Office régional de la santé Assiniboine Regional Health Authority

PANDEMIC INFLUENZA RESPONSE PLAN

SECTION THREE – RESPONSE LEVELS
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PANDEMIC PHASES / RESPONSE LEVELS

World Health Organization (WHO)

The WHO classification of pandemic phases is used universally. The WHO collects and analyzes data on the occurrence of influenza viruses around the world and alerts national health authorities of the global health situation. This information is provided to assist countries in determining the appropriate level of response that is required. In April 2005, the WHO revised its classification for influenza pandemics. Pandemics are now organized under three time-periods, with phases from 1 – 6.

Interpandemic Period

Phase 1: No new influenza virus subtypes have been detected in humans. An influenza virus subtype that has caused human infection may be present in animals. If present in animals, the risk of human infection or disease is considered to be low.

Phase 2: No new influenza virus subtypes have been detected in humans. However, a circulating animal virus subtype poses a substantial risk of human disease

Pandemic Alert Period

Phase 3: Human infection(s) with a new subtype, but no human-to-human spread, or at most rare instances of spread to a close contact.

Phase 4: Small cluster(s) with limited human-to-human transmission but spread is highly localized, suggesting that the virus is not well adapted to humans

Phase 5 Larger cluster(s) with limited human-to-human spread still localized, suggesting that the virus is becoming increasingly better adapted to humans, but may not yet be fully transmissible (substantial pandemic risk).

Pandemic Period

Phase 6: Pandemic; increased and sustained transmission in general population.

Canadian Pandemic Phases

Subsequent to the WHO releasing their new classification of pandemic phases, the Public Health Agency of Canada felt there was a need to update the current Canadian pandemic phases.

Prior to any changes, Canada used the same phases as the WHO except they were intended to be used to describe the situation in Canada. With the new emphasis on the Pandemic Alert Period and the fact that the first cases occurring in Canada may be managed differently depending whether or not a pandemic has been declared when the cases are detected, there was a need to re-consider the Canadian Pandemic Phase terminology. The new terminology is intended to be clear, concise and an accurate summary of the overall situation in Canada and globally.

On June 28, 2005 the Canadian Pandemic Influenza Committee accepted the following new terminology for the Canadian Pandemic Influenza Phases. In order to facilitate consistency with the WHO phases and also to tie in a descriptor of national levels of novel/new influenza subtype activity in Canada, the nomenclature is as follows:

WHO Phase # Canadian Activity Level

Example: 3.0

The WHO phase number reflects the international risk or activity level with respect to the new influenza virus (ie. phases 1-6) and is determined by the WHO. The Canadian activity level indicator noted after the decimal point would likely be determined by the Chief Public Health Officer and would summarize the observed new influenza virus activity in Canada. It is proposed that these levels be classified as follows:

0- No activity observed in Canada
1- Sporadic cases observed in Canada
2- Localized or widespread activity observed in Canada.

Canadian Pandemic Phases and Examples

Interpandemic Period

Phase	Definition	Example(s)
1.0	No new virus subtypes have been detected in humans. An influenza virus subtype that has caused human infection may be present in animals located outside of Canada. If present in animals, the risk of human infection/disease is considered to be low.	Low pathogenic H7N3 detected in a migratory bird outside of Canada.
1.1	No new virus subtypes have been detected in humans. An influenza virus subtype that has caused human infection is present in animals in Canada but the risk of human infection/disease is considered to be low.	Low pathogenic H7N3 detected in a migratory bird in Canada.
2.0	No new virus subtypes have been detected in humans. However, an animal influenza virus subtype that poses substantial risk to humans is circulating in animals located outside of Canada.	Highly pathogenic H5N1 detected in avian flocks outside of Canada.
2.1	No new virus subtypes have been detected in humans. However, an animal influenza virus subtype that poses substantial risk to humans is circulating in animals in Canada.	Highly pathogenic H5N1 detected in avian flocks in Canada

Pandemic Alert Period

Phase	Definition	Example(s)
3.0	Outside Canada human infection(s) with a new subtype are occurring, but no human-to-human spread, or at most rare instances of spread to a close contact has been observed. No cases identified in Canada.	Outside Canada sporadic human cases are occurring in connection to an avian outbreak.
3.1	Sporadic human infection(s) with a new subtype detected in Canada. Virus is not known to be spreading from human-to-human, or at most rare instances of spread to close contact have been observed.	Case imported into Canada from area outside Canada experiencing an avian outbreak. Case arising in Canada "de novo", OR in association with an avian outbreak in Canada.
4.0	Outside Canada small cluster(s) with limited human-to-human transmission are occurring but spread is highly localized, suggesting that the virus is not well adapted to humans. No cases identified with these cluster(s) have been detected in Canada.	Outside Canada small cluster(s) of human cases are occurring in connection to an avian outbreak.

Phase	Definition	Example(s)
4.1	Sporadic infection(s) with virus that has demonstrated limited human-to-human transmission detected in Canada. No cluster(s) identified in Canada.	Detection of an imported case in Canada that is infected with the virus known to be causing small clusters of human cases outside Canada.
4.2	Small localized clusters with limited human-to-human transmission are occurring in Canada but spread is highly localized, suggesting that the virus is not well adapted to humans.	Detection of an imported case in Canada that is infected with the virus known to be causing small clusters of human cases outside Canada.
5.0	Outside Canada larger cluster(s) are occurring but human-to-human spread still localized, suggesting that virus is becoming increasingly better adapted to humans but may not yet be fully transmissible (substantial pandemic risk). No cases identified with these clusters have been detected in Canada.	Outside Canada larger cluster(s) of human cases are occurring in connection to an avian outbreak.
5.1	Sporadic infection(s) with virus that is better adapted to humans detected in Canada. No cluster(s) identified in Canada.	Detection of an imported case in Canada that is infected with the virus known to be causing larger clusters of human cases outside Canada.
5.2	Larger localized cluster(s) with limited human-to-human transmission are occurring in Canada but human-to-human spread still localized, suggesting that virus is becoming increasingly better adapted to humans but may not yet be fully transmissible (substantial pandemic risk).	Detection of a large but localized cluster of cases in Canada linked to an imported case OR from cases arising in Canada.

Pandemic Period

Phase	Definition	Example(s)
6.0	Outside Canada increased and sustained transmission in general population has been observed. No cases identified with the affected populations have been detected in Canada.	Countries outside of Canada have reported sustained transmission of the new virus in their populations.
6.1	Sporadic infection(s) with the pandemic virus detected in Canada. No cluster(s) identified in Canada.	Detection of an imported case in Canada that is infected with the pandemic virus.
6.2	Localized or widespread pandemic activity observed in Canadian population.	Large numbers of clinical cases being rapidly identified with no history of travel to an affected area.

