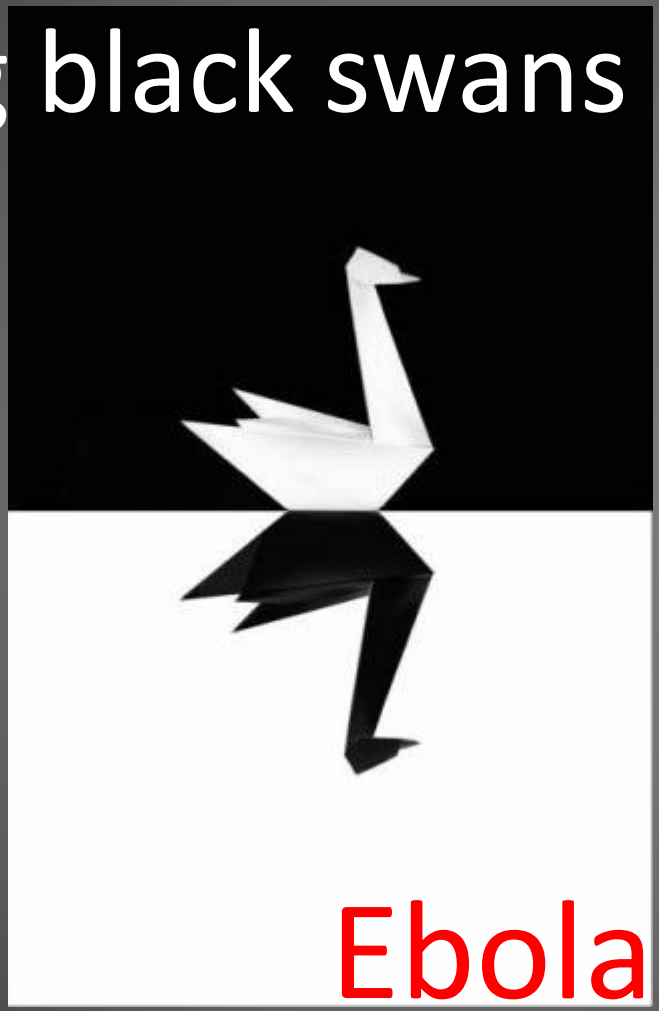
Hunting black swans in Global health



Ebola a well prepared disaster

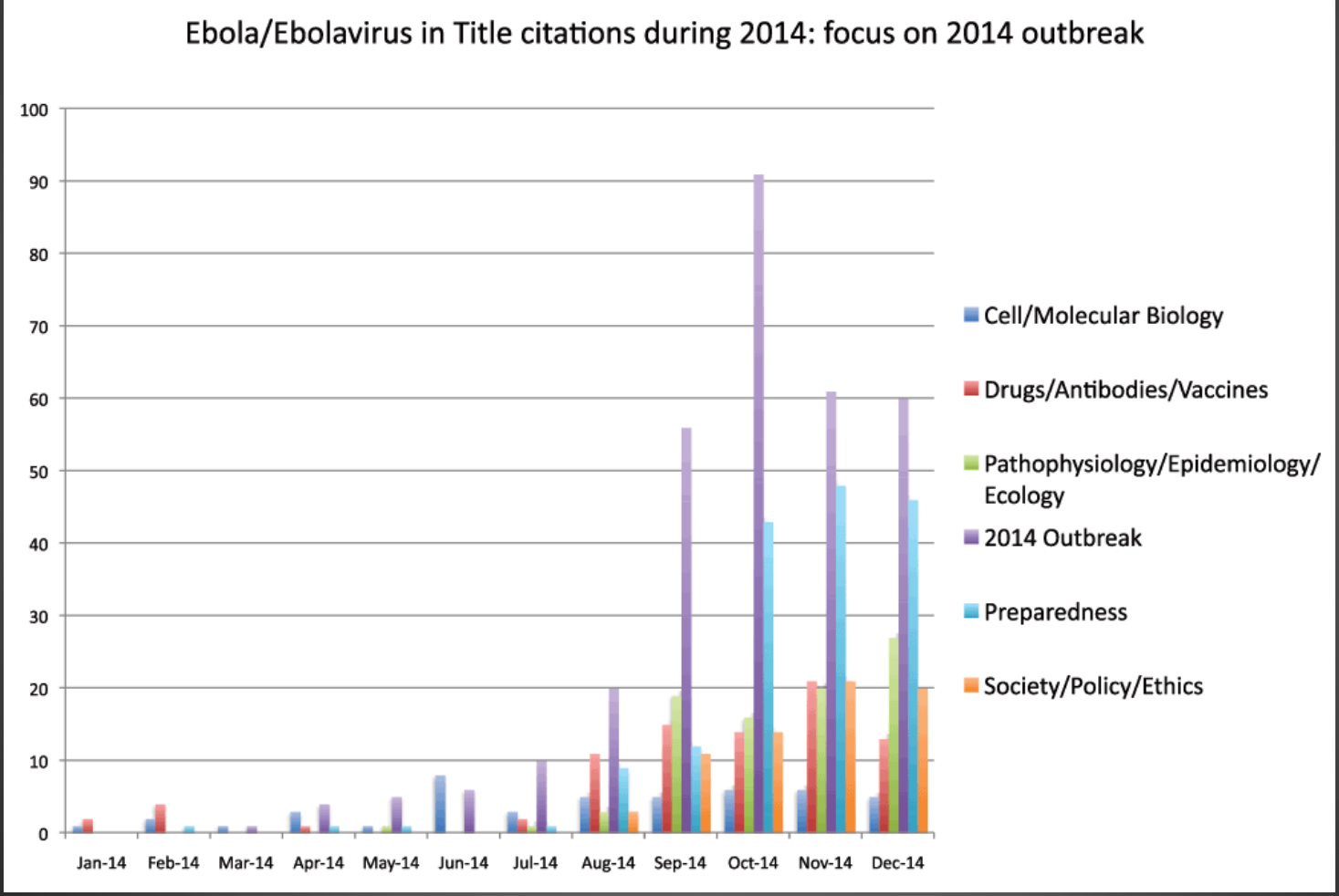
Morten Sodemann, professor of global health
Center for Global Health, University of Southern Denmark

Ebola: The epidemic of epidemics

- Epidemic of **swing door poverty**
- Epidemic of **misunderstanding**
- Epidemic of **orphans**
- Epidemic of **the unexpected**
- Epidemic of **mismanagement**
- Epidemic of **poverty terror**

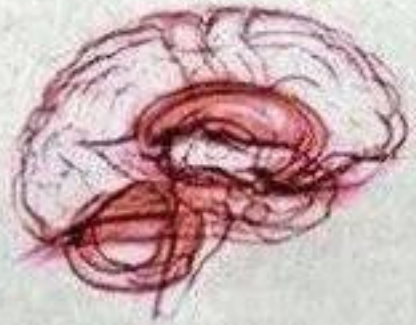
An epidemic of publications

Figure S20. Subjective classification for current outbreak focus or, alternatively, for the indicated...

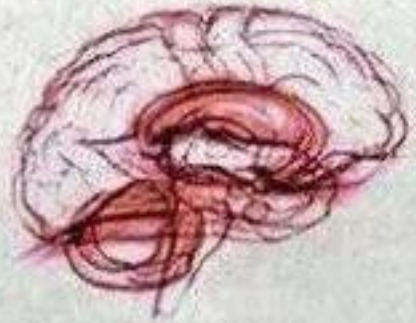


Ballabeni A and Boggio A 2015 [v1; ref status: approved 1, http://f1000r.es/54v] F1000Research 2015, 4:68 (doi: 10.12688/f1000research.6206.1)

F1000Research



THE HUMAN BRAIN
IS AWESOME
IT FUNCTIONS 24 HOURS A DAY FROM THE DAY WE ARE BORN



THE HUMAN BRAIN

IS AWESOME

IT FUNCTIONS 24 HOURS A DAY
FROM THE DAY WE ARE BORN
AND ONLY STOPS WHEN
WE ARE TAKING AN EXAM

Willfull blindness
Failing to see patterns & ignoring facts

”Ebola
is ***always*** a highly localized, ***short-term***,
typically ***rural*** event”

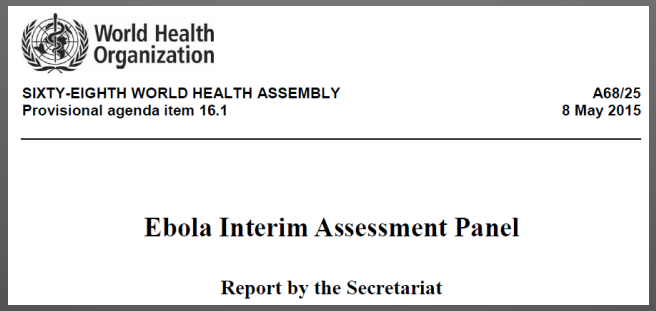
Making old lessons new!

All maps from Guiné contradicted this by showed every sign of of epidemic expansion
But local health authorities, Ministry of health and the local WHO stuck to the doctrine
in spite of thefoverwhelming acts

highly localized, ***short-term***,
typically ***rural*** event”

Mapping Medical Disasters: Ebola Makes Old Lessons,
Newhttp://journals.cambridge.org/download.php?file=%2FDMP%2FS1935789315000142a.pdf&code=eeeb08a00f722ff6f111c69b82140018

"It is unclear to the panel why early warnings, from May through to July 2014, did not result in an effective and adequate response"



World Health Organization

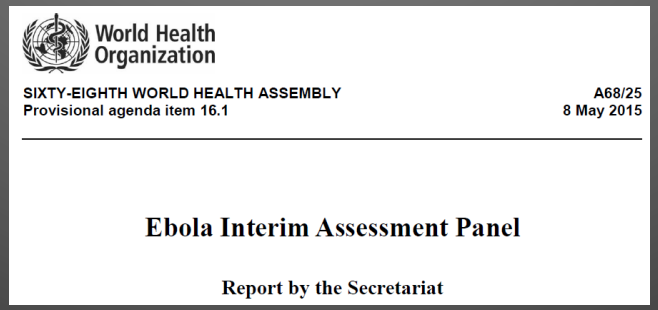
SIXTY-EIGHTH WORLD HEALTH ASSEMBLY
Provisional agenda item 16.1

A68/25
8 May 2015

Ebola Interim Assessment Panel

Report by the Secretariat

"Although WHO drew attention to the 'unprecedented outbreak' at a press conference in April 2014, this was not followed by international mobilization and a consistent communication strategy"



World Health Organization

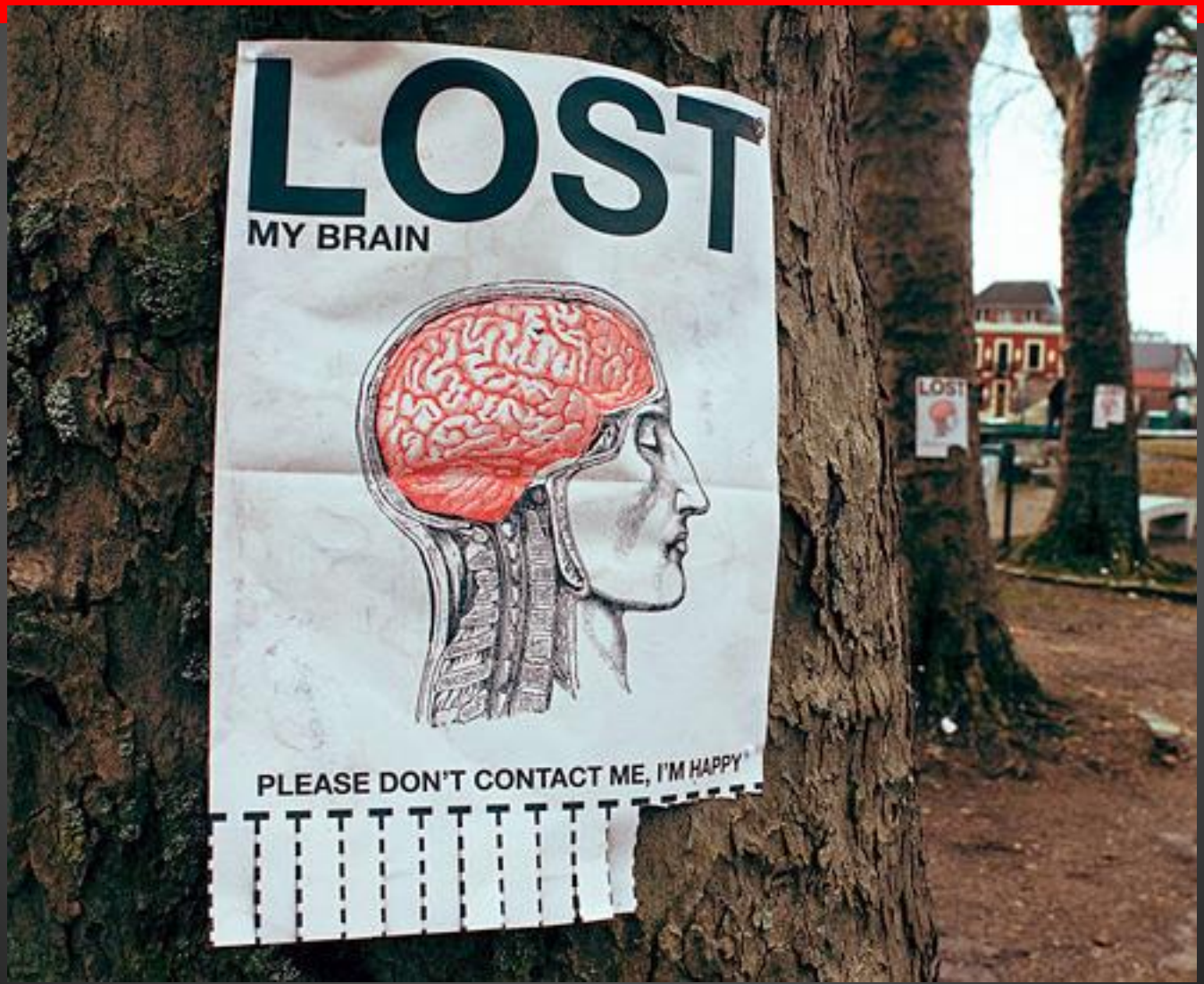
SIXTY-EIGHTH WORLD HEALTH ASSEMBLY
Provisional agenda item 16.1

