Cutting Edge News: Emerging Infections & Vaccines

Steven Callens, MD, PhD Ghent University Hospital Ghent University



Antibiotic Resistance



NATIONAL ACTION PLAN FOR COMBATING ANTIBIOTIC-RESISTANT BACTERIA



BRIEFING ROOM

ISSUES

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The White House Hosts a Forum on Combating Antibiotic Resistance

JUNE 2, 2015 AT 4:55 PM ET BY JENNA BRAYTON







Summary: The White House hosts a forum on curbing antibiotic resistance with government, business, and agricultural leaders.



The White House. (2015). National Action Plan for Combating Antibiotic-Resistant Bacteria, 62.



FROM WHENCE THEY CAME—ANTIBIOTIC-RESISTANT ESCHERICHIA COLI IN AFRICAN WILDLIFE

Table 2. Prevalence of antimicrobial resistance in feces from African animals sampled in northern Botswana in 2011 (based on isolated *Escherichia coli*), stratified by key life history trait.

Life history trait	N^a	Resistant ^b	P^c	$Multidrug\ resistant\ (MDR)^b$	P^{c}
Diet ^d			0.006		0.001
Carnivore	8 (37)	87.5 (7/8; 47.3-99.7)		62.5 (5/8; 24.5-91.5)	
Omnivore	43 (126)	48.8 (21/43; 33.3-64.5)		14.0 (6/43; 5.3-27.9)	
Herbivore	99 (277)	34.3 (34/99; 25.1-44.6)		9.1 (9/99; 4.2-16.6)	
Water ^e			0.051		0.006
Water-associated	15 (60)	66.7 (10/15; 38.4-88.2)		40.0 (6/15; 16.3-67.7)	
Not water-associated	135 (380)	38.5 (52/135; 30.3-47.3)		10.4 (14/135; 5.8-16.8)	
Land use ^f			0.85		0.013
Protected	111 (319)	40.5 (45/111; 31.3-50.3)		9.0 (10/111; 4.4-15.9)	
Unprotected	39 (121)	43.6 (17/39; 27.8–60.4)		25.6 (10/39; 13.0–42.1)	





Drug-resistant typhoid 'concerning'

By Michelle Roberts Health editor, BBC News online

(1) 11 May 2015 | Health

Figure 4: Major geographical transfers within the H58 lineage, inferred from the phylogenetic tree.

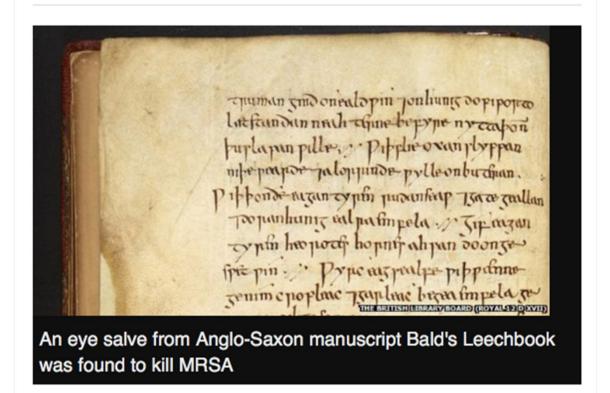


The size of each arrow indicates the relative number of likely transfers between regions or countries.



1,000-year-old onion and garlic eye remedy kills MRSA

30 March 2015 Nottingham



A 1,000-year-old treatment for eye infections could hold the key to killing antibiotic-resistant superbugs, experts have said.

ANTIBIOTIC RESISTANCE

1,000-year-old onion and garlic eye remedy kills MRSA. http://www.bbc.com/news/uk-england-nottinghamshire-32117815

O Climate Change

Le moustique tigre, porteur de la dengue et du chikungunya, a été repéré en Belgique

Sudinfo

Selon l'Institut de médecine tropicale à Anvers, ce n'est pas la première fois que ce type de moustique est aperçu en Belgique. Le moustique a été aperçu dans un établissement fin juin.



