

## Seqirus Media Monitoring

### 6th Feb 2018

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#### Seqirus mentions

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##### **CDC Flu Update: Pediatric Flu-Related Deaths Continue**

In the U.S., influenza activity increased again according to the latest FluView report from the CDC. All U.S. states but Hawaii and Oregon continue to report widespread flu activity. Since October 1, 2017, CDC has tested 282 influenza A(H1N1)pdm09, 828 influenza A(H3N2), and 337 influenza B viruses for resistance to antiviral medications. While the majority of the tested viruses showed susceptibility to the antiviral drugs, two (0.7%) H1N1pdm09 viruses were resistant to both oseltamivir and peramivir, but was sensitive to zanamivir.

<http://www.infectioncontrolday.com/news/2018/02/cdc-flu-update-pediatric-flurelated-deaths-continue.aspx>

#### Pandemic Influenza News

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##### **Flu's Endless Mutation Threatens People, Birds, Pigs: QuickTake**

Flu season in the U.S. this winter is proving among the worst in the past decade. Canadian researchers found that this year's flu shot is only about 17 percent effective at preventing illness from the H3N2 strain. Flu among birds has been a growing concern, especially since a strain that was first detected in 1996 in a farmed goose in southern China began spreading a decade later in poultry across Asia, then to Europe and Africa. Countries in Southeast Asia alone culled 140 million fowl and spent about \$10 billion on controlling the virus. The strain, known as H5N1, is also blamed for the death of more than 450 people, mostly in Indonesia and Egypt, since 2003. Since 2013, another variant, H7N9, has caused repeated epidemics in China, killing more than 550 people, about a third of those infected.

[http://www.washingtonpost.com/business/flu-endless-mutation-threatens-people-birds-pigs-quicktake/2018/02/05/63f0e80e-0a93-11e8-998c-96deb18cca19\\_story.html](http://www.washingtonpost.com/business/flu-endless-mutation-threatens-people-birds-pigs-quicktake/2018/02/05/63f0e80e-0a93-11e8-998c-96deb18cca19_story.html)

*Additional sources: (Bloomberg Quint)*

##### **Bird flu: WARNING as deadly outbreak spreads - how to avoid infection**

Bird flu is a deadly infection that's caused by the H5N1, H7N9, and H5N6 influenza viruses. While common among birds, it can infect humans on rare occasions. The H5N1 virus has infected 860 people worldwide, according to latest World Health Organization figures. More than 450 people have died. Since March 2013, the H7N9 virus has infected 1,565 people, and 612 people have died from the flu virus. The NHS advised the public on how to reduce the risk of infection.

<http://www.express.co.uk/life-style/health/913143/bird-flu-uk-nhs-infection-outbreak-spread-virus-avian-symptoms-signs>

##### **The CDC Is About to Fall Off a Funding Cliff**

Two weeks ago, Betsy McKay at The Wall Street Journal reported that the CDC, with no firm promise of future funding, is preparing to downsize its work in 39 countries. Those include the Democratic Republic of Congo, which recently experienced its eighth Ebola outbreak, and China, which is recently underwent its worst outbreak of H7N9 bird flu. Lena Sun of The Washington Post confirmed this report, writing that "notice is being given now to CDC country directors" as the first part of a transition. These changes would make the world—and the United States—more vulnerable to a pandemic

<http://www.theatlantic.com/health/archive/2018/02/cdc-funding-pandemics/552224/>

#### Industry News

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### **Number of Austin flu-related death grows; rapid flu test in short supply**

Austin doctors saw a distribution shortage of the drug that eases flu symptoms. Now, health workers nationwide are running out of rapid flu tests. This comes as the Austin-Travis County Health Authority released new numbers for flu-related deaths in the area. So far, 28 people have died in Travis County, said Dr. Phil Huang, the authority's medical director. All of the victims are in their 30s and older. Of those, 19 were 80 years old and older, he said. Those numbers show the severity of this year's flu season as dozens more have died nationwide.