A68/25
8 May 2015

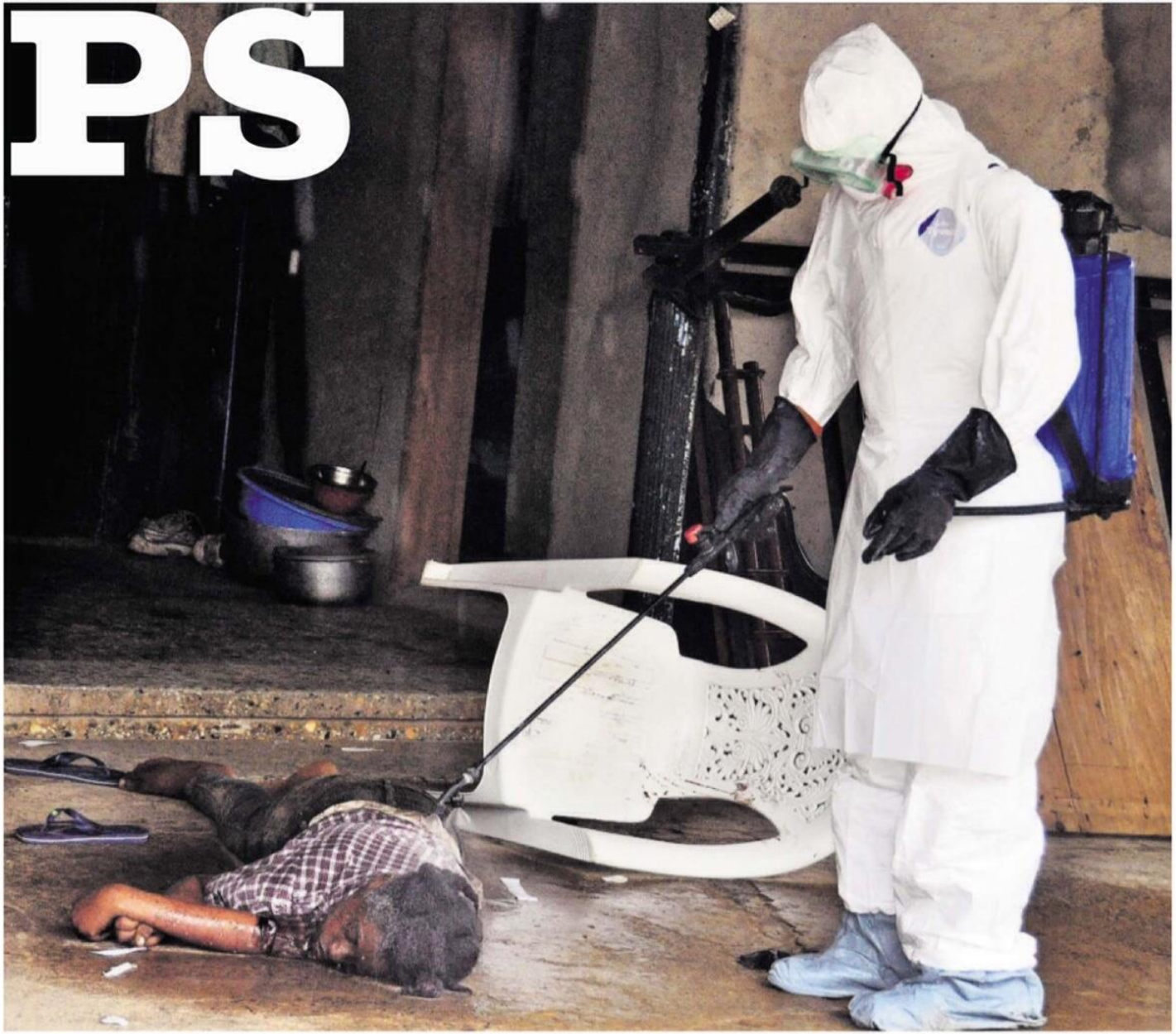
Ebola Interim Assessment Panel

Report by the Secretariat

Global Health doesn't have a brain



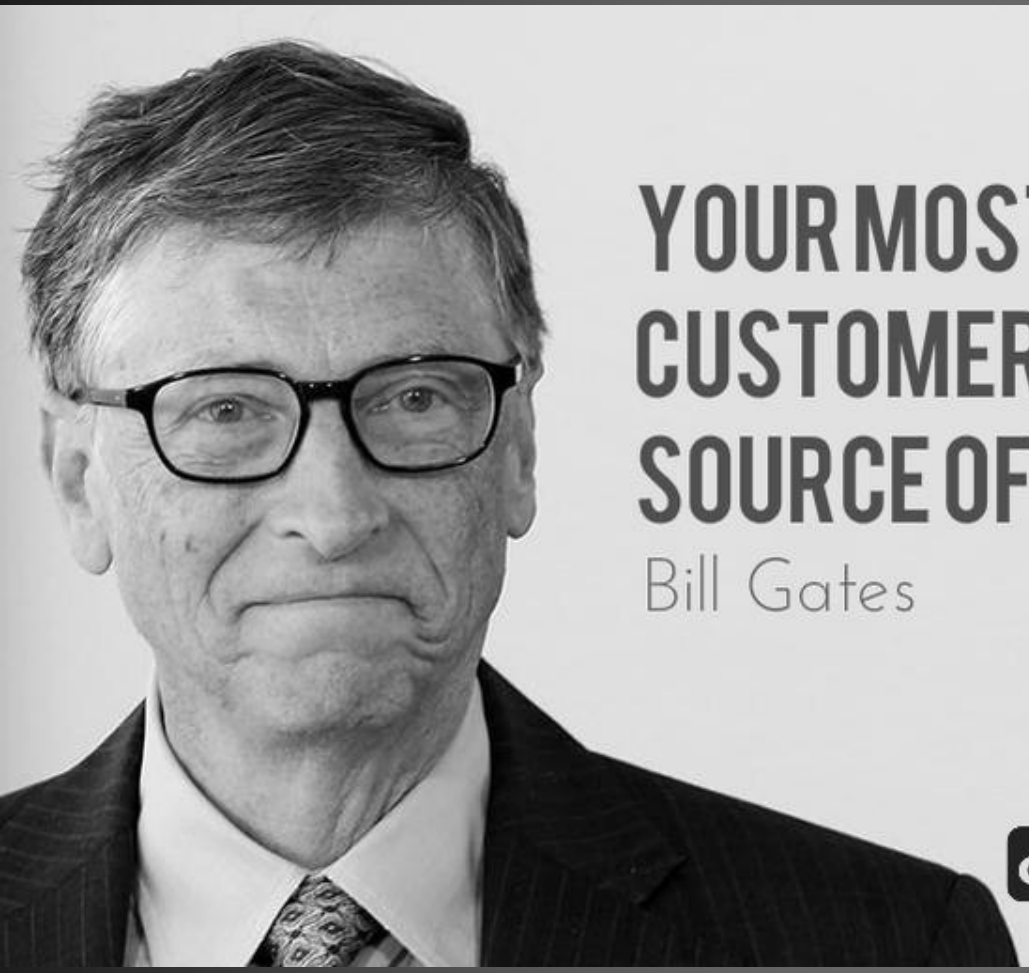
PS



UN had complete organ failure

Beyond the public narratives

and the obviously bad international performance



YOUR MOST UNHAPPY CUSTOMERS ARE YOUR GREATEST SOURCE OF LEARNING.

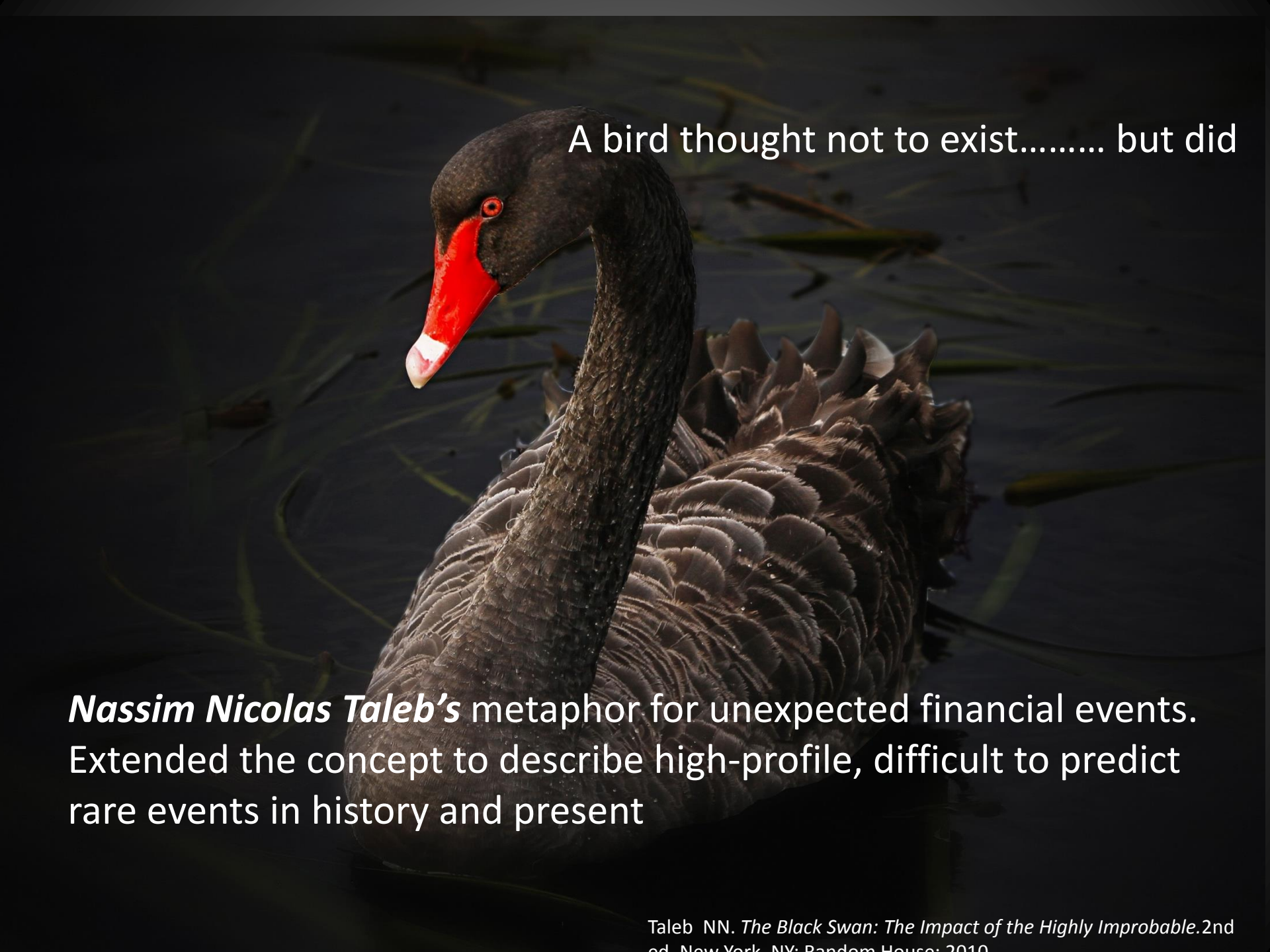
Bill Gates

cliffcentral.com

Future CEOs™

IM NOT TOTALLY USELESS.

I CAN BE USED AS A BAD EXAMPLE.



A bird thought not to exist…… but did

Nassim Nicolas Taleb's metaphor for unexpected financial events. Extended the concept to describe high-profile, difficult to predict rare events in history and present

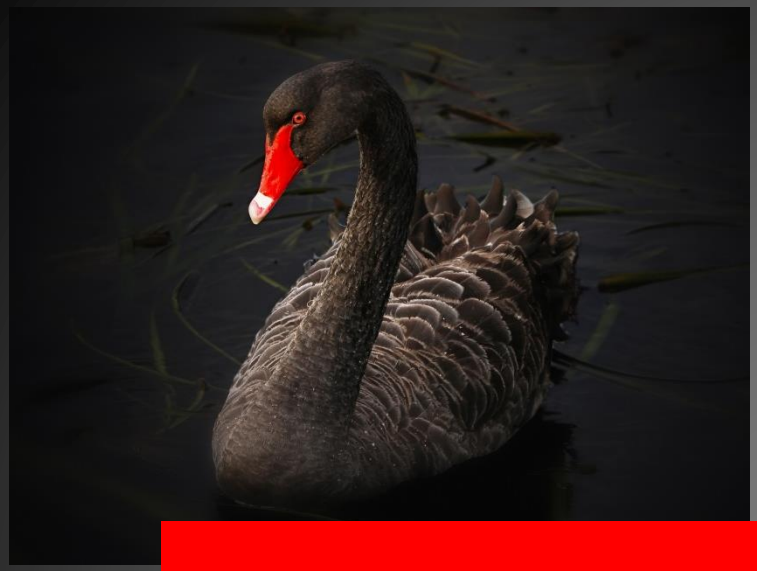
Taleb NN. *The Black Swan: The Impact of the Highly Improbable.* 2nd ed. New York, NY: Random House; 2010.

