



Political Factors that Influence State Pandemic Flu Plan Comprehensiveness

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BACKGROUND

- The 2009 A/H1N1 outbreaks have shown the need for pandemic preparedness.
- In the United States, states primarily respond to a pandemic.
- All 50 states have pandemic plans; however, there is great variation in how they address federally recommended domains (Table 1).
- Federal recommendations surrounding leadership, networking and surveillance have been well-integrated into state plans.
- Greater efforts are needed to develop partnerships with health care agencies and focus on antiviral preparedness and infection controls.
- Political factors have been shown to be associated with health department behavior; however, those associated with pandemic planning have been unclear.

- Understanding political factors associated with pandemic planning may decrease variance between states and ensure more comprehensive responses.

RESEARCH AIM

- Test three theoretical models to evaluate the political and economic variables associated with high scoring state pandemic plans.

Organizational Capacity - the preferences and influences of external political forces determine the decisions and activities of a state health department

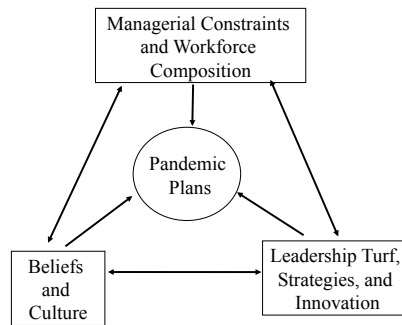


TABLE 1: VARIATION MEASURES OF PANDEMIC PLAN DOMAIN SCORES

Domain	Range	Min	Max	Mean	Max possible	Average Score
Leadership and Networking	27-49	22	49	38	54	71%
Community Disease Control and Prevention	19-32	10	29	20	30	67%
HC and PH Partners	18-42	14	32	22	42	53%
Surveillance	10-15	5	15	11	15	75%
Infection Control and Clinical Guidelines	7-11	4	11	7	12	57%
Public Health and Clinical Labs	7-12	4	11	7.7	12	60%
Vaccines	22-39	13	35	24	39	62%
Antivirals	6-15	6	12	9	15	59%
Communications	15-24	9	24	16	24	66%
Psychosocial Considerations	8-12	4	12	7	12	60%
Total Score	105-205	100	205	162	255	64%

METHODS

- Measures making up theoretical models were collected from secondary sources (Table 2).
- Two-tailed Pearson Correlations evaluated the relationship between continuous independent variables with average state scores and domain scores. To address multicollinearity, independent variables correlated with each other above 0.7 were removed; variables thought to offer more explanatory value based on the theoretical models remained
- Multiple Regression Analyses of theoretical models and individual variables to evaluate their association with total scores and domain scores.

THEORETICAL MODELS

Overhead Political Control - the preferences and influences of external political forces determine the decisions and activities of a state health department.

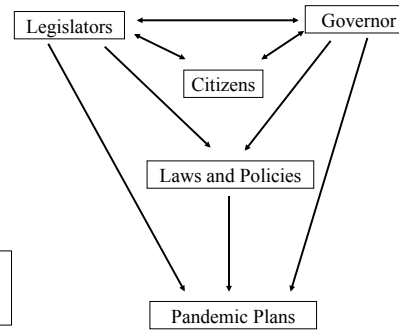


TABLE 2: DESCRIPTIVE STATISTICS BY THEORETICAL MODEL*

Variable	Mean	Median	Standard Deviation	Range
Organizational Capacity				
Health Expenditures Per 1000	\$166,841	\$151,770	\$83,380	\$58,000 - \$389,800
Emergency Management Fund Expenditures Per 1000	\$1,440	\$630	\$2,410	\$60 - \$15,790
EMA FTE Per 1000	0.19	0.16	0.15	0.06 - 0.86
2003 Cooperative Agreement Funds Per 1000	\$4,170	\$3,300	\$2,130	\$1,740 - \$11,580
2003 Disaster Aid Expenditures Per 1000	\$7,683,100	\$3,234,300	\$19,268,600	\$0 - \$13,400,000
2003 Federal Aid to State Emergency Management Planning Expenditures Per 1000	\$2,534	\$890	\$8,179	\$0-\$58,030
Commissioner Salary Per 1000	\$51	\$30	\$52	\$2 - \$209
2003 Federal Expenditures on Salaries and Wages Per 1000	\$28	\$3	\$84	\$0 - \$472
Federal Expenditures on DHHS Grants per 1000	\$912	\$864	\$292	\$413 - \$2102
Overhead Bureaucratic Control				
Governor Involved in EMA Appointment	Frequencies: No=21; Yes = 29			
Governor Involved in Health Commissioner Appointment	Frequencies: No=9; Yes = 41			
Voter Turnout *	55%	55%	10%	37% - 79%
Governor Salary	\$116,928	\$117,000	\$25,530	\$70,000 - 179,000
Governor Staff	59	59	60	8 - 310
Governor Party	Democrats = 22; Republicans = 28			
House Democrats **	50%	51%	19%	18% - 88%
Senate Democrats **	50%	46%	17%	20% - 90%
Professionalism	0.26	0.24	0.15	0.06 - 0.90
Task Environment				
Population Density	182	88	250	1 - 1134
% Urban	68%	69%	15%	32% - 93%
Medicaid Expenditures Per Capita	\$851	\$791	\$253	\$212 - \$1,551
Medicare Expenditures Per Capita	\$986	\$981	\$188	\$531 - \$1,422
Median Income	\$44,151	\$43,294	\$6,134	\$33,993 - \$57,338
Revenue Per 1000	\$5,886	\$5,450	\$1,962	\$3,900 - \$16,190
% uninsured	15%	14%	8%	7.9% - 24%
2003 Per Capita Income	\$35,384	\$33,966	\$5,239	\$26,344 - \$49,092

