cigarette brand after coming under pressure from fans on her social networks, tobacco control advocates and international health groups through a co-ordinated traditional and social media campaign. This included the establishment of an action website, tobaccofreeidol.com, where people could send emails to Clarkson's management or post messages on her Facebook page and Twitter account. The story was covered extensively by international media, entertainment media and blogs and Indonesian media. Fans of Clarkson and advocates posted hundreds of comments on Clarkson's Facebook page and Twitter account and sent more than 1900 e-mails to the singer's management company asking her to drop the tobacco sponsorship.

As a result, branding was removed from outdoor billboards and tickets, and online promotions featuring the LA Lights logo were taken down. Advocates attending the concert confirmed that there was no tobacco advertising or promotion at the event. Following cancellation of the sponsorship, editorials in two widely disseminated newspapers called for stronger tobacco control laws in Indonesia, including tobacco advertising bans that would stop tobacco companies from sponsoring events.

http://global.tobaccofreekids.org/en/industry_watch/case_studies/jakarta_indonesia_kelly_clarkson

<http://www.tobaccofreekids.org/microsites/tobaccofreeconcerts/index.html>

Behavioural Risk Factors for NCDs

A significant number of children and adolescents die from NCDs, and the vast majority of behavioural patterns that underlie NCDs start during adolescence. Physical inactivity, tobacco use, unhealthy diet and the harmful use of alcohol are strongly associated with and causally linked to NCD-related morbidity, mortality and disability. As these are modifiable behaviours, there is significant scope to effect behavioural change and thereby contribute to the prevention of NCDs.

Alcohol: Alcohol use is the largest single contributor to risks to health in young people accounting for 7% of incident disability-adjusted life years (DALYs) in young people aged 10-24 years (20). Alcohol use starts at a young age: 14% of adolescent girls and 18% of boys aged 13-15 years in LMICs are reported to use alcohol. Globally, alcohol consumption is responsible for 5% of all deaths of young people between the ages of 15-29 years (21).

Tobacco: Nearly one in five of the world's adolescents aged 13-15 years use tobacco, and more than one in ten use tobacco in a form other than cigarettes (22). The overall rise in tobacco use in adolescents in many developing countries will have devastating future effects on adult health – Tobacco use is responsible for five million, or 12% of all deaths of adults above the age of 30 globally each year (23).

Physical Inactivity and Unhealthy Diet: Much of the world is experiencing upward trends in childhood overweight and obesity. Although the prevalence of overweight in high-income countries is more than double that in LMICs, three quarters of the global total live in LMICs (24). If trends are not reversed, increasing rates of childhood overweight and obesity will have vast implications on healthcare costs and in turn economic development (24).

Physical activity provides fundamental health benefits for children and youth, yet an analysis of data on physical activity available for 85 countries showed that with the exception of boys aged 13 years in Slovakia, no country had more than 50% of either boys or girls achieve recommended exercise levels (19).

SECTION 1: Harnessing the Culture of Technology for NCD Prevention (Continued) Across the Life-course

Promoting RHD Prevention Messages to Young People via Digital Platforms

Rheumatic Heart Disease (RHD), a chronic heart condition caused by rheumatic fever (RF), is the most common acquired heart disease in children. It is estimated that RHD affects more than 30 million people worldwide and kills more than 200,000 individuals each year, with many more disabled by this disease and its long-term complications. Today, RHD is largely a disease of the developing world with some estimates showing that three out of every 100 children and adolescents in developing countries are affected by this condition, with serious costs to social and economic development in LMICs. At the 66th World Health Assembly in May 2013, the omnibus resolution on NCDs was adopted that recognises that children can die from treatable NCDs, including RHD, type 1 diabetes, asthma, and leukaemia, if health promotion, disease prevention, and comprehensive care are not provided (18).

Further investment in the education of health professionals and the community of the importance of prevention is essential, especially to reach young people in regions where RF and RHD are endemic (25). With increasing access to ICTs in developing countries, novel community-based approaches targeted at young people are reaching those most affected and at risk of this disease.

CASE STUDY 3: Giving Adolescents a Voice through a Short Film about Rheumatic Heart Disease in South Africa



According to the WHO, RHD is one of the four main NCDs affecting children and adolescents in low- and middle-income countries.

The STOP RHD ASAP Program at the University of Cape Town, South Africa, funded by Medtronic Foundation, collaborated with a local private film production company to produce a six-minute short film creating awareness of rheumatic heart disease. An original soundtrack was written by students at Cape Music Institute (CMI), which is a local college educating children and youth from low-income communities.

