

Access to Global Health Technologies

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GLOBAL
HEALTH
PROGRAMS

Technologies: big part of the global health landscape today

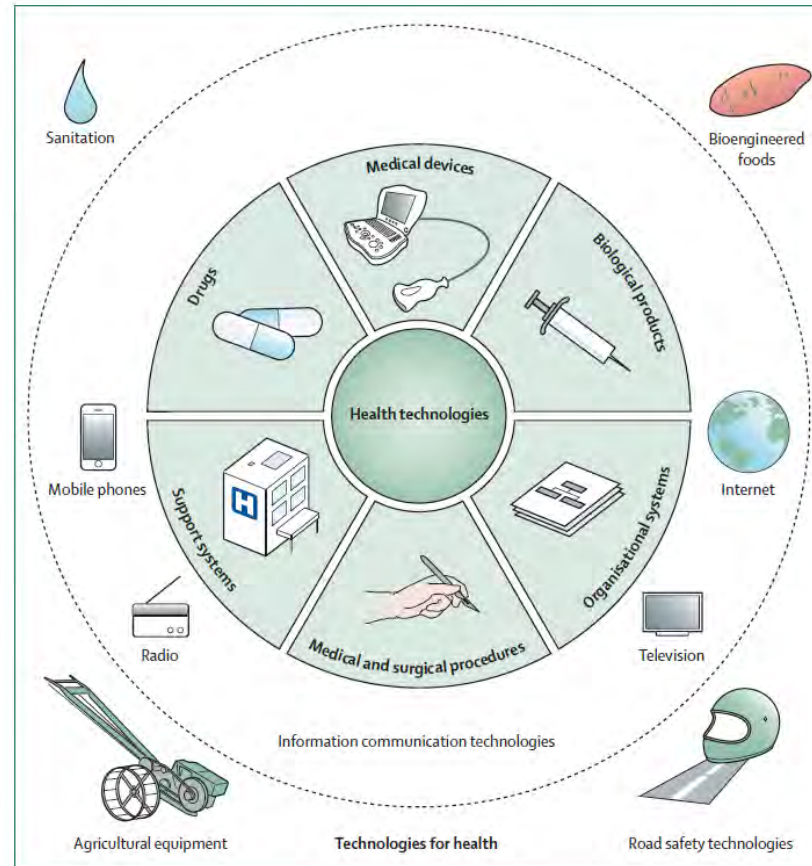
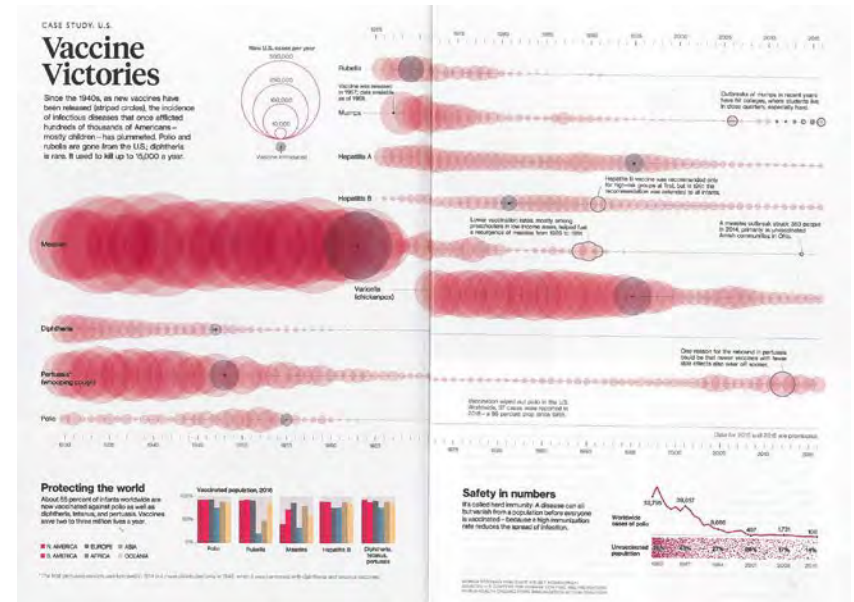
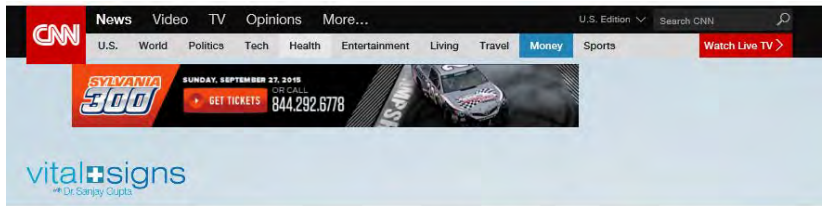


Figure 1: Overview of technology for global health





WHO: Trials show new Ebola vaccine is 'highly effective'



By Laura Smith-Spark, CNN

Updated 12:33 PM ET, Mon August 3, 2016

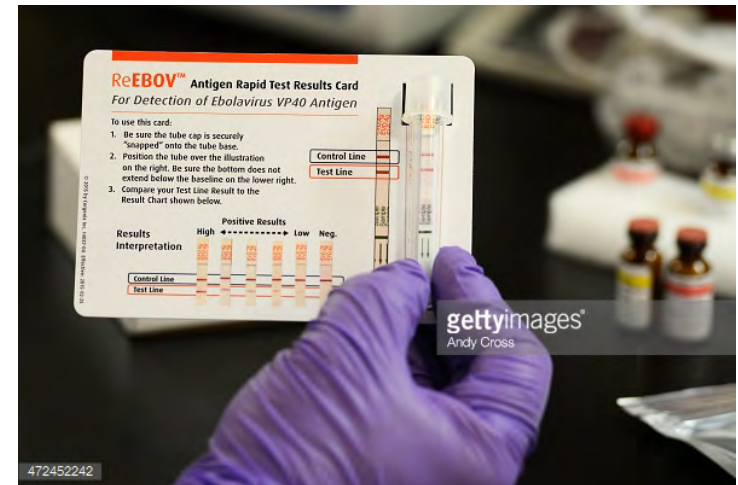


Ebola outbreak



WHO: New Ebola vaccine is 'highly effective'

Ebola found in U.S. doctor's eye



In global health, this is what we really care about

Good products get developed

They undergo adequate evaluation

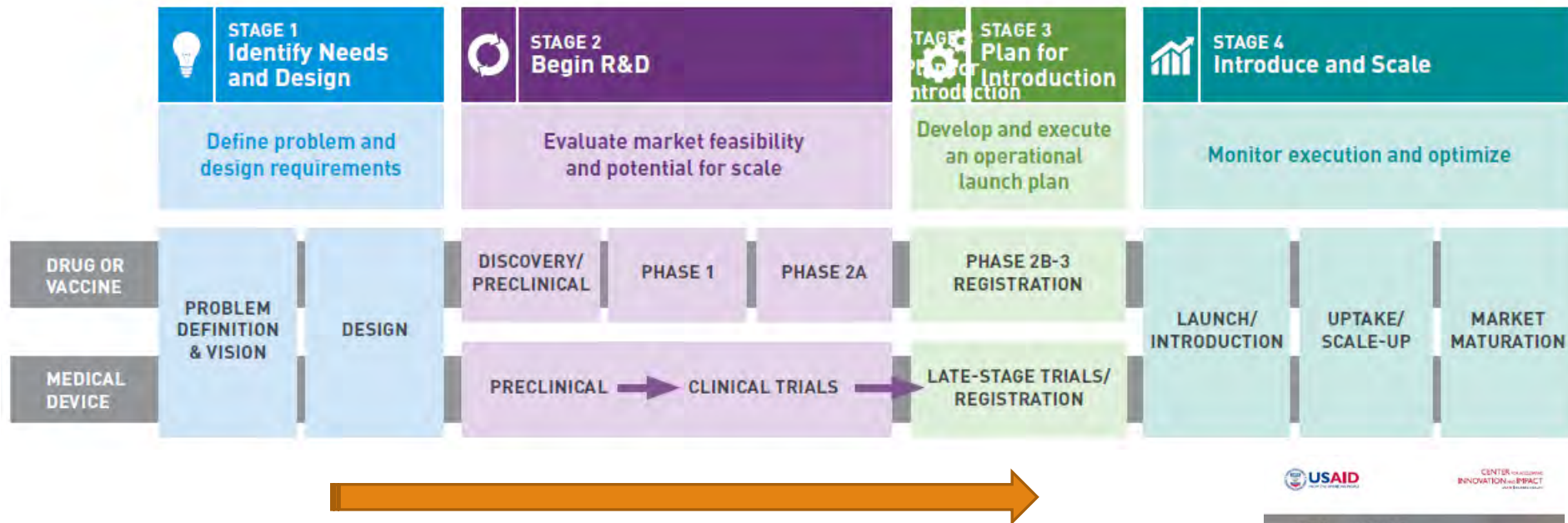
Evidence-based policies get formulated

Products and policies get implemented in countries

Impact is seen on disease burden

This could be a single long value chain...

