

Letters

RESEARCH LETTER

Health Care Contact Days, Care Experience, and Out-of-Pocket Spending Among Traditional Medicare Patients

Health care contact days—spent obtaining care outside of the home—can represent needed care and place burdens on older adults and caregivers.¹⁻³ For older Medicare beneficiaries, studies show that contact days vary by factors beyond medical need, suggesting modifiable overuse and underuse.⁴⁻⁶



Supplemental content

Understanding how contact days relate to other dimensions of patient experience could inform better use of these days. This study used nationally representative data to assess relationships between contact days and patients' care satisfaction, ease in managing care, and out-of-pocket spending.

Methods | We used data from the 2019 Medicare Current Beneficiary Survey, a nationally representative rotating panel survey, linked to the Cost Supplement and Traditional Medicare (TM) claims. Among community-dwelling beneficiaries 65 years or older without end-stage renal disease, alive, and continuously enrolled in TM for the year (eMethods in Supplement 1), we examined survey subsamples with data on care satisfaction, ease in managing care, or out-of-pocket spending.

Our predictor was health care contact days, a claims-based measure of days spent receiving ambulatory (visits, tests, imaging, procedures, or treatments) or institutional (hospi-

tal, emergency department, skilled-nursing facility, or hospice facility) care (eMethods, eTable 1 in Supplement 1).⁴ Outcomes were care satisfaction, ease in managing care, and out-of-pocket spending in 2019 (eTable 2 in Supplement 1). For survey outcomes, we used logistic regression with deciles of contact days as the predictor. For spending, we used linear regression with continuous contact days as the predictor, modeled using linear splines with knots at 7 and 46 contacts days per locally estimated scatterplot smoothing. Models were adjusted for sociodemographic and clinical factors and care-seeking behaviors that are associated with contact days or could explain differences in care experience and were clustered by hospital referral region (eTable 2 in Supplement 1). In sensitivity analyses, we controlled for individual chronic conditions rather than condition count. Analyses were weighted to be nationally representative according to survey design.

The institutional review board of Mass General Brigham waived review. We used R version 4.3.2. A 2-sided $P < .05$ was significant. The study followed the STROBE reporting guidelines. Data were analyzed from June to December, 2024.

Results | Subsamples included 2980 to 6218 respondents (weighted, 28 273 301 across subsamples; Table). Most were younger than 75 years, lived in metropolitan areas, and had 1 or more chronic condition. The mean (SD) total contact days ranged from 20.0 (21.7) to 23.6 (21.1). Of those asked, 58.1% (3556 of 6218) patients reported care satisfaction, and 61.2% (1783 of 2980) reported ease in managing care. The mean (SD) out-of-pocket spending was \$2596 (\$4438).

Table. Characteristics and Contact Days of Respondents in Each Study Cohort^a

Characteristics	Cohort, No. of patients (weighted %) ^b		
	Care satisfaction (n = 6218)	Ease managing care (n = 2980)	Out-of-pocket spending (n = 3929)
Age, y			
65-69	1233 (30.4)	558 (27.6)	679 (29.9)
70-74	1326 (28.9)	667 (30.4)	896 (29.0)
75-79	1192 (18.0)	610 (20.3)	769 (18.3)
80-84	1227 (11.5)	583 (11.1)	745 (11.4)
≥85	1240 (11.3)	562 (10.5)	840 (11.5)
Sex			
Female	3372 (53.9)	1627 (55.0)	2133 (53.8)
Male	2846 (46.2)	1353 (45.1)	1796 (46.2)
Race ^c			
African American	370 (6.8)	111 (4.1)	234 (6.6)
Asian	118 (2.7)	39 (1.9)	65 (2.5)
White	5373 (85.0)	2691 (89.4)	3400 (85.2)
Other	230 (3.7)	89 (3.1)	155 (4.1)
Hispanic ethnicity ^d			
No	5792 (94.2)	2832 (95.7)	3677 (94.4)
Yes	397 (5.4)	133 (3.9)	236 (5.2)

(continued)

Table. Characteristics and Contact Days of Respondents in Each Study Cohort^a (continued)

