

SWOPHR Pandemic Influenza Survey Report

To: Southwest Ohio Public Health Region Executive Steering Committee
From: REDI

Regional Pandemic Influenza Epidemiological Analysis

The Center for Disease Control is conducting a second-round of epidemic analysis in the United States to identify any emerging trends of the pandemic and to re-characterize the outbreak. The Southwest Ohio region was selected as a survey area. Participating local hospitals have completed the CDC survey for randomly selected, probable pandemic influenza patients admitted on 3/1/2008 and were followed for the extent of their hospitalization thru 3/30/2008. The following report contains analysis of the Southwest Ohio patient data as well as comparison to the national trends.

Southwest Ohio Trends

A total of 299 surveys were completed in Southwest Ohio Region participating hospitals. General percentage values follow.

Table of age group by Sex			
Age group	Sex(Sex)		Total
Frequency Percent	Female	Male	
20 and under	42 14.05	45 15.05	87 29.10
21 to 40	47 15.72	60 20.07	107 35.79
41-60	30 10.03	37 12.37	67 22.41
61 and up	19 6.35	19 6.35	38 12.71
Total	138 46.15	161 53.85	299 100.00

The Southwest data shows there were a higher percentage of aged “21 to 40” (35.79%) than the other age groups. Second highest percentage were the “20 and under” group (29.1%). Nationally, the percentage of cases were higher in the “41-60” group (19.96%) followed by the “21 to 40” group (14.14%). In the age group most affected in SW Ohio, there was a higher percentage difference between males and females. Also noted was the SW Ohio Regional trend of greater percentage of males affected versus females overall. Nationally, the data showed almost no difference between the percentage of females (50.78%) vs. males (49.22%).

Race Females				
Race	Frequency	Percent	Cumulative Frequency	Cumulative Percent
American Indian	1	0.72	1	0.72
Asian	1	0.72	2	1.45
Black	20	14.49	22	15.94
Hispanic/Latino	9	6.52	31	22.46
Other	1	0.72	32	23.19
Refused to Answer	1	0.72	33	23.91
White	105	76.09	138	100.00

Race Males				
Race	Frequency	Percent	Cumulative Frequency	Cumulative Percent
American Indian	1	0.63	1	0.63
Asian	3	1.88	4	2.50
Black	18	11.25	22	13.75
Hispanic/Latino	10	6.26	32	20.00
Other	2	1.25	34	21.25
Refused to Answer	4	2.50	38	23.75
Unknown	1	0.63	39	24.38
White	121	75.63	160	100.00

Race Males and Females				
Race	Frequency	Percent	Cumulative Frequency	Cumulative Percent
American Indian	2	0.67	2	0.67
Asian	4	1.34	6	2.01
Black	38	12.75	44	14.77
Hispanic/Latino	19	6.38	63	21.14
Other	3	1.01	66	22.15
Refused to Answer	5	1.68	71	23.83
Unknown	1	0.34	72	24.16
White	226	75.84	298	100.00

There were no significant differences between Regional and National data regarding Percentages of Race.

Epidemiology Risk Factors

Previous survey participants were asked to answer a series of epidemiological risk question.

Question 1: Is the patient part of a health care worker cluster of severe respiratory illness?

Question 2: Is the patient a laboratory or health care worker with potential exposure to avian influenza (H5N1)?

Question 3: Did the patient travel to an area with documented avian influenza (H5N1) in birds or humans?

Question 4: In the 10 days prior to illness onset, did the patient visit or stay in the same household with a traveler returning from a country with H5N1 in poultry or humans who developed severe respiratory illness or severe respiratory illness or severe flu-like illness?

Question 5: Did the patient have close contact (3 feet) with anyone with severe respiratory or flu-like illness?

Questions 1-5 are represented in the following table.