1

an outlier, as it lies outside the realm of regular expectations

2

It carries an extreme impact

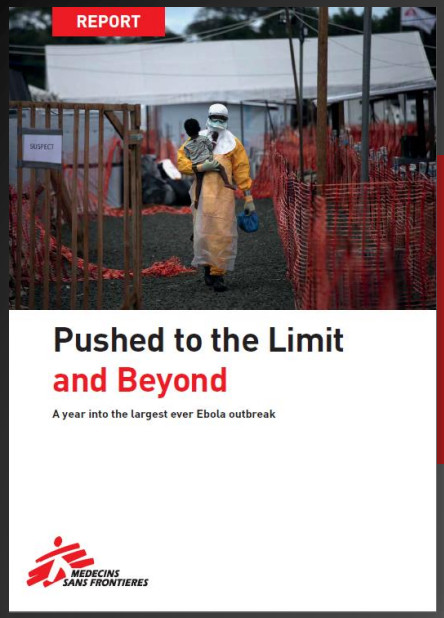


3

in spite of its outlier status, human nature makes us invent explanations for its occurrence after the fact, making it explainable and predictable

The narrative of the black swan: a political tool when we fail big time


7 genes that rocked the world



MSF: A perfect storm

Ebola outbreak was a perfect storm: cross-border epidemic in countries with weak public health systems that had never seen Ebola before

"For the Ebola outbreak to spiral this far out of control required many institutions to fail. And they did, with tragic and avoidable consequences."

—CHRISTOPHER STOKES | MSF GENERAL DIRECTOR

7 genes did what politicians & media failed

- ***Revealed*** countries' lack of political commitment to global health security
- ***Destroyed*** WHO's credibility
- ***Highlighted*** non-compliance with international health law

7 genes stripped global health research naked

Medical research and development model ***ill suited*** to address the world's health priorities

www.thelancet.com **Vol 385 May 9, 2015**

7 genes that showed us we need more of what we haven't got

We wait for biomedicine to fail – ***THEN we call in social science***

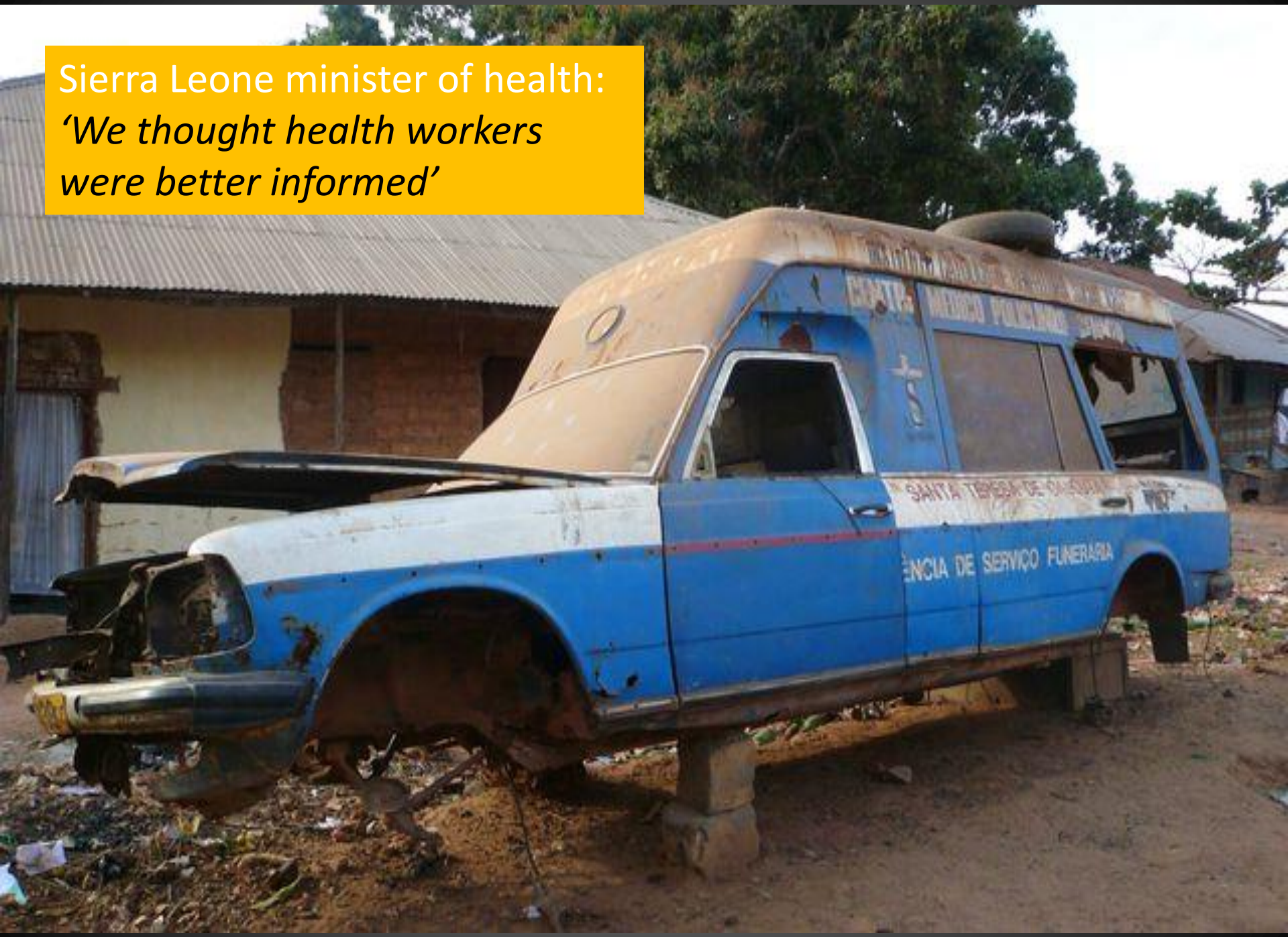
Social Pathways for Ebola Virus Disease in Rural Sierra Leone, and some Implications for Containment

By PLOS Neglected Tropical Diseases
Posted: October 31, 2014

Denial, ignorance or fatal neglect?

The origin of the Ebola outbreak in West Africa has been traced to the likely confluence of a virus, a bat, a two-year-old child and an underequipped rural health centre in Guiné – and fatal global ignorance

Huff, A.R.; Winnebah, T **Ebola, Politics and Ecology: Beyond the 'Outbreak Narrative'**
http://opendocs.ids.ac.uk/opendocs/handle/123456789/5853#.VWWA8T9EiM8


Sierra Leone minister of health:
'We thought health workers were better informed'

Denial, ignorance or fatal neglect?

The outbreak of Ebola in Eastern Sierra Leone in May 2014 is a result of a

socioeconomic, religious, cultural, and political accident

Ebola Wrecks havoc in Sierra Leone. Koroma and Lv Infectious Diseases of Poverty 2015, 4:10 http://www.idpjournal.com/content/4/1/10

Denial, ignorance or fatal neglect?

The outbreak of Ebola in Eastern Sierra Leone:

Sierra Leonean herbalist went to the Republic of Guinea to dispense herbs to a sick person who turned out to be an Ebola victim and eventually died. The herbalist returned to Sierra Leone and fell sick; she also died and was given an traditional honorable burial. Hundreds of mourners came from nearby towns, which resulted in as many as 365 deaths being linked to the funeral and, triggered the subsequent Ebola epidemic in the country

Ebola Wrecks havoc in Sierra Leone. Koroma and Lv Infectious Diseases of Poverty 2015, 4:10 http://www.idpjournal.com/content/4/1/10

Denial, ignorance or fatal neglect?

Demography, patterns of land use and of human-wildlife interaction are all implicated in zoonotic 'spillover' events, but cannot be generalised across cases and localities

Huff, A.R.; Winnebah, T **Ebola, Politics and Ecology: Beyond the 'Outbreak Narrative'**

http://opendocs.ids.ac.uk/opendocs/handle/123456789/5853#.VWWA8T9EiM8

7 genes that exposed us to structural violence in health

social structures and institutions ***causing harm*** by preventing people from meeting their needs and by focusing on low risk groups

Ebola and Lessons for Development. IDS PRACTICE PAPER IN BRIEF 16
FEBRUARY 2015. http://opendocs.ids.ac.uk/opendocs/bitstream/handle/123456789/5849/ID557%20Online.pdf?sequence=1

7 genes that exposed total global vulnerability

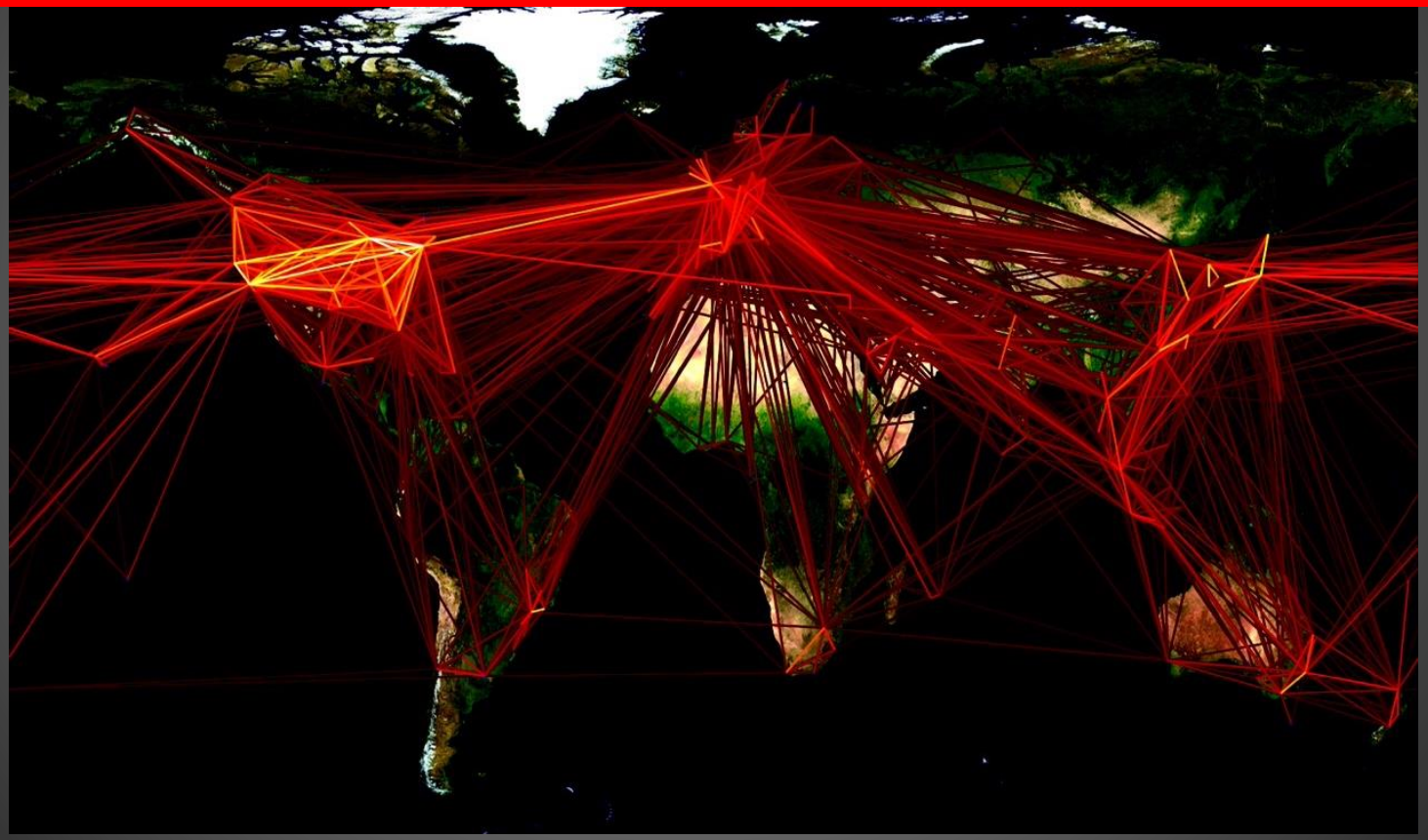
We are only as safe as the

most fragile states

incubation period longer than even the farthest plane ride

www.thelancet.com **Vol 385 May 9, 2015**

7 genes that put migration back into global health



New and better prediction models needed

www.thelancet.com **Vol 385 May 9, 2015**

7 genes that rocked the world

Destabilized several countries

Exposed failure of African WHO

Exposed that social determinants also act at country and regional level

7 genes that made history

With delay the UN declared it a ***threat to international peace and security*** (second time in history) – but it took a cross atlantic case

7 genes that pacified pacifists

Doctors without Borders *(and other NGOs)* called for a *military response* to the Ebola epidemic, after 43 years of discouraging military intervention in other humanitarian crises.

7 genes that did what superpowers failed

Fundamental reform of WHO

Global emergency response fund

7 genes made more noise than the really big killers

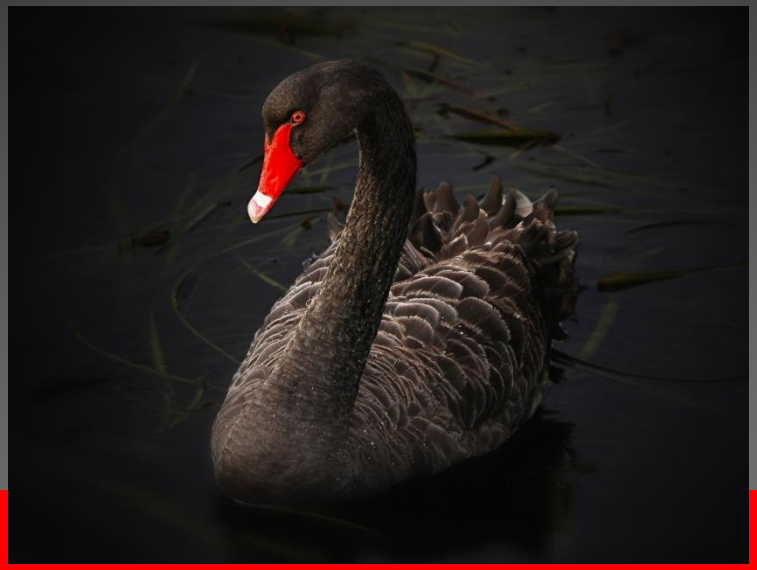
HIV/AIDS, malaria, TB, diarrhoea

What kills us

may be very different from what frightens us or substantially affects our social systems

The inverse mortality risk

Health care workers, lacking necessary equipment to provide safe treatment, were dying at even faster rates than patients



Was the epidemic a black swan?

