Title:
Indiana Medical Resident's Knowledge of Surrogate Decision Making Laws

Authors
Stephanie Bartlett, PT,MS[1], Lyle P. Fettig, MD[2], Peter H. Baenziger, M.S. MD[3], Eliana N. DiOrio, MD[4], Kayla M. Herget, MD[5], Lynn D'Cruz, PT, MHA[1] , Johanna R. Coughlin, MD[6], Mikaela Lake, BS[7], Amy Truong[8],Amber R. Comer, PhD,JD[9]

Current Affiliations
1. PhD student & Research Assistant, Indiana University School of Health and Human Sciences
2. Assistant Prof of Clinical Medicine, Palliative Medicine, Indiana University School of Medicine, Eskenazi Health
3. Ascension's Peyton Manning Children's Hospital (2001 West 86th Street, Indianapolis, IN 46260)
4. Palliative Care Physician, Hendricks Regional Health.
5. Palliative Care Physician, St. Vincent Hospital
6. Palliative Care Physician at Indiana University Health and Emergency Medicine Physician at Witham Hospital
7. D.O. Student at Lake Erie College of Osteopathic Medicine- Bradenton (LECOM-B)
8. BA Student & Research Assistant, IUPUI.
9. Assistant Professor, Health Sciences Indiana University

Corresponding Authors contact information
Amber R. Comer, PhD. JD
Assistant Professor, Health Sciences Indiana University
Indiana University- Purdue University Indianapolis
1050 Wishard Blvd RG 3034
Indianapolis, IN 46202
Comer@iu.edu
317-278-1026

Acknowledgements
The authors wish to thank all the medical residents that complete the online survey.

Funding
This study did not receive any funding.

Statement of conflicts or competition
All authors report no conflicts or competing interests.

Prior Publication, Abstract or Poster Presentation
This information was present in a poster presentation format at IUPUI fellowship research day

---

This is the author's manuscript of the article published in final edited form as:

Bartlett, S., Fettig, L. P., Baenziger, P. H., DiOrio, E. N., Herget, K. M., D'Cruz, L., . . . Comer, A. R. (2021). Indiana Medical Resident's Knowledge of Surrogate Decision Making Laws. Int Q Community Health Educ, 272684x211004737. https://doi.org/10.1177/0272684x211004737

Abstract

Introduction During the care of incapacitated patients, physicians, and medical residents discuss treatment options and gain consent to treat through healthcare surrogates. The purpose of this study is to ascertain medical residents' knowledge of healthcare consent laws, application during clinical practice, and appraise the education residents received regarding surrogate decision making laws.

Methods Beginning in February of 2018, 35 of 113 medical residents working with patients within Indiana completed a survey. The survey explored medical residents' knowledge of health care surrogate consent laws utilized in Indiana hospitals and Veterans Affairs (VA) hospitals via clinical vignettes.

Results Only 22.9% of medical residents knew the default state law in Indiana did not have a hierarchy for settling disputes among surrogates. Medical residents correctly identified which family members could participate in medical decisions 86% of the time. Under the Veterans Affairs surrogate law, medical residents correctly identified appropriate family members or friends 50% of the time and incorrectly acknowledged the chief decision makers during a dispute 30% of the time. All medical residents report only having little or some knowledge of surrogate decision making laws with only 43% having remembered receiving surrogate decision making training during their residency.

Conclusions These findings demonstrate that medical residents lack understanding of surrogate decision making laws. In order to ensure medical decisions are made by the appropriate surrogates and patient autonomy is upheld, an educational intervention is required to train medical residents about surrogate decision making laws and how they are used in clinical practice.

Key words: surrogate decision making; advance care planning; ethics; resident education; medical education

Introduction

Medical surrogate decision makers become necessary when a patient is incapacitated and unable to communicate their own medical decisions.[1,2] More than half of all hospitalized older adults require the assistance of a surrogate. [3] Surrogates are identified prospectively by the patient through a health care power of attorney or health care representative form.[4,5] If there is no form naming a surrogate, physicians utilize default state health care consent laws to identify the appropriate medical decision maker.[4,5] Studies indicate that more than two thirds of patients rely on default state health care consent laws to identify their surrogate medical decision maker.[6] In most instances, physicians are charged with implementing health care consent laws by identifying the appropriate surrogate for incapacitated patients.[7]

Although physicians must identify appropriate surrogates, fewer than half of physicians are able to correctly identify the legal surrogate medical decision maker.[5] Additionally, only 15% of physicians are able to identify who the final surrogate decision maker would be in the event that multiple surrogates are unable to reach a consensus on the course of medical treatment.[5] Physicians report delay in providing care when they were unable to identify the legal healthcare decision maker.[8] During clinical practice, medical residents are often the first clinician to interact with patients, and thus, often face the task of identifying the appropriate surrogate medical decision makers.

