

Training Toolkit 17 Lessons from Wars and Pandemics

Training New Trainers



Lessons from Global Wars and Pandemics

The COVID-19 pandemic has been said to represent the greatest threat to global health in 100 years and the greatest shock to the global economy in 200 years. Over this time major changes in the global governance of health and economics were only achieved after catastrophic failures were revealed by wars, pandemics and economic crises and the emergence of leaders offering new ideas. In this paper we look back at previous paradigm shifts and look forward to a new international order for health and economic management in the light of the current crises. It is clear that new ideas and new leadership will be essential to address the ongoing threat of COVID-19 and to prepare for the changes required to our lives and institutions to address the threat to the health of our planet and future generations.

Looking Back

The Napoleonic Wars resulted in the death of between 5 and 7 million people including civilians. In response Metternich, the Austrian Chancellor sought to limit French power with a new diplomatic order. At the Congress of Vienna, held before Napoleon's return for the Battle of Waterloo in 1815, he introduced the idea of peace maintained by a balance of power between nations, defined by agreed frontiers. On this basis a new multilateral system of diplomacy and conferences was developed, allowing simultaneous negotiation between states, known as the Conference of Europe.

The Napoleonic Wars also fuelled a debt crisis – in the UK government debt rose to over £1 billion, more than 250% of GDP at that time. This debt was funded by consolidated annuities, known as “Consols”, bonds which were sold at a percentage of their nominal value (60%) and provided a fixed return (3%) for an unlimited future. This method of financing meant that the government never needed to pay off the capital sum (though it was decided to redeem them in 2015). The capital gains and returns from Consols benefited the moneyed classes and have been credited with funding the Industrial Revolution alongside the £20 m compensation payments to slave owners from 1833.

While our view of this age is focussed on a small rich elite the great majority of the population shared a life of poverty with life expectancy cut short by infant death and disease. The total world population was 1.1 billion people of whom 1 billion lived in extreme poverty. In European countries average Life Expectancy at Birth (LEB) was some 36 years, while in Asia it was 28 years and in Africa 26 years.

In the years from 1817 to 1818 a Cholera pandemic swept across the world from Calcutta to China and the Middle East, resulting in up to 2 million deaths. This was one of a series of Cholera pandemics spread by global trade that reached London and Washington by 1832. In total 10 to 20 million deaths have been caused by Cholera, which still remains a potent health threat with current epidemics in Yemen and Zimbabwe. The first international body to seek to control the disease was established by the Ottoman Empire as the 1839 Constantinople Supreme Council for Healthcare. European powers followed in 1851, with an International Sanitary Conference held in Paris. This was the first of 10 to consider infectious diseases and their impact on trade and shipping, bringing together at first 7 and then 12 countries. At these meetings doctors were later replaced by diplomats and last by diplomats with medical knowledge at the International Office of Public Hygiene (OIHP) established in Paris in 1903.

This diplomatic system, without any stable structure or funding was undermined by political and economic rivalries leading to the First World War, which resulted in some 40 million casualties and 20 million deaths between 1914 and 1918. Its conclusion with the imposition of the Treaty of Versailles meant that it would certainly not be the “war to end all wars”.

The War had been largely financed by debt. UK debt rose to some 180% of GDP, much of which was secured against overseas loans, which in turn were funded by bonds such as “Liberty Bonds” in the US offering a 5% return. European nations argued for the cancellation of debt, but this was not accepted by the US, the principle source of funding. France demanded \$33 billion in reparation payments from Germany in order to repay its debts and to ensure against German resurgence.

In response to the horrors of the war Sir Edward Grey the British Foreign Secretary proposed the formation of the League of Nations with the support of the US President Woodrow Wilson, in 1919. This was the first universal state membership organisation. The idea was to move to a “parliament of man” with negotiations run by an international secretariat.

