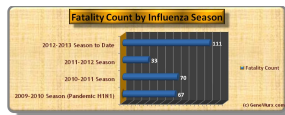




2013-01-31

At least 4 US states of those few who collect detailed viral disease statistics are currently reporting *all-time high counts* for Influenza Hospitalisations & Fatalities, topping the record-setting 2009 and 2010 Pandemic H1N1 seasons. Please review our **GeneWurx** charts and summary on the next page concerning Minnesota's Influenza Fatalities distantly exceeding the previous state record of 70. The [public health](#) officials counted 36 victims this week giving a total of *111 Deceased* due to confirmed Influenza. This *week's* Fatality count is higher than the *entire previous* Minnesota *flu season*.

GeneWurx [Fatality by Season](#) Minnesota Chart



One week exceeding an entire year is an issue with any statistic, but that issue defines a more profound focus when *fatality follows an unnecessary* disease. This 2012-2013 season continues in full force though the current count of deceased at 111 souls is *already TRIPLE* last season's total.

Hospitalisations continued to set new records each week with a total of *2,367 citizens requiring In-Patient* medical care so far this season.

The state of Minnesota has been nationally recognised for their *high vaccination rate*.

The most current sequences from around the world and all regions of the United States demonstrate *wide disparity from the vaccine* due to a [high count of changes](#) and a variation pattern at antigenic locations typically leading to higher morbidity & mortality (illness & fatality). The recently deposited [Minnesota26_C1_31F_2012_12_13](#) sequence bears a *total of 33 Polymorphisms* among the HA and NA gene segments.

A synoptic **GeneWurx** polymorphism report from a *recent full batch* of each circulating serotype (pH1N1 and sH3N2) trails the Minnesota Fatality Summary.

GeneWurx.com

NS1.

2013-01-31

Minnesota

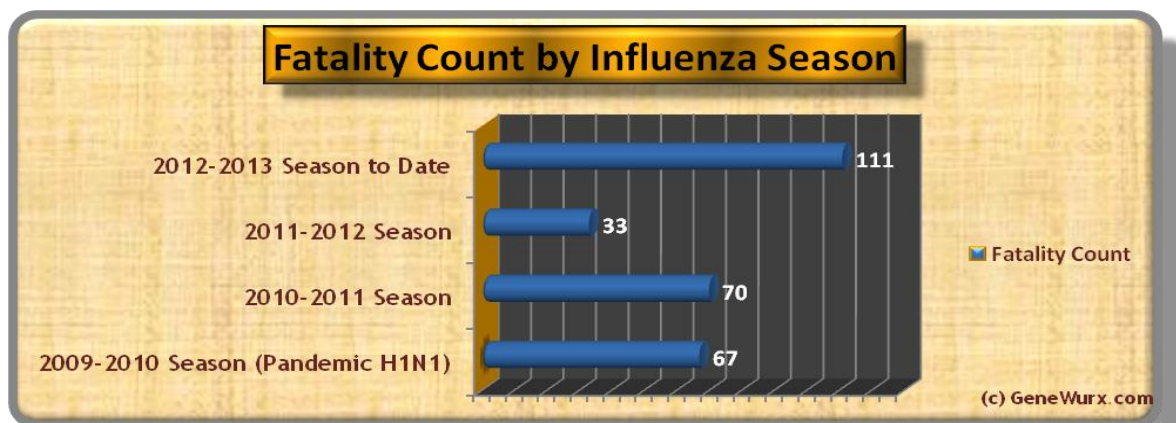
Fatality and Hospitalisation Totals after 2013 Week 04

State Record Influenza Fatality Count of 111 Citizens . . . so far this season,

- Fatalities **increased by 36** this week, more than the **entire previous season's** total.
- This season is more than **300% higher** than the final total of last season.

Fatality Count History for Minnesota

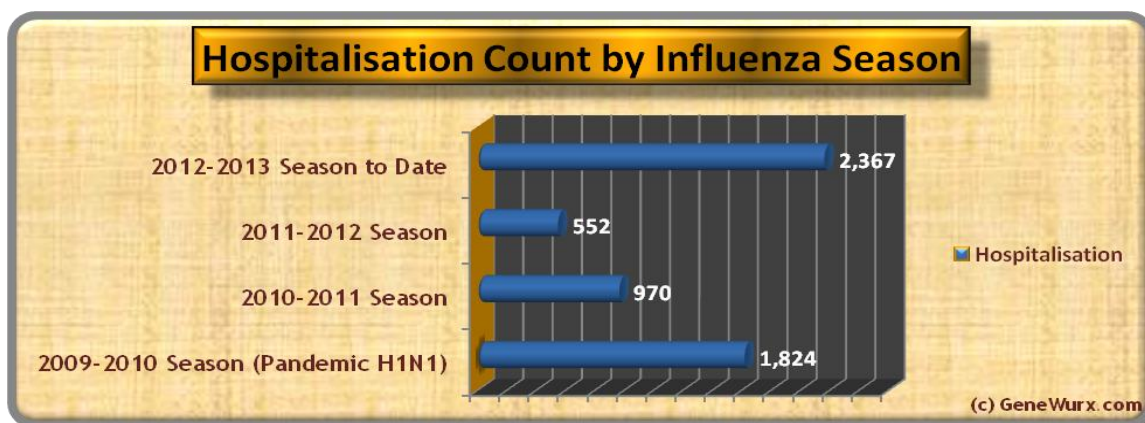
- 2011-2012 Season **33**
- 2010-2011 Season **70** State Record during 2nd Season of Pandemic H1N1
- 2009-2010 Season **67**



State Record Influenza Hospitalisation Count of 2,367 Citizens . . . so far this season.