In order to identify the appropriate surrogate, medical residents require knowledge of the specific health care consent laws in the state where they are practicing. Medical residents report that their clinical medical education programs are not providing adequate training or

mentoring in this area.[9] Training that they do receive focuses on how to communicate with surrogates and not on how to identify the appropriate surrogate medical decision maker.[10,11] This lack of education may leave medical residents unprepared to appropriately identify the person or persons who should legally be making medical decisions for the incapacitated patient. [11]

This study is among the first to measure medical residents' knowledge of surrogate decision making laws and the implementation of surrogate laws during clinical practice. The purpose of the study is twofold. The first objective is to determine whether medical residents receive specific education about surrogate decision making laws. The study's second purpose is to assess medical residents' knowledge and ability to apply both federal laws of the Veteran Affairs Association (VA) and default state laws as appropriate to the clinical setting.

Methods

A cross sectional study of Indiana medical residents electronically administered surveys assessing knowledge of the use surrogate decision making laws during clinical practice. The participants were residents in Emergency Medicine or Internal Medicine/ Pediatrics. These specialties were selected because they have an increased likelihood that they will need to utilize the default state law to identify surrogates. A list of 113 medical residents from Emergency Medicine and Internal Medicine/ Pediatric programs in Indiana was obtained through the program directors.

The survey was electronically administered using a REDCap. The survey and subsequent reminders were emailed one time per week over the course of three weeks. All participants' information was de-identified. The survey consisted of demographic information, and vignettes which were designed to measure resident knowledge about surrogate decision making laws based on Indiana default health care consent laws and Federal laws governing the Veteran Affairs Administration clinic and hospitals. Additionally, the survey asked medical residents to self-report their perceived knowledge of the health care consent surrogate laws and whether they received specific education about surrogate decision making laws during their training.

All responses were coded in REDCap, exported via CSV file and imported into IBM-SPSS version 24. Descriptive statistics were utilized in analyzing demographic information, medical residents' knowledge and the amount of prior education they received about surrogate decision making laws. Chi-square analysis was used to determine if a relationship existed between: 1) receiving education in Indiana, 2) type of residency and 3) year in the program to the accuracy of the vignette answers. The University IRB approved this study with exempt status.

Results

Thirty-five medical residents completed the survey; a response rate of 31%. The majority of study participants were female (57%) and were in a combined internal medicine and pediatric residency (54%) (Table 1). The majority of the medical residents surveyed were in their second (40%) and third (31%) year of residency (Table 1). More than half of these medical residents now practicing in Indiana received their medical education outside the state of Indiana (69%).

Only 26% of medical residents demonstrated the correct knowledge about who could legally serve as a surrogate medical decision maker under state law. Additionally, only 23% of medical residents were able to identify who the final decision maker would be under state law in the event that multiple surrogates could not reach a consensus on medical decisions. No medical residents were able to correctly identify all persons who could legitimately serve as a surrogate for patients in the Veterans Affairs (VA) Hospital system (Table 2). However, 46% of medical residents were able to correctly identify that a patient's spouse has final decision making abilities in the VA system (Table 2). No relationships were found between where medical education was received ($p=0.76$), the type or year of residency ($p=0.14$) to the resident's correct application of the state default laws or federal VA laws.

All medical residents reported that they had only some (20%) or low knowledge (80%) of Indiana's health care consent law (Table3). Less than half (43%) of medical residents reported that they received formal education on surrogate decision making laws during their clinical training while in residency. Of those residents who received training on surrogate decision making, 60% report that the training was didactic, 45% report training was received at the bedside, and 15% were self-taught (Table 3).

Discussion

Most medical residents do not know who can legal serve as a surrogate nor can they appropriately apply surrogate decision making laws during clinical practice in either Indiana Hospitals or Federal laws at Veteran Affairs Hospitals. Medical residents in this study

indicated the type of education received regarding proxy decision making laws was primarily didactic. The literature on medical residents' perception of end of life family decision making education indicates didactic presentation alone may not be the optimal method for training. Medical residents describe didactic education as not meaningful[11] or impactful.[12] Third year medical residents, in a qualitative study, reported there was some importance to prior classroom preparation; however, it did not compare to the knowledge gained from clinical experience.[13] Based on the medical resident perception of didactic learning, education of surrogate decision making laws could be initiated with on-line jurisprudence modules or lecture format but is best supported by a clinical environment focused on ensuring that surrogates decision making laws are followed.

