This weekly digest targets news, events, announcements, articles and research in the vaccine and global health ethics and policy space and is aggregated from key governmental, NGO, international organization and industry sources, key peer-reviewed journals, and other media channels. This summary proceeds from the broad base of themes and issues monitored by the Center for Vaccine Ethics & Policy in its work: it is not intended to be exhaustive in its coverage.

Vaccines and Global Health: The Week in Review is also posted in pdf form and as a set of blog posts at https://centerforvaccineethicsandpolicy.net. This blog allows full-text searching of over 8,000 entries.

Comments and suggestions should be directed to
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Center for Vaccine Ethics & Policy
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Request an email version: Vaccines and Global Health: The Week in Review is published as a single email summary, scheduled for release each Saturday evening at midnight (EST/U.S.). If you would like to receive the email version, please send your request to david.r.curry@centerforvaccineethicsandpolicy.org.

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Contents [click on link below to move to associated content]
A. Milestones :: Perspectives :: Featured Journal Content
B. Emergencies
C. WHO; CDC [U.S., Africa, China]
D. Announcements
E. Journal Watch
F. Media Watch

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:::
**Milestones :: Perspectives :: Research**

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**WHO – 146th session of the Executive Board**

**Resolutions**
In an effort to respond to Member States’ needs, the present texts have been made available as quickly as possible. The definitive versions of the resolutions and decisions adopted, edited for the Official Records, will be made available in due course.

- **EB146.R1** Appointment of the Regional Director for Africa
- **EB146.R2** Appointment of the Regional Director for Europe
- **EB146.R3** Appreciation of the outgoing Regional Director for Europe
- **EB146.R4** Remuneration of staff in the professional and higher categories
- **EB146.R5** Salaries of staff in ungraded positions and of the Director-General
- **EB146.R6** Cervical cancer prevention and control: accelerating the elimination of cervical cancer as a public health problem
- **EB146.R7** Global strategy for tuberculosis research and innovation
- **EB146.R8** Integrated people-centred eye care, including preventable vision impairment and blindness

**Decisions**
In an effort to respond to Member States’ needs, the present texts have been made available as quickly as possible. The definitive versions of the resolutions and decisions adopted, edited for the Official Records, will be made available in due course.

- **EB146(1)** Nelson Mandela Award for Health Promotion
- **EB146(2)** Non-State actors in official relations with WHO
- **EB146(3)** Geneva buildings renovation strategy
- **EB146(4)** Membership of the Independent Expert Oversight Advisory Committee
- **EB146(5)** Participation in the Programme, Budget and Administration Committee of the Executive Board
- **EB146(6)** Meningitis prevention and control
Strengthening global immunization efforts to leave no-one behind

[See full text of Annex at end of this edition]

Epilepsy

Neglected tropical diseases

Global strategy and plan of action on public health, innovation and intellectual property

Polio eradication

Decade of Healthy Ageing

Data and innovation: global strategy on digital health

Primary health care

Editor’s Note:
While we have concentrated key reports below, COVID-19 announcements, analysis and commentary will be found throughout this issue, in all sections.

Coronavirus [COVID-19]
Public Health Emergency of International Concern (PHEIC)

Situation report - 25
Novel Coronavirus (COVID-19)
14 February 2020
[Excerpt]

SITUATION IN NUMBERS

Globally :: 49,053 laboratory-confirmed [2056 new]
China :: 48,548 laboratory-confirmed [1998 new]
:: 1,381 deaths [121 new]
Outside of China
:: 505 laboratory-confirmed [58 new]
:: 24 countries
:: 2 deaths [1 new]

WHO RISK ASSESSMENT

China - Very High
Regional Level - High
Global Level - High
**HIGHLIGHTS**

:: No new countries reported cases of 2019-nCoV in the past 24 hours.
:: The second death has been reported outside of China, in Japan. This individual did not have known travel history to China.
:: In China, health care workers account for 1716 confirmed cases of COVID-19 including six deaths.

**STRATEGIC OBJECTIVES**

WHO’s strategic objectives for this response are to:
:: Limit human-to-human transmission including reducing secondary infections among close contacts and health care workers, preventing transmission amplification events, and preventing further international spread from China*;
:: Identify, isolate and care for patients early, including providing optimized care for infected patients;
:: Identify and reduce transmission from the animal source;
:: Address crucial unknowns regarding clinical severity, extent of transmission and infection, treatment options, and accelerate the development of diagnostics, therapeutics and vaccines;
:: Communicate critical risk and event information to all communities and counter misinformation;
:: Minimize social and economic impact through multisectoral partnerships.

*This can be achieved through a combination of public health measures, such as rapid identification, diagnosis and management of the cases, identification and follow up of the contacts, infection prevention and control in health care settings, implementation of health measures for travelers, awareness-raising in the population and risk communication.*

::::::

**National Health Commission of the People's Republic of China**

http://en.nhc.gov.cn/

News
:: **Daily briefing on novel coronavirus cases in China**
Updated: 2020-02-15

...As of 24:00 on Feb 14, the National Health Commission had received 66,492 reports of confirmed cases and 1,523 deaths in 31 provincial-level regions on the Chinese mainland and the Xinjiang Production and Construction Corps, and in all 8,096 patients had been cured and discharged from hospital. There still remained 56,873 confirmed cases (including 11,053 in serious condition) and 8,969 suspected cases. So far, 513,183 people have been identified as having had close contact with infected patients. 169,039 are now under medical observation...

**China pushes for differentiated measures to battle coronavirus**

Updated: 2020-02-14  Xinhua

Epidemic prevention and control in Hubei Province, particularly in the capital city of Wuhan, remain the top priority, said Premier Li Keqiang.

BEIJING, Feb. 13 (Xinhua) -- Chinese authorities on Feb 13 stressed differentiated measures for different regions to fight the novel coronavirus outbreak at a high-level meeting chaired by Premier Li Keqiang.
The leading group of the Communist Party of China (CPC) Central Committee on the prevention and control of the novel coronavirus outbreak also demanded efforts to improve patient treatment and expedite research on drugs.

Epidemic prevention and control in Hubei Province, particularly in the capital city of Wuhan, remain the top priority, said the leading group headed by Li, who is also a member of the Standing Committee of the Political Bureau of the CPC Central Committee.

While ordering Wuhan to speed up hospital admission and suspected case quarantine, the leading group instructed hard-hit cities in Hubei such as Xiaogan and Huanggang to carry out equally strict measures as in Wuhan in surveillance, quarantine and treatment.

The demand for more medics in Hubei and Wuhan should be fulfilled, and the departure channels of the city and the province need further control, according to the meeting.

Multiple steps such as spacing out return trips have prevented large-scale flows of people after the Spring Festival, said the meeting.

Each province is responsible for formulating differentiated epidemic prevention and control strategies based on their own conditions, according to the meeting.

No one-size-fits-all approach should be taken and unfair and extreme practices must be corrected without delay, said the meeting...

New York Times
http://www.nytimes.com/
Accessed 15 Feb 2020

China’s Leader, Under Fire, Says He Led Coronavirus Fight Early On
In pushing a new account of the country's response, officials said President Xi Jinping was aware of the outbreak nearly two weeks before he first spoke publicly about it. It could draw him directly into questions about whether Chinese officials did too little, too late.

By Amy Qin
Feb. 15, 2020
Under fire for its response to the coronavirus epidemic, China’s authoritarian government appears to be pushing a new account of events that presents President Xi Jinping as taking early action to fight the outbreak that has convulsed the country.

But in doing so, the authorities have acknowledged for the first time that Mr. Xi was aware of the epidemic and involved in the response nearly two weeks before he first spoke publicly about it — and while officials at its epicenter in the city of Wuhan were still playing down its dangers.

That confirmation risks drawing the president, China's most powerful leader in decades, directly into questions about whether top officials did too little, too late.

In an internal speech published on Saturday, Mr. Xi said he had “issued demands about the efforts to prevent and control” the coronavirus on Jan. 7, during a meeting of the Politburo Standing Committee, the highest council of the Communist Party, whose sessions are typically cloaked in secrecy.

In the speech, he also said he had authorized the unprecedented lockdown of Wuhan and other cities beginning on Jan. 23.
“I have at every moment monitored the spread of the epidemic and progress in efforts to curtail it, constantly issuing oral orders and also instructions,” Mr. Xi said of his more recent involvement...

WHO News release 12 February 2020
World experts and funders set priorities for COVID-19 research
Leading health experts from around the world have been meeting at the World Health Organization’s Geneva headquarters to assess the current level of knowledge about the new COVID-19 disease, identify gaps and work together to accelerate and fund priority research needed to help stop this outbreak and prepare for any future outbreaks.

The 2-day forum was convened in line with the WHO R&D Blueprint – a strategy for developing drugs and vaccines before epidemics, and accelerating research and development while they are occurring.

“This outbreak is a test of solidarity -- political, financial and scientific. We need to come together to fight a common enemy that does not respect borders, ensure that we have the resources necessary to bring this outbreak to an end and bring our best science to the forefront to find shared answers to shared problems. Research is an integral part of the outbreak response,” said WHO Director-General Dr Tedros Adhanom Ghebreyesus. “I appreciate the positive response of the research community to join us at short notice and come up with concrete plans and commitment to work together.”

The meeting, hosted in collaboration with GloPID-R (the Global Research Collaboration for Infectious Disease Preparedness) brought together major research funders and over 300 scientists and researchers from a large variety of disciplines. They discussed all aspects of the outbreak and ways to control it including:
:: the natural history of the virus, its transmission and diagnosis;
:: animal and environmental research on the origin of the virus, including management measures at the human-animal interface;
:: epidemiological studies;
:: clinical characterization and management of disease caused by the virus;
:: infection prevention and control, including best ways to protect health care workers;
:: research and development for candidate therapeutics and vaccines;
:: ethical considerations for research;
:: and integration of social sciences into the outbreak response.

“This meeting allowed us to identify the urgent priorities for research. As a group of funders we will continue to mobilize, coordinate and align our funding to enable the research needed to tackle this crisis and stop the outbreak, in partnership with WHO,” said Professor Yazdan Yazdanpanah, chair of GloPID-R. “Equitable access – making sure we share data and reach those most in need, in particular those in lower and middle-income countries, is fundamental to this work which must be guided by ethical considerations at all times.”

During the meeting, the more than 300 scientists and researchers participating both in person and virtually agreed on a set of global research priorities. They also outlined mechanisms for
continuing scientific interactions and collaborations beyond the meeting which will be coordinated and facilitated by WHO. They worked with research funders to determine how necessary resources can be mobilized so that critical research can start immediately.

The deliberations will form the basis of a research and innovation roadmap charting all the research needed and this will be used by researchers and funders to accelerate the research response.

*WHO News release 13 February 2020*

**Remarks by Dr Michael Ryan, Executive Director, WHO Health Emergencies Programme at media briefing on COVID-19 on 13 February 2020**

::::

**Transcript for CDC Media Telebriefing: Update on COVID-19**
Friday, February 14, 2020

**FDA's Actions in Response to 2019 Novel Coronavirus at Home and Abroad**
Feb 14, 2020

::::

**Emergencies**

**Ebola – DRC+**

*Public Health Emergency of International Concern (PHEIC)*

**Ebola Outbreak in DRC 79: 11 February 2020**

[Excerpts]

**Situation Update**

From 3 to 9 February 2020, three new confirmed cases of Ebola virus disease (EVD) were reported in Beni Health Zone, North Kivu Province in the Democratic Republic of the Congo (Figure 1). All of the cases were registered as contacts and two were under surveillance at the time of detection.

In the past 21 days (20 January to 9 February 2020), 13 new confirmed cases were reported from four of the 30 health areas in two active health zones in North Kivu Province (Figure 2, Table 1): Beni (92%; n=12) and Mabalako (8%; n=1) Health Zones. Although recent trends of this outbreak, including the small number of weekly cases and limited geographic area affected by EVD are encouraging, continued vigilance is crucial, particularly for contact identification and follow up, in order to interrupt possible nosocomial transmission linked to traditional practitioner facilities. In the last 21 days, there were three cases of the 13 new confirmed cases who passed away in the community, outside of Ebola treatment centres.

The security situation in several EVD-affected health areas remain unstable and unpredictable. On 8 February, a health centre was attacked in Butembo, destroying
equipment and infrastructure. On 8 February 2020, an attack on civilians in Mabalako Health Zone led to a suspension of response activities for 48 hours. This attack resulted in displacement of people fearing armed attacks.

As of 9 February 2020, a total of 3431 EVD cases, including 3308 confirmed and 123 probable cases have been reported, of which 2253 cases died (overall case fatality ratio 66%). Of the total confirmed and probable cases, 56% (1920) were female, 28% (968) were children aged less than 18 years, and 5% (172) were healthcare workers...

...Conclusion
Beni Health Zone remains the hotspot of this outbreak. Ongoing insecurity in other areas is of concern. Continued access and heightened vigilance is required to maintain case investigation and contact tracing activities in all health zones.

12 February 2020  Statement

...Conclusions and Advice
It was the unanimous view of the Committee that this event still constitutes a public health emergency of international concern (PHEIC) under the IHR (2005).

The Committee acknowledged the revised risk assessment, which puts the risk now as high at national and regional levels, and low at the global level.