Poverty still predominated in a world of some 1.7 billion people of whom 1.55 billion lived in extreme poverty. Health in European countries improved, Life Expectancy at Birth climbed to 48 years while Asia and Africa had barely changed LEB of 29 and 26.5 years respectively.

In the following years 1918-1919 the world influenza pandemic, mistakenly called “Spanish flu”, spread amongst returning soldiers and their contacts, infecting some 500 million people including President Wilson, and resulting in some 20-50 million deaths. The Pan American Sanitary Bureau (PASB) which later became the Pan American Health Organisation (PAHO) had been created in 1902. It played a role in raising awareness and sharing international health information. In Europe there was less international coordination as the League of Nations Health Organization (LNHO) was only developed by 1920. Measures similar to self-isolation and social distancing were recommended by governments.

The vast increase in indebtedness supported the economic boom of the 1920s as investors borrowed to invest. Boom was followed by the 1929 Wall Street Crash and the Great Depression. Increases in unemployment and poverty meant governments were faced with fast rising social costs. To preserve the value of their currencies (at the Gold Standard) they reduced money supply, allowed interest rates to rise, and cut unemployment benefits and other social expenditure. This reduced the amount of money people had to spend. Many countries including the US and UK also introduced import taxes to protect their industries, but this reduce trade. These measures made the depression worse. The solution, implemented by Franklin D. Roosevelt in 1932 was the New Deal, which reversed previous measures through government programmes of investment in infra structure and job creation coupled with support for unionisation and unemployment benefits. While the Great Depression created widespread hardship, studies suggest that it had little effect on indicators of morbidity in higher income countries, except for an increase in suicide rates, showing a significant impact on mental health.

By 1931 Germany had paid the equivalent of less than \$5 billion, but Hitler fostered resentment at the conditions of the Treaty of Versailles and the financial cost of reparations, presented as exploitation by an alien race who could be blamed for German failure. Unemployment in Germany resulting from the Great Depression provided fertile ground for discontent. World War II from 1939-1945 resulted in the death of 50-55 million civilians of whom some 25 million died from war related diseases and starvation and some 20 - 25 million combatants died in Europe, North Africa and Asia.

The Nazi Holocaust focused hatred on people who were said to be of “inferior races” or with other differences, including Jews, Romani, people with disabilities, homosexuals and political opponents, murdering some 6 million people. Those responsible for crimes against humanity during World War II were tried at the Nuremberg Court, a series of military tribunals based on international law and the laws of warfare. The Declaration of Human Rights (1948) established for the first time that other

governments could be concerned with how a state treats its people, and the Genocide Convention of 1948 makes it a crime to commit acts “with intent to destroy, in whole or in part, a national, ethnic, racial, or religious group.” But the use of human differences to encourage: prejudice, bullying, and genocide is still a source of countless deaths and is a shameful reminder of our failure to learn from history. It is estimated that 55 million civilians have died in 89 genocides since 1951.

Franklin D. Roosevelt initiated the Bretton Woods Conference in 1944 to create the United Nations system. This provided a legal, institutional and financial basis for the settlement of differences between nations and peoples and established 9 major institutions (now 19) supporting aspects of human rights and access to services. The Bretton Woods system included the World Bank, intended to provide financial support to low-income countries and International Monetary Fund providing short term aid and advice to any country experiencing financial shock. The World Health Organisation (WHO) was proposed by a Chinese health diplomat Dr Szeming Sze, it was ratified in 1946 and operated from 1948.

Once again war was funded by debt and UK government debt rose to 240% of GDP. The economic impact of the war was moderated to some extent by the European Recovery Program devised by US Secretary of State George Marshall and signed by President Harry S. Truman. This amounted to \$13 billion, 90% of which was provided as grants and 10% as loans. Conditions attached to grants and loans required recipients to adopt modern working practices and open borders to trade. It was seen as a bulwark against Communism and one of the foundations for the relative prosperity of post war years.

