This is Africa: The end of cheap medicine?

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The end of cheap medicine?

By Adam Robert Green | Published: 15 November, 2011

The Bric countries have redefined affordable drugs, making access to medicines possible for millions in low income regions. Yet changing priorities for major generic drug producers, such as India, could reshape the African pharmaceutical landscape

Access to medicines has improved dramatically over the last decade, driven by the rise of cheap pharmaceuticals from Asia, domestic efforts by governments of developing countries, commitment from donors, and price cuts from brand producers.

Smallpox is eradicated, the end of polio is nigh, and the number of children dying from measles has dropped by over 80 per cent. HIV-Aids, once a hopeless diagnosis for most people in developing countries, is now treatable for as little as $87 per person each year, down from around $10,000 in the late 1990s.

Brazil, India and China have been essential in driving this transformation, pushing down the price of drugs and introducing new business models that have re-shaped how medicines are consumed in Africa. But their changing interests, and greater adoption of intellectual property rules, some warn, could unleash price rises. How African governments respond to this changing terrain will determine whether the progress of the last decade can be quickened.

To understand the global health revolution of the last decade, and the decisions that confront African governments now if they are to sustain that progress, it is necessary to step back to the 1980s when the Brazilian government helped public labs develop yellow fever vaccines that Western producers were not providing – becoming the first developing country to enable cheap copies of brand drugs, now known as generics.

A more assertive stance was taken in 1996 when, to tackle a potential Aids epidemic, policy makers passed a law guaranteeing free, universal access to treatment. Brazilian domestic manufacturers were allowed to make copies of patented antiretroviral (ARV) drugs, which delay the onset of Aids from the HIV virus, provoking at times hostile responses from some Western governments, particularly the US. Drug companies were pressured to lower their prices or have their products copied.

“Brazil changed the landscape by proving that treatment in resource-limited settings was possible, by forcing pharmaceutical companies to reduce prices, and by ushering in global policy changes to promote more equitable

access to essential medicines" says Amy Nunn, assistant professor of medicine at the Division of Infectious Diseases, Brown University Medical School.

In 2001, the Doha Declaration globalized Brazil's innovation, allowing all developing countries to copy brand drugs – whose patent life is typically 20 years – if public health demands were serious enough, or to import generics if they did not have manufacturing capacity. India seized the opportunity, producing and later exporting cheap generics around the world. Africa became India's second largest market after the US, with Kenya, Nigeria and South Africa the biggest recipients. India also provides most essential medicines procured by global health funds.

China later emerged as an exporter of chemical raw materials - especially artemisinin for malaria. At the Sino-African Summit in 2006, President Hu Jintao pledged Africa $37.5m in grants for artemisinin, part of a broader charm offensive geared to boost pharmaceutical exports, says Yanzhong Huang, senior fellow for global health at the Council on Foreign Relations and an associate professor at Seton Hall University. "China wants to use health aid not just to expand political influence and improve its international image, but also to open the market for Chinese medicines and equipment," says Professor Huang. In its most blatant form, doctors dispatched to Africa are encouraged to dispense Chinese-made drugs.

In 2005, China joined a network promoting Aids prevention, pooling its chemical exports to Brazil's advanced infrastructure and Russia's scale capacity. While Beijing took interest in global rule-setting after the Sars crisis in 2003, it shows little appetite for a major advocacy role. The elite are sceptical about calls to take greater responsibility for global welfare issues, believing this a Western conspiracy to slow China's growth, claims Professor Huang. Beijing prefers bilateral health aid rather than playing too heavily into multilateral initiatives, he says. Expectations of major charitable efforts are unrealistic. Brazil, in contrast, is becoming a major donor; the first developing country to sign up to a bond-based financing facility for immunization programmes last June.

Perhaps China's most promising public contribution is in research. At a Shanghai Institute college, Chinese scientists are working on malaria, tuberculosis, African sleeping sickness and dengue fever treatments. Xinjiang Medical University also partners a South African company in developing implants for bone disease.

Changing priorities

Although the rise of these three countries pushed down the price of medicines in Africa, the engagement of India and China has become increasingly ambiguous. In 2005, India implemented the Trade Related Aspects of Intellectual Property Rights, or Trips, part of its subscription to World Trade Organisation rules, which enforces tighter rules on patent protection. The implication is that all new drugs produced in India are under patent for twenty years, with flexibility for emergencies so producers can set higher prices since they have a monopoly for a set period. "Any treatment dependent on drugs or a vaccine is subject to price rises under Trips" argues Michelle Childs, director of policy advocacy of MSF's Access Campaign.

