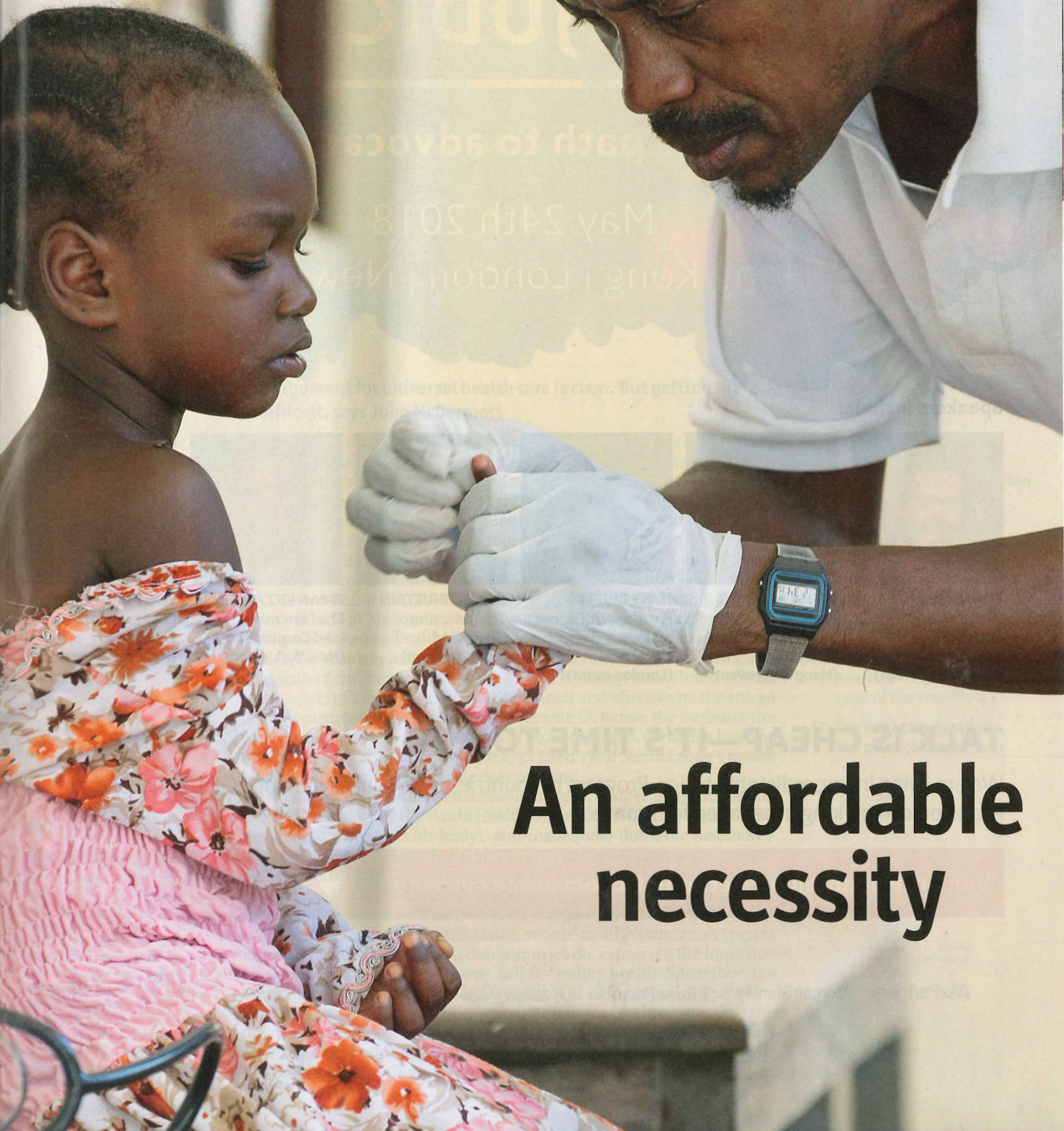


The
Economist

SPECIAL REPORT
UNIVERSAL HEALTH CARE

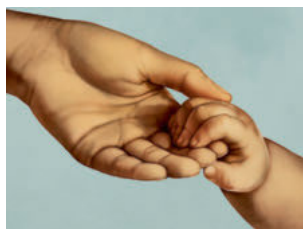
April 28th 2018



**An affordable
necessity**

Within reach

The case for universal health care is a powerful one—including in poor countries



BY MANY measures the world has never been in better health. Since 2000 the number of children who die before they are five has fallen by almost half, to 5.6m. Life expectancy has reached 71, a gain of five years. More children than ever are vaccinated.

Malaria, TB and HIV/AIDS are in retreat.

Yet the gap between this progress and the still greater potential that medicine offers has perhaps never been wider. At least half the world is without access to what the World Health Organisation deems essential, including antenatal care, insecticide-treated bednets, screening for cervical cancer and vaccinations against diphtheria, tetanus and whooping cough. Safe, basic surgery is out of reach for 5bn people.

Those who can get to see a doctor often pay a crippling price. More than 800m people spend over 10% of their annual household income on medical expenses; nearly 180m spend over 25%. The quality of what they get in return is often woeful. In studies of consultations in rural Indian and Chinese clinics, just 12-26% of patients received a correct diagnosis.

That is a terrible waste. As this week's special report shows, the goal of universal basic health care is sensible, affordable and practical, even in poor countries. Without it, the potential of modern medicine will be squandered.

How the other half dies

Universal basic health care is sensible in the way that, say, universal basic education is sensible—because it yields benefits to society as well as to individuals. In some quarters the very idea leads to a dangerous elevation of the blood pressure, because it suggests paternalism, coercion or worse. There is no hiding that public health-insurance schemes require the rich to subsidise the poor, the young to subsidise the old and the healthy to underwrite the sick. And universal schemes must have a way of forcing people to pay, through taxes, say, or by mandating that they buy insurance.

But there is a principled, liberal case for universal health care. Good health is something everyone can reasonably be assumed to want in order to realise their full individual potential. Universal care is a way of providing it that is pro-growth. The costs of inaccessible, expensive and abject treatment are enormous. The sick struggle to get an education or to be productive at work. Land cannot be developed if it is full of disease-carrying parasites. According to several studies, confidence about health makes people more likely to set up their own businesses.

Universal basic health care is also affordable. A country need not wait to be rich before it can have comprehensive, if rudimentary, treatment. Health care is a labour-intensive industry, and community health workers, paid relatively little compared with doctors and nurses, can make a big difference in poor countries. There is also already a lot of spending on health in poor countries, but it is often inefficient. In India and Nigeria, for example, more than 60% of health spending is

through out-of-pocket payments. More services could be provided if that money—and the risk of falling ill—were pooled.

The evidence for the feasibility of universal health care goes beyond theories jotted on the back of prescription pads. It is supported by several pioneering examples. Chile and Costa Rica spend about an eighth of what America does per person on health and have similar life expectancies. Thailand spends \$220 per person a year on health, and yet has outcomes nearly as good as in the OECD. Its rate of deaths related to pregnancy, for example, is just over half that of African-American mothers. Rwanda has introduced ultrabasic health insurance for more than 90% of its people; infant mortality has fallen from 120 per 1,000 live births in 2000 to under 30 last year.