Characteristics	Cohort, No. of patients (weighted %) ^b		
	Care satisfaction (n = 6218)	Ease managing care (n = 2980)	Out-of-pocket spending (n = 3929)
Income, % of the FPL			
≤100	640 (8.6)	176 (4.8)	407 (8.4)
>100-≤200	1366 (18.6)	571 (15.8)	830 (18.0)
>200	4212 (72.7)	2233 (79.4)	2692 (73.6)
Education ^c			
Did not graduate high school	785 (9.8)	224 (5.5)	496 (9.6)
High school or some college	2988 (46.2)	1414 (44.5)	1868 (45.8)
College or above	2430 (43.8)	1336 (49.8)	1556 (44.4)
Beneficiary residence ^d			
Metropolitan	4522 (78.8)	2229 (81.2)	2810 (77.9)
Micropolitan	874 (11.2)	394 (10.1)	564 (11.6)
Small town	447 (5.5)	204 (5.0)	299 (5.6)
Rural	373 (4.5)	153 (3.7)	254 (4.8)
No. of chronic conditions			
0	405 (11.2)	140 (7.9)	332 (13.6)
1-5	1871 (36.4)	820 (33.8)	1170 (37.0)
6-10	2635 (37.2)	1361 (41.7)	1642 (35.5)
>10	1307 (15.2)	659 (16.5)	785 (13.9)
Poor self-rated health ^e			
No	5152 (83.7)	2515 (84.4)	3218 (82.7)
Yes	1042 (16.0)	460 (15.5)	595 (14.6)
Functional impairment ^f			
No	4500 (76.1)	2171 (76.3)	2825 (76.1)
Yes	1705 (23.8)	806 (23.6)	999 (21.4)
Worry about health more than average ^g			
No	5123 (82.2)	2500 (83.6)	3222 (82.3)
Yes	930 (15.4)	416 (14.8)	512 (13.5)
Go to physician as soon as I feel bad ^h			
No	3616 (59.0)	1731 (58.5)	2292 (59.8)
Yes	2550 (40.3)	1228 (40.8)	1504 (37.2)
Avoid going to physician ^k			
No	4973 (80.4)	2533 (85.9)	3065 (78.1)
Yes	1223 (19.3)	441 (13.9)	748 (19.1)
Contact days, mean (SD), No.			
Total	20.0 (21.7)	23.6 (21.1)	19.3 (20.7)
Institutional	2.3 (9.6)	2.2 (7.6)	2.0 (8.1)
Ambulatory	17.7 (18.1)	21.4 (18.2)	17.3 (17.8)

Abbreviation: FPL, federal poverty level.

^a Missingness was handled using the indicator method.

^b Percentages were weighted to be nationally representative according to the survey design.

^c Race question: refused or answered "don't know" for 127, 50, and 75, respectively. Race was designated from a survey question.

^d Ethnicity question: refused or answered "don't know" for 29, 15, and 16, respectively. Ethnicity was designated from a survey question.

^e Education question: refused or answered "don't know" for 15, 6, and 9, respectively.

^f Determined based on rural-urban commuting area codes status missing

for 2, 0, 2 respectively.

^g Self-rated health question: refused or answered "don't know" for 24, 5, and 116, respectively.

^h Functional impairment composite: refused or answered "don't know" for 13, 3, and 105, respectively.

ⁱ Health worry question: refused or answered "don't know" for 165, 64, and 195, respectively.

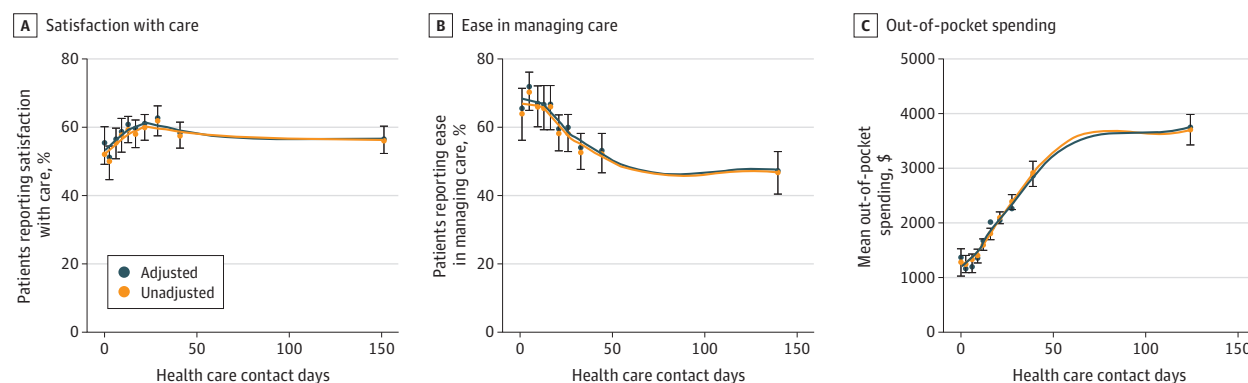
^j Go to physician as soon as I feel bad question: refused or answered "don't know" for 52, 21, and 133, respectively.

^k Avoid going to physician question: refused or answered "don't know" for 22, 6, and 116, respectively.

