

ROTARY/One



COVID-19  
THE FRONT LINES:  
A GLOBAL PANEL DISCUSSION

TUESDAY, MAY 5, 2020



**Moderator**

**J. Andrew Dykens, MD, MPH**

Chicago, Illinois

Dr. J. Andrew Dykens is a board certified physician in family medicine and an assistant professor in the Department of Family Medicine in the UIC College of Medicine. Dr. Dykens serves as associate director of medical student education in the department, directs the global community health track in the UIC Family Medicine Residency Program, and directs postgraduate global health education in the UIC Center for Global Health.

An IHRP Fellow, Dr. Dykens is a recipient of a research scientist development award of the Fogarty International Center of the National Institutes of Health and a co-principal investigator of the Illinois Prevention Research Center's collaboration in the CDC's global health research network. Both projects aim to reduce cervical cancer rates in low-income countries.

Dr. Dykens is the executive director and founder of Peace Care, a nonprofit organization that cultivates sustainable global health solutions by creating enduring links between communities of need and entities of resource. He served as a Peace Corps Volunteer in Mauritania, West Africa, working on community health and sanitation before earning his medical degree from the University of Missouri, Columbia, and an MPH from the UIC School of Public Health.



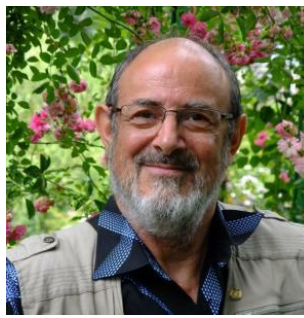


**Panelist - Woo Joo Kim, M.D., Ph.D.**

Professor, Division of Infectious Diseases, Department of Internal Medicine, Guro Hospital, Korea  
University College of Medicine - Seoul, Republic of Korea

Professor Woo Joo Kim is a native of Korea, where he received a medical doctor (Korea University College of Medicine, 1983) and was boarded in internal medicine (Korea University Hospital, 1987). In 1990, he joined the Division of Infectious Diseases of the Korea University Guro Hospital as a Clinical Instructor and achieved the subspecialty board of adult infectious diseases in 1992. From 1996 to 1997, he served as a visiting scholar at the Division of Infectious Diseases and Clinical Microbiology at Rush-Presbyterian St. Luke's Medical Center, Chicago, USA. Between 1999 and 2001, he worked as Chief of the Laboratory of Respiratory Viruses and the National Influenza Center at the Korea National Institute of Health (KNIH), supervising the surveillance, control, and research activities concerning influenza, measles, rubella, and mumps. While at the KNIH, Professor Kim was instrumental in the establishment of the Korean Influenza Surveillance Scheme (KISS), the first such national surveillance system for influenza. Since 2000, Professor Kim has been a member of the National Advisory Committee on Influenza. He provides advice on issues such as the identification of priority groups for influenza vaccination programs, the appropriate vaccination campaign, surveillance, burden of disease studies, and vaccine safety. Since 2007, he also has been advising on the influenza pandemic preparedness plan that the Korea Centers for Disease Control and Prevention (KCDC) is developing as well as the research and development of the influenza pandemic vaccine. In recognition of his expertise in and contribution to the field of influenza, he was appointed as Chair of the Trans-governmental Enterprise for Pandemic Influenza in Korea (TEPIK) in 2010, designated by the Ministry of Health and Welfare. He was the president of the Korean Society of Infectious Diseases from 2014 to 2015. During the 2105 MERS-CoV outbreak in Korea, He had served as the leader of Rapid Response Team and the special supervisor to prime minister to help the government for ending the outbreak within two months. In the last five years, Professor Kim has published numerous articles in international journals, including the *Lancet*, *New England Journal of Medicine*, *Journal of Infectious Diseases*, *Vaccine*, *Clinical Vaccine and Immunology*, *PLoS One*, *Human Vaccines & Immunotherapeutics*, *Influenza and Other Respiratory Viruses*, *Emerging Infectious Diseases*, *Epidemiology and Infection*, *Scientific Reports*, *Journal of Clinical Virology* and the *Journal of Medical Virology*.





**Panelist - Keith Paver, PhD**

Consultant, Rotary's polio initiative - Manchester, United Kingdom

Dr Keith Paver has worked in the field of public health for 40 years. Originally recruited straight from Bristol University with a BSc in Microbiology, he originally joined the Public Health Laboratory Service as a research clinical scientist in 1969, where he remained for the next 40 years until his retirement in 2008 at the age of 60, initially in Bristol and then in Manchester.