Medical residents lack knowledge of Indiana adult state default surrogate laws and federal VA hospital laws. Having a combined internal medicine/ pediatric residency may present additional challenges in having to know both adult and minor surrogate laws. This can also be true for emergency medicine residents, who could be face with incapacitated adult and minor patients. Prior research has shown attending physicians demonstrate similar inadequacies in their knowledge and application of both Indiana adult state and federal VA hospital systems' surrogate decision making laws.[5] Clinical education of physicians needs to assist with developing effective ways to teach medical residents how to determine who can speak for the incapacitated patient and the hierarchical order to handle disputes. It would behoove physicians and medical residents to be emerged in a more focused environment to gain clinical experience with identifying appropriate decision makers and the hierarchy in case of disputes. Focused Learning environments have been effective in increasing medical resident attempts to

discuss advance care directive with patients.[14] This environment could be created by educating clinical staff (NP, MD, DO) and medical residents regarding state and federal surrogate decision making laws.

Another option is to utilize online jurisprudence modules to improve physicians' and residents' knowledge. Mandatory state jurisprudence modules followed by an exam could be used for all physicians and residents applying for initial licensure in each state and with subsequent physician licensure renewals. With the enactment of new laws the modules would be updated keeping physicians informed of current state practice. As of 2016, forty-five states and three US territories require continued medical education for renewal of MD/ DO license.[15] Some state licensure boards list required topics; the most common are: pain management and dependency, recognition of abuse and how to report (child and elderly), and cultural competence. Only Florida, for Doctor of Osteopathy, lists at first renewal one hour of professional and medical ethics and one hour of Florida laws and rules.[15]

This study has several limitations. During the time of this study, Indiana state default health care consent law, was described as having a narrow construction.[16,17] Therefore, our findings may only be transferable to states with similarly restrictive surrogate laws versus those states that allow broader representation. Although the state law used in this study was considered restrictive, the VA was included in this study and the federal law used at the VA is considered broad and inclusive. Additionally, the finding that residents do not know and cannot apply state law during clinical practice also held true at the VA, under the federal law. The second limitation is that residents in our sample were from urban hospitals and represented two

specialties: internal medicine/ pediatric and emergency medicine residents. The generalizability of our finding to medical residents might be limited to those practicing in a similar residency and setting. The low response rates present the possibility of sampling bias as the respondents may have responded to the survey because they were either very knowledge on the subject or because they realized they had no knowledge. Although there is the possibility of sampling bias, the results of this survey are in alignment with prior studies which found a similar low level of knowledge of surrogate health care law.[3,5,16,17] Lastly the residents were asked to recall the education they received during residency about surrogate decision making laws. This response relies on the medical residents' ability to remember incidents of education. Nevertheless, if there were instances of education regarding surrogate decision making laws, they were minimally memorable and residents' ability to apply this knowledge shows the education was minimally meaningful.

Conclusion

This study offers insight into medical residents' lack of knowledge about identifying surrogate medical decision makers. The findings suggest that medical residents would benefit from deliberately devised clinical education, in the classroom, at the bedside, and during continuing medical education regarding surrogate decision making laws. An education intervention is required and future endeavors should focus on teaching surrogate decision making laws to medical residents that are applicable and transferable to the clinical setting. This will ensure medical decisions are made by the legally designated appropriate surrogates and patient autonomy is upheld.