The documentary, entitled *Sore Throat Can Lead to a Broken Heart*, was filmed in two low-income neighborhoods, Langa and

Photograph courtesy of Urban Soul Productions and Communications

Bonteheuwel. The film uses story-telling and role-modeling theory, which previous research has shown to be effective. It captures a sense of authenticity, showcasing real-life experiences and voices of the communities in an authentic way relevant to its audience.

Four adolescents in various stages of RHD were filmed and interviewed in their own communities, with no script or agenda. Conversations took place naturally as they were filmed playing chess at home, playing soccer in the street, skating at the ice rink, and playing music in a band.

Capturing their real lives on film illustrates the affirming key message: *“Being aware of your body and taking responsibility for your health is a start to a happy life and even if you already have rheumatic heart disease you can still live a normal and functional life.”*

Greg Davids, the Managing Director of Urban Soul Communications, defines his vision for the film: *“We wanted to get an account of their lives, circumstances that led to Rheumatic Fever and how their lives have been affected by this condition, and we know that rheumatic heart disease is largely a disease born out of poverty and we wanted to be able to depict this environment, and show that through a number of simple health options, people could live better and we wanted the kids to reflect this. We also wanted to show that they were otherwise normal kids, living in normal environments getting on with their lives.”*

Acknowledgement: Lauren Simone Watkins – on behalf of the STOP RHD ASAP Program

ASAP – Advocacy, Surveillance, Awareness and Prevention

To view this short film, go to: <http://www.youtube.com/watch?v=HLEepJKMz3Q>

For more background information on RHD, go to www.rhdafrica.org

CASE STUDY 4: Using Technology to Create Rheumatic Heart Disease Awareness among School-Going Children in Kenya

Rheumatic heart disease (RHD) is the most common cardiovascular disease in Kenya and mainly affects school-going children. As a preventable disease, its incidence may be significantly reduced by educating the community on preventive measures. The role of innovative training approaches (technology-based) among school-going children was demonstrated during a project by medical students from the University of Nairobi, Kenya.

The project utilized an interactive digital module from WiRED international, a US-based, non-profit organization working in Kenya. The module had simplified animated presentations linking sore throat, rheumatic fever and RHD, as well as ways of their prevention. It also comprised of interactive questions within the presentation. On clicking the correct answers, the program applauded the students and reinforced the correct response; whereas on clicking the incorrect answer, the program noted the error and provided the correct response. Such immediate feedback is vital to learning.

To test the module's effectiveness, upper primary pupils from two schools were randomly assigned into control and experimental groups. The experimental group was trained using the module, while the control group did not have any teaching. Both groups then answered 23 multiple choice questions (MCQs). During a follow-up visit one week later, the students were re-administered with the same final MCQ exam.



After analyzing the first visit tests, the experimental group had higher average scores compared to the control group (16.3 ± 2.5 vs. 10.5 ± 2.3 marks; $p < 0.001$). The follow-up test results were maintained at 15.7 ± 2.7 for experimental and 10.4 ± 2.4 marks for control; $p < 0.001$.

In conclusion, the use of interactive digital modules to train school-going children on RHD aimed at increasing knowledge and awareness are feasible, efficacious and sustainable, and thus could potentially reduce RHD toll. If tailored to the specific learning needs of the children and applied more widely, the results could be highly beneficial.

Acknowledgement: Duncan Matheka and WiRED International

CASE STUDY 5: Moonshine 'Moving Pictures Advocacy'

Moonshine Movies is a multi-award winning independent film production company specialising in creating moving picture projects of all forms that move audiences to action. With their unique visceral power, movies have the capacity to harness the mind and spirit unlike any other medium.

Films are a powerful and effective way of delivering a message to an audience and encouraging them to care about a social issue. The visual element of the story telling is unique and allows a deep level of audience engagement that can be intimate and emotive. Documentary story telling is not new, but the ability to deliver it in various forms across emerging digital communications platforms is, and this is where the real benefits to an advocacy approach like this lie. Films can not only raise awareness but help audience to care, get involved and become part of the solution.

By working closely with our partners, we've been able to create projects that have brought issues to light and helped generate real world outcomes. We recently completed the successful LIFE Before Death documentary series, which advocates for better access to pain relief and palliative care globally. While we were on this journey we learned that 12 million children worldwide can benefit from paediatric palliative care but access to services remains inaccessible or under resourced in many countries. However, there are some wonderful organisations and individuals pushing to get this essential resource on the agenda.

This is where we come in, by communicating key messages through powerful human stories across multiple platforms, audiences are encouraged to engage and empowered to take action. Little Stars is an example of such an initiative.