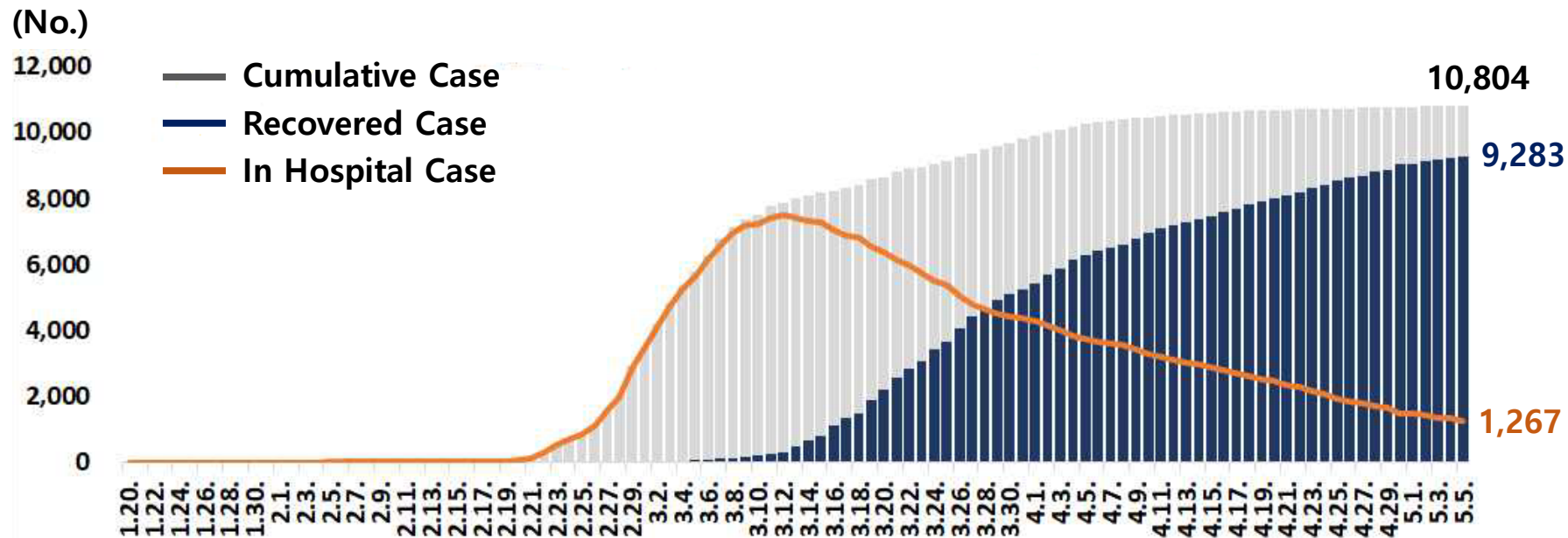
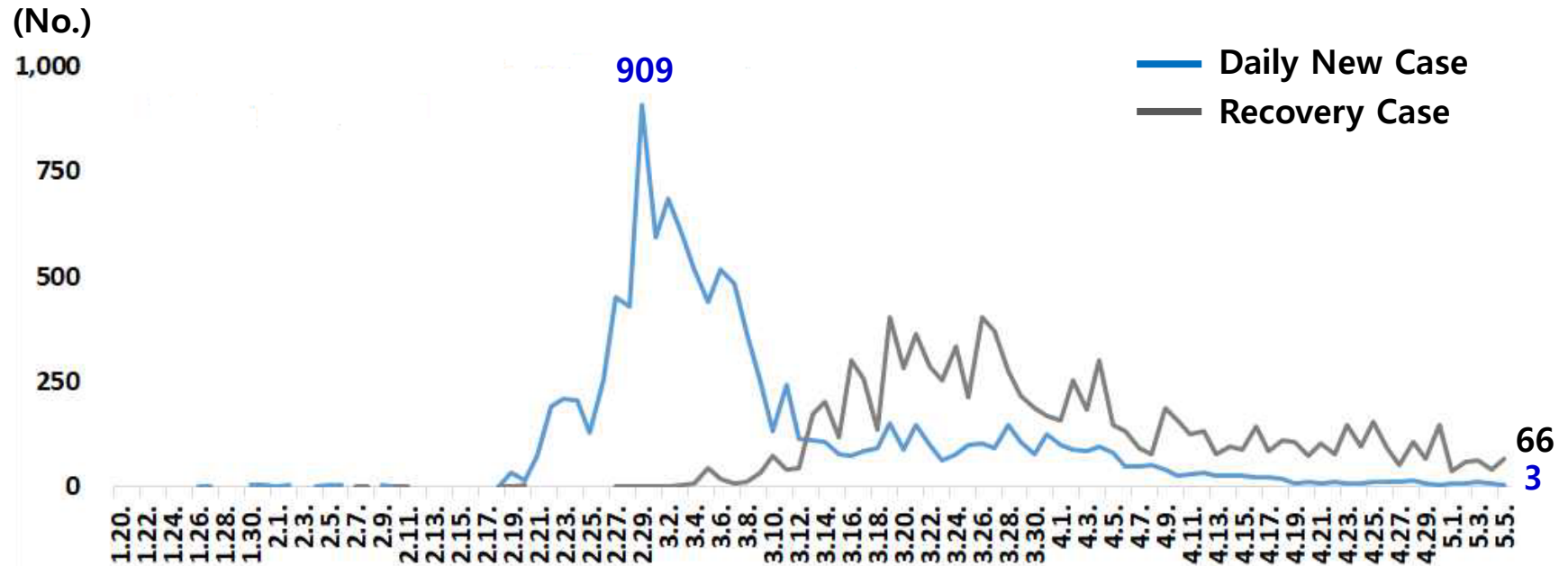
The PHLS underwent a major reorganisation in 2003 when it became a special health authority directly accountable to the Secretary of State for Health with the addition of the Centre for Applied Microbiology and Research at Porton Down and the National Focus for Chemical Incidents, and then again in 2013 when it was absorbed into Public Health England as a result of the Health and Social Care Act of 2012, losing many of its local public functions to local authorities. Although he started his career working in a research capacity, after gaining his PhD for work on non-bacterial gastroenteritis Keith morphed into a diagnostic virologist ending up with consultant status with the Central Manchester NHS Foundation Trust. A major area of his work was in the diagnosis and epidemiology of hepatitis B and C and other blood borne infections, and he played a significant public health role in the early years of the HIV pandemic in Manchester.

Over time, Keith's brief expanded and for the last 10 years he was as much as an epidemiologist as a diagnostician, as well as introducing proper quality control measures into the diagnostic laboratories in Manchester. Alongside his busy day job, he has taught part time at post graduate level, lecturing on clinical and theoretical virology, epidemiology and public health at both Manchester universities and was a member of the Health Protection Agency North West regional surveillance and training committees.

Keith joined Rotary in 1987, serving as club president for the first time in 1993 and after various district roles as the Centennial District Governor in 2004-05. He was appointed as one of the 41 End Polio Now Coordinators for this current Rotary year, a role in which he will continue after 1st July.