Assiniboine Regional Health Authority: Level of Response

The Assiniboine Regional Health Authority will continually monitor both the declared WHO Pandemic Phase as well as Canada's level of Pandemic Influenza activity. The level of response at a regional level will be guided by these two factors in addition to the ARHA's ability to maintain programs and services as the situation escalates.

As outlined in the ARHA Disaster and Emergency Response Plan, when any emergency or disaster arises that exceeds what can reasonably be managed with normal day to day operations, the Corporate Incident Command System (ICS) and / or Facility ICS shall be activated.

In the event of a pandemic event, affecting the ARHA, either directly or indirectly, the Chief Executive Officer (Incident Commander) with input from the Emergency Preparedness Committee as required will implement the Corporate ICS. The Command Section and Section Chiefs shall be immediately briefed on the situation and planning shall be implemented to manage the projected scope of the pandemic. Corporate ICS positions shall be further activated as required with attention to briefing Program and Area Managers regarding the situation and the Pandemic Action Plan.

Subsequently, the CEO (IC) shall activate Facility ICS as necessary across the region to establish lines of communication in regards to reporting and receiving information to / from the Corporate ICS and Facility ICS levels.

Facility ICS activation will depend on the scope of the pandemic event and its direct impact on the ARHA. At minimum, each local IC, Command Section and Section Chiefs should be activated to receive information regarding the event. This will allow for an effective means to communicate information to the general staff levels where required as well as to assess the situation locally and provide that information to the Corporate ICS level.

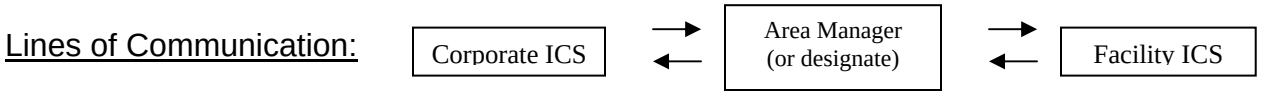
Activation of additional staff to the Facility ICS will be determined by a combination of factors including the following:

- Local IC requirement for additional support due to the pandemic event
- Impact on the local site due to other emergencies
- Direction received from Corporate ICS due to a regional plan to manage the pandemic event or other circumstances

Assiniboine Regional Health Authority: Level of Response Cont'd

The Facility ICS will be responsible for reporting events that may be relevant to the planning and preparation or receiving of clients in respect to the event or other circumstances. The 'Facility Status Report-F5 (located Section 8- Forms ARHA Disaster & Emergency Response Plan), shall be used to report the status of the facility in regard to managing the event whether pandemic or otherwise. Staff will utilize task sheets and follow additional guidelines as required.

Lines of communication shall be maintained through designated reporting routes to ensure the effective command and coordination required to manage the event.



Estimated Impact of Pandemic Influenza on ARHA

The impact of the next influenza is difficult to predict and is dependent on how virulent the virus is and how rapidly it spreads from population to population. To further complicate the ability to predict impact of a pandemic is the fact that the global health community has not experienced an influenza pandemic in recent years, therefore questions about surge capacity of institutions and the effects of modern medical treatment in this type of environment remain difficult to answer.

In an effort to provide some estimation of impact, Manitoba Health & Healthy Living (MHHL) has used two internationally accepted influenza modeling programs developed in the Center for Disease Control in Atlanta, Georgia, USA by Dr. M. Meltzer. These programs, FLUAID and FLUSURGE, allow planning at a strategic level and give a minimum, maximum and 'most likely' scenario information. The models were adapted to meet specific MHHL planning needs. The computer based model is based upon 3 historical periods, 1918: Spanish Influenza, 1957: Asian Influenza, and 1968: Hong Kong Influenza. MHHL has utilized this modeling tool to create a Manitoba specific prediction of how the next pandemic will affect Manitoba as a whole. This has helped to guide planning at a provincial level.

Furthermore, MHHL has instructed regional health authorities to use the same modeling tool to help guide planning at a regional level. Utilizing the modeling tool, the table below illustrates the estimated impact of a pandemic on Canada, Manitoba and the ARHA.

	CANADA	MANITOBA		ARHA	
		LOW	HIGH	LOW	HIGH
POPULATION	31,612,895	1,186,386		67,819	
PEOPLE CLINICALLY ILL (35% Gross Attack Rate)	11,064,513	415,235		23,737	
PEOPLE NEEDING OUTPATIENT CARE	2-5 million	17,3586	300,528	9,923	17,180
PEOPLE NEEDING HOSPITALIZATION	34,000 – 138,000	1,841	6,291	105	360
DEATH	11,000 – 58,000	677	1,900	39	109

Definitions:
Population – ARHA numbers are based on 2008 MHHL Population report statistics. Canada and Manitoba numbers are based on Statistics Canada 2006 Census Report.
Gross Attack Rate – The percentage of the population that becomes clinically ill due to influenza. MB Health uses a 35% Gross Attack Rate which is the accepted pan-Canadian planning rate.
Clinical Illness – defined as a case of influenza that causes some measurable economic impact, such as one half day of work lost or a visit to a physician's office.
People Needing Outpatient Care – those seeking medical care in emergency rooms, physician clinics, primary care settings etc.

Surge Impact

In ARHA we have enhanced our planning ability by combining data from the flu modeling tool and other regional statistics collected from a variety of sources. All of this information has been compiled into the Surge Impact Chart (Surge Impact Tool 3.1) as found on the following pages. It is recognized that regardless of the data collected, it is only estimation, and numbers may vary based upon the specific strain and impact of a novel influenza virus.

Surge Impact Chart (Tool 3.1)

The chart lays out the estimated eight week impact on a day by day basis. The chart provides for both “maximums” and “most likely” impacts of the pandemic on the region and includes information on: hospital admissions, inpatient numbers, and deaths, places of death and bed availability.

The intent of the chart is to depict the combination of the effects of pandemic influenza and current regional operational statistics to provide for the numbers of inpatients, admissions, deaths and bed availability.

Surge Impact Chart (Tool 3.1) Definitions:

Pandemic numbers are based on the MHHL flu modeling tool.

- **Present numbers** are based upon the information listed on page 3-9.