The Committee was concerned that withdrawing the PHEIC now might have adverse consequences for the response efforts through diminishing focus. Additionally, although the primary concern of the Committee is EVD, there are serious ongoing outbreaks of other diseases, including measles and cholera, in DRC. The country continues to need support to combat infectious diseases as well as to strengthen its health system. Further, there remains an urgent need to maintain international solidarity for the response.

The Committee noted the ongoing discussions about the interpretation in the text of the IHR (2005) of the terms international and regional spread, and about creating an intermediate level of response between the binary possibilities of PHEIC or no PHEIC, in a way that does not require reopening negotiations on the Regulations. The Committee supports these discussions, as an intermediate level would be as useful for gradually ending a PHEIC and for signaling the potential for one to be declared...

...Based on this advice, the reports made by the affected State Party, and the currently available information, the Director-General accepted the Committee’s assessment and on 12 February 2020 maintained the Ebola outbreak in the Democratic Republic of the Congo as a Public Health Emergency of International Concern (PHEIC).
**ERVEBO® (Ebola Zaire Vaccine, Live) Now Registered in Four African Countries, Within 90 Days of Reference Country Approval and WHO Prequalification**

Democratic Republic of the Congo One of the First African Countries to Register ERVEBO

February 14, 2020 11:20 AM Eastern Standard Time

KENILWORTH, N.J.--(BUSINESS WIRE)--Merck (NYSE: MRK), known as MSD outside the United States and Canada, today confirmed that four African countries, including the Democratic Republic of the Congo (DRC), have approved ERVEBO (pronounced er-VEE-boh). ERVEBO was granted a conditional marketing authorization by the European Commission on November 11, 2019 and approved by the U.S. Food and Drug Administration (FDA) on Dec. 20, 2019. In the United States, ERVEBO is indicated for the prevention of disease caused by Zaire ebolavirus in individuals 18 years of age and older. The duration of protection conferred by ERVEBO is unknown. ERVEBO does not protect against other species of Ebolavirus or Marburgvirus. Effectiveness of the vaccine when administered concurrently with antiviral medication, immune globulin (IG), and/or blood or plasma transfusions is unknown...

Emergencies

**POLIO**

Public Health Emergency of International Concern (PHEIC)

http://polioeradication.org/polio-today/polio-now/this-week/

Polio this week as of 12 February 2020

:: A time-limited working group has been put together to manage and coordinate GPEI’s activities to enable a rapid and effective roll out of nOPV2. Take a look at the terms of reference for the working group.
:: With the evolving public health emergency associated with the increase in new emergences of circulating vaccine-derived poliovirus type 2, a draft decision was adapted by the WHO Executive Board during last week’s meeting. [see text below]

Summary of new viruses this week (AFP cases and ES positives):

:: **Pakistan**: five WPV1 cases, twelve WPV1 positive environmental samples and three cVDPV2 positive environmental samples
:: **Nigeria**: one cVDPV2 case and one cVDPV2 positive environmental sample
:: **Democratic Republic of the Congo (DR Congo)**: two cVDPV2 cases
:: **Somalia**: two cVDPV2 positive environmental samples
:: **Angola**: three cVDPV2 cases
:: **Cote d’Ivoire**: three cVDPV2 positive environmental samples
:: **Ethiopia**: seven cVDPV2 cases
:: **Philippines**: one cVDPV2 case and three cVDPV2 positive environmental samples

WHO EXECUTIVE BOARD
146th session Provisional agenda item 16.1
Poliomyelitis

**Polio eradication :: Draft decision**

The Executive Board is invited to consider the following draft decision:

The Executive Board, having considered the report on poliomyelitis: polio eradication;1 noting with great concern the evolving public health emergency associated with the increase in new emergencies due to circulating vaccine-derived poliovirus type 2, particularly in parts of Africa; and noting the development of the draft Strategy for Control of cVDPV2 2019–2021, an addendum to the Polio Endgame Strategy 2019–2023,2 to more effectively address the evolving circulating vaccine-derived poliovirus type 2 epidemiology, decided:

(1) to request the Director-General to: (a) continue to ensure adequate and uninterrupted supply of oral polio vaccine type 2 to respond to such outbreaks, in line with existing mandates; (b) accelerate the assessment and roll-out of a novel oral polio vaccine type 2 including through the WHO Emergency Use Listing procedure; (c) initiate a transparent and evidence-based process for prioritizing the equitable allocation of limited supplies of novel oral polio vaccine type 2; and,

(2) to urge Member States to: (a) expedite the processes for authorizing the importation and use of vaccines to respond to polio outbreaks, including novel oral polio vaccine type 2 on the basis of its emergency use listing; and (b) mobilize domestic financial resources to complement international financial and political commitments.

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**Editor’s Note:**

WHO has posted a refreshed emergencies page which presents an updated listing of Grade 3,2,1 emergencies as below.

**WHO Grade 3 Emergencies** [to 15 Feb 2020]

Democratic Republic of the Congo :: Ebola Outbreak in DRC 79: 11 February 2020
[See Emergencies above for detail]

Yemen :: Journey to recovery: Yemeni patients get new lease on life in Jordan 9 February 2020

Mozambique floods - No new digest announcements identified
Nigeria - No new digest announcements identified
Somalia - No new digest announcements identified
South Sudan - No new digest announcements identified
Syrian Arab Republic - No new digest announcements identified

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**WHO Grade 2 Emergencies** [to 15 Feb 2020]

**Burkina Faso [in French]**

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:: Cas suspect d’infection par le nouveau coronavirus au Burkina Faso : les résultats ...
14 février 2020
Ouagadougou, le 11 février 2020, le Ministère de la santé a fait un exposé sur les mesures sanitaires préventives prises par le Burkina Faso pour faire face à un risque de survenue d’une éventuelle épidémie due au nouveau coronavirus dans le pays.

:: Burkina Faso : Riposte vaccinale contre la poliomyélite dans le District sanitaire d...
11 février 2020
Ouargaye (Centre Est au Burkina Faso), 7 février 2020, lancement du round 0 de la campagne de vaccination de riposte contre la poliomyélite sous la coordination du Gouverneur de la Région.

Afghanistan - No new digest announcements identified
Angola - No new digest announcements identified
Burundi - No new digest announcements identified
Cameroon - No new digest announcements identified
Central African Republic - No new digest announcements identified
Ethiopia - No new digest announcements identified
HIV in Pakistan - No new digest announcements identified
Iran floods 2019 - No new digest announcements identified
Iraq - No new digest announcements identified
Libya - No new digest announcements identified
Malawi floods - No new digest announcements identified
Measles in Europe - No new digest announcements identified
MERS-CoV - No new digest announcements identified
Myanmar - No new digest announcements identified
Niger - No new digest announcements identified
occupied Palestinian territory - No new digest announcements identified
Sudan - No new digest announcements identified
Ukraine - No new digest announcements identified
Zimbabwe - No new digest announcements identified

::: WHO Grade 1 Emergencies [to 15 Feb 2020]
Chad - No new digest announcements identified
Djibouti - No new digest announcements identified
Kenya - No new digest announcements identified
Namibia - viral hepatitis - No new digest announcements identified
Tanzania - No new digest announcements identified

::: UN OCHA – L3 Emergencies
The UN and its humanitarian partners are currently responding to three ‘L3‘ emergencies. This is the global humanitarian system’s classification for the response to the most severe, large-scale humanitarian crises.
Syrian Arab Republic
Recent Developments in Northwest Syria - Situation Report No. 8 - As of 13 February 2020

HIGHLIGHTS
:: People in northwest Syria are living through some of the worst crises since the war in Syria began. More than 800,000 people have been displaced since 1 December, due to intense conflict in freezing weather. The humanitarian community is doing everything it can but is overwhelmed by the scale of needs. An immediate cessation of the violence is critical. More resources, including funding, is immediately needed to save people’s lives and alleviate their suffering...

Yemen - No new digest announcements identified

UN OCHA – Corporate Emergencies
When the USG/ERC declares a Corporate Emergency Response, all OCHA offices, branches and sections provide their full support to response activities both at HQ and in the field.

CYCLONE IDAI and Kenneth - No new digest announcements identified

EBOLA OUTBREAK IN THE DRC
- No new digest announcements identified

WHO & Regional Offices [to 15 Feb 2020]

News release 14 February 2020
Four countries in the African region license vaccine in milestone for Ebola prevention

News release 13 February 2020
Remarks by Dr Michael Ryan, Executive Director, WHO Health Emergencies Programme at media briefing on COVID-19 on 13 February 2020

News release 12 February 2020
World experts and funders set priorities for COVID-19 research

News release 10 February 2020
WHO and FIND formalize strategic collaboration to drive universal access to essential diagnostics

Weekly Epidemiological Record, 14 February 2020, vol. 95, 07 (pp. 61–68)
:: Report of the thirtieth meeting of the International Task Force for Disease Eradication, 22 October 2019

WHO Regional Offices
Selected Press Releases, Announcements

**WHO African Region** AFRO
:: Four countries in the African region license vaccine in milestone for Ebola preventi... 14 February 2020
:: Supporting media to bust harmful myths on coronavirus disease 13 February 2020

**WHO Region of the Americas** PAHO
:: PAHO prepares a further 9 countries in the Americas for laboratory diagnosis of new coronavirus (02/14/2020)
:: PAHO prepares 8 Caribbean countries for laboratory diagnosis of new coronavirus (02/12/2020)
:: Cases of dengue in the Americas exceeded 3 million in 2019 (02/12/2020)
:: New coronavirus: Fiocruz, Ministry of Health of Brazil and PAHO provide training in laboratory diagnosis in nine countries (02/11/2020)

**WHO South-East Asia Region** SEARO
No new digest content identified.

**WHO European Region** EURO
:: Coronavirus disease (COVID-19): European Region focusing on readiness 14-02-2020
:: Poland can strengthen financial protection by exempting poor people from copayments for medicines 12-02-2020
:: Harms and benefits of evidence-based screening outlined in new WHO report 11-02-2020
:: Well-prepared laboratories are first line of defence against novel coronavirus in Europe 10-02-2020

**WHO Eastern Mediterranean Region** EMRO
:: Yemeni patients get new lease on life in Jordan. 9 February 2020

**WHO Western Pacific Region**
:: 14 February 2020 | Commentary
It is time for all of us to play our part in the fight against the novel coronavirus in the Pacific
Our Region is at a critical juncture in the novel coronavirus (now known as COVID-19) outbreak. While the vast majority of cases are still in China, as of 14 February the virus has also been confirmed in 24 other countries on several continents. And there are now cases of local transmission in several countries, increasing the risk of onward spread.

:::::::

CDC/ACIP [to 15 Feb 2020]
http://www.cdc.gov/media/index.html
https://www.cdc.gov/vaccines/acip/index.html
ACIP Meetings
Next ACIP Meeting: February 26-27, 2020
Agenda (Draft) pdf icon[2 pages]

Latest News Releases
Africa CDC  [to 15 Feb 2020]
http://www.africacdc.org/
News
Africa Identifies First Case of Coronavirus Disease: Statement by the Director of Africa CDC
ADDIS ABABA, ETHIOPIA, 15 FEBRUARY 2020. On 14 February 2020, the Minister of Health and Population of Egypt, Dr Hala Zayed, confirmed the first case of the coronavirus disease (COVID-19) in Egypt. In her statement, she confirmed that the patient is male, 33 years old, of foreign origin and is currently receiving treatment at an isolation centre in Egypt. The 17 contacts of the patient have tested negative, and all of them...

China CDC
http://www.chinacdc.cn/en/
No new digest content identified.

National Health Commission of the People's Republic of China
http://en.nhc.gov.cn/
News
:: Daily briefing on novel coronavirus cases in China
Updated: 2020-02-15
...As of 24:00 on Feb 14, the National Health Commission had received 66,492 reports of confirmed cases and 1,523 deaths in 31 provincial-level regions on the Chinese mainland and the Xinjiang Production and Construction Corps, and in all 8,096 patients had been cured and discharged from hospital. There still remained 56,873 confirmed cases (including 11,053 in serious condition) and 8,969 suspected cases. So far, 513,183 people have been identified as having had close contact with infected patients. 169,039 are now under medical observation...

China pushes for differentiated measures to battle coronavirus
Updated: 2020-02-14 Xinhua
Epidemic prevention and control in Hubei Province, particularly in the capital city of Wuhan, remain the top priority, said Premier Li Keqiang. [See Emergencies above for detail]
Announcements

**Paul G. Allen Frontiers Group** [to 15 Feb 2020]
*News*
No new digest content identified.

**BMGF - Gates Foundation** [to 15 Feb 2020]
http://www.gatesfoundation.org/Media-Center/Press-Releases
No new digest content identified.

**Bill & Melinda Gates Medical Research Institute** [to 15 Feb 2020]
https://www.gatesmri.org/
The Bill & Melinda Gates Medical Research Institute is a non-profit biotech organization. Our mission is to develop products to fight malaria, tuberculosis, and diarrheal diseases—three major causes of mortality, poverty, and inequality in developing countries. The world has unprecedented scientific tools at its disposal; now is the time to use them to save the lives of the world’s poorest people
No new digest content identified.