And universal health care is practical. It is a way to prevent free-riders from passing on the costs of not being covered to others, for example by clogging up emergency rooms or by spreading contagious diseases. It does not have to mean big government. Private insurers and providers can still play an important role.

Indeed such a practical approach is just what the low-cost revolution needs. Take, for instance, the design of health-insurance schemes. Many countries start by making a small group of people eligible for a large number of benefits, in the expectation that other groups will be added later. (Civil servants are, mysteriously, common beneficiaries.) This is not only unfair and inefficient, but also risks creating a constituency opposed to extending insurance to others. The better option is to cover as many people as possible, even if the services available are sparse, as under Mexico's Seguro Popular scheme.

Small amounts of spending can go a long way. Research led by Dean Jamison, a health economist, has identified over 200 effective interventions, including immunisations and neglected procedures such as basic surgery. In total, these would cost poor countries about an extra \$1 per week per person and cut the number of premature deaths there by more than a quarter. Around half that funding would go to primary health centres, not city hospitals, which today receive more than their fair share of the money.

The health of nations

Consider, too, the \$37bn spent each year on health aid. Since 2000, this has helped save millions from infectious diseases. But international health organisations can distort domestic institutions, for example by setting up parallel programmes or by diverting health workers into pet projects. A better approach, seen in Rwanda, is when programmes targeting a particular disease bring broader benefits. One example is the way that the Global Fund to Fight AIDS, Tuberculosis and Malaria finances community health workers who treat patients with HIV but also those with other diseases.

Europeans have long wondered why the United States shuns the efficiencies and health gains from universal care, but its potential in developing countries is less understood. So long as half the world goes without essential treatment, the fruits of centuries of medical science will be wasted. Universal basic health care can help realise its promise. ■



An affordable necessity

The argument for universal health care is clear. But getting there is difficult, says John McDermott

IN MAY 2014 DOZENS of mourners attended the funeral of a healer in the Kailahun District of eastern Sierra Leone. She had died after tending to people struck by fever, vomiting and bloody diarrhoea. As women ritually washed her corpse, 14 of them contracted the virus that had killed her and many who had sought her remedies. After the Ebola virus had swept through west Africa in the worst epidemic of the 21st century so far, as many as 365 deaths were traced to that single burial. In all, the outbreak killed 11,310 people.

When Bailor Barrie, a Sierra Leonean doctor, heard about the first cases of Ebola in his country, he knew it would spread quickly and widely. “Sierra Leone is a health desert,” he says. “No surveillance; no public health; no health system.” Life expectancy was already just 50 years, and an eighth of children died before their fifth birthday. Most clinics offered no prospect of affordable, accurate diagnosis and effective treatment, so few people trusted them when they became ill. Before the outbreak the country had just one doctor for every 50,000 people. (America has one for about every 400; China one for 275.) Then 7% of Sierra Leone’s health workers died from Ebola during the epidemic.

That epidemic was an avoidable tragedy. A slow international response, especially by the World Health Organisation (WHO, the UN’s Geneva-based public-health body), and inadequate domestic health systems proved a lethal mix. Probably more people died as an indirect result of the outbreak than from the virus itself. The number of children treated for malaria in Sierra Leone in September 2014 was 39% down on four months earlier because health workers were overwhelmed.

Writing in April 2015, Bill Gates, whose family foundation spends more on health aid than most rich countries do, expressed the hope that Ebola would serve as a wake-up call for public health. Since then the World Bank has launched a facility that will help meet the cost of responding to a future pandemic. Tedros Adhanom Ghebreyesus, the Ethiopian who took over as boss of the WHO in July, receives daily briefings on disease outbreaks. That did not happen under his immediate predecessor, Dr Margaret Chan, who occupied the post for ten years.

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▶ But Ebola has also encouraged a broader rethink of the approach to global health, shifting the emphasis from trying to eradicate single diseases to building health systems that are resilient to diverse threats and less reliant on aid. One of its aims is to reduce the number of people pushed into poverty by having to pay for health care. Central to this effort is the embrace of universal health care, the idea that everyone should be able to get the care they need without facing financial ruin. All countries have committed themselves to getting there by 2030 as part of the UN's "sustainable development goals", a voluminous set of targets agreed on in 2015. That commitment marks a new chapter in global health. Even though recent years have seen remarkable improvements—child deaths, for example, fell from 10m in 2000 to 6m in 2015—much remains to be done.

A report published in December by the World Bank and the WHO found that at least half the world's population does not have access to what it called "essential" health services, such as antenatal care, basic treatment for malaria, HIV and tuberculosis, and checks for high blood pressure. Another study, in 2015, for the *Lancet*, a medical journal, estimated that 5bn people around the world cannot get basic surgery such as a caesarean section, a laparotomy (an incision into the abdominal wall) or a repair for a fractured bone.

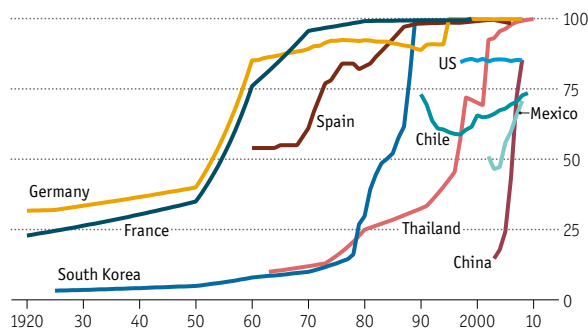
According to the paper from the World Bank and the WHO, 800m people spend more than 10% of their household budget on health care, and nearly 100m are pushed into extreme poverty (defined as having less than \$1.90 a day to live on) every year by out-of-pocket health expenses. This chimes with smaller-scale studies. A survey last year of patients at a government hospital in Uganda discovered that 53% of their households had to borrow money to pay for treatment and 21% sold possessions. About 17% lost their job.

It used to be common even for people in rich countries to have to choose between financial or physical health. When Britain's National Health Service, the world's first universal-health-care system free at the point of use, was set up in 1948, households received leaflets telling them that the service would "relieve your money worries in time of illness". Since then many more countries have followed suit with comprehensive health-insurance schemes (see chart below).

As countries get richer, they spend more on health. This is known as "the first law of health economics". As a share of GDP, the developed world spends roughly twice as much on health as developing countries do. But this does not mean that once the world gets richer, universal health care will necessarily follow. Nor are rising incomes the only cause of improving health.