Data	Values	Description And Source	Last Updated
Population			
0-19	17053	Population numbers from MB Health Population report 2008	CGW, 25/06/2009
20-64	37556		
>65	13210		
Total Bed Numbers			
	371	Unknown	CGW, 25/06/2009
ARHA Deaths Per Day			
Most Likely	2.16	MB Vital Statistics 2006 (Most Recent)	CGW, 25/06/2009
Maximum	2.38	MB Vital Statistics 2004-2006 (Highest Annual Value)	CGW, 25/06/2009
Deaths In ARHA Facilities / Day			
Most Likely	1.55	ARHA MIS 2005/06-2008/09 (Includes PCH Deaths - Average)	CGW, 25/06/2009
Maximum	1.64	ARHA MIS 2005/06-2008/09 (Includes PCH Deaths - Highest Annual Value)	
ARHA Deaths Other / Day			
Most Likely	0.61	MB Vital Statistics 2006 / ARHA MIS 2005/06-2008/09	CGW, 25/06/2009
Maximum	0.74	MB Vital Statistics 2004-2006 / ARHA MIS 2005/06-2008/09	
ARHA Inpatients / Day			
Most Likely	184	ARHA MIS 2005/06-2008/09 (Average)	CGW, 25/06/2009
Maximum	190	ARHA MIS 2005/06-2008/09 (Highest Annual Value)	CGW, 25/06/2009
Hospital Admissions / Day			
Most Likely	17.0	ARHA MIS 2005/06-2008/09 (Average)	CGW, 25/06/2009
Maximum	18.4	ARHA MIS 2005/06-2008/09 (Highest Annual Value)	CGW, 25/06/2009
Pandemic Attack Rate			
	35%	Flu Modelling Tool	CGW, 25/06/2009

Use this sheet to update Flu modelling - *DO NOT* change any other sheet

Surge Impact

WEEK ONE

	Day 1			Beds	Day 2			Beds	Day 3			Beds	Day 4			Beds	Day 5			Beds	Day 6			Beds	Day 7			Beds
	Present	Pandemic	Total	Remain	Present	Pandemic	Total	Remain	Present	Pandemic	Total	Remain	Present	Pandemic	Total	Remain	Present	Pandemic	Total	Remain	Present	Pandemic	Total	Remain	Present	Pandemic	Total	Remain
Hospital Admit Daily																												
Most Likely	17.0	0.6	18		17.0	1.2	18.2		17.0	1.8	18.8		17.0	2.4	19.4		17.0	3.0	20.0		17.0	3.6	20.6		17.0	4.2	21.2	
Maximum	18.4	0.8	19		18.4	1.5	19.9		18.4	2.3	20.7		18.4	3.1	21.5		18.4	3.9	22.3		18.4	4.6	23.0		18.4	5.4	23.8	
Inpatients																												
Most Likely	184	2	186	185	184	5	189	182	184	7	191	180	184	10	194	177	184	12	196	175	184	14	198	173	184	17	201	170
Maximum	190	3	193	178	190	6	196	175	190	9	199	172	190	12	202	169	190	15	205	166	190	18	208	163	190	22	212	159
Deaths by Day																												
Most Likely	2.16	0.06	2.22		2.16	0.12	2.28		2.16	0.18	2.34		2.16	0.25	2.41		2.16	0.31	2.47		2.16	0.37	2.53		2.16	0.43	2.59	
Maximum	2.38	0.09	2.47		2.38	0.18	2.56		2.38	0.28	2.66		2.38	0.37	2.75		2.38	0.46	2.84		2.38	0.55	2.93		2.38	0.65	3.03	
Places of Death																												
At Hosp - Most Likely	1.55	0.04	1.59		1.55	0.09	1.64		1.55	0.13	1.68		1.55	0.17	1.72		1.55	0.22	1.77		1.55	0.26	1.81		1.55	0.30	1.85	
At Hosp - Maximum	1.64	0.06	1.70		1.64	0.13	1.77		1.64	0.19	1.83		1.64	0.26	1.90		1.64	0.32	1.96		1.64	0.39	2.03		1.64	0.45	2.09	
Other - Most Likely	0.61	0.02	0.63		0.61	0.04	0.65		0.61	0.06	0.67		0.61	0.07	0.68		0.61	0.09	0.70		0.61	0.11	0.72		0.61	0.13	0.74	
Other - Maximum	0.74	0.03	0.77		0.74	0.06	0.80		0.74	0.08	0.82		0.74	0.11	0.85		0.74	0.14	0.88		0.74	0.17	0.91		0.74	0.19	0.93	

Surge Impact

WEEK TWO

	Day 1			Beds	Day 2			Beds	Day 3			Beds	Day 4			Beds	Day 5			Beds	Day 6			Beds	Day 7			Beds
	Present	Pandemic	Total	Remain	Present	Pandemic	Total	Remain	Present	Pandemic	Total	Remain	Present	Pandemic	Total	Remain	Present	Pandemic	Total	Remain	Present	Pandemic	Total	Remain	Present	Pandemic	Total	Remain
Hospital Admit Daily																												
Most Likely	17.0	3.2	20		17.0	3.5	20.5		17.0	3.7	20.7		17.0	4.0	21.0		17.0	4.3	21.3		17.0	4.6	21.6		17.0	4.9	21.9	
Maximum	18.4	4.1	22		18.4	4.4	22.8		18.4	4.8	23.2		18.4	5.1	23.5		18.4	5.5	23.9		18.4	5.8	24.2		18.4	6.2	24.6	
Inpatients																												
Most Likely	184	19	203	168	184	20	204	167	184	22	206	165	184	23	207	164	184	25	209	162	184	27	211	160	184	28	212	159
Maximum	190	24	214	157	190	26	216	155	190	28	218	153	190	30	220	151	190	32	222	149	190	34	224	147	190	36	226	145
Deaths by Day																												
Most Likely	2.16	0.49	2.65		2.16	0.55	2.71		2.16	0.62	2.78		2.16	0.68	2.84		2.16	0.74	2.90		2.16	0.80	2.96		2.16	0.86	3.02	
Maximum	2.38	0.74	3.12		2.38	0.83	3.21		2.38	0.92	3.30		2.38	1.02	3.40		2.38	1.11	3.49		2.38	1.20	3.58		2.38	1.29	3.67	
Places of Death																												
At Hosp - Most Likely	1.55	0.35	1.90		1.55	0.39	1.94		1.55	0.43	1.98		1.55	0.47	2.02		1.55	0.52	2.07		1.55	0.56	2.11		1.55	0.60	2.15	
At Hosp - Maximum	1.64	0.52	2.16		1.64	0.58	2.22		1.64	0.65	2.29		1.64	0.71	2.35		1.64	0.78	2.42		1.64	0.84	2.48		1.64	0.91	2.55	
Other - Most Likely	0.61	0.15	0.76		0.61	0.17	0.78		0.61	0.18	0.79		0.61	0.20	0.81		0.61	0.22	0.83		0.61	0.24	0.85		0.61	0.26	0.87	
Other - Maximum	0.74	0.22	0.96		0.74	0.25	0.99		0.74	0.28	1.02		0.74	0.31	1.05		0.74	0.33	1.07		0.74	0.36	1.10		0.74	0.39	1.13	

