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## Physician Licensure During Disasters: A National Survey of State Medical Boards

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the majority of cases are not diagnosed because pediatric clinicians are not recognizing abnormal blood pressure readings for their patients. This is supported by our findings that the diagnosis of hypertension is correlated with the number of elevated blood pressure readings beyond 3, the number of blood pressure readings in the stage 2 hypertension range, and the presence of an obesity-related diagnosis.

The example of a 10-year-old boy of median height and usual systolic BP of 110 mm Hg with visit-to-visit SD of 10 mm Hg who might have 1 blood pressure reading in the normal range and 4 blood pressure readings in the abnormal range illustrates some of the complexity in the current definition. Using the standard definition of pediatric hypertension, this child should be given a diagnosis of hypertension once the third elevated blood pressure was obtained, regardless of the order of when the normal blood pressure occurred. However, a pediatric clinician may attach differing levels of clinical significance and therefore approach the work-up and treatment differently if the normal blood pressure occurred at the beginning, in the middle, or at the end of the 5 blood pressure readings.

Clarification of blood pressure guidelines with respect to blood pressure variability, further study of blood pressure variability in children and adolescents, and integration of these findings into blood pressure guidelines would be helpful.

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## RESEARCH LETTER

### Physician Licensure During Disasters: A National Survey of State Medical Boards

**To the Editor:** In August 2005, Hurricane Katrina caused a public health emergency by displacing more than 4400 physicians in the greater New Orleans area and leading to the closure of 13 of 16 hospitals in New Orleans.<sup>1</sup> Out-of-state phy-

sician volunteers, many without professional licensure in the state in which they were providing critical medical services, responded to this unprecedented collapse of health care infrastructure. In effect, they were practicing medicine without a license, potentially placing them at risk for civil and/or criminal penalties.<sup>2</sup> Louisiana Governor Kathleen Blanco, responding to the public health emergency in her state, issued an executive order 12 days after Hurricane Katrina that suspended regular licensing procedures. In addition to providing license reciprocity, this executive order recognized physicians as agents of the state of Louisiana for tort liability purposes.<sup>3</sup> We sought to determine the policies of each state regarding physician licensure during disasters.

**Methods.** Following approval from the institutional review board at Kansas City University of Medicine and Biosciences, a questionnaire was submitted via facsimile to the director of the medical board for each state and the District of Columbia. The first question was, "Does your state allow for expedited licensure [accelerated licensing procedures] for volunteer physicians responding to a disaster in your state?" It was followed with, "If yes, please check that which is most applicable: (a) expedited licensing process [expedited internal process], (b) exemption [license reciprocity], or (c) other, please explain." Citation of any applicable specific policy or statute was requested. When we sought clarification, we interviewed the state medical board director or designated representative by telephone. Data were collected from June 2007 to September 2007.

**Results.** Of the states, 18 (35%) do not permit expedited physician licensure or exemption. Thirty-two states and the District of Columbia (65%) had statutes specifically granting licensure for volunteer physicians during a disaster; 13 of these 32 states offered licensure via expedited process while 19 states and the District of Columbia offered licensure through exemption (direct reciprocity) (TABLE). No states were classified as "other."

**Comment.** Licensure is a central issue for volunteer physicians. Although physicians "federalized" during a disaster, such as those affiliated with the US Public Health Service or a disaster medical assistance team, do not require state licensure,<sup>5</sup> private-sector physicians may volunteer without certainty of legal and professional standing. Current strategies available to states to address licensing and other issues during emergencies include the Uniform Emergency Volunteer Health Practitioners Act (UEVHPA),<sup>5</sup> the Emergency Management Assistance Compact (EMAC),<sup>6</sup> and the Emergency System for Advance Registration of Volunteer Health Professionals (ESAR-VHP).<sup>2</sup> The UEVHPA provides legislatures with a guide for licensing health care professionals during states of emergency. The EMAC, a non-federal compact for mutual assistance between states, offers a comprehensive approach to interstate mutual aid but contains no provision for licensure of private-sector physicians. The ESAR-VHP is a national system of state-based emergency volunteer registries that verifies licensure and

**Table.** Physician Licensure During Declared States of Emergency or Disaster

State	Expedited Licensure		Citation
	No	Yes	
		Expedited Internal Process	
Alabama	✓		
Alaska			Alaska Stat § 26.23.020(g)(1)
Arizona	✓		
Arkansas	✓		
California			Healthcare Professional Disaster Response Act 920-922
Colorado			Director could not cite statute
Connecticut	✓		
Delaware		✓	24 Del Code § 17.24
District of Columbia			DC Code § 3-1205.02 (1)
Florida	✓		
Georgia	✓		
Hawaii			Haw Rev Stat § 453-3 (5)
Idaho			Idaho Stat § 54.1804
Illinois			20 Ill Comp Stat 2105/2105-400
Indiana	✓		
Iowa			Iowa Code § 29C.6, Iowa Admin Code § 653-9.2 (2)c
Kansas			Kan Stat Ann § 48-924(b)(l)
Kentucky		✓	201 Ky Admin Regs § 9:071
Louisiana		✓	La Admin Code Tit 46:XL § 412
Maine		✓	Me Rev Stat Tit 32, § 48:2-3278
Maryland	✓		Public Safety Statute 14-702 prohibits expedited or exempt licensure
Massachusetts		✓	Statute proposed but not promulgated <sup>a</sup>
Michigan			Mich Pub Acts 368 of 1978 § 333.16171(c)
Minnesota			Minn Stat § 12.42
Mississippi			Miss Code § 45-18-3
Missouri		✓	Mo Rev Stat § 190.500 and 334.150
Montana		✓	Director could not cite statute
Nebraska			Neb Rev Stat § 71-1103 (1)
Nevada	✓		
New Hampshire	✓		
New Jersey			NJ Stat Ann § 45:9-21 (1)
New Mexico			NM Stat Ann 1978 § 61-6-17
New York			NY Educ Law § 6527
North Carolina		✓	NC Gen Stat § 90-12.2
North Dakota	✓		
Ohio	✓		
Oklahoma	✓		
Oregon			Or Admin R § 847-010-0068
Pennsylvania		✓	Volunteer Health Service Act (senate bill 1017)
Rhode Island	✓		
South Carolina		✓	SC Code of Laws § 40-47-31(G)
South Dakota		✓	SD Codified Laws § 36-4-20.3 <sup>a</sup>
Tennessee	✓		Tenn Public Act 579 prohibits expedited or exempt licensure
Texas		✓	Texas Medical Board Rules 172.5 (29 Tex Reg 10111)
Utah			Utah Code § 58-1-307
Vermont	✓		
Virginia	✓		
Washington	✓		
West Virginia			W Va Code § 15:5-11
Wisconsin		✓	Executive order in place
Wyoming			Board of Medicine document No. 5572, Rules and Regulations, Chap 1, § 3(k)(vii)(A)