It is a series of films, short and long, about the surprisingly life-affirming stories of children around the world living with life-shortening illnesses. Against the odds, these very special kids are making the most of every moment thanks to the support of their families, in harmony with passionate 'palliative care' teams. www.littlestars.tv. Take Heart is another example. A moving picture advocacy project designed to put Rheumatic Heart Disease (RHD) on the global media and public health agendas. RHD is preventable, but it currently affects over 15 million vulnerable children worldwide. The project will create a collection of films reaching out to the public and decision-makers, communicating the global scale of RHD and the impact it has on communities all around the world through the stories of people living with the disease and those who care for them. www.takeheart.tv

Please visit www.moonshinemovies.com for more information about 'Moving Pictures Advocacy'.



SECTION 2: Harnessing the Culture of Technology to Manage NCDs in Young People

By removing traditional geographic and economic barriers to health care, communication technologies have the potential to increase the capacity and quality of NCD services for young people, and to enable them to better manage their own health (26). Mobile health (mHealth) applications are increasingly being developed and implemented across the health sector in both developed and developing countries with WHO reporting that the vast majority of Member States have at least one mHealth initiative in their country (13) (Case Study 7). The increasing attention on applying mHealth solutions is largely attributable to the ubiquity of mobile phones as well as the convenience, user friendliness, and relatively low cost of mHealth applications. While other applications are being developed across a diverse range of digital platforms, simple text messaging platforms are the most pervasive and have the potential to substantially reduce the NCD burden using cost-effective and existing technology (27).

The opportunities to deliver mobile solutions for management of NCDs (in addition to prevention of NCDs) in young people in an equitable manner are rapidly improving with unprecedented levels of mobile-cellular subscriptions. The latest figures from the International Telecommunication Union (ITU) show that global mobile-cellular subscriptions are approaching 100% (12). While Africa has the lowest rates at 63%, some countries are already at market saturation. For example Safaricom, a Kenyan mobile phone operator has nearly as many subscribers as Kenya has adults – 19 million people from a population of 43 million (13). The worldwide mobile health revenue is expected to reach about US\$23 billion across all stakeholders – mobile operators, device vendors, healthcare providers and content/application players – by 2017 (28). Chronic disease management and post acute care services are expected to garner about 70% share, corresponding to almost US\$10.7 billion in 2017, with the bulk of revenues coming from the former (28).

Lessons learned from the communicable disease experience in malaria and HIV prevention as well as existing programs in Maternal and Child health can be used to shape the way this technology is applied to the management of NCDs. Innovative partnerships such as MAMA (Mobile Alliance for Maternal Action), that delivers evidence-based, culturally sensitive mobile messages to new and expectant mothers through mobile phones are leading the way in developing mobile health solutions with the underlying goals of scale, sustainability, and impact. MAMA is also committed to providing evidence-based information using adaptable messages that are based on WHO and UNICEF guidelines and have been developed in close collaboration with global health experts.

Programs such as Mobile for Reproductive Health (m4RH) have demonstrated the ability to reach young people, aged 10-24 through these applications in developing countries. Building on the experience of programs such as m4RH and others, mHealth has the potential to assist health workers to engage young people to provide health information on NCDs and to direct them to local, quality health services. There is also the potential to enable young people to better manage their own health. For example, using smartphone applications to assist young people to track their blood sugar levels, helping them to control fluctuations and reduce the likelihood of harm.

Harnessing technology to address gaps in the training of community health workers (CHWs) and equip them with the skills and knowledge to engage young people in the prevention and management of NCDs will be critical to build the local capacity needed to sustain interventions, but also to ensure that children and adolescents receive best practice support and care (29). Online learning and mHealth initiatives have been shown to be effective in training health workers through technology enabled multimedia materials including video and animation (29).

CASE STUDY 6: Embracing Culture and Technology to Support NCD Communities

The majority of young people living with NCDs and disability in low- and middle-income countries (LMICs) are exposed to enormous global inequities. In multisectoral partnership with others, Australian-based non-government organization CLAN (Caring & Living as Neighbours – www.clanchildhealth.org) is demonstrating that a community development approach to empowering families of young people who are living with NCDs and disability – bringing them together as one for education and support – is not only culturally acceptable in a range of LMICs, but also affordable and sustainable.