Single, linear value chain



In reality, it is messy

A Pipeline of Promise

Goal: Address a health need by producing a safe and effective product that is:

- ✓ APPROPRIATE
- ✓ AFFORDABLE
- ✓ ACCEPTABLE
- ✓ ACCESSIBLE

START

1. IDENTIFY NEED

Researchers discuss end-user needs and health challenges with communities keeping in mind cultural norms and health systems to inform product design and development. These considerations must be revisited throughout the process.



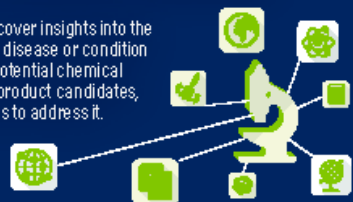
3. PRECLINICAL RESEARCH

Researchers translate discoveries into potential products and conduct laboratory testing to determine initial indicators of safety and efficacy.



2. BASIC RESEARCH/DISCOVERY

Scientists uncover insights into the biology of the disease or condition and identify potential chemical compounds, product candidates, or approaches to address it.



4. CLINICAL TRIALS*

Regulatory authority reviews preclinical results, clinical trial design, and ethics factors to determine if product can advance to human clinical trials.

Clinical trials include three phases:



PHASE 1: Small trials testing safety in healthy volunteers



PHASE 2: Larger trials testing safety and efficacy among target populations



PHASE 3: Largest trials confirming safety and long-term efficacy in intended target populations

5. REGULATORY REVIEW & APPROVAL

There is a multi-stage regulatory approval process for many global health products sometimes taking several years before products achieve widespread availability. Regulatory approval must be secured in each country where product is intended for use.

The national regulatory authority reviews clinical trial data, inspects manufacturing facilities, and approves product if deemed safe and effective.



INITIAL APPROVAL BY STRINGENT REGULATORY AUTHORITY

Secure initial approval from a stringent regulatory authority like the US Food and Drug Administration or European Medicines Agency. This can facilitate approvals in countries with limited regulatory capacity.



WORLD HEALTH ORGANIZATION (WHO) PREQUALIFICATION**

WHO reviews products for safety and efficacy and determines whether to "prequalify" it, permitting its purchase by global procurers (e.g., the United Nations; Global Fund; Gavi; the Vaccine Alliance). Many regulatory authorities of low- and middle-income countries require a product to be prequalified before they will consider it.

REGULATORY REVIEW & PRODUCT REGISTRATION***

COUNTRY A

COUNTRY B

COUNTRY C

8. IMPACT ACHIEVED

- ✓ Lives saved or improved
- ✓ Health care costs reduced
- ✓ Economic growth accelerated



7. POST-APPROVAL SURVEILLANCE

After product introduction, conduct studies to gain further understanding of the product's use and continue to monitor safety, side effects, and quality.



6. INTRODUCTION & SCALE

Product is introduced in countries where it has been approved. Manufacturing and distribution networks must be expanded to meet need.



Health officials and providers seek to expand access and overcome barriers to acceptance and use.

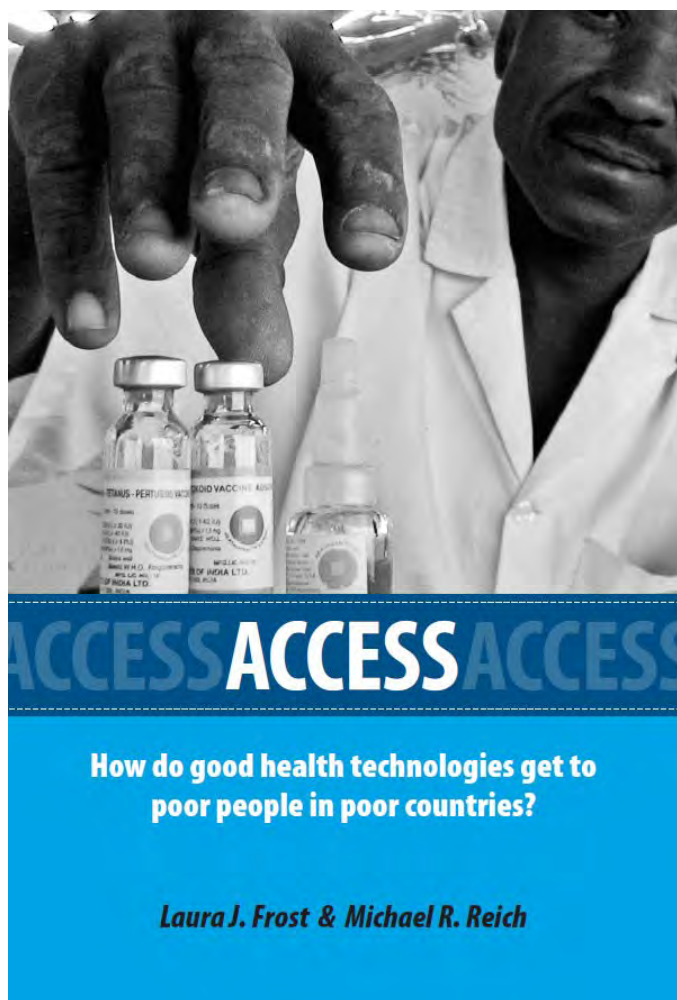
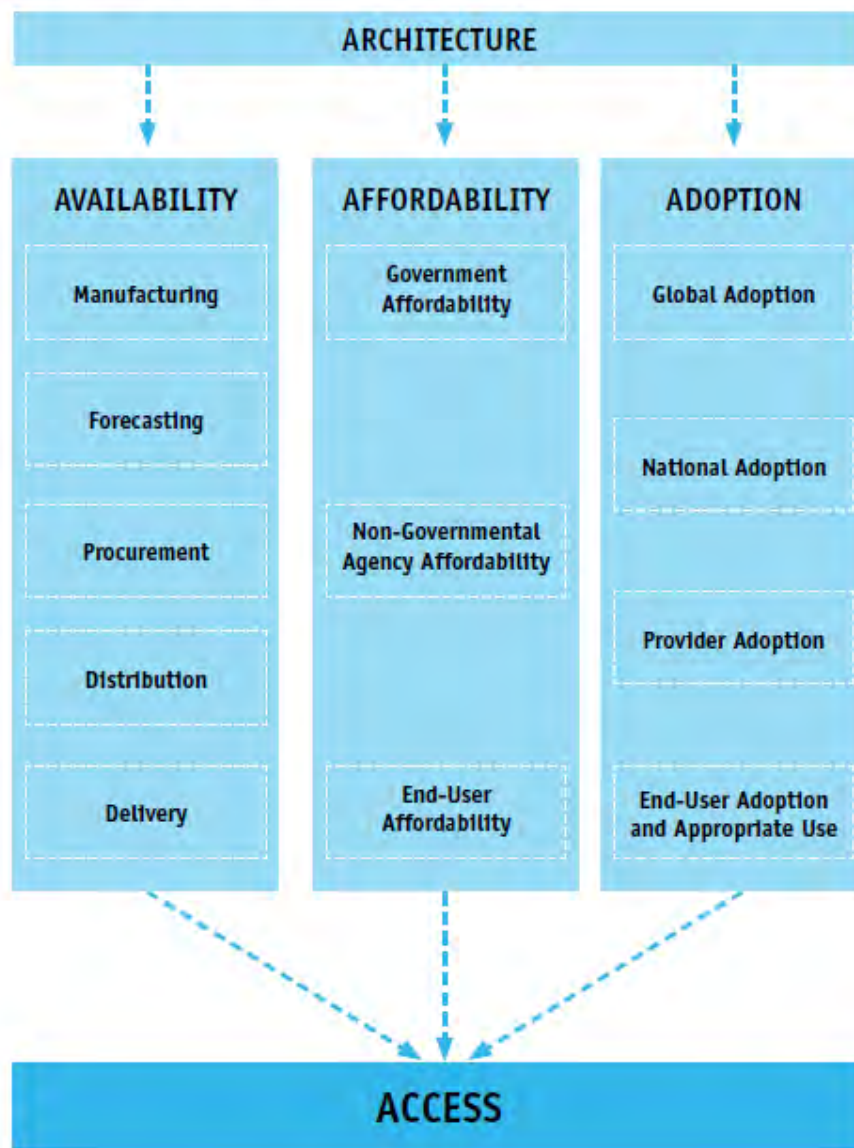


Figure 2.1 | The access framework



AVAILABILITY

TB Care Today



Current therapy for drug-resistant TB



New, promising therapy (NIX-TB)





By
Zoe Rohrich

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Nonprofit drug maker produces TB antibiotic after private companies wouldn't

Health Aug 22, 2019 7:05 AM EDT

Why are we still using old tools in TB?

Broken pharma R&D model

Insufficient investment (money, time)

Academics and funders are risk-averse

Inadequate industry-academia partnerships

Market forces and decisions

Regulatory hurdles

Even when new tools are developed, access is a big issue



FEATURE ARTICLE



POINT OF VIEW

Tuberculosis innovations mean little if they cannot save lives

Abstract The past decade has seen the emergence of new diagnostics and drugs for tuberculosis, a disease that kills over 1.8 million people each year. However, these new tools are yet to reach scale, and access remains a major challenge for patients in low and middle income countries. Urgent action is needed if we are committed to ending the TB epidemic. This means raising the level of ambition, embracing innovation, increasing financial investments, addressing implementation gaps, and ensuring that new technologies reach those who need them to survive. Otherwise, the promise of innovative technologies will never be realized.