Keep going

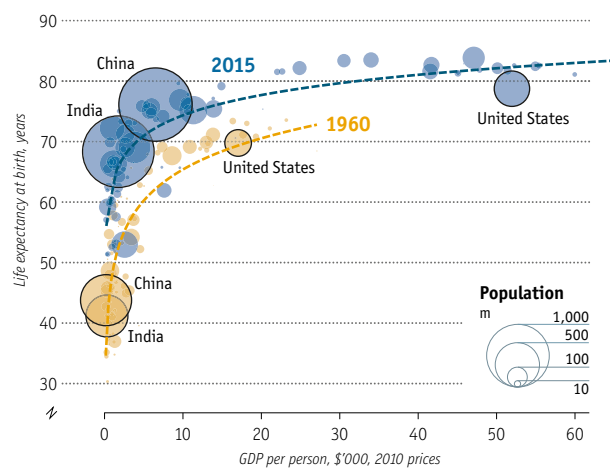
Share of population with public and private health-care coverage, % of total



Source: United Nations Development Programme

Rich rewards

Life expectancy and wealth



Sources: World Bank; United Nations

Wealth and health are intertwined, but only up to a point.

In "The Great Escape", a book on the historical relationship between health and growth, Angus Deaton, a Nobel laureate in economics, explains that a country's GDP per person is linked to its life expectancy (see chart above). On average, as countries' GDP per person rises, their people live longer. Higher incomes mean they have more money to buy food and medicines, and governments are better able to afford public-health measures such as sanitation. But life expectancy over time has increased even more than implied by rising incomes. For Mr Deaton this is evidence that income is not the only factor; the application of knowledge also matters. "There are ways of ensuring good health at low incomes, and ways of spending large sums of money to no purpose," he says. America is a case in point.

You don't have to be rich

This special report will argue that universal health care is both desirable and possible, even in low-income countries. Some countries achieved near-universal coverage when they were still relatively poor. Japan reached 80% when its GDP per person was about \$5,500 a year. More recently, several developing countries have shown that low income and comprehensive health care are not mutually exclusive. Thailand, for example, has a universal health-insurance programme and a life expectancy close to that in the OECD club of mostly rich countries. In both Chile and Costa Rica income per person is roughly 25% of that in the United States and health spending per person just 12%, but life expectancy in all three countries is about the same. Rwanda's GDP per person is only \$750, but its health scheme covers more than 90% of its population and infant mortality has halved in a decade. "Ebola would not have happened there," says Dr Barrie.

This may start off a virtuous cycle. It is becoming increasingly clear that better health can lead to higher incomes, as well as the other way around. Economists at the World Bank used to call spending on health a "social overhead", but now they believe that it speeds up growth, says Timothy Evans, one of its senior economists. A study in 2011 carried out by the University of St Gallen looked at 12 European countries between 1820 and 2010 and found a close link between the expansion of health care, a fall in mortality rates and growth in GDP per person. Another study found that in Britain as much as 30% of the growth in GDP ▶▶

▶ between 1780 and 1979 may have been due to better health and nutrition. A paper by two leading economists, Dean Jamison and Lawrence Summers, found that 11% of the income gains in developing countries between 1970 and 2000 were attributable to lower adult-mortality rates.

Smaller-scale studies support these historical analyses. Improving health, for example through malaria-eradication efforts, is associated with children receiving more schooling and going on to earn more money in adulthood. And lower out-of-pocket health costs reduce inefficiencies in purchasing health care and can encourage consumer spending. Clearing land of disease-carrying parasites can open it up to farming, mining and other forms of development.

Pioneering countries and new research have added to the argument in favour of universal health care. So, too, has the growing realisation among the biggest institutions in global health that eliminating specific diseases is hard in places where basic health systems are dysfunctional. Indeed, single-disease programmes can make the problem worse by setting up parallel structures or diverting health workers. Mr Gates has recently called for more investment in primary health care, a core part of achieving full coverage, to improve the outcomes of his foundation's schemes.

Making a commitment to universal health care is the easy bit. The hard part, for both governments and international organisations, is to find ways to make the best use of limited resources and then get on with reform. That task is made even tougher by shifts in the burden of disease. ■

Epidemiological transition

A shifting burden

Even in poorer countries, chronic diseases are rapidly becoming a bigger problem than infectious ones

A CHILD BORN in China today can expect to live more than three decades longer than his ancestors 50 years ago, a gain in life expectancy that rich countries typically took twice as long to achieve. The increase reflects a shift in the burden of disease that is increasingly apparent in other developing countries, too. But the speed of the transition brings with it huge challenges for both domestic policymakers and the international organisations that distribute aid and run health programmes.

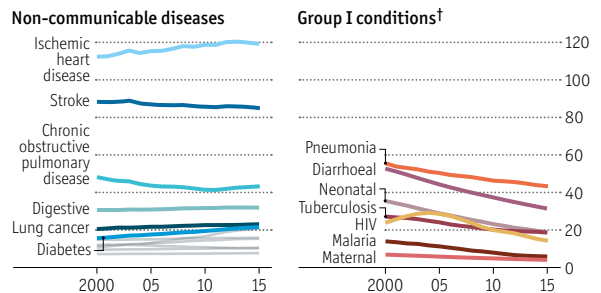
Crudely put, what is known as “the epidemiological transition” is a shift from diseases of the bellies and lungs of babies to those of the arteries of adults. In 1990 the main causes of premature loss of life in 16 of China's 33 provinces were either respiratory infections or complications of pre-term births. By 2013 the leading cause in 27 provinces was cerebrovascular disease.

This change is documented by the Global Burden of Disease Study, produced by the Institute for Health Metrics and Evaluation (IHME) based at the University of Washington in Seattle. As well as crunching the numbers for death rates and life expectancy at birth, the IHME tracks “disability-adjusted life years” (DALYs), an estimate of the time lost to disability and early death. By measuring DALYs, it can work out the number of years people can expect to live free from disability.

The Global Burden of Disease Study is imperfect. For every death for which data are available, it has to make assumptions about many more. Its alphabet soup of measures can be unappe-

A chronic problem

High-income countries*, death rate per 100,000 population



Source: Disease Control Priorities

*GNI per person of \$12,746 or more in 2013
†Communicable, maternal, perinatal and nutritional

ting. But it offers the best picture available of the world's health. Between 1990 and 2016, the global average for healthy life expectancy at birth increased from 55 to 61 years for men and from 58 to 65 years for women. The rise was due mainly to lower rates of infectious diseases such as HIV/AIDS, malaria and tuberculosis, as well as fewer neonatal deaths. Between 2006 and 2016, years of life affected by disease or early death fell by 44% for HIV/AIDS, 27% for malaria and 23% for tuberculosis. For neonatal disorders the drop was 23%. Separate data from the WHO show that death rates from these causes fell sharply between 2005 and 2015. HIV/AIDS still kills more than 1m people every year, but since 2014 it has not appeared in the global list of the ten most common causes of death.

Meanwhile the burden of chronic conditions has been rising. The number of DALYs due to diabetes and kidney disease has gone up by 24% and 20% respectively since 1990. In a survey last year the World Bank and the WHO found that more than 1bn people globally have uncontrolled hypertension, a risk factor for many non-communicable diseases. Even though health spending per person in China increased by 12% a year between 1993 and 2012, studies suggest that over half of Chinese with hypertension may be unaware of their condition. Globally, mental illness has become more common, too. In 2016 major depressive disorders were among the top ten causes of ill health in all but four countries worldwide.

