Apr. 12, 2024: [16] Apr 26, 2024: ^[23] Apr. 9, 2024: ^[2] **Epidemiological Timeline** CDC expands reccomendations to USDA confirms five commercial poultry USDA confirms 29 positive dairy farms in farms positive for HPAI in four states eight states: Texas (11), Kansas (3), New protect farm workers since Mar. 2024: Michigan (2), Texas (1), Mexico (7), Idaho (1), Michigan (4), South Early Descriptions of H5N1 Mar 19. 2024: ^[6] Mar 28, 2024: Dakota (1), North Carolina (1), and Ohio (1) South Dakota (1), and Massachusetts (1) Concerns voiced about A viral sample was collected Apr. 26, 2024: [2] unknown illness in dairy cattle from a human in Texas that in the United States (2024) Mar 7, 2024: [2] Apr. 9, 2024: [16] in Texas was positive for H5N1 & USDA confirms 14 commercial poultry Commercial poultry farm positive for HPAI in Essex County, MA, USA Apr. 12, 2024: ^[2] farms positive for HPAI in seven states: sequenced (posted Apr 2) USDA confirms 25 positive dairy farms Michigan (6), Texas (1), South Dakota (1), Apr. 1, 2024: [13] in eight states: Texas (10), Kansas (3), USDA confirms eight commercial poultry farms positive for HPAI in seven states: Massachusetts (1), Minnesota (1), New New Mexico (6), Idaho (1), Michigan (2), Klein B, Kraemer MUG, Scarpino SV USDA confirms 15 Mexico (3), and Kansas (1) Michigan (2), Texas (1), South Dakota (1), South Dakota (1), North Carolina (1), positive dairy farms in Apr. 19, 2024: [16] five states: Texas (7), and Ohio (1) Massachusetts (1), Minnesota (1), New b.klein@northeastern.edu Kansas (3), New Mexico USDA confirms 35 positive dairy Mexico (1), and Kansas (1) farms in eight states: Texas (12), (3), Idaho (1), and moritz.kraemer@biology.ox.ac.uk Mar 7, 2024: [1] Apr. 10, 2024: [2] Michigan (1) Kansas (4), New Mexico (8), Idaho Unknown dairy cattle illness first (2), Michigan (6), South Dakota (1) s.scarpino@northeastern.edu reported publicly by the Texas commercial poultry farms Apr. 1, 2024: [13] North Carolina (1), and Ohio (1) Apr 29, 2024: ^[25] Animal Health Commission positive for HPAI in five Apr. 15, 2024: [2] USDA confirms H5N1 in dairy states: Michigan (2), Texas CDC publishes a paper on Last updated: Thurs 3 May, 2024 cattle in New Mexico the outbreak of H5N1 in poultry farms positive for HPAI in Apr 23, 2024: [18] cats and dairy cows Massachusetts (1), and seven states: Michigan (2), Apr. 1, 2024: [12] Kansas (1) Analysis of 239 additional Texas (1), South Dakota (1), Mar 11, 2024: [4] Massachusetts (1), Minnesota (1) genomes suggests cow-to-Wastewater collected in North Texas Mar 25, 2024: [11] New Mexico (2), and Kansas (1) cow transmission tests positive for H5. These data Apr 29, 2024: [4] Apr. 10, 2024: ^[16] Texas confirms weren't made public until Apr 29th A preprint shows H5 presence in H5N1 in dairy cattle USDA confirms 27 positive Apr. 3, 2024: ^[2] U.S. wastewater. Milk products dairy farms in eight states: Apr. 15, 2024: ^[16] Apr 23, 2024: [19] being dumped into wastewater Texas (11), Kansas (3), USDA confirms 30 positive dairy Mar 15, 2024: ^[5] poultry farm in Ionia, MI Analysis of 239 additional may explain this pattern. New Mexico (7), Idaho (1), farms in eight states: Texas (11) HPAI detected in genomes suggests a single Michigan (2), South Dakota Apr. 4, 2024: [16] Kansas (3), New Mexico (7), wild birds in Texas origin for the ongoing dairy (1), North Carolina (1), and Idaho (1), Michigan (5), South cattle outbreak Feb 2024:^[1] USDA confirms 18 positive Ohio (1) Dakota (1), North Carolina (1), dairy farms in six states: Earliest reports of unknown and Ohio (1) Mar Apr May Feb Texas (9), Kansas (3), New dairy cattle disease in Texas Mexico (3), Idaho (1), Michigan (1), and Ohio (1) 2024 Mar Feb Apr May Mar 20, 2024: Feb 2024: [2] dairy cattle in Texas (n=6) Apr. 5, 2024: [16] May 1, 2024: [26,27] that were positive for H5N1 _____ One viral genome from & sequenced (posted Mar 27, 2024: outbreak of HPAI in FDA declares pasteurization Mar 8, 2024: [3] Mar 27, n=5; Apr 5, n=1) dairy cattle posted Apr. 21, 2024: [17] commercial poultry farms Three viral genomes inactivates H5N1 and USDA finds Cattle transferred from dairy publicly (collected in TX - from goats posted -----USDA posts 239 additional no evidence for H5N1 in beef farm in Texas (that later tested on Mar 20th) publicly (collected in H5N1 genomes from birds positive) to a farm in Ohio that Minnesota on Mar 8) and dairy cattle tested positive on April 2 Apr 28, 2024: [24] Mar 20, 2024: [7] Apr. 5, 2024: [16] Apr. 11, 2024: [2] Metadata was extracted and Minnesota Board of Animal Apr. 17, 2024: ^[2] populated for the dairy USDA confirms 19 positive Health announces H5N1 in