Patient Characteristics Associated with and Changes Over Time in Trust in Inpatient Physicians

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INTRODUCTION

Physicians have been considered one of the most trusted professions in the USA. However, recent reports suggest that trust in the medical profession has eroded.^{1, 2} One potential contributor to declining trust is the breakdown of the doctor-patient relationship resulting from discontinuity of inpatient care,^{3, 4} where patients do not see their primary care doctor when hospitalized. Additionally, patients from underrepresented groups are less likely to trust the medical profession due to a legacy of racism and bias⁵ that has resulted in recognized disparities in care. However, whether these factors affect patients' trust in their inpatient physician is not well described. The aim of this study was to test whether certain patient demographic or clinical factors are associated with patients' trust in their inpatient physician and examine changes in patient trust in their inpatient physician over time.

METHODS

From 2006 to 2018, adult general medicine inpatients were recruited into an ongoing study of hospital care. Consented patients were contacted by phone 30 days after discharge and asked: "During your hospitalization did you have confidence and trust in the doctors treating you?" Responses included (1) Yes, always; (2) Yes, Sometimes; and (3) No. A multivariable logistic regression (combining responses "Yes, always" and "Yes, sometimes") model was used to test whether patients' age, gender, race, insurance status, length of stay (LOS), Charlson Comorbidity Score (CCS), and year of admission (2006–2018) were associated with patient trust in their inpatient physician. Interaction variables between gender and race and gender and age were included in the model to test for differences across gender, race, and age, and their association with patient trust.

RESULTS

From 2006 to 2018, 76,265 patients were eligible for study participation, 54,430 (71%) consented to participate, and 37,116 (68%) completed the follow-up survey. The mean patient age was 58, 21,779 (59%) were female, and 26,777 (72%) were African American (Table 1). Overall, 35,267 (95%) expressed trust in their inpatient physician, and only 1849 (5%) patients expressed no trust. In the regression model (Table 2), trust in their physician was associated with older age (age: 44–59 OR=1.2, $p<0.01$, 60–74 OR=1.6, $p<0.01$, ≥ 75 OR=1.6, $p<0.01$), and having private insurance (OR=1.2, $p<0.01$). Females (OR 0.63, $p<0.01$) were less likely to trust

Table 1 Patient Characteristics

<i>n</i> = 37,116	
Age, mean $\pm$ SD	58 $\pm$ 19
Age quartiles, <i>n</i> (%)	
18–44	8833 (24)
45–59	9637 (26)
60–74	10,776 (29)
75+	7870 (21)
Female, <i>n</i> (%)	21,779 (59)
Race, <i>n</i> (%)	
White	7771 (21)
Black or African American	26,777 (72)
Other	1648 ⁴
Unknown/refused	920 (3)
Insurance status, <i>n</i> (%)	
Private	7837 (21%)
Medicare	19, 116 (52%)
Medicaid	9405 (25%)
Uninsured	758 (2%)
Length of stay (days), <i>n</i> (%)	
1	6984 (19)
2–3	7592 (20)
3–5	9754 (27)
5–7	4988 (13)
≥ 7	7798 (21)
Charlson Comorbidity Index, <i>n</i> (%)	
0	11,735 (32%)
1–2	15,180 (41%)
3–4	7425 (20%)
5	2776 (7%)
Admission year, <i>n</i> (%)	
2006	2894 (8)
2007	1787 ⁵
2008	1366 ⁴
2009	1065 ³
2010	1154 ³
2011	2399 ⁶
2012	2893 (8)
2013	3523 (9)
2014	3936 (11)
2015	3807 (10)
2016	3999 (11)
2017	4977 (13)
2018	3316 (9)

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Table 2 Trust in Inpatient Physicians by Patient Characteristics and Admission Year

<i>n</i> =37,116	Odds ratio	95% CI	<i>p</i> value
Age			
18–44		Referent	
45–59	1.2	1.1–1.4	<0.01
60–74	1.6	1.4–1.8	<0.01
75+	1.6	1.3–1.9	<0.01
Female	0.63	0.51–0.78	<0.01
Race			
White		Referent	
Black or African American	0.88	0.72–1.1	0.19
Other	0.73	0.51–1.0	0.07
Unknown/refused	0.71	0.47–1.1	0.13
Gender x race*†			
Black or African American Female	1.5	1.2–1.9	<0.01
Other female	1.6	0.99–2.6	0.05
Unknown/refused female	1.8	0.99–3.4	0.05
Insurance status			
Medicare		Referent	
Medicaid	1.1	0.96–1.2	0.18
Private	1.2	1.1–1.4	<0.01
Uninsured	1.3	0.89–1.8	0.17
Length of stay (days)			
1		Referent	
2	1.0	0.89–1.2	0.66
3–4	1.0	0.89–1.2	0.83
5–6	1.0	0.87–1.2	0.71
≥7	0.94	0.81–1.1	0.43
Charlson Comorbidity Index			
0		Referent	
1–2	0.94	0.84–1.0	0.26
3–4	0.96	0.83–1.1	0.56
5	1.1	0.87–1.3	0.50
Admission year			
2006	1.0	0.82–1.3	0.75
2007	1.1	0.86–1.5	0.39
2008	1.0	0.77–1.4	0.82
2009	1.0	0.74–1.4	0.97
2010	0.97	0.72–1.3	0.87
2011	1.0	0.80–1.3	0.91
2012		Referent	
2013	1.3	1.0–1.6	0.03
2014	1.1	0.90–1.4	0.30
2015	0.84	0.68–1.0	0.10
2016	1.1	0.90–1.4	0.28
2017	1.1	0.88–1.3	0.43
2018	1.4	1.1–1.8	<0.01

*Referent categories are male gender and white race

†Interaction effect overall *p* value < 0.01

their physician. There was a significant interaction between gender and race, with females identifying as African American (OR 1.5, $p<0.01$), other (OR 1.6, $p<0.01$), or unknown/refused (OR 1.8, $p<0.01$) race, reporting greater trust in their physician than white females. There was no association between patient trust in their physician and LOS or CCS. There was no association between patient trust in their physician and the year of admission besides 2013 (OR=1.3, $p=0.03$) and 2018 (OR=1.4, $p<0.01$) (Fig. 1), where small increases in trust were observed. Controlling for hospitalist service vs non-hospitalist did not change the results.

DISCUSSION

The overwhelming majority of patients reported trust in their inpatient physician. Despite significant changes to inpatient

care delivery over the study period including the growth of hospitalists, there were no sustained changes in trust. However, some patient characteristics (age, gender, race, insurance status) were associated with increased trust in their inpatient doctor. Older adults may report greater trust due to increased familiarity with hospital care and represent a generation that has historically trusted physicians more than younger adults today. Privately insured patients may trust their inpatient physicians more due to greater access and fewer financial concerns regarding their care.⁶ Females may be less trusting of their inpatient physician than males as a result of gender inequity in healthcare or because they have stronger relationships with their primary doctors than men do. Why non-white females were more likely to trust their inpatient physician compared to white females is a finding that is inconsistent with past research and merits further exploration.

Fig. 1 Patient's Trust in Their Inpatient Physician Over Time

As a single-institution study, our results may not be generalizable. However, lessons from our experience may be salient. For example, the increases in trust in 2013 and 2018 correspond to institutional expansions in access to care (new hospital, opening trauma center), suggesting that health system investments can improve patient trust. Future work should focus on how to improve and capitalize upon trust in inpatient physicians, especially for diverse patients in multicenter prospective studies.

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Declarations:

Conflict of Interest: The authors declare that they do not have a conflict of interest.

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