Another way of looking at the shift is to examine the main causes of DALYs in countries of different income levels. In the poorest fifth of countries the four most common causes are lower respiratory infections (such as pneumonia), malaria, diarrhoea and HIV/AIDS. In middle-income countries they are heart disease, conditions to do with blood supply to the brain, road accidents and lower back and neck pain.

So developing countries will have to deal with two problems simultaneously. The first is that the absolute numbers of people with infectious diseases remains high. Nigeria has more than a quarter of the entire world's malaria cases, for example. The second is that people are living longer, but not necessarily in a healthy state, as already evident in the rich world (see chart).

DALY bread

Shifts in the burden of disease also present dilemmas for international organisations. Though most spending on health in poor countries comes from government budgets and out of consumers' pockets, an average of just over a third in 2016 was paid for by aid. Health aid in that year added up to \$37.6bn, according to the IHME. A little over half of that came from three sources: the American government (34.0% of the total), the British govern- ▶▶

ment (10.9%) and the Gates Foundation (7.8%). The vast majority of this aid goes on child and maternal health and on infectious diseases, especially HIV, which makes up fully 25% of the total. Non-communicable diseases account for just 1.7%.

Those diseases also get minimal attention from the biggest institutions in global health. The World Bank and the WHO, both set up in the 1940s, have a sprawling array of interests. Two newer organisations, the GAVI Alliance, which funds vaccines, and the Global Fund to Fight AIDS, Tuberculosis and Malaria, are chiefly concerned with infectious diseases.

“Improving global health is no longer primarily about combating infectious diseases,” says Lawrence Summers, who as the World Bank’s chief economist in the 1990s did much to advance its work on health. That view may strike many health experts as premature when malaria, tuberculosis and HIV are still killing millions every year, but the epidemiological shift will ensure that ever more resources will be consumed by chronic conditions. Policymakers will have to think carefully about which health services to prioritise, and how best to supply them. ■

Primary care

First things first

Good primary care is an essential precondition for a decent health-care system

IT IS MONDAY morning at Connaught hospital in Freetown, the capital of Sierra Leone, and the accident and emergency department is abuzz. One of only four specialist hospitals in the country, it should provide the sophisticated care not available elsewhere. Instead, like many urban hospitals in poor countries, it is full of people with simple problems that should have been dealt with through primary care (the generalist branch of medicine), or patients with complex conditions that should have been treated earlier.

For many patients Connaught is a last resort. If they find themselves ill, their first response is to hope that their symptoms will pass; their second is to self-medicate. This may involve a visit to a drugseller, perhaps buying a “shotgun bag” containing a few days-worth of antimalarial medicine, antibiotics and painkillers. If that does not work, they go to Connaught. A board in the entrance of the A&E ward lists prices, from 10,000 leones (\$1.30) for catheterisation to 30,000 (\$3.90) for a transfer to a bed. Once admitted, patients have to pay extra for food and supplies. About half of the nurses are not on the payroll but come in the hope of picking up work. Consultation can easily turn into negotiation. That can harm patients. And if clinicians do not treat what they have diagnosed, they will be slower to learn.

If you fall ill in Sierra Leone, Connaught is one of the better options. But both its staff and its patients are victims of the sort of dysfunctional health system common in poor countries. In November

Before 1995 just 25% of Costa Ricans had access to primary health care; by 2006 the share was 93%

the IHME and the University of Washington published the latest volume of its Disease Control Priorities report (known as DCP3), one of the most influential documents in global public health. It tries to set out which treatments and policies poor countries should prioritise, based on the most cost-effective ways to improve healthy life expectancy and prevent financial catastrophe. “Unfortunately,” notes the report, “most countries lack health systems that meet this standard.”

In many developing countries people get their health care mostly from informal private providers such as drug shops or unqualified practitioners. In India, informal providers account for three-quarters of all visits. The figures in other countries are similar, if mostly less extreme: 65-77% in Bangladesh, 36-49% in Nigeria and 33% in Kenya. Often these markets exist side by side with public-sector providers who rely on patients paying for drugs and tests, as in China, despite a spate of recent regulations.

It is easy enough to measure how long patients have to wait or whether drugs are available. In rural India, for example, 66% of the population does not have access to preventive medicines, and 33% must travel more than 30km to get treatment. But answering the most important question—whether a problem is diagnosed and treated correctly—has proved harder. That is why recent research by Jishnu Das of the World Bank and colleagues is so welcome. Inspired by “mystery shoppers” who visit supermarkets, they send “standardised patients” to clinics across the world. These patients present with symptoms that are specific to particular diseases. After the consultation they are quizzed on whether the health workers adhered to clinical guidelines.

The findings show widespread woefulness. In one Chinese study the average consultation time was a minute and a half. In India the average length was double that, but one-third of the visits lasted just one minute and featured a single question: “What is wrong with you?” Only 30% of consultations in India and 26% in China resulted in correct diagnoses, and patients were more likely to receive unnecessary or harmful treatment than the correct sort. Studies in Paraguay, Senegal and Tanzania have produced similar results.

The consequences of such ineptitude are severe. In India about half a million children die of diarrhoeal diseases every year. In a study in Delhi only 25% of providers asked parents whether there was blood or mucus in the child’s stool, a clear ▶▶



▶ symptom of such disease. Health workers who had undergone more training provided more accurate diagnoses, but that alone is not enough. Curiously, Mr Das and his team also found that, even when clinicians know what treatment should be given, they often do not provide it. In one study 74% of Indian clinicians were able to tell researchers how to deal with patients suffering from angina, asthma or diarrhoea, but when visited by mystery “patients” presenting with exactly these symptoms, just 31% treated them correctly. One explanation for the “know-do gap” is that patients generally know far less about the best course of action than clinicians, who can get away with under- or over-treatment when they are not held accountable for their work.

Other developing countries provide much better care at low cost. An exemplar is Costa Rica, whose model shows the benefit of high-quality primary health care. This is often ignored as countries splurge on big hospitals. “Primary care is not heroic,” explains Asaf Bitton of Ariadne Labs, “but it works well.” Between 1995 and 2002 Costa Rica established more than 800

“Equipos Básicos de Atención Integral de Salud”, or integrated primary-health-care teams, each looking after 4,000-5,000 people. The teams are made up of a technical assistant, who visits patients at home; a clerk who keeps up-to-date records; a nurse; a doctor; and a pharmacist. The doctors have a lot of scope to run the teams the way they think best, but the health ministry holds them accountable for their patients’ outcomes.

Before the programme was in place, just 25% of Costa Ricans had access to primary health care; by 2006 the share had risen to 93%. It was introduced in stages, which enabled researchers to assess its impact. A study in 2004 found that for every five years it was in place, child mortality declined by 13% and adult mortality by 4%, compared with areas not yet covered. Another study estimated that 75% of the gains in health outcomes resulted from the reforms.