Surge Impact

WEEK THREE

	Day 1			Beds	Day 2			Beds	Day 3			Beds	Day 4			Beds	Day 5			Beds	Day 6			Beds	Day 7			Beds
	Present	Pandemic	Total	Remain	Present	Pandemic	Total	Remain	Present	Pandemic	Total	Remain	Present	Pandemic	Total	Remain	Present	Pandemic	Total	Remain	Present	Pandemic	Total	Remain	Present	Pandemic	Total	Remain
Hospital Admit Daily																												
Most Likely	17.0	5.0	22		17.0	5.4	22.4		17.0	5.7	22.7		17.0	6.0	23.0		17.0	6.4	23.4		17.0	6.7	23.7		17.0	7.0	24.0	
Maximum	18.4	6.4	25		18.4	6.8	25.2		18.4	7.3	25.7		18.4	7.7	26.1		18.4	8.1	26.5		18.4	8.6	27.0		18.4	9.0	27.4	
Inpatients																												
Most Likely	184	30	214	157	184	32	216	155	184	34	218	153	184	36	220	151	184	38	222	149	184	40	224	147	184	42	226	145
Maximum	190	39	229	142	190	41	231	140	190	44	234	137	190	46	236	135	190	49	239	132	190	51	241	130	190	54	244	127
Deaths by Day																												
Most Likely	2.16	0.92	3.08		2.16	0.99	3.15		2.16	1.05	3.21		2.16	1.11	3.27		2.16	1.17	3.33		2.16	1.23	3.39		2.16	1.29	3.45	
Maximum	2.38	1.39	3.77		2.38	1.48	3.86		2.38	1.57	3.95		2.38	1.66	4.04		2.38	1.76	4.14		2.38	1.85	4.23		2.38	1.94	4.32	
Places of Death																												
At Hosp - Most Likely	1.55	0.65	2.20		1.55	0.69	2.24		1.55	0.73	2.28		1.55	0.78	2.33		1.55	0.82	2.37		1.55	0.86	2.41		1.55	0.91	2.46	
At Hosp - Maximum	1.64	0.97	2.61		1.64	1.04	2.68		1.64	1.10	2.74		1.64	1.17	2.81		1.64	1.23	2.87		1.64	1.29	2.93		1.64	1.36	3.00	
Other - Most Likely	0.61	0.28	0.89		0.61	0.30	0.91		0.61	0.31	0.92		0.61	0.33	0.94		0.61	0.35	0.96		0.61	0.37	0.98		0.61	0.39	1.00	
Other - Maximum	0.74	0.42	1.16		0.74	0.44	1.18		0.74	0.47	1.21		0.74	0.50	1.24		0.74	0.53	1.27		0.74	0.55	1.29		0.74	0.58	1.32	

Surge Impact

WEEK FOUR

	Day 1			Beds	Day 2			Beds	Day 3			Beds	Day 4			Beds	Day 5			Beds	Day 6			Beds	Day 7			Beds
	Present	Pandemic	Total	Remain	Present	Pandemic	Total	Remain	Present	Pandemic	Total	Remain	Present	Pandemic	Total	Remain	Present	Pandemic	Total	Remain	Present	Pandemic	Total	Remain	Present	Pandemic	Total	Remain
Hospital Admit Daily																												
Most Likely	17.0	6.9	24		17.0	7.1	24.1		17.0	7.4	24.4		17.0	7.6	24.6		17.0	7.9	24.9		17.0	8.2	25.2		17.0	8.4	25.4	
Maximum	18.4	8.8	27		18.4	9.1	27.5		18.4	9.4	27.8		18.4	9.8	28.2		18.4	10.1	28.5		18.4	10.4	28.8		18.4	10.7	29.1	
Inpatients																												
Most Likely	184	44	228	143	184	45	229	142	184	47	231	140	184	49	233	138	184	50	234	137	184	52	236	135	184	54	238	133
Maximum	190	56	246	125	190	58	248	123	190	60	250	121	190	62	252	119	190	64	254	117	190	66	256	115	190	68	258	113
Deaths by Day																												
Most Likely	2.16	2.69	4.85		2.16	2.92	5.08		2.16	3.16	5.32		2.16	3.39	5.55		2.16	3.62	5.78		2.16	3.86	6.02		2.16	4.09	6.25	
Maximum	2.38	4.03	6.41		2.38	4.38	6.76		2.38	4.74	7.12		2.38	5.09	7.47		2.38	5.44	7.82		2.38	5.79	8.17		2.38	6.14	8.52	
Places of Death																												
At Hosp - Most Likely	1.55	1.88	3.43		1.55	2.05	3.60		1.55	2.21	3.76		1.55	2.37	3.92		1.55	2.54	4.09		1.55	2.70	4.25		1.55	2.86	4.41	
At Hosp - Maximum	1.64	2.82	4.46		1.64	3.07	4.71		1.64	3.31	4.95		1.64	3.56	5.20		1.64	3.81	5.45		1.64	4.05	5.69		1.64	4.30	5.94	
Other - Most Likely	0.61	0.81	1.42		0.61	0.88	1.49		0.61	0.95	1.56		0.61	1.02	1.63		0.61	1.09	1.70		0.61	1.16	1.77		0.61	1.23	1.84	
Other - Maximum	0.74	1.21	1.95		0.74	1.32	2.06		0.74	1.42	2.16		0.74	1.53	2.27		0.74	1.63	2.37		0.74	1.74	2.48		0.74	1.84	2.58	