DOI: [10.7554/eLife.25956.001](https://doi.org/10.7554/eLife.25956.001)

MADHUKAR PAI* AND JENNIFER FURIN

HUFFPOST

CANADA LIVING

Featuring fresh takes and real-time analysis from
HuffPost's signature lineup of contributors



Dr. Madhukar Pai [Become a fan](#)
Professor & Director of Global Health, McGill University



Jennifer Furin, MD, PhD [Become a fan](#)
Infectious diseases specialist and medical anthropologist
currently a lecturer at Harvard Medical School

Bridging The Gap Between Tuberculosis Innovation And Access

Posted: 05/02/2017 9:54 am EDT | Updated: 05/02/2017 10:01 am EDT

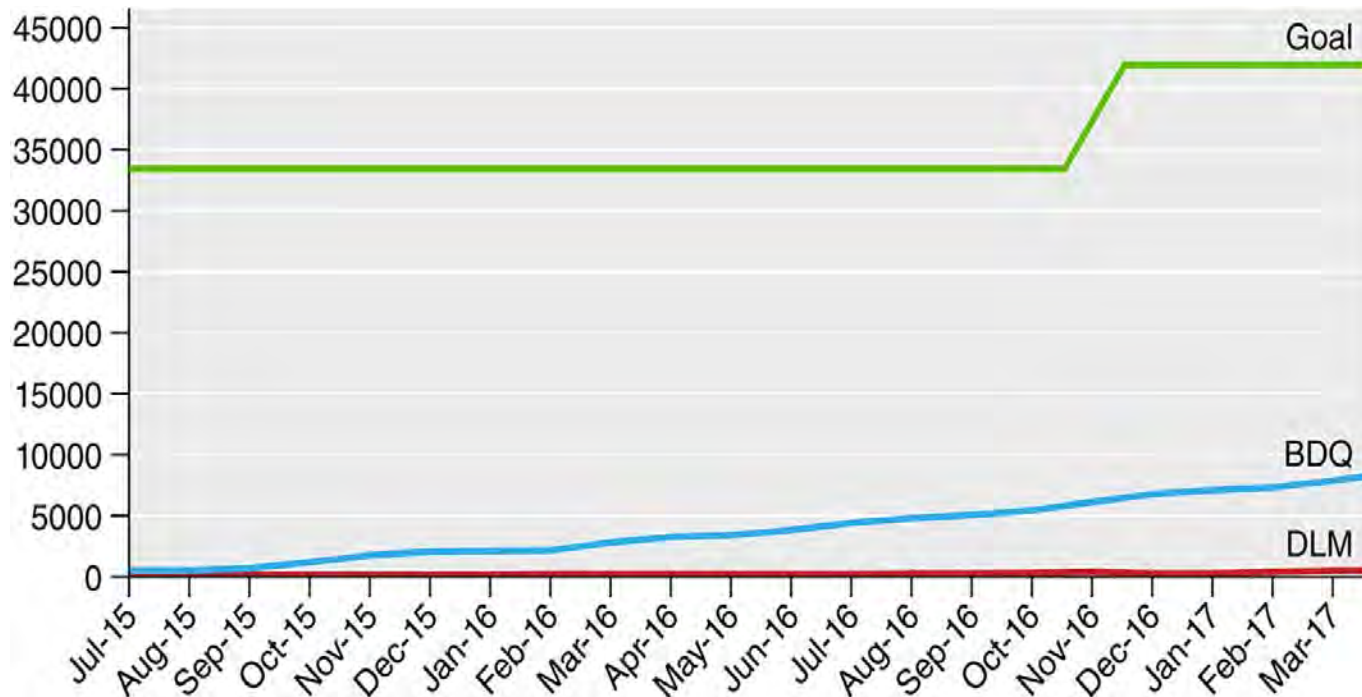
Never bring a knife to a gunfight. And yet, the global tuberculosis (TB) community has been doing precisely that for decades -- fighting a protracted battle with antiquated, inefficient tools, including an insensitive diagnostic (i.e. sputum microscopy), a low-efficacy vaccine (i.e. BCG), and drug regimens that have hardly changed for decades.



Dr Jennifer Furin

A critically ill patient, with possible drug-resistant TB being examined by his physician. Unfortunately, this patient did not have access to novel diagnostic testing or treatment and died of his disease. (Photo: Dr Jennifer Furin, with permission from the physician and the patient)

Access to new TB drugs



As of March 1, 2017 there were [8,195 persons who have ever taken bedaquiline](#) and [496 who have ever taken delamanid under program conditions](#). How does that compare to the need? The most conservative estimate would be that these medications are needed in approximately 42,000 patients per year, or one-third of the number of persons initiated on MDR-TB treatment annually.

Why?

1. Lack of adequate funding to national TB programs
2. Regulatory hurdles
3. High cost of tools
4. Restrictive policies
5. Bureaucratic apathy & implementation failures
6. In the case of new drugs, a desire to protect the drug (as opposed to protecting patients) coupled with excessive concern about potential side effects

AFFORDABILITY

American caravan arrives in Canadian 'birthplace of insulin' for cheaper medicine



U.S. residents come to Canada to purchase life-saving type 1 diabetes medication

Thomson Reuters · Posted: Jun 29, 2019 2:58 PM ET | Last Updated: June 29



Quinn Nystrom holds insulin she purchased in Canada after travelling over the border for more affordable medication. (Lorenda Reddekopp/CBC)

The Insulin Racket

NATALIE SHURE JUNE 24, 2019

Insulin is a 100-year-old drug whose wholesale price has tripled in ten years. The reasons why explain everything wrong with America's broken prescription drug market.



About the Author

Natalie Shure is a writer and researcher whose work focuses on health, history, and politics.

ARTICLES BY NATALIE SHURE

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Columns

Notebook

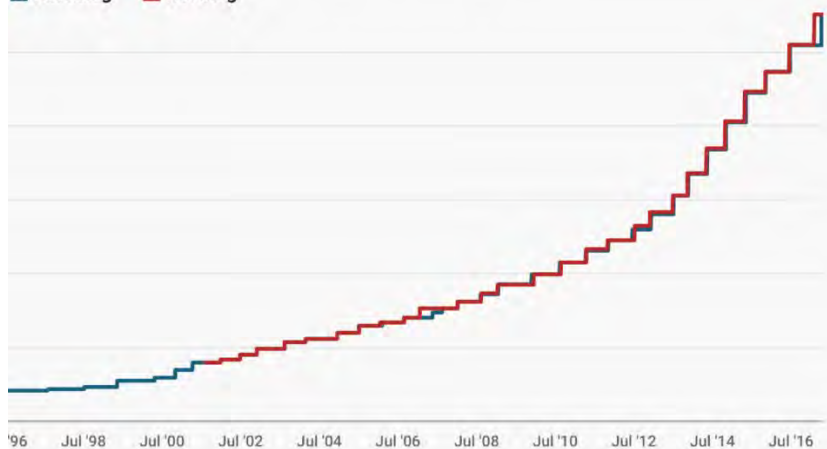
Features

Climate Change and the Democrats

**Neoliberalism: Political Success,
Economic Failure**

RISING INSULIN PRICES

■ Humalog ■ Novolog



ven Health Analytics

BUSINESS INSIDER

Key Facts & Statistics:

- 50% of people around the world in need of insulin cannot reliably access it because it is unavailable, unaffordable, or both"
- Monthly out-of-pocket costs for diabetes supplies the USA are anywhere from \$0 to \$1700 USD"
- In Syria, up to 77% of income can be spent on diabetes supplies, if any are available"
- Monthly costs for diabetes supplies in Brazil can be as much as \$700 USD, or 82% of a person's income"
- Full diabetes management in Kenya could cost about \$120 USD per month, but the average monthly salary in Kenya is \$216 USD"
- Discontinuation of insulin use was the leading cause of diabetic ketoacidosis in 68% of people in a USA inner city"

https://www.t1international.com/media/assets/file/Advocacy_Toolkit_-_WEB_SPREADS.pdf

BUSINESS 07/28/2019 19:50 EDT | **Updated** 07/29/2019 14:04 EDT



This Is Why Insulin And Other Drugs Are So Much Cheaper In Canada

Americans are heading over the border to buy pharmaceuticals at a lower cost.

By Sima Shakeri



With Americans increasingly crossing the border to buy insulin in Canada, [prompting worries of a shortage](#), in a situation that Vermont Senator Bernie



The simple reason is Canada, like many other industrialized countries, has price controls on the cost of pharmaceuticals. The [Patented Medicine Prices Review Board](#) ensures the price of patented medicine sold in Canada is “not excessive” and remains “comparable with prices in other countries.”