**CARB-X** [to 15 Feb 2020]
https://carb-x.org/
CARB-X is a non-profit public-private partnership dedicated to accelerating antibacterial research to tackle the global rising threat of drug-resistant bacteria.
No new digest content identified.

**CEPI – Coalition for Epidemic Preparedness Innovations** [to 15 Feb 2020]
http://cepi.net/
*News*
**Ethiopia funds Coalition for Epidemic Preparedness Innovations to combat spread of epidemics**
10 Feb 2020
Oslo, Norway; Addis Ababa, Ethiopia – Ethiopia has pledged USD$300,000 in funding as part of a commitment to join the Coalition for Epidemic Preparedness Innovations (CEPI) and support its mission to speed development of vaccines to combat emerging infectious diseases and prevent future epidemics...

**Clinton Health Access Initiative, Inc. (CHAI)** [to 15 Feb 2020]
https://clintonhealthaccess.org/
*News & Press Releases*
The European & Developing Countries Clinical Trials Partnership (EDCTP) aims to accelerate the development of new or improved drugs, vaccines, microbicides and diagnostics against HIV/AIDS, tuberculosis and malaria as well as other poverty-related and neglected infectious diseases in sub-Saharan Africa, with a focus on phase II and III clinical trials.

No new digest content identified.

http://www.edctp.org/

European Medicines Agency  [to 15 Feb 2020]
News & Press Releases
No new digest content identified.

European Vaccine Initiative  [to 15 Feb 2020]
http://www.euvaccine.eu/news-events
No new digest content identified.

FDA  [to 15 Feb 2020]
https://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/default.htm
Press Announcements
February 14, 2020 - FDA’s Actions in Response to 2019 Novel Coronavirus at Home and Abroad
The FDA is an active partner in the Novel Coronavirus (COVID-19) response, working closely...with our government and public health partners across the U.S. Department of Health and Human Services, as well as with our international counterparts. Our work is multifaceted, focusing on actively facilitating efforts to diagnose, treat and prevent the disease; surveilling the medical product supply chain for potential shortages or disruptions and helping to mitigate such impacts, as necessary; and leveraging the full breadth of our public health tools as we oversee the safety and quality of FDA-regulated products for American patients and consumers...

Fondation Merieux  [to 15 Feb 2020]
http://www.fondation-merieux.org/
News, Events
Mérieux Foundation co-organized event
5th Meeting of the GTFCC Water, Sanitation and Hygiene (WASH) Working Group
United States endorses Gavi with recommendation of US$ 1.16 billion, four-year commitment

:: The United States Agency for International Development (USAID) has announced a commitment of US$ 1.16 billion in funding for Gavi, the Vaccine Alliance for fiscal years 2020 to 2023
:: Gavi aims to immunise 300 million additional children, saving more than 7 million lives
:: Dr Seth Berkley: Gavi advances sustained country ownership and strengthens global health security

Washington, DC, 10 February 2020 – Gavi, the Vaccine Alliance, welcomes the US Administration’s announcement to commit US$ 1.16 billion to the Alliance for the fiscal years 2020 to 2023, exceeding its previous pledge in 2015. The commitment appeared in the President’s Fiscal Year 2021 budget request today and is subject to Congressional approval.

“This announcement is an important vote of confidence for Gavi’s mission and model,” said Dr Seth Berkley, Gavi’s CEO. “It will go a long way to help us build on our successful efforts over the last 20 years to provide the poorest, most vulnerable children in the world with the essential vaccines they need to survive and thrive. US support will also allow us to continue helping countries take ownership of their immunisation systems and sustain them in the future, which is central to Gavi’s model.”...

GHIT was set up in 2012 with the aim of developing new tools to tackle infectious diseases that

No new digest content identified.

No new digest content identified.

No new digest content identified.

No new digest content identified.
**International Coalition of Medicines Regulatory Authorities [ICMRA]**
Selected Statements, Press Releases, Research
No new digest content identified.

**International Generic and Biosimilar Medicines Association [IGBA]**
https://www.igbamedicines.org/
News
No new digest content identified.

**IFFIm**
http://www.iffim.org/
No new digest content identified.

**IFRC** [to 15 Feb 2020]
Selected Press Releases, Announcements
Asia Pacific, China, Global
**IFRC to majorly ramp up coronavirus programmes across the globe**

Geneva/Kuala Lumpur, 11 February 2020 – With the novel coronavirus steadily spreading beyond China and rising death toll, the International Federation of Red Cross and Red Crescent Societies (IFRC) is expanding its novel coronavirus disease (Covid-19) response and preparedness programmes.

A 32 million Swiss franc global emergency appeal will support community-based health activities, access to basic services, and the management of misinformation and stigma – all equally crucial to control the spread of the virus. In the past two weeks the IFRC has been on the ground, supporting National Societies in countries where the outbreak is spreading, mainly in the Asia Pacific region. Through this emergency appeal, the IFRC hopes to invest in preparedness activities in other countries, with a focus on those whose health systems are already under pressure...
11 February 2020

**IVAC** [to 15 Feb 2020]
https://www.jhsph.edu/research/centers-and-institutes/ivac/index.html
Updates
No new digest content identified.
**IVI**  [to 15 Feb 2020]
http://www.ivi.int/
Selected IVI News & Announcements
No new digest content identified.

**JEE Alliance**  [to 15 Feb 2020]
https://www.jeealliance.org/
Selected News and Events
No new digest content identified.

**MSF/Médecins Sans Frontières**  [to 15 Feb 2020]
http://www.msf.org/
Latest [Selected Announcements]
Epidemics and pandemics
**Supporting preparedness efforts to fend off coronavirus**
Voices from the Field 14 Feb 2020

**Epidemics and pandemics**
**Providing materials, engaging communities in the COVID-19 coron...**
Project Update 14 Feb 2020

Specialised medical protective equipment from Médecins Sans Frontières (MSF) is on its way to Wuhan Jinyintan hospital in the capital city of Hubei province, China, the epicentre of the current coronavirus COVID-19 outbreak.

“As of 14 February, there are more than 64,000 COVID-19 cases, 99 per cent of which are in China,” says Gert Verdonck, MSF’s Emergency Coordinator for COVID-19. “Medical protective equipment is key. So, we want to contribute to supporting frontline health workers with the specialised protection they need to work safely in an outbreak of this magnitude.”...

**Iraq**
**Extending a helping hand in Iraqi health facilities**
Project Update 14 Feb 2020

**Epidemics and pandemics**
**MSF update on COVID-2019 coronavirus outbreak**
Project Update 14 Feb 2020

**National Vaccine Program Office - U.S. HHS**  [to 15 Feb 2020]
https://www.hhs.gov/vaccines/about/index.html
NVAC 2020 Meetings
**June 9-10, 2020 NVAC Meeting**
**September 23-24, 2020 Meeting (Virtual)**

**NIH**  [to 15 Feb 2020]
Selected News Releases

Remdesivir prevents MERS coronavirus disease in monkeys
February 13, 2020 — Results support testing antiviral against 2019 novel coronavirus.

Recent advances in addressing tuberculosis give hope for future
February 11, 2020 — NIH officials describe “banner year”.

Less than a quarter of at-risk adolescent boys ever get tested for HIV
February 11, 2020 — Study stresses promoting patient-clinician communication about sexual behavior to encourage HIV testing in teenagers.

PATH [to 15 Feb 2020]
https://www.path.org/media-center/

Selected Announcements

Statement on the Administration’s Fiscal Year 2021 Budget Request
February 11, 2020 by PATH
The following is a statement from Heather Ignatius, PATH’s Director for Policy and Advocacy, on the release of the Administration’s Fiscal Year 2021 Budget Request.
“For the fourth year in a row, the Administration's Fiscal Year 2021 budget request includes extensive cuts to global health programs—totaling more than $3 billion—at the U.S. Agency for International Development (USAID), the State Department, and at the U.S. Centers for Disease Control and Prevention (CDC).

These cuts would hamper U.S. efforts to combat diseases such as HIV/AIDS, polio, and measles. They also impact the ability of our partners like the Global Fund and the World Health Organization (WHO) to work alongside us, putting additional lives at risk and reducing America's own security and standing in the world.

However, the request is not all bad. One positive inclusion that we applaud is the strong signal of support for Gavi, the Vaccine Alliance and for USAID and CDC’s global health security programs. These investments are necessary to help some of the poorest countries afford life-saving vaccines, and at the same time help these countries become better prepared to stop deadly or debilitating infectious diseases before they spread to our borders.

The best way to keep our nation safe and promote America’s interests around the world is not by scaling back the very investments that ensure our safety and security. We urge Members of Congress to continue the decades of bipartisan support for these critical investments, and fully fund global health and development programs.”

Sabin Vaccine Institute [to 15 Feb 2020]
http://www.sabin.org/updates/pressreleases

Statements and Press Releases
No new digest content identified.

UNAIDS [to 15 Feb 2020]
http://www.unaids.org/en

Selected Press Releases/Reports/Statements
13 February 2020
New Investment Book highlights investment opportunities
The Investment Book, an online tool for UNAIDS donors that capitalizes on the unique value of UNAIDS, has been launched. Highlighting the opportunities that are available for partnership and donor investment, the Investment Book shows the impact of investment opportunities at the global, regional and country levels.

11 February 2020
How are babies becoming infected with HIV in Africa?

10 February 2020
Advocacy toolkit for African first ladies launched

UNICEF [to 15 Feb 2020]
https://www.unicef.org/media/press-releases
Selected Statements, Press Releases, Reports
Press release
Critical support for former child soldiers in South Sudan at risk from lack of funding
900 children on verge of release could be left in limbo unless new funds are secured
11/02/2020

Press release
Geneva Palais briefing note on the situation of children in Madagascar
This is a summary of what was said by UNICEF Madagascar Deputy Representative Jean Benoit Manhes – to whom quoted text may be attributed – at today’s press briefing at the Palais des Nations in Geneva
11/02/2020

Vaccination Acceptance Research Network (VARN) [to 15 Feb 2020]
https://vaccineacceptance.org/news.html#header1-2r
No new digest content identified.

Vaccine Confidence Project [to 15 Feb 2020]
http://www.vaccineconfidence.org/
No new digest content identified.

Vaccine Education Center – Children’s Hospital of Philadelphia [to 15 Feb 2020]
http://www.chop.edu/centers-programs/vaccine-education-center
No new digest content identified.

Wellcome Trust [to 15 Feb 2020]
https://wellcome.ac.uk/news
News | 13 February 2020
Wellcome pledges £10 million to tackle novel coronavirus (COVID-19) epidemic
Wellcome is making a pledge of up to £10 million to accelerate research and support global efforts to tackle the ongoing COVID-19 epidemic.

*News* | 11 February 2020
**Jim Smith to resume his role as Wellcome’s Director of Science in May 2020**
Jim Smith, who has been leading Wellcome’s Science Review since January 2019, is returning to his role as Director of Science as the review is almost complete.

The Wistar Institute | [to 15 Feb 2020]
*Press Releases*
*No new digest content identified.*

World Organisation for Animal Health (OIE) | [to 15 Feb 2020]
*Press Releases*
**Lunar New Year: travel responsibly to avoid carrying ASF virus**

On the eve of a new lunar year, the risk of disease spread increases due to the massive movements of people travelling to celebrate. The World Organisation for Animal Health (OIE) launches the second phase of its awareness campaign focusing on the role of travellers as carriers of African swine fever, a deadly pig disease, and how they can avoid spreading it.

Paris, 24 January 2020 – Tomorrow marks the start of the Year of the Rat. The largest annual human movement in the world is underway: people travelling home to celebrate the Lunar New Year, particularly to and from countries in Asia. With this, higher risk of travellers spreading infectious diseases such as African swine fever (ASF) or even the newly identified *2019 novel Coronavirus*, poses a major threat to both animal and human populations, worldwide.

ASF affects domestic and wild pigs, and it has been causing detrimental impacts at different levels of society in over 50 countries across Sub Saharan Africa, Asia and Europe since 2018. ASF is not a danger to human health, however, it poses a major threat to pig health and welfare and, therefore, to pig production systems. Considering that pigs have become a main source of animal protein among a growing human population, ASF not only impacts the livelihoods of small and large-scale pig producers, but also threatens global food security. To date, more than 6 million animal losses have been reported in Asia and the Pacific, the biggest pork producing region in the world.

Given that there is no effective vaccine or treatment against ASF yet, prevention remains essential to stop its spread. It is important that key actors in the transmission of the disease acknowledge their role in preventing it and human carelessness is one of the main drivers of ASF spread...

ARM [Alliance for Regenerative Medicine] | [to 15 Feb 2020]
Press Releases
No new digest content identified.

BIO  [to 15 Feb 2020]
Press Releases
No new digest content identified.

DCVMN – Developing Country Vaccine Manufacturers Network  [to 15 Feb 2020]
http://www.dcvmn.org/
News
Advanced Pharmacovigilance workshop and WG meeting
16 March 2020 to 19 March 2020, Shanghai / China

IFPMA  [to 15 Feb 2020]
http://www.ifpma.org/resources/news-releases/
Selected Press Releases, Statements, Publications
IFPMA and WHO Global Research and Innovation Forum
Published on: 12 February 2020
IFPMA as the body representing the innovator biopharmaceutical industry in official relations with the UN, together with a number of its member companies were invited to the WHO Global Research and Innovation Forum on COVID-19 which took place on 11 and 12 February 2020 in Geneva.