INVASIVE MOSQUITOS

Worldwide increase

Belgium

Australia

US

France

South America



Горячая линия: 8-800-100-00-04

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ФЕДЕРАЛЬНАЯ СЛУЖБА ПО НАДЗОРУ В СФЕРЕ ЗАЩИТЫ ПРАВ ПОТРЕБИТЕЛЕЙ И БЛАГОПОЛУЧИЯ ЧЕЛОВЕКА

Поиск

РОСПОТРЕБНАДЗОР

ДЕЯТЕЛЬНОСТЬ

ДОКУМЕНТЫ

КОНТРОЛЬ И НАДЗОР

ГОСУДАРСТВЕННЫЕ

О ситуации по клещевому вирусному энцефалиту и другим заболеваниям, передающимся при укусе кл Российской Федерации

09.06.2015 г.

В связи с наступлением потепления на территории Российской Федерации активизировалась жизнедеятельность клещей – перенс инфекционных заболеваний, в том числе и клещевого вирусного энцефалита (далее – КВЭ), иксодового клещевого боррелиоза (геморрагической лихорадки (КГЛ) и других заболеваний, передающихся при укусе клещами.

Роспотребнадзором осуществляется мониторинг за заболеваниями, передающимся при укусе клещами, обращаемостью населения роганизации по поводу укусов клещей, а также проведением комплекса профилактических и противоэпидемических мероприятий, на предупреждение возникновения данных заболеваний.

По данным оперативного еженедельного мониторинга на 9 июня 2015 г. в 79 субъектах Российской Федерации в медицинские обратились 235281 пострадавший от укусов клещей, в том числе 57627 детей. По сравнению с аналогичным периодом прообращаемость пострадавших от укусов клещей увеличилась на 15%.

TICK BORNE DISEASES – RUSSIA -INCREASING

Due to warming temperatures in the Russian Federation, there is intensified activity of ticks, carriers of dangerous infectious diseases including tick-borne encephalitis virus (hereinafter TBE), Ixodes tick borreliosis (CBI), Crimean Congo hemorrhagic fever (CCHF), and other diseases transmitted by their bites.



RELATED KEYWORDS: Mite-Borne-Rickettsial-Infection

ICMR gears up to tackle rising cases of mite-borne infections

Umesh Isalkar, TNN | May 12, 2015, 01.57AM IST



PUNE: Mite-borne rickettsial infection, seen primarily in the rural populace in the past, is now being increasingly detected in people residing in expanding cities across the country.

The resurgence of this disease can be attributed to rising urbanization the vectors, ticks and mites, have now found their residence in urban bushes, with the increase in transport, influx of people and city limits merging into nearby rural areas.

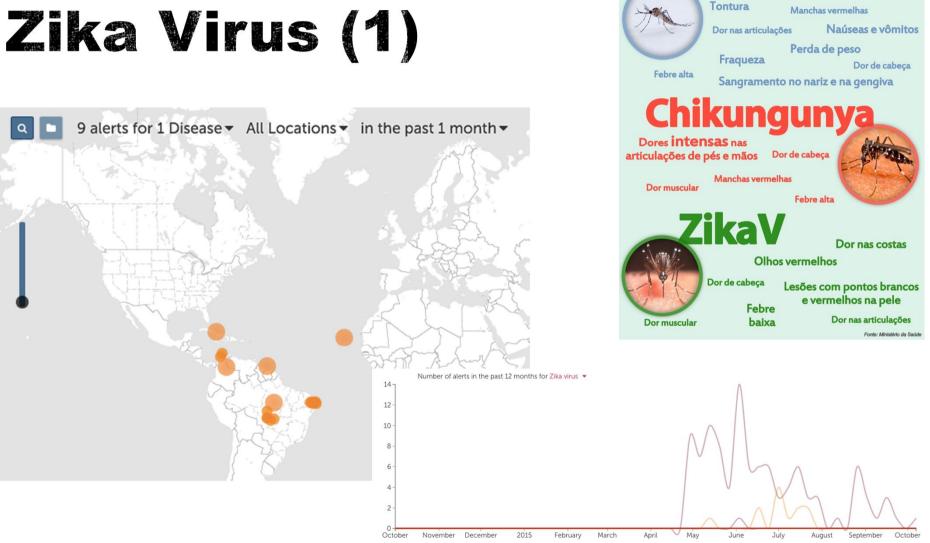
The disease epidemiology, experts say, has been changing with increasing urbanization. In view of this, Indian Council of Medical Research (ICMR) has developed guidelines on diagnosis and management of rickettsial diseases in India this year. Of all rickettsioses cases, scrub typhus is the most common and accounts for upto 50% of undifferentiated fever presenting to hospital.