# Epidemic Curve of COVID-19, S. Korea, Jan. 20<sup>th</sup>~May 5<sup>th</sup>



# No.(%) of COVID-19 Cases & Deaths, May 5<sup>th</sup> 2020

Sex or Age		Confirmed case(%)	Death(%)	CFR(%)
Total		10,804 (100)	254 (100)	2.35
Sex	Male	4,377 (40.51)	131 (51.57)	2.99
	Female	6,427 (59.49)	123 (48.43)	1.91
Age	80 ≤	488 (4.52)	122 (48.03)	25.00
	70-79	710 (6.57)	76 (29.92)	10.70
	60-69	1,353 (12.52)	36 (14.17)	2.66
	50-59	1,957 (18.11)	15 (5.91)	0.77
	40-49	1,436 (13.29)	3 (1.18)	0.21
	30-39	1,165 (10.78)	2 (0.79)	0.17
	20-29	2,964 (27.43)	0 (0.00)	-
	10-19	591 (5.47)	0 (0.00)	-
	0-9	140 (1.30)	0 (0.00)	-

# **Public Health Responses against COVID-19**

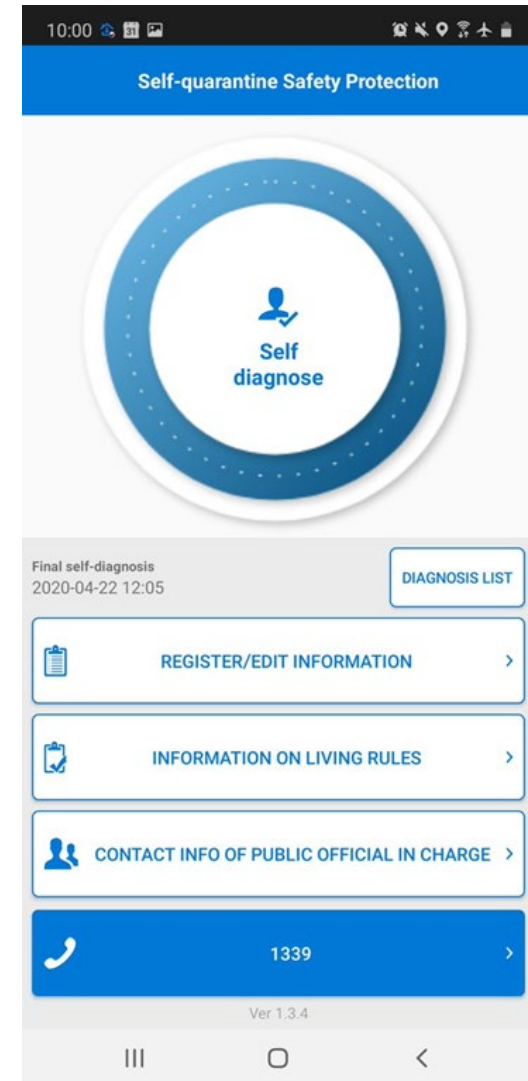
- **Entry ban or restrictions**
- **Quarantine in Air/Sea Ports**
  - **Special entry procedures to passengers entering Korea**
  - **Fever screening, Health Questionnaire**
  - **Self-quarantine Safety and Protection App or Self-Diagnosis App**
- **Surveillance, Testing with SARS-CoV-2 rRT-PCR in Hospital or Regional Public Health Center**
- **Patient Isolation and Treatment in negative-pressured rooms**
- **Contact Tracing and Quarantine**
  - **Home quarantine for 14 days**
  - **Self-quarantine Safety and Protection App**

# Drive-thru screening station



Woo Joo Kim, M.D., Ph.D.