<http://kxan.com/2018/02/04/number-of-austin-flu-related-death-grows-rapid-flu-test-in-short-supply/>

### **Parents blame Tamiflu for son's suicide, but doctors say it's not likely**

12 News reached out to the company that makes the drug, but at this time they told us they cannot comment on the specific case. However, they did add the following: "The most common side effects associated with Tamiflu are nausea, vomiting, headache and pain. Neuropsychiatric events have been reported during administration of Tamiflu in patients with influenza, especially in children and adolescents. These events are also experienced by patients with influenza without Tamiflu administration. Patients should be closely monitored for behavioral changes, and the benefits and risks of continuing treatment with Tamiflu should be carefully evaluated for each patient. We take all such reports very seriously and undertake thorough investigations. Data is provided to regulatory authorities for their independent review and to date there is no data suggesting a link with antiviral treatment."

<http://www.kvoa.com/story/37424936/parents-blame-tamiflu-for-sons-suicide-but-doctors-say-its-not-likely>

### **Pharmacies Experiencing Flu Vaccine, Tamiflu Shortage**

The severe flu outbreak gripping Chicago and the rest of the country has doctors urging everyone to get their flu shot. One problem: some local parents are now finding out flu shots are in short supply. Some pharmacies across the region are experiencing a shortage of Tamiflu, a prescription medicine used to treat influenza, as well as test kits and flu vaccines.

<http://chicago.cbslocal.com/2018/02/05/flu-vaccine-tamiflu-shortage/>

### **PositiveID's Chief Science Officer Discusses Company's Detection of Flu Virus on its FireflyDX Prototype in Interview with CEOLIVE.TV**

PositiveID, a life sciences company focused on detection and diagnostics, and its ExcitePCR subsidiary announced that Chief Science Officer, Dr. Kimothy Smith, discussed the Company's successful detection of influenza virus on its FireflyDX real-time polymerase chain reaction breadboard prototype system

<http://globenewswire.com/news-release/2018/02/05/1332841/0/en/PositiveID-s-Chief-Science-Officer-Discusses-Company-s-Detection-of-Flu-Virus-on-its-FireflyDX-Prototype-in-Interview-with-CEOLIVE-TV.html>

### **Inside Rx Provides Savings on Influenza Medications**

Inside Rx announced that it is now offering better pricing on the brand and generic versions of Tamiflu (oseltamivir phosphate) to help Americans affected by what the Centers for Disease Control and Prevention has called the worst recorded influenza season in almost a decade.

<https://www.prnewswire.com/news-releases/inside-rx-provides-savings-on-influenza-medications-300593061.html>

### **No major shortage of flu drugs, but pharmacies face supply gap**

U.S. drug stores have scrambled to keep up with demand for Tamiflu and its generic brand, and that's resulting in spot shortages. A spokesman for Genentech, which makes Tamiflu, told GHN last week that "we have a robust national supply of Tamiflu." Genentech only makes the brand-name medication, but company spokesman Bob Purcell said generic Tamiflu capsules, usually taken by adults, have been widely available since December 2016.

[http://www.northwestgeorgianews.com/associated\\_press/news/state/no-major-shortage-of-flu-drugs-but-pharmacies-face-supply/article\\_67909140-0ab0-11e8-a43e-9f2c5ec7f9be.html](http://www.northwestgeorgianews.com/associated_press/news/state/no-major-shortage-of-flu-drugs-but-pharmacies-face-supply/article_67909140-0ab0-11e8-a43e-9f2c5ec7f9be.html)

## Academic studies

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### **The Chase for a Permanent Flu Vaccine**

As doctors struggle with the worst flu season in nearly a decade, some are racing to answer a question: Can they find a more permanent solution than variably successful annual vaccines? Researchers at the University of California, Los Angeles have developed a new approach for a vaccine that tested successfully in animals. GlaxoSmithKline is in the early stages of testing another promising approach in people. And the newly launched Universal Influenza Vaccine Initiative is sequencing the blood of individuals who receive the current flu vaccine or are infected with the virus. The group hopes to shed light on the body's immune response to ultimately develop better treatments.

<https://www.wsj.com/articles/the-chase-for-a-permanent-flu-vaccine-1517841467>

### **Wash Univ researchers' study of flu genome could predict pandemic**

Washington University scientists are identifying genetic features of flu viruses to investigate how to predict flu pandemics. In a study published in the Nature Communications journal, researchers Jacco Boon, Graham Williams, and Sebla Kutluay write that focusing on the genetic makeup of a flu virus can determine how they replicate and mutate.