India: MORE
ORIENTA
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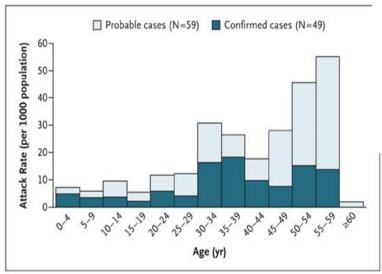
Zika Virus (1)





Dor atrás dos olhos

Zika Virus (2)

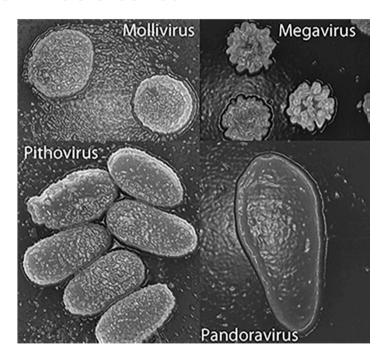


Sign or Symptom	No. of Patients (%)
Macular or papular rash	28 (90)
Fever*	20 (65)
Arthritis or arthralgia	20 (65)
Nonpurulent conjunctivitis	17 (55)
Myalgia	15 (48)
Headache	14 (45)
Retro-orbital pain	12 (39)
Edema	6 (19)
Vomiting	3 (10)

- * Cases of measured and subjective fever are included.
 - Flavivirus related to yellow fever, dengue,
 West Nile virus and Japanse encephalitis virus
 - 2007 outbreak: Federated States of Micronesia
 - One US student viraemic traveled to US

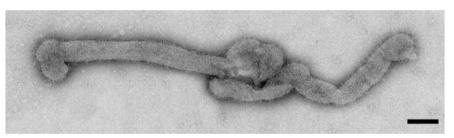
New Pathogens of Interest

Mollivirus sibericum



http://www.demorgen.be/wetenschap/weer-reuzenvirus-ontdekt-in-30-000-jaar-oudepermafrost-en-dat-mag-ons-zorgen-baren-be3fe8d1/

Bourbon Virus







HEAT EXHAUSTION - SUDAN: (NORTHERN) FATAL, MOH

A ProMED-mail post

http://www.promedmail.org

ProMED-mail is a program of the

International Society for Infectious Diseases < http://www.isid.org>

Date: 13 Aug 2015

Source: Ashoroog News [in Arabic, trans. Mod.MM, edited] < http://www.ashoroog.net/news_site

/index.php?option=com content&view=article&id=50498&Itemid=24>

In a press statement today (Thu 13 Aug 2015) the Sudanese health minister Mr Bahr Abu Garda announced the death of 13 people due to heat exhaustion (sunstroke) in the last 48 hours in Wadi Halfa province-Northern State. This is due to the rising temperature, which has reached 47-48 C (116.6-118.4 F), leading local authorities there to close schools and reduce working hours to 2 hours and urging the local population to stay indoors, drink large amounts of cold liquids, and avoid sun exposure.

The minister excluded [the possibility that] these deaths were caused by epidemic meningitis, adding that the entire Sudanese population from 1-30 years of age have been vaccinated against meningitis.

Promed Mail archive number: Archive Number: 20150814.3576829

Heat Exhaustion

O Migration

LOUSE-BORNE RELAPSING FEVER - GERMANY: ASYLUM SEEKERS

- 17 Jul 2015 and 31 Aug 2015, 11 cases of Louse-borne-relapsing fever (LBRF) caused by _Borrelia recurrentis_ have been diagnosed in Germany -- all among asylum seekers/refugees from Horn-of-Africa countries (Eritrea, Ethiopia, Somalia).
- The cluster of LBRF-cases diagnosed in Germany -- n=11, thereof 5 published (1), Switzerland (2) and the Netherlands (n=2) (3) -- is likely the tip of the iceberg

Promed Mail archive number: 20150911.3638819 and 20150903.3620174 and 20151110.3779157 and 20150731.3549645
Lucchini, A., Lipani, F., Costa, C., Scarvaglieri, M., Balbiano, R., Carosella, S., ... Perri, G. Di. (2016). Louseborne Relapsing Fever among East African Refugees, Italy, 2015. Emerging Infectious Disease Journal, 22(2). http://doi.org/10.3201/eid2202.151768