# Self-quarantine Safety Protection App





# **Infection Prevention and Control/Social Distancing**

- **Infection Prevention and Control**

- **Hand hygiene**

- **Cough etiquette/mask wearing**

- **Patient isolation, Contact tracing and quarantine**

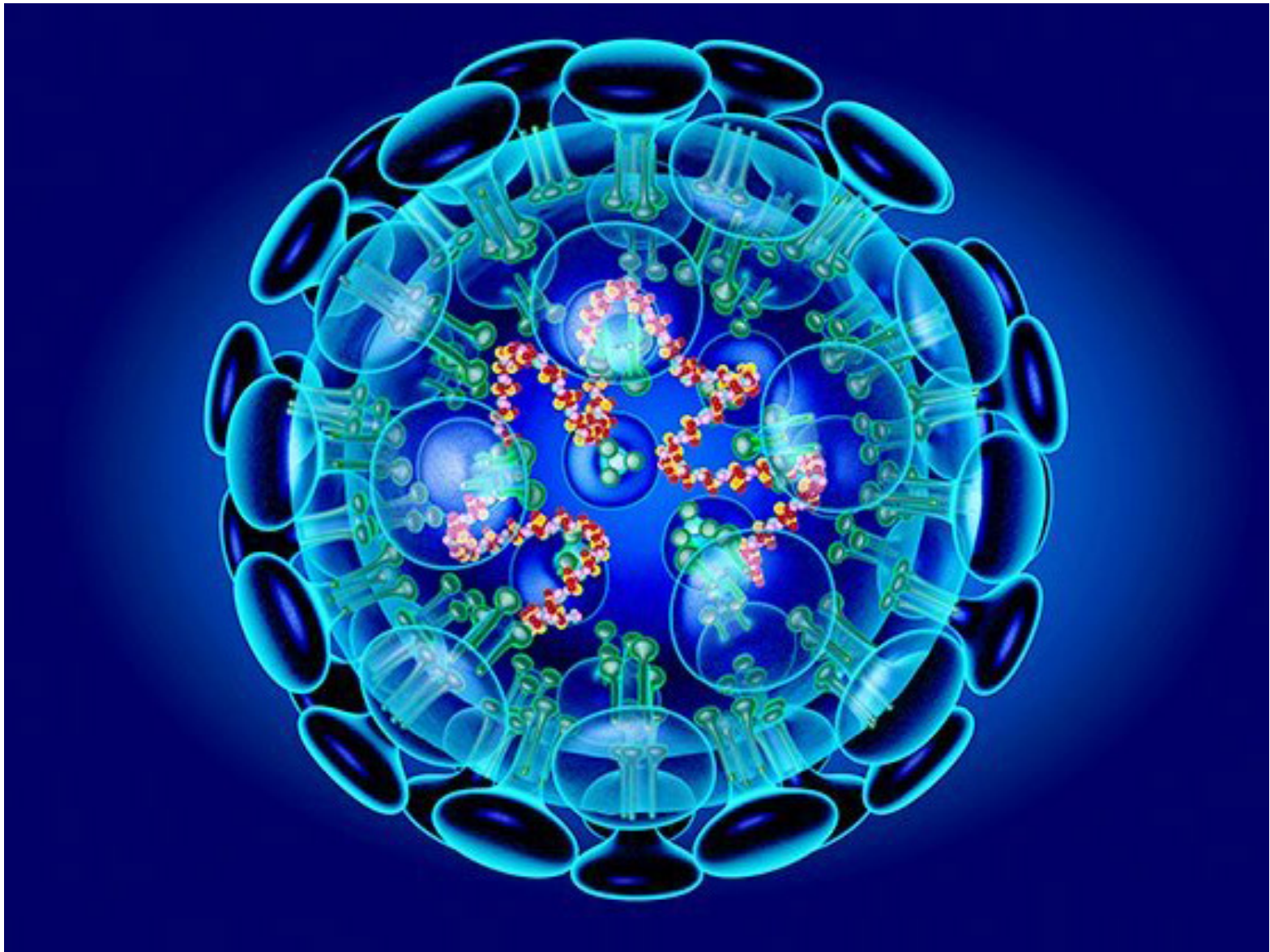
- **Social Distancing**

- **School and workplace closure**

- **Stop or delay mass gatherings**

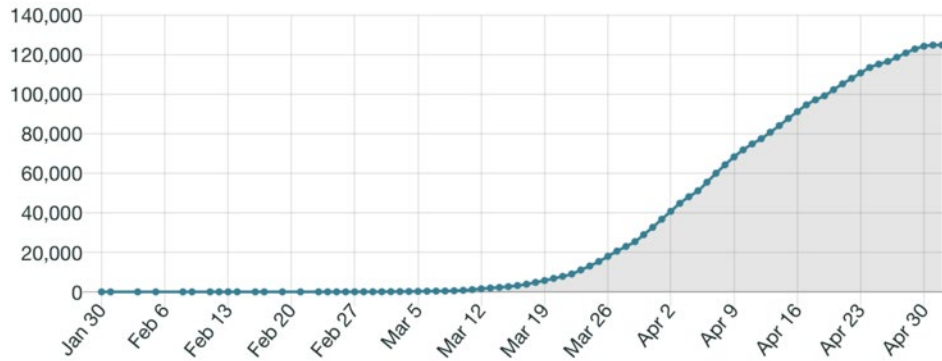
- **Telecommuting, Online education**

- **Mask wearing in public transport, shopping mall, indoor gathering**

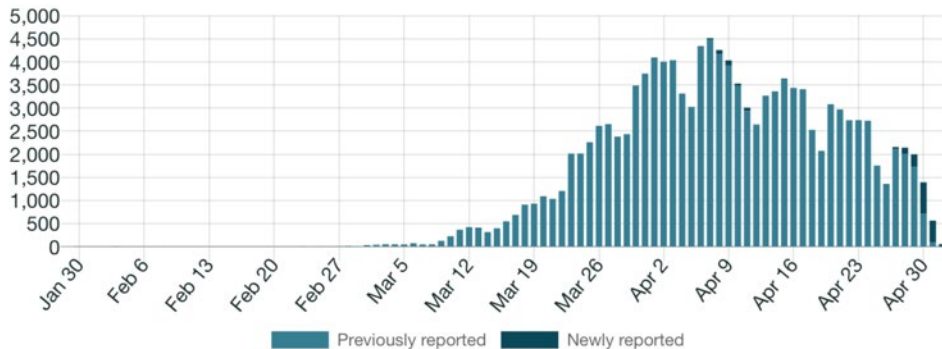


<i>country</i>	<i>total cases</i>	<i>new cases 3 May 20</i>	<i>cases per million pop</i>	<i>total deaths</i>	<i>new deaths 3 May 20</i>	<i>deaths per million pop</i>	<i>total tests</i>	<i>tests per million pop</i>
Spain	247,122	1,533	5,285	25,264	164	540	1,932,455	41,332
Italy	210,717	1,389	3,485	28,884	174	478	2,153,772	35,622
U.K.	186,599	4,339	2,749	28,446	315	419	1,206,405	17,771
France	168,693	297	2,584	24,895	135	381	1,100,228	16,856
Germany	165,664	697	1,977	6,866	54	82	2,547,052	30,400
Russia	134,687	10,633	923	1,280	58	9	4,100,000	28,095