IFPMA views on the meeting and the roadmap going forwards:
Geneva, 12 February 2020 – Global health security, and the public health emergency that COVID-19 represents, is everyone’s responsibility, it requires solidarity, collaboration, and innovative efforts from various stakeholders – i.e. industry, academia, regulators, governments, and WHO, to harness the power of science.

Innovative biopharmaceutical member companies of IFPMA are ready to help and are taking practical steps to see where it makes the most sense to engage. Those companies with potentially relevant knowhow have teams of scientists checking their libraries of potential assets that could fight coronaviruses. Our priority as industry is to help develop countermeasures, be it vaccines, therapies, or diagnostics, and if and when successful, make them immediately available to those in need.

Having a delegation present the WHO consultation these past two days has been helpful in that regard.

The WHO should be congratulated for managing to mobilize so many of the key players whose experience will be critical to stem the spread of the COVID-19 epidemic.

The very collegiate and science-focused manner in which the consultation took place bodes well for further the collaboration and positive engagement needed across the board if we are going
to use the science at our disposal to minimise the public health impact of COVID-19 and potentially further coronavirus outbreaks.

The industry is fully supportive of efforts that will ensure the scientific community can respond quickly to the challenges this epidemic presents. The Forum resulted in many commendable ideas. Congratulations to WHO for getting so many stakeholders together at short notice. We would however comment that pragmatic implementation of the forthcoming WHO Roadmap is critical moving forward.

Going forwards, it will be crucial that the WHO continue to involve researchers, government, industry and coordinate efforts to help make informed decisions on how best to prioritize and collaborate on a shared research agenda for this virus. Speed and coordination, evidence-based response, involvement of those who already have the knowledge and expertise (in particular scientists on the front line in China), avoiding duplication, are all going to be paramount to ensure that lives will be saved and the spread of virus would stemmed and if possible be stopped.

The longer term research agenda should not detract taking the necessary immediate steps to contain the COVID-19 outbreak and support first-line responders while vaccines are being developed & therapeutics are researched. This includes streamlining the use of existing networks to improve response, such as Global Initiative on Sharing All Influenza Data / GISDAID Initiative, sharing data & clinical trials outcomes.

*The above can be attributed to Thomas Cueni, Director General of the International Federation of Pharmaceutical Manufacturers and Associations (IFPMA)*

**PhRMA**  [to 15 Feb 2020]
http://www.phrma.org/

*Selected Press Releases, Statements*

**R&D Focus: New report shows nearly 600 medicines in development for pediatric patients**

February 13, 2020, Andrew Powaleny

America’s biopharmaceutical researchers are committed to studying, developing and testing medicines to meet the unique needs of pediatric patients. New treatment options for infants, children and adolescents can be complex and often require different clinical approaches than adult treatment pathways. According to a [new report](http://www.phrma.org/) released today, there are nearly 600 pediatric medicines currently in development.

Here is a closer look at a few exciting developments in pediatric medicines:

* There are more than 2,100 industry-sponsored pediatric clinical trials underway, testing 580 investigational medicines and involving more than 1.2 million pediatric patients across a variety of therapeutic areas, including diseases where there is significant unmet medical need.

Medicines in development include:

:: A gene-edited cell therapy that could potentially be a one-time treatment for sickle cell disease
:: A monoclonal antibody approved to treat asthma in adults and children ages 12 years and older being tested in children ages 6 to 11
The first DDP-4 inhibitor approved for adults with type 2 diabetes in the United States being tested in children ages 10 to 17

Researchers are also testing medicines approved for use in adults to determine safe and effective dosage levels for children. Current investigations include:

- 125 treatments for genetic diseases including medicines for cystic fibrosis, which affects more than 30,000 American children and adults
- 86 treatments for cancer which, despite significant progress, is still a leading cause of death by disease among American children ages 1 to 19
- 75 medicines for infectious diseases, such as HIV/AIDS, ear infections, pneumonia and hepatitis
- 55 medicines for skin disorders, including atopic dermatitis, a chronic condition which affects about 20% of children in the United States...

Press Release

**Statement on Biopharmaceutical Industry Efforts to Address the Coronavirus Public Health Emergency**

Washington, D.C. (Tuesday, February 11, 2020) — PhRMA member companies’ global research and development leaders issued the following statement on the biopharmaceutical industry’s efforts to address the novel coronavirus public health emergency:

“For the past several weeks, the world has watched with growing concern as more information has become available on the rapidly evolving coronavirus outbreak.

“As leaders of global R&D organizations within the biopharmaceutical industry and as scientists, physicians and public health professionals, we share the concern over this serious global public health threat. We stand in solidarity with patients and medical colleagues in China and around the world as we race to understand and contain this new outbreak.

“The global biopharmaceutical industry is devoting our expertise, resources and capabilities to identify science-based solutions and medical treatments to combat this threat. For example, several companies have begun or accelerated development of vaccines and antiviral therapies. Members of the biopharmaceutical ecosystem, along with government and academic experts and charitable organizations, are all working around the clock to identify and develop new ways to prevent, diagnose and treat this deadly infectious disease. Further details will be communicated soon.”

* * * * *

**Journal Watch**

*Vaccines and Global Health: The Week in Review* continues its weekly scanning of key peer-reviewed journals to identify and cite articles, commentary and editorials, books reviews and other content supporting our focus on vaccine ethics and policy. Journal Watch is not intended to be exhaustive, but indicative of themes and issues the Center is actively tracking. We selectively provide full text of some editorial and comment articles that are specifically relevant to our work. Successful access to some of the links provided may require subscription or other access arrangement unique to the publisher.

If you would like to suggest other journal titles to include in this service, please contact David Curry at: david.r.curry@centerforvaccineethicsandpolicy.org
Development of the WHO-INTEGRATE evidence-to-decision framework: an overview of systematic reviews of decision criteria for health decision-making

Decision-making in public health and health policy is complex and requires careful deliberation of many and sometimes conflicting normative and technical criteria. Several approaches and tools, such as multi-...

Authors: J. M. Stratil, R. Baltussen, I. Scheel, A. Nacken and E. A. Rehfuess
Citation: Cost Effectiveness and Resource Allocation 2020 18:8
Content type: Review
Published on: 11 February 2020
BMC Infectious Diseases
http://www.biomedcentral.com/bmcinfectdis/content
(Accessed 15 Feb 2020)
Safety and effectiveness of acellular pertussis vaccination during pregnancy: a systematic review
Infants < 3 months of age are at highest risk for developing severe complications after pertussis. The majority of pregnant women has low concentrations of pertussis-specific antibodies and thus newborns are i...
Authors: Sabine Vygen-Bonnet, Wiebke Hellenbrand, Edeltraut Garbe, Rüdiger von Kries, Christian Bogdan, Ulrich Heininger, Marianne Röbl-Mathieu and Thomas Harder
Citation: BMC Infectious Diseases 2020 20:136
Content type: Research article
Published on: 13 February 2020

BMC Medical Ethics
http://www.biomedcentral.com/bmcmedethics/content
(Accessed 15 Feb 2020)
[No new digest content identified]

BMC Medicine
http://www.biomedcentral.com/bmcmed/content
(Accessed 15 Feb 2020)
[No new digest content identified]

BMC Pregnancy and Childbirth
http://www.biomedcentral.com/bmcpregnancychildbirth/content
(Accessed 15 Feb 2020)
[No new digest content identified]

BMC Public Health
http://bmcpublichealth.biomedcentral.com/articles
(Accessed 15 Feb 2020)
EPI immunization coverage, timeliness and dropout rate among children in a West Cameroon health district: a cross sectional study
Monitoring of the expanded program on immunization’s performance is not only limited to routine periodic reports but equally includes surveys. Based on unpublished national EPI surveillance data from the past...

Authors: Jérôme Ateudjieu, Martin Ndinakie Yakum, André Pascal Goura, Ayok Maureen Tembei, Douanla Koutio Ingrid, Beyala Bita’a Landry, Bruno Kenfack, Lapia Amada, Isaac Tadzong and Anne Cecile Bissek

Citation: BMC Public Health 2020 20:228
Content type: Research article
Published on: 13 February 2020

**Personal and social patterns predict influenza vaccination decision**

Seasonal influenza vaccination coverage remains suboptimal in most developed countries, despite longstanding recommendations of public health organizations. The individual’s decision regarding vaccination is l...

Authors: Adir Shaham, Gabriel Chodick, Varda Shalev and Dan Yamin

Citation: BMC Public Health 2020 20:222
Content type: Research article
Published on: 12 February 2020

**BMC Research Notes**

http://www.biomedcentral.com/bmcresearchnotes/content
(Accessed 15 Feb 2020)
[No new digest content identified]

**BMJ Open**
January 2020 - Volume 10 - 1
http://bmjopen.bmj.com/content/current
[Reviewed earlier]

**Bulletin of the World Health Organization**
Volume 98, Number 2, February 2020, 77-148
https://www.who.int/bulletin/volumes/98/2/en/
**Special theme: accelerating universal health coverage**
[Reviewed earlier]

**Child Care, Health and Development**
Volume 46, Issue 2  Pages: 155-248  March 2020
https://onlinelibrary.wiley.com/toc/13652214/current
[Reviewed earlier]

**Clinical Therapeutics**
January 2020 Volume 42, Issue 1, p1-236
http://www.clinicaltherapeutics.com/current
Abstract
Biomedicine is witnessing a paradigm shift in the way complex disorders are investigated. In particular, the need for big data interpretation has led to the development of pipelines that require the cooperation of different fields of expertise, including medicine, functional biology, informatics, mathematics and systems biology. This review sits at the crossroad of different disciplines and surveys the recent developments in the use of graph theory (in the form of network analysis) to interpret large and different datasets in the context of complex neurodegenerative diseases. It aims at a professional audience with different backgrounds.

Recent Findings
Biomedicine has entered the era of big data, and this is actively changing the way we approach and perform research. The increase in size and power of biomedical studies has led to the establishment of multi-centre, international working groups coordinating open access platforms for data generation, storage and analysis. Particularly, pipelines for data interpretation are
under development, and network analysis is gaining momentum since it represents a versatile approach to study complex systems made of interconnected multiple players.

Summary

We will describe the era of big data in biomedicine and survey the major freely accessible multi-omics datasets. We will then introduce the principles of graph theory and provide examples of network analysis applied to the interpretation of complex neurodegenerative disorders.

Conclusions

The research community is witnessing a very productive moment in biomedicine, experiencing an exponential growth in the amount of data that is generated with many initiatives taking place to improve the way we analyse data to extract biologically meaningful information to be translated for the benefit of medical practice. Of course, even if the computational power, the statistical approaches and the mathematics of graph theory are available, such paradigm shift in basic and applied research is still in its infancy. There still are levels of complexity that need to be overcome; for example, networks are more static than dynamic objects, where both edges and nodes can reconfigure themselves as in the real biological context [76•], and many omics datasets still lack that critical cell specificity type of information that would be necessary to draw more comprehensive functional conclusions. A specific initiative called Dialogue for Reverse Engineering Assessment and Methodology (DREAM) challenge (http://dreamchallenges.org) has been launched in 2006 as a crowdsourcing effort, where teams from all over the world are competing to develop the best performing pipelines to address compelling, big data problems in biomedicine. Analytical pipelines are being generated at a fast pace; however, these will need to stand the test of time; particularly, the next critical step will be validating the in silico findings, thus develop useful functional systems to model disease and highlight efficient endpoints for therapeutic drug intervention.

