

Non-communicable diseases viewed as “collateral damage” of our decisions: Fixing accountabilities and finding solutions in primary care settings

Sudip Bhattacharya¹, Ruchi Juyal¹, Md Mahbub Hossain², Amarjeet Singh³

¹Department of Community Medicine, Himalayan Institute of Medical Sciences, Dehradun, Uttarakhand, ²Department of Health Promotion and Community Health Sciences, School of Public Health, Texas A & M University, Austin, Texas, USA,

³Department of Community Medicine & School of Public Health, PGIMER, Chandigarh, India

ABSTRACT

In the changing global socio-economic and epidemiological landscapes, non-communicable diseases (NCDs) are affecting the health and wellbeing of populations. The burden is worse among people in low- and middle-income countries with more than 32 million deaths attributable to NCDs each year. This scenario can be explained through the concept of collateral damage, where intentional actions often lead to adverse consequences alongside the primary outcomes. Thus, NCDs can be viewed as collateral damage of unplanned urbanization, rapid globalization, fast pace of life etc., In addition, a lack of appropriate public health approaches has aggravated the situation. It is essential to build a collaborative approach engaging public health agencies to ensure that the developmental initiatives are without the threat of collateral damages and are people-friendly. This will help in reducing the burden of NCDs in primary care settings.

Keywords: Cancer, collateral damage, diabetes, lifestyle, hypertension, non-communicable disease

Introduction

Public health experts are involved in making strategies to prevent and control diseases and promoting the overall health of the people. Reasonable success has been obtained in some fields, e.g. smallpox, guinea worm disease, leprosy, polio, neonatal tetanus, yaws, syphilis etc., In the 21st century, disease dynamics has changed across global population. Double burden of diseases, NCDs as well as communicable diseases are disproportionately affecting the low- and middle-income countries, where more than three quarters of global NCDs deaths (32 million) take place annually.^[1,2] Thus, presently, NCDs are a formidable

challenge to the health care administrators. There is a need of looking at this problem from a new angle. Visualizing NCDs as collateral damage to our decisions related to our lifestyle can help in reshaping our policies with an aim to control this group of diseases.

Collateral damage is any death, injury, or other damage inflicted on an unintended target. This terminology is used for the incidental killing or wounding of non-combatants or damage to property during an attack on a legitimate military target.^[3]

In medicine, the adverse effects of antibiotic therapy like the unwanted development of colonization or infection with multidrug resistant organism is a “collateral damage.”^[4] Similarly, another example of collateral damage is when we take antibiotics for respiratory tract infections and patient develops antibiotic associated diarrhea.^[5]

Address for correspondence: Dr. Sudip Bhattacharya, Department of Community Medicine, Himalayan Institute of Medical Sciences, Dehradun, Uttarakhand, India. E-mail: drsudip81@gmail.com

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Death due to the end stage of chronic obstructive lung disease of a housewife due to second hand smoke is a classic example of collateral mortality in public health.^[6]

Further examples of collateral damage may include:-

1. Inability to consume healthy foods like vegetables and fruits (due to poverty) and buying unhealthy processed foods, due to the phenomenon of “sanskritization” a form of social change observed in India where the poor seek upward mobility in social hierarchy by emulating the practices of upper classes; which may lead to the later development of NCD is an example of collateral damage of being poor
2. Inadequate policies and practices may influence the development of NCDs. For example, being unable to provide playground to the children (who prefer to stay indoors and indulge in indoor games) results in a rapid rise in childhood obesity. This is also considered as collateral damage of fetishism with modernization or westernization, with an utter disregard of the traditional culture and allied values
3. Unemployment causes frustration among youths, who may get addicted to alcohol, smoking, and other unhealthy behavior. This is also an example of collateral damage of wrong policies at national level
4. Lack of geriatric friendly environment and infrastructural barriers compels elderly people to lead a sedentary lifestyle. This results in a compromised quality of life and increased chances of developing NCDs. This is also an example of collateral damage of wrong policies at national level
5. Development of various cancers due to eating carcinogen laden foods are also viewed as collateral damage of social, political, and administrative indifferences to the root causes of the diseases.