ACCESS TO HEPATITIS C TREATMENT 2016

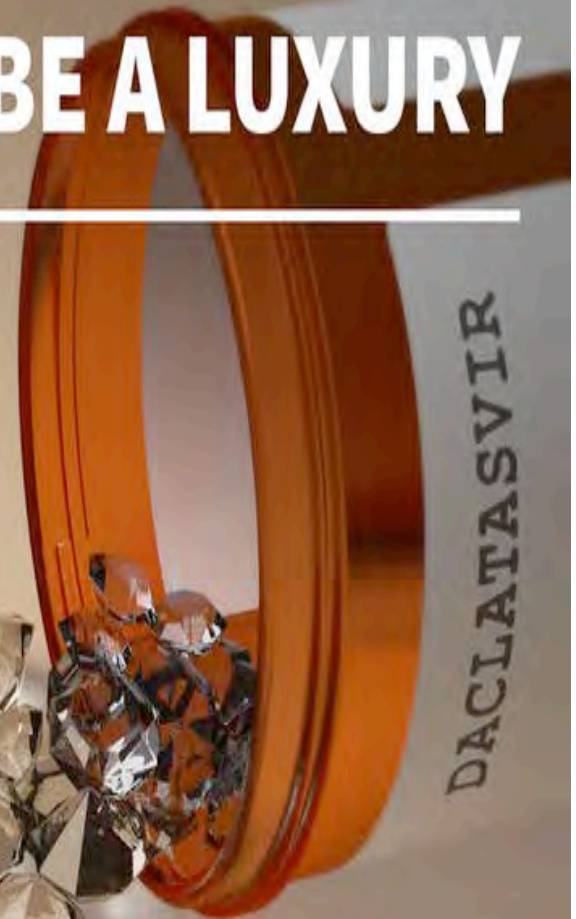
Of **80 million** people infected - over **1 million**
had access to Hep C treatment



We have a long way to go

MEDICINES SHOULDN'T BE A LUXURY

Gram for gram, this hepatitis C drug is more expensive than diamonds





Of the 275,000 women in the world who die of cervical cancer every year, more than 85% are in low-income countries, where the incidence of HPV infection is higher and few women have access to screening and treatment - GAVI

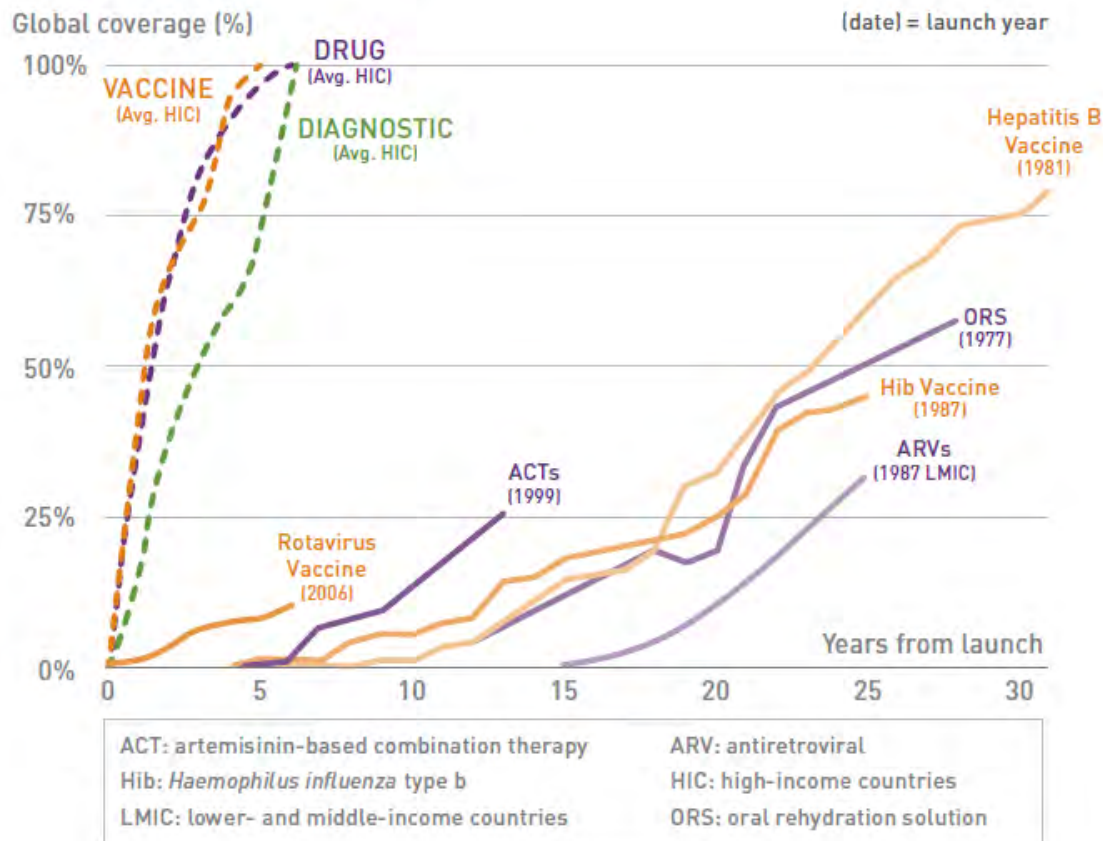


HPV vaccines are among the most expensive adult vaccines, often costing close to \$400 in the US private sector for a full three-dose course of therapy

ADOPTION & SCALE

Even when products are developed, availability does not necessarily mean they get scaled-up

Figure 1. Years to scale-up



While drugs, diagnostics, and vaccines typically scale within the first two years of launch in developed countries, they often take decades to scale in lower- and middle-income countries.

Source: Bill & Melinda Gates Foundation

Better Therapies For TB Are Here, But They Will Not Deliver Themselves



Madhukar Pai Contributor

Healthcare

I write about global health, infectious diseases, and equity



- Planning, alignment and engagement of stakeholders
- Strong policies
- Pathfinder countries
- Go beyond donation programs
- Active regulators
- Donor support
- United TB community & advocacy

Several interesting case studies & models to improve access to tools

Anti-retrovirals

GAVI

Hepatitis B vaccines

DNDi

HPV vaccination

Global Drug
Facility

Rota virus vaccine


Hepatitis C drugs

Affordable
Medicine for
Malaria (AMfM)

New TB diagnostic and drugs

CEPI

Canada's Ebola vaccine



OFFICIAL SELECTION
2013
SUNDANCE
FILM FESTIVAL


MEDICINE MONOPOLY MALICE


fire in the blood

WATCH THE FILM

VERSIÓN EN ESPAÑOL FOR EDUCATORS

PURCHASE THE DVD

HOME VIDEO SCREENINGS REVIEWS DIRECTOR'S NOTES CAST & CREW NEWS BLOG GET INVOLVED 



02:42

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LATEST FROM FACEBOOK

An intricate tale of 'medicine, monopoly and malice', FIRE IN THE BLOOD tells the story of how Western pharmaceutical companies and governments aggressively blocked access to low-cost AIDS drugs for the countries of Africa and the global south in the years after 1996 - causing ten million or more unnecessary deaths - and the improbable group of people who decided to fight back.

Shot on four continents and including contributions from global figures such as Bill Clinton, Desmond Tutu and Joseph Stiglitz, FIRE IN THE BLOOD is the never-before-told true story of the remarkable coalition which came together to stop 'the Crime of the Century' and save millions of lives in the process.

As the film makes clear, however, this story is by no means over. With dramatic past victories having given way to serious setbacks engineered far from public view, the real fight for access to life-saving medicine is almost certainly just beginning.

A film by *Dylan Mohan Gray*, narrated by *William Hurt*.

<http://fireintheblood.com/>

Most models try to address demand and supply side issues

Description or examples	
Supply side	
Preventing delay in generic entry	Expedited or abbreviated application processes, early working (Bolar) provisions, and biowaivers
Incentivising market authorisation	Incentives for manufacturers to file an application for market authorisation of a generic medicine
Assuring quality of generic medicines	Requirements for bioequivalence testing and the publication of lists of interchangeable medicines; transparency of reviews of such evidence; reliance on decisions taken by stringent regulators or prequalification
Using TRIPS flexibility	Policies that enable the use of TRIPS flexibilities, including undisclosed test data protection that does not prohibit the registration of a generic
Increasing competition between manufacturers	Patent pools, improving transparency of patent information, and publishing information on the prices of medicines
Pricing for affordability	Internal reference pricing, external reference pricing, pricing controls, the regulation of distribution chain mark-ups, and charges; pooled procurement and tenders
Demand side	
Promoting generic prescribing	Prescribing medicines by the international non-proprietary (generic) name
Enabling substitutions	Mandate or enable the dispensing of generic equivalents instead of branded products by pharmacists and other dispensers
Adapting medicines reimbursement policies	Promoting generic medicines via waiver of copayments or the application of internal reference pricing
Promoting independent medicines information	Banning the provision of free medicine samples, banning direct-to-consumer advertising of prescription medicines
Monitoring consumption	Monitor and report the consumption pattern of generic medicines
TRIPS=Trade-Related Aspects of Intellectual Property Rights.	
Table 4: Pro-generic policies to increase competition and reduce prices¹⁶²	

Summary table of different countries and results of their price reduction intervention for Hep C drugs