Current Opinion in Infectious Diseases
February 2020 - Volume 33 - Issue 1
https://journals.lww.com/co-infectiousdiseases/pages/currenttoc.aspx
[Reviewed earlier]

Developing World Bioethics
Volume 19, Issue 4 Pages: 187-247 December 2019
https://onlinelibrary.wiley.com/toc/14718847/current
[Reviewed earlier]

Development in Practice
Volume 30, Issue 1, 2020
http://www.tandfonline.com/toc/cdip20/current
[Reviewed earlier]

Disaster Medicine and Public Health Preparedness
Volume 13 - Issue 5-6 - December 2019
https://www.cambridge.org/core/journals/disaster-medicine-and-public-health-preparedness/
Disasters
Volume 44, Issue 1  Pages: 1-232  January 2020
https://onlinelibrary.wiley.com/toc/14677717/current
[Reviewed earlier]

EMBO Reports
Volume 21  Issue 1  7 January 2020
https://www.embopress.org/toc/14693178/current
[Reviewed earlier]

Emerging Infectious Diseases
Volume 26, Number 2—February 2020
http://wwwnc.cdc.gov/eid/
[Reviewed earlier]

Epidemics
Volume 29  December 2019
[Reviewed earlier]

Epidemiology and Infection
Volume 148 - 2020
https://www.cambridge.org/core/journals/epidemiology-and-infection/latest-issue
[Reviewed earlier]

Ethics & Human Research
Volume 42, Issue 1  Pages: 1-40  January–February 2020
https://onlinelibrary.wiley.com/toc/25782363/current
Off-Trial Access :: Deception :: Crowdsourced Research :: Single IRBs
[Reviewed earlier]

The European Journal of Public Health
Volume 30, Issue 1, February 2020
https://academic.oup.com/eurpub/issue/30/1
[Reviewed earlier]

Gates Open Research
https://gatesopenresearch.org/browse/articles
Genome Medicine
https://genomemedicine.biomedcentral.com/articles
[Accessed 15 Feb 2020]
[No new digest content identified]

Global Health Action
Volume 12, 2019 Issue 1
https://www.tandfonline.com/toc/zgha20/12/sup1?nav=tocList
[Accessed 15 Feb 2020]
[No new digest content identified]

Global Health: Science and Practice (GHSP)
Vol. 7, No. 4 December 23, 2019
http://www.ghspjournal.org/content/current
[Reviewed earlier]

Global Public Health
Volume 15, 2020 Issue 2
http://www.tandfonline.com/toc/rgph20/current
[New issue; No digest content identified]

Globalization and Health
http://www.globalizationandhealth.com/
[Accessed 15 Feb 2020]
[No new digest content identified]

Health Affairs
Vol. 39, No. 2 February 2020
https://www.healthaffairs.org/toc/hlthaff/current
Opioids, Investing In Social Determinants & More
[New issue; No digest content identified]

Health and Human Rights
Volume 21, Issue 2, December 2019
Special Section: Abortion in the Middle East and North Africa
Special Section: Abortion Law Reform
Special Section: Human Rights for Health across the United Nations
[Reviewed earlier]
Health Economics, Policy and Law
Volume 15 - Issue 1 - January 2020
https://www.cambridge.org/core/journals/health-economics-policy-and-law/latest-issue
[Reviewed earlier]

Health Policy and Planning
Volume 34, Issue Supplement_3, December 2019
https://academic.oup.com/heapol/issue/34/Supplement_3
Access to Medicines through Health Systems in Low- and Middle-Income Countries
[Reviewed earlier]

Health Research Policy and Systems
http://www.health-policy-systems.com/content
[Accessed 15 Feb 2020]
Research co-design in health: a rapid overview of reviews
Billions of dollars are lost annually in health research that fails to create meaningful benefits for patients. Engaging in research co-design – the meaningful involvement of end-users in research – may help a...
Authors: Peter Slattery, Alexander K. Saeri and Peter Bragge
Citation: Health Research Policy and Systems 2020 18:17
Content type: Review
Published on: 11 February 2020

Review of published evidence on knowledge translation capacity, practice and support among researchers and research institutions in low- and middle-income countries
Knowledge translation (KT) is a dynamic and iterative process that includes synthesis, dissemination, exchange and ethically sound application of knowledge to yield beneficial outcomes for society. Effective K...
Authors: Violet Ibukayo Murunga, Rose Ndakala Oronje, Imelda Bates, Nadia Tagoe and Justin Pulford
Citation: Health Research Policy and Systems 2020 18:16
Content type: Review
Published on: 10 February 2020

Human Gene Therapy
Volume 31, Issue 1-2 / January 2020
https://www.liebertpub.com/toc/hum/31/1-2
[Reviewed earlier]

Humanitarian Exchange Magazine
Number 76, January 2020
The Crisis in Yemen
by HPN

This edition of Humanitarian Exchange focuses on the crisis in Yemen. Since the war there began in 2014, thousands of civilians have been killed or injured and air strikes and ground operations have destroyed hospitals, schools and critical infrastructure. An estimated 80% of Yemenis need humanitarian assistance.

In the lead article, Laurie Lee highlights the critical role Yemenis and Yemeni organisations are playing in addressing the humanitarian challenges in the country, and how NGOs can better support them. Genevieve Gauthier and Marcus Skinner reinforce this point with reference to two local organisations, the Yemen Women’s Union and Al Hikma. Warda Saleh, the founder of another Yemeni grassroots organisation, discusses the increased risk of gender-based violence facing women and girls, while Ibrahim Jalal and Sherine El Taraboulsi-McCarthy focus on internal displacement and the opportunities for a more effective humanitarian response. Reflecting on child protection programming in Yemen, Mohammed Alshamaa and Amanda Brydon conclude that multisectoral approaches with local authorities result in better and more sustainable outcomes. Padraic McCluskey and Jana Brandt consider the ethical dilemmas Médecins Sans Frontières (MSF) faced in trying to balance quality and coverage in a mother and child hospital in Taiz. Lindsay Spainhour Baker and colleagues reflect on the challenges involved in gathering and analysing information on the humanitarian situation while Lamis Al-Iryani, Sikandra Kurdi and Sarah Palmer-Felgate discuss the findings from an evaluation of the Yemen Social Fund for Development (SFD) Cash for Nutrition programme. An article by Kristine Beckerle and Osamah Al-Fakih details Yemeni and international organisations’ efforts to document and mitigate harm to civilians caught up in the conflict. The edition ends with a piece by Fanny Pettibon, Anica Heinlein and Dhabie Brown outlining CARE’s advocacy on the arms trade.

Finally, readers will note that this edition is shorter than usual, largely because it was very difficult to persuade potential authors to write on the Yemen crisis. Many of the individuals and organisations we contacted were either too busy responding or were concerned that writing frankly about their work could negatively affect their operations. HPN has covered many similarly sensitive contexts in Humanitarian Exchange over the last 26 years, but this is the first time we have experienced such reluctance to engage. A worrying sign.

Human Vaccines & Immunotherapeutics (formerly Human Vaccines)
Volume 16, Issue 1, 2020
http://www.tandfonline.com/toc/khvi20/current
[Reviewed earlier]

Infectious Agents and Cancer
http://www.infectagentscancer.com/content
[Accessed 15 Feb 2020]
[No new digest content identified]
Infectious Diseases of Poverty
http://www.idpjournal.com/content
[Accessed 15 Feb 2020]
[No new digest content identified]

International Health
Volume 12, Issue 2, February 2020
https://academic.oup.com/inthealth/issue/12/2

Articles
Re-evaluating herd protection by Vi typhoid vaccine in a cluster randomized trial
Mohammad Ali, Dipika Sur, Suman Kanungo, Firdausi Qadri, Deok Ryun Kim ...
Int Health, Volume 12, Issue 1, January 2020, Pages 36–42,
https://doi.org/10.1093/inthealth/ihz069

International Journal of Community Medicine and Public Health
Vol 7, No 1 (2020) January 2020
https://www.ijcmph.com/index.php/ijcmph/issue/view/58
[Reviewed earlier]

International Journal of Epidemiology
Volume 48, Issue 6, December 2019
https://academic.oup.com/ije/issue/48/6
[Reviewed earlier]

International Journal of Human Rights in Healthcare
Volume 12 Issue 5
https://www.emerald.com/insight/publication/issn/2056-4902/vol/12/iss/5
[Reviewed earlier]

International Journal of Infectious Diseases
February 2020 Volume 91, p1-270

Editorial
Extra time and penalties in the polio endgame
Melinda Suchard, Oyewale Tomori, Lucille Blumberg
p252–254
Published online: January 6, 2020

Editorial
The continuing 2019-nCoV epidemic threat of novel coronaviruses to global health — The latest 2019 novel coronavirus outbreak in Wuhan, China
Sharing Health Care Data With Digital Giants - Overcoming Obstacles and Reaping Benefits While Protecting Patients
Robert M. Wachter, MD; Christine K. Cassel, MD
This Viewpoint proposes principles of security, transparency, and privacy to guide data-sharing agreements between clinical organizations and digital technology companies as both seek electronic health record (EHR) data to grow their business and improve health care delivery and outcomes.

Artificial Intelligence in Health Care - A Report From the National Academy of Medicine
Michael E. Matheny, MD, MS, MPH; Danielle Whicher, PhD, MHS; Sonoo Thadaney Israni, MBA
This Viewpoint summarizes the 2019 AI in Healthcare report from the National Academy of Medicine (NAM), which reviews best practices for AI development, adoption, and maintenance and urges prioritization of equity, inclusion, and human rights in AI health system implementation.

Clinical Practices for Measles-Mumps-Rubella Vaccination Among US Pediatric International Travelers
Emily P. Hyle, MD, MSc; Sowmya R. Rao, PhD; Audrey C. Bangs, BA; et al.
online only
This cross-sectional study examines clinical practice regarding measles-mumps-rubella (MMR) vaccination of pediatric international travelers and assesses reasons for nonvaccination of infants and children identified as eligible for vaccination.
Journal of Adolescent Health
January 2020   Volume 66, Issue 1, Supplement, S1-S58
https://www.jahonline.org/issue/S1054-139X(18)X0003-2

Gender Norms and Adolescent Health
Edited by Margaret Greene, George Patton
[New issue; No digest content identified]

Journal of Community Health
Volume 45, Issue 1, February 2020
https://link.springer.com/journal/10900/45/1
[Reviewed earlier]

Journal of Development Economics
Volume 143  March 2020
[New issue; No digest content identified]

Journal of Empirical Research on Human Research Ethics
Volume 14 Issue 5, December 2019
http://journals.sagepub.com/toc/jre/current
Special Issue: Empirical Studies in Empirical Ethics
[Reviewed earlier]

Journal of Epidemiology & Community Health
February 2020 - Volume 74 - 2
https://jech.bmj.com/content/74/1
[New issue; No digest content identified]

Journal of Evidence-Based Medicine
Volume 12, Issue 4  Pages: 233-336 November 2019
https://onlinelibrary.wiley.com/toc/17565391/current
[Reviewed earlier]

Journal of Global Ethics
Volume 15, Issue 3, 2019
http://www.tandfonline.com/toc/rjge20/current
Special Issue: Global Justice and Childhood
[Reviewed earlier]
Journal of Health Care for the Poor and Underserved (JHCPU)
Volume 31, Number 1, February 2020
https://muse.jhu.edu/journal/278
Table of Contents
[Reviewed earlier]

Journal of Immigrant and Minority Health
Volume 22, Issue 1, February 2020
https://link.springer.com/journal/10903/22/1
[Reviewed earlier]

Journal of Immigrant & Refugee Studies
Volume 18, 2020, Issue 1
https://www.tandfonline.com/toc/wimm20/current
[Reviewed earlier]

Journal of Infectious Diseases
Volume 221, Issue 1, 1 January 2020
https://academic.oup.com/jid/issue/221/1
[Reviewed earlier]

Journal of Medical Ethics
February 2020 - Volume 46 - 2
http://jme.bmj.com/content/current
[Reviewed earlier]

Journal of Patient-Centered Research and Reviews
Volume 7, Issue 1 (2020)
https://digitalrepository.aurorahealthcare.org/jpcrr/
[Reviewed earlier]

Journal of Pediatrics
February 2020 Volume 217, p1-224
http://www.jpeds.com/current
Original Articles
Provider Experience Recommending HPV Vaccination Before Age 11 Years
Providers had positive experiences recommending HPV vaccination before age 11 years. Routine recommendation before age 11 years may offer advantages related to fewer shots per visit, fewer missed opportunities, and reduction of parental concerns related to sexual activity.
Dea L. Biancarelli, Mari-Lynn Drainoni, Rebecca B. Perkins
p92–97
Published online: November 19, 2019
Journal of Pharmaceutical Policy and Practice
https://joppp.biomedcentral.com/
[Accessed 15 Feb 2020]
[No new digest content identified]

Journal of Public Health Management & Practice
January/February 2020 - Volume 26 - Issue 1
https://journals.lww.com/jphmp/pages/currenttoc.aspx
[Reviewed earlier]

Journal of Public Health Policy
Volume 40, Issue 4, December 2019
https://link.springer.com/journal/41271/40/4
[Reviewed earlier]

Journal of Refugee & Global Health
https://ir.library.louisville.edu/rgh/
[Reviewed earlier]

Journal of the Royal Society – Interface
01 February 2020  Volume 17  Issue 163
https://royalsocietypublishing.org/toc/rsif/current
[Reviewed earlier]

Journal of Travel Medicine
Volume 27, Issue 1, January 2020
https://academic.oup.com/jtm/issue/27/1
[Reviewed earlier]

Journal of Virology
February 2020; Volume 94, Issue 3
http://jvi.asm.org/content/current
[Reviewed earlier]

The Lancet
Feb 15, 2020 Volume 395 Number 10223 p467-536, e28-e32
https://www.thelancet.com/journals/lancet/issue/current
Editorial
Appropriate care for pregnant women in Ebola outbreaks
The Lancet

Articles
Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China
Chaolin Huang, et al

Epidemiological and clinical characteristics of 99 cases of 2019 novel coronavirus pneumonia in Wuhan, China: a descriptive study
Nanshan Chen, et al

A familial cluster of pneumonia associated with the 2019 novel coronavirus indicating person-to-person transmission: a study of a family cluster
Jasper Fuk-Woo Chan, er al

The Lancet Child & Adolescent Health
Feb 2020 Volume 4 Number 2 p91-166, e5
https://www.thelancet.com/journals/lanchi/issue/current
Editorial
Redoubling efforts to tackle antimicrobial resistance
The Lancet Child & Adolescent Health

Lancet Digital Health
Feb 2020 Volume 2 Number 2 e49-e101
https://www.thelancet.com/journals/landig/issue/current
[New issue; No digest content identified]