Contact days and care satisfaction were significantly associated, with an inverted U-shaped distribution peaking at 25 to 32 contact days (Figure). There was a significant, inverse relationship between contact days and ease in managing care,

with drop-off after 3 to 7 days. The association between contact days and out-of-pocket spending was linear between 7 and 46 days (most of the sample). Within this range, each additional contact day was associated with an additional \$48.81

Figure. Unadjusted and Adjusted Associations of Contact Days With Satisfaction With Care, Ease in Managing Care, and Out-of-Pocket Spending



The models were adjusted for sociodemographic and clinical factors and care-seeking behaviors that were previously associated with contact days or could plausibly explain differences in care experience and were clustered by hospital referral region.

(95% CI, \$36.82-\$60.80) in out-of-pocket spending per beneficiary. Results were similar in sensitivity analyses.

Discussion | In this nationally representative study, TM beneficiaries experiencing lower- or higher-than-average contact days reported less satisfaction with care, even after adjusting for sociodemographic and clinical factors and care-seeking behaviors. Having more contact days were also associated with less reported ease in managing care and \$49 more out-of-pocket per day. Our results suggest that those with few contact days may be dissatisfied due to access barriers, and that above certain thresholds, more contact days may offer patients diminishing marginal benefits.

Limitations include limited generalizability to Medicare Advantage enrollees or younger adults and possible recall or proxy response bias in survey responses.

These results suggest that contact days, which reflect both patient need and care efficiency, represent a dimension of patient experience that is complementary to existing measures. Clinicians, researchers, and policymakers could use contact days to evaluate interventions and reduce excess contact days for patients by avoiding unnecessary care, improving care coordination, and shifting care to the home.¹

Nicholas E. Daley, AB
E. John Orav, PhD
Ishani Ganguli, MD, MPH

Author Affiliations: Brigham and Women's Hospital Division of General Internal Medicine and Primary Care, Boston, Massachusetts (Daley, Orav, Ganguli); Harvard University, Boston, Massachusetts (Orav, Ganguli); Associate Editor, *JAMA Internal Medicine* (Ganguli).

Accepted for Publication: December 23, 2024.

Published Online: March 17, 2025. doi:10.1001/jamainternmed.2024.8517

Corresponding Author: Ishani Ganguli, MD, MPH, Brigham and Women's Hospital, Division of General Internal Medicine and Primary Care, 1620 Tremont St, Third Floor, Boston, MA 02120 (iganguli@bwh.harvard.edu).

Author Contributions: Dr Ganguli 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.

Concept and design: Daley, Ganguli.

Acquisition, analysis, or interpretation of data: All authors.

Drafting of the manuscript: Daley.

Critical review of the manuscript for important intellectual content: All authors.

Statistical analysis: Daley, Orav.

Obtained funding: Ganguli.

Administrative, technical, or material support: Daley.

Supervision: Ganguli.

Conflict of Interest Disclosures: Dr Ganguli reported receiving grants from the National Institute on Aging during the conduct of the study; personal fees from F-Prime Capital outside the submitted work. No other disclosures were reported.

Disclaimer: Dr Ganguli is an Associate Editor of *JAMA Internal Medicine* but was not involved in any of the decisions regarding review of the manuscript or its acceptance.

Data Sharing Statement: See Supplement 2.

- Ganguli I. How does health care burden patients? let me count the days. *N Engl J Med*. 2024;391(10):880-883. doi:10.1056/NEJMp2402138
- Ray KN, Chari AV, Engberg J, Bertolet M, Mehrotra A. Opportunity costs of ambulatory medical care in the United States. *Am J Manag Care*. 2015;21(8):567-574.
- Presley CJ, Soulos PR, Tinetti M, Montori VM, Yu JB, Gross CP. Treatment burden of Medicare beneficiaries with stage I non-small-cell lung cancer. *J Oncol Pract*. 2017;13(2):e98-e107. doi:10.1200/JOP.2016.014100
- Ganguli I, Chant ED, Orav EJ, Mehrotra A, Ritchie CS. Health care contact days among older adults in traditional Medicare: a cross-sectional study. *Ann Intern Med*. 2024;177(2):125-133. doi:10.7326/M23-2331
- Chant ED, Ritchie CS, Orav EJ, Ganguli I. Healthcare contact days among older adults living with dementia. *J Am Geriatr Soc*. 2024;72(5):1476-1482. doi:10.1111/jgs.18744
- Gupta A, Chant ED, Mohile S, et al. Health care contact days among older cancer survivors. *JCO Oncol Pract*. 2024;20(7):943-952. doi:10.1200/OP.23.00590