Supply-side reforms to health care in other countries have also brought dramatic improvements. Thailand in the 1980s froze capital investment in urban hospitals and reallocated the fund- ▶

A crazy system

Mental illness is ignored by policymakers and aid donors

“YOU WILL BE stunned by the suffering inside,” said Dr Abdul Jalloh, a psychiatrist at Kissy mental hospital in Freetown, Sierra Leone, as your correspondent arrived for a visit. He was right.

Opened in 1820, Kissy is Africa’s oldest psychiatric hospital and the only such facility in Sierra Leone. It has about 150 patients, most of whom were brought in by their families. Outside the wards, on the walls painted black and yellow, there are drawings made by patients. One is of a ladder going up the wall. Inside the sparse wards most male patients are chained to their iron beds. Several lie in the fetal position on the bare metal, or on what is left of a foam mattress. A teenager sits rigid, staring out of the open window. Some of the toilets are out of order, so the patients urinate and defecate in black buckets next to their beds, the fetid smell wafting through the hallways.

The two psychiatrists are overwhelmed, and the drug dispensary is bare. Eddie, a patient aged 30, says he does not feel safe, “especially after six o’clock”, when it gets dark. There is no electricity, and people from outside break in and steal his food.

Kissy may be horrific, but “the neglect of mental health is not a uniquely Sierra Leonean problem,” says Tarik Endale of the King’s Sierra Leone Partnership, an English charity working in the country. According to the world mental-health survey conducted by the WHO, between 76% and 85% of people with serious mental disorders had received no treatment in the previous year. Low-income countries spend an average of just 0.5% of their health budgets on mental

health, with the vast majority of the money going on hospitals that are more like asylums. And mental-health spending made up just 0.4% of global aid spending on health between 2000 and 2014.

The neglect stems partly from the stigma attached to mental disorders. Kissy is known locally as the “craze yard”. For a doctor to choose to work there is seen as an odd and career-limiting move, notes Dr Jalloh. But mental-health problems are also neglected because they may be underreported. In a paper published in 2016 Daniel Vigo of Harvard Medical School and colleagues show that the Global Burden of Disease study ignores various personality disorders and does not count suicide and self-harm as mental-health issues. Dr Vigo reckons that mental conditions make up 13% of the global burden of disease (measured by DALYs), roughly the same as cardiovascular diseases and more than cancer.

Anti-epileptic drugs, generic anti-depressants and psychotherapy for depression are all highly cost-effective, according to DCP3, which analyses the value for money offered by various health-care interventions. But providing such treatments in countries that, in effect, have no mental-health service is difficult.

One promising effort to develop these is PRIME, a project run by the University of Cape Town in parts of Ethiopia, India, Nepal, South Africa and Uganda. PRIME researchers are training nurses and community health workers in diagnosing disorders and following clinical guidelines, integrating this treatment with local primary-care systems.



A prisoner in all but name

But resources are thinly stretched. Most of the countries where PRIME operates have less than one psychiatrist or nurse for every 100,000 people.

Back at Kissy hospital, Dr Jalloh and his colleague, Dr Bailor Barrie, are unimpressed by international donors. A huge sign celebrates an EU-funded project to refurbish five toilets, none of which is now working, mere yards from chained patients. “This is ridiculous,” Dr Barrie says. “They build toilets, have no plan, and leave.” Meanwhile the health ministry has stopped supplying drugs and new nurses. As he leaves a ward, Dr Jalloh notes: “The only difference between this place and a prison is that the patients have committed no crime.”

ing to primary-care centres, which cut mortality rates. Ethiopia since 2004 has trained more than 38,000 “health extension workers”, rural high-school graduates who undergo a year’s training before being sent back to their local area. They have helped cut child and maternal mortality by 32% and 38% respectively. In Rwanda each village has to have three community health workers, elected by their peers, who offer basic services and make referrals. “People who have a minimum education can do a lot,” says Agnes Binagwaho, a former health minister.

One lesson from countries like Rwanda is that closing the gap between knowledge and action requires reforms far beyond the consultation room. Training helps, but so do incentives and accountability. When Rwandan health workers were paid to adhere to clinical guidelines, their performance improved. And when rural Ugandans were given more information about the quality of local health services, clinicians did a better job.

But care needs to be taken to set the right incentives. Doctors who are rewarded for prescribing medicines will overdo it. One study from 2013 found that more than half of all outpatient prescriptions in China contained antibiotics (the WHO suggests the share should be less than 30%). China has also rapidly expanded hospitals over the past 20 years; today it has more hospital beds per person than Britain or America. Yet between 2002 and 2013 the number of primary-care providers actually fell.

Have you taken your medicine?

Aid organisations can make matters worse. If you drive from Freetown to Kono in the east of Sierra Leone, you will pass a graveyard of failed projects. Signs mark clinics built but never staffed. But in Kono, with the help of Partners in Health, an American charity, Dr Barrie is trying to buck the trend. This region of 500,000 people has just two doctors who are paid by the government. That makes the job of Mabel Konoma, a community health worker, even more vital. Every morning she visits patients with tuberculosis or HIV. As she goes from house to house, she asks people whether they have taken their medicines. One woman with HIV says she has struggled since villagers started shunning her rice stall because of the stigma attached to the disease. No custom means no money, no food and no medicine. Mabel takes a note and arranges for the woman to receive food.

When patients need further care they are referred to the Wellbody clinic, a primary health centre. Unlike most in Sierra Leone, it does all of the basics well. On arrival, patients are screened for signs of Ebola as a precaution, and triaged. They receive an electronic record number so their cases can be tracked. This is useful in Sierra Leone where many first-born children are given the same name: Sahr for boys and Sia for girls. Because of the shortage of doctors, Wellbody has trained “associates”, somewhere between a nurse and a doctor.

It also has an obstetrics wing, where pregnant women with potential complications wait to give birth. Sierra Leone has one of the world’s highest rates of maternal mortality, partly because most women would rather give birth at home with the help of traditional birth attendants than go to a clinic far from home that may lack trained midwives or perhaps even electricity. Wellbody is properly equipped, and to encourage women to give birth there it allows the birth attendants to come, too.

DCP3, the value-for-money report, says that for maximum cost-effectiveness, poor countries would spend about 50% of any increase in funding on primary care and 18% on community care. Yet although these are the building blocks of strong health systems, by themselves they are not enough. Hospitals will always be needed to provide emergency and specialist care. This is particularly true in a field that campaigners for universal health care rarely mention: surgery. ■

Surgery

Kindest cut

Operations are a critical part of universal health care

OUTSIDE THE SURGICAL theatre at Koidu hospital in Sierra Leone’s Kono district, Therisa Mye-Komara explains that until a few years ago surgeons would operate by torchlight in the evenings. Things are better now, says the surgical nurse. There is a generator to provide round-the-clock electricity, an oxygen machine to supply the anaesthetic equipment and an anaesthetist who can use the kit. “It is very rare for us to lose a patient on the table,” she says. But Ms Mye-Komara readily concedes that “we do not have the know-how” for many of the operations needed.