Total number of lab-confirmed cases in England by specimen date

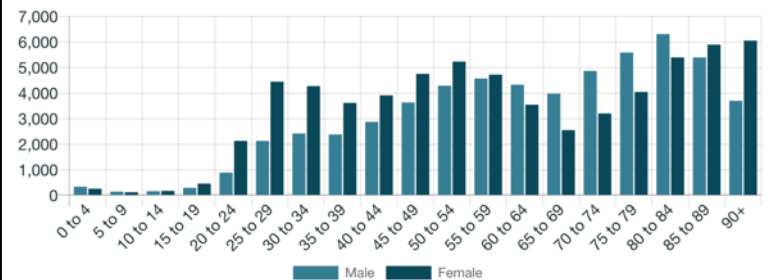


Daily number of lab-confirmed cases in England by specimen date

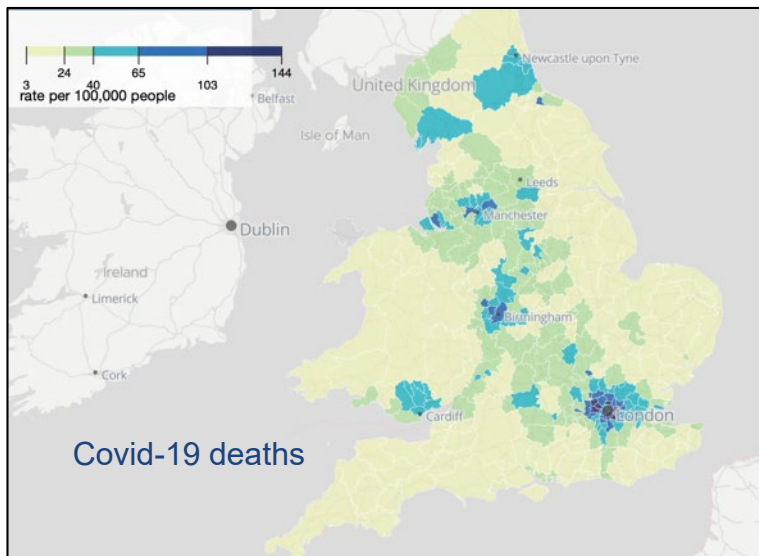
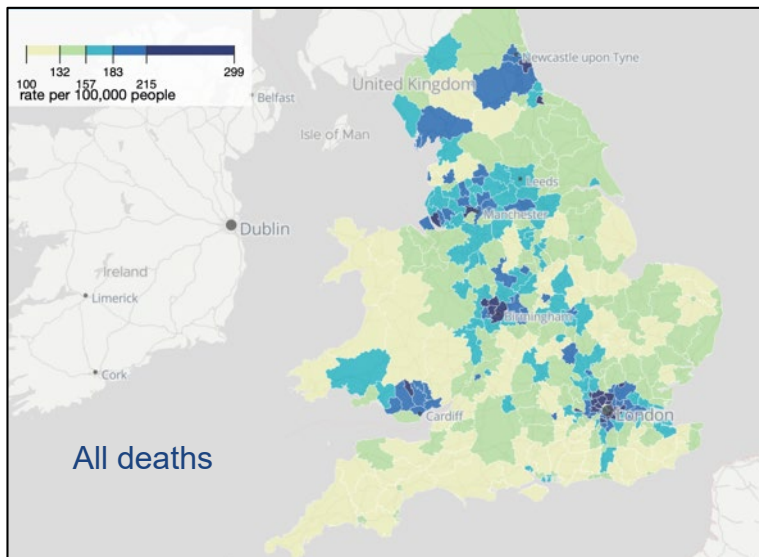


	population	cases	deaths
England	55,977,178	124,861	25,528
N Ireland	1,881,641	3,767	376
Scotland	5,438,100	12,097	1,559
Wales	3,138,631	10,329	983
U.K.	66,435,550	186,599	28,446

Total number of lab-confirmed cases in England by age and sex



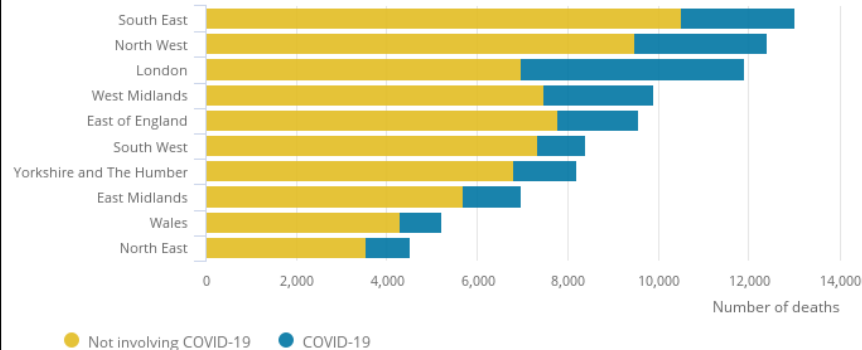
UK Gov data up to 3rd May 2020



ONS mortality data by local authority 1<sup>st</sup> Mar – 17<sup>th</sup> Apr 2020

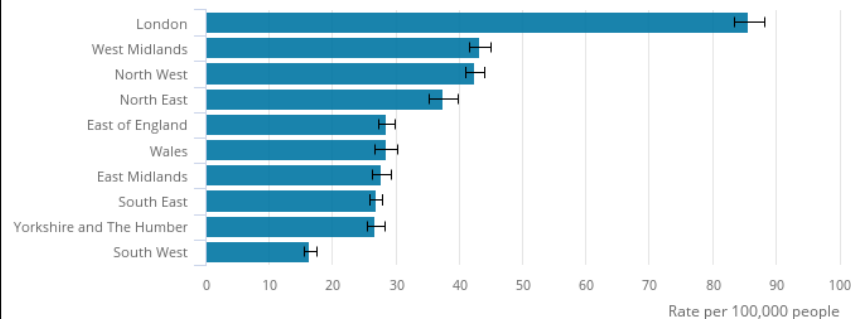
**Figure 1: London had the highest proportion of deaths involving the coronavirus (COVID-19)**

Number of deaths involving and not involving the coronavirus (COVID-19), Wales and regions of England, deaths occurring between 1 March and 17 April 2020



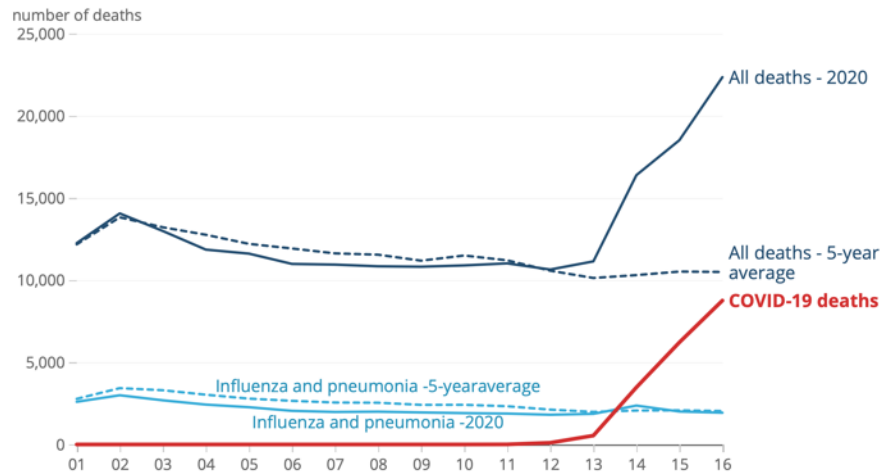
**Figure 2: London had the highest age-standardised mortality rate of deaths involving the coronavirus (COVID-19)**

