Vaccines: Trends, mistrust and consequences

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Vaccines have saved tens of millions of lives but immunization rates have stagnated in recent years due in part to fake news stories claiming vaccinations can cause measles, autism or sterility.

Here are some key facts about vaccinations:

Trends

Immunisation prevents two to three million deaths every year, and could prevent another 1.5 million if vaccination programs were fully implemented.

But vaccination rates have "dangerously" stalled, according to a July report from the World Health Organization (WHO) and UNICEF.

Lats year, 19.8 million children under the age of one did not receive the basic triple "DPT" vaccine against tetanus, diphtheria and whooping cough, or were not protected against measles.

"That means that more than one in ten are not getting all the vaccinations they need," said Kate O"Brien, head of WHO's vaccine department.

Two-thirds of these unvaccinated children live in ten countries: Angola, Brazil, Ethiopia, India, Indonesia, Nigeria, Pakistan, The Philippines, Democratic Republic of Congo (DRC) and Vietnam.

Worldwide, DPT and measles vaccination rates have stalled since 2010 at about 86 percent.

For measles, the figure has dropped to 69 percent if one takes into account the booster, which is required for a high level of immunity.

While these figures may seem high, they are still "insufficient" and need to climb to 95 percent, the WHO has warned.

Consequences

Measles outbreaks are occurring worldwide, in countries rich and poor.

More than 360,000 cases have been reported since January, the highest figures since 2006, said the WHO.

There were 90,000 cases reported in Europe during the first six months of 2019, more than double the number from the same period last year.

Based on the 2018 data, four European countries recently lost their "measles free" status: Albania, Britain, the Czech Republic and Greece.

Measles is more contagious than tuberculosis or Ebola, yet it is eminently preventable with a vaccine that costs pennies.

Often benign, is can nonetheless cause severe symptoms—fever, rash, coughing—as well as blindness and, for pregnant women, miscarriages.

The disease can also be fatal. In 2000, measles is estimated to have killed more than half-a-million people. In 2016, that figure had dropped to 90,000 but climbed the following year to 110,000.

Backsliding

Vaccination rates have stagnated for two distinct reasons.

One is growing mistrust—mostly in wealthy nations—fueled by the fear that they cause disease or conditions such as autism. The second is poor access in countries with weak healthcare systems.

Ironically, France—home of Louis Pasteur, the inventor of the vaccine—harbors one of the highest rates of suspicion: one in three people there are not sure vaccines work, according to a survey conducted for the British healthcare foundation Wellcome Trust.

Other countries where vaccine doubt runs high include Gabon, Togo,

Russia and Switzerland.

By contrast, nearly the entire population of Bangladesh and Rwanda say they have confidence in the efficacy and safety of vaccines.

"These are areas where you have more infectious disease," said Imran Khan, Wellcome Trust's head of public engagement and lead researcher for the survey.

"Perhaps what you see is the people in those countries can see what happens if you don't vaccinate."

Skepticism

A lot of "anti-vaxers" cite a 1998 study published by The Lancet, a respected medical journal, that reported a causal link between vaccines and autism in children.

When it was revealed that evidence underlying this claim had been falsified, the study was withdrawn and its author Andrew Wakefield barred from the profession. But the damage was done.

Hostility towards immunization can also have religious roots.

New York state, for example, recently revoked a vaccine exemption for school children on the basis of religious belief following measles outbreaks in districts with large orthodox Jewish communities.

In Afghanistan and Pakistan, some religious leaders say the polio vaccine is part of a conspiracy to sterilise Muslim children. And in the DRC, an audio recording circulated on social networks earlier this year calling on people to physically attack health workers inoculating against the Ebola virus.

Vaccines are also to some extent a victim of their own success.

"We no longer see the diseases, just reports about possible side-effects," said Cornelia Betsch, a researcher at the University of Erfurt in Germany who has written extensively about vaccine policy.

"That leads us to over-estimate the risks of vaccination, and under-estimate the risks of the diseases."