NO!

A well prepared disaster that we were warned about

SEARCH

The New York Times

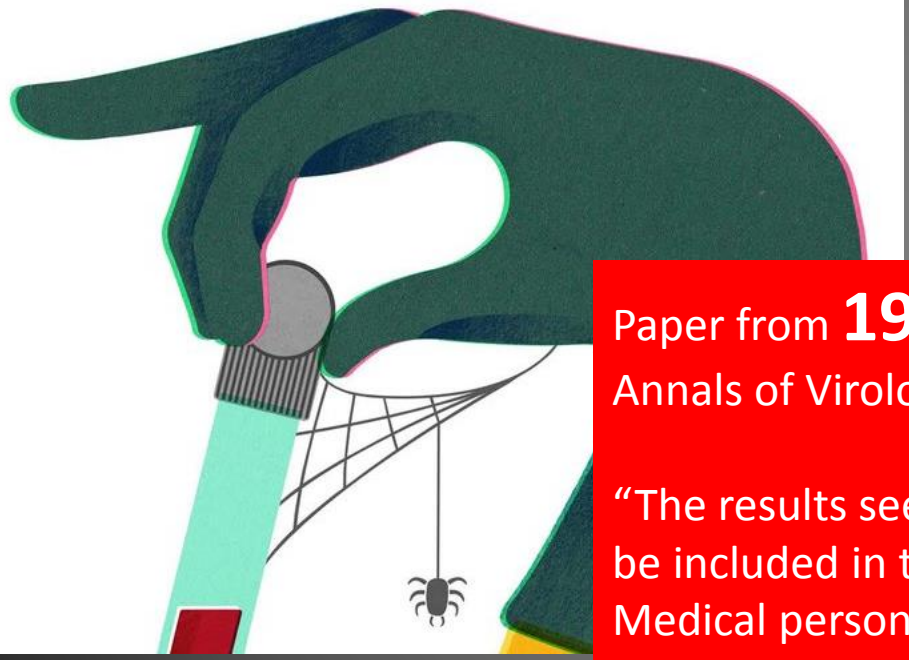
Hvis du har værdipapirinvesteringer for mere end 2,5 mio. kroner, kan du down
guide, skrevet af "Forbes" skribenten og formueforvalteren Ken Fishers firma. S
allerede har en plan, indeholder denne guide vigtige undersøgelser og analyser
bruge med det samme. Den er uundværlig!

FISHER INVESTME

The Opinion Pages | OP-ED CONTRIBUTORS

Yes, We Were Warned About Ebola

By BERNICE DAHN, VERA MUSSAH and CAMERON NUTT APRIL 7, 2015



Paper from **1982**:
Annals of Virology

"The results seem to indicate that Liberia has to be included in the Ebola virus endemic zone. Medical personnel in Liberian health centers should be aware of the possibility that they may come across active cases and thus be prepared to avoid nosocomial epidemics"

http://www.nytimes.com/2015/04/08/opinion/yes-we-were-warned-about-ebola.html

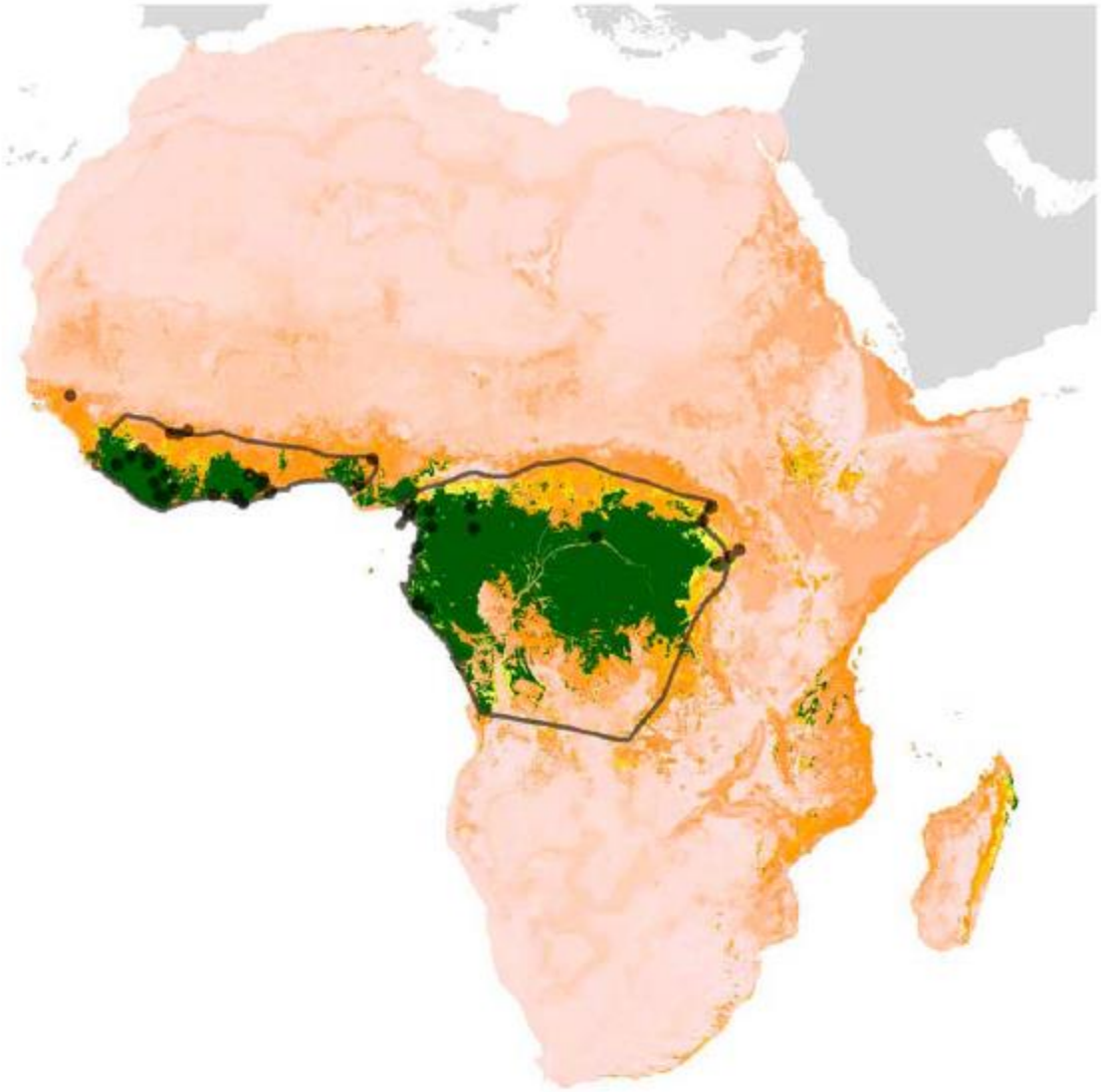
Ebola virus in bats and humans in West Africa since 2005 (at least)

Human blood samples collected in Sierra Leone, Liberia and Guinea between 2006 and 2008 from patients with suspected Lassa fever but tested negative for Lassa virus & malaria found that 8.6 per cent, of 220 samples tested were ***positive for Ebola Zaire antibodies***

http://opendocs.ids.ac.uk/opendocs/bitstream/handle/123456789/5853/ID561%20Online.pdf?sequence=1

Schoepp, R.J.; Rossi, C.A.; Khan, S.H.; Goba, A. and Fair, J.N. (2014) 'Undiagnosed Acute Viral Febrile Illnesses, Sierra Leone', Emerging Infectious Diseases 20.7

Territorial Range of Fruit Bats Implicated in the Ebola Epidemic of 2014.



The extent of the map is roughly congruent with the area most affected by the virus.
Source: Pigot DM, Golding N, Mylne A, et al. ELife. 2014;10.7554/eLife.04395.
http://elifesciences.org/content/early/2014/09/05/eLife.04395.[23]

Not a new virus or a sudden mutation

The virus doesn’t decide on it’s own whether it wants to be severe

It has the potential – but human behaviour and the environment decides

Humans change behaviour and their environment

That could be the black swan

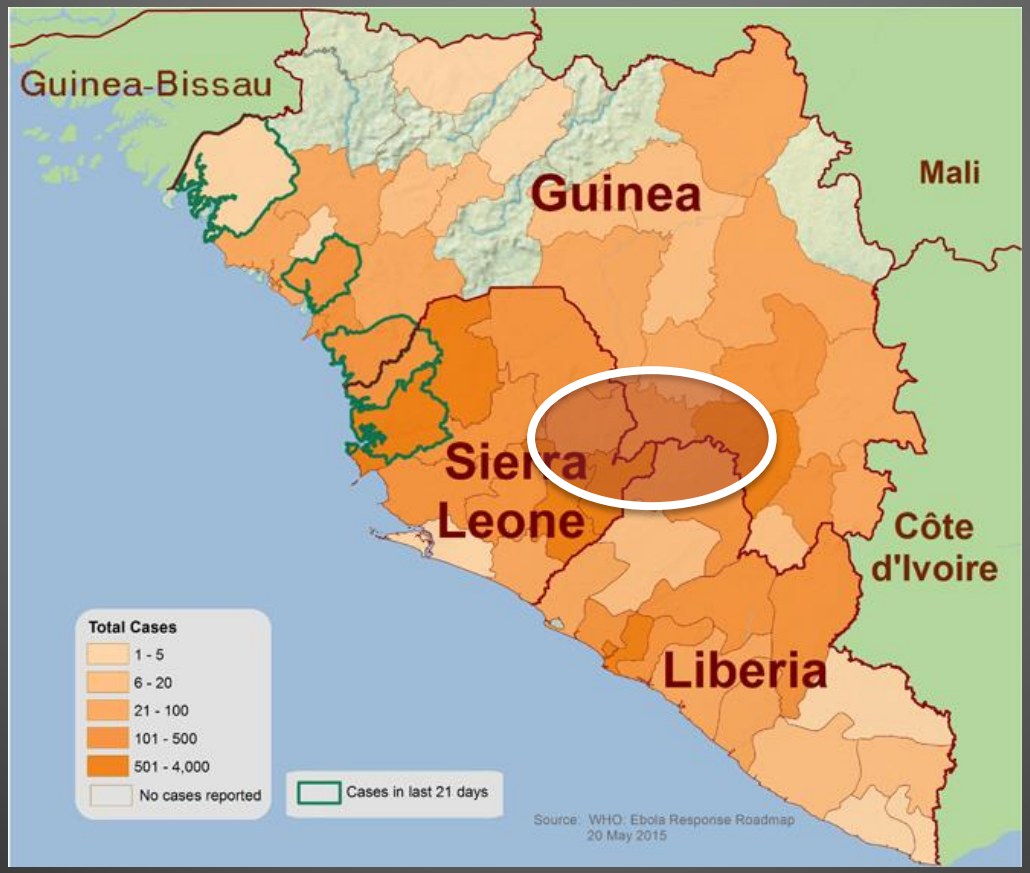
Measles, Cholera, TB and Dengue

Can also change severity and come up with surprise attacks caused by changes in human behaviour

The new normal is ***crises***

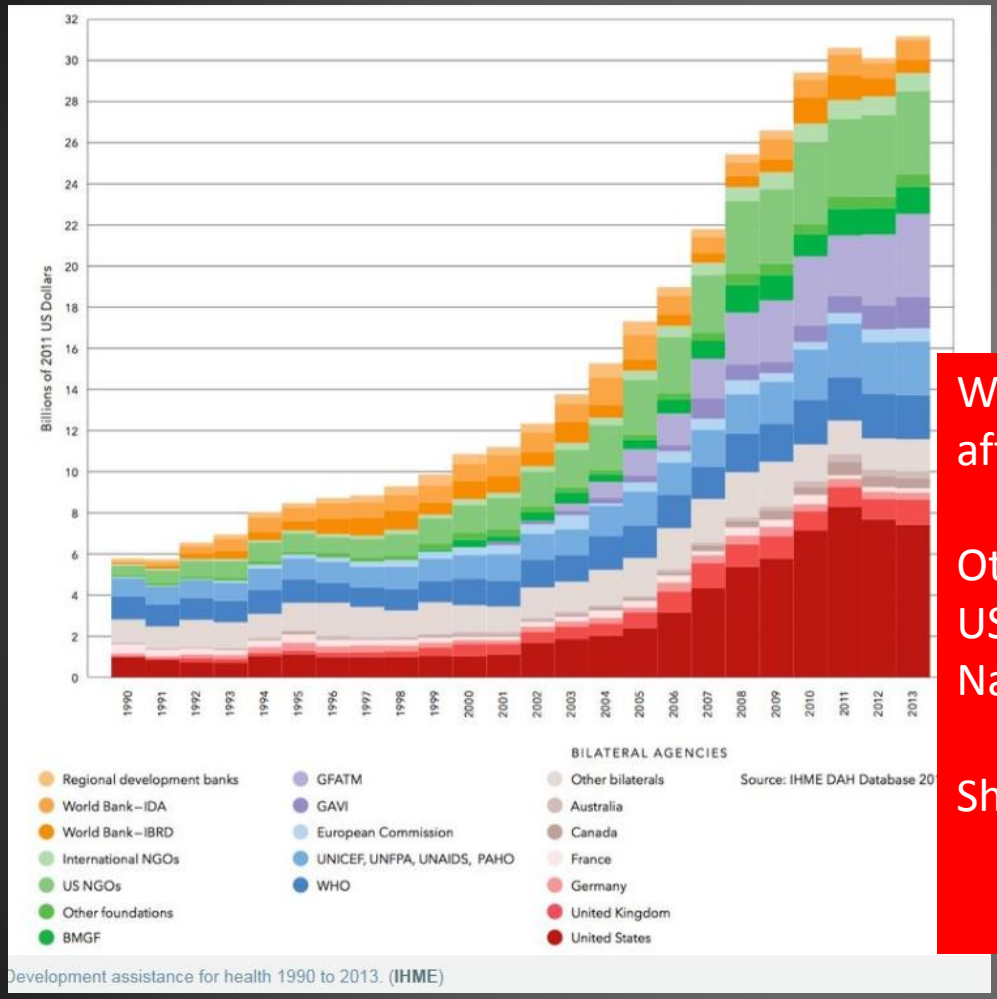
Caused by our lack of understanding of human behaviour & it's consequences

"Where the borders of the three countries intersect is now the designated hot zone, where transmission was intense and people in the three countries continued to reinfect each other"



Margaret Chan NEJM http://www.nejm.org/doi/full/10.1056/NEJMp1409859

Who's to blame for WHO failure?