In 2013 the Vietnamese Muscular Dystrophy (MD) Community came together for the first time, with over 100 families of young people with MD uniting as one to learn more about the best ways to care for their young people. Youth leaders were elected into Club Executive positions (in no small way chosen because of their graduate studies at University in Technology!), and pledged to utilize their skills with computers, social media, email, mobile and other technology to help this new community of families stay connected and collectively drive ongoing action to ensure all young people living with MD in Vietnam will enjoy the highest quality of life possible in future. Club planning ensured technology was utilized to its fullest potential to help raise awareness and understanding – from printed booklets (edited via email and printed locally) to translated You Tube cartoon clips that explain MD in basic terms – ensuring all parents (be they farmers or tertiary educated professionals) left feeling empowered as individuals and capable of driving ongoing action as a community.

Observers attending the MD Club meeting noted that families visibly shifted throughout the day from quiet and despairing individuals to inspired, almost joyful members of a culturally acceptable and empowered non-geographically based community network. Community development approaches that embrace culture and technology are demonstrating that cost-effective, population based change is possible for young people who are living with NCDs and disability in LMICs, and support from policy makers to ensure existing health and education systems support such initiatives must be a priority for all governments.



In addition, knowledge transfer and skill development can be enhanced by engaging CHWs in the development of locally customised content including translation into local languages and consideration of culture (29). For more specialised training, online education programs exist in some areas of NCD management. For example, the St Jude Cure4Kids international medical education web site and online collaboration centre that provides high quality content for continuing education and web communication tools to support collaborations among paediatric oncologists and health professionals in 187 countries (<https://www.cure4kids.org/ums/home/>).

Beyond education, mHealth solutions can assist frontline health workers to share information in real time, saving time and reducing costs (30). In rural areas where paper-based data collection and submission to district-level reporting systems require hand delivery, traditional techniques are being fast-tracked from paper-based to electronic or mobile-based tools, speeding monitoring and surveillance, as well as enhancing accountability. In addition to compressing time, new opportunities can be created to strengthen action across the health system. For example, employing mHealth solutions to improve the efficiency within supply chain management to avoid stock outs of essential medicines including pain medicines for paediatric palliative care. Mobile tracking or mTrac, an SMS-based technology, is already being used in some settings to connect hospitals to the national drug chain. In Uganda, mTrac is being used to capture real-time data on availability of essential drugs so that bottlenecks are identified rapidly and addressed. Over 57 districts have received mTrac training so far and over 1,000 health facilities are submitting data via mTrac (31).

Experience of programs in maternal and child health indicate that mHealth services targeting new and expectant mothers involve a broad range of private and public partnerships in the planning for promotion and outreach, content and format, and pricing of mHealth services. Similarly, innovative partnerships will be critical to ensure the necessary resources for building sustainable interventions against NCDs and to facilitate the transition from pilot programs to strategic large-scale deployments. Initiatives targeting NCDs and behavioural risks in young people should also aim to be integrated with other existing and emerging mHealth strategies directed towards this age group exploring potential synergies across health and reproductive issues, maximizing reach and impact.

WHO found that a lack of supporting policy was one of the key barriers to mHealth implementation (13). Governments are key stakeholders in mobile health – they are in a position to influence the uptake of mobile health by formulating policies that promote market growth; instituting regulations for the certification of devices and applications and driving standardization (27); and driving awareness among health professionals and the community of the benefits of mhealth solutions (28). Additionally, strategic alignment of mHealth solutions within existing health system priorities is required so that mHealth and other technology driven interventions are integrated within national adolescent and child health and NCD plans.

CASE STUDY 7: Be He@lthy, Be Mobile – A ground breaking new partnership between WHO and ITU to focus on the use of mobile technology to improve NCD prevention and treatment

This new UN initiative will harness the best mobile technology available and make it accessible for all countries to fight NCDs. A number of countries are already using mobile technology to deliver health promotion messages on the NCD risk factors; survey the epidemic; persuade users to change unhealthy behaviours; and to help countries implement national laws on NCDs. This initiative will take these successful pilots and scale them up in other countries. WHO will provide the technical assistance and ITU will help implement country projects through government partnership with support from the private sector.