Table of Epidemiological Risk Factors by Sex						
Sex(Sex)	Epidemiological Risk Factor					Total
Frequency	1	2	3	4	5	
Female	5	16	5	7	46	79
Male	6	16	7	6	37	72
Total	11	32	12	13	83	151
Frequency Missing = 148						
Table of Epidemiological Risk Factor Percent by Sex based on N in gender, Female = 138, Male = 161						
Sex(Sex)	“yes” to Epidemiological Risk Factor					Total
Frequency	1	2	3	4	5	
Female						79
	3.62%	11.59%	3.62%	5.07%	33.33%	
Male						72
	3.73%	9.94%	4.35%	3.73%	22.98%	
Total						151
	3.68%	10.70%	4.01%	4.35%	27.76%	
Frequency Missing = 148						

National data indicates that question 1 and question 5 both were answered yes more often than in SW Ohio. This current trend in SW Ohio may be due to the more recent occurrence of pandemic influenza in our region.

Fever Rates

Fever Female				
Fever	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	19	13.77	19	13.77
yes	119	86.23	138	100.00

Fever Male				
Fever	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	7	4.35	7	4.35
yes	154	95.65	161	100.00

For those with fever (female), was Temperature>38_C/100_4_F_				
Temperature __38_C_100_4_F_	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	25	21.01	25	21.01
yes	94	78.99	119	100.00

For those with fever (male), was Temperature>38_C/100_4_F_				
Temperature __38_C__100_4_F_	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	35	22.73	35	22.73
yes	119	77.27	154	100.00

There was no significant difference regionally versus nationally regarding the percentage of individuals with fever. There was a slightly higher percentage of those having a fever > 100.4 F nationally than regionally (89.57% of males and 88.99% of females in the national data).

Clinical Symptoms

Chills Female				
Chills	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	75	54.35	75	54.35
yes	63	45.65	138	100.00

Chills Male				
Chills	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	87	54.04	87	54.04
yes	74	45.96	161	100.00

Chills (male and female combined)				
Chills	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	162	54.18	162	54.18
yes	137	45.82	299	100.00

Sore Throat Female				
Sore Throat	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	42	30.43	42	30.43
yes	96	69.57	138	100.00
Sore Throat Male				
Sore Throat	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	51	31.68	51	31.68
yes	110	68.32	161	100.00
Sore Throat (male and female combined)				
Sore Throat	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	93	31.10	93	31.10
yes	206	68.90	299	100.00

Wheezing Female				
Wheezing	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	50	36.23	50	36.23
yes	88	63.77	138	100.00
Wheezing Male				
Wheezing	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	69	42.86	69	42.86
yes	92	57.14	161	100.00
Wheezing (male and female combined)				
Wheezing	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	119	39.80	119	39.80
yes	180	60.20	299	100.00

Nausea vomiting Female				
Nausea vomiting	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	119	86.23	119	86.23
yes	19	13.77	138	100.00
Nausea vomiting Male				
Nausea vomiting	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	136	84.47	136	84.47
yes	25	15.53	161	100.00
Nausea vomiting (male and female combined)				
Nausea vomiting	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	255	85.28	255	85.28
yes	44	14.72	299	100.00

Lethargy Female				
Lethargy	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	18	13.04	18	13.04
yes	120	86.96	138	100.00
Lethargy Male				
Lethargy	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	24	14.91	24	14.91
yes	137	85.09	161	100.00
Lethargy (male and female combined)				
Lethargy	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	42	14.05	42	14.05
yes	257	85.95	299	100.00

Rigors Female				
Rigors	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	106	76.81	106	76.81
yes	32	23.19	138	100.00
Rigors Male				
Rigors	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	132	81.99	132	81.99
yes	29	18.01	161	100.00
Rigors (male and female combined)				
Rigors	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	238	79.60	238	79.60
yes	61	20.40	299	100.00