Lancet Global Health
Feb 2020 Volume 8 Number 2 e152-e304
http://www.thelancet.com/journals/langlo/issue/current
Editorial
Taking the neglected out of neglected tropical diseases
The Lancet Global Health

Comment
The elimination of measles in Iran
Saeed Namaki, Mohammad Mehdi Gouya, Seyed Mohsen Zahraei, Neda Khalili, Hossein Sobhani, Mohammad Esmaeil Akbari

Articles
Global burden of cancer attributable to infections in 2018: a worldwide incidence analysis
Catherine de Martel, et al
Estimates of incidence and mortality of cervical cancer in 2018: a worldwide analysis
Marc Arbyn, et al

Lancet Infectious Diseases
Feb 2020  Volume 20  Number 2  p145-260, e26-e62
http://www.thelancet.com/journals/laninf/issue/current

Comment
Development of effective vaccines for enterotoxigenic Escherichia coli
Hyesuk Seo, Weiping Zhang

Article
Safety and immunogenicity of the oral, inactivated, enterotoxigenic Escherichia coli vaccine ETVAX in Bangladeshi children and infants: a double-blind, randomised, placebo-controlled phase 1/2 trial
Firdausi Qadri, et al
Open Access

Lancet Public Health
Feb 2020  Volume 5  Number 2  e71-e126
https://www.thelancet.com/journals/lanpub/issue/current
[New issue; No digest content identified]

Lancet Respiratory Medicine
Feb 2020  Volume 8  Number 2  p125-216, e4-e7
http://www.thelancet.com/journals/lanres/issue/current
[New issue; No digest content identified]

Maternal and Child Health Journal
Volume 24, Issue 2, February 2020
https://link.springer.com/journal/10995/24/2

Original Paper
Influenza Vaccine Efficacy and Effectiveness in Pregnant Women: Systematic Review and Meta-analysis
Tranq HoThu Quach, Nicholas Alexander Mallis

Medical Decision Making (MDM)
Volume 40 Issue 1, January 2020
http://mdm.sagepub.com/content/current
[Reviewed earlier]

The Milbank Quarterly
**Nature**
Volume 578 Issue 7794, 13 February 2020
http://www.nature.com/nature/current_issue.html

*Editorial* | 11 February 2020
**As coronavirus spreads, the time to think about the next epidemic is now**
- World leaders and international donors must strengthen the most vulnerable nations’ health-care systems.

*Editorial* | 12 February 2020
**Irreproducibility is not a sign of failure, but an inspiration for fresh ideas**
- The history of metrology holds valuable lessons for initiatives to reproduce results — and for efforts to enhance trust in research.

*World View* | 11 February 2020
**Coronavirus: hospitals must learn from past pandemics**
- Use techniques honed during the SARS, H1N1 and Ebola epidemics to separate sick and well, keep workers safe and prepare for the next outbreak, says Nahid Bhadelia

Nahid Bhadelia

*Review Article* | 12 February 2020
**The promise and challenge of therapeutic genome editing**
- The scientific, technical and ethical aspects of using CRISPR technology for therapeutic applications in humans are discussed, highlighting both opportunities and challenges of this technology to treat, cure and prevent genetic disease.

Jennifer A. Doudna

**Nature Biotechnology**
Volume 38 Issue 2, February 2020
https://www.nature.com/nbt/volumes/38/issues/1
[New issue; No digest content identified]

**Nature Genetics**
Volume 52 Issue 1, January 2020
https://www.nature.com/ng/volumes/52/issues/1
[Reviewed earlier]

**Nature Medicine**
Volume 26 Issue 2, February 2020
https://www.nature.com/nm/volumes/26/issues/2
Communication, collaboration and cooperation can stop the 2019 coronavirus

As the outbreak of a deadly new coronavirus in China and its rapid spread is rattling countries, only the collective international experience and advances derived from past outbreaks can accelerate its control.

Nature Reviews Genetics
Volume 21 Issue 2, February 2020
https://www.nature.com/nrg/volumes/21/issues/2
[New issue; No digest content identified]

Nature Reviews Immunology
Volume 20 Issue 2, February 2020
https://www.nature.com/nri/volumes/20/issues/2
Year in Review | 11 November 2019
Novel vaccine technologies for the 21st century

New approaches to vaccine development have generated exciting results over the past 18 months. Focusing on respiratory syncytial virus infection, influenza and tuberculosis, Fauci and Mascola discuss the impact of structure-based vaccine design, gene-based vaccine platforms and advances in adjuvant development.
John R. Mascola & Anthony S. Fauci

New England Journal of Medicine
February 13, 2020 Vol. 382 No. 7
http://www.nejm.org/toc/nejm/medical-journal

Sounding Board
The Magic of Randomization versus the Myth of Real-World Evidence
R. Collins, L. Bowman, M. Landray, and R. Peto

Nonrandomized observational analyses have been promoted as alternatives to randomized clinical trials. However, randomization ensures balance between groups, whereas nonrandomized studies are often biased by between-group differences. Efforts to reduce the cost and complexity of clinical trials are preferable to relying on observational studies.

Pediatrics
February 01, 2020; Volume 145,Issue 2
https://pediatrics.aappublications.org/content/145/2

Articles
Mandatory Vaccination in Europe
Olivia M. Vaz, Mallory K. Ellingson, Paul Weiss, Samuel M. Jenness, Azucena Bardají, Robert A. Bednarczyk, Saad B. Omer
Pediatrics, Feb 2020, 145 (2) e20190620

Commentaries
Vaccination Policies and Disease Incidence Across the Pond: Implications for the United States
Sean T. O'Leary, Yvonne A. Maldonado
Pediatrics, Feb 2020, 145 (2) e20192436

Special Article
Big Data in the Assessment of Pediatric Medication Safety
Pediatrics, Feb 2020, 145 (2) e20190562

Pharmaceutics
Volume 12, Issue 1 (January 2020)
https://www.mdpi.com/1999-4923/12/1
[Reviewed earlier]

PharmacoEconomics
Volume 38, Issue 2, February 2020
https://link.springer.com/journal/40273/38/2
[New issue; No digest content identified]

PLoS Genetics
https://journals.plos.org/plosgenetics/
(Accessed 15 Feb 2020)
[No new digest content identified]

PLoS Medicine
http://www.plosmedicine.org/
(Accessed 15 Feb 2020)
Emerging priorities for HIV service delivery
Policy Forum | published 14 Feb 2020 PLOS Medicine
https://doi.org/10.1371/journal.pmed.1003028

PLoS Neglected Tropical Diseases
http://www.plosntds.org/
(Accessed 15 Feb 2020)
[No new digest content identified]
Disease burden and seasonal impact of improving rotavirus vaccine coverage in the United States: A modeling study
Chin-En Ai, Molly Steele, Benjamin Lopman | published 14 Feb 2020 PLOS ONE
https://doi.org/10.1371/journal.pone.0228942

Opinion: Sustainable development must account for pandemic risk
Moreno Di Marco, Michelle L. Baker, Peter Daszak, Paul De Barro, Evan A. Eskew, Cecile M. Godde, Tom D. Harwood, Mario Herrero, Andrew J. Hoskins, Erica Johnson, William B. Karesh, Catherine Machalaba, Javier Navarro Garcia, Dean Paini, Rebecca Pirzl, Mark Stafford Smith, Carlos Zambrana-Torrelio, and Simon Ferrier

Veridical data science
Inaugural Article
Bin Yu and Karl Kumbier

Predictability, computability, and stability (PCS) are three core principles of data science. They embed the scientific principles of prediction and replication in data-driven decision making while recognizing the central role of computation. Based on these principles, we propose the PCS framework, including workflow and documentation (in R Markdown or Jupyter Notebook). The PCS framework aims at responsible, reliable, reproducible, and transparent analysis across fields of science, social science, engineering, business, and government. It can be used as a recommendation system for scientific hypothesis generation and experimental design. In particular, we propose (basic) PCS inference for reliability measures on data results, extending statistical inference to a much broader scope as current data science practice entails.

Abstract
Building and expanding on principles of statistics, machine learning, and scientific inquiry, we propose the predictability, computability, and stability (PCS) framework for veridical data science. Our framework, composed of both a workflow and documentation, aims to provide
responsible, reliable, reproducible, and transparent results across the data science life cycle. The PCS workflow uses predictability as a reality check and considers the importance of computation in data collection/storage and algorithm design. It augments predictability and computability with an overarching stability principle. Stability expands on statistical uncertainty considerations to assess how human judgment calls impact data results through data and model/algorithm perturbations. As part of the PCS workflow, we develop PCS inference procedures, namely PCS perturbation intervals and PCS hypothesis testing, to investigate the stability of data results relative to problem formulation, data cleaning, modeling decisions, and interpretations. We illustrate PCS inference through neuroscience and genomics projects of our own and others. Moreover, we demonstrate its favorable performance over existing methods in terms of receiver operating characteristic (ROC) curves in high-dimensional, sparse linear model simulations, including a wide range of misspecified models. Finally, we propose PCS documentation based on R Markdown or Jupyter Notebook, with publicly available, reproducible codes and narratives to back up human choices made throughout an analysis. The PCS workflow and documentation are demonstrated in a genomics case study available on Zenodo.

QnAs with Bin Yu
Farooq Ahmed

Prehospital & Disaster Medicine
Volume 35 - Issue 1 - February 2020
https://www.cambridge.org/core/journals/prehospital-and-disaster-medicine/latest-issue
[Reviewed earlier]

Preventive Medicine
Volume 131  February 2020
Review article  Abstract only
Factors associated with adolescent HPV vaccination in the U.S.: A systematic review of reviews and multilevel framework to inform intervention development
Serena A. Rodriguez, Patricia Dolan Mullen, Diana M. Lopez, Lara S. Savas, Maria E. Fernández
Article 105968

Research article  Abstract only
Does self-rated health status influence receipt of an annual flu vaccination?
Ian Watson, S. Cristina Oancea
Article 105949

Proceedings of the Royal Society B
12 February 2020  Volume 287  Issue 1920
https://royalsocietypublishing.org/toc/rspb/current
[New issue; No digest content identified]
**Public Health**  
Volume 178  Pages 1-182 (January 2020)  
[Reviewed earlier]

**Public Health Ethics**  
Volume 12, Issue 3, November 2019  
http://phe.oxfordjournals.org/content/current  
[Reviewed earlier]

**Public Health Reports**  
Volume 135 Issue 1, January 2020  
https://journals.sagepub.com/toc/phrg/135/1  
[Reviewed earlier]

**Qualitative Health Research**  
Volume 30 Issue 4, March 2020  
http://qhr.sagepub.com/content/current  
[New issue; No digest content identified]

**Research Ethics**  
Volume 15 Issue 3-4, July-October 2019  
http://journals.sagepub.com/toc/reab/current  
[Reviewed earlier]

**Reproductive Health**  
http://www.reproductive-health-journal.com/content  
[Accessed 15 Feb 2020]  
[No new digest content identified]

**Revista Panamericana de Salud Pública/Pan American Journal of Public Health (RPSP/PAJPH)**  
https://www.paho.org/journal/en  
Latest articles  
[No new digest content identified]

**Risk Analysis**  
Volume 40, Issue 2  Pages: 215-438  February 2020  
https://onlinelibrary.wiley.com/toc/15396924/current  
Original Research Articles  
**The Prioritization of Island Nations as Refuges from Extreme Pandemics**
Abstract
In this conceptual article with illustrative data, we suggest that it is useful to rank island nations as potential refuges for ensuring long-term human survival in the face of catastrophic pandemics (or other relevant existential threats). Prioritization could identify the several island nations that are most suitable for targeting social and political preparations and further investment in resiliency. We outline a prioritization methodology and as an initial demonstration, we then provide example rankings by considering 20 sovereign island states (all with populations greater than 250,000 and no land borders). Results describe each nation in nine resilience-relevant domains covering location, population, resources, and society according to published data.