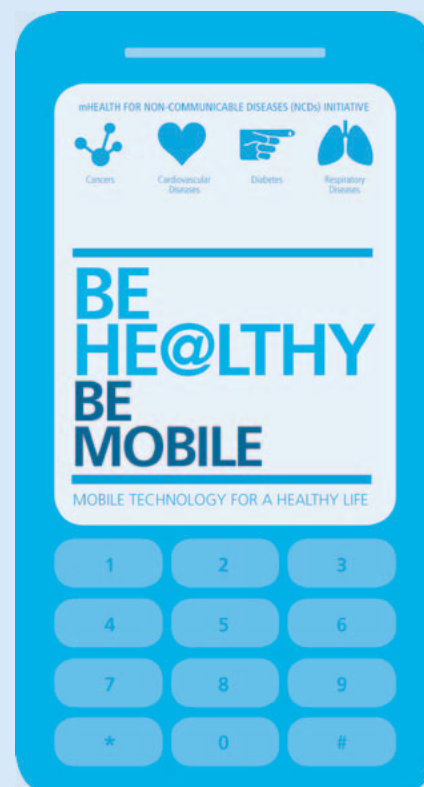
The initiative, in its initial four-year period, will scale-up mobile technology in eight priority countries (at least one in each region) for NCD prevention, treatment and policy enforcement. Activities will be two-fold: mHealth operational projects will be implemented within countries, and standard operating procedures developed for running mHealth NCD intervention packages to support more traditional NCD prevention and control work. Mobile solutions will be primarily sms or apps based and will include a range of services including mAwareness, mTraining, mBehavioural change, mSurveillance, mTreatment, mDisease management and mScreening building on existing successful pilots and scaling them to a population level. A country will select its intervention by identifying its priorities from criteria such as:

1. Weight of disease burden for a specific NCD or risk factor on the population
2. Disease priority in the national health agenda
3. Existing technology that they would like refined through the initiative
4. Desire for a rapid implementation (SMS) or a longer project (building a tailored smart-phone app, or a full mobile platform for example for screening and treatment).

After identifying priorities, a country can then pick solutions from the WHO/ITU mHealth program's 'juke-box' of possible approaches selected from evidence collected around the world. Opportunities to tailor mHealth to life-course and youth-focused NCD action is enormous.

Costa Rica was the first country to officially enter the mHealth for NCDs program. The government's priority was to reduce the number of tobacco-related diseases in the country. They approached the WHO-ITU program for guidance on approach and intervention models. The program has been working with them since January 2013 to produce a mobile cessation program for smokers in Costa Rica wanting to quit. This is currently being introduced into the country, and an initial run of the program will be fully operational in September 2013.

<http://www.itu.int/en/ITU-D/ICT-Applications/Documents/faqs.pdf>



SECTION 3: Building Social Capital Against NCDs

The rapid means in which technology connects young people with each other and the world is key to spreading knowledge, shaping attitudes and behaviours in informal or non-formal settings that will ultimately mitigate the impact of NCDs on young people. Technology builds social capital through connecting young people regardless of place or time and providing a platform for the inclusion of traditionally excluded populations such as girls and women, ethnic minorities, and persons with disabilities – groups previously marginalized due to cultural, social and geographical circumstances.

Larger social networks facilitate meaningful participation on a global scale – it allows youth to express and access ideas, increases unity, transparency, accountability, and responsibility for initiatives that affect their lives. A stronger presence also serves to empower young people, allowing them to exercise their rights to participate in the policy making process that affects their lives. The space and level of participation is increased if governments and international organizations can take notice and help to mobilize youth leadership in the NCD discourse. For example, a recommendation stemming from the outcomes of the Bali Global Youth Forum of United Nations Member States in 2012 was that the United Nations should appoint a young Special Advisor on youth, for issues such as health, education, etc (32). Ideally, governments and international bodies will endorse and embrace youth channels of social and political participation within the NCD discourse.

Within the NCD discourse, young people are increasingly taking action to build a social and political voice to address NCDs and challenge governments and policy makers to prioritise NCDs within the global health and development discourse. Networks such as the Young Professionals Chronic Disease Network (YP-CDN) and NCDFREE (see Case Study 8) are using visual images and social media to communicate the facts about NCDs and connect a social network of global citizens – supporting those affected by and solving NCDs in the planet's poorest communities (<http://ncdfree.org/>). Other initiatives such as the 100 Campaign aim to go outside the 'business as usual approach' to diabetes to build a social movement that brings to light the inequities in insulin delivery, and bring awareness to the broader issues of access to affordable medicines for young people living with NCDs (<http://100campaign.org/>)



The power of peer-to-peer communication through different digital platforms to disseminate positive messages and build grassroots advocacy is evident in many areas of health affecting young people, including NCDs. For example, AYUDA is a volunteer-based organization that empowers young people to become agents of social change within diabetes communities around the world. AYUDA trains youth volunteers to become global advocates for diabetes through online training, fundraising and on-the ground experience. Volunteers, who come from all over the world, travel to countries such as the Dominican Republic to work together with in-country youth leaders living with diabetes to create camps and other outreach activities for children and youth living with diabetes. The AYUDA volunteers in turn learn how to better manage their own health and are empowered to become well-informed advocates for diabetes at a global level.