Volume 22, Number 2—February 2016

Dispatch

Louseborne Relapsing Fever among East African Refugees, Italy, 2015

Anna Lucchini™, Filippo Lipani, Cecilia Costa, Mariaelisabetta Scarvaglieri, Rosanna Balbiano, Sinibaldo Carosella, Andrea Calcagno, Sabrina Audagnotto, Anna Maria Barbui, Silvia Brossa, Valeria Ghisetti, Ivano Dal Conte, Pietro Caramello, and Giovanni Di Perri

Author affiliations: Ospedale Amedeo di Savoia, Turin, Italy (A. Lucchini, F. Lipani, R. Balbiano, S. Carosella, S. Audagnotto, V. Ghisetti, I. Dal Conte, P. Caramello); Università degli Studi di Torino, Turin (C. Costa, M. Scaravaglieri, A. Calcagno, S. Brossa, G. Di Perri); Città della Salute, Turin (A.M. Barbui)

Suggested citation for this article

Abstract

During June 9–September 30, 2015, five cases of louseborne relapsing fever were identified in Turin, Italy. All 5 cases were in young refugees from Somalia, 2 of whom had lived in Italy since 2011. Our report seems to confirm the possibility of local transmission of louse-borne relapsing fever.

Louseborne relapsing fever (LRF) was once widely distributed in all geographic areas, including Europe and North America, occurring in association with poverty and overcrowding. In Europe, it virtually disappeared after World War I in parallel with

On This Page
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Suggested Citation

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THE JORDAN TIMES





Today, October 31, 2015

17 c° / Partly Cloudy





Home » Local » '109 tuberculosis cases detected among Syrian refugees'

'109 tuberculosis cases detected among Syrian refugees'

By Khetam Malkawi - Mar 12,2014 - Last updated at Mar 12,2014



AMMAN — A total of 109 tuberculosis (TB) cases have been detected among Syrian refugees in Jordan so far, a Health Ministry official said on Wednesday.

Khaled Abu Rumman, director of the National Programme to Stop TB, said 40 of the total cases were diagnosed among residents of the Zaatari Refugee Camp, while the rest were among those living in host communities.

In addition, four of the cases were diagnosed as multi-drug resistant.

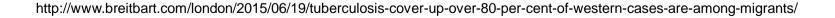
Abu Rumman said the ministry supervises the medication of all refugees diagnosed with TB as part of the "Public Health Strategy among Syrian Refugees" launched earlier this year.

He noted that the strategy — launched in cooperation with the International Organisation for Migration, the World Health Organisation (WHO) and UNHCR — seeks to reduce TB transmission among Syrian refugees.



TUBERCULOSIS COVER-UP? OVER 80 PER CENT OF WESTERN CASES ARE AMONG MIGRANTS

- Austria's government is continuing to cover up the names of schools suffering outbreaks of Tuberculosis (TB) in the name of community cohesion, even as a 14-year-old immigrant girl living in Tyrol is revealed to have been killed by the preventable disease.
- Speaking exclusively to Breitbart London, Dr. Masoud Dara of the World Health
 Organisation confirmed that in some European countries up to 80 per cent of all
 TB cases were found within migrant populations, but refused to comment on whether
 it was mass migration itself that was causing rates of infection in Austria to rise.





On Pestilence, Encephalitis, Anthrax and other good news

BUITENLAND Leger VS heeft mogelijk pest en encefalitis-virus verspreid

11-09-15, 02.33u - Bron: Belga



1 Een verdacht pakketje wordt gecontroleerd op de aanwezigheid van antrax. ©epa

Het Pentagon is een onderzoek gestart naar de mogelijke verspreiding van de pestbacterie en het encefalitis-virus (dat hersenontsteking veroorzaakt, n.v.d.r.) door militaire laboratoria in de VS. Dat maakten verschillende Amerikaanse media donderdag bekend. Eerder dit jaar was er nog commotie ontstaan nadat de labo's per ongeluk een aantal antrax-stalen hadden verstuurd naar Zuid-Korea en Australië. De verspreiding zou echter nooit een gevaar voor de volksgezondheid hebben opgeleverd.