cattle genomes posted by poultry farms positive for HPAI in six Mar 27, 2024: dairy farms in six states: Mar 8, 2024: goats commercial poultry farms the USDA on April 21. Texas (9), Kansas (3), New Five viral genomes states: Michigan (2), Texas (1), Samples collected from goats in positive for HPAI in seven from dairy cattle Mexico (3), Idaho (1), South Dakota (1), Massachusetts Minnesota (n=3) that were states: Michigan (4), Texas Michigan (2), and Ohio (1) (1), Minnesota (1), and Kansas (1) posted publicly positive for H5N1 & sequenced (1), South Dakota (1), (collected in TX on (posted Mar 27) Massachusetts (1), Mar 22, 2024: [8] Minnesota (1), New Mexico Additional dairy testing Apr. 2, 2024: (3), and Kansas (1) Apr 25, 2024: [22] Legend: initiated due to concerns First genome collected from a Evidence that 30 - 40% of about unknown infection in human posted online Apr. 6, 2024: ^[15] Apr. 17, 2024: [16] Goats commercial milk samples Cattle dairy cattle (collected in TX on Mar 28th) USDA confirms 21 positive dairy USDA confirms 34 positive were PCR positive for H5N1 Mar 12, 2024: [2] dairy farms in eight states: farms in six states: Texas (9). Birds Human Apr. 2, 2024: [14] Kansas (3), New Mexico (5), Idaho Texas (12), Kansas (4), New nercial turkey farm positive for . Dairy farm in Idaho (1), Michigan (2), and Ohio (1) Mexico (8), Idaho (1), Genome Misc. HPAI in Hutchinson County, SD, USA Apr. 25, 2024: [15] confirmed positive for H5N1 Mar 22, 2024: ^[9] Michigan (6), South Dakota 36 positive dairy farms in nine states: Mystery illness reported Apr. 16, 2024: [15] (1), North Carolina (1), and Apr. 2, 2024: [15] in dairy cattle in Texas & Texas (12), Kansas (4), New Mexico References 10 viral genomes from felines Ohio (1) (8), Michigan (6), Idaho (2), Ohio (1), New Mexico Poultry farm in Parmer County, Texas posted publicly (collection South Dakota (1), North Carolina (1), confirmed positive for H5N1 https://www.aphis.usda.gov/livestock-poultry-disease/avian/avian-influenza/hpai-detections/commercial-backyard-flocks date & location not provided) Mar 22, 2024: ^[10] and Colorado (1) Apr. 2, 2024: [14] PAHO warns of increased https://www.tahc.texas.gov/news/2024/2024-03-15_HPAI MooreCo.pdf HPAI in mammals in the ____ USDA confirms 16 positive dairy Apr. 24, 2024; [16] Apr. 16, 2024: [16] Americas farms in six states: Texas (7), https://www.bah.state.mn.us/news_release/stevens-county-goal-tests-positive-for-same-influenza-virus-affecting-poultry/https://www.aphis.usda.gov/news/agency-announcements/federal-state-veterinary-public-health-agencies-share-update-hpa USDA confirms 13 commercial poultry Kansas (3), New Mexico (3), USDA confirms 10 commercial poultry farms positive for HPAI in seven states: https://www.dairyherd.com/news/dairy-production/mystery-illness-now-affecting-dairy-cows-texas-new-mexico-industry-searches Idaho (1), Michigan (1), and Ohio (1) farms positive for HPAI in seven states: . Michigan (5), Texas (1), South Dakota (1), Michigan (3), Texas (1), South Dakota (1), Massachusetts (1), Minnesota (1), New Massachusetts (1), Minnesota (1), New https://www.dshs.texas.gov/news-alerts/dshs-reports-first-human-case-avian-influenza-texas Apr. 2, 2024: [3] Mexico (3), and Kansas (1) Mexico (2), and Kansas (1) https://www.aphis.usda.gov/news/agency-announcements/usda-confirms-highly-pathogenic-avian-influenza-dairy-herd-new-mexico Ohio Department of Agriculture https://www.aphis.usda.gov/news/agency-announcements/usda-confirms-highly-pathogenic-avairanineliza-dairy-herd-idaho https://www.aphis.usda.gov/news/agency-announcements/usda-confirms-highly-pathogenic-avairaninfluenza-dairy-herd-idaho https://www.texasagriculture.gov/News-Events/Article/9961/COMMISSIONER-MILLER-CONFIRMS-CAL-MAINE-FOOD-S-TEXAS-POULTRY-FACILITY-TESTS-POSI announces positive H5N1 cases Apr 24, 2024: [21] in a dairy farm in Wood County https://www.aphis.usda.gov/livestock-poultry-disease/avian/avian-influenza/usda-publishes-h5n1-influenza-virus-geneti.https://x.com/MichaelWorobey/status/1782880126042271931 NIH NIAID researchers fail to find live virus in pasturized milk that was PCR positive for H5N1 https://www.statnews.com/2024/04/24/h5n1-bird-flu-usda-orders-dairy-cow-testing/ https://www.statnews.com/2024/04/25/h5n1-bird-flu-cows-outbreak-likely-widespread/ Apr 24, 2024: [20] USDA announces mandatory https://wwwnc.cdc.gov/eid/article/30/7/24-0508_article testing for movement of dairy https://www.aphis.usda.gov/livestock-poultry-disease/avian/avian-influenza/hpai-detections/livestock/h5n1-beef-safety-studies cattle across state borders 27. https://www.statnews.com/2024/05/01/bird-flu-pasteurization-inactivates-h5n1-in-milk/