Governments can assist young people moving beyond empowerment to engagement by partnering with their young constituents to remove the barriers – legal, political, and regulatory – that hinder young people from exercising their full potential as agents of influence and change. In the process of political decision-making, there should be an institutionalized mechanism that emphasises the need for youth leadership and a representative voice, particularly for marginalized and excluded groups (see Case Study 9). The current fight against NCDs largely lacks the voice of youth – the needs of young people living with and in danger of developing NCDs are unclear. An urgent call to action is needed for the meaningful representation of young people within the NCD discourse, followed by political and financial commitment by governments to address these issues. Only by understanding the specific needs of young people within the NCD arena, can NCD policies and programs be developed in accordance with the principles of equality, non-discrimination and inclusivity. The participation of young people is a pre-condition for a comprehensive NCD dialogue (see Case Study 10).

CASE STUDY 8: NCDFREE – A Global Social Movement Against NCDs



NCDFREE is an extraordinary movement led by the Young Professionals Chronic Disease Network and the Australian design firm Local Peoples, coordinated and catalysed by two young brothers – Alessandro and Giuseppe Demaio, both passionate about playing a role in creating a world free of preventable NCDs.

They aim to gain social and political support and through the power of social movements, be able to engage people globally to incite action and commitment to fight NCDs.

In March 2013, NCDFREE launched a crowd sourcing campaign with the purpose of lending a voice to local change-makers in developing countries and celebrate their efforts in the fight against NCDs. The campaign was successful in bringing global attention and awareness to NCDs and in raising the funds necessary to create a series of films that will highlight the work of these young change-makers from developing countries. These films aim to give NCDs a face by profiling inspiring change-makers from the 'frontline' in developing nations to help others understand who is part of the story so that it becomes easier for people to get engaged and get motivated. The films will be launched at a series of global symposia – first Harvard, then Melbourne in 2013.

More recently, the NCDFREE movement has launched a second campaign called the NCDFREE Europe Challenge. Ahead of a meeting of European Ministers and the World Health Organization in July, in Vienna, NCDFREE is doing its part in ensuring that NCDs be a priority item on the agenda. The recently launched campaign calls for crowd-sourcing of video footage – a call to action for the presentation of local work in NCDs. The videos will then be showcased at the conference, and be used as an example of the importance of having NCDs prioritised and the engagement of people from around the world.

To read more about this campaign and for more information, please visit NCDFREE: <http://ncdfree.org/>

SECTION 3: Building Social Capital Against NCDs

(Continued)

CASE STUDY 9: Reaching New Audiences to Build Awareness of Disabilities



On 30 May 2013 UNICEF launched its flagship report *The State of the World's Children 2013: Children with Disabilities* (33). The report brings global attention to the urgent needs of a largely invisible population, and provides a platform to reach a broad audience with stories of children with disabilities.

One of these stories comes from Nguyen Phuong Anh, a Vietnamese girl who uses her talent and determination to inspire others. Nguyen Phuong Anh was born with osteogenesis imperfecta, or 'brittle-bone disease', a genetic disorder causing fragile bones. *"My bones have broken 30 times or more,"* she says. *"We stopped counting because we thought that it didn't matter anymore."* Despite her condition, Phuong Anh's fighting spirit and supportive family have enabled her to become a role model in Viet Nam. Since the age of eight, she has used her vocal talent at Voice of Vietnam, broadcasting radio messages to rural villagers. She also connects to numerous friends globally through social networking.

Her big moment came, however, when she auditioned for Viet Nam's Got Talent, a television show that brought her national recognition, inspiring millions with her singing. Phuong Anh says, *"The amount of support people gave me was so surreal that it made me feel more powerful, and I believed more in what I do. Now, people would still come up to me – people with disabilities or not – and say that I inspired them. And that's, like, my biggest goal in life. So what could be more amazing than that?"*

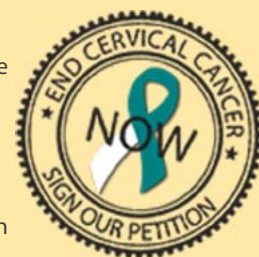
Working as a Friend of UNICEF Viet Nam, Phuong Anh continues to deliver her message to help children with disabilities. *"You can do a lot of things if people believe in you and actually treat you equally. So, with my voice, I hope that I can raise awareness everywhere I go about how we should be nice to everyone, especially people with disabilities, because you know attitude can change so much."*

At a recent Club meeting in Hanoi for over 75 families of children living with brittle-bone disease, a video of Phuong Anh singing was streamed off the internet. Phuong Anh sang *"No Dreams Too Big"*, and through her music and words (the song was penned by a member of the Filipino osteogenesis imperfecta support community) inspired all children and families in the audience to believe in themselves, never give up and strive to fulfil their own potential in life. Culture and technology combined in this moment to encourage and support children living with brittle bone disease and disability.