Ninety-five per cent of essential medicines are already off-patent, and available generics will not be affected, so at first glance the regulation seems harmless. However, many diseases require continuous innovations. HIV patients, for example, develop treatment immunity over time, so second and third generation drugs are needed. Moreover, current drugs require improvements; pregnant women, for example, are often unable to take some due to high toxicity. India's new trade laws have already pushed up the price of newer medicines by between 7 and 27 percent, says Ms Childs. This is echoed by Emmanuel Mujuru, chair of the Southern Africa Generic Medicines Association, who testifies to a rise in Aids and anti-malaria drug prices in Africa since 2005.

These price rises may be accentuated by a 2016 deadline for African countries to implement their own Trips legislation, making the continent a less attractive export market for generic producers looking for countries where there is no risk of patent infringement, says Christoph Spennemann of the Intellectual Property Unit at Unctad. The concern is that a global roll out of Trips puts an end to the very flexibilities which transformed access. While Trips could potentially increase profits for Africa's domestic producers, the sector needs "10 more years" to be ready to benefit, says SAGMA's Mr Mujuru, who anticipates "major shortages" if the deadline is not extended.

Voices from industry downplay these fears. “The approaches that companies adopt in terms of pricing depend on the markets they are looking at,” says Andrew Jenner, director of innovation, intellectual property and trade at the International Federation of Pharmaceutical Manufacturers and Association, which represents the brand industry. “Companies will not generally take legal action against low income countries if producers manufacture decent quality copies,” he says. GlaxoSmithKline has already offered free licenses for generic companies to copy a range of their drugs in 69 countries around the world, including all of Africa’s low income states. If anybody is vulnerable to Trips, it is probably the poorest in large emerging economies such as India, where pricing is likely to be more competitive.

Most of Africa simply is not a business concern yet for big pharmaceutical companies, who are highly unlikely to sue governments after the public relations disaster in 2001 when a consortium took legal action against South Africa for its generics policies. The industry is also open to an extension to the 2016 deadline, says John Pender, vice-president of intellectual property and access at GlaxoSmithKline’s government affairs office. “I believe that the actions of the industry over the past few years have demonstrated that we can help address the health challenges of the developing world without weakening intellectual property,” he says.

The changing commercial interests of pharmaceutical producers in India and China present a second set of dangers, according to Unctad. Indian companies are increasingly aiming their sights on richer markets, where several blockbuster drugs are coming off patent. Chinese companies want access too, and as the disease burden within India and China starts to resemble that of rich countries, with more diabetes and cancer for example, tropical diseases may move off the radar.

However, non communicable diseases are a growing problem in Africa too, so more research effort is not simply to the benefit of the rich. Secondly, higher exports to OECD markets may give Indian and Chinese producers more resources to subsidise pricing in Africa, and to invest in research. In 2010, India’s Serum Institute, in partnership with a non-profit group, released a highly effective vaccine for the ‘meningitis belt’ that stretches from Senegal to Ethiopia. With ambitions to be powerhouses of innovation rather than merely copy cats, the research contribution that India and China could make to diseases in developing countries is potentially enormous.

Perhaps the greater commercial concern may be not disinterest, but crowding out. Chinese firms are selling a particular form of ‘monotherapy’ malaria drugs in Africa which, while cheap, are less effective than combination therapy because patients develop resistance. Yet attempts to get low income patients to buy healthier combination therapy drugs are made difficult by the Chinese undercutting, says Amanda Glassman at the Centre for Global Development.

Domestic production

Worried about Trips and business trends, Unctad and Unido are calling for Africa to raise pharmaceutical output. South Africa has the largest industry, with some proposing a state-owned pharmaceutical company based on the Brazilian experience. South African firms have marketing collaborations with over 20 African countries, and strong linkages with Botswana, Namibia and Nigeria. Egypt is strong on distribution with 10 African partners and a steady flow of graduates, but lacks export drive, according to Unctad’s Mr Spennemann. Morocco, Tunisia, Cameroon, Ghana, Tanzania, Nigeria and Zimbabwe have some production, with donors, especially Germany, offering support.

Yet most small economies face an uphill struggle. Countries need to be at a threshold of competitiveness in terms of energy supply, skills, infrastructure, and regulatory efficiency, which few in sub-Saharan Africa have attained. It is not, however, impossible. Prior to 1982, eight transnational pharmaceutical companies controlled up to 70 per cent of Bangladesh’s local industry. Bangladeshi firms now take that share. In Indonesia between 1991 and 2010, the same reversal has taken place.

Foreign investment is one stimulus, and there are forays from the Brics. India’s Cipla is a partner in Cipla Medpro, South Africa’s fourth largest pharmaceutical company and third largest generics company, and has established a joint venture in Uganda with a Kampala-based manufacturer producing Aids and malaria drugs. Ranbaxy, the first international company to establish a presence in French West Africa when it settled in

Cameroon in 1987, provides ARVs, anti-infectives, anti-inflammatory drugs and cardiovascular medications there, and distributes products through offices in Nigeria, Côte d'Ivoire, Egypt, Kenya and Morocco. Indian firms have supported Zimbabwe's efforts to produce Aids treatments through a Harare-based manufacturer, and Cadila recently announced a $65m joint venture in Rwanda.

