
Assessment of Current Hospital Capacity and Potential Gaps in Beijing in Responding to Potential Influenza Pandemic

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Background

- Influenza pandemic can cause very high morbidity, mortality rates
 - Preparedness is key for reducing human suffering and loss
 - Hospital preparedness is important part of overall preparedness
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FluSurge

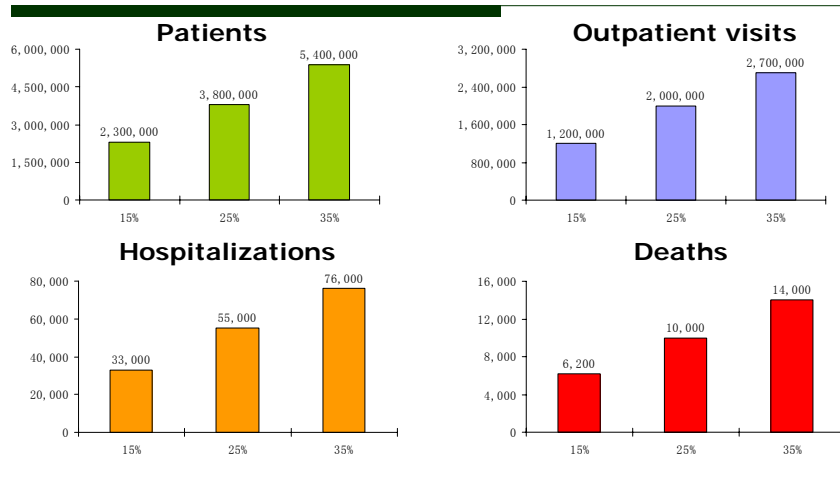
- Based on population characteristics and hospital resources
 - Estimates number of potential cases
 - Compares demands with existing capacity
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Age Distribution of Population and Hospital Resources in Beijing

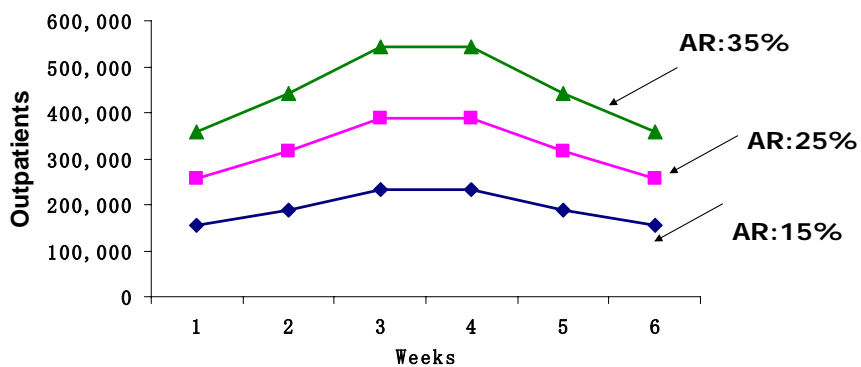
Age Distribution	0-19	2,700,000
	20-64	11,000,000
	≥65	1,700,000
Available Hospital Resources	Non-ICU beds	69,097
	ICU beds	211
	Mechanical ventilators	1,387

*Beijing statistics almanac 2006 ,Beijing health statistics almanac 2005

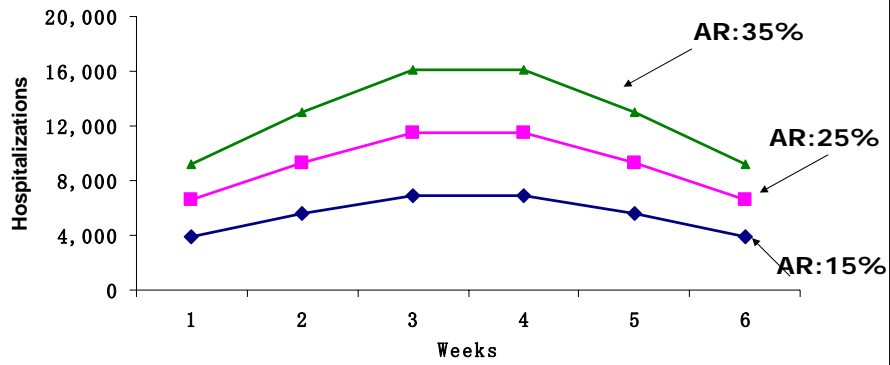
Estimated # patients, outpatient visits, hospitalizations & deaths under different AR