- 69 labs in US and 5 abroad received live samples with anthrax.
 - Australia, Canada, South Korea, Britain as well as Japan
- Experimental method to inactivate samples was used
- Radiation protocol may proof insufficient to kill samples

Promed Mail archive number: 20150615.3438979

http://www.demorgen.be/s/atahQa



How Europeans brought sickness to the New World



- When the Taino gathered on the shores of San Salvador Island to welcome a small party of foreign sailors on 12 October 1492, they had little idea what lay in store. They laid down their weapons willingly and brought the foreign sailors—Christopher Columbus and his crewmen—tokens of friendship: parrots, bits of cotton thread, and other presents. Columbus later wrote that the Taino "remained so much our friends that it was a marvel."
- A year later, Columbus built his first town on the nearby island of Hispaniola, where the Taino numbered at least 60,000 and possibly as many as 8 million, according to some estimates. But by 1548, the Taino population there had plummeted to less than 500. Lacking immunity to Old World pathogens carried by the Spanish, Hispaniola's indigenous inhabitants fell victim to terrible plagues of smallpox, influenza, and other viruses.

http://news.sciencemag.org/node/115875/draft



() Ebola

Current Outbreak Curves

Ebola

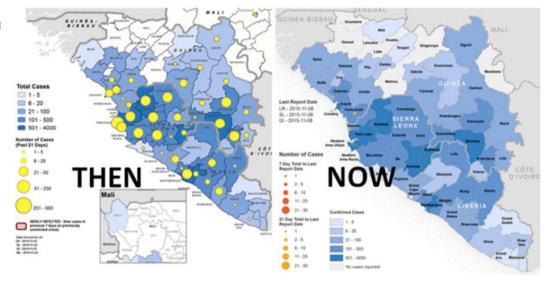
Ebola virus disease outbreak

Ebola - Then and Now

11 November 2015 -- This week Guinea reported no new cases of Ebola (to 8 November) and Sierra Leone, like Liberia earlier, has interrupted transmission of the virus. But one year ago, the Ebola outbreak was generating so many new cases, had spread to so many countries that the world was terrified, fearing that this was the pathogen that would overwhelm humanity. Strong leadership, responsiveness to cultures and innovation have turned the tide.

The latest Ebola Situation Report

Then and Now by Chris Dye: epidemiology and information management



WHO

0 new cases

No new cases of Ebola virus disease were reported in the week of 8 November.

11,314

Worldwide, there have been 28,635 cases of Ebola virus disease and 11,314 deaths as of 8 November.

7,000

WHO has trained 7,000 experts in clinical management, infection prevention and control.

http://apps.who.int/ebola/ebola-situation-reports

For more: Ebola Situation Report, 11 November

For more: Ebola data by country

For more: Ebola dashboard of achievements

Landen met Ebola Epidemie & Gevallen Situatie 30 oktober 2015

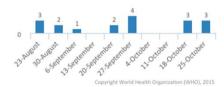
- Guinée Conakry: stabiele transmissie
- Sierra Leone: laatste geval Week van 13 september

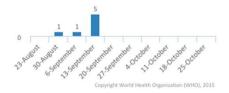
Zijn Ebolavrij verklaard door WHO

- Nigeria
- Senegal
- DR Congo
- Liberia
- Mali
- Zijn Marburg uitbraak vrij verklaard
 - Uganda
- Een interactieve tijdslijn vind je op
 - http://healthmap.org/ebola/
 - http://www.who.int/csr/disease/ebola/situation-reports/en/

Total confirmed cases (by week, 2015)

Guinea Sierra Leone







Long term complications of Ebola survivors

Neuro Complications

 Post-Ebola complications that recently hospitalized a Scottish nurse who had initially recovered from her infection in January include a severe central nervous system (CNS) disorder, and her spinal fluid has tested positive for the virus, an official said.

Ophtalmic complications

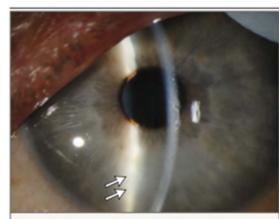


Figure 2. Slit-Lamp Photograph of the Left Eye 14
Weeks after the Onset of Ebola Virus Disease.
Mild corneal edema, rare keratic precipitates (arrows), and inflammatory cells and protein in the anterior chamber are consistent with acute anterior uveitis.

http://www.cidrap.umn.edu/news-perspective/2015/10/neuro-complications-cited-uk-nurses-ebola-case

