

Adequacy of Advance Directives in Patients Admitted to the Intensive Care Unit



Gregory Benes, BS¹; Maya Roth, MD¹; Bailli Fontenot, MD¹; Stacey Rhodes, MD²; Evrim Oral, PhD³; Carolyn Wheeler, BS¹; Jessica Fox, MS³; Lisa Moreno Walton, MD, MS, FACEP, FAAEM²

¹LSUHSC School of Medicine, ²LSUHSC Department of Emergency Medicine, ³LSUHSC School of Public Health



Background

- End-of-life care decision making is a vital component of treatment and long-term management for patients admitted to the intensive care unit (ICU)
- Documents such as an Advance Directive (AD) and selection of a Power of Attorney (POA) can help guide patients, families, and physicians in providing goal oriented and timely care reducing healthcare costs
- Studies show rate of having an AD and/or POA ranged between 55% and 60%
- Having an AD does not mean it will be followed
- Limited studies regarding adherence and specificity of ADs and POAs in the ICU setting

Objectives

1. Measure the percentage of patients admitted to the ICU who have an AD or POA
2. Determine if ICU patients have an AD or POA that outlines their specific wishes regarding end-of-life care or care when they are unable to make decisions
3. Determine whether those patients with an AD or POA received health care that aligned with wishes
4. Conclude if having an AD or POA limits the number of futile procedures that patients receive

Methods

- Retrospective chart review of 2,363 patients admitted to University Medical Center of New Orleans
- Inclusion criteria:
 - ≥ 18 years old
 - ICU admissions between August 2015 and March 2019
- Data collected:
 - Patient characteristics
 - Presence, format, and specificity of AD and/or POA
 - Treatments delivered (life support measures, escalation events, palliative care)
- Statistical analysis:
 - ADs and patient characteristics were analyzed using Firth's logistic regression
 - POAs and patient characteristics were analyzed using logistic regression modeling

Demographics

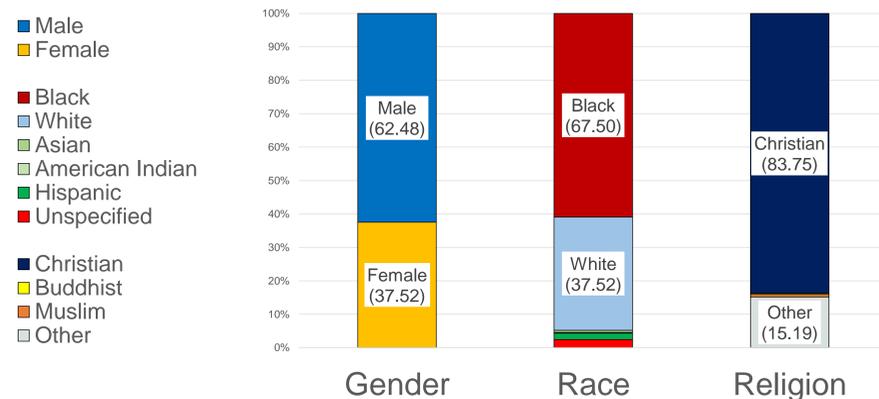


Figure 1: Demographic breakdown (percentages of total patient population)

Frequency and Specificity

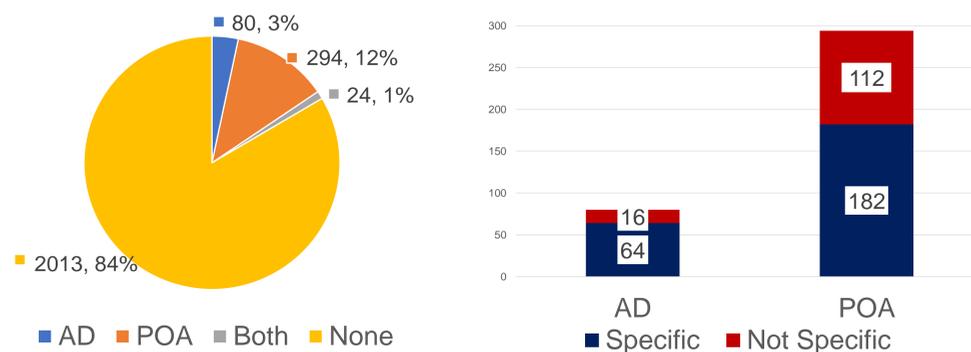


Figure 2: frequency of AD or POA

Figure 3: specificity of AD or POA

Advance Directive

Variable	OR	95% CI	p-value*	
Age	1.061	1.043	1.080	<0.0001*
Gender				
Male vs Female	0.707	0.446	1.122	0.1415
Race				
Non-Hispanic Black vs Other	1.943	0.360	10.489	0.4402
Non-Hispanic White vs Other	1.807	0.321	10.180	0.5022
Asian vs Other	1.009	0.039	26.118	0.9957
American Indian vs Other	4.650	0.118	182.643	0.4119
Hispanic vs Other	2.387	0.283	20.116	0.4238
Religion				
Christian vs Other	1.498	0.697	3.217	0.3004
Buddhist vs Other	3.425	0.135	86.582	0.4551
Muslim vs Other	6.960	1.038	46.661	0.0457*

Table 1: association between variables and having an Advance Directive

Power of Attorney

Variable	OR	95% CI	p-value*	
Age	1.041	1.031	1.051	<0.0001*
Gender	1.042	0.803	1.351	0.7586
Male vs Female				
Race				
Non-Hispanic Black vs Other	0.828	0.407	1.685	0.6033
Non-Hispanic White vs Other	0.770	0.369	1.606	0.4856
Asian vs Other	1.114	0.225	5.520	0.8952
American Indian vs Other	1.215	0.117	12.593	0.8702
Hispanic vs Other	0.209	0.043	1.024	0.0535
Religion				
Christian vs Other	1.324	0.900	1.948	0.1535
Buddhist vs Other	2.082	0.310	13.959	0.4502
Muslim vs Other	0.474	0.058	3.858	0.4850

Table 2: association between variables and having a POA

Alignment of Care

	Life Support	Escalation Events	Palliative Care
AD	79.63% (n=80)	65.63% (n=80)	50% (n=80)
POA	70.97% (n=294)	35.71% (n=294)	48.20% (n=294)
Overall Directive	73.82% (n=350)	37.62% (n=350)	48.57% (n=350)

Table 3: percentage of patients who received care that aligned with their wishes as stated in an AD or by a POA

Conclusions

- 13.75% (n=80) of patients with an AD received some combination of futile procedures and that percentage increased to 46.60% (n=294) among patients with a POA
- Overall, among patients with some form of directive, 41.43% of patients received some futile procedures (n=350)
- Educational programs that target AD and POA planning prior to ICU admission would be beneficial since the presence of a POA often led to care that did not align with patient's wishes and increased futile procedures
- Recommend additional emphasis on end-of-life care counseling
- Intervention targeted at younger individuals in the emergency department would help improve AD completion and POA delegation