Age-standardised mortality rates for deaths involving the coronavirus (COVID-19), per 100,000 population, England and Wales, by country and region, deaths occurring between 1 March and 17 April 2020



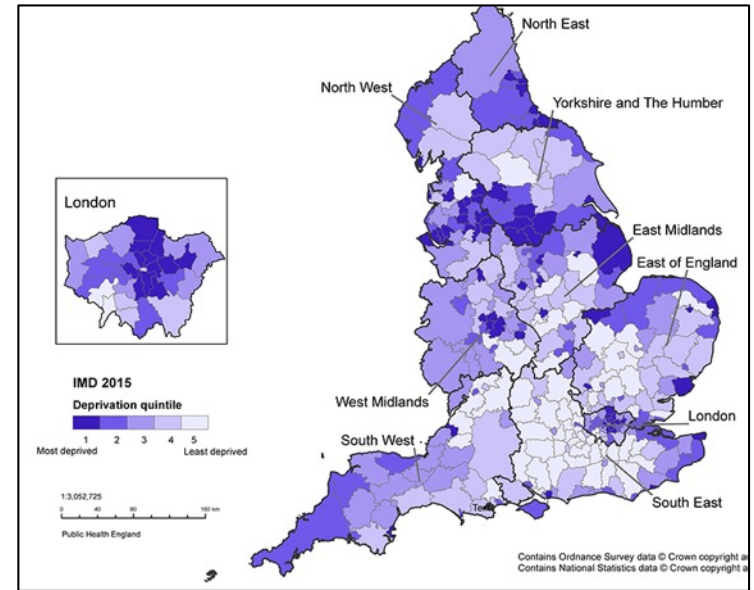
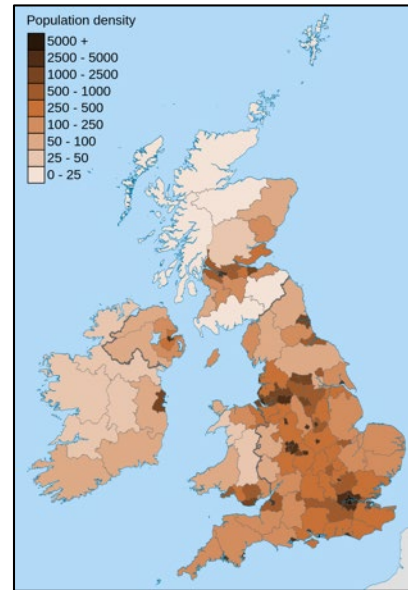
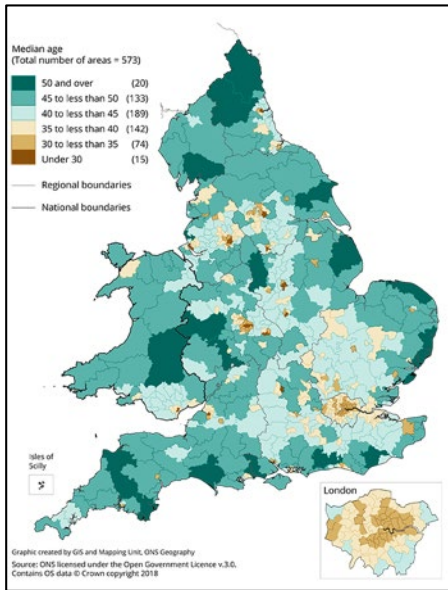
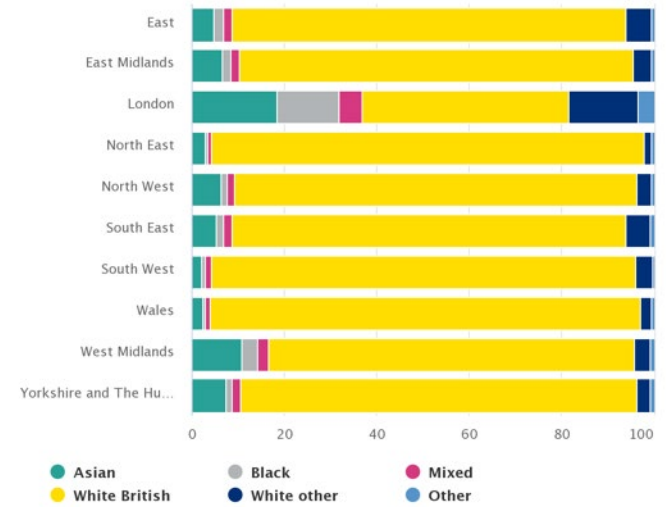


Number of deaths registered by week, England and Wales, 28 December 2019 to 17 April 2020



Source: Office for National Statistics – Deaths registered weekly in England and Wales

Title: Areas of England and Wales by ethnicity. Location: England and Wales. Time period: 2011. Source: England and Wales 2011 Census | Ethnicity Facts and Figures GOV.UK



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## Revealed: how Britain missed three chances to bulk-buy protective kit

By **Robert Mather**  
Health Editor

As the world's leading health care system, Britain has a reputation for its expertise in managing infectious diseases. But it has failed to take advantage of three major opportunities to bulk-buy protective kit, according to a new report. The report, published by the House of Commons Health Committee, says that the government missed three major opportunities to bulk-buy protective kit: in 2014, 2016 and 2017. It says that the government's failure to do so has cost the NHS millions of pounds and could have saved lives.