Runny Nose/Congestion Female				
Runny Nose Congestion	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	17	12.32	17	12.32
yes	121	87.68	138	100.00
Runny Nose/Congestion Male				
Runny Nose Congestion	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	29	18.01	29	18.01
yes	132	81.99	161	100.00
Runny Nose/Congestion (male and female combined)				
Runny Nose Congestion	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	46	15.38	46	15.38
yes	253	84.62	299	100.00

Shortness of breath Female				
Shortness of breath	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	49	35.51	49	35.51
yes	89	64.49	138	100.00
Shortness of breath Male				
Shortness of breath	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	64	39.75	64	39.75
yes	97	60.25	161	100.00
Shortness of breath (male and female combined)				
Shortness of breath	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	113	37.79	113	37.79
yes	186	62.21	299	100.00

Diarrhea Female				
Diarrhea	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	111	80.43	111	80.43
yes	27	19.57	138	100.00
Diarrhea Male				
Diarrhea	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	127	78.88	127	78.88
yes	34	21.12	161	100.00
Diarrhea (male and female combined)				
Diarrhea	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	238	79.60	238	79.60
yes	61	20.40	299	100.00

Myalgia Female				
Myalgia	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	42	30.43	42	30.43
yes	96	69.57	138	100.00
Myalgia Male				
Myalgia	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	54	33.54	54	33.54
yes	107	66.46	161	100.00
Myalgia (male and female combined)				
Myalgia	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	96	32.11	96	32.11
yes	203	67.89	299	100.00

Cough productive of sputum Female				
Cough productive of sputum	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	79	57.25	79	57.25
yes	59	42.75	138	100.00
Cough productive of sputum Male				
Cough productive of sputum	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	101	62.73	101	62.73
yes	60	37.27	161	100.00
Cough productive of sputum (male and female combined)				
Cough productive of sputum	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	180	60.20	180	60.20
yes	119	39.80	299	100.00

Headache Female				
Headache	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	40	28.99	40	28.99
yes	98	71.01	138	100.00
Headache Male				
Headache	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	62	38.51	62	38.51
yes	99	61.49	161	100.00
Headache (male and female combined)				
Headache	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	102	34.11	102	34.11
yes	197	65.89	299	100.00

Cough Female				
Cough	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	23	16.67	23	16.67
yes	115	83.33	138	100.00
Cough Male				
Cough	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	25	15.53	25	15.53
yes	136	84.47	161	100.00
Cough (male and female combined)				
Cough	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	48	16.05	48	16.05
yes	251	83.95	299	100.00

Ear Pain Female				
Ear Pain	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	127	92.03	127	92.03
yes	11	7.97	138	100.00
Ear Pain Male				
Ear Pain	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	155	96.27	155	96.27
yes	6	3.73	161	100.00
Ear Pain (male and female combined)				
Ear Pain	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	282	94.31	282	94.31
yes	17	5.69	299	100.00

Apnea Female				
Apnea	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	132	95.65	132	95.65
yes	6	4.35	138	100.00
Apnea Male				
Apnea	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	159	98.76	159	98.76
yes	2	1.24	161	100.00
Apnea (male and female combined)				
Apnea	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	291	97.32	291	97.32
yes	8	2.68	299	100.00

Regional data show more individuals experiencing diarrhea and cough than that of the national data. Lethargy and running nose/congestion were most reported for regional as well as national data, although runny nose and congestion percentages were lower in SW Ohio. (Data on symptoms of altered mental status, conjunctivitis, and abdominal pain are not included in SW Ohio Regional data).