Hospitalisation Count History for Minnesota

- 2011-2012 Season **970**
- 2010-2011 Season **552**
- 2009-2010 Season **1,824** Previous State Record during Pandemic H1N1



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pH1N1 2013_01_22_CDC HA & NA Polymorphisms

pH1N1 Influenza Hemagglutinin & Neuraminidase Segments elucidated at 2013-01-22-18_29_55_797930 by GeneWurx see.PolyDetector v0, Copyright 2007-2013.
Sequences discussed in this analysis are variously stored publicly at GenBank and privately at GISAID. We gratefully acknowledge the authors, originating and submitting laboratories of the sequences from GenBank and from GISAID's EpiFlu™ Database on which this research is based. GISAID Citations are attached as PDF.

HA 308 Polymorphisms Averaging ~20.5 per Segment
NA 193 Polymorphisms Averaging ~12.9 per Segment
HA & NA 501 Polymorphisms Averaging ~33.4 per Sequence

.... India2192_2012_12_22 (
..... GISAID HA [EPI413162](#)
..... GISAID NA [EPI413161](#)
..... 19 Polymorphisms (9 Amino and 10 Silent)
..... 12 Polymorphisms (5 Amino and 7 Silent))

.... Minnesota26_C1_31F_2012_12_13 (
..... GISAID HA [EPI409917](#)
..... GISAID NA [EPI409916](#)
..... 21 Polymorphisms (8 Amino and 13 Silent)
..... 12 Polymorphisms (6 Amino and 6 Silent))

.... Florida57_M1C1_25M_2012_12_12 (
..... GISAID HA [EPI409898](#)
..... GISAID NA [EPI409897](#)
..... 19 Polymorphisms (8 Amino and 11 Silent)
..... 12 Polymorphisms (6 Amino and 6 Silent))

.... RhodeIsland10_C2_44M_2012_12_05 (
..... GISAID HA [EPI409889](#)
..... GISAID NA [EPI409888](#)
..... 22 Polymorphisms (10 Amino and 12 Silent)
..... 12 Polymorphisms (6 Amino and 6 Silent))

.... NewYork45_C2_51F_2012_12_02 (
..... GISAID HA [EPI414444](#)
..... GISAID NA [EPI409900](#)
..... 28 Polymorphisms (11 Amino and 17 Silent)
..... 16 Polymorphisms (8 Amino and 8 Silent))

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pH1N1

2013_01_22_CDC

(continued as Page 2 of 3)

.... Indiana167_M1C1_52F_2012_11_25 (
 GISAID HA [EPI409909](#)
 GISAID NA [EPI409908](#)
 22 Polymorphisms (9 Amino and 13 Silent)
 16 Polymorphisms (8 Amino and 8 Silent))

.... NewHampshire20_C1_60M_2012_11_24 (
 GISAID HA [EPI409915](#)
 GISAID NA [EPI409914](#)
 18 Polymorphisms (8 Amino and 10 Silent)
 12 Polymorphisms (5 Amino and 7 Silent))

.... ChinaGansu_Ganzhou33_E2E1_2012_11_19 (
 GISAID HA [EPI409924](#)
 GISAID NA [EPI409923](#)
 19 Polymorphisms (8 Amino and 11 Silent)
 13 Polymorphisms (6 Amino and 7 Silent))

.... ChinaGansu_Ganzhou35_C1C1_2012_11_19 (
 GISAID HA [EPI409922](#)
 GISAID NA [EPI409921](#)
 20 Polymorphisms (9 Amino and 11 Silent)
 12 Polymorphisms (6 Amino and 6 Silent))

.... India5416_X1C1_30M_2012_11_10 **TmX247** (
 GISAID HA [EPI409892](#)
 GISAID NA [EPI409891](#)
 18 Polymorphisms (8 Amino and 10 Silent)
 15 Polymorphisms (5 Amino and 10 Silent))

.... Peru2023_C1_7F_2012_10_26 (
 GISAID HA [EPI409903](#)
 GISAID NA [EPI409902](#)
 20 Polymorphisms (8 Amino and 12 Silent)
 14 Polymorphisms (4 Amino and 10 Silent))



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pH1N1

2013_01_22_CDC

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.... Brazil3479_C1C1_14M_2012_10_16 (
..... GISAID HA [EPI409895](#)
..... GISAID NA [EPI409894](#)
..... 19 Polymorphisms (8 Amino and 11 Silent)
..... 9 Polymorphisms (4 Amino and 5 Silent))