This was a time of huge disparity in the wealth and life chances of rich and poor and access to health services. This growing inequality was reflected in the gap between incomes in the richest and poorest countries. In a world population of 2.5 billion people, 1.6 billion lived in poverty. Nearly all the 900 million people not living in poverty lived in Europe, America and Australasia. Advances in medicine such as the wider use of antibiotics in the 1940s and 1950s, meant that life expectancy at birth had risen in Europe to 62 years, across Asia it had risen to 42 years while for Africa the average was 36 years. In the UK reaction to the inequality faced by those returning from combat spurred the creation of the welfare state including the birth of the NHS in 1947.

To address the inequality between nations many international agencies including WHO and UNICEF developed to provide aid and assistance to low-income countries focussing on transmissible health diseases such as Tuberculosis, Smallpox and Malaria. Tuberculosis was a common cause of death throughout the 19th and early 20th century, known as Consumption. Worldwide it is estimated that almost a quarter of the world’s population was infected by the bacterium that causes TB, over half of which were in Asia. By the mid-1950s, 3.5 million children worldwide were being tested for TB every month and over 1 million vaccinated, but even today over 10 m people fall ill with TB and 1.5 m people die as a result each year. The Immunisation programme against Smallpox was more successful, by 1980 the disease, which in the early 1950s had infected some 50 million people each year with a 20-60% fatality rate, was eradicated. Malaria was another priority, by 1950 this disease affected 200 million people, killing 1.5 million people, each year. Dichloro-diphenyl-trichloroethane (DDT) was first used as a pesticide in the 1940s to control mosquitos from spreading Malaria among soldiers. Its subsequent widespread use reduced Malaria but was found to cause serious environmental harm, entering the food chain of animals and humans and endangering health. Use was reduced and discontinued in the 1960s. As a result, Malaria increased during 1970s so attention focused on use on nets and other preventive measures. The disease still affects some 200 million people and kills over 400,000 people each year

Recent Pandemics

Zoonotic diseases passed from animals to humans have become increasingly common some 33 instances of the transmission of mutated viruses have been recorded in recent year.

The human immunodeficiency viruses (HIV) leading to acquired immunodeficiency syndrome (AIDS), developed in Africa in the 1970s having been transmitted from monkeys to humans. HIV/AIDS spread across the world during the 1980s, to infect some 70 million people over this period, about half of whom have died. It was quickly evident that this disease could not be confined to Africa or low-income countries, it was threat to health, peace and prosperity in all countries. Perhaps for this reason international collaboration developed rapidly. It was led first by the WHO and latter UNAIDS working with a great variety of international and national agencies, charities and foundations. It was targeted by the UN Millennium Development Goals (2000 - 2015) and later the Sustainable Development Goals (2015-2030) alongside TB and Malaria. International aid and domestic expenditure on HIV reached an estimated US\$ 20.6 billion in low and middle-income countries by the end of 2017.

Severe acute respiratory syndrome (SARS) began in China's Guangdong Province in 2002. At first Chinese authorities suppressed news of the outbreak, allowing its transmission across the world, resulting in some 8,000 cases and 800 deaths. This underlined the importance of international transparency in health. The SARS pandemic is estimated to have cost the global economy about \$15-\$20 billion.

Partly in response to the SARS pandemic, in 2005 196 countries finally passed into international law the International Health Regulations (IHR), which had been under discussion at the World Health Organisation since 1996. This could be seen as further updating of regulations agreed at the 1851 International Sanitary Conference Paris, intended to control the transmission of Cholera. The 2005 regulations require all countries to monitor health conditions that could represent an international threat and to work together to prevent the spread of disease, without unduly limiting international trade and traffic. Unfortunately, while the intention was clear, monitoring by WHO showed that without support many low-income countries would struggle to measure or control infectious diseases.