Complications

Chest pain Female				
Chest pain	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	94	68.12	94	68.12
yes	44	31.88	138	100.00
Chest pain Male				
Chest pain	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	108	67.08	108	67.08
yes	53	32.92	161	100.00
Chest pain (male and female combined)				
Chest pain	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	202	67.56	202	67.56
yes	97	32.44	299	100.00

Encephalitis Female				
Encephalitis	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	134	97.10	134	97.10
yes	4	2.90	138	100.00
Encephalitis Male				
Encephalitis	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	154	95.65	154	95.65
yes	7	4.35	161	100.00
Encephalitis				
Encephalitis	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	288	96.32	288	96.32
yes	11	3.68	299	100.00

Myocarditis Female				
Myocarditis	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	98	71.01	98	71.01
yes	40	28.99	138	100.00
Myocarditis Male				
Myocarditis	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	109	67.70	109	67.70
yes	52	32.30	161	100.00
Myocarditis (male and female combined)				
Myocarditis	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	207	69.23	207	69.23
yes	92	30.77	299	100.00

Sepsis Female				
Sepsis	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	127	92.03	127	92.03
yes	11	7.97	138	100.00
Sepsis Male				
Sepsis	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	149	92.55	149	92.55
yes	12	7.45	161	100.00
Sepsis (male and female combined)				
Sepsis	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	276	92.31	276	92.31
yes	23	7.69	299	100.00

Diaphoresis Female				
Diaphoresis	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	130	94.20	130	94.20
yes	8	5.80	138	100.00
Diaphoresis Male				
Diaphoresis	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	151	93.79	151	93.79
yes	10	6.21	161	100.00
Diaphoresis (male and female combined)				
Diaphoresis	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	281	93.98	281	93.98
yes	18	6.02	299	100.00

Meningitis Female				
Meningitis	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	111	80.43	111	80.43
yes	27	19.57	138	100.00
Meningitis Male				
Meningitis	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	131	81.37	131	81.37
yes	30	18.63	161	100.00
Meningitis (male and female combined)				
Meningitis	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	242	80.94	242	80.94
yes	57	19.06	299	100.00

Seizures Female				
Seizures	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	135	97.83	135	97.83
yes	3	2.17	138	100.00
Seizures Male				
Seizures	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	154	95.65	154	95.65
yes	7	4.35	161	100.00
Seizures (male and female combined)				
Seizures	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	289	96.66	289	96.66
yes	10	3.34	299	100.00

Bacterial Pneumonia Female				
Bacterial Pneumonia	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	122	88.41	122	88.41
yes	16	11.59	138	100.00
Bacterial Pneumonia Male				
Bacterial Pneumonia	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	142	88.20	142	88.20
yes	19	11.80	161	100.00
Bacterial Pneumonia (male and female combined)				
Bacterial Pneumonia	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	264	88.29	264	88.29
yes	35	11.71	299	100.00

The Southwest Ohio region appears to have a higher percentage of chest pain and bacterial pneumonia than does the National frequency. The regional data show fewer complaints of diaphoresis than the national data. (Regional data on Reye Syndrome and renal failure are not included in this report).

Antiviral effectiveness

Amantadine Female				
Amantadine	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	135	97.83	135	97.83
yes	3	2.17	138	100.00
Amantadine Male				
Amantadine	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	153	95.03	153	95.03
yes	8	4.97	161	100.00

Amantadine (male and female combined)				
Amantadine	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	288	96.32	288	96.32
yes	11	3.68	299	100.00

Table of Amantadine by Death				
Amantadine(Amantadine)	Death(Death)		Total	
	no	yes		
Frequency Row Pct				
no	184 63.89	104 36.11	288	
yes	4 36.36	7 63.64	11	
Total	188	111	299	

Rimantadine Female				
Rimantadine	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	134	97.10	134	97.10
yes	4	2.90	138	100.00
Rimantadine Male				
Rimantadine	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	158	98.14	158	98.14
yes	3	1.86	161	100.00
Rimantadine (male and female combined)				
Rimantadine	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	292	97.66	292	97.66
yes	7	2.34	299	100.00
Table of Rimantadine by Death				
Rimantadine(Rimantadine)		Death(Death)		Total
Frequency	Row Pct	no	yes	
no		182 62.33	110 37.67	292
yes		6 85.71	1 14.29	7
Total		188	111	299