* North Dakota and Wisconsin excluded; North Dakota has no registration and Wisconsin has same day registration
 ** Nebraska was excluded; the state has a unicameral legislature

‡Data from year before plan creation unless otherwise noted. All 2003 Data were adjusted for inflation to the year before plan creation.

Task Environment - the problems and situational imperatives facing a health department determine the choices it makes.

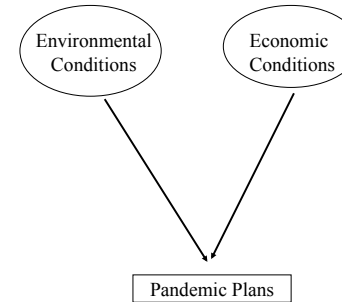


TABLE 3: MRA RESULTS BY THEORETICAL MODEL

Theory	IV	Domain	B	SE	Beta	
Organizational Capacity	Adjusted R ² = 0.02	Health Expenditures per 1000	Surveillance	.294	1.465	.294*
		Federal Expenditures on HHS Grants per 1000	Surveillance	-4.509	1.288	-.577***
		2003 Disaster Aid Expenditures per 1000	Surveillance	.552	.259	.347**
		2003 Federal Aid to State Emergency Management Planning Expenditures per 1000	Health Care and Public Health Partners	2.030	.845	.286**
Overhead Political Control	Adjusted R ² = 0.129	Governor Involved in Health Commissioner Appointment	Community Disease Control and Prevention	3.231	2.038	.365**
		Voter Turnout	Antivirals	-1.251	.619	-.282**
		Health Care and Public Health Partners	Surveillance	1.448	.832	.338***
		Surveillance	Public Health and Clinical Labs	1.09	.638	.467***
Task Environment	Adjusted R ² = 0.044	Health Care and Public Health Partners	Antivirals	1.01	.611	.487**
		Public Health and Clinical Labs	Antivirals	.856	.341	.388**
		Health Care and Public Health Partners	Surveillance	9.447	4.865	.338*
		Public Health and Clinical Labs	Antivirals	1.175	.437	.446*
Demographic	Adjusted R ² = 0.044	Population Density	Antivirals	.871	.370	.432**
		% Urban	Public Health and Clinical Labs	1.303	.571	.323**
		Medicaid Expenditures	Surveillance	-.003	.001	-.370**
		Medicare Expenditures	Public Health and Clinical Labs	.003	.002	.316**
% Uninsured	Adjusted R ² = 0.044	Leadership and Networking	Leadership and Networking	.351	.261	.265*
		2003 per capita income	Leadership and Networking	.001	.000	.000***
Community Disease Control and	Adjusted R ² = 0.044	Community Disease Control and	Community Disease Control and	.000	.000	.437**

* p<.10
 ** p<.05
 *** p<.01

DISCUSSION

- None of the three theories as a whole offers a definitive explanation for pandemic plans.
- Funding (as seen in organizational capacity results) may not be what drives states to create comprehensive preparedness plans.
- Variables making up overhead political control appear to be associated with domain scores and total score more than other models.
- Citizens' financial resources, voter turnout, and political actors appear to influence plan creation more than other variables.

IMPLICATIONS AND CONCLUSION

- Political actors may influence pandemic planning, potentially more than other factors because they have control over health department resources and activities via policy and budgeting processes.
- Ensuring politicians and the public understand the role and needs of public health can benefit pandemic planning and response.
- Quantifying the impact of political actors on pandemic planning shows the need for increased relationships between public health and policy makers.

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