Surge Impact

WEEK FIVE

	Day 1			Beds Remain	Day 2			Beds Remain	Day 3			Beds Remain	Day 4			Beds Remain	Day 5			Beds Remain	Day 6			Beds Remain	Day 7			Beds Remain
	Present	Pandemic	Total		Present	Pandemic	Total		Present	Pandemic	Total		Present	Pandemic	Total		Present	Pandemic	Total		Present	Pandemic	Total		Present	Pandemic	Total	
Hospital Admit Daily																												
Most Likely	17.0	8.4	25		17.0	8.2	25.2		17.0	7.9	24.9		17.0	7.6	24.6		17.0	7.4	24.4		17.0	7.1	24.1		17.0	6.9	23.9	
Maximum	18.4	10.7	29		18.4	10.4	28.8		18.4	10.1	28.5		18.4	9.8	28.2		18.4	9.4	27.8		18.4	9.1	27.5		18.4	8.8	27.2	
Inpatients																												
Most Likely	184	54	238	133	184	54	238	133	184	55	239	132	184	55	239	132	184	56	240	131	184	56	240	131	184	56	240	131
Maximum	190	69	259	112	190	69	259	112	190	70	260	111	190	70	260	111	190	71	261	110	190	71	261	110	190	72	262	109
Deaths by Day																												
Most Likely	2.16	4.24	6.40		2.16	4.52	6.68		2.16	4.80	6.96		2.16	5.09	7.25		2.16	5.37	7.53		2.16	5.65	7.81		2.16	5.93	8.09	
Maximum	2.38	6.36	8.74		2.38	6.78	9.16		2.38	7.21	9.59		2.38	7.63	10.01		2.38	8.05	10.43		2.38	8.48	10.86		2.38	8.90	11.28	
Places of Death																												
At Hosp - Most Likely	1.55	2.97	4.52		1.55	3.16	4.71		1.55	3.36	4.91		1.55	3.56	5.11		1.55	3.76	5.31		1.55	3.96	5.51		1.55	4.15	5.70	
At Hosp - Maximum	1.64	4.45	6.09		1.64	4.75	6.39		1.64	5.04	6.68		1.64	5.34	6.98		1.64	5.64	7.28		1.64	5.93	7.57		1.64	6.23	7.87	
Other - Most Likely	0.61	1.27	1.88		0.61	1.36	1.97		0.61	1.44	2.05		0.61	1.53	2.14		0.61	1.61	2.22		0.61	1.70	2.31		0.61	1.78	2.39	
Other - Maximum	0.74	1.91	2.65		0.74	2.03	2.77		0.74	2.16	2.90		0.74	2.29	3.03		0.74	2.42	3.16		0.74	2.54	3.28		0.74	2.67	3.41	

Surge Impact

WEEK SIX

	Day 1			Beds Remain	Day 2			Beds Remain	Day 3			Beds Remain	Day 4			Beds Remain	Day 5			Beds Remain	Day 6			Beds Remain	Day 7			Beds Remain
	Present	Pandemic	Total		Present	Pandemic	Total		Present	Pandemic	Total		Present	Pandemic	Total		Present	Pandemic	Total		Present	Pandemic	Total		Present	Pandemic	Total	
Hospital Admit Daily																												
Most Likely	17.0	7.0	24		17.0	6.7	23.7		17.0	6.4	23.4		17.0	6.0	23.0		17.0	5.7	22.7		17.0	5.4	22.4		17.0	5.0	22.0	
Maximum	18.4	9.0	27		18.4	8.6	27.0		18.4	8.1	26.5		18.4	7.7	26.1		18.4	7.3	25.7		18.4	6.8	25.2		18.4	6.4	24.8	
Inpatients																												
Most Likely	184	56	240	131	184	55	239	132	184	54	238	133	184	53	237	134	184	52	236	135	184	52	236	135	184	51	235	136
Maximum	190	71	261	110	190	70	260	111	190	69	259	112	190	68	258	113	190	67	257	114	190	66	256	115	190	65	255	116
Deaths by Day																												
Most Likely	2.16	5.80	7.96		2.16	6.02	8.18		2.16	6.23	8.39		2.16	6.44	8.60		2.16	6.66	8.82		2.16	6.87	9.03		2.16	7.08	9.24	
Maximum	2.38	8.71	11.09		2.38	9.03	11.41		2.38	9.34	11.72		2.38	9.66	12.04		2.38	9.98	12.36		2.38	10.30	12.68		2.38	10.62	13.00	
Places of Death																												
At Hosp - Most Likely	1.55	4.06	5.61		1.55	4.21	5.76		1.55	4.36	5.91		1.55	4.51	6.06		1.55	4.66	6.21		1.55	4.81	6.36		1.55	4.96	6.51	
At Hosp - Maximum	1.64	6.09	7.73		1.64	6.32	7.96		1.64	6.54	8.18		1.64	6.76	8.40		1.64	6.99	8.63		1.64	7.21	8.85		1.64	7.44	9.08	
Other - Most Likely	0.61	1.74	2.35		0.61	1.81	2.42		0.61	1.87	2.48		0.61	1.93	2.54		0.61	2.00	2.61		0.61	2.06	2.67		0.61	2.12	2.73	
Other - Maximum	0.74	2.61	3.35		0.74	2.71	3.45		0.74	2.80	3.54		0.74	2.90	3.64		0.74	3.00	3.74		0.74	3.09	3.83		0.74	3.19	3.93	