.... Peru0505_C1_27M_2012_10_12 (
..... GISAID HA [EPI409906](#)
..... GISAID NA [EPI409905](#)
..... 21 Polymorphisms (8 Amino and 13 Silent)
..... 12 Polymorphisms (5 Amino and 7 Silent))

.... India1214_X1C1_39F_2012_10_05 (
..... GISAID HA [EPI414445](#)
..... GISAID NA [EPI409919](#)
..... 18 Polymorphisms (7 Amino and 11 Silent)
..... 13 Polymorphisms (3 Amino and 10 Silent))

.... Peru0429_C1_24M_2012_09_04 (
..... GISAID HA [EPI409912](#)
..... GISAID NA [EPI409911](#)
..... 24 Polymorphisms (10 Amino and 14 Silent)
..... 13 Polymorphisms (5 Amino and 8 Silent))

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sH3N2
2013_01_16_CDC
HA & NA Polymorphisms

sH3N2 Influenza Hemagglutinin & Neuraminidase Segments elucidated at 2013-01-22-01_19_34_490910 by GeneWurx see.PolyDetector v0, Copyright 2007-2013.
Sequences discussed in this analysis are variously stored publicly at GenBank and privately at GISAID. We gratefully acknowledge the authors, originating and submitting laboratories of the sequences from GenBank and from GISAID's EpiFlu™ Database on which this research is based. GISAID Citations are attached as PDF.

HA 282 Polymorphisms Averaging ~25.6 per Segment
NA 210 Polymorphisms Averaging ~19.1 per Segment
HA & NA 492 Polymorphisms Averaging ~44.7 per Sequence

.... Virginia15_C2_85F_2012_12_05 (
..... GISAID HA [EPI408604](#)
..... GISAID NA [EPI408603](#)
..... 38 Polymorphisms (16 Amino and 22 Silent)
..... 29 Polymorphisms (7 Amino and 22 Silent))

.... RhodeIsland09_C2_19M_2012_11_28 (
..... GISAID HA [EPI408606](#)
..... GISAID NA [EPI408605](#)
..... 17 Polymorphisms (9 Amino and 8 Silent)
..... 9 Polymorphisms (2 Amino and 7 Silent))

.... NewJersey08_C2_93M_2012_11_28 (
..... GISAID HA [EPI408601](#)
..... GISAID NA [EPI408600](#)
..... 16 Polymorphisms (10 Amino and 6 Silent)
..... 16 Polymorphisms (5 Amino and 11 Silent))

.... Nebraska11_C2_33F_2012_11_26 (
..... GISAID HA [EPI408613](#)
..... GISAID NA [EPI408612](#)
..... 19 Polymorphisms (8 Amino and 11 Silent)
..... 14 Polymorphisms (5 Amino and 9 Silent))

.... Missouri13_C2_79M_2012_11_26 (
..... GISAID HA [EPI408611](#)
..... GISAID NA [EPI408610](#)
..... 21 Polymorphisms (8 Amino and 13 Silent)
..... 11 Polymorphisms (4 Amino and 7 Silent))



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sH3N2

2013_01_16_CDC

(continued as Page 2 of 2)

.... Maryland43_C2_2M_2012_11_13 (
..... GISAID HA [EPI408608](#)
..... GISAID NA [EPI408607](#)
..... 37 Polymorphisms (15 Amino and 22 Silent)
..... 27 Polymorphisms (8 Amino and 19 Silent))

.... Virginia14_X1C2_7M_2012_11_13 (
..... GISAID HA [EPI408598](#)
..... GISAID NA [EPI408597](#)
..... 36 Polymorphisms (15 Amino and 21 Silent)
..... 26 Polymorphisms (7 Amino and 19 Silent))

.... SouthDakota10_C1_73M_2012_10_12 (
..... GISAID HA [EPI408616](#)
..... GISAID NA [EPI408615](#)
..... 20 Polymorphisms (9 Amino and 11 Silent)
..... 11 Polymorphisms (3 Amino and 8 Silent))

.... Alaska25_C2_5F_2012_10_11 (
..... GISAID HA [EPI408596](#)
..... GISAID NA [EPI408595](#)
..... 34 Polymorphisms (15 Amino and 19 Silent)
..... 25 Polymorphisms (6 Amino and 19 Silent))

.... ChinaXinjiang_Tianshan1411_C3C1_2012_04_01_VxX (
..... GISAID HA [EPI408591](#)
..... GISAID NA [EPI408590](#)
..... 34 Polymorphisms (15 Amino and 19 Silent)
..... 32 Polymorphisms (15 Amino and 17 Silent))

.... Vietnam51_CXC2_2012_02_26_VxX (
..... GISAID HA [EPI408588](#)
..... GISAID NA [EPI408587](#)
..... 10 Polymorphisms (6 Amino and 4 Silent)
..... 10 Polymorphisms (5 Amino and 5 Silent))