Influenza is a zoonotic disease that has been known for thousands of years, its name is derived from an Italian dialect word referring to an illness which was thought to be due to the influence of the moon. It spreads each year in slightly mutated forms, usually originating in the Far East. Globally this is believed to be a factor in some 300,000 to 650,000 deaths each year, mostly amongst older people. In some years Flu is seen as a more serious threat, for example, the "Avian Influenza" pandemics, of 2007 and in 2020 and the 2009 "Swine Flu". Annual costs to the US economy of Influenza are estimated at about \$90 billion a year and probably 3 times this globally. A well-established system identifies new forms of Influenza each year, taking samples from those countries where it originates and developing vaccines to address the specific virus mutation considered most likely to spread.

The weakness of international law in such cases was shown in 2007, when Indonesia withheld samples of Avian Influenza virus on the grounds that these would be passed to a drug company who would then develop a vaccine that would be unaffordable to most people in the region. They claimed that while they had an "informal" agreement to provide the samples and this was implicit in the IHR, the Convention on Biological Diversity (an international agreement signed at the Rio Earth Summit of 1992) upheld their right to ownership of the samples. Indonesia gained support for their stand from a range of low and middle-income countries. This was only resolved after several years of negotiation at WHO.

The Ebola virus disease (EVD) is a zoonotic disease first identified in 1976 in two simultaneous outbreaks in South Sudan and the Congo. Subsequently some 25 further outbreaks attributable to different strains of the Ebola virus have occurred including in West Africa from 2013 to 2016 and in the Congo and Uganda from 2018 and still ongoing. The West African epidemic resulted in some 30,000 cases and over 11,000 deaths. Costs to the West African economies have been estimated at some \$25 billion.

The WHO drew many lessons from the experience of the Ebola outbreak in West Africa. They noted the importance of establishing research and development capability to fast track the development of tests, vaccines and treatments for new disease outbreaks. Rapid turn round of tests and early development of vaccines and trial of new treatments were found to be vital. The importance of protecting frontline staff with personal protective equipment and “safe rooms” was stressed. It was found that survivors of EVD had continuing physical and mental follow up care needs that needed to be recognised at an early stage. Community action was a vital element of the response so community engagement and information sharing were identified as essential elements of both prevention and treatment programmes.

The scale and impact of pandemics also highlights the relative lack of funding for agencies addressing global health threats. The WHO is funded by member states through assessed contributions based on each country’s wealth and population and voluntary contributions from states, agencies and foundations usually directed towards programmes agreed by the contributor. In total they amount to \$4.5 billion in assessed contributions and \$2 billion in voluntary contributions.

Total global aid for health-related agencies and bilateral programmes in middle and low-income countries including by governments and charities amounts to about \$35 billion (about a tenth of the agriculture subsidies paid by OECD countries to their farmers). Total Official Development Aid is less than half the level proposed at the UN in 1970 when a level of 0.7 % of GDP was agreed. These figures are put in context by the economic and social cost of pandemics, which is only one element of the total impact of global health. In 2016 the WHO established a new Health Emergencies Programme to bring together the capability to strengthen preparedness and to respond to health emergencies. This required a “Contingency Fund for Emergencies” that could ensure that money would be available to support a rapid response. This fund has received only 82% of the \$20 million proposed by WHO.

Threats to global health and economics posed by wars and pandemics over the past 200 years such as those summarised here provide a context and scale against which to consider the Coronavirus Pandemic. Like other threats to health and livelihoods it demands rapid innovation. In this instance for the development of testing facilities contact tracing and vaccines, and it will require major investment in the resources needed for global delivery. This pandemic requires a level of community action normally only invoked in times of war, it requires scarce resources, such as critical care beds, ventilators and protective equipment. The requirement to maintain social distancing will inevitably have direct impacts on global and national economies. Further, unlike many previous pandemics, it is most evident in high income countries. Perhaps the most comparable pandemic was the 1918-19 Flu.