http://www.unicef.org/infobycountry/vietnam_69360.html

CASE STUDY 10: The Cervical Cancer e-Petition – Healthy Caribbean Coalition

The Healthy Caribbean Coalition (HCC) is using the eHealth platform to build public awareness and create social advocacy movements from the grass-roots which drive improved cervical cancer policies and programs and simultaneously increase demand and uptake of these services. Using social media young Caribbean people are being asked to stand up and take action by signing the first of its kind in the region – electronic petition which requests Heads of Government of Caribbean Countries to increase Caribbean women's access to affordable Cervical Cancer screening. This goal of the petition supports the internationally and regionally agreed goal of 80% coverage in cervical cancer screening by 2025 and the WHO Best Buy Interventions in particular for cancer: Screening and treatment of pre-cancerous lesions to prevent cervical cancer.



The HCC, formed in 2008, is a network of non-governmental and civil society organizations from across the Caribbean Region with a remit to address NCDs. Building upon the highly successful 2011 *Get The Message mHealth* campaign in which over 700,000 Caribbean people pledged their support for the UNHLM on NCDs, the HCC is now asking Caribbean women and men to demand universal access to cervical cancer screening. In an historical meeting in March 2013; 20 Caribbean Cancer NGOs representing 16 Caribbean countries came together in an act of solidarity to make a bold statement against cervical cancer. Cervical cancer is the second leading cause of death among Caribbean women with death rates several magnitudes higher than countries such as the USA. More than 95% of cases of cervical cancer can be prevented, so why are 31,700 women in Latin America and the Caribbean dying each year? Comparatively low access and uptake of cervical cancer screening is one of the primary factors contributing to the high burden of disease in the Caribbean.

This initiative seeks to meet young people where they are in the electronic space through social media and arm them with basic information about cervical cancer and the importance of getting the Pap Test thereby establishing positive attitudes and health seeking habits from a young age. The petition is being promoted among young people through social media, traditional media and mobile platforms. Young champions will also be identified as advocates for the cause; using their voices and influence to increase youth awareness and urge young people to sign the petition. Exploiting the eHealth space to create young agents of social change has been heralded as groundbreaking for the Caribbean. It is hoped that the very agency which drives a young woman to sign this petition will also increase her likelihood of seeking a Pap Test. The process empowers young people with the knowledge and the power to be equal partners in shaping health programming and policy particularly within the context of NCDs. The HCC hopes that this project will serve as a platform for increasing regional advocacy efforts of young Caribbean people.

www.healthycaribbean.org

SECTION 4: Reshaping Development through the Lens of a Culture of Technology

New technologies and opportunities for connectivity are creating innovative models for improving health and well-being and promoting development that were not available when the MDGs were formulated. As decisions are being made on the next generation of development goals to reduce poverty and facilitate sustainable development, it is timely to refine and reshape our understanding of and approach to NCD prevention and management within the post-2015 development framework through the lens of a culture of technology.

The Report of the High-level Panel on the post-2015 agenda notes that *'every country that has experienced sustained high growth has done so through absorbing knowledge, technology and ideas from the rest of the world, and adapting them to local conditions'* (34). As such, harnessing the full potential of the culture of technology in young people to reduce the future burden of NCDs must be considered within a contextual framework – the technology platform as well as the content of the intervention must be adapted according to the cultural norms and traditions in each country or region, in order to make a positive impact on the health and well-being of children, adolescents and youth. Additionally, social factors, market-based incentives, and regulatory frameworks at the national level must be considered.

Literacy remains a key issue in the implementation of mHealth and other digital services. Young people have asked that education go beyond primary schooling, not just formal learning but life skills and vocational training to prepare them for jobs (34). In addition to competence in the basic skills of language, literacy and numeracy, young people should be equipped with 21st century skills such as communication and technological literacy (35). Further, specific efforts are required to ensure that girls are included in this agenda. A recent report from the ITU notes that a gender gap exists in use of technology and is more pronounced in the developing world, where 16% fewer women than men use the Internet, compared with only 2% fewer women than men in the developed world (12). Programs such as the Intel® Learn program (<http://www.youtube.com/watch?v=OyeR68IV2SI>), an education initiative that provides technology education to youth around the world has been able to reach large numbers of girls and women and enhance their technology skills, critical thinking, and self-confidence, improving their effectiveness as students, community members, and businesswomen (36).