Nine in ten people living in developing countries do not have access to “safe and affordable” surgical care, according to a report in 2015 by the *Lancet* (see map, next page). About 60% of operations round the globe are concentrated in countries with only 15% of the world’s population. In rich countries a rough rule of thumb suggests there will be about 5,000 operations per 100,000 people every year. But according to the African Surgical Outcomes Study, a survey of 25 African countries, the median rate on that continent is just 212 per 100,000.

Surgery may seem something of a luxury if funds are tight, but the consequences of not having access to it are profound. In ►►



Lucky to be here

► 2010, 17m lives were lost from conditions needing surgical care, dwarfing those from HIV/AIDS (1.5m), TB (1.2m) and malaria (also 1.2m). Roughly one-third of the global disease burden measured by DALYs is from conditions requiring surgery.

Lack of emergency obstetric care is a case in point. The WHO estimates that 5% of births may require a caesarean section. But in a survey of east African countries back in 2005, less than 1% of women there had access to such treatment. Globally, 1bn women would not get the urgent care they would need in the event of complications with a pregnancy.

Surgery is also more likely than other forms of care to have severe financial consequences, says Anna Dare of the University of Toronto. An operation is often a matter of life or death, so there may be no time to put funds aside for it. Some 57% of operations in developing countries are for emergencies, compared with 25% in rich ones. A recent study in rural Bangladesh found that 10-22% of patients with acute surgical conditions, such as a post-delivery hysterectomy, ended up in poverty. For those with conditions that did not require surgery the figure was 3.4%.

Jim Yong Kim, now president of the World Bank, and Paul Farmer, the founder of Partners in Health, the American health charity, noted in 2008 that surgery is the “neglected stepchild” of global health. It remains neglected, for several reasons. One is an image problem, notes Justine Davies, one of the authors of the *Lancet* report: surgery is seen as an expensive luxury. Another is that because it is used to treat many different conditions, it holds less appeal for aid donors, who like to focus on specific diseases such as HIV/AIDS or malaria.

But as the DCP3 report by the University of Washington shows, surgery is an essential part of any universal-health-care scheme. The report identifies 44 essential procedures that, if widely available, could avert 1.5m deaths a year at a global cost of \$3bn. Most of them can be carried out at smaller district hospitals. These “rank among the most cost-effective of all health interventions”. A caesarean section costs between \$15 and \$380 for every year of disability (DALY) averted, cataract surgery \$50 and hernia repair between \$10 and \$100. Anti-retroviral treatment for HIV/AIDS costs \$900 per DALY (see chart). Such metrics rely on debatable assumptions, but they do suggest that basic procedures can have large benefits at low cost.

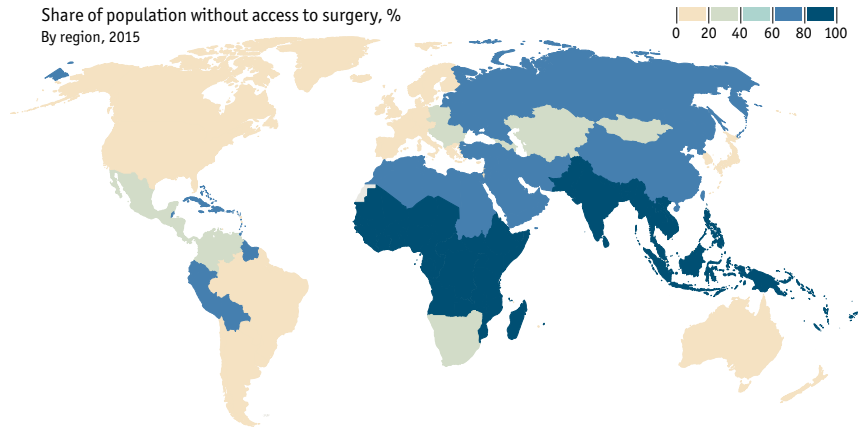
More for less

The question is how poor countries can expand their surgical capacity. The 25 countries in the African Surgical Outcomes Study had an average of 0.7 surgeons, obstetricians and anaesthetists per 100,000 people, compared with a typical figure of more than 40 in the rich world. Over half the district hospitals in one study of eight African countries had no anaesthesia machine. Often the kit is donated, and few locals know how to fix it. One survey suggests that 40% of donated surgical equipment in poor countries is out of service.

Training more surgeons is clearly vital, but there are other ways to make surgery more accessible, such as getting it done by more junior staff. In a review of studies conducted in countries such as Malawi, Mozambique and Tanzania, clinical officers with about three years of training performed caesarean sections as safely as doctors did. Technology can help, too, such as the

Cutting edge

Share of population without access to surgery, %
By region, 2015



Source: “Global access to surgical care: a modelling study” by B.C. Alkire, N.P. Raykar et al., *Lancet*, 2015

cheap pulse oximeters to measure blood-oxygen saturation developed by Lifebox, a charity.

Even more important, surgery needs to be a core part of the broader health system, or else referrals will be made too late, and primary-care clinics will not be able to keep an eye on patients after surgery. The African Surgical Outcomes Study found that the death rate following surgery across the continent was twice the global average. What happens after a patient leaves the operating table is as important as the surgery itself. ■

America

Land of the free-for-all

The only large rich country without universal health care

THE ARLINGTON FREE CLINIC, in the American state of Virginia, is a world away from the treatment rooms of sub-Saharan Africa. Thanks to local doctors and nurses who donate their time to the clinic for people without health insurance, the patients get care akin to that in nearby private hospitals. They are fortunate: of the more than 1,000 free clinics in America, few are as well-run or offer such a broad range of services. And even in Arlington getting access is partly a matter of luck. The clinic holds a monthly lottery to decide which locals will be added to its rolls. Out of an estimated number of those without insurance of 20,000, the charity can offer free specialist care to only 1,650.

Despite the passage of the Affordable Care Act in 2010, America remains an outlier in health-care provision. It has some of the best hospitals in the world, but it is also the only large rich country without universal health coverage. And health-care costs can be financially ruinous.

America made a good start. Towards the end of the civil war Abraham Lincoln announced that there would be health provision “...to care for him who shall have borne the battle, and for his widow and his orphan”. At the time this was one of the largest government-backed health-care plans in the world. But America never followed rich European and later East Asian countries in introducing universal coverage. Today 10% of Ameri- ►►

► cans below retirement age are without insurance (the elderly are covered by a government-backed scheme, Medicare), though the share ranges from 6% to 17% in different states.

Historians offer various explanations, not least America's strong culture of individualism. Many Republicans believe that health care is not a right but something people choose to buy (or not) in a marketplace. As Jason Chaffetz, a Republican congressman, put it, "Americans have choices. And they've got to make a choice. And so maybe, rather than getting that new iPhone that they just love, and they want to go spend hundreds of dollars on that, maybe they should invest in their own health care." Another reason is resistance to reform by powerful interest groups. When nine of the ten best-paid occupations involve medicine, doctors have little incentive to change the system.