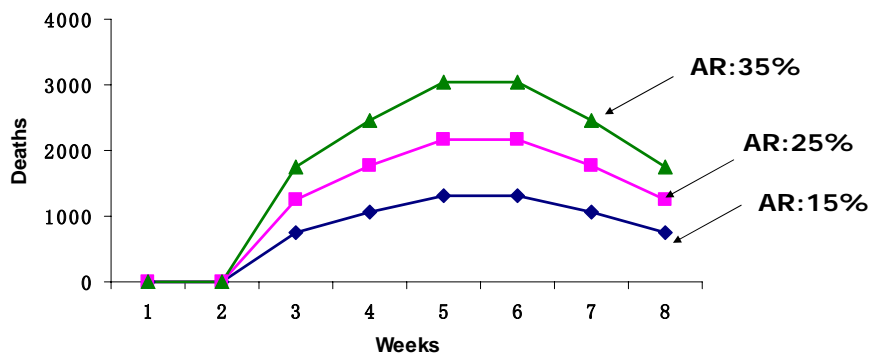
Estimated weekly outpatient visits after start of pandemic



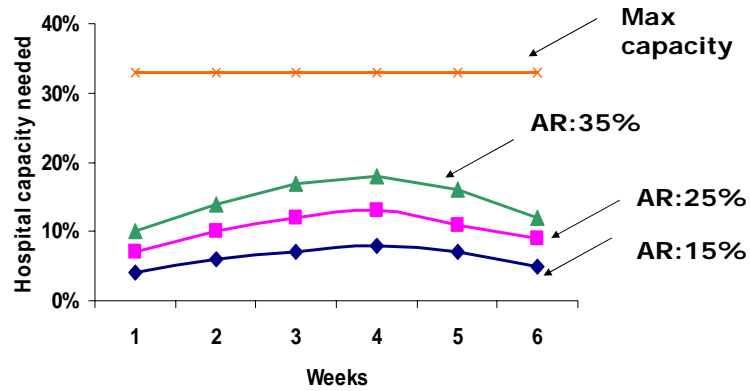
Estimated weekly hospitalizations after start of pandemic



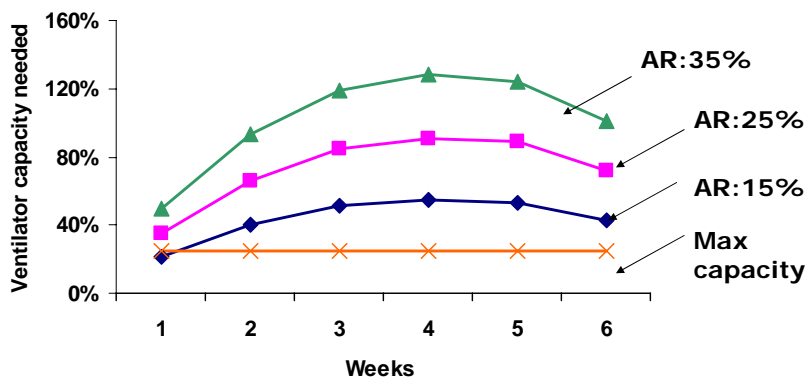
Estimated weekly numbers of deaths after start of pandemic