Varkey, J. B., Shantha, J. G., Crozier, I., Kraft, C. S., Lyon, G. M., Mehta, A. K., ... Yeh, S. (2015). Persistence of Ebola Virus in Ocular Fluid during Convalescence. New England Journal of Medicine, 372(25), 2423–2427. http://doi.org/10.1056/NEJMoa1500306 E

The New york Times

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Officer Randolph Holder Is Buried in His Native Guyana



Acrimony at Jersey Shore Over Plan to Build Protective Dunes



Biased Lending Evolves, and Blacks Face Trouble Getting Mortgages



Frida

N.Y. / REGION

Hospital Says Man Who Died of Lassa Fever Initially Didn't Disclose Trip to Africa

By ANEMONA HARTOCOLLIS MAY 27, 2015

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Email

A New Jersey hospital identified itself on Wednesday as the one that released a man on May 18 who <u>later died</u> of a rare disease that he may have contracted in Liberia.

But the hospital, St. Barnabas
Medical Center in Livingston, said
the man had not told hospital staff
of his recent travels until at least
three days after he first visited the
emergency room — a disclosure



http://nyti.ms/1BpVhYP



More



O Vaccines

Could some vaccines make diseases more deadly?



- Evolutionary science suggests that many pathogens aren't deadly, or not even very virulent, because if they kill their host too quickly they can't spread to other victims.
- Over the past few decades, Marek's disease has become much more virulent—which some researchers believe is the result of vaccination.



Vaccine Safety: Influenza and Narcolepsy



O Hubris

Leptospirosis

Lopers besmet met 'rattenziekte' na loopwedstrijd

03/10/2015 om 09:04 door I Bron: BELGA



Foto: Joren De Weerdt

2.500 deelnemers aan de spectaculaire Titan Run in Nijlen, midden vorige maand, zijn tijdens deze obstakelloop mogelijk besmet geraakt met leptospirose, de zogenaamde rattenziekte of modderkoorts. Alvast drie deelnemers belandden erg ziek in het ziekenhuis.

http://www.standaard.be/cnt/dmf20151003_01900476



Rats kill Pollsmoor prisoners

NEWS / 19 September 2015 at 1:05pm By: Caryn Dolley

Cape Town - A massive evacuation of thousands of inmates from Pollsmoor Prison apparently began on Friday after two prisoners died and scores of others were deemed to be at high risk of exposure to an infectious disease, thanks to a rampant

http://beta.iol.co.za/news/crime-courts/rats-kill-pollsmoor-prisoners-1918458



ILLNESSES FROM RATS, MICE MORE THAN TRIPLE IN A YEAR



- Last year the number of patients with diseases transmitted by wild rodents more than tripled compared to previous years. This mostly involves Leptospirosis, 97 patients last year instead of the average of 30, and Hantavirus infections, 36 patients instead of the usual annual average of 13.
- The National Institute for Public Health and Environment, the RIVM, and the Dutch Food and Consumer Product Safety Authority, the NVWA, announced this on Tuesday.



O Malaria

Annex 1a. Estimated malaria cases and deaths, by MDG region, 2000, 2005, 2010 and 2015

	Estimated number of malaria cases (000's)			Estimated number of malaria deaths				
MDG region	2000	2005	2010	2015	2000	2005	2010	2015
Northern Africa	-	-	-	-	-	-	-	-
Sub-Saharan Arica	217 000	221 000	210 000	190 000	772 000	678 000	502 000	400 000
Latin America and the Caribbean	2 500	1 800	1 100	700	1 600	1 200	1 100	500
Caucasus and Central Asia	23	3	-	-	-	-	-	-
Eastern Asia	-	-	-	-	30	50	20	15
Southern Asia	32 400	31 600	24 000	16 000	47 000	42 000	36 000	24 000
South-eastern Asia	7 600	7 600	6 300	6 000	13 600	12 200	10 600	9 800
Western Asia	500	460	370	340	1 900	1 500	1 300	900
Oceania	1 600	1 600	1 300	1 300	3 200	2 900	2 800	2 800
World	262 000	264 000	243 000	214 000	839 000	738 000	554 000	438 000