From these examples, it is evident that, NCDs are aggravating due to a wide range of collateral damages resulting from actions or roles of non health sectors like food industry, civil engineering, cultural factors etc., Moreover, healthcare practitioners limit their roles to diagnose or treat the diseases. The underlying causes of these problems are often ignored. It is quite natural because these factors are not under the purview of health department with limited scope to address the challenges. Historically, non health sectors have been more powerful in terms of oppressing the voices for necessary changes in healthcare.^[7]

It is essential to analyze the underlying causes of NCDs in a given population. Direct or indirect causes of NCDs include but are not limited to rapid unplanned urbanization, unhealthy diets, globalization of sedentary lifestyles, and population ageing. This may manifest in people as raised blood pressure, increased blood glucose, elevated blood lipids, and obesity.^[2] Thus, NCDs may be seen as “collateral damage” of our individual and collective decisions, behavior, religion, ethnicity, occupation, geographical location, genetic composition, public policies, market forces, vested interests on marketing unhealthy products, and so on.^[2,3]

Globalization has become a smart subject for the international economic community. We are constantly reminded that we are all parts of the global village. But this means very little to people during natural disasters, major political tensions, and poverty. In fact, globalization attempts to subjugate developing nations to western influence and are forced to adopt their socioeconomic and health care models. Many public health specialists feel that this trend may not be good for the health of most developing nations.^[8] As a collateral damage of globalization, we are copying the western life style (e.g., food habits) blindly. People are eating more fast foods, sweetened beverages, packed foods containing preservative that are carcinogenic in most cases.^[9]

Fast foods are not healthy at all. In addition, the quality of fast food available in poor countries is inferior to western countries. As an example, the processed food in poor countries contains preservatives and artificial colors that are banned in the western countries. Also, the food safety law is not stringent enough in low and middle-income countries. Thus, people are literally eating poison in the form of regular foods.^[9] Moreover, the concept of globalization is not confined to the economic dimensions. It is also applicable to the diet, lifestyle, and lived experience of the people. So, tragically, the diabesity (diabetes + obesity) epidemic relates to the socioeconomic revolution and its impact on regular lifestyle. This implies that the prevention and control of these NCDs is not entirely within the control of general public or the healthcare community.^[8]

Furthermore, at macro level, globalization is one of the important determinants of NCDs epidemic. It directly affects the health of population by high mortality and morbidity. Also, it indirectly affects the national economies and health systems’ performance. Production and marketing campaigns of the tobacco and alcohol industry in the era of globalization are the major challenges to NCD prevention and control.^[7,8]

Uncontrolled urbanization is another key challenge for increasing the burden of NCDs. Over the last few decades, traditional societies in many developing countries have experienced rapid and unplanned urbanization with resultant collateral damages. This has led to the proliferation of unhealthy lifestyles characterized by unhealthy diet, physical inactivity, tobacco and alcohol consumption; contributing to high burden of NCDs in those populations.^[10]

A study conducted by Bhattacharya *et al.* in an urban slum of northern India, in 2018, showed that urban slum people are taking local burger (unhealthy) worth 10 INR for their meals instead of their traditional foods like *chapatti* and *sabji*, which they considered costlier than the burger.^[11]

Thus, NCDs have emerged as collateral damage of the errors of omission and commission in the decisions taken by the town planners in the name of “development.” Today, most of the sports grounds in developing countries have been converted into residential buildings and shopping malls. Previously, in

each residential sector people used to see a playground where people could perform physical activities. The mushrooming of unplanned and illegal buildings have restricted young and old people to confine themselves within a small room/cabin all day after their working hours outside. Previously after work or study, children used to go to the playground. Now they indulge in videogames, watch televisions (TVs). Although nowadays gyms, amusement parks, and clubs are available, but unfortunately only the creamy section of our society can avail these facilities, as it is costly. Though government is creating open air gyms, but its implementation is patchy and is limited to major cities only. These can also be seen as collateral damage of the policy related decisions taken by the town planners.^[12]