There is a great deal of uncertainty, concerning the current Coronavirus pandemic: will immunity develop, will the virus recur either in the immediate future or as a recurrent risk to health, will it perhaps become endemic in countries unable to afford counter measures, mutating as similar viruses do, to return as an annual pandemic?

While there is general agreement that the Coronavirus pandemic will cause a global and national economic shock, the scale of this depends upon the progress of the disease and how governments,

health systems and businesses respond. Current estimates of the possible impact on the global economy range from \$1 trillion to \$2.7 trillion (for a global GDP estimated at \$80 trillion). The need to maintain social distancing has closed workplaces in many countries for at least a month and often longer. Governments in high income countries have therefore provided financial aid to individuals and businesses to preserve their economies. This has been financed by debt funded by central banks that have been required to buy both government and business sector bonds. As a result, levels of government, corporate and personal debt are rising to levels previously unimagined.

This economic shock has come at a time when global debt levels were already extremely high due in part to the 2007-2009 recession, a balance sheet recession caused by mismanagement of high levels of unsustainable private sector debt in the USA and globally. Government Debt to GDP ratios at global level had been approaching 90%, this coupled with corporate and household debt levels which were also rising has meant that the total Global Debt/GDP ratio had risen to 320% in 2020, a total debt of \$250 trillion. The current crisis is likely to push this beyond 350% and perhaps 400%.

The experience of Japan, which has had the world's highest Government Debt to GDP ratio at 240%, coupled with corporate and private debt taking total Debt/GDP to over 500% is relevant. Since the mid 1960s the Japanese economy has experienced a balance sheet recession. To counter this the Prime Minister Shinzo Abe has adopted what is named Abenomics. This is claimed to have three arrows: quantitative easing (or printing money), fiscal stimulus (government spending on infrastructure) and structural reforms (borrowing based on promises to reduce revenue expenditure) to hold interest rates very low and sometimes negative. It has been suggested a fourth arrow should have been taxes on wealth, as inequality increased despite higher employment levels, but this has not happened.

The full social and economic impact will only be realised if and when debts start to be repaid and/or interest rates increase. Debt might be passed to future generations, as in the case of the Napoleonic War debts. It seems likely that debts will lead to disputes between countries. This might involve China as the greatest lender and the US as the greatest debtor, these countries are already engaged in a "war of words" regarding the pandemic. There might be an attempt to reduce debt by restricting public spending as in the Great Depression and the 2007-2009 recession. Alternatively, there might be an attempt to reduce inequality between countries and people by forgiving some national debts, as happened after World War II and is being called for by many agencies. There might even be an increase in personal wealth and income taxes. This happened in the post WW II era, when higher economic growth rates were achieved than in the years since 1980 when neoliberal economic approaches prevailed. In all likely scenarios the poorest countries and poorest people will face greatest hardship.

The current crisis and recent pandemics point to the importance of resilience in respect of health preparedness, economic security and global structures and systems. It is apparent that in all these ways the world was not ready to act together to counter the pandemic or its economic consequences. Global support for health and care systems needs much higher levels of investment to develop surveillance in all countries and to provide emergency resources when necessary. Global economic management must also be strengthened to ensure countries are able to withstand such shocks. This requires a renewed system of global governance with meaningful international laws and regulations and adequate financial resources and powers balanced by a democratic system to engage and empower communities.

Rethinking Our Future

The common lesson from milestones in the management of global affairs and health is that on each occasion major change was only achieved after catastrophic failure of the previous regime. This enabled a reimagining of the system. In each case a leader came forward gaining the trust of the international community by listening to the people and offering a new solution to their needs. We are now at a further paradigm shift point, but where will the new ideas and leadership we need be found?