**Lockdown may go on for another month**

By **Andrew Sparrow**  
Health Editor

As the world's leading health care system, Britain has a reputation for its expertise in managing infectious diseases. But it has failed to take advantage of three major opportunities to bulk-buy protective kit, according to a new report. The report, published by the House of Commons Health Committee, says that the government missed three major opportunities to bulk-buy protective kit: in 2014, 2016 and 2017. It says that the government's failure to do so has cost the NHS millions of pounds and could have saved lives.

**How Dua Lipa perfected the art of pop**

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## No 10 admits mistakes over testing as it sets new target



**Panic buying**  
Millions in US rush to buy guns amid pandemic

**In it together**  
A guide to isolating yourself

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## PM tells Britain: stay in to stop march of coronavirus

- Johnson's warning as epidemic nears period of fast growth
- Public urged to avoid travel and stay away from pubs and theatres
- Focus on over-70s, pregnant women and those with health issues

By **Rebecca Stewart**  
Health Editor

Prime Minister Boris Johnson has urged the public to take unprecedented protective measures, including avoiding all unnecessary contact and travel and staying away from pubs and theatres, on the back of expert modelling that suggests the approach could cut the estimated coronavirus death toll from 260,000 to 30,000.



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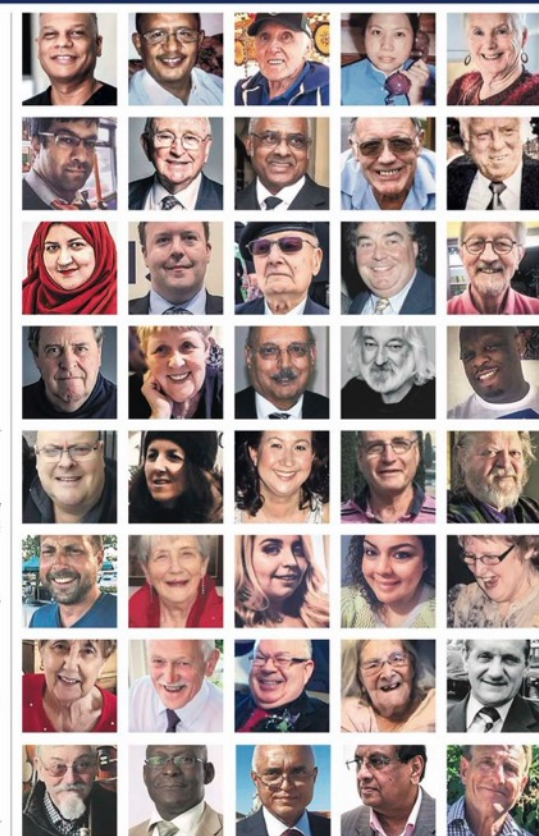
**Special report**

# The lives cut short

**The numbers keep coming, every day. In ones and twos at first. Now it's close to a thousand.** A daily death toll, higher yesterday than seen in Italy and Spain, is announced every 24 hours – bald statements of data that belie the drama and pain playing out in hospitals, care homes and households across the country.

We are told that the increase in the death rate is now slowing down, that crucial tests are on their way, that things may be looking up. But the dead are real people, people who were loved, people taken before their time. The old, the young, the vulnerable, the strong. The doctors and nurses who have put their own lives on the line, often without crucial protective equipment, to try to save their patients. The D-Day veterans who had survived the horrors of a previous age. Councillors and academics. Bus drivers and comedians. It has stripped so many of the dignity of saying goodbye, and left the bereaved bereft at how to cope without them. Because behind the cold, shocking figures are true stories. Of mothers and fathers, sons and daughters, lovers and friends. Lives cut short by coronavirus.

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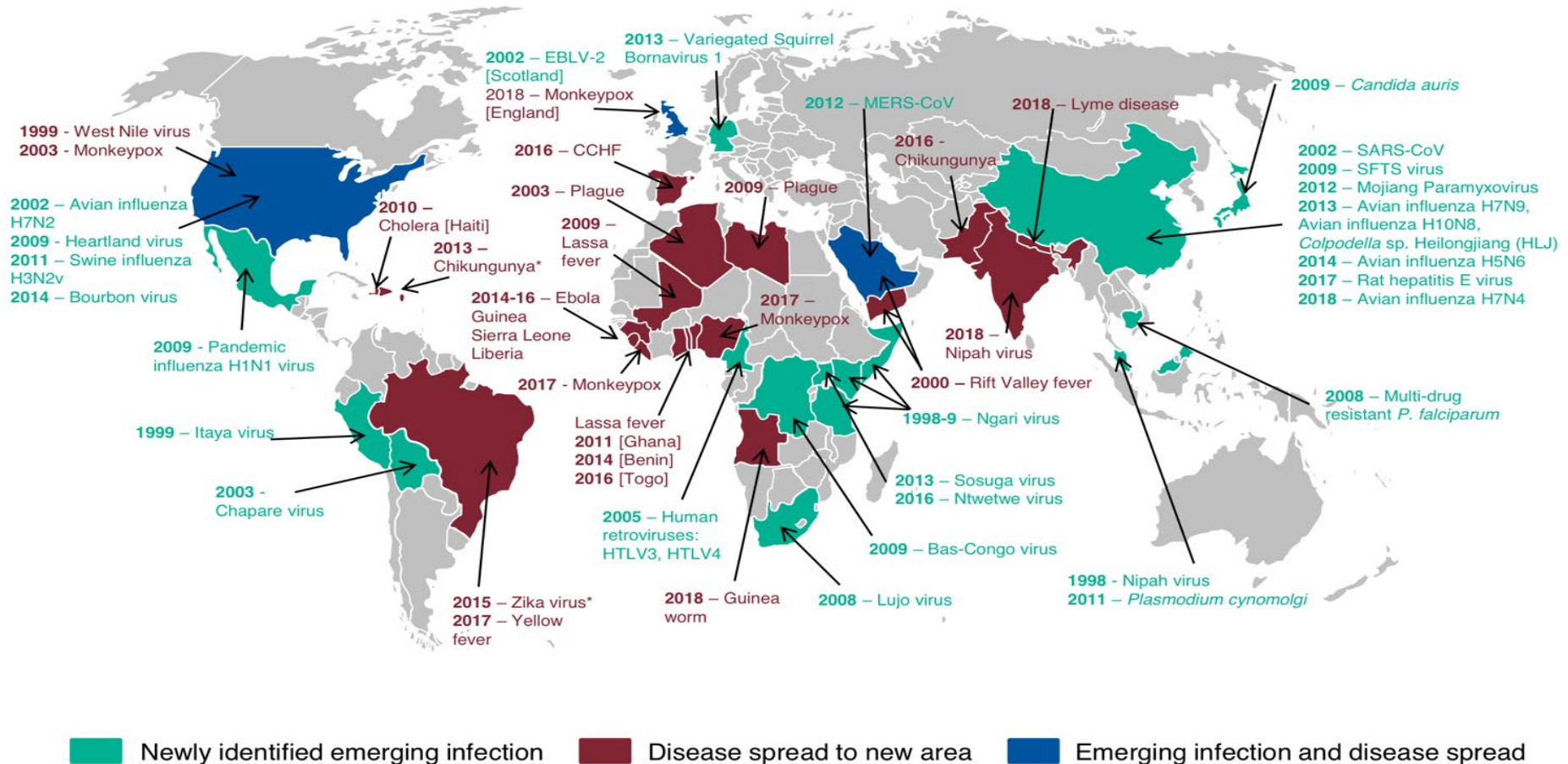
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Early easing could prompt fatal resurgence of virus 13 →

