# Leading virologists warn H5N1 bird flu may be evolving toward human transmission



Over 40 leading virologists have raised a significant alarm regarding the escalating threat of H5N1 bird flu, cautioning that the virus may be evolving towards human-to-human transmission. In a report published in *The Lancet Regional Health—Americas*, members of the Global Virus Network (GVN) stressed the urgency of preventive measures to avert a potential global health crisis.

Historically, H5N1 has predominantly infected birds, but recent patterns indicate a concerning shift, as the virus has begun infecting a range of mammals, including pigs and cattle. This progression raises fears that it may soon be capable of infecting humans, a scenario which could lead to widespread fatalities. Current mortality rates for human cases linger at an alarming 50%, underscoring the virus's lethal potential.

“We are at a critical point,” the scientists warned, noting that the virus's ability to adapt poses serious risks. The GVN further highlighted previous global health commitments made in the aftermath of the COVID-19 pandemic, pointing out that the world remains inadequately prepared for a similar outbreak. Disparities in disease surveillance at the animal-human interface and insufficient pandemic preparedness are notable concerns that echo sentiments expressed by health authorities worldwide.

Christian Bréchot, president of the GVN, articulated these fears succinctly: “Influenza viruses are known for their ability to jump between species. If a person becomes infected with both H5N1 and seasonal flu variant simultaneously, the risk of a more contagious strain could materialise.” This potential for viral reassortment, especially during peak flu seasons, emphasises the need for vigilance.

In response to this looming threat, the GVN has put forth a ten-point action plan. This comprehensive strategy advocates for an acceleration of genomic data sharing to monitor mutations effectively, an enhancement of vaccine development and stockpiling, and the implementation of robust biosecurity measures on farms to mitigate animal-to-human transmission risks. Furthermore, it calls for the establishment of detailed pandemic preparedness plans, inclusive of effective testing and vaccination frameworks.

The demand for international collaboration has also been stressed, as experts contend that isolated efforts are inadequate to counter the probable spread of H5N1. This point is echoed by Jeremy Farrar, WHO's chief scientist, who has noted the immense need for global cooperation in monitoring and addressing the upward trend in avian flu cases.

The current situation is indeed troubling. Instances of H5N1 in North American dairy cattle have been labelled "mild," yet the scientists remind us that this does not predict its impact on human health. They caution against complacency, positing that any underreaction at this juncture could lead to catastrophic consequences.

Experts across various regions, particularly in countries with fragile health systems like Nigeria, have expressed heightened concern. With ongoing struggles against diseases such as Lassa fever and cholera, a new pandemic could stretch the already burdened healthcare framework to its limits. Virologist Ifeanyi Okeke from Abuja emphasised the urgent need for Nigeria to fortify surveillance systems, particularly in high-risk areas such as live bird markets and agricultural sites.

The calls for preparedness resonate with those made by the Coalition for Epidemic Preparedness Innovations (CEPI), which has similarly urged global leaders to take definitive action against the multifaceted threat posed by H5N1. The persistent evolution of the virus and its potential for human infections necessitate a continuous and proactive approach to monitoring animal populations and developing effective vaccines.

As the virologists of the GVN conclude, while predicting the onset of a pandemic remains uncertain, the evidence available necessitates immediate and coordinated global action. Failure to act decisively may lead to dire and irrevocable repercussions in the years to come, as "the clock is ticking," they warned. A united front is essential to avert a potential crisis that could result in a staggering loss of life.

### Reference Map

1. Lead article focusing on the GVN report and virologists' warnings.
2. Call for global leaders' action on H5N1 threats.
3. WHO's concerns about the H5N1 virus.
4. Persistent threat of H5N1 as highlighted by experts.
5. Urgency for preparedness from CEPI experts.
6. Global health threat posed by H5N1 avian influenza.
7. Comparison with past pandemics and the need for vigilance.