Development assistance for health 1990 to 2013. (**IHME**)

WHO funding levelled off
after 20 years of constant increase

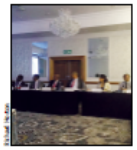
Other global health investors have grown
US and other channel more funding to
National research and GH organisations

Shifted balance of power away from the WHO

IHME
Institute for Health Metrics and Evaluation

http://www.vox.com/2015/5/18/8621129/who-reform-ebola

Offline: Delivering a new future for Africa



Post-Ebola, commentators have been given permission to say in public what they have thought in private for a long time—namely, that WHO's Regional Office for Africa (AFRO) has a record and reputation for failure second to none in global health today. In advance of an unprecedented meeting convened by the new Regional Director for WHO AFRO, Dr Matshidiso Moeti, earlier this month, I asked a group of Africa health experts for their views on WHO's work on the continent. WHO AFRO does have strengths. Most importantly of all, its country offices. Africa has one of the fastest growing collections of national economies in the world today. It has progressively expanding scientific capacities. Yet for all of these advantages, WHO AFRO is not well respected. Its performance has been a persistent disappointment. It can claim no important or substantive wins from its work. It is seen as a large bureaucracy with little impact. There has been no effective leadership for decades. Staff are "decent but unambitious", and are therefore not respected for their competency. One disadvantage is the location of the Regional Office in Brazzaville, Congo. It is isolated, distant, and remote, characteristics that are said to be true of the entire organisation. WHO AFRO needs to be brutally honest with itself, our advisers suggested. A poor history of Regional Directors. A low talent pool across the organisation. Corrupt appointments made as rewards for past service, instead of on merit. Donor voices that dominate because there is no clear strategy from WHO AFRO's leadership. And basic public health functions in countries that have been ignored or neglected. To worsen WHO AFRO's influence still further, the Regional Office has a poor relationship with WHO's headquarters in Geneva. WHO AFRO has the largest regular budget of any WHO region, but there is little or no accountability about how its funds are spent. The prospects for WHO AFRO are bleak: an accelerating brain drain, declining self-determination as a continent, and a chronic erosion of trust and confidence. Yet for all of these dismal weaknesses, the country devastation and institutional crises precipitated by Ebola have created a remarkable opportunity—to lead change, and to promote transparency and accountability, around a clear set of new priorities for Africa. Does such a vision suggest a rationally optimistic outlook or simplistic radical naivety?

There is one reason to be hopeful: a new Regional Director for WHO AFRO, Dr Moeti, who is motivated for change. She wants to strengthen health and economic security in Africa, and she intends to deliver on the promise of the Sustainable Development Goals for the continent. She knows that her first priority must be to re-establish confidence in WHO AFRO among key partners, especially those who might consider investing in WHO's work. One decision shows her commitment to working differently. She has appointed an Independent Advisory Group, chaired by Francis Omaswa and Helene Gayle, to give her strategic advice on WHO AFRO and "on mechanisms to support improved health systems performance of Member States towards better health outcomes". The group met for the first time earlier this month in Johannesburg (full disclosure: I am one of 16 members). Two important strands of work emerged. First, to embark on ambitious internal reforms, changing the culture of WHO AFRO to one of accountability for results and resources. Second, to implement a 10-year African Health Transformation Programme. One aim of this initiative is to deliver universal health coverage across 47 countries. Dr Moeti and her Advisory Group want to make Africa a destination for leadership in health. *The Lancet* will make its contribution to this vision through our Commission on the Future of Health in Sub-Saharan Africa. This Commission, chaired by Peter Piot, includes leading African voices on health and medical science. Last week in London, Tumani Corrah, Peter Lamptey, Nelson Sewankambo, Alex Ezeh, Bongani Mayosi, Bright Simons, and Nduku Kilonzo met with Peter Piot and others to consider what they could do to add value to existing efforts to scale up action on health in Africa. The Commission will complete its work this year, and we plan to launch its findings early in 2016. The next few years will be decisive for Africa. There is also every prospect that a new Director-General of WHO, succeeding Margaret Chan in July, 2017, will come from the continent. Now is therefore not the time for armchair criticism of WHO AFRO or African efforts to advance health on the continent. Now is a moment to join hands and get to work for Africa.

Richard Horton
richard.horton@lancet.com

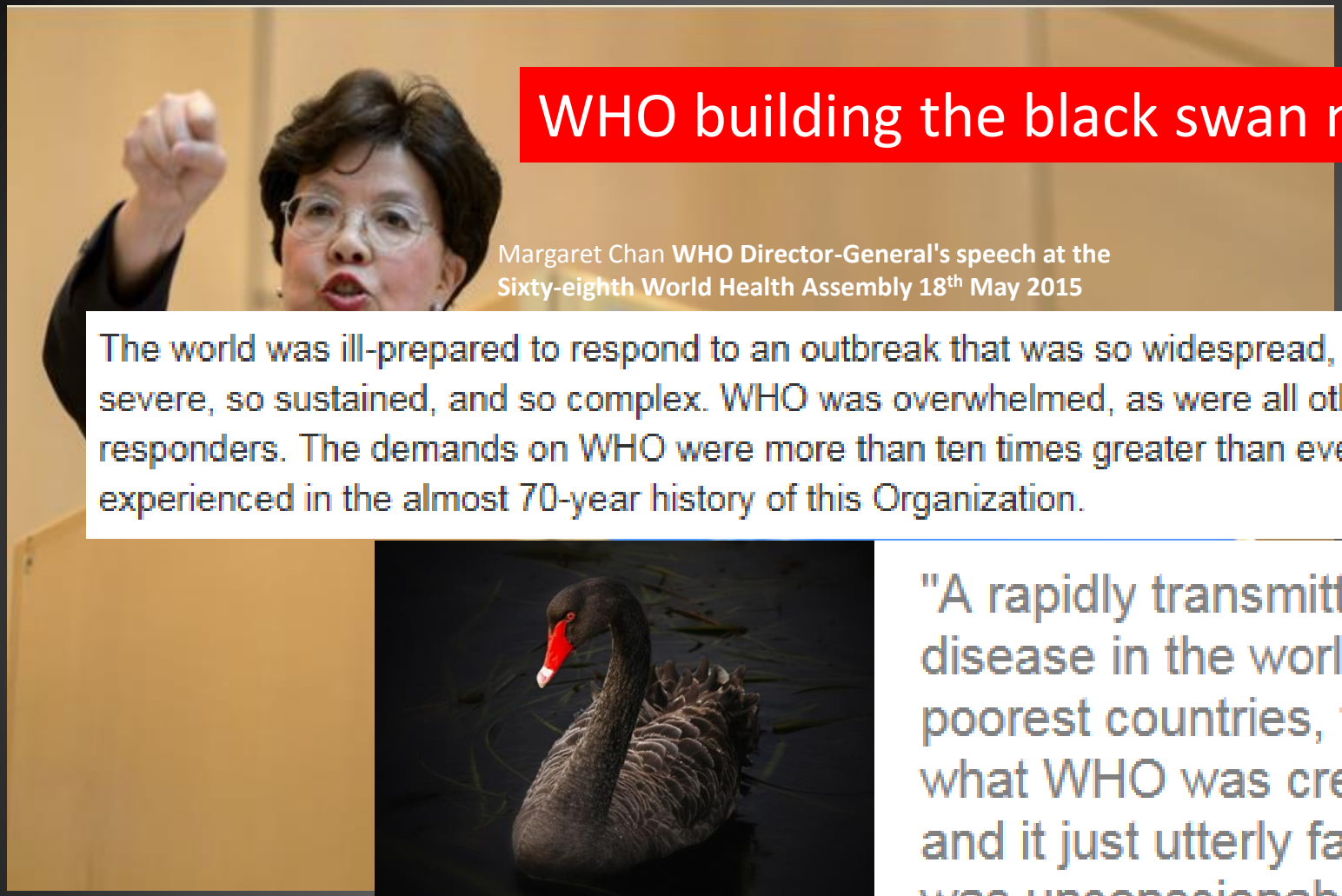
http://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736(15)60968-0.pdf

Failure second to none....

WHO's Regional Office for Africa (AFRO) has a record and reputation for failure second to none in global health today."

Richard Horton, Chief Editor, The lancet

WHO building the black swan narrative



Margaret Chan **WHO Director-General's speech at the Sixty-eighth World Health Assembly 18th May 2015**

The world was ill-prepared to respond to an outbreak that was so widespread, so severe, so sustained, and so complex. WHO was overwhelmed, as were all other responders. The demands on WHO were more than ten times greater than ever experienced in the almost 70-year history of this Organization.

"A rapidly transmitted disease in the world's poorest countries, that's what WHO was created for, and it just utterly failed. It was unconscionable."

- Lawrence Gostin, a professor of global health law at Georgetown University

http://www.who.int/dg/speeches/2015/68th-wha/en/

http://www.npr.org/sections/goatsandsoda/2015/05/21/408289115/who-calls-for-100-million-emergency-fund-doctor-swat-team

Margaret Chan **WHO Director-General's speech at the Sixty-eighth World Health Assembly 18th May 2015**

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http://www.who.int/dg/speeches/2015/68th-wha/en/

"WHO does not have the operational capacity or ***culture*** to deliver a full emergency public health response"
(Draft of external review of WHO ebola response)

http://www.npr.org/sections/goatsandsoda/2015/05/21/408289115/who-calls-for-100-million-emergency-fund-doctor-swat-team

Outdated institutions tackling future challenges

Challenges—Outdated Institutions

We are chasing the whirlwind of 21st century diplomacy with an international system still tethered to 19th century patterns of state behavior and cooperation. Caught in the middle are intergovernmental organizations, such as WHO, which appreciate the disease trends but remain accountable to sovereign states and their interests.[15]

Professor David P. Fidler,
in Evidence to
UK House of Commons Select Committee

We live in a star wars civilization with Stone Age emotions, medieval institutions and Godlike technology

Edward Wilson. The Social conquest of earth. Liveright 2013

2002:
Chinese authorities lied about SARS cases for fear of trade & tourism effect

2004:
Thailand with held information on avian flu cases for fear of tourism

2014:

Ebola epidemic declared March 2014, WHO aware but didn't declare emergency until 8th of August for fear of interrupting tourism, making affected countries angry and for fear of interfering with annual pilgrimage to Mecca

Experience is a ticket to a train that has already left

Ebola teams from Uganda were not wellcome in Liberia: their experience from 7 epidemics was unwanted

http://www.globalhealthminders.dk/interview-six-times-i-fought-a-war-against-ebola-and-beat-it/#comment-11121

6 lessons we refuse to learn

1. Impact

Uncontrolled pandemics are devastating

- 1918 influenza pandemic killed 50 mill people within a year
- HIV/Aids has killed 40 mill since 1981
- Pandemics disrupt societies and economies and cause widespread secondary effects

2. Inequalities
Pandemics love poverty

Pathways by which poverty increases risk include: inadequate sanitation, poor nutrition, crowded living conditions, lack of healthcare services, poor infection control, lack of public health infrastructure and poor governance

3. Uncertainty

The emergence, origin & transmission routes of individual pandemics is unpredictable

Uncertainty around transmissibility of new infectious agents and seriousness (case fatality) during early stages

4. Controllability

Most pandemics can be controlled but socio-economic and environmental context, speed and preparedness can change that

5. Panic & rage

Fear is natural with new threats. Frequently translates into panic and outrage in the face of pandemic diseases

6. Media

Social epidemics, panic and fake facts spread fast.

Effective risk communication is key to managing this response.

Politicised epidemics: Sierra Leone

When the first cases emerged in Kailahun, heartland of the main opposition party, they prompted rumours: country's ruling party had set up 'death squads' to take whole communities to treatment centres in order to administer a lethal injection

http://m.scidev.net/global/disease/feature/communicating-crisis-ebola-facts-figures.html?utm_content=bufferf531e&utm_medium=social&utm_source=twitter.com&utm_campaign=buffer

Politicised epidemics: Liberia

People accused President Ellen Johnson Sirleaf of deliberately poisoning citizens and of exaggerating the scale of the epidemic in order to receive international donor money

http://m.scidev.net/global/disease/feature/communicating-crisis-ebola-facts-figures.html?utm_content=bufferf531e&utm_medium=social&utm_source=twitter.com&utm_campaign=buffer

Evidence doesn’t solve any problems

People talking to people do

Researchers, public health officials and WHO should have and could have imagined

How Ebola would explode in an African suburban slum area

Looking around corners

More creative imagination needed in considering future infectious disease scenarios and in planning

Research funders are responsible

Governments and organizations that fund global public health should support research that explores ***Black Swans***

World Report

Ebola in west Africa: learning the lessons

The region has presented unforeseen challenges, and the three worst affected countries have put in place different response strategies. Anna Petherick reviews some of the lessons learned so far.