Tool 3.1 Surge Impact

Surge Impact

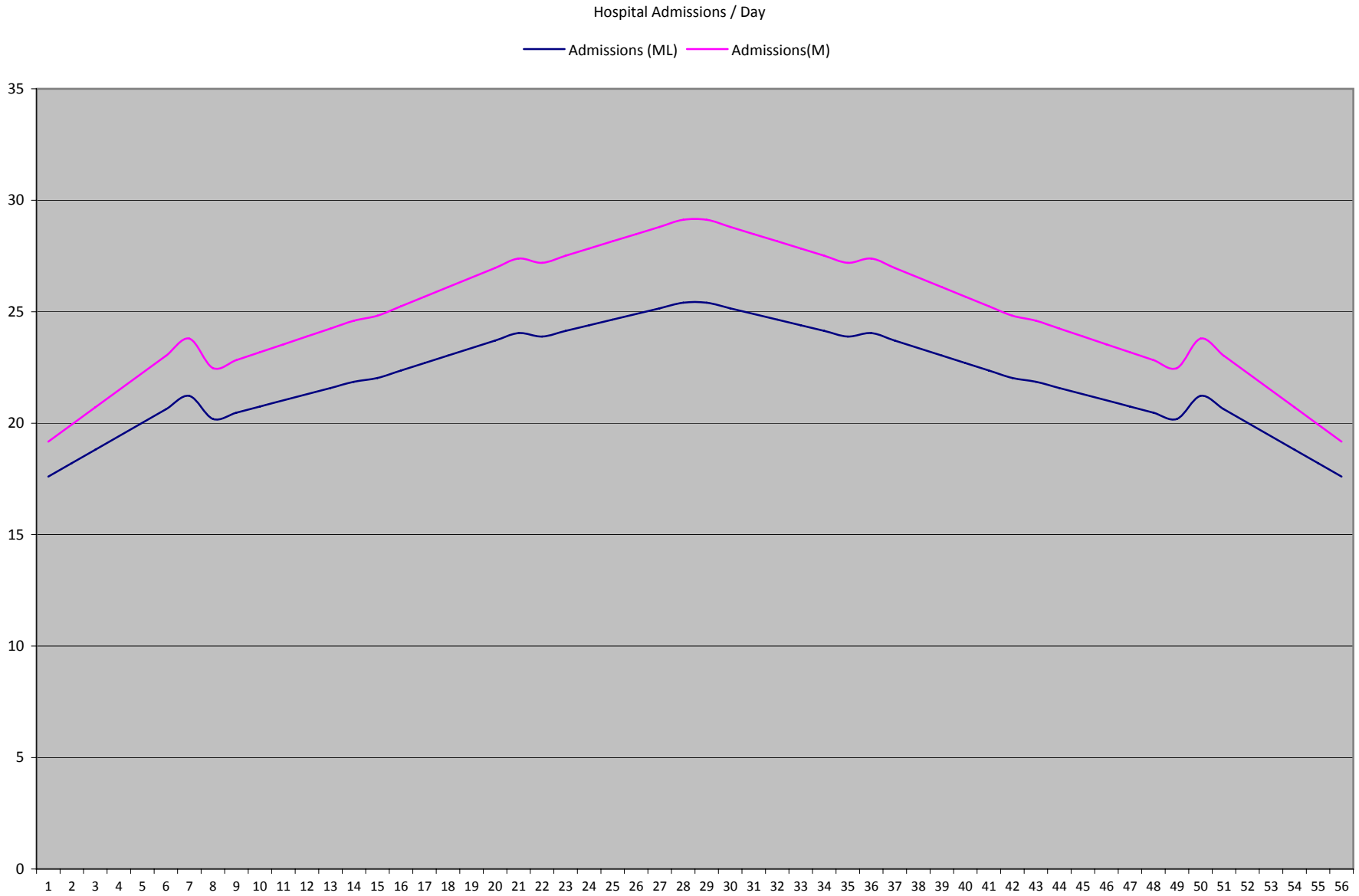
WEEK SEVEN

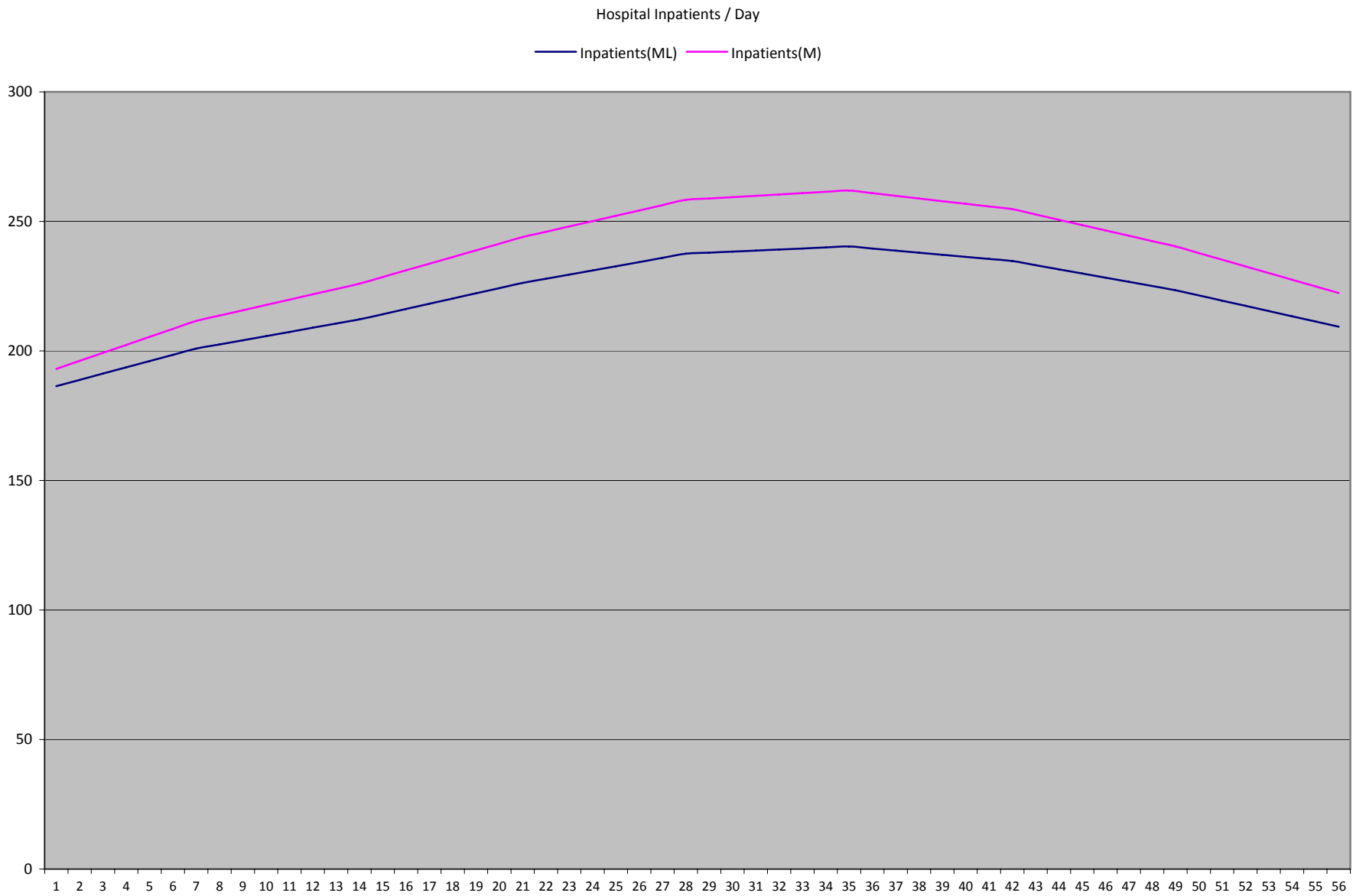
	Day 1			Beds	Day 2			Beds	Day 3			Beds	Day 4			Beds	Day 5			Beds	Day 6			Beds	Day 7			Beds
	Present	Pandemic	Total	Remain	Present	Pandemic	Total	Remain	Present	Pandemic	Total	Remain	Present	Pandemic	Total	Remain	Present	Pandemic	Total	Remain	Present	Pandemic	Total	Remain	Present	Pandemic	Total	Remain
Hospital Admit Daily																												
Most Likely	17.0	4.9	22		17.0	4.6	21.6		17.0	4.3	21.3		17.0	4.0	21.0		17.0	3.7	20.7		17.0	3.5	20.5		17.0	3.2	20.2	
Maximum	18.4	6.2	25		18.4	5.8	24.2		18.4	5.5	23.9		18.4	5.1	23.5		18.4	4.8	23.2		18.4	4.4	22.8		18.4	4.1	22.5	
Inpatients																												
Most Likely	184	49	233	138	184	47	231	140	184	46	230	141	184	44	228	143	184	43	227	144	184	41	225	146	184	39	223	148
Maximum	190	63	253	118	190	61	251	120	190	59	249	122	190	57	247	124	190	54	244	127	190	52	242	129	190	50	240	131
Deaths by Day																												
Most Likely	2.16	7.08	9.24		2.16	6.87	9.03		2.16	6.66	8.82		2.16	6.44	8.60		2.16	6.23	8.39		2.16	6.02	8.18		2.16	5.80	7.96	
Maximum	2.38	10.62	13.00		2.38	10.30	12.68		2.38	9.98	12.36		2.38	9.66	12.04		2.38	9.34	11.72		2.38	9.03	11.41		2.38	8.71	11.09	
Places of Death																												
At Hosp - Most Likely	1.55	4.96	6.51		1.55	4.81	6.36		1.55	4.66	6.21		1.55	4.51	6.06		1.55	4.36	5.91		1.55	4.21	5.76		1.55	4.06	5.61	
At Hosp - Maximum	1.64	7.44	9.08		1.64	7.21	8.85		1.64	6.99	8.63		1.64	6.76	8.40		1.64	6.54	8.18		1.64	6.32	7.96		1.64	6.09	7.73	
Other - Most Likely	0.61	2.12	2.73		0.61	2.06	2.67		0.61	2.00	2.61		0.61	1.93	2.54		0.61	1.87	2.48		0.61	1.81	2.42		0.61	1.74	2.35	
Other - Maximum	0.74	3.19	3.93		0.74	3.09	3.83		0.74	3.00	3.74		0.74	2.90	3.64		0.74	2.80	3.54		0.74	2.71	3.45		0.74	2.61	3.35	