Ensuring a successful transition to the workplace is essential. Youth unemployment is at crisis levels – global youth unemployment is estimated to stand at 73.4 million in 2013, an increase of 3.5 million since 2007 (37). The social implications for those young people out of work and unable to access services can be devastating. For young people living with an NCD, the dual burden of unemployment or underemployment plus an NCD can push them further into poverty and poor health, unable to afford effective and quality medicines and health services. Employment difficulties experienced by young people may also increase the likelihood of adopting NCD risk behaviours such as alcohol abuse and vulnerability to mental health problems. According to the World Economic Forum, *"Although research on the global economic effects of non-communicable diseases is still in a nascent stage, economists are increasingly expressing concern that NCDs will result in long-term macroeconomic impacts on labour supply, capital accumulation and gross domestic product worldwide with the consequences most severe in developing countries ... Globally, the labour units lost owing to NCD deaths and the direct medical costs of treating*

NCDs have reduced the quality and quantity of the labour force and human capital" (38). Re-orientation of the labour market and skill training in technology is being promoted by both the private and not-for-profit sectors to prepare young people adequately for the transition to the workplace. Technology is being used by some companies to reduce the high cost of vocational training utilising 'serious games' to give young people a chance of virtual training at low cost as well as to take work to young people in work deprived areas. Other initiatives are directly targeting girls with the aim of promoting a career in ICTs and addressing the low participation of girls and women in the technology workforce (see Case Study 11).

Greater attention is also needed to progress towards an inclusive development approach whereby young people with disabilities have affordable access to assistive technologies or specially-developed ICTs. It is essential to ensure these young people have equal access to education, culture, and health information and services in order to maximise job opportunities and their full participation in the NCD discourse. As Member States prepare for this year's UN high level meeting on disability and development, it is an imperative that they recognise that in LMICs, a disproportionate number of children, adolescents and youth experience restricted participation and poor quality of life due to NCD-related disability and the associated stigma; and the significant role that ICTs can play in broadening access to NCD prevention and control measures.

The ability of today's cohort of young people to enter the workforce as healthy, educated, productive workers will shape national and global economic prospects. The opportunity exists now to fully engage young people and work towards a culture of accessibility and inclusion to mitigate the impact of NCDs on current and future generations. This goal must be entrenched within a global framework of development and aligned with innovations in education and employment if the gains in economic and social development of the last decade are to be sustained.

CASE STUDY 11: International Girls in ICT Day

International Girls in ICT Day is an initiative backed by ITU Member States in ITU Plenipotentiary Resolution 70 (39) to create a global environment that empowers and encourages girls and young women to consider careers in the growing field of ICTs.

Every year on the fourth Thursday in April, ITU and the global technology community celebrate 'Girls in ICT Day', paying tribute to women's achievements in the field of technology and helping to inspire a new generation of girls with an interest in science and maths. All stakeholders create their own events, tailored to fit their own needs and means, most involving from 20-500 girls.

Since its inception in 2010, the day has been gaining huge momentum around the world, with over 1,300 events organized in 90 countries in 2012, reaching over 30,000 school aged girls worldwide.

Information, pictures and videos from all national and local Girls in ICT Day events are available on the ITU Girls in ICT Portal, <http://www.girlsinict.org>

“We need to communicate what NCDs are, and why they matter to a global audience of young people – the generation who must solve this issue”

Dr Alessandro Demaio, NCDFREE



Photograph courtesy of Mike Hill, Moonshine Movies

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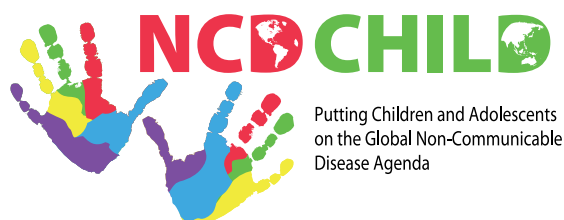
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YOUNG PEOPLE AND NCDs

Harnessing the Culture of Technology



The NCD Child movement is a global multi-stakeholder alliance, championing the rights and needs of children, adolescents and youth who are living with or at risk of developing NCDs. We work together to ensure that issues related to NCDs, children, adolescents and youth are equitably addressed and prioritised in global and national health policy and development agendas. We actively engage and collaborate with governments, foundations, multilateral and non-governmental organizations, civil society, private sector, academic and research institutions to mainstream NCDs and scale up knowledge, experience and resource sharing on NCDs.

NCD Child is committed to the prevention of NCDs throughout the life-course. We promote policies and initiatives that minimise preventable death and disability. This includes a focus on the social determinants of health, as well as relevant behavioural interventions. The NCD Child movement will do all it can to ensure children, adolescents and youth are fully integrated within the global NCD, health and development agendas.



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