We now face the most serious threat to our future that the world has ever known. Planetary health is so abused that it poses a clear and present danger to the lives of our grandchildren and the future of the human race. The idea that humans depend upon the health of the environment that sustains us and regulates the climate, air and sea quality and the 8.7 million species that live on our planet is not new. Charles Darwin observed both this dependence and the threat, for example, posed by the loss of coral reefs in 1842. The last 50 years have seen imminent threats to human life and health posed by CO₂ emission, demand for energy, water and food, acidification of the oceans, deforestation and overuse of fertilisers. Many ecologists believe that human impact on nature, is now comparable to five previous catastrophic extinction events over the past 3.5 billion years, when up to 95% of species died out.

We live in an age dominated by global trade, communications (including fake news) and ideas, but we still attempt to address the global challenges that confront us through the structures and systems developed in 1944, when nation states managed national industries, economies and health. Then we talked about “developed” and “developing” countries, assuming there was a single path of economic and social progress, though neoliberal and socialist ideology defined this path in different ways. Health was seen as depending on economic growth, requiring western health systems with doctors and nurses rather than community workers and IT. Infectious Diseases were seen as the problem of “developing” countries and the Non-Communicable Diseases confined to “developed” countries. Our complex, “multipolar” world is now led by shifting coalitions of states, multinational businesses, international NGOs, foundations, cities and civil society groups, who influence action on issues such as global health.

In one lifetime the global population has grown from 2.5 to 7.5 billion. **In high-income countries**, such as the UK, USA and Panama, 1.2 billion people, claim 84% of the world’s income, with GDP per capita of over \$13,000, with almost 3 physicians per 1,000 and average expenditure on health of \$3,000 per capita, of which less than 22% is paid by out-of-pocket expenditure, resulting in a LEB of some 81years. **In upper middle-income countries**, like China, Russia and South Africa, a population of 2.7 billion people live with a GDP per capita of \$4,500- 13,000, with 2 physicians per 1,000 and health expenditure of \$500 per capita 32% of which is paid out of pocket by patients, they achieve an average LEB of 75 years. **Lower middle-income countries** including; India, Nigeria and Zimbabwe, have a population of 3 billion people with a GDP per capita of \$1,000- 4,400, and only 0.8 physicians per 1,000 and average health expenditure of \$130 per capita, 39% of which is paid out of pocket, they achieve a LEB of some 65 years. **Low-income countries**, such as Ethiopia, Afghanistan and Haiti, have a population of 0.7 billion who take just 1.2 % of world income, with a GDP per capita of \$200-1,000, 0.1-0.3 physicians per 1,000 and health expenditure of \$41 per capita, 41% paid out of pocket, LEB ranges from 42-65 years averaging 63 years.

Responsibility for the planetary health disaster must be borne by high and upper middle-income countries, which produce over 85% of CO₂ and other pollutants. Governance of planetary health is, weak, the Kyoto Protocol of 1995 and Paris Agreement of 2015 were too little too late and too weak, as shown when President Trump pulled the USA out of the Paris Climate Change Agreement in 2017.

High income, middle and low-income countries share common threats to health including both Infectious Diseases and Non-Communicable Diseases (NCDs). The WHO have noted: “Low and lower-middle-income countries have the highest proportion of deaths under 60 years from NCDs. In lower-middle-income countries the proportion of premature NCD deaths under 60 years rose to 28%, more than double the proportion in high-income countries. In low-income countries the proportion of premature NCD deaths under 60 years was 41%, three times the proportion in high-income countries”. Slum areas have the highest rates of all forms of disease. While a total 227 million people in the world have moved out of slums since 2000, the absolute number of slum dwellers has increased from 777 million in 2000 to 863 million in 2012 and is now estimated by some sources at over 1 billion people.

Women’s health and education have been noted as crucial to population health and prosperity, because in all societies they are the guardians of family health. In lower income countries larger families are seen as the only insurance for old age. As health improves and prosperity increases family size reduces. For example, in Brazil household size has decreased from over 5 in 1970 to just over 3 today as health, incomes and education improved. This progress was disrupted by the “Global Gag” rule imposed by President Trump in 2017 forbidding US aid to any agency providing information about birth control. The restriction has been applied not only to \$595m for Family Planning Services but all \$9.5 billion US health Aid. Any health service making mention of safe abortion services may expect a sudden funding cut.