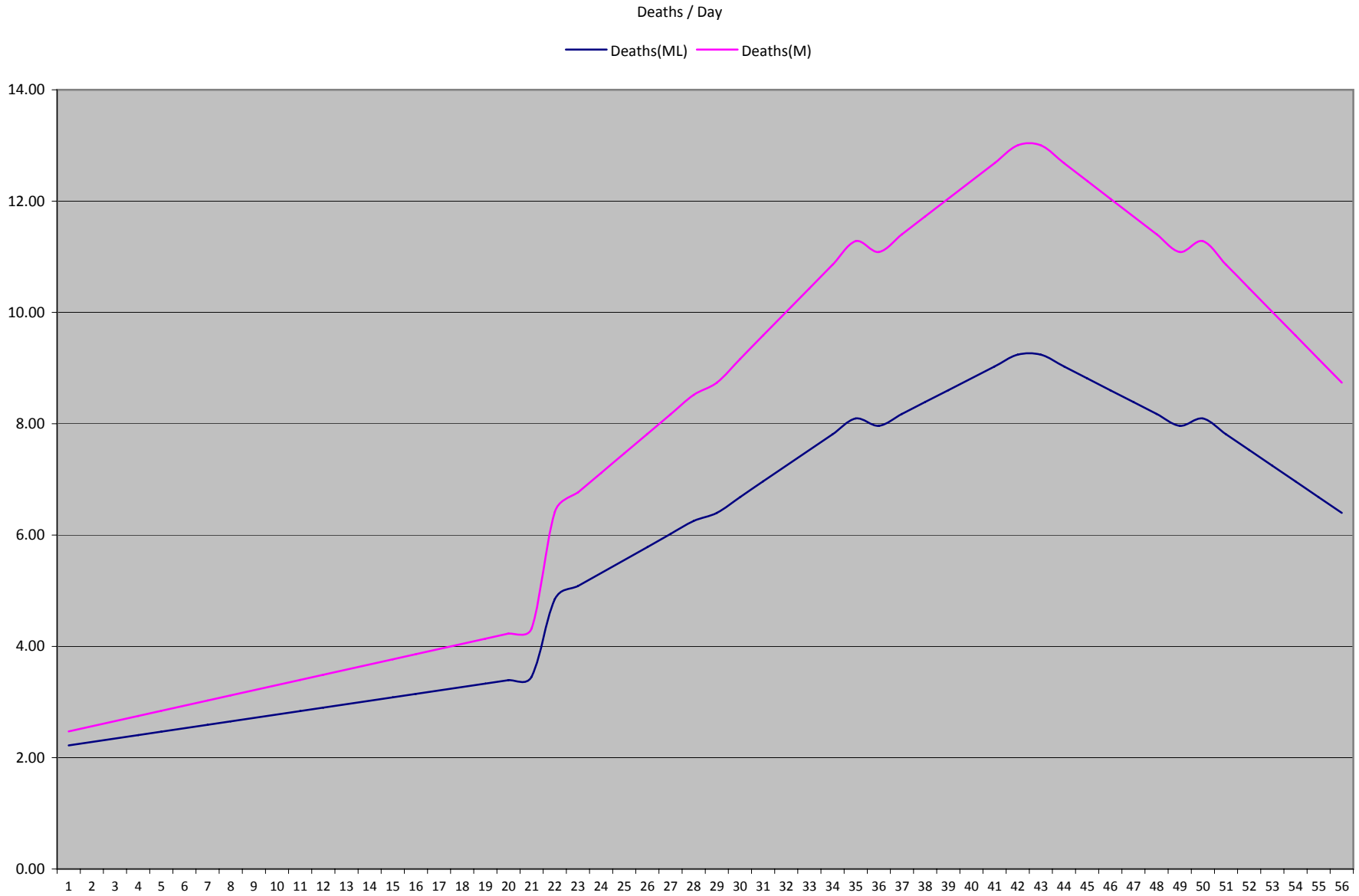
Surge Impact

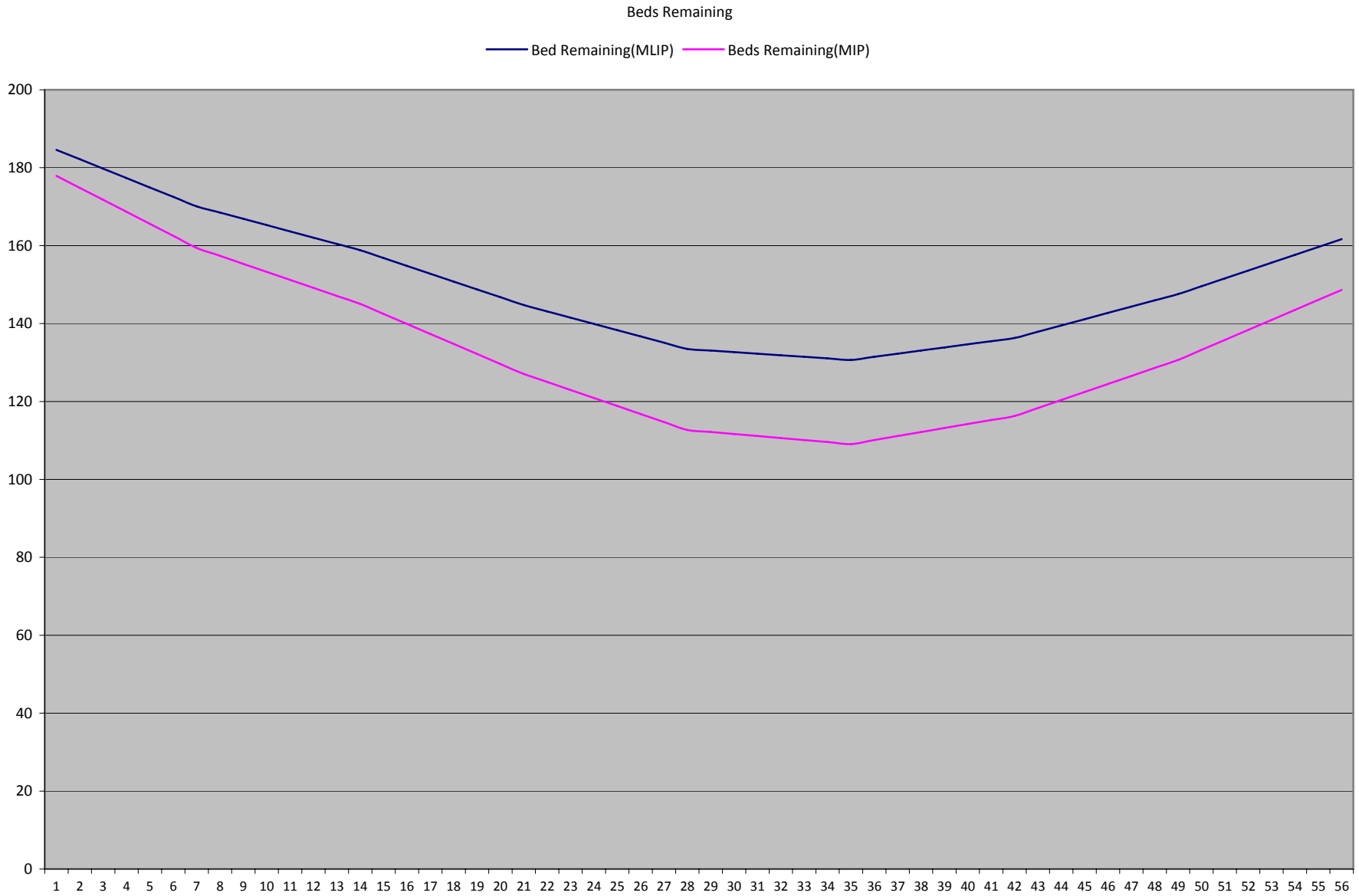
WEEK EIGHT

	Day 1			Beds	Day 2			Beds	Day 3			Beds	Day 4			Beds	Day 5			Beds	Day 6			Beds	Day 7			Beds
	Present	Pandemic	Total	Remain	Present	Pandemic	Total	Remain	Present	Pandemic	Total	Remain	Present	Pandemic	Total	Remain	Present	Pandemic	Total	Remain	Present	Pandemic	Total	Remain	Present	Pandemic	Total	Remain
Hospital Admit Daily																												
Most Likely	17.0	4.2	21		17.0	3.6	20.6		17.0	3.0	20.0		17.0	2.4	19.4		17.0	1.8	18.8		17.0	1.2	18.2		17.0	0.6	17.6	
Maximum	18.4	5.4	24		18.4	4.6	23.0		18.4	3.9	22.3		18.4	3.1	21.5		18.4	2.3	20.7		18.4	1.5	19.9		18.4	0.8	19.2	
Inpatients																												
Most Likely	184	37	221	150	184	35	219	152	184	33	217	154	184	31	215	156	184	29	213	158	184	27	211	160	184	25	209	162
Maximum	190	48	238	133	190	45	235	136	190	43	233	138	190	40	230	141	190	38	228	143	190	35	225	146	190	32	222	149
Deaths by Day																												
Most Likely	2.16	5.93	8.09		2.16	5.65	7.81		2.16	5.37	7.53		2.16	5.09	7.25		2.16	4.80	6.96		2.16	4.52	6.68		2.16	4.24	6.40	
Maximum	2.38	8.90	11.28		2.38	8.48	10.86		2.38	8.05	10.43		2.38	7.63	10.01		2.38	7.21	9.59		2.38	6.78	9.16		2.38	6.36	8.74	