Oseltamivir Female				
Oseltamivir	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	127	92.03	127	92.03
yes	11	7.97	138	100.00

Oseltamivir Male				
Oseltamivir	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	148	91.93	148	91.93
yes	13	8.07	161	100.00

Oseltamivir (male and female combined)				
Oseltamivir	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	275	91.97	275	91.97
yes	24	8.03	299	100.00

Table of Oseltamivir by Death				
Oseltamivir(Oseltamivir)		Death(Death)		Total
Frequency	Row Pct	no	yes	
no		168 61.09	107 38.91	275
yes		20 83.33	4 16.67	24
Total		188	111	299

Zanamavir Female				
Zanamavir	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	131	94.93	131	94.93
yes	7	5.07	138	100.00

Zanamavir Male				
Zanamavir	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	151	93.79	151	93.79
yes	10	6.21	161	100.00
Zanamavir (male and female combined)				
Zanamavir	Frequency	Percent	Cumulative Frequency	Cumulative Percent
no	282	94.31	282	94.31
yes	17	5.69	299	100.00

Table of Zanamavir by Death				
Zanamavir(Zanamavir)		Death(Death)		Total
Frequency	Row Pct	no	yes	
no		177 62.77	105 37.23	282
yes		11 64.71	6 35.29	17
Total		188	111	299

Table of Death by drug name Female					
Death(Death)	Drug name				Total
Frequency	Amantadine	Oseltamivi	Rimantadin	Zanamavir	
no	2	9	3	5	19
yes	1	2	1	2	6
Total	3	11	4	7	25

Statistics for Death by drug name Female

Statistic	DF	Value	Prob
Chi-Square	3	0.4298	0.9340
Likelihood Ratio Chi-Square	3	0.4294	0.9341
Mantel-Haenszel Chi-Square	1	0.0324	0.8572
Phi Coefficient		0.1311	

Statistic	DF	Value	Prob
Contingency Coefficient		0.1300	
Cramer's V		0.1311	
WARNING: 75% of the cells have expected counts less than 5. Chi-Square may not be a valid test.			

Sample size 25

Table of Death by drug name Male					
Death(Death)	Drug name				Total
Frequency	Amantadine	Oseltamivi	Rimantadin	Zanamavir	
no	2	11	3	6	22
yes	6	2	0	4	12
Total	8	13	3	10	34

Statistics for Death by drug name Male

Statistic	DF	Value	Prob
Chi-Square	3	9.5125	0.0232
Likelihood Ratio Chi-Square	3	10.5289	0.0146
Mantel-Haenszel Chi-Square	1	1.0391	0.3080
Phi Coefficient		0.5289	
Contingency Coefficient		0.4676	
Cramer's V		0.5289	
WARNING: 63% of the cells have expected counts less than 5. Chi-Square may not be a valid test.			

Sample size 34

Table of Death by drug name					
Death(Death)	Drug name				Total
Frequency	Amantadine	Oseltamivi	Rimantadin	Zanamavir	
no	4	20	6	11	41
yes	7	4	1	6	18
Total	11	24	7	17	59

Statistics for Death by drug name

Statistic	DF	Value	Prob
Chi-Square	3	8.9157	0.0304
Likelihood Ratio Chi-Square	3	8.7195	0.0333
Mantel-Haenszel Chi-Square	1	0.6514	0.4196
Phi Coefficient		0.3887	
Contingency Coefficient		0.3623	
Cramer's V		0.3887	
WARNING: 38% of the cells have expected counts less than 5. Chi-Square may not be a valid test.			

The Southwest region saw a greater percentage of deaths in males who took Amantadine as compared to the percentage of deaths nationally. Rimantadine and Oseltamirvir appeared to be more effective. Oseltamirvir also seemed effective nationally.