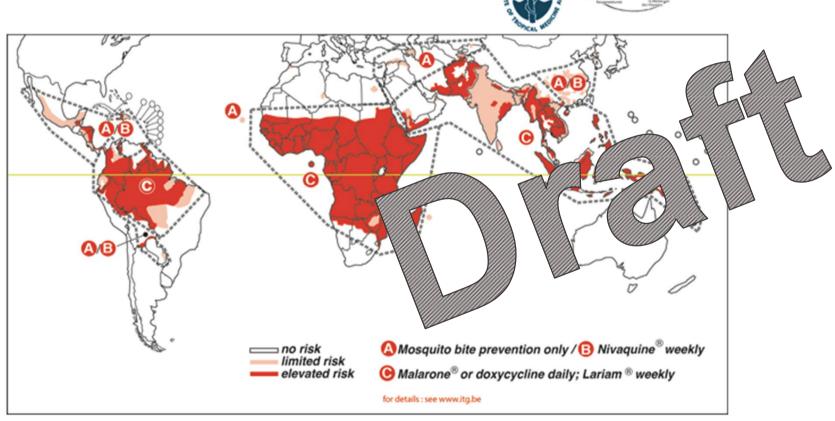
Malaria WHO report

- "Global malaria control is one of the great public health success stories of the past 15 years," said Dr. Margaret Chan, Director-General of WHO. "It's a sign that our strategies are on target, and that we can beat this ancient killer, which still claims hundreds of thousands of lives, mostly children, each year."
- In 2015, 89 per cent of all malaria cases and 91 per cent of deaths were in sub-Saharan Africa.
 - Of the 106 countries and territories with malaria transmission in 2000, 102 are projected to reverse the incidence of malaria by the end of 2015.
 - Between 2000 and 2015, the proportion of children under five sleeping under an ITN in sub-Saharan Africa increased from less than 2 per cent to an estimated 68 per cent.
 - 1 in 4 children in sub-Saharan Africa still lives in a household with no ITN and no protection provided by indoor residual spraying.
- In 2015, only an estimated 13 per cent of children with a fever in sub-Saharan Africa received an ACT.



New ITM Malaria Map

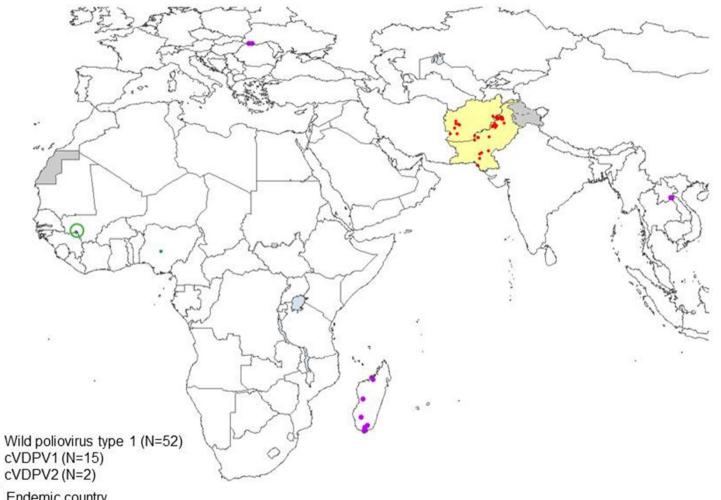
Malaria 2015 (source WHO 2010, World Malaria Report 2014)



Polio eradication



Wild Poliovirus & cVDPV Cases¹, 2015 01 January - 10 November



Endemic country

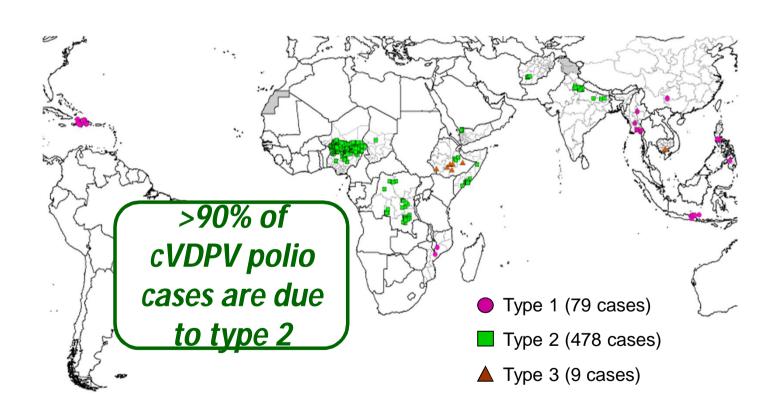
xcludes viruses detected from environmental surveillance.