Country	Description of Intervention	Cost of SOF per treatment of 12 weeks (per pill) pre-intervention	Cost of SOF per treatment of 12 weeks (per pill) post-intervention	Number of people who have accessed lower price medication
Australia (High-income)	Volume-based pricing deal	84,000\$ AUS (1,000\$)	Free to patients after normal co-payment scheme	25,890 people initiated treatment in 2016
Canada (High-income)	Leveraging collective buying power	55,000\$ USD (655\$)	Prices not disclosed due to confidentiality	Newer prices not yet implemented
Malaysia (Upper middle-income)	Compulsory licenses	12,000\$ USD (143\$)	Price is lower than 300\$ USD, but SOF alone not disclosed	Newer prices not yet implements. RCTs needed for regulatory purposes
India (Lower middle-income)	Voluntary licenses generic competition	900\$ USD (10.71\$)	22\$ USD (0.26\$)	42,000 people had received treatment by the end of 2015
Egypt (Lower middle-income)	Challenging patents generic competition	900\$ USD (10.71\$)	Gilead's SOF 250\$ USD (2.98\$) Generic SOF 51\$ USD (0.61\$)	More than 1 million people had accesed treatment by the end of 2016

PPHS511 Case Study, Fall 2017

Criminal Cost: The High Price of the Hepatitis C Medication Sofosbuvir

Authors: Adam Palayew B.Sc.(honors)¹, Elitsa Papazova², Mauli Patel³, Nevena Veljanovic³, Marie Ezran⁴, Claudia Woronko B.Sc.(honors)¹

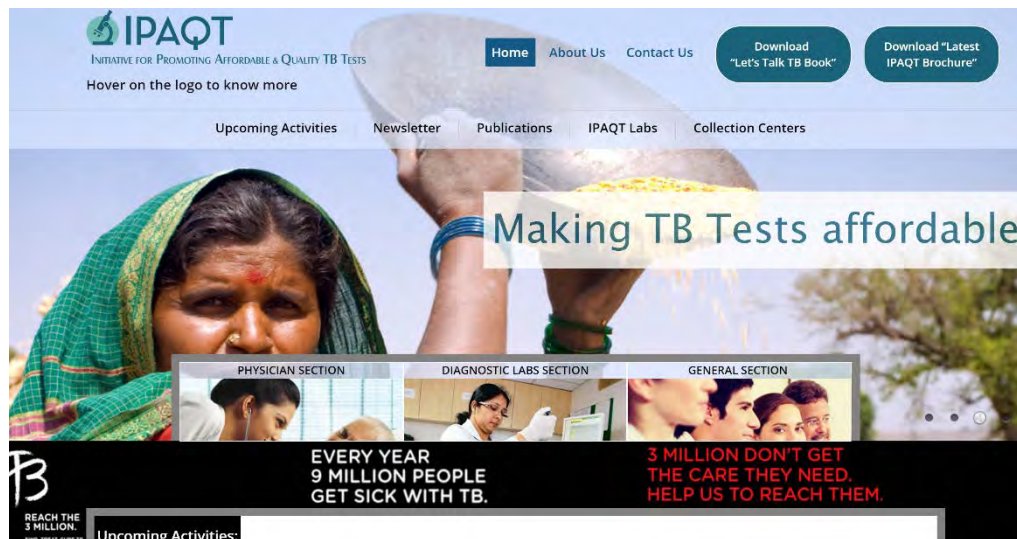
Case study: Xpert MTB/RIF test for TB and rifampicin resistance



Smear microscopy



Rapid molecular test

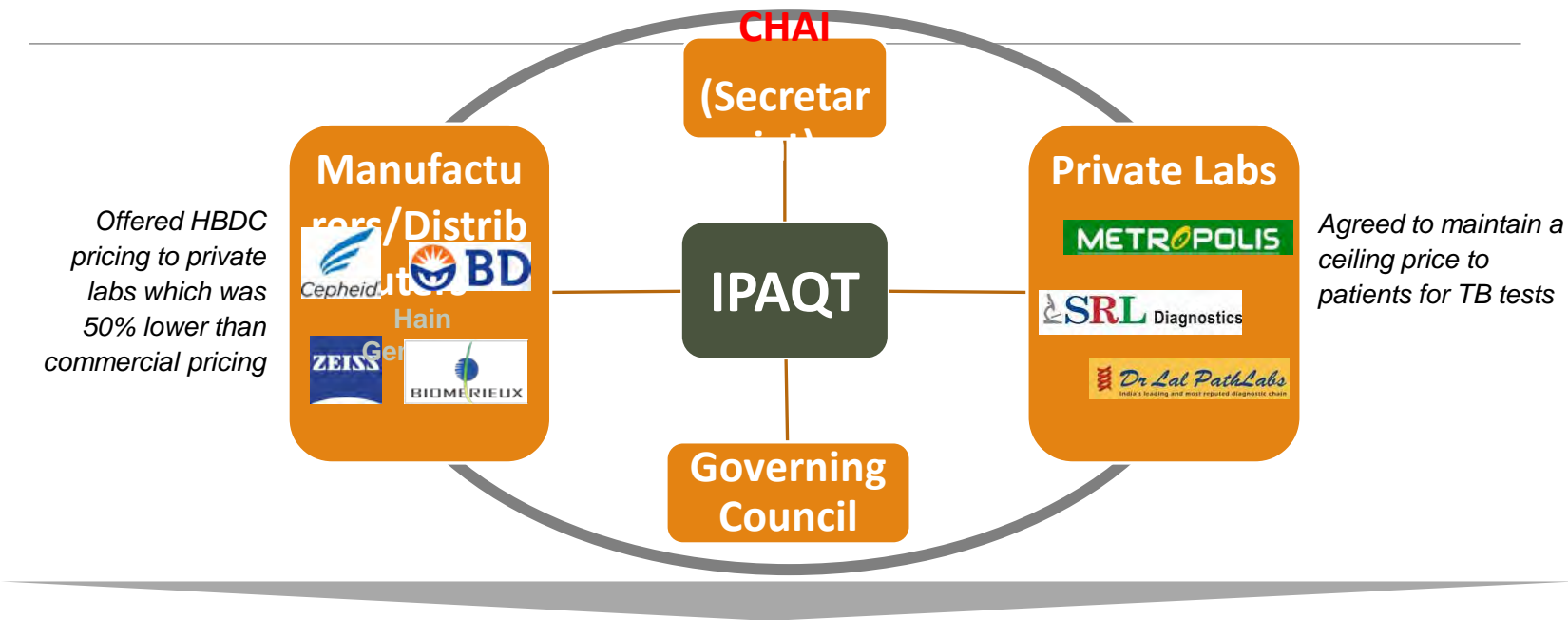


CASE STUDY

Catalyzing the market for accurate tuberculosis testing in India's extensive private sector through IPAQT

INCREASING ACCESS TO ACCURATE, VALIDATED DIAGNOSTICS IN THE PRIVATE SECTOR IS KEY TO REDUCING INDIA'S HIGH TUBERCULOSIS BURDEN. CHAI FACILITATED A PARTNERSHIP BETWEEN PRIVATE SECTOR LABORATORIES AND MANUFACTURERS TO SUPPORT ADOPTION OF A LOW-PRICE, HIGH-VOLUME MODEL THAT IMPROVES ACCESS TO QUALITY DIAGNOSTICS AND STRENGTHENS LINKAGES IN INDIA'S HEALTHCARE SYSTEM.

What is IPAQT?

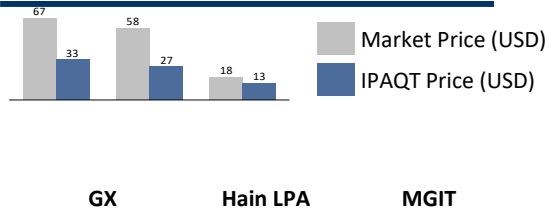


Lower input price to labs

	Pre-IPAQT (\$/Unit)	IPAQT (\$/Unit)
GeneXpert		
Capital Investment	30,00,000	15,00,000
Cartridges	2300	1150



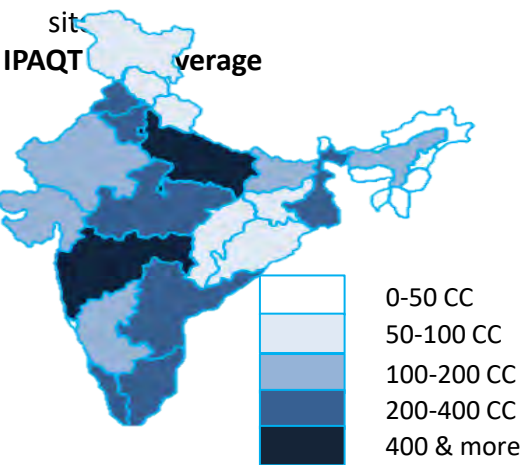
Resulting in lower price to patient



What has IPAQT achieved?