Perhaps more important, about half of Americans have their health insurance provided by their employers (see map). This resulted from a quirk of history. During the second world war President Franklin Roosevelt froze Americans' wages but allowed companies to increase workers' benefits, which they wanted to do to alleviate labour shortages. The share of workers with health insurance increased from 10% in 1940 to nearly 30% in 1946. That gave companies a stake in the system, which successive tax exemptions have helped maintain. So now America has a version of a problem seen the world over: voluntary insurance cannot ensure that everybody gets coverage.

The Affordable Care Act expanded Medicaid—the health-insurance system for the very poorest Americans—and subsidised slightly less poor ones to buy health insurance in statewide marketplaces. This cut the number of uninsured people from 44m to 28m, but still left a gap among people not poor enough to qualify for Medicaid but not rich enough to buy private insurance. Following a Supreme Court decision in 2012 that allowed states to opt out of expanding Medicaid, 18 did just that, leaving more people uninsured.

Last year the Republican-controlled Congress tried and failed to repeal the Affordable Care Act, but it keeps chipping away at some of its provisions. At the same time the Democrats were buoyed by their successful opposition to the repeal. "The Affordable Care Act was never popular until the Republicans tried to abolish it," says a former policy adviser to President Barack Obama. Today the standard view among Democrats is that the time has come to travel the last mile towards universal health care. Polls for the Kaiser Family Foundation, a health think-tank,

find that a slim majority of Americans now favour a "single-payer" system (usually meaning that government, rather than insurance companies, buys care from providers), with more support from those without a political affiliation. This is an important shift. The next Democratic candidate for president will almost certainly campaign under the banner of universal health care.

Though broader coverage remains a Democratic goal, the main rationale for the party's reform proposals is to cut costs for those who are already insured. According to a report published in 2017 by the Commonwealth Fund, a think-tank, 28% of Ameri-

America has a version of a problem seen the world over: voluntary insurance cannot ensure that everybody gets coverage

can adults under 65, or 41m people, are underinsured, meaning that in addition to their insurance premiums they spend more than 10% of household income (or 5% for poor households) on topping up their health care.

In 2016 America spent \$10,348 per person on health care, roughly twice as much as the average for comparable rich countries, according to the Kaiser Foundation. That is 17.9% of GDP, compared with 10.7% elsewhere (see chart, next page). America's figure is so high partly because the country consumes more expensive forms of care, such as MRI and CT scans and elective surgery, but mostly because treatments cost more. On average, both hospital costs and drug prices can be 60% higher than in Europe, according to an analysis by the OECD in 2009.

Outrageous fortune

Higher costs reflect fragmented insurance markets, where consumers have little scope to negotiate. Fragmentation also means that prices for the same service can vary enormously. Having your appendix removed, for example, can cost anywhere from \$1,500 to \$183,000, depending on the insurer. Administrative costs are affected, too. Whereas the number of doctors increased by 150% between 1975 and 2010, that of health-care administrators rose by 3,200%.

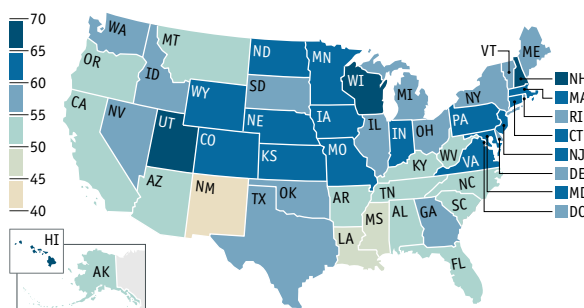
Most of the myriad plans floating around Washington, DC, are aimed at higher coverage and lower costs, but they differ on how to get there. In reports for the Century Foundation, a think-tank, Jeanne Lambrew and her colleagues have set out a range of ideas, which fall into four broad groups. The first are "single-payer" plans. One, proposed by the Democrat Bernie Sanders and supported by several presidential hopefuls, is "Medicare for all", based on the existing scheme for pensioners. Medicare would eventually become nearly the only purchaser of care.

A second group hopes gradually to widen access to Medicare, whether by lowering the eligibility age or making it available in places with few or no private insurers. Perhaps the most radical version was proposed in February by the Centre for American Progress, an influential centre-left think-tank. It would open up Medicare to everyone but allow people to keep their employer-based insurance plans so long as they offered Medicare-like benefits and prices.

A third set would allow better-off people to buy Medicaid. Since Medicaid is administered by the states rather than the federal government, they would have to take the lead in achieving universal coverage. A fourth group involves various tweaks to the marketplaces introduced by the Affordable Care Act, such as government-backed reinsurance that would cap the out-of-pocket costs faced by people with private insurance. ►►

Where not to be ill

United States, employer-sponsored health-insurance coverage of the non-elderly* 2016, %



Source: Kaiser Family Foundation

*Aged 64 years and under

None of these schemes has been thoroughly costed. Ominously for Mr Sanders's plan, even his home state of Vermont ditched the idea of a single-payer system in 2014. In California, ahead of the election for governor in November, those on the left, supported by a powerful nurses' union, want candidates to sign up to a state bill for a single-payer plan. Privately, however, many policymakers worry about the cost of such a drastic change—and the likely backlash from people who would have to change their insurer.

There is a lot of misunderstanding about what a single-payer system means. Almost half of Americans do not think they would have to switch insurers, but under Mr Sanders's plan, for example, they would. Most Americans are satisfied with their health-insurance coverage, so a true single-payer system would be a hard sell, even before interest groups began campaigning against it. And there is no guarantee that changing to a single-payer system would lower costs, because providers will lobby hard to avoid having to cut their prices.

Where America goes from here depends on what happens to health care during the rest of President Donald Trump's term of office. With Congress and many Republican-run state governments trying their best to undermine the Affordable Care Act, the numbers of uninsured and underinsured Americans could rise over the next few years. If health care turns into even more of a mess than it is now, Democrats might try to introduce more radical reforms should they regain the presidency in the 2020s. By then yet more developing countries may have achieved universal health care, making America even more of an outlier. ■

The next two decades

The price of human lives

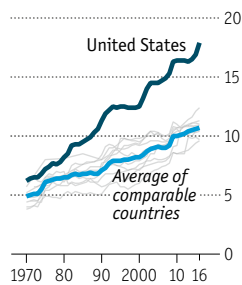
If universal health care is to become ubiquitous, politicians will have to act more boldly

IN 2013 A GROUP of doctors and health economists argued in the *Lancet* that a "grand convergence" would be possible over the next two decades. If governments spent more on health, and more wisely, mortality rates in the poorest countries could fall to those seen in the healthiest middle-income ones. That would amount to saving 10m lives a year.