Population growth and ageing is another aspect of understanding the high rise of NCDs. Demographic transition is influencing the population health dynamics in every region of the world. Populations are ageing fastest in low-and middle-income countries.^[12,13]

Some people perceive that after 60 years of their age, they should lead a sedentary life as they have worked a lot for their family in the past. Family members also believe in the same philosophy. The aged persons also perceive that it is their privilege not to work. They are content to supervise and play their role as a decision maker in the family. It is an old tradition in an Indian family, which runs from generation to generation. However, this sudden change in lifestyle, from active to inactive (sedentary), can result in weight gain and increase the chance of NCDs such as diabetes mellitus, hypertension etc., Due to the fear of fall, some people especially elderly confine themselves in their home and pursue a sedentary lifestyle, watching televisions (TVs), eating foods with minimal/no exercise and fall victim to killer NCDs.^[12] These examples again reinforce the concept of collateral damage of the errors of omission and commission in the individual level decisions taken by the people about their way of life.

Health promotion can be a constructive solution to break this vicious cycle of collateral damage, rather than conventional epidemiological approaches used in public health. It is critical to understand that epidemiology is just a diagnostic tool to quantify and analyze the problem, whereas health promotion focuses on action through lobbying, advocacy, formulating laws, creating civic amenities, and imparting health education.^[14]

For control of NCDs, primordial and primary prevention is the key, e.g., by taking healthy diet, physical exercise, making smart city (to prevent obesity, hypertension, diabetes mellitus, injury, and cancer), early diagnosis and treatment (screening for diabetes mellitus, hypertension, cancer etc). Public health legislations (e.g., Fat tax in USA) also have a role here through improved access for people to vaccinations, screening, and treatment. The socioeconomic cultural, political, and environmental determinants are directly linked with harmful use of tobacco, alcohol, physical inactivity, and unhealthy diet or injuries.^[15]

If the modifiable risk factors for NCDs are addressed properly; the burden of NCDs can be reduced. These unhealthy approaches of the town planners, civil engineering department, policy makers, and implementers are responsible for sudden rise in NCDs such as injury, hypertension, diabetes mellitus, dyslipidemia, and obesity.^[13]

Control of NCDs also needs collaboration with engineers, policy makers, environmental specialists, health specialists like yoga specialists, meditation trainers, and nutritionists as this requires the elimination of risk factors of NCDs through risk identification, risk communication, and risk reduction.^[15] That is practically nonexistent at the ground level due to multiple reasons.

Prevention of NCDs can be achieved by promoting healthy behavior like yoga, meditation, regular physical exercise, and avoiding high risk behaviors like taking unhealthy diet (avoiding high calorie foods, fast foods, carbonated sweetened beverages, and foods having preservative) to prevent obesity, stress, hypertension, diabetes mellitus and cancer, etc.

Long term sustainable solutions are required in this scenario. Commitments of the individuals, communities, and countries are also critical for addressing the problems. Public health specialists should play a leadership role both academically as well as in action!

All decisions from different sectors need to be audited whether individual level or policy level (by the administrators from all sectors) for possible or potential collateral damages of our micro (personal) and macro (societal) level decisions, most of which are in non health sector, like industry, marketing, import-export related policy, work culture, etc., For every new venture (opening a liquor shop or fast food center for example), we should insist on authorization of the Ministry of Health and Family Welfare. This way, considering NCD as collateral damage to our decisions related to our lifestyle can help in reshaping our policies with an aim to reduce the burden of NCDs in primary care settings, since at micro level everything related to health is manifested at grass root level. In our opinion, the main War (*Asli Jung*) against NCDs have yet to begin.... strategy is yet to be made, real action has yet to be taken, so that NCDs can be tackled both the ways, i.e., effectively and efficiently.

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Conflicts of interest

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