Ensured pan India availability of quality TB tests

- IPAQT network is truly nationwide
- 210 labs, & >6,000 collection centers (cc); all major chain labs.
- >80% Indian districts with at least one participating collection site

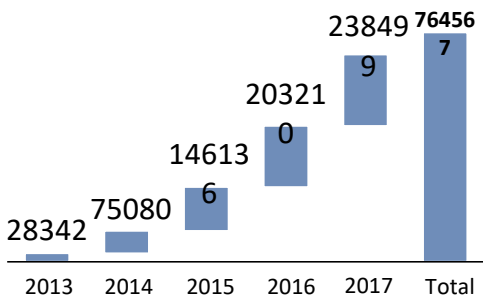


10x increase in test volumes

Steady YoY increase in test orders.
~85% of the GX volumes through IPAQT labs

YoY IPAQT Test Volumes

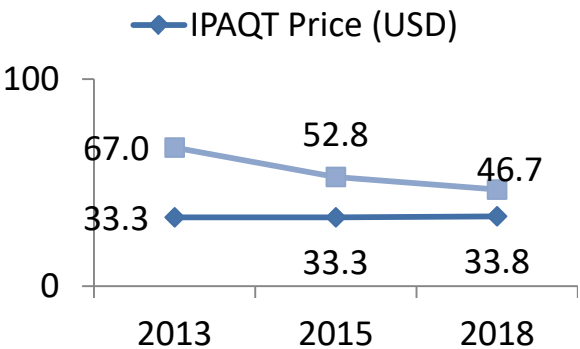
Σ (GeneXpert, Hain LPA, BacT/Alert)



Commercial prices of GX reduced over a period of time¹

YoY GX pricing trends in the private sector suggest that IPAQT has been successful in driving down the commercial GX price

GX Price to Patient



1 – Ponnudurai et al, J Epi Global Health 2018

IPAQT labs offer the lowest price for Xpert MTB/Rif Test in the private sector

Country	Mean price for Xpert MTB/RIF 2015	Mean price for Xpert MTB/RIF 2017-18	Range 2015	Range 2017-18	Labs contacted in 2015 with Xpert testing	Labs contacted in 2017-18 with Xpert testing
Kenya	\$80.60	\$85.36	\$51-\$171	\$58.20-\$149.38	5	5
India						
IPAQT* member laboratories	\$30.26	\$33.80	Fixed Price	Fixed Price	..	..
Rest of Private Sector	\$52.82	\$46.70	\$27.84-\$86.55	\$24.67-\$80.19	13	22
Pakistan	\$37.26	\$47.67	\$25.96-\$58.65	\$25.63-\$66.45	4	7
Philippines	\$155.44	\$152.49	\$128-\$183	\$106.4-\$170	9	8
Bangladesh	\$74.75	\$64.20	\$45.50-\$130	\$42-\$90	4	6
Afghanistan	\$50.00	No Xpert	..	..	1	..
Uganda	No Xpert	No Xpert	..	..	..	..
Vietnam	No Xpert	No Xpert	..	..	..	..
Indonesia	No Xpert	No Xpert	..	..	..	..
Myanmar	No Xpert	\$71.03	..	..	..	1
Nigeria	No Xpert	\$175.00	..	\$115.00-\$235.00	..	2
Cambodia	No Xpert	No Xpert	..	..	..	..

- The average price to the patient of US \$68.73 in 2015 v/s US \$84.53 (range \$46.70-\$175.00) that patients pay now, translates to a 23% increase.
- The 2015 and 2017-18 data show a similar trend, with IPAQT laboratories still offering the lowest price (US \$33.80) among all 12 countries.
- The gap between IPAQT and market prices in India has narrowed between 2015 and 2018, suggesting that IPAQT might have played a role in increasing affordability in the private sector at large.

WORLD NEWS

Plan to Fight Deadly TB Strain Gains in India

BY GUY CARO

NEW DELHI—An international health initiative has broken a deadlock, agreed that aims to halve the price patients pay for advanced tests for a strain of tuberculosis that is resistant to standard drugs.

The deal between the makers of diagnostic equipment that can detect multi-drug-resistant TB and private Indian clinics that test patients. Together, they could fill a big hole in international efforts to combat more virulent forms of the disease by creating a market model.

India is fighting a TB epidemic. In the past year, a Mumbai hospital has been reporting an increasing number of patients—now numbering 22, who are resistant to virtually all of the drugs traditionally commonly used against the disease.



An Indian patient suffering from tuberculosis was treated in the northern Indian city of Jaipur. Last year.

New Delhi's support is crucial to persuade private physicians not to let patients see their tests rather than the poor diagnostics, the initiative's organizers say.

Dr. Dang said the WHO has indicated all of the discounted diagnostics and they are widely used globally. But the Indian TB officials say they haven't validated some of them. To participate, after about a year of effort, the TB division had to open GeneXpert—a rapid test to detect TB and drug resistance within two hours—into the pilot studies centers.

Last week, Dr. Dang said he and other organizers visited the TB division and invited officials to endorse their efforts to bring good diagnostic diagnostics to private laboratories.

"I was quite diagnosed" by the reaction of the officials, Dr. Dang said. "They said, these are not validated tests. How can they not

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IPAQT: subsidised Xpert TB test in private labs gets popular

The test will cost Rs.2,000 from January 15

R. PRASAD

The number of labs/private hospitals in the country offering the WHO-approved tests like GeneXpert, Line Probe Assay (LPA) for diagnosing TB disease at a subsidised price has reached 54. There are over 10,000 collection centres spread across the country.

In eight months since the novel initiative – Improving Access to Affordable & Quality TB Tests (IPAQT) – was launched, the number people accessing these labs for the



THE PROOF: Over 15,000 people in India have availed the GeneXpert test in eight months after IPAQT came into being. – PHOTO: K. PICHUMANI

70 labs in India cut TB test bill by half

Malathy Iyer | TNN

Mumbai: Awareness about drug-resistant tuberculosis across India increased in the last two years after Hinduja Hospital's doctors highlighted the plight of patients who were resistant to all 12 known TB drugs. This is borne out by the fact that the number of sophisticated TB tests—called GeneXpert and Hain line probe assays—done from April to December 2013 stood

nostic laboratory chains in India to offer drug-sensitivity tests for TB at half the price.

Dr. Madhukar Pai, an epidemiologist from Canada's McGill University, who has been instrumental in putting the initiative together, said that while the government has upgraded diagnostic facilities, most Indians still prefer the private sector. "The only way to reach out to them was by offering affordable tests. We convinced the labs that the volume of tests would increase to a great extent if the prices were kept low," said Dr. Pai.

Considering that 70% of Indians seek healthcare in the private sector by paying from their own pocket, the IPAQT logic clicked. Around 380 diagnostic outlets from Maharashtra are a part of IPAQT; 170 are from Mumbai and Navi Mumbai.

Dr. B. R. Das from SRL Diagnostics, one of the largest diagnostic chains in India, said, "We now offer GeneXpert at Rs 2,000 from the initial cost of Rs 3,500. We conduct approximately 900 GeneXpert tests a month, compared to 50 tests a month two years ago."

Dr. Shamma Shetye from Metropolis Healthcare Ltd said, "Since the price is fixed across partner IPAQT labs, it ensures standardization of prices for the patient."

Public health experts believe that low awareness of drug-resistant TB, coupled with high costs of diagnostic tests had worsened the TB epidemic in the country; two people died every three minutes in

TESTS WITH REDUCED COSTS

Xpert MTB/RIF | ₹2,000
Detects multidrug resistant TB in two hours. Considered a game-changer in the battle against TB

Hain Genotype LPA | ₹1,600
Specialized gene-based test to detect resistance to two drugs. Recommended by the World Health Organisation

MGIT Liquid Culture & Bact/Alert Liquid Culture | ₹900 each
Popular tests used by doctors across the world to detect multidrug resistant strains



BMJ

BMJ 2013;346:f2161 doi: 10.1136/bmj.f2161 (Published 5 April 2013)

Private firms form initiative to offer accurate and affordable TB tests

NE

'IPAQT is now seen as a novel market-shaping business model to increase access to quality diagnostics'

Plan to Fight De

By GEETA ANAND

NEW DELHI—An international health initiative has brokered a landmark accord that aims to



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BILL & MELINDA
GATES foundation

PO Box 23350
Seattle, WA 98102, USA
V 206/709.3100
F 206/709.3180
www.gatesfoundation.org

June 14, 2013

Dr. Madhukar Pai
Associate Director
McGill International TB Centre
Department of Epidemiology & Biostatistics
1020 Pine Avenue West
Montreal QC H3A 1A2
Canada

Dear Dr. Pai:

Thank you for meeting with me during my visit to Mumbai. It was a great discussion, and I enjoyed learning more about India's private diagnostics industry and its role in improving tuberculosis control.

I was very impressed with your comprehensive understanding of the diagnostics landscape in India and your work to ban unreliable serological tests and replace them with more suitable WHO endorsed tests. In particular, I appreciate your heroic efforts to reduce cost and increase access through the IPAQ coalition. I look forward to hearing of future progress.

It was a pleasure meeting you, and I appreciate your sharing your time and expertise with me.

Sincerely,

Bill Gates

Bill Gates

Plan
An int
price
View

Gavi's business model in six steps

1

The vaccine goal

Accelerate equitable uptake and coverage of vaccines.

2

The systems goal

Increase effectiveness and efficiency of immunisation delivery as an integrated part of strengthened health systems.

3

The sustainability goal

Improve sustainability of national immunisation programmes.

4

The market shaping goal

Shape markets for vaccines and other immunisation products.

Getting vaccines on the agenda



1

Donor and developing countries need to see proof of the value of new vaccines before investing.

Securing predictable financing



2

Immunisation is a commitment for life that requires guaranteed, long-term funding.

Putting countries in charge



3

Developing countries decide for themselves how best to use Gavi support for immunisation.

Strengthening health delivery systems



4

It's not enough to buy new vaccines. They have to safely reach every child.