**Marina Hyde**  
'Ministers should be facing far tougher questions' Journal →

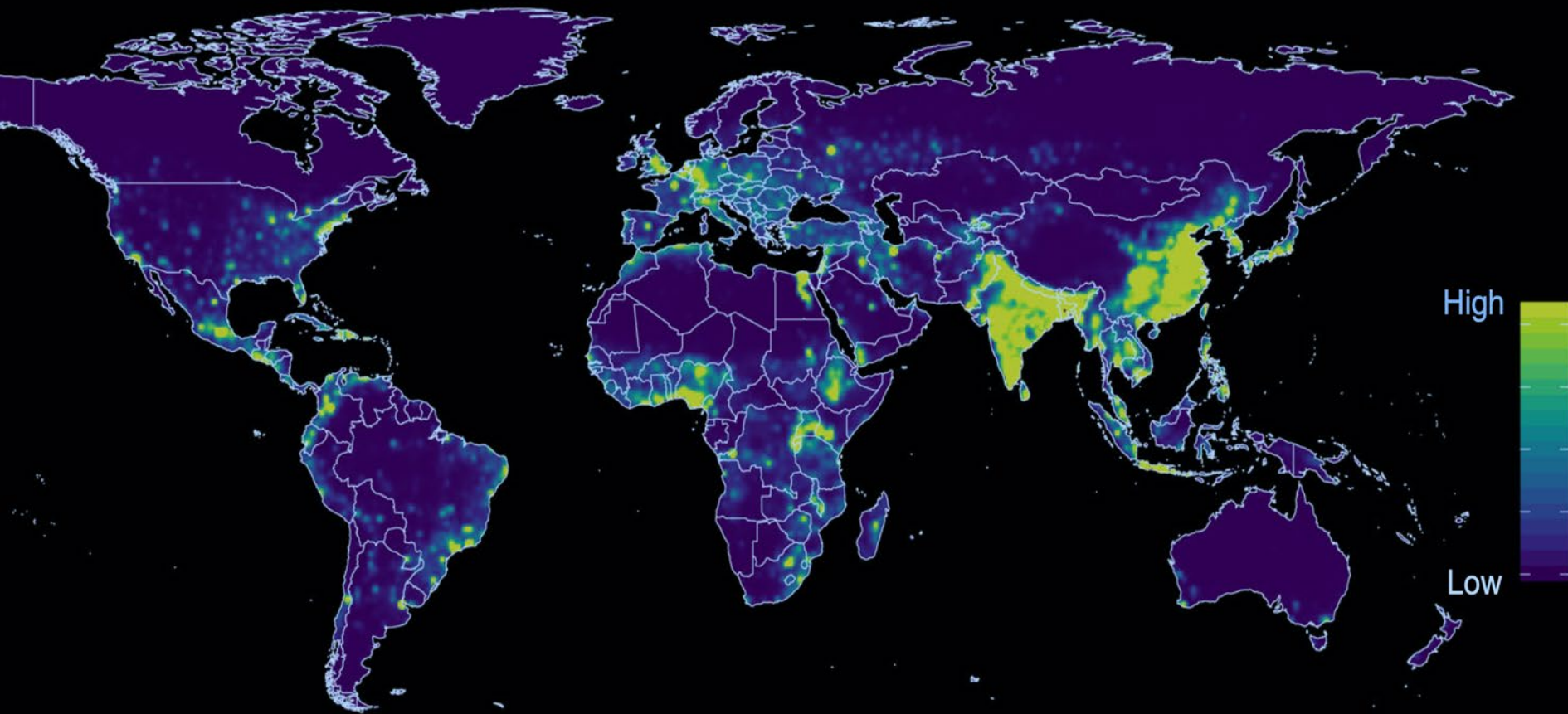


# Global map of significant and new emerging infections in humans: spread to new areas since 1998



\*Incursion followed by regional spread





$$R_0 = \beta \cdot K \cdot D$$

B = risk of transmission per contact (attack rate)

K = number of contacts per unit time

D = duration of infectiousness

$$R_e = R_0 \cdot (1 - P_i)$$

Measles  $R_0 = 15$

Poliovirus  $R_0 = 6$

Smallpox  $R_0 = 6$

Influenza  $R_0 = 4$

SARS  $R_0 = 3$

Covid-19  $R_0 = 3$




ROTARY NEWS

## Rotarians get creative to help communities during coronavirus







FIGHTING DISEASE

# Rotary club funds medics' clogs for Blackpool hospital's critical care unit



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