<sup>a</sup>Issuance of locum tenens certificate.

other base credentials but does not provide for license portability.

There are many important issues pertaining to physician response during disasters, including licensing, credentialing, liability, safety, and compensation. This study focused strictly on licensure of private-sector physicians during declared states of emergency. The finding that 18 states do not currently have policies allowing accelerated physician licensure indicates the potential for suboptimal medical care in the event of a large-scale disaster. Although the issuance of executive orders and “federalization” of physicians may be useful as reactive measures, a policy of accelerated licensure during states of emergency may enhance the rapidity and magnitude of physician response.

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**Author Contributions:** Dr Boyajian-O'Neill had full access to all of the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis.

**Study concept and design:** Boyajian-O'Neill, Gronewold, Glaros, Elmore.

**Acquisition of data:** Boyajian-O'Neill, Gronewold.

**Analysis and interpretation:** Boyajian-O'Neill, Gronewold, Glaros.

**Drafting of the manuscript:** Boyajian-O'Neill, Gronewold, Glaros.

**Critical revision of the manuscript for important intellectual content:** Boyajian-O'Neill, Gronewold, Glaros, Elmore.

**Statistical analysis:** Glaros.

**Administrative, technical, or material support:** Boyajian-O'Neill, Gronewold, Glaros, Elmore.

**Study supervision:** Boyajian-O'Neill.

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## CORRECTION

**Incorrect Data in Table and Text:** In the Original Contribution entitled “Emergency Department Use and Subsequent Hospitalizations Among Members of a High-Deductible Health Plan” published in the March 14, 2007, issue of *JAMA* (2007;297[10]:1093-1102), the third and fifth columns of Table 4 contained miscalculated data. The corrected table appears below. In addition, the third and fourth full paragraphs on page 1098 of the article should read as follows:

“Table 4 shows utilization patterns by deductible level. The percentages of HDHP members in individual/family plans who had deductibles of \$500/\$1000, \$1000/\$2000, and \$2000/\$4000 were 9.9%/23.3%, 13.9%/32.3%, and 6.2%/14.3%, respectively. Of members in individual HDHPs, 32.2%, 19.8%, and 5.7%, respectively, of members with \$500, \$1000, and \$2000 deductibles exceeded their deductible during the follow-up period. For those in family plans, 41.4%, 19.4%, and 8.5%, respectively, of members with \$1000, \$2000, and \$4000 deductibles exceeded their individual or family deductible. Eighty-four percent of all emergency department visits by HDHP members in the follow-up period and 90% of first visits occurred while members were below their deductible level.

There was little difference in the odds of a visit in the follow-up period compared with the baseline period by deductible level. However, members in individual plans whose spending exceeded the deductible level had a statistically significant higher odds of visiting the emergency department compared with the odds during time spans when members remained below deductible levels (odds ratio, 1.8; 95% CI, 1.4-2.4), with the highest odds of emergency department visits among members with \$2000 deductibles (odds ratio, 2.9; 95% CI, 1.1-7.7). Members of family plans showed similar patterns of utilization after reaching their deductible level compared with members in individual plans.”

**Table 4.** Utilization Among HDHP Members Stratified by Individual vs Family Plan and Deductible Level

Deductible Level	HDHP Members in Plan, % (No.)*	HDHP Members Exceeding Deductible, % (No.)*	Odds of Emergency Department Visit Among HDHP Members During Follow-up Period vs Baseline Period (95% CI)†	Odds of Emergency Department Visit Among HDHP Members During Above-Deductible vs Below-Deductible Time Spans (95% CI)†
Individual plans, \$				1.8 (1.4-2.4)
500	9.9 (863)	32.2 (278)	1.0	1.8 (1.2-2.7)
1000	13.9 (1215)	19.8 (241)	1.0 (0.73-1.4)	1.6 (1.0-2.6)
2000	6.2 (542)	5.7 (31)	1.3 (0.86-2.0)	2.9 (1.1-7.7)
Family plans, \$				1.5 (1.2-1.9)
1000	23.3 (2037)	41.4 (844)	1.0	1.5 (1.1-2.0)
2000	32.3 (2816)	19.4 (547)	0.90 (0.75-1.1)	1.4 (1.0-1.9)
4000	14.3 (1251)	8.5 (106)	1.2 (0.96-1.6)	2.7 (1.4-5.4)

Abbreviations: CI, confidence interval; HDHP, high-deductible health plan.

\*Unadjusted values.

†Odds ratios are from Poisson models with general estimating equations that included age, sex, deductible level, employer size, index date, socioeconomic status, association status, and morbidity.