Working together for healthy vaccine markets



5

Gavi's market shaping efforts aim to make life-saving vaccines and other immunisation products more accessible and affordable for lower-income countries.

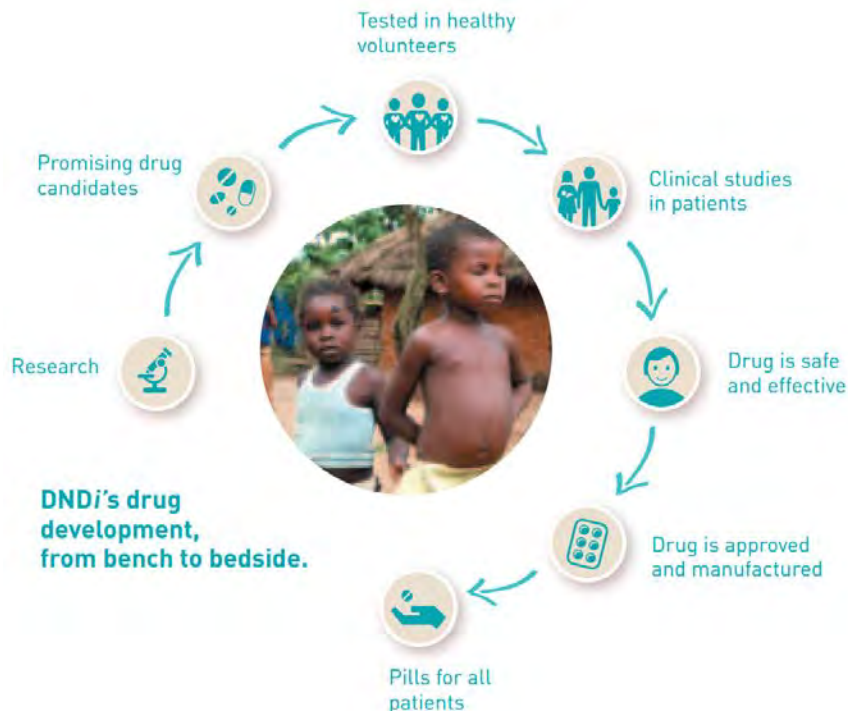
Country commitment to co-financing



6

National immunisation programmes must survive long after Gavi support stops.

Drugs for Neglected Diseases *initiative* (DNDi) is a collaborative, patients' needs-driven, non-profit drug research and development (R&D) organization that is developing new treatments for neglected diseases.



SIX NEW TREATMENTS DELIVERED AND A PIPELINE OF Easy-to-use, affordable, field-adapted, non-patented

<p>ASAQ <i>Malaria</i> 2007</p> <p>(Fixed-dose combination of artesunate + amodiaquine)</p> <ul style="list-style-type: none"> Innovative partnership with Sanofi Simple regimen: 1 or 2 tablets once a day for 3 days Registered in 35 countries, of which 31 in Africa WHO prequalified WHO Essential Medicines List (adults and children) <p>320 million treated in 31 African countries</p>	<p>ASMQ <i>Malaria</i> 2008</p> <p>(Fixed-dose combination of artesunate + mefloquine)</p> <ul style="list-style-type: none"> Developed by DNDi and Farmanguinhos/Fiocruz, Brazil Simple and adapted regimen for children and adults Registered in Brazil (2008), India (2011), Malaysia and Myanmar (2012), Tanzania (2013), Vietnam and Niger (2014) South-South technology transfer from Farmanguinhos to Cipla, India WHO prequalified (Cipla) WHO Essential Medicines List (adults and children) <p>1.2 million treated in Latin America and Asia</p>	<p>NECT <i>Sleeping Sickness</i> 2009</p> <p>(Nifurtimox-eflornithine combination therapy)</p> <ul style="list-style-type: none"> Partnership between DNDi, MSF, governments, pharmaceutical companies, and WHO Approximately 95% of all stage 2 sleeping sickness patients in endemic countries treated with NECT (2013) WHO Essential Medicines List (adults and children) On essential medicines lists of 12 African countries (covering 98% of reported cases) <p>13,000 treatments in Africa</p>
<p>SSG&PM <i>Visceral Leishmaniasis</i> 2010</p> <p>(Sodium stibogluconate & paromomycin combination therapy)</p> <ul style="list-style-type: none"> Partnership between DNDi, the Leishmaniasis East Africa Platform (LEAP), national control programmes of Kenya, Sudan, Ethiopia, and Uganda, MSF, and WHO Recommended by the WHO Expert Committee on the Control of Leishmaniasis for East Africa (2010) National VL guidelines of Sudan, South Sudan, Kenya, and Ethiopia Paromomycin registered in Uganda (2011), in Kenya (2013), and underway in other East African countries <p>25,000 treated in East Africa</p>	<p>NEW VL treatments in India <i>Visceral Leishmaniasis</i> 2011</p> <p>(SD AmBisome® / PM+M / M+M*)</p> <ul style="list-style-type: none"> Large-scale implementation programme with health authorities at state, national, and regional levels High efficacy and good safety profiles Field-adapted Recommended by the WHO Expert Committee on the Control of Leishmaniasis (2010) <p>SD AmBisome® and PM+M recommended in revised Indian VL elimination roadmap</p>	<p>Benznidazole 12.5 mg <i>Chagas Disease</i> 2011</p> <p>(Paediatric dosage form of benznidazole)</p> <ul style="list-style-type: none"> Partnership with LAFEP, Brazil Age-adapted, easy-to-use, and affordable treatment Easily dispersible tablet for children under 2 years of age Registered in Brazil in 2011 Recommended by the WHO Expert Committee on the Control of Leishmaniasis (2010) Agreement with Mundo Sano Foundation for second source (2013) <p>Only child-adapted dosage form</p>

DNDi co-developed fexinidazole, the first all-oral treatment for sleeping sickness

New patient-friendly sleeping sickness treatment

Current treatment

NIFURTIMOX

10 DAYS x
ORAL PILLS

EFLORNITHINE

x 7 DAYS
INTRAVENOUS
INFUSIONS (IV)

NECT
NIFURTIMOX EFLORNITHINE
COMBINATION TREATMENT



Three times a day



Twice a day



- ✗ Cumbersome, heavy: each box weighs 36 kg
- ✗ Difficult to transport and store
- ✗ Only for patients with advanced disease
- ✗ Difficult for patients: requires hospitalization
- ✗ Needs to be given by trained health workers

VS

New all-oral treatment

FEXINIDAZOLE



x 10 DAYS
ORAL PILLS



Once a day



- ✓ Easy to transport and store
- ✓ Works for all stages of the disease
- ✓ Simple to administer: easier to reach remote or unstable areas
- ✓ Can be given closer to a patient's home

#Fexinidazole

DNDi
Drugs for Neglected Diseases initiative

What about universities? How can we help?



UNIVERSITY REPORT CARD 2017 - GLOBAL EQUITY IN BIOMEDICAL RESEARCH

Measuring the commitment of Canadian universities to research that meets the needs of people worldwide

Search for a word:

1. UNI. OF BRITISH COLUMBIA	A
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6. MCMASTER UNIVERSITY	C
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UAE
UNIVERSITY ASSOCIATION OF
EQUITY IN MEDICINE

Project Summary

"Canadian Universities play a critical role in addressing global challenges such as HIV/AIDS, Tuberculosis, and other neglected diseases. It is imperative that we continue to give priority to the lives of millions through licensing practices that allow our world-class research to reach those that need it most. This Report Card helps us measure the impact our universities have on global health. It clearly shows Canadian Universities are falling short: students, faculty and related communities must join the Universities into sanity."

Stephen Lewis, Co-Director of AIDS-Free World, Canada's Former Ambassador to the United Nations

"The UAE's Canadian Global Equity in Biomedical Research Report highlights a worrying lack of transparency on publicly funded biomedical research carried out by Canadian Universities. With only a third of clinical trials data disclosed and only one university adopting global access licensing, this Report card proves once again that universities have a long way to go. It is time for universities to fulfill their responsibility to ensure that publicly funded biomedical research is available for the public good."

Rachel Kiddell-Monroe, ISID Professor of Practice McGill University

UAE's Canadian Report Card project evaluates 15 of Canada's research-intensive universities on their contributions to biomedical research on neglected health needs, access to medicines, and education concerning access and innovation issues. The Report Card uses both publicly available and self-reported information to evaluate academic institutions on three key questions:

1. To what extent are universities investing in innovative biomedical research that addresses the neglected health needs of resource-limited populations?
2. When universities license their medical breakthroughs for commercial development, are they doing so in ways that ensures equitable access for all marginalized and vulnerable populations in high, middle and low-income countries? What steps are they taking to ensure innovative treatments are made available at affordable prices?
3. What efforts are universities making to educate the next generation of global health leaders about the crucial impact that academic institutions can have on global health through their biomedical research and licensing activities?

