In 2011, United Nations General Assembly delegates agreed to pursue a formidable global goal: They proposed to cut deaths from noncommunicable diseases—including heart disease, diabetes, respiratory diseases and cancer—25 percent by the year 2025. The body had convened just once before over its 68-year history to devote its attention solely to a health issue. But an often overlooked, yet imminent epidemic threatens to devastate both populations and economies. Of the 36 million deaths caused by noncommunicable diseases in 2008, 80 percent occurred in developing nations.

But how will nations and their health workers go about meeting this enormous challenge, especially when many countries lack resources, strong health delivery systems, funding for drug therapy and even basic registries to record death statistics? The World Health Organization (WHO) was tasked with developing a global action plan with benchmarks that are both achievable and flexible enough to allow for progress in every nation, regardless of socioeconomic status. That plan contains nine targets for preventing some of the world's biggest killers—heart disease, diabetes, chronic respiratory diseases and cancer—and addresses the behaviors that contribute to them. It allows countries to set their own realistic national goals while collaborating on more complex multinational challenges, such as reducing smoking.

WHO also developed a framework that, beginning in 2015, will help nations monitor progress. It identifies the lifestyle choices that feed these diseases, including salt intake, obesity and others while highlighting areas that are not keeping pace.

In essence, this is a public health roadmap offering a way forward for nations currently overwhelmed by chronic disease. When implemented, the plan will save millions of lives.

**STEMMING AN UNACCEPTABLE DEATH TOLL**

By 2025, WHO's goal is for all nations to cut the current 36 million deaths from noncommunicable diseases by 25 percent. Some 14 million people die prematurely from these killers—
The nine voluntary global targets for prevention and control of noncommunicable diseases to be achieved by 2025:

- Drug therapy and counseling: 50% coverage
- Salt and sodium intake: 30% reduction
- Tobacco use: 30% reduction
- Harmful use of alcohol: 10% reduction
- Diabetes and obesity: 0% increase
- Essential NCD medicines and technologies: 80% coverage
- Raised blood pressure: 25% reduction
- Physical inactivity: 10% reduction
- Premature mortality from NCDs: 25% reduction
before the age of 70, with great impact both on families and nations. Meeting this “25 by 25” target would save at least two million lives per year in people between the ages of 30 and 70, based on 2010 mortality data.

The medical and public health community knows how to prevent many of these diseases. Many of the targets identified by WHO reinforce one another, making it possible to achieve wide-scale health improvements through progress on linked actions, such as increasing activity and losing weight.

There has been a dramatic cut in mortality from heart disease and stroke in industrialized countries, including the United States, due to improved awareness and treatment. A public health program in Finland—which once had the world’s highest rate of heart disease—lowered death rates from stroke and heart disease by nearly 80 percent. The program encouraged manufacturers to improve the nutritional content of food. Public information programs also taught Finns to consume less butter and whole milk, stop smoking and seek treatment for high blood pressure. This type of effective initiative has lessons for other countries.

MAKE SMOKING HISTORY

Nearly 15 percent of the planet’s adult population smokes. Tobacco is the world’s leading preventable cause of death, responsible for the demise of some six million people yearly. About one in 10 of those deaths are caused by cardiovascular disease. Smoking impacts circulation by narrowing arteries, damaging the lining of blood vessels and increasing the risk of blood clots. This more than doubles the risk of having a heart attack or stroke and shortens a smoker’s life by about a decade.

As tobacco use continues to fall in industrialized nations, tobacco manufacturers have shifted their attention to the developing world, with dramatic result. Between 1990 and 2009, as smoking decreased 26 percent in western Europe, it increased by more than double that in West Africa, jumping by 57 percent. In China, more than 300 million men now smoke nearly one in three of the world’s cigarettes.

WHO is calling for countries to reduce smoking by nearly one third to conduct national surveys to track tobacco use. Many nations have curbed smoking through increased taxes, graphic ads and warning labels as well as bans on public smoking and sales of tobacco to minors. In Poland, where the smoking rates in men were once very high, tobacco use dropped by 10 percent between 1990 and 1998 after the government passed landmark antismoking legislation.

GET PEOPLE MOVING

By increasing the risk of cardiovascular disease, diabetes and some cancers, physical inactivity contributes to some 3.2 million deaths per year, mostly in low- and middle-income countries.

Just two and half hours of moderate activity per week—even walking—can drop the likelihood of developing heart disease by one third. Moderate exercise even drives down risk in those with high blood pressure or diabetes. Yet WHO statistics show that 31 percent of those older than 15 don’t get this half hour of exercise each day. In general, women are the least active, along with both men and women living in high-income countries where everyday lifestyles mean driving rather than walking, and sedentary jobs are common.