Brazil and China have modest commitments. Brazil has significant pharmaceutical trade with South Africa, with minor investments in Angola and Mozambique. Chinese entities have made occasional investments – in Zanzibar in the 1970s, joint ventures in Mali and Côte d'Ivoire in the 1990s and, recently, in drug capsule production in Ethiopia through Jianxi Corporation, but Chinese firms are unlikely to want African production to emerge since they see the continent as a potential export market for themselves.

Some helpful technology transfer occurring through public initiatives such as Expand-TB, which provides laboratory-strengthening in 10 African countries, can stimulate production. Technical assistance from Western universities can help too. Recently, a team of researchers from New York University, Columbia University, Kigali, and Amsterdam launched the "mChip", a stamp-size, portable pad that can diagnose HIV for just $1.

These inflows could increase if Trips is fully implemented, says Mario Ottiglio, associate director, public affairs and global health policy at IFPMA. "An innovation-friendly environment would encourage technology transfer by creating a level of trust, transparency and certainty for investors," he claims. A larger domestic skills base, with graduates in pharmacy, biochemistry and industrial production, is also needed. Such domestic talent was vital to India's rise.

One of the best ways to boost industry, says SAGMA's Mr Mujuru, is for African producers to be given preferential treatment by global procurement agencies who currently source most drugs from industrialised countries or emerging economies, especially India. But preferential purchasing is problematic since African producers are pricier than their Indian counterparts. Should public agencies be interested in the cheapest drugs, or the development of the drug industry?

"From a public health perspective what matters is that medicines reach the person in need, on time, in the right place and at the right price," says Juergen Reinhardt at Unido. But the venue of production should not be ignored, he says. Continuity of supply, strengthening national regulation and readying for a period beyond charitable donation are all worthy goals, he says, but proposals to build the pharmaceutical industry are batted from ministries of health to ministries of industry, and back again, Reinhardt claims, identifying a "tremendous disconnect" between public health and industrial actors

Tax may further hamper industry. While pharmaceuticals are a strategic priority in Ethiopia, high tariffs on imported raw materials are stifling local production, according to public statements by the Ethiopian Pharmaceutical and Medical Supplies Manufacturers Association. Yet even if African producers were given preferential treatment, quality control could make that an empty privilege. Only a handful of companies – in South Africa, Zimbabwe and Uganda –are qualified by the WHO to sell into procurement funds.

While a 'business case' needs to emerge in the long term, low purchasing power among low income groups means most interventions are going to be more public-initiated than private for the time being. "Africa is out there as a market, but it is on the horizon," says Simon Friend, partner at PricewaterhouseCoopers.

If production looks overly ambitious, streamlining regulation across smaller economies could boost Africa's attractiveness as a destination to sell into. When US pharmaceutical company Eli Lilly developed two antibiotics for tuburculosis and sought generic companies to sell them on in Africa, those identified – including South Africa's Aspen – said the mountain to climb to secure regulatory approval in each country made it unviable. It may be more effective to build regional regulators, perhaps incorporated into existing regional economic blocs such as Ecowas. A smaller number of better-resourced agencies might also help tackle the corruption that dogs some nations. In 2006, almost a million Aids drugs delivered to the Democratic Republic of Congo went missing. The following year, Uganda had vaccines grants suspended for mass corruption.

Political will

While the price of final drugs is important, access to medicine depends on how well the entire health system works. It can often be costs along the supply chain – from import taxes to handling fees – which drive prices up. Fragmented distribution networks, meanwhile, hinder the transit of drugs. “Even where you have medicines, getting them to people is difficult, both in pharmaceuticals and, more pertinently, in vaccines,” says Stephen Rea, a spokesperson at GlaxoSmithKline.

Refrigeration facilities, good roads, detailed country maps and skilled staff to administer drugs are key parts of that puzzle. Security and public goods are critical too. “If people don’t have clean water, or there is a war, those will be huge factors in how health access works,” says IFPMA’s Mr Jenner. Water is particularly important for Africa’s cholera burden which is rising, even as global incidences fall. While Indian firms are working on a $3 treatment, the solution lies in fixing sanitation systems.

While the sheer breadth of the challenge may seem overwhelming – and costly – there is no evidence that bigger economies necessarily have better health outcomes. Rwanda has among the highest rates of Aids treatment coverage in Africa, at around 95 percent, while in South Africa only 66 percent of those needing treatment receive it. Governments, not companies, emerge as the most important actors in ensuring wide access to medicines for their populations. Their policies, from intellectual property rules to public investments in higher education and roads, may prove more important than the whims of companies in Delhi, Geneva or Beijing.