GLOBAL HEALTH COMMENTARY

The Global Access Initiative at The University of British Columbia (UBC): Availability of UBC Discoveries and Technologies to the Developing World

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ABSTRACT: The University of British Columbia (UBC) became the first university in Canada to develop a strategy for enhancing global access to its technologies. UBC's University-Industry Liaison Office, in collaboration with the UBC chapter of Universities Allied for Essential Medicines (UAEM), established a mandate and developed principles that provide the developing world with access to UBC technologies. This commentary will discuss these principles and provide examples of where they have been applied to several UBC technologies. © 2008 Wiley-Liss, Inc. and the American Pharmacists Association *J Pharm Sci* 98:791–794, 2009

Keywords: absorption potential; formulation; anti-infectives; vaccine delivery; nanotechnology

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Affordable, life-saving medicines for all: McGill adopts Global Access Licensing Principles for research conducted on campus

News



made affordable to all.

McGill University, in conjunction with Universities Allied for Essential Medicines (UAEM), has committed to increasing access to life-saving medicines by adopting Global Access Licensing Principles. McGill is the third Canadian university to adopt the principles, demonstrating a dedication to ensure that any research and university-developed technologies created on McGill's campus with potential for further development into a drug, vaccine, or medical diagnostic are

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Visualizing an alternative biomedical R&D system

12th Jan 2018 Access to medicines Research 0 comments



Author : Chloe Hogg

Chloe Hogg is a recent graduate of McGill University with a BA in Economics and International Development. She is a member of the North American Coordinating Committee of Universities Allied for Essential Medicines (UAEM).

<http://globalhealth.thelancet.com/2018/01/12/visualizing-alternative-biomedical-rd-system>

Can technologies alone save lives?

How Mobile Phones Are Saving Lives in the Developing World

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How Artificial Intelligence Can Save Human Lives

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Medium

Featured Post

How Blockchain Technology Can Save Lives



World's fastest delivery drones are saving lives. Here's how

The drones can deliver blood or other medical supplies up to 50 miles away.

by Healthline Staff / Apr 25, 2018 / 4:38 PM EDT



The Machine That Will Help End TB

Nearly 1.5 million people die from tuberculosis every year, even though most cases can be cured with routine antibiotic treatments. One country's fight to get the ancient scourge under control has an unlikely hero: a simple diagnostic test.

by Jon Cohen December 11, 2012

Tuberculosis is one of the leading causes of death in much of the world; HIV is the only infectious disease that kills more people. Yet many TB cases go undiagnosed.



PROMISE

REALITY

Improved Diagnostics Fail to Halt the Rise of Tuberculosis

TB remains a big killer despite the development of a better test for detecting the disease

By Ewen Callaway, Nature magazine on November 17, 2017



Come in for a retirement go review today.



To save lives of mothers and babies and improve care in low-income settings, frontline workers need periodic coaching to master using the Safe Childbirth checklist. Here, a nurse (left) and her two trainees, part of a large trial now underway in northern India. Source: Anandhi Labs

SEPTEMBER 19, 2014

FONT SIZE PRINT

Saving lives in childbirth: do we have a game changer?

MARIAM CLAESON, ATUL GAWANDE, APARAJITA RAMAKRISHNAN
September 19, 2014

AUTHOR

Mariam Claeson

Mariam Claeson is Director
of Global Financing Facility

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HEALTH

Promise unrealized: A birth checklist fails to reduce deaths in rural India

By CASEY ROSS @caseymross / DECEMBER 13, 2017



Vinita, 23, holds her baby girl a few hours after her birth at a Community Health Center in Mall, near the capital of Uttar Pradesh.

ROBERTO SCHMIDT/AP/GETTY IMAGES

There are no silver bullets or killer apps in global health...



Editorial

BMJ Global Health

Surrogate endpoints in global health research: still searching for killer apps and silver bullets?

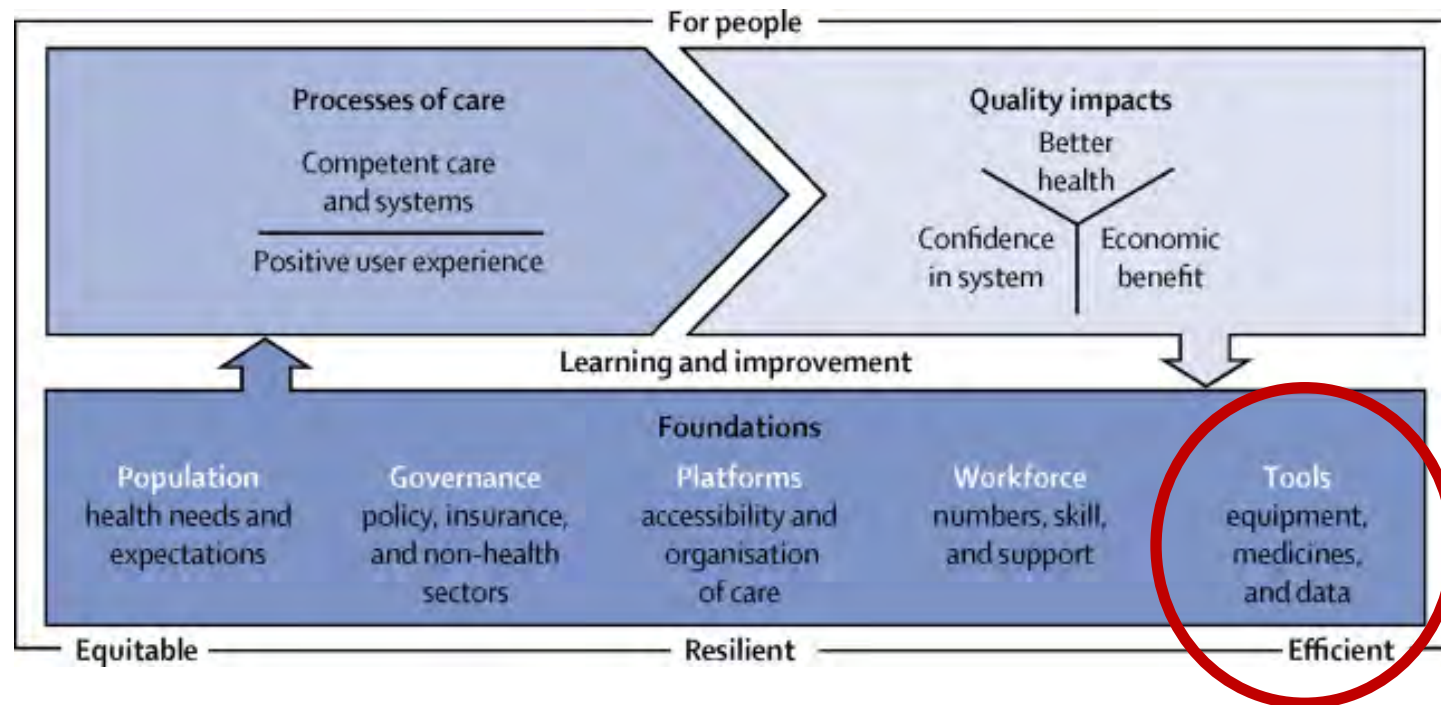
Madhukar Pai,¹ Samuel G Schumacher,² Seye Abimbola^{3,4}

Open access: <http://gh.bmj.com/content/3/2/e000755>

Technologies help, but cannot overcome low quality health systems

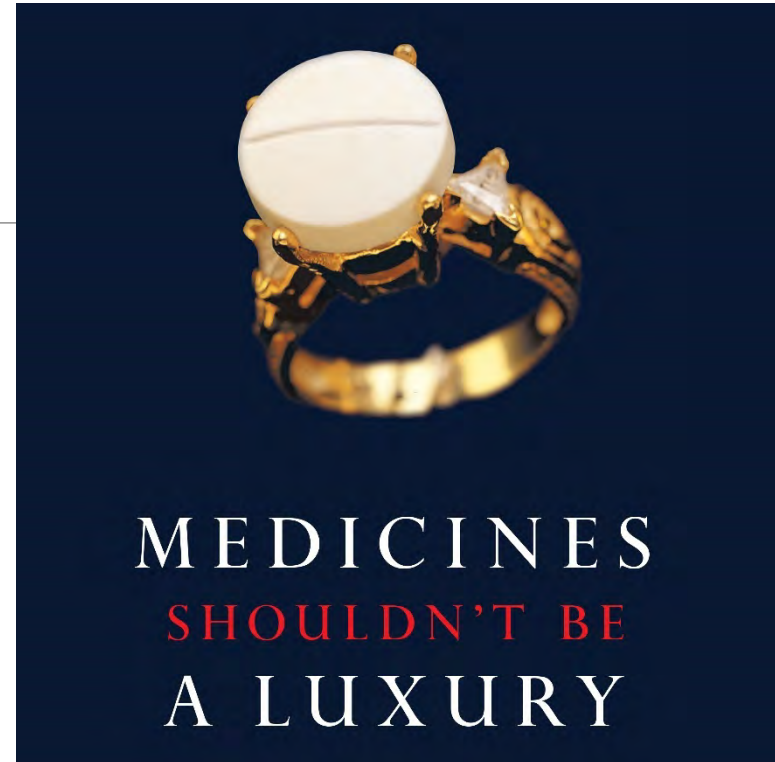


For real, enduring impact, we need high quality health systems



The Lancet Global Health DOI: (10.1016/S2214-109X(18)30386-3)

Thank you!
Merci!!



MSF Access Campaign



McGill



GLOBAL
HEALTH
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PROGRAMMES DE
SANTÉ
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