<http://news.stlpublicradio.org/post/wash-u-researchers-study-flu-genome-could-predict-pandemic>

### **Comparison of the Efficacy of N9 Neuraminidase-Specific Monoclonal Antibodies against Influenza A(H7N9) Virus Infection**

The novel A(H7N9) viruses that emerged in China in 2013 continue to infect humans, with a high fatality rate. The most recent outbreak resulted in a larger number of human cases than previous epidemic waves. Due to the absence of a licensed vaccine and the emergence of drug-resistant viruses, there is a need to develop alternative approaches to prevent or treat A(H7N9) infection.

<http://jvi.asm.org/content/92/4/e01588-17.abstract>

## Pediatric influenza news

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### **Flu brought on my girl's hidden diabetes**

In Ireland, the mother of a talented young dancer has told how her "perfectly healthy" seven-year-old was left fighting for her life after a flu exacerbated an underlying but unknown diabetic condition. Blood tests revealed Carla had type-one diabetes and the onset of the flu had put her young body under so much pressure it had aggravated the underlying condition.

<http://www.irishnews.com/news/northernirelandnews/2018/02/05/news/mother-s-warning-to-parents-after-daughter-7-was-left-fighting-for-life-when-flu-aggravated-hidden-diabetes-1248802/>

## Over 65's influenza news

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### **No News Recorded**

## General Influenza News

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### **This winter's awful flu season was made worse by a wildly ineffective vaccine**

A number of factors aligned this flu season, including the fact that the vaccine against the main strain of the flu is particularly ineffective. A paper from Canadian scientists published last week suggests that the vaccine is only 17% effective against H3N2, the strain that's causing 80% of flu infections. Worse, in those aged 20 to 64, it's only 10% effective. This study, conducted in Canada, isn't necessarily representative of the entire Northern Hemisphere that's in the thick of flu season

<http://qz.com/1198395/this-years-flu-vaccine-is-more-than-20-less-effective-than-last-years/>

Additional sources: ([Pharmacist.com](http://Pharmacist.com))

### **How Math (and Vaccines) Keep You Safe From the Flu**

Infections are spread in much the same way as a rumor: Someone picks it up and passes it on to someone else. There are differences, of course, but the same elementary mathematical model is useful in both situations. Simple examples involving rumors show how a seemingly small difference in the transmission rate of the rumor made a big difference in how many people ultimately heard it. The same is true when it comes to infectious diseases: the difference between passing the infection on to one person and passing it on to two can be the difference between a few isolated cases and an epidemic.

<http://www.quantamagazine.org/flu-vaccines-and-the-math-of-herd-immunity-20180205/>

### **Flu risks apply pressure on science for a universal vaccine**

Many scientists insist that the only way to stop a future pandemic is by developing a universal flu vaccine. One approach being pursued at Oxford university's Jenner Institute, is to focus not on the surface proteins but instead on internal proteins common to all influenza A viruses. Another approach, pioneered at the University of California Los Angeles, has been to scrutinise the influenza A genome and find its key genetic weapon for slipping past the body's defences.

<http://www.ft.com/content/aa48cd7e-0a59-11e8-bacb-2958fde95e5e>

### **Prevention and control of influenza in an acute healthcare trusts**

Influenza is on the rise in England this winter, with a 78% increase in GP visits from symptomatic patients, a 50% increase in hospitalisations and a 65% increase in admissions to intensive care. This article details a range of infection prevention and control measures deployed at Nottingham University Hospitals.

<http://www.nursingtimes.net/clinical-archive/infection-control/prevention-and-control-of-influenza-in-an-acute-healthcare-trust/7023121.article>

### **These are the symptoms of Aussie Flu H3N2 strain you need to look out for**

In the UK, the flu vaccine is the best protection we have, though flu strains change so it needs to be done every year. The flu jab is offered free to adults at risk, over-65s, pregnant women and children at risk aged six months to two years old, and a spray is offered to children up to four. You can have the jab at your GP and some pharmacies. Serious side effects of the vaccine are rare.

<http://www.bristolpost.co.uk/news/health/symptoms-aussie-flu-h3n2-strain-992071>

### **World needs all-out effort for truly effective flu vaccine**

It's well past time for an effective flu vaccine. The lack of one has to do with two reasons — the difficulty of targeting an ever-evolving set of viruses, and the structure of profit-based pharmacology. Traditional vaccines like those for measles, mumps and rubella, or yellow fever work very well. They are over 97 percent effective. The worst thing about them for pharmaceutical manufacturers is that they work well for many, many years. There isn't much profit in a drug people take once or twice. As a result, there's little commercial incentive to invent a flu vaccine that works well against every possible strain of the disease.