Case fatality rate

Table of Death by age group Female					
Death(Death)	Age group				Total
Frequency Percent	20 and under	21 to 40	41-60	61 and up	
no	29 21.01	33 23.91	21 15.22	13 9.42	96 69.57
yes	13 9.42	14 10.14	9 6.52	6 4.35	42 30.43
Total	42 30.43	47 34.06	30 21.74	19 13.77	138 100.00

Statistics for death by age group Female

Statistic	DF	Value	Prob
Chi-Square	3	0.0290	0.9987
Likelihood Ratio Chi-Square	3	0.0290	0.9987
Mantel-Haenszel Chi-Square	1	0.0002	0.9874
Phi Coefficient		0.0145	
Contingency Coefficient		0.0145	
Cramer's V		0.0145	

Sample size 138

Table of Death by age group Male					
Death(Death)	Age group				Total
Frequency Percent	20 and under	21 to 40	41-60	61 and up	
no	26 16.15	28 17.39	25 15.53	13 8.07	92 57.14
yes	19 11.80	32 19.88	12 7.45	6 3.73	69 42.86
Total	45 27.95	60 37.27	37 22.98	19 11.80	161 100.00

Statistics for death by age group Male

Statistic	DF	Value	Prob
Chi-Square	3	5.3250	0.1495
Likelihood Ratio Chi-Square	3	5.3704	0.1466
Mantel-Haenszel Chi-Square	1	1.6437	0.1998
Phi Coefficient		0.1819	
Contingency Coefficient		0.1789	
Cramer's V		0.1819	

Sample size 161

Table of Death by age group					
Death(Death)	Age group				Total
Frequency Percent	20 and under	21 to 40	41-60	61 and up	
no	55 18.39	61 20.40	46 15.38	26 8.70	188 62.88
yes	32 10.70	46 15.38	21 7.02	12 4.01	111 37.12
Total	87 29.10	107 35.79	67 22.41	38 12.71	299 100.00

Statistics for death by age group

Statistic	DF	Value	Prob
Chi-Square	3	3.0418	0.3852
Likelihood Ratio Chi-Square	3	3.0477	0.3843
Mantel-Haenszel Chi-Square	1	0.8767	0.3491
Phi Coefficient		0.1009	
Contingency Coefficient		0.1004	
Cramer's V		0.1009	

Sample size 299

The SW Ohio Region has seen a greater percentage of deaths over the national data. The percentage of male deaths in the “21 to 40” age group was quite a bit higher than the percentage of females of the same age range as well as the percentage of males and females in the national data.

Continued Hospitalization Rates

	Female	Male	Combined
Still Hospitalized	29 21.01%	30 18.63%	59 19.73%

SW Ohio region has a fewer percent of males that are “still hospitalized” at the end of the survey period than the national percent. (national data showed 22.45% remained in the hospital) Otherwise, the SW Ohio data was comparable to the national data.

Time between onset and antiviral administration

Statistics											
Variable	Death	N	Lower CL Mean	Mean	Upper CL Mean	Lower CL Std Dev	Std Dev	Upper CL Std Dev	Std Err	Minimum	Maximum
drugtime	0	42	9.4771	10.786	12.094	3.4554	4.1995	5.3551	0.648	2	22
drugtime	1	20	15.685	17.95	20.215	3.6802	4.8393	7.0681	1.0821	9	24
drugtime	Diff (1-2)		-9.562	-7.164	-4.767	3.7446	4.4121	5.3715	1.1987		

Individuals who lived had a significant shorter time lapse between symptom onset and administration of antiviral medication.

SW Ohio trends are as follows:

- Age group 21-40 more effected
- Males more effected than females
- More individuals reported not having close contact with an ill individual compared to the national average as well as having fewer healthcare worker clusters of illness
- Of those reporting fever, the fever was less than 100.4 F
- Lethargy and Running nose/congestion were the most reported symptoms
- Chest pain and bacterial pneumonia were the most reported complications
- Oseltamivir and Rimantadine seemed most effective while Amanatadine was not effective
- Faster administration of the antivirals had a positive effect on mortality rate