The early history of the ongoing Ebola outbreak in west Africa is a salutary statement about the lack of infectious disease surveillance capacity in one of the world's poorest regions. The 1 year anniversary of the first case passed in December, 2014, yet that of the first laboratory confirmation of the virus won't be until March 23, 2015. In the intervening period last year, cholera and then Lassa fever were thought to be the more likely suspects. When the diagnosis finally arrived, it came not from a facility in the region, but from the Institut Pasteur in Lyon, France. By that stage, people had succumbed to the virus not only in Guinea, but also in two more countries, Sierra Leone and Liberia—a spread that was not, at that point, detected, investigated, or reported to WHO. These three countries have now each witnessed deaths in the thousands.

Too late

Opportunities to contain the virus were lost soon after, largely because of a lack of trust between local communities and the officials and medical professionals trying to nip the epidemic in the bud. For a while, doctors and administrators knew the identity—and hence the seriousness—of their viral enemy, and the outbreak was restricted to a reasonably small area of busy trade where the borders of the three countries meet. Médecins Sans Frontières (MSF) hired anthropologists to try to get the message across in Guéckédou, the district at the epicentre, but locals would hide new cases and contacts did not want to be traced. In early April, a mob attacked an MSF treatment facility believing that its staff were introducing the disease to the community in Macenta, a town in the next-door prefecture to Guéckédou. By mid-June, a rumour became widespread that infection-control teams spraying chlorine were wearing head-to-toe protection because they were in fact spraying the disease's causative agent. Riots ensued. Eventually, an army of 3000 heavily armed youths assembled in a mining town called Forecariah, leading WHO epidemiologists to flee for their lives.

> "Surprisingly to some experts, no Level 3 emergency was declared—the UN classification of the most serious kind of humanitarian problem..."

And when it became time to scream to the world that case loads were skyrocketing, and to call for substantial international backup, the message seemed muddled to those poised to step in. Surprisingly to some experts, no Level 3 emergency was declared—the UN classification of the most serious kind of humanitarian problem—and, as a result, the usual, international disaster response mechanisms were never triggered. Mostly behind the scenes, there has been heavy criticism of WHO's apparent reluctance to acknowledge the scale of the crisis at a crucial juncture, by contrast with full blown praise for MSF, which reached out to the media and lobbied foreign governments while working hard at fighting the disease on the ground. As MSF's advocacy spurred goodwill among foreign medical staff, this goodwill to help came up against a bottleneck in medical evacuation resources; only one company in the world, a US outfit called Phoenix, operates air ambulances that are equipped to transport Ebola patients.

For next time

Huge praise is due to those who have responded to the Ebola outbreak in west Africa. At the same time, the retrospective analysis that is just beginning has already revealed several glaring lessons to be heeded next time. To be sure, there was no way of predicting that the most lethal form of the Ebola family, the Zaire species, would appear so far away from its usual range, and its dynamics had never previously been witnessed in urban settings, but there is a sense that the ball was somewhat dropped. Some of the lessons to be learned are specific to west Africa, some are specific to dealing with Ebola, and some are globally relevant.

Ebola is not a particularly difficult disease to contain, as long as tried and tested containment methods are instigated promptly and completely. West Africa has various regional characteristics that exacerbated the challenge. The ratio of doctors to patients is about two per 100 000. Civil war and state-wide turmoil, mainly in the 1990s, still leave footprints in the damage to hospital facilities and to roads, and in a whole cohort of young adults who missed out on schooling

Published Online February 10, 2015 http://dx.doi.org/10.1016/S0140-6736(15)60075-7

See Editorial page 578

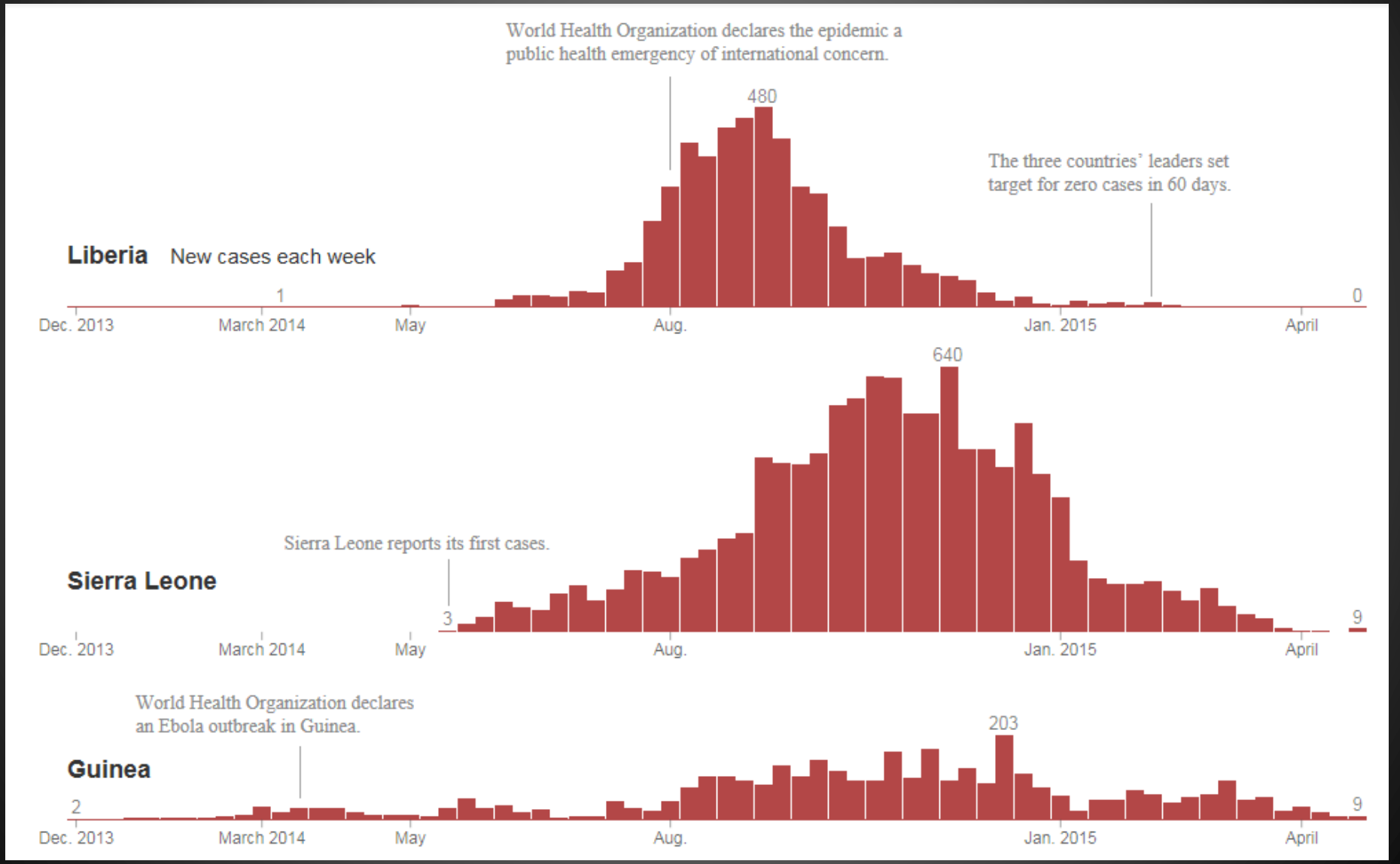
A Liberian Red Cross burial team working in Monrovia, October, 2014

The Lancet Feb 2015

- Why didn't WHO declare **stage 3 emergency** = slowed response
- West African context added to complexity: **few doctors, civil war/post-conflict, low trust**
- Guinea: initial public "success" was not true: **many hidden patients**
- Guinea was **not used to UN presence** =conflict
- Suboptimal rural strategy used in **urban** setting
- **Top-down approach** in Liberia better in suburban/urban case detection and quarantines

The Lancet, February 10, 2015, http://dx.doi.org/10.1016/S0140-6736(15)60075-7

Three epidemics in one

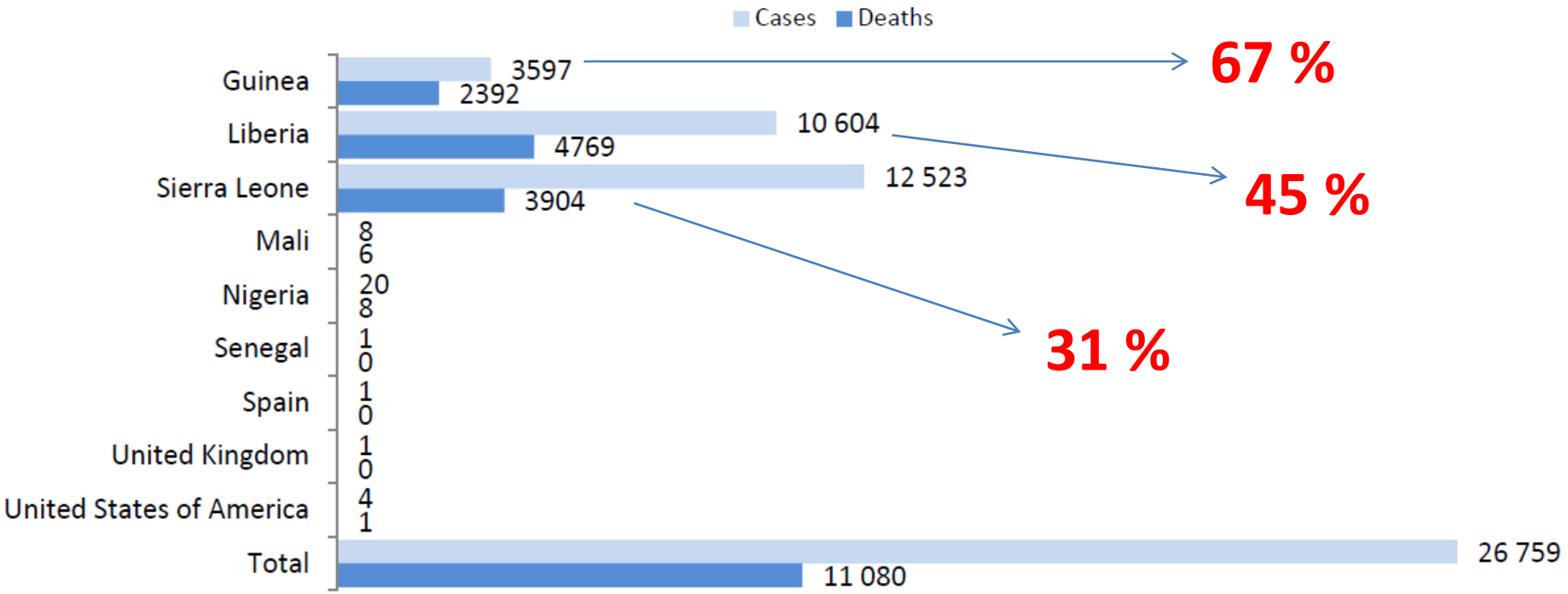


Mortality and the darling factor

27th May 26,971 cases (confirmed and probable) with 11,122 deaths (41 %)

UN Mission for Ebola Emergency Response (UNMEER) External Situation Report 22 May 2015

Figure 1: Confirmed, probable, and suspected EVD cases worldwide (data up to 10 May 2015)



http://apps.who.int/ebola/en/current-situation/ebola-situation-report-13-may-2015

Health worker case fatality

Guiné	56 %
Sierra Leone	68 %
Liberia	80 % (illegal home clinics?)

The multiple girl effect?

- Girls and women more likely to be infected by men who have recovered: virus in semen for 7 weeks
- Women at higher risk as the majority of the health-care workers are women
- women tend to be the ones caring for the sick at home and preparing the dead for funerals.
- Pregnant women seeking antenatal care more likely to be exposed to infected healthcare workers.

Sparrow, Annie. "Before Ebola, Western Doctors Believed the Age of Epidemics Was Over—It Wasn't." (2014).

During Ebola 2014

Pregnant women attending antenatal care dropped by 30 % (Sierra Leone)

Attended births dropped from 52 % to 38 % (Liberia)

No overall gender difference in mortality

Female 70 %

Male 72 %

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ORIGINAL ARTICLE

Ebola Virus Disease in West Africa — The First 9 Months of the Epidemic and Forward Projections

WHO Ebola Response Team

N Engl J Med 2014; 371:1481-1495 | October 16, 2014 | DOI: 10.1056/NEJMoa1411100

Women die initially and men later?

Ebola graveyard, Gulu, feb 2015

Understanding gendered dimensions of health emergencies from cradle to grave

women's compounded vulnerability to Ebola through their role as carers and as they give life

Ebola teaching us resilience

Not only focus on visible manifestations of ill-being without changing the (social and health) structures that underpin them

Current epidemic has raised new questions

Sexual transmission

Handling of hospital waste

Subclinical cases

Modes of transmission: superspreaders

Survivors role in continuos spread / care

Editorial

Lessons from the public health response to Ebola

Journal of Public Health Policy (2015) **36**, 1–3. doi:10.1057/jphp.2014.51;
published online 11 December 2014

Current epidemic has raised new questions

New global interest in non-communicable diseases has shifted focus and funding away from infectious diseases

http://www.palgrave-journals.com.proxy1-bib.sdu.dk:2048/jphp/journal/v36/n1/pdf/jphp201451a.pdf

EBOLA DEEPLY

Guinea's Dr. Sakoba Keita: 'Taxi Drivers Can Help Drive Ebola Away'

May 21st, 2015 by Amadou Touré · 5 min read · Share 22 Tweet 9

As cases surge in western Guinea, threatening to undermine recent progress in the response effort, Ebola Deeply's Amadou Touré traveled to Forécariah – one of the worst-hit areas in the region. He sat down with Dr. Sakoba Keita, Guinea's National Ebola Response

http://www.eboladeeply.org/articles/2015/05/7894/guineas-dr-sakoba-keita-taxi-drivers-drive-ebola-away/

Resurgence in Guiné :
unsafe burials, bodies secretly transported to home, still no burning of corpses

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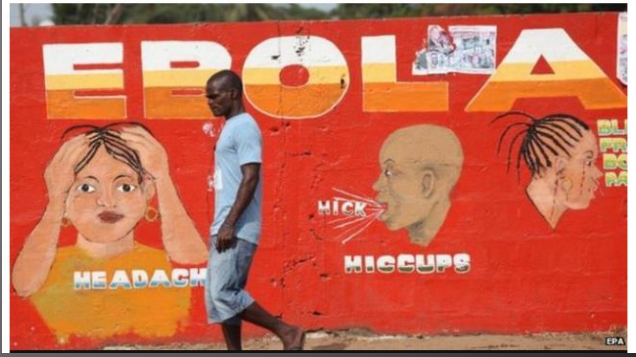
Ebola crisis: Guineans jailed for putting corpse in taxi

25 May 2015 | Africa



New strategy:
Incentives to relatives for information
Including taxi drivers in health promotion

Resurgence Guiné

- French speaking
- Low prestige (UN / WHO)
- Weak health care
- Huge country
- Many remote inaccessible areas
- Not used to UN or foreign agencies
- Mining and forestry…(new or old phenomea?)