Levels of poverty have diminished, in a global population of 7.5 billion, only 700 million people live in absolute poverty, now defined as less than \$1.9 per day. There are rich and poor people in every country but most people living in absolute poverty, live in lower middle income and low-income countries. Most of the poorest people in low-income countries (83%) and many in middle income countries (25%) live in fragile or failing states, which the OECD defines as “Those failing to provide basic services to poor people because they are unwilling or unable to do so”. This often reflects a lack of trust between government and people, often because of conflict or corruption. But there are widening gaps between the richest 1% in every country and 99% of the population. The 8 richest individuals in the world have greater wealth than half the people on our planet.

It might seem obvious that in the face of a global economic depression caused by the pandemic, wealthy firms and wealthy individuals should be asked to contribute more. But in the face of the 2007/9 financial crisis, caused by wealthy bankers mismanaging debt, governments in high-income countries intervened to bail out their financial institutions to protect the savings of high and middle-income people and jobs. To recover the resulting government debt, the strategy adopted by nearly all governments was to reduce spending on public services, including health and social care. The USA even reduced taxation on wealthy individuals and corporations. Many countries also planned to increase expenditure on infrastructure to create jobs. This was based on the neoliberal assumption that capital expenditure would generate returns, greater than the prevailing interest rate, while revenue expenditure on services was seen as unproductive. One reason for this is that national taxation policies are in competition to attract wealthy individuals and firms. Those that increase taxes fear that the mega wealthy will simply migrate and firms will relocate their headquarters to lower tax countries. This requires international cooperation to coordinate taxation and ensure transparency at least for the mega wealthy and international firms.

Global trade, which accounted for 3% of global GDP in 1960, rose to 50% by 2012. It is regulated by the World Trade Organisation (WTO), a non-UN body which enables countries to negotiate trade agreements. Agreements reached through WTO include a “social clause” banning child labour but not

recognising worker rights or environmental protection, which are left to governments to negotiate. Multi-National Enterprises (MNEs) have a turnover of \$24 trillion, almost 30% of global GDP. The world's 10 biggest MNEs together have revenue greater than that of the government revenue of 180 countries combined. Globalisation has brought employment and relative prosperity to middle-income countries, but MNEs can also be seen as the vectors of what has been called a "Global Pandemic of Non-Communicable Diseases". They promote foods, products and lifestyles that lead to early disease and death. Seven out of ten people worldwide now die each year of Non-Communicable Diseases, such as heart and circulatory conditions, diabetes and lung cancer. MNE investment is attracted to countries with lower levels of environmental controls and worker protection in a so called "race to the bottom". They manipulate internal pricing to shelter profit in tax havens like Panama, a firm with a copper mine in Africa can claim its profits are made by a trading office in a low tax country.

Pharmaceutical companies are mostly MNEs, their economic model depends upon Intellectual Property Rights (IPR), agreed at the WTO, which protect patented products. This model is only relevant where a sufficient market exists, able to afford the medicines produced. There are 20 Neglected Tropical Diseases (NTDs) affecting over 1 billion people and 150,000 deaths each year, that do not meet this requirement, except when a drug developed for another purpose is found to be useful. These are sometimes donated for lower income countries. At the same time the world faces a future without antibiotics as resistance rises due to their uncontrolled use for animals and humans and a lack of incentives for the development of new biological solutions.