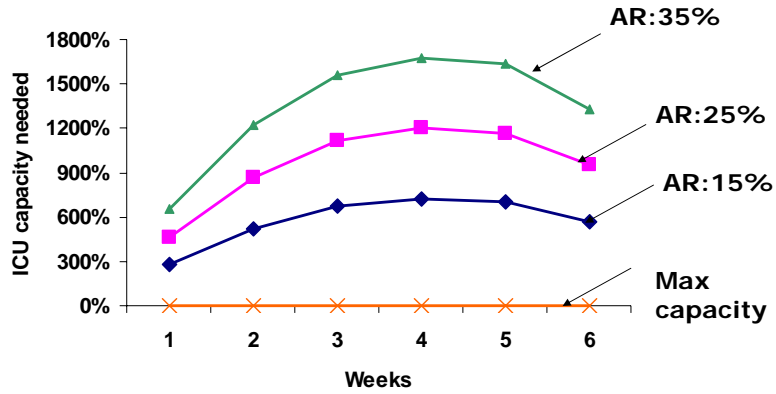
Non-ICU beds needed under different attack rate scenarios



Ventilators needed under different attack rate scenarios



ICU-beds needed under different attack rate scenarios



Limiting factor: Tertiary hospitals likely will bear heaviest burdens

Hospital level	# of hospitals	Total daily outpatients	% outpatients
Tertiary	51	71400	48
Secondary	109	50140	34
Community	264	26400	18

Limiting factor: Human resources

- Availability of healthcare professionals**
 - **Illness of self and loved ones**
 - **Fatigue**
 - **Fear**
 - Skills and knowledge**
 - **65% had current knowledge**
 - **64% use PPE correctly**
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Limiting factor: Mobile population

- Mobile population**
 - **5.1 million; 30% of Beijing's total population**
 - **Characteristics and healthcare seeking behaviors unknown**
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Conclusions

- Current hospital capacity in Beijing insufficient to meet demands**
 - Largest gap is # ICU beds**
 - Followed by # ventilators**
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Recommendations

- Increase surge capacity, especially ICU-beds, ventilators**
 - Develop strategies to convert non-ICU beds into ICU beds during pandemic**
 - Public education to direct healthcare seeking behavior for ILI**
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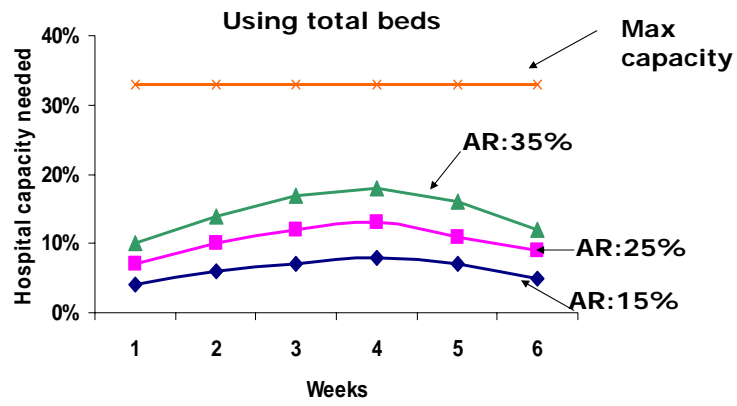
Acknowledgments

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 - Beijing Health Bureau, China
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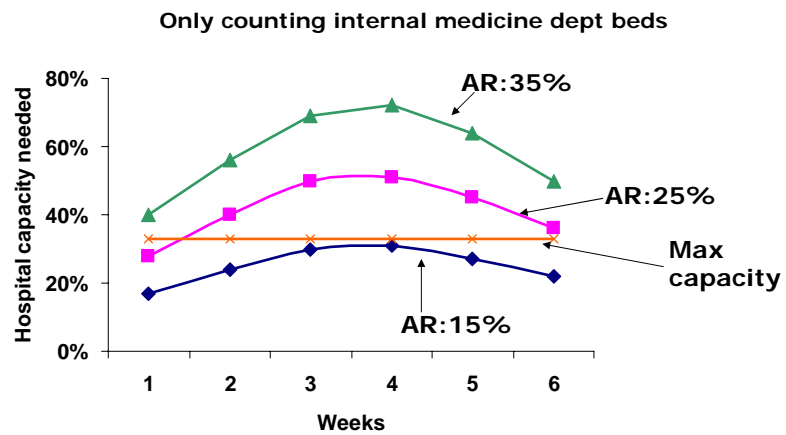
Thanks!



Caution: Non-ICU beds



Caution: Non-ICU beds



Caution: Non-ICU beds

Only counting beds respiratory disease dept