<https://www.newsday.com/opinion/editorial/flu-season-long-island-1.16512921>

### **Flu scourge means even those who have been vaccinated already still may not be safe**

In the first phase of the influenza epidemic, which began in November and December, the initial two type A flu strains were covered in the vaccines provided by the Ministry of Health and distributed to the Regions. Then two type B strains took over with greater incidence, but the Yamagata B strain was not among the vaccines. Or rather, only in one part. "The forecasts for what vaccines were needed belong to the ministry, not to the healthcare companies," according to Dr. Lorena Gottardello, epidemiologist at USS 6 Euganea.

<http://nuovavenezia.gelocal.it/venezia/cronaca/2018/02/03/news/flagello-influenzale-tra-i-malati-anche-chi-si-era-vaccinato-1.16427671>

## **Burden of disease**

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### **Weekly flu report says isles among worst-hit states**

The number of patients visiting the hospital for influenzalike illnesses has been on the rise, and now places Hawaii in the same category as most of the nation for flu activity, according to the state Health Department. Hospital visits in Hawaii have reportedly spiked just as the CDC reported that 16 more children in the U.S. died from the flu over the past week, bringing the total pediatric flu-related deaths to 53 this season. Since the flu season began in early October, Hawaii had been an exception to reports of high flu activity in most states.

<http://www.staradvertiser.com/2018/02/05/hawaii-news/weekly-flu-report-says-isles-among-worst-hit-states/>

### **Flu cases in New Brunswick rise to 738 with double whammy of A and B strains**

New Brunswick has seen 572 more cases of the flu so far this season than the same time last year, with 160 more hospitalizations and eight more deaths, Department of Health statistics show. But the season started much earlier than usual — the first week of October instead of the end of December, stressed department spokesman Bruce Macfarlane.

<http://www.cbc.ca/news/canada/new-brunswick/flu-new-brunswick-vaccine-a-b-1.4519996>

### **More than 50 now dead from flu in Georgia, including more young people**

This year's ferocious flu season has now claimed the lives of more than 50 people in Georgia and resulted in more than 1,000 hospitalizations in the metro-Atlanta area alone, according to the latest data released from the Georgia Department of Public Health. At this point in the season a year ago, only 332 people had been hospitalized from flu in Georgia, and only two people had died, both over 65 years old.

<http://www.ledger-enquirer.com/news/local/article198404404.html>

### **Girl, 7, dies of the flu just hours after she was sent home from hospital**

A seven-year-old girl has been killed by the flu in Indiana less than a day after being sent home from the hospital. Savanna Jessie tested positive for influenza B, strep throat and scarlet fever after her death. The first grader was taken to the hospital the night before she died and was treated but it is unclear if she had gotten her flu shot.

<http://www.dailymail.co.uk/health/article-5354083/Indiana-girl-7-dies-flu-left-hospital.html>

### **One of the busiest ER doctors in the US talks about this year's deadly flu, kids**

One of the busiest emergency rooms in the U.S. at St. Joseph's Healthcare System in Paterson, New Jersey, has seen a huge surge of patients coming in with the flu. The chairman of emergency medicine, Dr. Mark Rosenberg, said the hospital has seen that kids are especially hard hit. "This year, the big difference is the flu vaccine," Rosenberg said. "We're seeing more people come in who had the flu vaccine who now have the flu."

[http://kticradio.com/abc\\_health/one-of-the-busiest-er-doctors-in-the-us-talks-about-this-years-deadly-flu-kids-abcid36030638/](http://kticradio.com/abc_health/one-of-the-busiest-er-doctors-in-the-us-talks-about-this-years-deadly-flu-kids-abcid36030638/)

### **Health authorities stay alert against flu**

In Vietnam, the Ministry of Health has issued an urgent notice asking health departments to strengthen their measures against flu, with the number of flu patients rising. Deputy minister Nguyễn Thanh Long acknowledged that the flu was spreading in several localities. Health departments should work closely with veterinary agencies and relevant units to detect and handle any flu outbreaks among poultry, and to tightly control the trans-border sale and transportation of sick poultry, to prevent virus transmission to people.