Places of Death																												
At Hosp - Most Likely	1.55	4.15	5.70		1.55	3.96	5.51		1.55	3.76	5.31		1.55	3.56	5.11		1.55	3.36	4.91		1.55	3.16	4.71		1.55	2.97	4.52	
At Hosp - Maximum	1.64	6.23	7.87		1.64	5.93	7.57		1.64	5.64	7.28		1.64	5.34	6.98		1.64	5.04	6.68		1.64	4.75	6.39		1.64	4.45	6.09	
Other - Most Likely	0.61	1.78	2.39		0.61	1.70	2.31		0.61	1.61	2.22		0.61	1.53	2.14		0.61	1.44	2.05		0.61	1.36	1.97		0.61	1.27	1.88	
Other - Maximum	0.74	2.67	3.41		0.74	2.54	3.28		0.74	2.42	3.16		0.74	2.29	3.03		0.74	2.16	2.90		0.74	2.03	2.77		0.74	1.91	2.65	


Hospital Admissions / Day
Admissions (ML)
Admissions(M)
35
30
25
20
15
10
5
0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56


Hospital Inpatients / Day
Inpatients(ML)
Inpatients(M)
300
250
200
150
100
50
0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56


Deaths / Day
Deaths(ML)
Deaths(M)
14.00
12.00
10.00
8.00
6.00
4.00
2.00
0.00
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56


Beds Remaining
Bed Remaining(MLIP)
Beds Remaining(MIP)
200
180
160
140
120
100
80
60
40
20
0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56