The failure of the market for HIV/AIDS medicines was partially resolved with the intervention of Nelson Mandela in 2000. This led to the provision of some emergency drugs for low-income countries at much lower prices. Differential pricing for medicines and health equipment would enable lower income countries to gain access to essential medicines and the equipment necessary to cope with pandemics. This could benefit pharmaceutical companies by extending their markets, albeit at lower prices and would help reduce the likelihood that diseases could become endemic in lower income countries mutating to return as further global pandemics. NTDs only found in tropical countries require international funding for research and development and cooperation by Pharmaceutical Companies. This model has one important drawback, corruption! It is feared that differential pricing would increase the practice of selling low priced items back to higher price markets, sometimes even before the product arrives at the intended destination. Without proper controls it might also increase the marketing of counterfeit drugs, which are a major problem in lower income economies. WHO suggest that worldwide sales of counterfeit medicines are over US\$ 75 billion and, 1 in 10 medical products sold in lower income countries is falsified or substandard, with an economic cost estimated as up to \$200 billion annually.

Lack of global governance also allows corruption in both rich and poor countries and health is no exception. It is a major obstacle to development as it breaks down trust between the people and government at all levels and it penalises the poor and powerless. Lower income countries have been estimated to lose more than a 1\$ trillion per year to corruption. The low pay of medical staff, tax laws and havens, lack of regulation and sometimes lax control of aid monies all contribute to the problems. The scale of corruption ranges from petty demands for cash by police or other officials (including public health inspectors, doctors and nurses) to "grand scale" corruption, which can include presidential or ministry level profiteering from trade and aid. In many countries corruption can be described as "systemic" meaning that it is seen as "the way the system works".

Any international body will have its weaknesses, as a large bureaucracy, which will be seen as distant from the global communities it serves. The challenge is not simply to reorganise the UN but to create new channels of engagement with global issues such as health and the global economy. This requires community empowerment and education at every level and in every country. Only when the Earth is seen as Our Planet and we all see ourselves as global as well as national citizens will this be achieved. At national level this could build upon the extraordinary level of community action engendered in response to the Coronavirus Pandemic, with a structure supporting and listening to local groups. At international level one immediate step would be to create a third committee at the World Health Assembly to engage community action for global health, this was proposed as “Committee C” in 2010.

The current generation of global leaders has left the world poorly equipped to face this challenge, with a focus on blaming other nations and institutions and lack of will to work in unity or share sovereignty. Ignoring science in favour of simplistic answers to complex problems, panders to followers but does not take people where they need to be led. This is not leadership but populism. Democracy at national and global levels requires leadership of ideas and ethics, that offers new solutions in times of crisis.

Conclusion

A radical new conception of global governance is essential to our survival. This must entail:

1. A global governance system that engages and communicates with governments and their people providing leadership for national and civil society action for planetary health.
2. International laws that can be effectively applied to Multi-National Enterprises and governments to ensure that they respect the planet and its people and repair any harm they cause.
3. Financing of global systems and structures at a level that reflects the magnitude of these challenges, including coordination of taxes and a tax on global transactions (Tobin Tax).
4. A stronger system of global financial and economic management that ensures that countries retain the resilience necessary to avoid national or global depression and counter corruption.
5. Support for low-income countries that finally makes good on the 1970 UN pledge to provide 0.7% of GDP as government aid.
6. Wider recognition of health as a global issue including funding for health surveillance, vaccines, new antibiotics and Neglected Tropical Diseases.
7. A focus on women’s health and education in lower income countries to encourage a reduction in family size and reduce the global population growth rate.

All these steps require a reimagining of the way we live as communities supported by our planet.

Please note that the figures used are broad estimates rounded in billions and the history is inevitably simplified but these are real people and real problems.

Dr Graham Lister 24 April 2020

Visiting Professor Dept of Health and Social Care of London South Bank University

Senior Fellow of the Global Health Centre of the Graduate Institute, Geneva

Roger Latham

Visiting fellow at the University of Gloucestershire

Past president of CIPFA

Professor Malcolm Prowle

Visiting Professor Welsh Institute for Health and Social Care

Professor of performance management at the Universities of Nottingham Trent and Gloucestershire