<http://vietnamnews.vn/society/health/422485/health-authorities-stay-alert-against-flu.html>

### **Govt says 28 died of H1N1, 31 says SKIMS**

The J&K government and SK Institute of Medical Sciences, Saura on Monday gave out contradictory

statements regarding the number of deaths due to swine flu in Kashmir this season so far. While the health Minister Bali Bhagat quoted 28 deaths due to the viral disease, SKIMS' official statement puts the death toll at 31.

<https://kashmirmonitor.in/Details/142517/govt-says-28-died-of-h1n1-31-says-skims>

### **News Scan for Feb 05, 2018**

The World Health Organization (WHO) said a Swiss man was diagnosed with variant H1N1 (H1N1v) influenza after coming into contact with infected swine. This case was noted in the WHO's monthly report on flu at the animal-human interface. On Dec 20, the 48-year-old farm worker presented with acute but mild respiratory symptoms. A nasal swab was obtained and the virus analyzed and partially sequenced was closely related to European avian-like swine influenza A (H1N1), according to the WHO. Swine housed on the farm tested positive for the virus. This is the sixth year Switzerland has reported swine influenza A (H1N1) in humans. Past years included 2003, 2009, 2010, 2011, and 2016.

<http://www.cidrap.umn.edu/news-perspective/2018/02/news-scan-feb-05-2018>

### **Flu epidemic less lethal this year in France**

In France, the flu epidemic has been less lethal this year, killing around 2,850 people compared to 14,400 last year. Although it is not over yet, the peak is now behind us. Most of the flu-related deaths have been among the over 65s (90%). The lower mortality seems to be because the main strain circulating is H1N1, which is less dangerous than H3N2.

<http://www.leparisien.fr/vie-quotidienne/sante/sante-cette-annee-l-epidemie-de-grippe-a-provoque-moins-de-deces-05-02-2018-7541433.php>

*Additional sources: (France Bleu)*

### **First picture of gifted schoolboy, 9, who is the 'youngest in the UK to die from flu' this winter as the killer outbreak claims at least 231 lives**

In the UK, a heartbroken family have released pictures of their nine-year-old son, believed to be the youngest person to die from flu in the country this winter. Coby Simons, from Exeter, passed away on January 24 - two days after being struck down with the killer virus. The deadly flu outbreak has claimed at least 231 lives in the UK this winter, but is now on the decline as cases have peaked and are now 'stabilising'.

<http://www.dailymail.co.uk/health/article-5353275/First-picture-gifted-schoolboy-9-died-flu.html>

### **The number of flu cases hit the highest levels for 20 years**

A further 750,000 people are recorded as having been affected by influenza-like syndromes over the last week, making a cumulative total of about 5,529,000 cases since the start of flu surveillance.

<http://www.infodata.ilsole24ore.com/2018/02/05/influenza-mai-picchi-incidenza-cosi-alti-cosi-20-anni/>

## **Flu Surveillance in Animals**

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### **Highly pathogenic avian flu A(H5N6) found in Hong Kong chicken**

In Hong Kong, a chicken was found to have highly pathogenic avian flu A(H5N6). The relevant authorities were contacted and notified the OIE on 1st February

<https://www.mesvaccins.net/web/news/11921-grippe-aviaire-hautement-pathogene-a-h5n6-chez-un-poulet-a-hong-kong>

### **Iran reports H5N6 bird flu among wild ducks in north - OIE**

Iran has reported an outbreak of the highly pathogenic H5N6 bird flu virus among wild ducks in the north of the country, the World Organisation for Animal Health (OIE) said on Monday

<https://www.reuters.com/article/us-health-birdflu-iran/iran-reports-h5n6-bird-flu-among-wild-ducks-in-north-oie-idUSKBN1FP26U>

### **Queen's Windsor swans 'killed by bird flu'**

In England, more than 20 swans from the Queen's flock have died and several more are "dying at the moment" amid fears they have been infected by bird flu. Seven of the dead birds have been sent for testing to establish whether avian flu is responsible. Defra confirmed it is investigating a suspected finding of avian influenza in wild mute swans in Berkshire.

<http://www.bbc.co.uk/news/uk-england-berkshire-42943593>