Data in WHO HQ as of 10 November 2015

2015

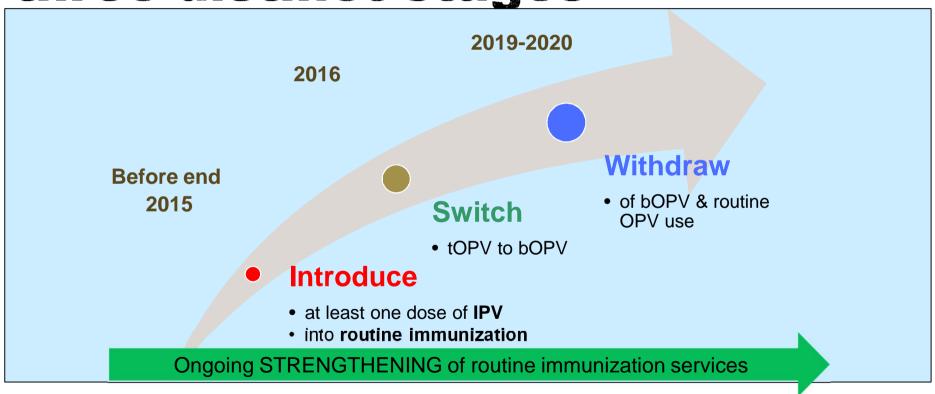
http://www.polioeradication.org/Dataa ndmonitoring.aspx

circulating Vaccine-Derived Poliovirus Outbreaks (cVDPVs), 2000-2011





Objective 2 of The Plan addresses the Endgame through three distinct stages



How good are we at eradication?

Health » Scientific American Volume 307, Issue 1 » Advances





The World's Last Worm: A Dreaded **Disease Nears Eradication**



A dreaded tropical disease is on the verge of eradication







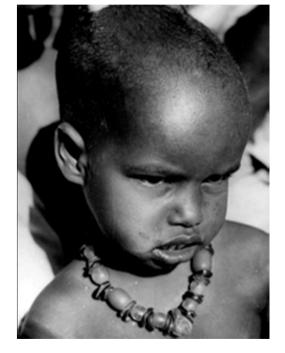


A parasite that has plagued the human race since antiquity is poised to become the second human disease after smallpox to be eradicated. "We are approaching the demise of the last guinea worm who will ever live on earth," says former U.S. president Jimmy Carter, whose Carter Center has spearheaded the eradication effort.

Unlike polio's high-profile eradication program, the mission to eliminate guinea worm disease has largely been off the public's radar. Affecting some of the poorest and most remote communities in Africa-97 percent of cases are in South Sudan-guinea worm is a parasitic infection caused by the nematode roundworm Dracunculus medinensis. It is the only disease transmitted solely by drinking water, and humans are its only reservoir, says James



VANESSA VICK Redux Pictures









HEALTH

Rubella Has Been Eliminated From the Americas, Health Officials Say

By DONALD G. McNEIL Jr. APRIL 29, 2015



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Eerste dode door mazelen in VS in 12 jaar

In de Verenigde Staten hebben de autoriteiten het eerste dodelijk geval door mazelen in twaalf jaar geregistreerd. Volgens de gezondheidszorg in de hoofdstad Olympia van de staat Washington overleed een vrouw in de lente door het virus. Uit de lijkschouwing bleek dat ze was gestorven aan een "door mazelen veroorzaakte longontsteking". Meer bijzonderheden werden niet meegedeeld, ook de leeftijd van de vrouw niet. In het westen van de VS was er in de lente een uitbraak van de mazelen. De VS hadden zich in 2000 als vrij van mazelen verklaard. In 2011 worden avanval 61/

Infectie is schadelijk voor uw verstand

Zijn infecties nefast voor uw verstand? Een grootschalige Deense studie wijst op een verband tussen het aantal infecties en het IQ. Onderzoekers van de universiteiten van Kopenhagen en Aarhus bestudeerden 190.000 Denen van 20 tot 40 jaar die tussen 2006 en 2012 een IQ-test aflegden. 35 procent was voordien minstens één keer opgenomen met een infectie. Gemiddeld scoorden deze personen 1,76 punten lager

BUT NEVER FORGET THE BASICS!