WHO’s goal is to get one in 10 of each country’s inactive adults up and moving, which is more than possible. Well-designed programs work. Among them is an exercise and education program launched in Brazil in 2002. Over the next six years, the numbers of inactive adults in Sao Paulo decreased by 7 percent, though half of the country’s adults are still not sufficiently active.

CURB ALCOHOL USE

WHO’s concept of harmful alcohol use is drinking that causes detrimental health and social consequences for the drinker, the people around him or her and society at large—as well as drinking habits that adversely impact health.

It’s a massive problem. Each year, alcohol kills more people than AIDS and tuberculosis combined, about 2.5 million in all, including more than 300,000 individuals who have not yet reached their 30th birthday. The problem is worst in western and eastern Europe and the Russian Federation; one in five Russian men die an alcohol-related death.

Those deaths are due to injury, cirrhosis of the liver, cancer and heart disease. Heavy drinking can raise blood pressure and increase the risk of stroke. It enlarges the heart and raises harmful triglycerides. While alcohol consumption is relatively low in many developing nations, a steep rise is occurring in Africa and Southeast Asia. Even in countries where abstention is the religious or cultural norm, those who do drink often imbibe large amounts. WHO seeks to cut harmful use of alcohol by 10 percent by one of two tactics—either by reducing the average six plus quarts of pure alcohol consumed per person per year or by reducing the prevalence of binge drinking episodes.

A variety of tools can help, including raising the price of alcohol, raising the minimum drinking age to 21, restricting the

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Graphic by Lucy Reading
sale of alcoholic beverages in grocery stores—and instituting harsher penalties for drunk driving.

SHAKE THE SALT HABIT

There is strong evidence that high salt intake raises blood pressure. Each year, an estimated 2.3 million heart attack and stroke deaths are linked to salt-heavy diets.

WHO recommends a maximum intake of under two grams of sodium per day, which is about a teaspoonful of salt. But globally, the average person ingests twice that. In parts of central Asia, per capita daily salt consumption is triple the recommendation.

In industrialized countries, three quarters of dietary salt comes from processed food. Bread is the leading source in the U.S., followed by cured meats and pizza. In developing countries, most salt is added during cooking, using soy sauce, fish sauce or soup cubes, such as the salt- and MSG-filled soup cubes that are ubiquitous across Africa. WHO is recommending that the world consume 30 percent less.

In the United Kingdom, salt use fell nearly 15 percent following an initiative that included food producers voluntarily lowering salt content in their products. Another successful effort, in Tianjin (China’s fourth-largest city), was a door-to-door education effort that offered smaller spoons to measure salt, a measure that lowered sodium intake—and along with it, lowered residents’ blood pressure.

LOWERING BLOOD PRESSURE

Over the last three decades, the numbers of people with high blood pressure have skyrocketed, jumping from 600 million in 1980 to one billion in 2010, with the highest rates seen in Africa. With more people on the planet, a larger aging population and increasing global obesity, at least half of the 17 million deaths due to cardiovascular disease each year are caused by effects of elevated blood pressure. Hypertension is often a silent killer, with no symptoms or warning signs.

Globally, 40 percent of people over the age of 45 have hypertension, which is defined as systolic blood pressure of 140 mmHg or higher and/or diastolic blood pressure of 90 mmHg or above. WHO is targeting a reduction of 25 percent in every country.

This can be achieved by dovetailing with other goals, the most critical of which is reducing salt intake. But improving nutrition is also important: eating more fruits and vegetables and less saturated fats, and lowering harmful use of alcohol.

CURB OBESITY LEVELS

Obesity is among the most visible—yet most neglected—public health problems. Without immediate action, millions will suffer from an array of serious health disorders because of the growing global overweight and obesity epidemic—also known as “globeesity.” In 2008, 1.4 billion adults aged 20 and older were overweight, a full 35 percent of the population. About 500 million, or 11 percent, were obese. But even the young are affected: About 44 million toddlers under the age of five were overweight in 2012.

These numbers pale in comparison to rates in the United States, where nearly 70 percent of adults are overweight and more than 30 percent are obese. But as U.S. obesity rates creep upward, those in the rest of the world are galloping ahead, rising in high-, middle- and low-income countries, particularly in urban settings. Globally, obesity rates doubled between 1980 and 2008. Many nations now find themselves battling both obesity and malnutrition: In India, two in five children are undernourished, yet one in five is overweight. According to recent U.N. statistics, Mexico—where per capita consumption of sugary drinks is a staggering 163 liters (43 gallons) per year—recently surpassed the U.S. as the fattest nation in the world.

Obese populations have a 69 percent higher risk of coronary heart disease and a 47 percent greater chance of suffering a stroke than those carrying normal weight. Carrying excess weight kills 2.8 million people each year—exceeding the number of deaths from malnutrition. Obesity is also closely linked to diabetes, which can cause blindness, limb amputation, kidney failure and death. In 2008, some 10 percent of the world had diabetes, killing about 1.3 million; worldwide, rates are expected to double by 2030.