Source: [Noah Wire Services](https://www.noahwire.com)

## Bibliography

1. <https://leadership.ng/virologists-warn-of-h5n1-bird-flu-pandemic/> - Please view link - unable to able to access data
2. <https://www.cidrap.umn.edu/avian-influenza-bird-flu/top-virologists-urge-world-leaders-act-rising-avian-flu-threat> - Leading virologists from over 40 countries have called on global leaders to address the escalating threat of H5N1 avian flu. In a commentary published in The Lancet Regional Health–Americas, scientists from the Global Virus Network (GVN) emphasized the need for enhanced surveillance, improved biosecurity measures, and preparedness for potential human-to-human transmission. The experts highlighted the virus's spread to mammals, including dairy cattle, and the risk of mutations that could lead to human infections. They recommended continuous monitoring, accelerated genomic data sharing, and international collaboration to mitigate the pandemic threat. ([cidrap.umn.edu](https://www.cidrap.umn.edu/avian-influenza-bird-flu/top-virologists-urge-world-leaders-act-rising-avian-flu-threat?utm_source=openai))
3. <https://www.theguardian.com/world/2024/apr/18/risk-bird-flu-spreading-humans-enormous-concern-who> - The World Health Organization (WHO) has expressed significant concern over the potential for H5N1 avian influenza to spread to humans. WHO chief scientist Jeremy Farrar highlighted the virus's adaptation to mammals, including dairy cattle, and the possibility of human-to-human transmission. While no evidence of human-to-human spread has been found, the high mortality rate in human cases underscores the urgency for increased monitoring and preparedness. Farrar emphasized the need for global cooperation to prevent a potential pandemic. ([theguardian.com](https://www.theguardian.com/world/2024/apr/18/risk-bird-flu-spreading-humans-enormous-concern-who?utm_source=openai))
4. <https://www.healio.com/news/infectious-disease/20250228/bird-flu-not-going-away-experts-warn> - Experts warn that the H5N1 avian influenza virus remains a persistent threat, with sporadic human infections continuing to occur. While most cases have been mild, the virus's potential to mutate and adapt to humans necessitates ongoing vigilance. Health professionals emphasize the importance of preparedness, including monitoring animal populations, enhancing biosecurity measures, and developing effective vaccines to mitigate the risk of a pandemic. ([healio.com](https://www.healio.com/news/infectious-disease/20250228/bird-flu-not-going-away-experts-warn?utm_source=openai))
5. <https://cepi.net/world-should-prepare-now-potential-h5n1-flu-pandemic-experts-warn> - Experts from the Coalition for Epidemic Preparedness Innovations (CEPI) have called for urgent global action to prepare for a potential H5N1 flu pandemic. They highlight the virus's spread to mammals, including dairy cattle, and the risk of mutations that could lead to human infections. The experts stress the need for enhanced surveillance, rapid vaccine development, and international collaboration to strengthen pandemic preparedness and response. ([cepi.net](https://cepi.net/world-should-prepare-now-potential-h5n1-flu-pandemic-experts-warn?utm_source=openai))
6. <https://www.voanews.com/a/bird-flu-spillover-to-other-species-poses-global-health-threat-experts-warn/7906070.html> - Experts warn that the H5N1 avian influenza virus's ability to infect a wide range of species, including mammals like dairy cattle, poses a significant global health threat. The virus's spread to over 70 mammalian species increases the risk of mutations that could lead to human infections. Health authorities emphasize the need for increased surveillance and monitoring to prevent the virus from adapting to humans and causing a pandemic. ([voanews.com](https://www.voanews.com/a/bird-flu-spillover-to-other-species-poses-global-health-threat-experts-warn/7906070.html?utm_source=openai))
7. <https://www.theatlantic.com/science/archive/2024/06/bird-flu-swine-flu-2009-which-is-worse/678620/?utm_source=apple_news> - An analysis compares the potential impact of an H5N1 avian influenza pandemic to the 2009 H1N1 swine flu pandemic. While the H1N1 pandemic had significant health impacts, the H5N1 virus's high fatality rate and current widespread transmission among animals underscore the potential severity of a future pandemic. The article emphasizes the need for preparedness strategies, including monitoring genetic changes, deploying vaccines, and leveraging lessons from previous pandemics. ([theatlantic.com](https://www.theatlantic.com/science/archive/2024/06/bird-flu-swine-flu-2009-which-is-worse/678620/?utm_source=openai))