Risk Management and Healthcare Policy
[Accessed 15 Feb 2020]

Review
Why Have Immunization Efforts in Pakistan Failed to Achieve Global Standards of Vaccination Uptake and Infectious Disease Control?
Butt M, Mohammed R, Butt E, Butt S, Xiang J
Published Date: 12 February 2020

Science
14 February 2020 Vol 367, Issue 6479
http://www.sciencemag.org/current.dtl

Policy Forum
When health tech companies change their terms of service
By Jessica L. Roberts, Jim Hawkins
Science 14 Feb 2020 : 745-746 Full Access
Consumers may have limited control over their data

Science Translational Medicine
12 February 2020 Vol 12, Issue 530
https://stm.sciencemag.org/
[New issue; No digest content identified]

Social Science & Medicine
Volume 246 February 2020
[New issue; No digest content identified]

Systematic Reviews
Travel Medicine and Infectious Diseases
Volume 32   November–December 2019
[Reviewed earlier]

Tropical Medicine & International Health
Volume 25, Issue 2   Pages: i–iv, 143-275  February 2020
https://onlinelibrary.wiley.com/toc/13653156/current
[New issue; No digest content identified]

Vaccine
Volume 38, Issue 7   Pages 1579-1868 (11 February 2020)
https://www.sciencedirect.com/journal/vaccine/vol/38/issue/7
Review article  Open access
The effectiveness of influenza vaccination in pregnancy in relation to child health outcomes: Systematic review and meta-analysis
J.R. Jarvis, R.B. Dorey, F.D.M. Warricker, N.A. Alwan, C.E. Jones
Pages 1601-1613

Prevalence and types of vaccination errors from 2009 to 2018: A systematic review of the medical literature
Jesse Morse-Brady, Ann Marie Hart
Pages 1623-1629

Cost-effectiveness of using environmental surveillance to target the roll-out typhoid conjugate vaccine
Brittany L. Hagedorn, Jillian Gauld, Nicholas Feasey, Hao Hu
Pages 1661-1670

Cost-effectiveness of continuing pneumococcal conjugate vaccination at age 65 in the context of indirect effects from the childhood immunization program
Charles Stoecker, Miwako Kobayashi, Almea Matanock, Bo-Hyun Cho, Tamara Pilishvili
Pages 1770-1777

Beliefs in vaccine as causes of autism among SPARK cohort caregivers
Eric Fombonne, Robin P. Goin-Kochel, Brian J. O'Roak, Leonard Abbeduto, ... Allyson Zick
Pages 1794-1803
**Research article  Abstract only**

**Assessing adolescent immunization options for pertussis in Canada: A cost-utility analysis**
Kika Anyiwe, Marina Richardson, Jason Brophy, Beate Sander
Pages 1825-1833

**Research article  Abstract only**

**Resilience of HPV vaccine uptake in Denmark: Decline and recovery**
Peter R. Hansen, Matthias Schmidtblaicher, Noel T. Brewer
Pages 1842-1848

**Vaccines — Open Access Journal**
http://www.mdpi.com/journal/vaccines
(Accessed 15 Feb 2020)

**Open Access Article**

**Measles Immunization Policies and Vaccination Coverage in EU/EEA Countries over the Last Decade**
by Marco Montalti, Anna Kawalec, Erica Leoni and Laura Dallolio
Vaccines 2020, 8(1), 86; https://doi.org/10.3390/vaccines8010086 (registering DOI) - 14 Feb 2020

**Abstract**
Background: Starting from 2016, a major measles epidemic affected EU/EEA countries, after the measles incidence rate had progressively decreased from 2011 to 2015. Methods: This study describes measles incidences (ECDC reports), the vaccination coverages (VCs) (WHO/UNICEF reports) and the vaccination strategies, whether mandatory or recommended (ECDC Vaccine Scheduler), in 30 European countries over the last decade. Results: VCs were higher in countries with historically mandatory vaccination. However, in these countries, VCs declined between 2010 and 2018, in two cases to levels below 90% at the second dose. Instead, 9 and 12 countries with recommended vaccination increased their VCs, respectively, for the first and the second dose. Overall, the countries with VC ≥ 95% decreased from 20 to 15 for the first dose and from 10 to 7 for the second dose. This trend led Italy, France and Germany to make vaccination mandatory. In Italy this provision was introduced in 2017, and together with the catch-up campaigns on children between 1 and 15 years at school entry, led immediately to a strong effect: the first dose VC passed from 87% in 2016 to 93% in 2018, and from 82% to 89% for the second dose. Conclusions: Mandatory vaccination is certainly a policy producing positive effects; however, it seems to require additional strategies in order to reach the WHO goal of 95% of VC. Measures such as catch-up action on susceptible populations and communication strategies aimed at increasing awareness and acceptance should be considered.

**Open Access Article**

**Strategies to Increase Flu Vaccination Coverage among Healthcare Workers: A 4 Years Study in a Large Italian Teaching Hospital**
by Andrea Barbara, Daniele Ignazio La Milia, Marcello Di Pumpo, Alessia Tognetto, Andrea Tamburrano, Doriana Vallone, Carlo Viora, Silvia Cavalieri, Andrea Cambieri, Umberto Moscato, Filippo Berloco, Gianfranco Damiani, Walter Ricciardi, Giovanni Capelli and Patrizia Laurenti
Vaccines 2020, 8(1), 85; https://doi.org/10.3390/vaccines8010085 - 13 Feb 2020
Abstract
Flu vaccination is recommended among healthcare workers (HCWs). The low vaccination coverage registered in our hospital among HCWs called for new engaging approaches to improve flu vaccination coverage. The aim of this study was to evaluate the efficacy of different strategies implemented during the last four years (2015–2019). A quasi-experimental study was conducted, involving almost 4000 HCWs each year. Starting from the 2015–2016 campaign, new evidence-based strategies were progressively implemented. At the end of each campaign, an evaluation of the vaccination coverage rate reached was performed. Moreover, during the last three campaigns, differences in coverage among job category, wards involved or not in on-site vaccination (OSV) intervention, age classes and gender were analyzed. An increasing flu vaccination coverage rate was registered, from 6% in 2015–2016 to almost 22% at the end of 2018–2019. The overall number of vaccinated HCWs increased, especially at younger ages. OSV strategy always leads to better results, and physicians always show a higher vaccination coverage than nurses and other HCWs. The implemented strategies were effective in achieving higher flu vaccination coverage among HCWs in our hospital and therefore can be considered valuable examples of good prevention practices in hospital settings.

Open Access Commentary
The Vaccine Uptake Continuum: Applying Social Science Theory to Shift Vaccine Hesitancy
by Rachael Piltch-Loeb and Ralph DiClemente
Vaccines 2020, 8(1), 76; https://doi.org/10.3390/vaccines8010076 - 07 Feb 2020
Viewed by 227
Abstract
Vaccines are the optimal public health strategy to prevent disease, but the growing anti-vaccine movement has focused renewed attention on the need to persuade people to increase vaccine uptake. This commentary draws on social and behavioral science theory and proposes a vaccine uptake continuum comprised of five factors: (1) awareness of the health threat; (2) availability of the vaccine; (3) accessibility of the vaccine; (4) affordability of the vaccine; and (5) acceptability of the vaccine to effectively approach this rising challenge.

Value in Health
January 2020 Volume 23, Issue 1, p1-138
https://www.valueinhealthjournal.com/issue/S1098-3015(20)X0002-7
[Reviewed earlier]

Viruses
Volume 12, Issue 1 (January 2020)
https://www.mdpi.com/1999-4915/12/1
[Reviewed earlier]

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From Google Scholar & other sources: Selected Journal Articles, Newsletters, Dissertations, Theses, Commentary
No new digest content identified.

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**Media/Policy Watch**

This watch section is intended to alert readers to substantive news, analysis and opinion from the general media and selected think tanks and similar organizations on vaccines, immunization, global public health and related themes. *Media Watch* is not intended to be exhaustive, but indicative of themes and issues CVEP is actively tracking. This section will grow from an initial base of newspapers, magazines and blog sources, and is segregated from *Journal Watch* above which scans the peer-reviewed journal ecology.

We acknowledge the Western/Northern bias in this initial selection of titles and invite suggestions for expanded coverage. We are conservative in our outlook in adding news sources which largely report on primary content we are already covering above. Many electronic media sources have tiered, fee-based subscription models for access. We will provide full-text where content is published without restriction, but most publications require registration and some subscription level.

**The Atlantic**

http://www.theatlantic.com/magazine/

Accessed 15 Feb 2020

**Ideas**

**Coronavirus Is Spreading Because Humans Are Healthier**

Medical advances have dramatically extended life spans worldwide, but investment in basic health care has not kept up.

February 12, 2020

Thomas J. Bollyky

Director of the Global Health Program at the Council on Foreign Relations

**BBC**

http://www.bbc.co.uk/

Accessed 15 Feb 2020

**Coronavirus: Will someone develop a vaccine?**

13 Feb 2020

While the world worries about the spread of the deadly coronavirus, now known as Covid-19, one would expect the major pharmaceutical firms to make millions, even billions, by rushing to develop a vaccine.

But in reality, this is not the case. While the global vaccine market is expected to grow to $60bn (£46bn) this year, big profits are not guaranteed...

**The Economist**

http://www.economist.com/

Accessed 15 Feb 2020

[No new, unique, relevant content]
**Financial Times**
http://www.ft.com/home/uk
[No new, unique, relevant content]

**Forbes**
http://www.forbes.com/
Feb 13, 2020
**Religious Leaders Can Help Build Vaccine Confidence**
Religion may be getting used as a justification for anti-vaxx beliefs, not necessarily as the source of them
   By Christine Ro  Contributor

Feb 9, 2020
**Public Health Threat Of Measles Is Far From Over**
The WHO has singled out the need to earn the public’s trust with respect to vaccinations. This requires education, positive messaging, and a willingness to confront and debate the anti-vax community civilly and respectfully in a public setting.
   By Joshua Cohen  Contributor

**Foreign Affairs**
http://www.foreignaffairs.com/
Accessed 15 Feb 2020
[No new, unique, relevant content]

**Foreign Policy**
http://foreignpolicy.com/
Accessed 15 Feb 2020
**How China’s Incompetence Endangered the World**
   As the deadly coronavirus began to spread, Beijing wasted the most critical resource to fight it: trust.
Laurie Garrett
February 15, 2020, 4:48 PM

**The Guardian**
http://www.guardiannews.com/
Accessed 15 Feb 2020
**Coronavirus outbreak**
**Coronavirus: the huge unknowns**
   With no vaccines or treatments and limited diagnostic tools, we face a tough challenge in the fight against Covid-19
Robin McKie Science Editor
Sun 16 Feb 2020 02.22 EST

**New Yorker**
http://www.newyorker.com/
Accessed 15 Feb 2020
**Daily Comment**
The New Coronavirus and Preparing for the Next Viral Pandemic
Why not work on making vaccines that would protect broadly against this entire class of virus rather than waiting for each one to attack us and then try to fight back?
By Michael Specter

New York Times
http://www.nytimes.com/
Accessed 15 Feb 2020

China’s Leader, Under Fire, Says He Led Coronavirus Fight Early On
In pushing a new account of the country’s response, officials said President Xi Jinping was aware of the outbreak nearly two weeks before he first spoke publicly about it. It could draw him directly into questions about whether Chinese officials did too little, too late.
By Amy Qin
Feb. 15, 2020
Under fire for its response to the coronavirus epidemic, China’s authoritarian government appears to be pushing a new account of events that presents President Xi Jinping as taking early action to fight the outbreak that has convulsed the country.

But in doing so, the authorities have acknowledged for the first time that Mr. Xi was aware of the epidemic and involved in the response nearly two weeks before he first spoke publicly about it — and while officials at its epicenter in the city of Wuhan were still playing down its dangers. That confirmation risks drawing the president, China’s most powerful leader in decades, directly into questions about whether top officials did too little, too late.

In an internal speech published on Saturday, Mr. Xi said he had “issued demands about the efforts to prevent and control” the coronavirus on Jan. 7, during a meeting of the Politburo Standing Committee, the highest council of the Communist Party, whose sessions are typically cloaked in secrecy.

In the speech, he also said he had authorized the unprecedented lockdown of Wuhan and other cities beginning on Jan. 23.

“I have at every moment monitored the spread of the epidemic and progress in efforts to curtail it, constantly issuing oral orders and also instructions,” Mr. Xi said of his more recent involvement...

Health
Questions Complicate Efforts to Contain New Virus From China
Reports one day suggest the respiratory outbreak in China might be slowing, the next brings word of thousands more cases. Even the experts have whiplash in trying to determine if the epidemic is getting worse, or if a backlog of the sick is finally getting counted.
By The Associated Press

Health
Amid Coronavirus Fears, a Second Wave of Flu Hits US Kids
A second wave of flu is hitting the U.S., turning this into one of the nastiest seasons for children in a decade.
By The Associated Press
WHO Chief 'Very Encouraged' by Dip in Congo Ebola Cases

The head of the World Health Organization said Tuesday that experts are "very encouraged" after only three new cases of Ebola have been reported in the past week in eastern Congo, a sign that the world's second deadliest Ebola epidemic in history could finally be waning after 18 months.

By The Associated Press

Washington Post
https://www.washingtonpost.com/
Accessed 15 Feb 2020
[No new, unique, relevant content]

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Think Tanks et al

Brookings
http://www.brookings.edu/
Accessed 15 Feb 2020

Future Development
Preparing for pandemics such as coronavirus—will we ever break the vicious cycle of panic and neglect?
Gavin Yamey, Marco Schäferhoff, Kaci Kennedy McDade, and Wenhui Mao
Tuesday, February 11, 2020

Center for Global Development
http://www.cgdev.org/page/press-center
Accessed 15 Feb 2020

Expert Recommendations for US and Global Preparedness for COVID-19
Publication
2/13/20
The novel coronavirus outbreak that emerged in late 2019 has infected tens of thousands in China, community transmission is feared in other countries, and containment looks increasingly unlikely.

CSIS
https://www.csis.org/
Accessed 15 Feb 2020
[No new relevant content]

Council on Foreign Relations
http://www.cfr.org/
Accessed 15 Feb 2020
February 13, 2020
Public Health Threats and Pandemics

**What You Need to Know About the Coronavirus Outbreak**

A new coronavirus that originated in China has sparked fears of a potential pandemic, as health experts seek to answer questions about how it spreads.