To see what a high-quality health-care system in a developing country looks like, consider the case of Farida Waree, a 55-year-old housewife in Thailand. In early 2016 Mrs Waree felt a lump on her right breast. She went to her local primary-care centre, which referred her to Nakornayok provincial hospital. She was diagnosed with cancer, and over the next year was given a mastectomy, chemotherapy and Herceptin, an anti-cancer drug. Five years earlier her treatment might have cost her 800,000 baht (about \$25,000), much more than she and her family could have afforded. Instead, nearly all the costs were covered under Thai-

Over the top

OECD countries, total health spending, % of GDP



Source: Kaiser Family Foundation

land's Universal Coverage Scheme. The cancer is now in remission. "I consider myself very fortunate," she says.

Introduced in 2002, Thailand's scheme has become a model for other countries trying to extend coverage. It shows that universal health care can be affordable if policymakers think carefully about how to spend scarce resources. And it demonstrates the power of health insurance to bring "the magic of averages to the aid of millions", as Winston Churchill put it.

Nearly 10% of global GDP is spent on health care, according to the latest data from the WHO. Rich countries spend an average of 12%, with America an outlier well above that; middle-income ones (including China) 6%; and low-income ones just under 6%. In developed countries, 60% of health spending comes from public sources. In poor economies the figure is around 40%. As economies grow and governments are able to allocate more resources to health, the share of individual out-of-pocket spending typically falls. But the variation in such spending in poor countries suggests that the health systems they end up with depend on their choice of public policies.

In the 1980s and 1990s many health economists were relaxed about out-of-pocket payments, also known as user fees. The World Bank saw them as a way of making sure money was not wasted, and of helping health-care consumers hold providers to account. There is merit to this argument. Research by Jishnu Das of the World Bank found that when Indian health workers saw patients in their private clinics, they spent more time with them and asked more questions than when the same health workers saw patients in public clinics.

Pockets of resistance

Yet that does not make it a good idea to rely mostly on user fees to fund a health system. They stop those who need care from seeking it. Concerns that users will consume too much health care unless they have to pay are overblown. And when people are not getting vaccinated to save a few cents, others suffer, too.

Out-of-pocket payments are also "cannonballs of inefficiency", says Timothy Evans of the World Bank, which is now sceptical about user fees. If spending is pooled, it can insure more people against the risk of ill health and put pressure on providers to cut prices. Of the \$500bn generated globally by user fees every year, the World Bank estimates that 40% is wasted.

More than 110 countries now have some sort of social health-insurance scheme. Yet most are patchy, so users have to supplement them with out-of-pocket payments or private insurance. In parts of Africa such private schemes are expanding quickly as telecommunications companies branch out into health care. BIMA, a provider in Ghana, among other countries, offers schemes that reimburse users for hospital costs, and has recently set up its own telemedicine service. In Kenya, where about half of health costs are paid out of pocket, M-TIBA (tiba means "care" in Swahili) offers a dedicated mobile health account, letting people use their phones to put in money and pay approved providers. Developed by various groups including Safaricom, a telecoms company, it has more than 900,000 users.

These new services show there is demand for protection against ill health, especially among informal workers. Yet relying on voluntary private insurance and out-of-pocket payments will never get a country close to universal coverage, according to a report published in 2015 by the Institute of Global Health Innovation at Imperial College London. In voluntary schemes the sick buy lots of insurance whereas the healthy buy less. Since the sick will need lots of treatment, they will price out the healthy. This dynamic has plagued the United States, as well as poorer countries. Universal health care needs the rich, the young and the healthy to subsidise the poor, the old and the sick. ►►

▶ Countries that want to expand their coverage have taken two distinct approaches. The first is to start by covering a small group of workers in depth and work outward from there, adding workers from other industries as you go along. Inevitably, though, this leaves groups of people without insurance, and those with coverage have little incentive to help them get it.

Start small

The second, better approach is to cover more people but start with a limited range of benefits. In 2004 Mexico introduced Seguro Popular, a scheme that covered 50m people in the informal sector. Studies suggest that Seguro Popular has drastically reduced the number of Mexicans facing catastrophic health costs and reduced infant mortality.

Rwanda is another example. More than 90% of its people have health insurance, mostly under its Mutuelles de Santé policy that gives access to community health services as well as various treatments partly paid for by the Global Fund. Most visits involve a small co-payment and there is a tiered system of premiums, with exemptions for the poorest people. The scheme has helped cut out-of-pocket expenditure and improved health outcomes. Between 2000 and 2011, for example, the mortality rate for tuberculosis fell from 50 to 14 per 100,000 people.

In Thailand the Universal Coverage Scheme replaced two existing schemes for the rural poor and for informal workers. Today 98% of Thais have health insurance. The scheme was accompanied by reforms such as incentives for doctors to work in rural areas and extra payments to hospitals to take on patients. Crucially, Thailand's Health Intervention and Technology Assessment Programme, a quasi-governmental body, analyses the cost-effectiveness of treatments, as well as ensuring that cancer cases such as Ms Waree's are dealt with sympathetically. Despite the increased coverage, Thailand still spends only 4% of its GDP on health, about the same as it did 20 years ago. That works out at roughly \$220 per person per year.

Finding the best way to spend limited resources is critical. In November the DCP3 report proposed about 100 high-priority services, including public-health measures (such as informing

people about family planning), immunisations, antibiotics, antenatal care and basic surgery. If implemented, these would cost an additional \$26 per person per year, or an extra 3.1% of average GDP per person in low-income countries. A broader package of more than 200 treatments would cost \$53 per person. The report estimates that this could save 1.6m-2m lives per year. The numbers may be approximate, but they can guide policymakers on which treatments to make available.

Another option is to expand the tax base in poorer countries. Possible candidates are taxes on extractive industries and on goods harmful to health such as tobacco, alcohol and air pollution. That would not only raise money but have great public-health benefits. Energy subsidies could also be curtailed; some poor countries, including Bangladesh, Indonesia and Pakistan, spend more on these than they do on health and education.

However, the poorest countries will still need foreign aid. That way they can continue to fight communicable diseases while also building their health systems and expanding coverage. Some of the most cost-effective aid spending does both. The Global Fund, for example, uses its spending on HIV prevention to develop cadres of community health workers who could also help deal with other diseases.

Elsewhere, for example in Rwanda, aid spending has been used to match domestic resources that have gone into expanding health insurance.

But aid alone will never be enough to realise universal health care. Even in the poorest countries it amounts, on average, to only a third of health spending. And after rising rapidly during the 2000s the sums dished out by Western governments, especially America's and Britain's, have recently remained flat. During the days of plenty, governments in poor countries relied on big annual increases in aid so they could use their own budgets for other purposes; in effect, aid often replaced domestic health spending.

Recent research by the Institute for Health Metrics and Evaluation suggests that just one-fifth of the health-related targets set as part of the Sustainable Development Goals will be met on time. If there is to be a grand convergence, that will need to change. Poor countries will still need aid, but they will also have to step up their own efforts to bring about better health care for all. ■



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