Resurgence Guiné

- Donor Darlings and donor devils:
- Guiné got less economic support than Liberia or Sierre Leone – but 5 times bigger
- All labs in Guiné = 100 ebola tests per day
- One lab in Monrovia = 200 test per day

Lose-lose situation

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THE WORLD'S OPINION PAGE

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GLOBAL HEALTH & DEVELOPMENT

SERUFUSA SEKIDDE

Serufusa Sekidde, a consultant with Oxford Policy Management, worked in Uganda's main nati
before running South Sudan's largest private medical facility. He is a 2015 Aspen Institute New

MAY 12, 2015 1

English

Reversing Africa's Medical Brain Drain

Tweet 102 Share 24.8K Share 55 +1 7 Pin it 0

OXFORD – There is understandable consternation over Uganda's plan to send almost 300 health workers to Trinidad and Tobago. The plan reportedly includes four of Uganda's 11 registered psychiatrists, 20 of its 28 radiologists, and 15 of its 92 pediatricians. In return, the Caribbean country (which has a doctor-to-patient ratio 12 times higher than Uganda's) will help Uganda exploit its recently discovered oil fields.

Uganda's foreign ministry says the agreement is part of its mandate to promote the country's interests abroad through the transfer of skills and technology, as well as an opportunity to earn foreign

Sierra Leone lost 9 % of it's Doctors in 7 months

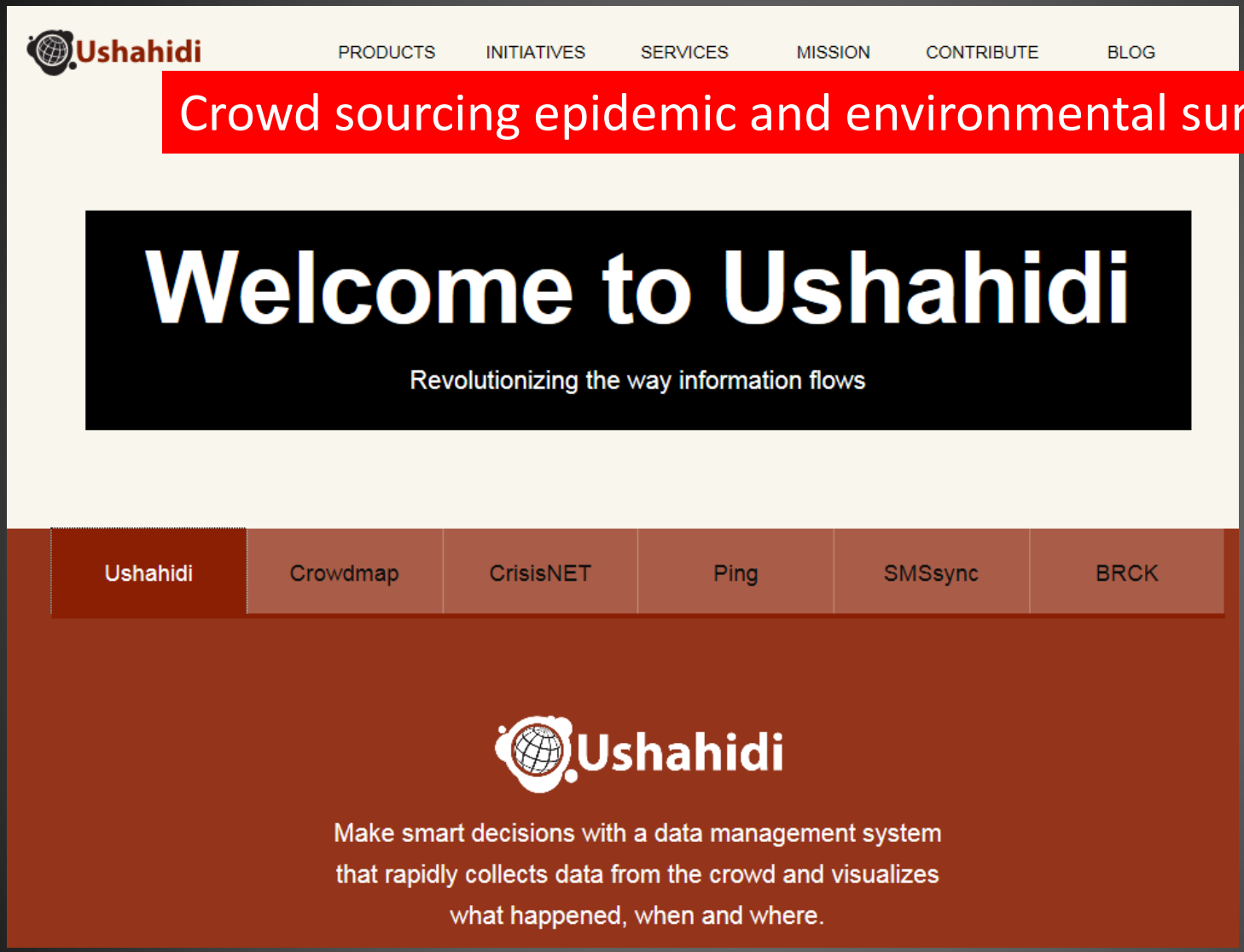
Koroma and Lv Infectious Diseases of Poverty 2015, 4:10
http://www.idpjournal.com/content/4/1/10

The trouble is that the so-called brain drain in Uganda and elsewhere is not the cause of this dearth of health-care workers. It is only a symptom of health-care systems that are already in crisis. The ultimate solution is not to discourage professionals from working abroad; it is to ensure better training and more amenable working conditions. That way, we health-care professionals can focus on the task at hand: providing health care to our people.

http://www.project-syndicate.org/commentary/developing-countries-doctor-shortage-by-serufusa-sekidde-2015-05

”In pandemics good isn’t good enough”

Tweet citing chief medical officer Sierra Leone at **Sixty-eighth World Health Assembly 18th May 2015**


Ushahidi
PRODUCTS
INITIATIVES
SERVICES
MISSION
CONTRIBUTE
BLOG
Crowd sourcing epidemic and environmental surveillance
Welcome to Ushahidi
Revolutionizing the way information flows
Ushahidi
Crowdmap
CrisisNET
Ping
SMSsync
BRCK
Ushahidi
Make smart decisions with a data management system
that rapidly collects data from the crowd and visualizes
what happened, when and where.

nature International weekly journal of science

NATURE | NEWS

African CDC needs more money and a strong leader

Ebola spurred US support for pan-African health agency, but centre needs much more to succeed.

Declan Butler

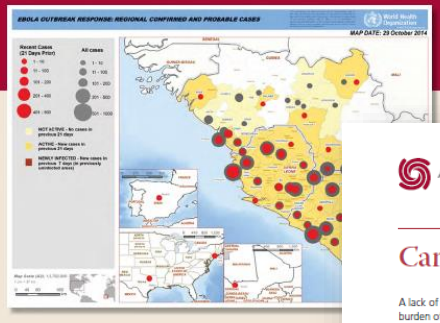
24 April 2015

An African CDC

Strengthening West African Health Care Systems to Stop Ebola:

Anthropologists Offer Insights

Prepared November 18, 2014



AMERICAN ANTHROPOLOGICAL ASSO

Social scientist feel they are called in too late and Run over my medical researcher

AMERICAN ANTHROPOLOGICAL ASSOCIATION

Care of the Sick

A lack of treatment facilities and trained staff places the burden of healthcare on local communities. Patients have tended to seek treatment from family and community members rather than internationally sponsored facilities. Local culture shapes decisions about self-reporting to hospitals, reporting family members and neighbors, and about quarantine.

Insights:

- **Multigenerational Families:** Care messages need to be refocused to address the multigenerational interdependence of households. To date, communications have recommended isolation and urged people to avoid contact with the sick, avoid sharing toilet facilities, exposure to bodily fluids, and. Family cohesion is a top value. Caretakers will not abandon their sick relatives even if it imperils other family members.
- **Palliative Care:** Basic medical ethics must be upheld, with palliative care available to all Ebola patients.
- **Risk Factor Data:** Social science observations are needed immediately on factors involving care-giving, care-seeking, and healthcare provision.
- **Rapid Review Cycle:** Solutions need to be revisited weekly to realign with evolving local perceptions and needs. Initially, Sierra Leoneans resisted homecare, preferring hospital care. They changed their minds.
- **A range of care options is needed,** including ETU's and hospitals, CCC's, and home-based care. Prioritizing one modality over another creates gaps in an already weak health infrastructure.
- **Home health care kits** need to be more widely available, including ORS, rehydration powder, fever medicines, thermometers, soap, and a cell phone/radio to help individuals make decisions about care.
- **Clarify the role of CCC's:** Are they for quarantining sick patients, regardless of their diagnosis? Asymptomatic people who have been exposed to Ebola? For transitional care?
- **Food is medicine.** Food should be provided to all at-risk communities. Severe impacts to agriculture, harvest, and food commerce are anticipated in the coming season. Unable to plant and harvest, seed stock will be consumed, thus adding famine to an already high-risk situation.
- **Evidence-based interventions:** As the epidemic continues, interventions like IV-treatments should be based on evidence. IV treatments raise culturally sensitive issues among many patients.
- **Medical experimentation has a long, checkered history of abuse in the region.** Many local populations distrust foreign and state-supported medical experimentation campaigns. Their concerns must be taken seriously and addressed with sensitivity. This is also true in the context of medical care. In Mali, caregivers who arrived with food, medical supplies, and bedding rather than authoritatively taking family members away were better received.
- **Sexual transmission** poses a critical public health risk that could transform the epidemic into an endemic, region-wide presence. Experience with HIV/AIDS programs in West Africa indicates that basic communications will not suffice. Abstinence-only or condom-recommended messages will not work unless paired with grassroots programs on prevention, sexual behaviors, and response. Sexually transmitted Ebola could also create social stigma or shunning. Thus, education must be handled carefully.
- **Survivor Research:** Social science research is needed to understand the current conditions, experiences, and dispositions of survivors. Ebola response programs should not assume that survivors are willing to work on Ebola-related issues. They may want nothing to do with Ebola ever again. Clinically, we do not know enough about the duration of Ebola antibodies to position recent Ebola patients in caregiving capacities.

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Health Communications

Communications to date have largely involved one-way messaging delivered via posters, and not local dialogue, information exchange, and feedback via cell phones. Along with inadequate data centralization and identification, this communications approach has undermined efforts to respond to rapidly changing circumstances. Correcting this imbalance will build trust, share information, and streamline multiple systems of prevention and response. Two-way communication allows institutions to rapidly become aware of local rumors, so steps can be taken to dispel myths before they become fodder for conflict and resistance.

Insights:

- **Problematic content:** Early fear messages drove Ebola reports underground. Ebola communications need to take an open, educational approach that explains why and how the situation is evolving. Local communities have rapidly learned and mastered a core set of messages about Ebola transmission, management, and treatment strategies. What they now need is detailed, specific, and relevant information that integrates local ideas of disease and misfortune.
- **Health beliefs:** People in the affected areas simultaneously pursue multiple healing strategies, and don't see a conflict between, for example, Christian healing, biomedicine, and traditional medicine. It is entirely reasonable that people accept sophisticated public health messages about Ebola causes, management, and transmission, while also accepting alternate explanations, such as Ebola is caused by sorcery.
- **Local views about symptoms** thought in terms of "small sickness" vs. "big hospital sickness" can lead to communications campaigns that help individuals undertake self-referral and quarantine behaviors in a timely manner.
- **Best practices:** Work through established community leaders, door-to-door campaigns, use social networks and "social learning", use hopeful, positive, empowering messages, encourage – but don't coerce – survivors to talk about their experiences, distribute free transistor radios and cell phones to facilitate the flow of information between local communities and response coordination, especially in remote areas.
- **Work with all religious communities:** Pentecostal and Seventh Day Adventist are the fastest growing religions among Liberians and Sierra Leoneans, and need to be better integrated into the Ebola response. In Guinea, the national network of Imams is a trusted voice of authority than can be better utilized.
- **Mixed messages:** Concern about "mixing messages" has created limitations. Information about homecare has not been emphasized because responders want to get people to the treatment units. The Ebola response should "meet people where they are" and provide information to caregivers where they are.
- **Develop longer-form communications outlets:** Take advantage of locally favored channels: call-in shows, fireside chats, radio trainings on home- or CCC-based healthcare, Q&A internet shows, and diaspora broadcasts. Multimedia can have great reach, like the video of a Liberian nurse who provided homecare to her family, which was shared on cell phones across Monrovia and reported even further by word of mouth.
- **The cultural concept of "home":** Home means, "Where are your people from" as well as "where do you live." Most people have many homes. When people hear "stay in your home" in Sierra Leone, they may think, "ok, I'll just go home to my grandmother's house in the village to wait out the lockdown."
- **Photojournalism:** Far greater photojournalist restraint is needed. Images of the sick and dying create a hostile, discriminatory perception of West Africans globally.
- **Emphasis on "care" not "war" imagery:** With war a recent memory in the region, metaphors for the 'fight' against Ebola can resurrect social conflicts and divisions. Messaging should rely on themes of caregiving and responsibility. A requested "gift" of blood will be more welcome than a demand for blood to fight a battle.