Backgrounder by Claire Felter and Lindsay Maizland

**Kaiser Family Foundation**

https://www.kff.org/search/?post_type=press-release

Accessed 15 Feb 2020

[No new relevant content]

**ODI**

https://www.odi.org/

Accessed 15 Feb 2020

Comment

**Economic vulnerabilities to the coronavirus: top countries at risk**

5 February 2020

Sheril Lynn Raga

The outbreak of the novel coronavirus will have significant impacts on the poorest economies, even if they do not have confirmed cases.

A new ODI paper examines the transmission channels and identifies individual countries that are most vulnerable to the economic impacts of the coronavirus outbreak and a slowdown in the Chinese economy.

According to our vulnerability index, the top countries at risk are Sri Lanka, Viet Nam, and the Philippines. Sub-Saharan Africa also could lose up to $4 billion worth of exports as the outbreak dampens Chinese and global demand.

**Regional bodies supporting national-level evidence-informed decision-making on vaccines**

Briefing papers | February 2020 | Anne L. Buffardi, Rachel A. Archer and Samuel Sharp

A range of regional bodies support national decision-making processes related to immunisation and public health policy, this brief profiles five bodies.

**Measuring evidence-informed decision-making processes in low- and middle-income countries**

Briefing papers | February 2020 | Anne L. Buffardi, Samuel Sharp, Sierd Hadley and Rachel A. Archer

This brief focuses on health policy and addresses measurement challenges and design considerations in evidence-informed decision-making.

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**WHO Executive Board**

EB146(7)

**Strengthening global immunization efforts to leave no-one behind**

ANNEX
DRAFT RESOLUTION PROPOSED BY ESWATINI, ETHIOPIA AND UNITED STATES OF AMERICA

The Seventy-third World Health Assembly,
Having considered the report on the global vaccine action plan;¹

Recalling resolutions WHA65.17 (2012) and WHA68.6 (2015) on the global vaccine action plan (2011–2020); resolution WHA67.23 (2015) on health intervention and technology assessment and WHA70.14 (2017) on strengthening immunization; and the global vision of defeating meningitis by 2030;

Recognizing the important contribution of vaccines and immunization to achieve the Sustainable Development Goals and that immunization contributes directly or indirectly to 14 of the 17 Goals;

Recalling the Political Declaration of the High-level Meeting on Universal Health Coverage “Universal health coverage: moving together to build a healthier world,” and its commitment to improve routine immunization and vaccination capacities as a fundamental contribution to universal health coverage;

Recalling the Global Vaccination Summit jointly organized by the European Commission and the WHO (2019), which identified 10 Actions Towards Vaccination for All, and set out priority areas for future collaboration;

Appreciating the contribution of the global vaccine action plan in galvanizing global immunization efforts to allow individuals to live free from vaccine-preventable diseases;

Noting with concern that despite the progress made during the past decade, 8 of the 9 goals of the global vaccine action plan will not be achieved by 2020, which underscores the need and urgency to set a new global vision and strategy for vaccines and immunization for the next decade, to accelerate progress and ensure a smooth transition away from global vaccine action plan, reflecting lessons learned;

Recognizing that although the introduction of new vaccines has contributed to reducing morbidity and/or mortality from vaccine-preventable diseases, significant barriers to timely and equitable access to vaccines remain, with significant variations of vaccine coverage and equity both between countries and within countries, including at the subnational level, and with an unacceptably slow pace of progress towards increasing equitable access to life-saving vaccines, ending cholera, and eliminating measles, rubella, and maternal and neonatal tetanus;

Recognizing also the increase in vaccine-preventable disease outbreaks occurring globally, which are stark reminders of backsliding in progress to reduce vaccine preventable disease burden and impact;

Recognizing the role that misinformation and uncertainty play in reducing public trust and confidence in vaccines, despite their proven safety and effectiveness in promoting individual, family and community health;
Noting with particular concern that, although Member States in all six WHO regions have measles elimination goals, and that four regions have rubella elimination goals, measles is undergoing an alarming resurgence with significant outbreaks in all six regions, creating an urgent need for additional efforts in order to reach measles and rubella elimination, through the primary strategy of strengthening routine immunization but also by considering control measures based on the local/regional epidemiology;

Recognizing the significant progress achieved towards polio eradication, but also noting continuing concerns with the persistence of wild-type polio, the rising number of vaccine-derived polio outbreaks, and reiterating the need for strong cross-border cooperation and implementation of necessary requirements concerning vaccination for travellers in accordance with the International Health Regulations (2005), and the need to integrate core polio functions, human resources, and infrastructure into national immunization programmes and health systems as polio eradication goals are met;

Recognizing also that community engagement and integrated, people-centred essential immunization programmes, as a part of a strong health system, are the cornerstones of primary health care and core to achieving immunization goals and targets;

Further recognizing the need for increased investment in research and development and innovation, including to improve timely and expanded access to vaccines of assured quality and diversification of manufacturing sources, including for vaccines such as against malaria that affect specific areas or communities of the world, and for new forms of delivery and service approaches to enhance coverage, equity and efficiency of immunization programmes while meeting the global demand;

Welcoming efforts to promote national and global forecasting, planning and procurement capacities, including through pooled procurement, and recognizing the importance of more accurate vaccine demand and supply forecasting, regular monitoring of vaccine stock levels, measures to assure and maintain supply security, and timely decisions on procurement to address recurrent vaccine shortages and stockouts in the short term,

1. WELCOMES the new global vision and strategy for vaccines and immunization “Immunization Agenda 2030”, recognizing the critical role of vaccines and immunization as a part of primary health care, to achieve universal health coverage and the Sustainable Development Goals, and notes that IA2030 provides the policy and technical framework for vaccines and immunization at the global, regional, and country levels, and looks forward to the operational elements of Immunization Agenda 2030, including its Monitoring and Evaluation Framework, governance mechanism, and operational plans at the regional level;

2. CALLS FOR enhanced cooperation at the global, regional and country levels to strengthen the capacities of countries to integrate their immunization programmes into primary health care and to achieve and sustain the goals of the Immunization Agenda 2030, including efforts to expand equitable access to quality, safe, effective and affordable vaccines and to increase community demand and acceptance for vaccines, and to combat misinformation and promote vaccine confidence;
3. URGES Member States:
(1) to demonstrate stronger leadership and governance of national immunization programmes as a component of strong health systems and towards achieving universal health coverage;

(2) **to identify the root causes of low coverage and address inequities**, and pockets of susceptible individuals by strengthening routine immunization programmes, vaccine preventable disease surveillance, data systems, and capacity to prepare for, swiftly detect, and respond to outbreaks, while building on the linkages between strong routine immunization programmes and outbreak preparedness and response capacities to decrease the risk of disease outbreaks and strengthen routine immunization recovery post-outbreak as a part of primary health care;

(3) **to invest in national and international public awareness efforts to communicate accurate information on the safety, effectiveness, and public health benefits of vaccines**, to work with media, including social media, individuals, parents, families and communities to combat misinformation regarding vaccines and vaccine preventable diseases, and by training health workers as part of a comprehensive communications strategy regarding community questions or concerns and engaging individuals, parents, families, communities to build and sustain trust in life-saving vaccines;

(4) to improve community immunization rates thereby protecting vulnerable populations, such as children and immunocompromised individuals at high risk for communicable diseases;

(5) **to sustain and redouble efforts to achieve or maintain national measles and rubella elimination targets** with the aim of supporting regional elimination goals through the strengthening of routine immunization systems and a range of tailored supplementary immunization activities that will reach the unreached and that also help to strengthen the overall routine immunization system;

(6) to strengthen comprehensive vaccine-preventable disease surveillance, including case-based surveillance and laboratory confirmation capacities, by prioritizing disease detection and notification systems, data analysis and reporting systems to strengthen immunization policies and programmes;

(7) to collect, monitor and use timely and accurate data on immunization coverage and outbreaks to guide strategic and programmatic decisions that protect at-risk populations and reduce disease burden;

(8) to mobilize adequate financing of immunization programmes, including allocation of adequate financial and human resources where appropriate and to sustain the immunization gains achieved, including through technical partners and funding agencies, such as: the Global Polio Eradication Initiative; Gavi, the Vaccine Alliance; WHO and UNICEF; the World Bank; academia; nongovernmental partners; and, in the Americas, through the PAHO Revolving Fund, as appropriate;

(9) to strengthen national processes and advisory bodies for independent, evidence-based, transparent advice and decision-making, both during and outside times of national, regional or global outbreaks, including on vaccine safety and effectiveness, such as health interventions
and technology assessments and/or National Immunization Technical Advisory Groups working in collaboration with national regulatory authorities;

(10) **to expand, where appropriate, immunization services beyond infancy to include the whole life course,** guided by evidence on the burden of disease, the value of vaccines, vaccines’ impact on reducing morbidity and mortality throughout the life course, and system capacities, using the most appropriate and effective means of reaching all age groups and high-risk populations with immunization and integrated health services with special emphasis on "zero-dose" children in order to reduce the burden of disease as much as possible with available resources;

(11) to promote incentives and to create an enabling environment to increase investment in public and private research and development collaborations aimed at diversifying and strengthening the pipeline, improving and increasing vaccine production capacity, and developing new products, services and practices, including for emerging infectious diseases;

(12) to continue to strengthen international cooperation and vaccine supply, including by enhancing and expanding sustainable national and regional manufacturing capacity for affordable vaccines and technologies;

4. **INVITES global, regional, and national partners, and other relevant stakeholders:**
   (1) to continue to support Member States to achieve regional and global vaccination goals and in the development and implementation of national immunization plans, including through contributions to Gavi, the Vaccine Alliance, and other health and development partners;

   (2) to increase efforts for multistakeholder and cross-sector coordination toward improved vaccine and immunization programme impact, aiming to avoid duplication and gaps, while leveraging resources more effectively;

   (3) to increase efforts and enhance multistakeholder collaboration to develop and apply tools to strengthen immunization, including through coordinated, responsible, sustainable and innovative approaches to research and development, including but not limited to quality, safe, effective and affordable vaccines, and to accelerate innovation to address key programmatic challenges on immunization delivery and services to optimize impact, recognizing the important contribution of the Coalition for Epidemic Preparedness Innovations (CEPI) in this regard;

   (4) to consider immunization priorities in funding and programmatic decisions, including innovative ways to mainstream immunization-relevant activities into existing international development financing;

   (5) **to ensure that robust response plans are in place to tackle misinformation and build community trust,** as well as to support social media platforms and actors in addressing incorrect information about vaccination risks that may increase vaccination hesitancy;
5. REQUESTS the Director-General:

(1) to support countries to achieve the goals and strategic priorities outlined in the Immunization Agenda 2030, taking stock of lessons learned from the global vaccine action plan;

(2) to advocate in national, regional and international forums for the need to implement the Immunization Agenda 2030 at regional and country levels, to achieve its goals to accelerate progress on and impact of the global immunization programme;

(3) to support Member States in their efforts to rebuild and sustain trust and confidence in vaccines and immunization services through national communication and education strategies, campaigns to combat misinformation about vaccines, training health workers on communication, providing high-quality integrated services, enhancing education on vaccines and vaccine-preventable diseases to individuals, parents, families, communities, and community influencers to galvanize the public and build trust regarding the value of vaccines including vaccine safety;

(4) to promote and technically support improved surveillance and disease detection notification systems and fully implement accountability mechanisms to monitor global and regional vaccine action plans;

(5) to support Member States to sustain and redouble efforts to achieve national targets on measles and rubella elimination, and to work to ensure that global and regional strategies on these diseases are updated to enable the most effective response at country level, while strengthening routine immunization systems and educating individuals, parents, families and communities on disease detection, notification and reporting;

(6) to strengthen collaboration with all key health and development partners, including civil society organizations and the private sector so that their work better complements national essential immunization and emergency preparedness, detection and response efforts;

(7) to support Member States, where appropriate, in strengthening and promoting innovation through the research and development of vaccines against new and re-emerging pathogens, facilitating linkages with other key research and development stakeholders, as well as continuing to provide technical assistance, including for outbreak response; to address key programmatic challenges, and to continue to promote and facilitate the development of new vaccines delivery and service formats that will make vaccines safer and more accessible;

(8) to continue working with research and development stakeholders to support, especially in developing countries, supply chain innovations and vaccine-administration technologies, to increase the efficiency of vaccine delivery, as appropriate;

(9) to continue to strengthen the WHO prequalification programme and to provide technical assistance to developing countries, working closely with national regulatory authorities, in capacity building for research and development, expanding capacity to produce quality-assured vaccines, and other upstream to downstream vaccine and diagnostic development and manufacturing strategies that foster competition for a healthy, secure vaccine market;
(10) to cooperate with international organizations, in accordance with their respective mandates, health and development partners, vaccine manufacturers and national governments to overcome barriers to timely and equitable access to affordable vaccines of assured quality for all, and to implement effective preventive measures for the protection of health workers, including in public health emergencies and in the context of humanitarian crises;

(11) to report to the Seventy-fourth World Health Assembly, through the Executive Board, on implementation of the Immunization Agenda 2030, including the development of regional operational plans, an IA2030 governance mechanism and the Monitoring and Evaluation framework;

(12) to continue to monitor progress annually and to report, through the Executive Board, as a substantive agenda item to the Seventy-fifth World Health Assembly on the achievements made towards the global goals of the Immunization Agenda 2030.

Sixth meeting, 5 February 2020 EB146/SR/