WHO’s goal for diabetes is for each nation to halt the rise of both the disease and weight gain in their populations, using fasting blood sugar levels and body mass index as indicators of progress. Studies show that even moderate weight loss can significantly lower risk for both diabetes and heart disease. Evidence suggests it is critical to control weight early in life in order to prevent obesity in adulthood. In a 2013 article published in The Lancet, the authors wrote that amidst burgeoning obesity, public health officials must use the tools they have in hand to avert “a potentially massive worldwide increase of cardiovascular disease.”

PREVENT HEART ATTACK AND STROKE

Decades of medical research show that half of those dying from heart attacks and stroke could be saved if risk factors were addressed and patients were given relatively inexpensive drugs, such as aspirin and cholesterol-lowering statins.

But very few people in the developing world receive the simple, cheap interventions that save lives. In a 2011 study of patients from 17 low- and middle-income countries who had heart disease or who had suffered a stroke, four fifths had not received drug treatment, something the report’s author, Salim

Promoting Cardiovascular Health Worldwide
Yusuf, professor of medicine at Canada's McMaster University, called "a global tragedy."

In many countries, screening is so limited that most people live unaware that they are at risk. A study in 2013 showed that more than half of people with hypertension worldwide do not know they have the condition (compared with 20 percent of Americans). To address this, WHO seeks to increase drug therapy for those at high risk of heart attack and stroke by 50 percent. Goals also include counseling and help in controlling blood sugar.

One way to meet this target is to strengthen primary care services in developing nations—especially screening, early detection and treatment. That will require an expanded medical workforce that is capable of monitoring blood pressure and blood sugar. A pilot study of health care workers in rural and urban India showed that personnel who trained for only two days could reliably use digital blood pressure monitors. An HIV/AIDS care program in western Kenya, AMPATH (Academic Model Providing Access to Healthcare), is transitioning its HIV clinics into more comprehensive health centers that now offer diabetes treatment to more than 2,000 patients who could not otherwise afford it.

INCREASE ACCESS TO DRUGS AND DIAGNOSTICS

The short list of therapies and tools that are most critical for preventing heart disease and diabetes contains cheap items that are commonplace in the developed world, drugs like aspirin, statins, diuretics and insulin as well as basic equipment that includes devices to measure blood sugar, blood pressure and weight. But in poorer countries, these simple items remain scarce. Studies show that nearly two thirds of public clinic patients in the developing world do not have access to safe, affordable generic drugs to treat noncommunicable diseases and only 55 percent of privately treated patients can get generics. Some health care advocates consider this lack of access to basic, lifesaving drugs to be a human rights issue.

The ultimate goal is to provide essential technologies and medicines to 80 percent of patients in both public- and private-care settings. This will require an overhaul of systems used to procure and distribute medicines. Developing countries could see huge cost savings if they could manufacture their own generic medicines and simple diagnostic tests. Bangladesh is one country that has developed a full-fledged pharmaceutical industry, producing hundreds of generic drugs that meet 97 percent of the country’s medication demands.

OUR GLOBAL CHALLENGE

The challenge ahead is ambitious, and looms larger for nations that have long lacked financial and human resources to improve health outcomes. Outside aid is limited. According to a 2010 report “Where Have All the Donors Gone?” from the Center for Global Development, less than 3 percent of the $22 billion in health funding goes toward noncommunicable disease.

Other problems include the lack of effective health systems to deliver basic primary care and the lack of the most basic vital registration systems for health surveillance. Powerful marketing forces of multinational corporations that promote tobacco, alcohol, sugary drinks and processed foods throughout the developing world are also contributing to poor nutrition and increased health risks.

Despite these roadblocks, we feel these benchmarks are achievable—and must be met. If these lifestyle diseases with their long incubation periods continue unchecked, this “slow-motion disaster” (a term coined by WHO Director General Margaret Chan) could bankrupt struggling nations and leave many of their citizens further entrenched in poverty.

The cost of preventing these diseases has been estimated at less than one dollar a year per person in low-income countries and a mere three dollars in middle-income countries where overhead is higher. The cost of inaction is too high, an unimaginable $47 trillion over the next 20 years in health care costs and lost productivity, according to a 2011 report by the World Economic Forum.

What is needed to meet these targets is long-term financial investment, enough skilled health workers to diagnose and treat these diseases, and the political muscle not just of health ministers but also of high-level political leaders. On this front, progress is being made. Mexico’s Congress recently passed a one-peso-per-liter tax on soft drinks and President Enrique Peña Nieto recently appeared on TV to urge citizens to exercise and make a “change of culture.”

The good news is, we know what works to prevent and control these global killers. We know prevention is relatively cheap. The actions we recommend here are not new or startling. But one thing is new—this plan includes a method that allows nations to check their progress. Countries are now conscious of the fact that if they don’t take action, it will be devastating at home and evident to the world.

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