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FEATURE

An epidemic of fear

Psychologists' research is guiding governments and health leaders in their efforts to communicate with the public during disease outbreaks.

By Stacy Lu
Monitor Staff
2015, Vol 46, No. 3
Print version: page 46

As Ebola raged in West Africa last fall, the United States battled an outbreak of "fearbola," the term the media invented to describe a paranoia that infected this country.

Although there were only 10 confirmed U.S. cases — all of them people who had direct, prolonged contact with Ebola patients — parents in Texas, Mississippi and New Jersey pulled children out of school after other students or administrators had chance encounters with Ebola patients or visited West Africa, and a teacher in Maine was put on leave after attending a conference in Dallas where the first U.S. case was discovered. The states of New York, New Jersey and Illinois mandated 21-day quarantines for health workers who had treated Ebola patients in West Africa, and Connecticut reserved the right to quarantine anyone believed to have been exposed to the virus.

Though the spread of Ebola may have come as a nasty shock to many, psychologists weren't surprised at people's outsized fears.

"What happened was quite consistent with what we know about risk perception," says Paul Slovic, PhD, professor at the University of Oregon and president of Decision Research, a nonprofit whose scientists study human judgment and decision making. "The minute the Ebola threat was communicated, it hit all of the hot buttons: It can be fatal, it's invisible and hard to protect against, exposure is involuntary and it's not clear that the authorities are in control of the situation."

For four decades, Slovic and other psychologists have studied how people perceive risk and what causes them to overreact to epidemics, terrorist attacks and other extreme events, even when their personal risk is infinitesimal, yet at the same time be less attentive to other threats that are far more likely to harm them, such as the flu.

Those misplaced reactions can lead to the stigmatization of p
on top of a current crisis. In response, psychologists are help
public to help make sure actions meet needs.

Novel threats provoke anxiety

Framing risk, reducing panic

Timely, honest communication from a source an audience deems credible is essential to containing fear during an epidemic, but governments have the tough job of explaining risk and telling people how to act without also seeding alarm, says Carnegie Mellon University psychologist Baruch Fischhoff, PhD. He chaired the Food and Drug Administration's Risk Advisory Committee and the Environmental Protection Agency's Homeland Security Advisory Committee.

"The discipline is very straightforward: Identify the few things that people most need to know and figure out how to explain them in clear, trustworthy terms," Fischhoff says.

Psychologists also want to help

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POLICY FORUM

Strengthening the Detection of and Early Response to Public Health Emergencies: Lessons from the West African Ebola Epidemic

Mark J. Siedner, Lawrence O. Gostin, Hilarie H. Cranmer, John D. Kraemer

Published: March 24, 2015 • DOI: 10.1371/journal.pmed.1001804

- A more precise system to **risk stratify geographic** settings susceptible to disease outbreaks
- Reconsideration of **International Health Regulations** Criteria to allow for earlier responses to localized epidemics before they reach epidemic proportions
- Increasing flexibility of the World Health Organization director general to characterize epidemics with more detail

http://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1001804

Split WHO in two

Available online at www.sciencedirect.com

Public Health

journal homepage: www.elsevier.com/puhe

WHO: Past, Present and Future

Split WHO in two: strengthening political decision-making and securing independent scientific advice

Steven J. Hoffman [a,b,c,d,*], *John-Arne Røttingen* [c,d,e,f]

WHO's professional staff:

43.8% medical specialists

0.1% are economists

1.4% lawyers

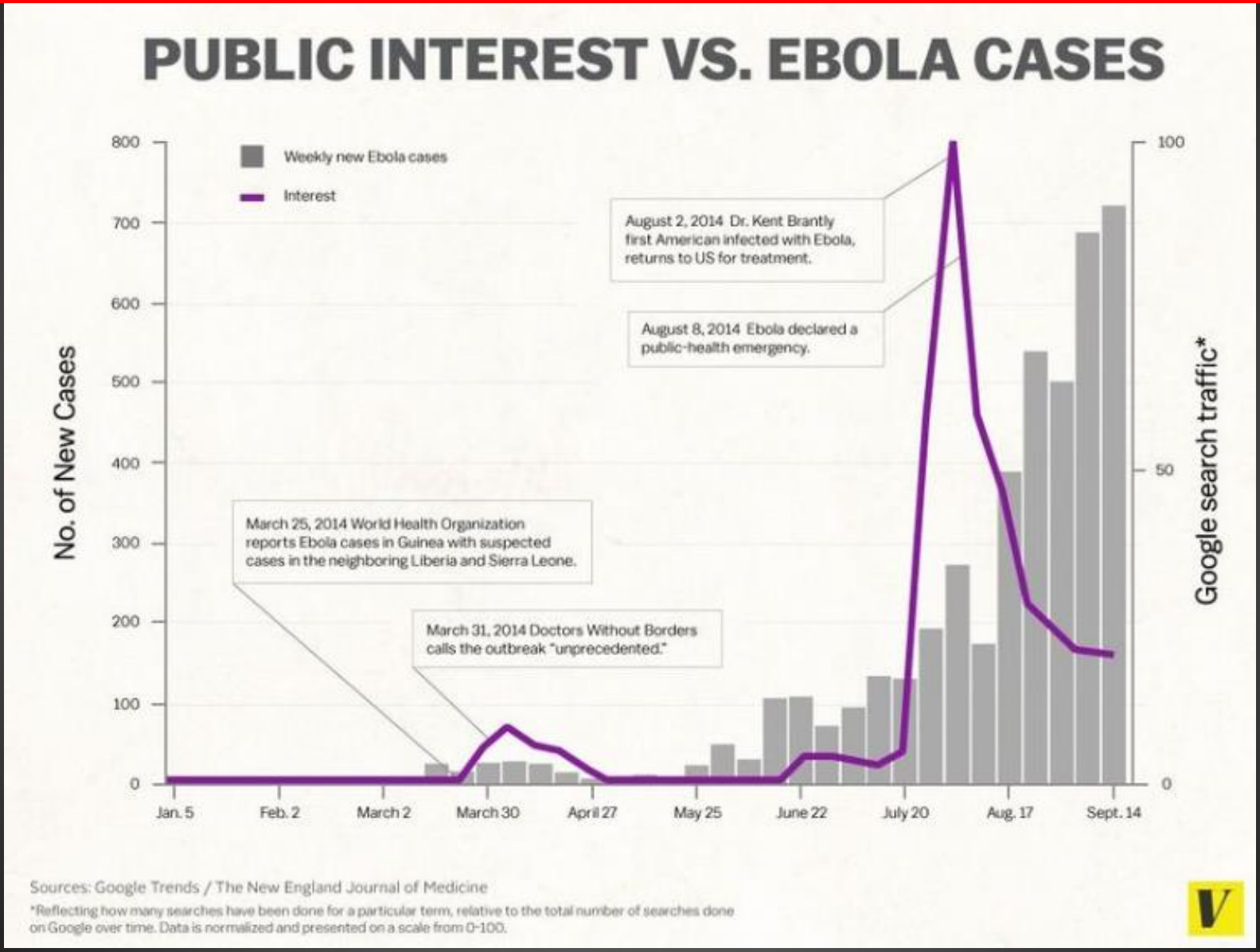
1.6% social scientists

http://www.publichealthjrnl.com/article/S0033-3506(13)00291-6/pdf

Margaret Chan's plan to change WHO

- Establish a $100 million emergency reserve fund that can finance field operations for up to three months in response to an infectious disease outbreak;
- Create a rapid response team that can be deployed quickly to provide services on the ground;
- Set up a review committee to consider improvements to the International Health Regulations and their requirements that states set up robust disease surveillance systems; and
- Develop a semi-autonomous committee within WHO, insulated from political pressures, that will have responsibility for declaring global health emergencies.

Losing the grip – easing political pressure



http://www.vox.com/2015/5/22/8640607/ebola-WHO-reform

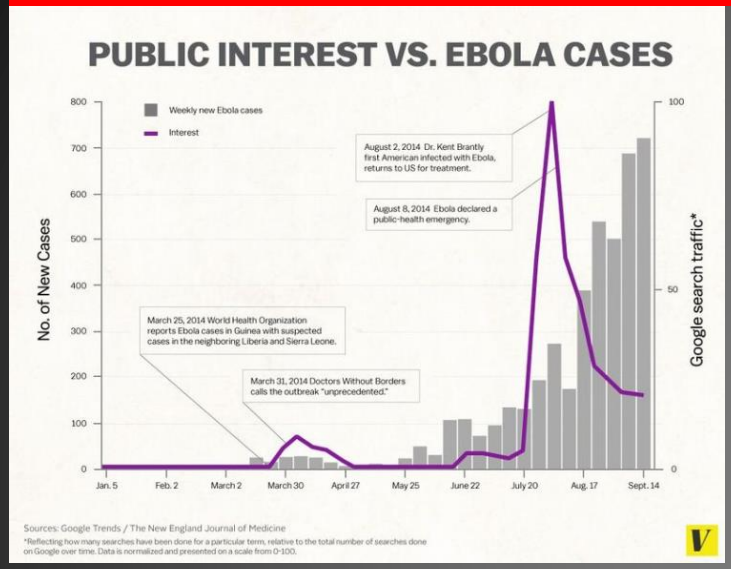
Ebola? – what's that?

"The most common final end to a pandemic is what I call profound amnesia. SARS? What's that? We are not yet at 'Ebola? What's that?' But I guarantee you we will be there. And that's the real problem."

Howard Markel, MD, PhD, the George E. Wantz Distinguished Professor of the History of Medicine at the University of Michigan *[Source]*

https://medium.com/@GHTCoalition/ebola-was-the-wake-up-call-for-global-health-e4569288ad9f

Losing the grip – easing political pressure



"That's exactly what happened after H1N1 in 2009 – we lost the grip"

Julio Frenk, former minister of health Mexico, now Havard

http://www.vox.com/2015/5/22/8640607/ebola-WHO-reform

Preparedness epidemic

9/11 got us on the wrong track down a blind alley

Before September 14

most researchers in global health would not have considered it good public policy to allocate limited resources toward developing an effective vaccine against Ebola virus disease

JAMA Intern Med. 2015;175(1):7-8. doi:10.1001/jamainternmed.2014.6235

IHP

switching the poles
in international health policies

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BRICS countries (Brazil, Russia, India, China and South Africa) (25 % of global GNI):

Very little
Disorganised
Unfocused

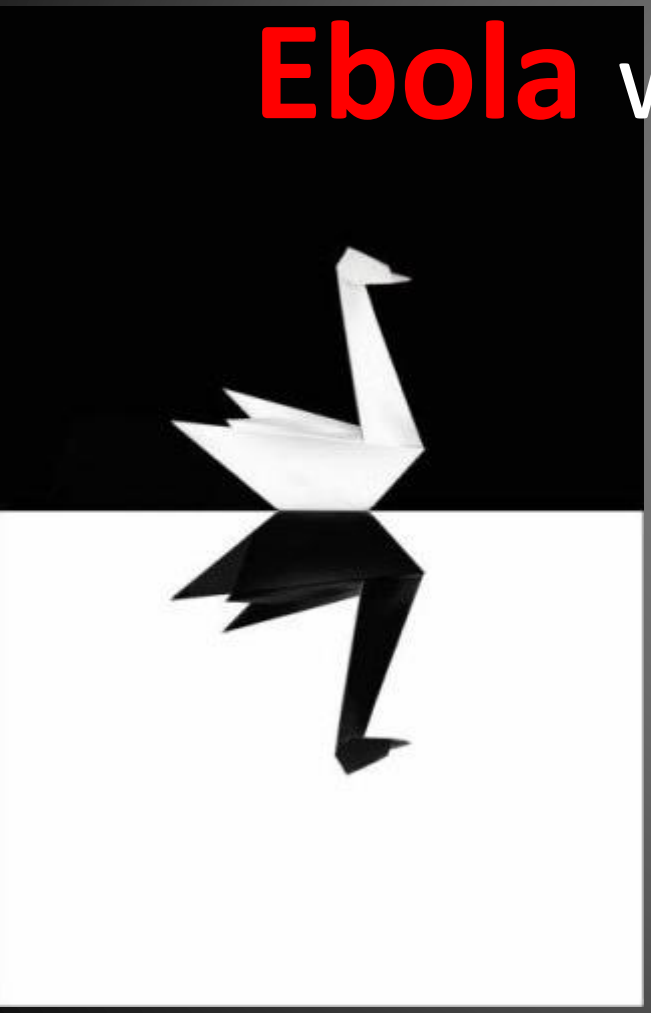
Articles.

BRICS and global health: the case of the Ebola response

By Guanyang Zou on May 14, 2015

Guanyang Zou *(China Program, COMDIS Health Services Delivery Research Consortium, University of Leeds, Shenzhen, China & Institute for International Health and Development, Queen Margaret University, Edinburgh, UK) wrote this blog together with* ***Kristof Decoster*** *(ITM),* ***Swati Srivastava*** *(PHFI, India),* ***Bhaskhar Purohit*** *(PHFI, India & Indian Institute of Public Health Gandhinagar (IIPHG)),* ***Shakira Choonara*** *(University of the Witwatersrand) and* ***Daniel Eduardo Henao Nieto*** *(Fundación Universitaria Autónoma de las Américas, Pereira, Colombia).*

Ebola wasn't the Black swan



We wanted it to be

IM NOT TOTALLY USELESS.

I CAN BE USED AS A BAD EXAMPLE.

Infectious diseases are like people: they are born, grow and die. But it's only through the actions of human beings that they can complete that life cycle. It's up to human beings to break it

Dr. Sakoba Keita, Guinea's National Ebola Response Co-ordinator

Crises is the new normal

Lets prepare for normal