References

1. Cai X, Robinson J, Muehlschlegel S, et al. Patient Preferences and Surrogate decision making in Neuroscience Intensive Care Units. *Neurocritical care.* 2015;23(1):131-141.
2. Patel AV, Ackermann RJ. Care of Patients at the End of Life: Surrogate decision making for Incapacitated Patients. *FP essentials.* 2016;447:32-41.
3. Torke AM, Siegler M, Abalos A, Moloney RM, Alexander GC. Physicians' experience with surrogate decision making for hospitalized adults. *Journal of general internal medicine.* 2009;24(9):1023-1028.
4. Sabatino CP. The evolution of health care advance planning law and policy. *The Milbank Quarterly.* 2010;88(2):211-239.
5. Comer AR, Gaffney M, Stone CL, Torke A. Physician understanding and application of surrogate decision making laws in clinical practice. *AJOB empirical bioethics.* 2017;8(3):198-204.
6. Yadav KN, Gabler NB, Cooney E, et al. Approximately One In Three US Adults Completes Any Type Of Advance Directive For End-Of-Life Care. *Health affairs (Project Hope).* 2017;36(7):1244-1251.
7. Snyder JW, Swartz MS. Deciding to terminate treatment: a practical guide for physicians. *Journal of critical care.* 1993;8(3):177-185.
8. Comer AR, Gaffney M, Stone CL, Torke A. The effect of a state health care consent law on patient care in hospitals: a survey of physicians. *Journal of Hospital Administration*. 2018; 7(2):31-35.
9. Schwartz CE, Goulet JL, Gorski V, Selwyn PA. Medical Residents' Perceptions of End-of-Life Care Training in a Large Urban Teaching Hospital. *Journal of Palliative Medicine.* 2003;6(1):37-44.
10. Gorman TE, Ahern SP, Wiseman J, Skrobik Y. Residents' End-of-Life decision making with Adult Hospitalized Patients: A Review of the Literature. *Academic Medicine.* 2005;80(7):622-633.
11. Reckrey JM, Diane McKee M, Sanders JJ, Lipman HI. Resident Physician Interactions with Surrogate Decision-Makers: The Resident Experience. *Journal of the American Geriatrics Society.* 2011;59(12):2341-2346.
12. Billings ME, Engelberg R, Curtis JR, Block S, Sullivan AM. Determinants of medical students' perceived preparation to perform end-of-life care, quality of end-of-life care education, and attitudes toward end-of-life care. *J Palliat Med.* 2010;13(3):319-326.
13. Ratanawongsa N, Teherani A, Hauer KE. Third-year medical students' experiences with dying patients during the internal medicine clerkship: a qualitative study of the informal curriculum. *Academic medicine : journal of the Association of American Medical Colleges.* 2005;80(7):641-647.
14. Allen SL, Davis KS, Rousseau PC, Iverson PJ, Mauldin PD, Moran WP. Advance care directives: overcoming the obstacles. *J Grad Med Educ.* 2015 Mar; 7(1): 91–94. doi: 10.4300/JGME-D-14-00145.1
15. Medscape. State CME requirements. 2016; https://www.medscape.org/public/staterequirements. Accessed March 18, 2019.
16. Comer AR, Gaffney M, Stone C, Torke A. "WHAT DO YOU MEAN I CANNOT CONSENT FOR MY GRANDMOTHER'S MEDICAL PROCEDURE?": KEY ISSUES

WITH STATE DEFAULT SURROGATE decision making LAWS. *Indiana Health Law Review.* 2017;14(2):1.

17. Comer AR, Slaven JE, Montz A, Burke E, Inger L, Torke A. Nontraditional Surrogate Decision Makers for Hospitalized Older Adults. *Medical Care.* 2018;56(4):337.

Table 1: Demographics of Medical Residents

Specialty	n(%)
Emergency Medicine	16(45.7)
Combined Internal and Pediatrics Program	19(54.3)
Years in training	
PGY-1	5(14.3)
PGY-2	14(40)
PGY-3	11(31.4)
PGY-4	5(14.3)
Gender	
Male	15(42.9)
Female	20(57.1)
Location of Medical School	
California	3(8.6)
Illinois	5(14.3)
Indiana	10(28.5)
Kentucky	1(2.9)
Maryland	1(2.9)
Michigan	1(2.9)
Minnesota	1(2.9)
Nebraska	1(2.9)
Ohio	4(11.4)
Tennessee	1(2.9)
Texas	2(5.7)
Virginia	1(2.9)
Wisconsin	2(5.7)
Dominican Republic	1(2.9)

Table 2 Frequency which Medical Residents Believed Surrogate was Legal.

Items	State Law n(%)	Federal Law of Veterans Association n(%)
Married Spouse	34(97.1) [a]	34(97.1) [a]
Parent	30(85.7) [a]	31(88.6) [a]
Adult Grandchild	16(45.7) [a]	19(54.3) [a]
Adult Niece	7(20)	7(20) [a]
Close Friend	0(0.0)	0(0.0) [a]
None of the above	1(2.9)	1(2.9)
[a] This is the correct answer		

Table 3 Medical Residents Reported Knowledge of Surrogate decision making

Item	No knowledge n(%)	Low Knowledge n(%)	Some Knowledge n(%)	High Knowledge n(%)
Level of knowledge of surrogate decision making laws	0(0.0)	7(20)	28(80)	0(0.0)
	Yes n(%)	No n(%)	I don't remember n(%)	
Report receiving training in surrogate decision during residency	15(42.9)	11(31.4)	9(25.7)	
	Didactic n(%)	Bedside n(%)	Self-taught n(%)	Other n(%)
Types of training received by medical residents who reported training	12(60) [b]	9(45) [b]	3(15) [b]	1(5) [b]
[b] n is out of 20 participants who responded				