## **Supplementary Online Content**

Reddy A, Pollack CE, Asch DA, Canamucio A, Werner RM. The effect of primary care provider turnover on patient experience of care and ambulatory quality of care [published online May 18, 2015]. *JAMA Intern Med*. doi:10.1001/jamainternmed.2015.1853.

eTable 1. Patient experience of care domains

eTable 2. The effect of interaction PCP turnover and usual provider of care (UPC) on patient experience of care

eTable 3. The effect of interaction PCP turnover and usual provider of care (UPC) on ambulatory quality of care

This supplementary material has been provided by the authors to give readers additional information about their work.

## eTable 1. Patient Experience of Care Domains

How Well Doctors/Nurses Communicate Score	Question 15. In the last 12 months, how often did your personal VA doctor or nurse explain things in a way that was easy to understand? Question 16. In the last 12 months, how often did your personal VA doctor or nurse listen carefully to you?  Question 18. In the last 12 months, how often did your personal VA doctor or nurse show respect for what you had to say?  Question 19. In the last 12 months, how often did your personal VA doctor or nurse spend enough time with you? Filters: Question 13. A personal doctor or nurse is the one you would see if you need a checkup, want advice about a health problem or get sick or hurt. Do you have a personal VA doctor or nurse? [Response options: Yes, No] Question 14. In the last 12 months, how many times did you visit your personal VA doctor or nurse to get care for yourself? [Response options: None, 1, 2, 3, 4, 5 to 9, 10 or more] Responses to Question 15, 16, 18, and 19 were used only if response to Question 13 was 'yes' or blank and response to Question 14 was not 'None.' Questions 15, 16, 18, and 19 have the following response scale: Never, Sometimes, Usually, Always. The score on each item is calculated as the percentage of responses that fall in the top category (Always). How Well Doctors/Nurses Communicate is then calculated as the average of the site's scores on the four items.
Rating of Personal Doctor/Nurse Score	Question 20. Using any number from 0 to 10, where 0 is the worst personal doctor/nurse possible and 10 is the best personal doctor/nurse possible, what number would you use to rate your personal VA doctor/nurse?  Filter: Question 13. A personal doctor or nurse is the one you would see if you need a checkup, want advice about a health problem or get sick or hurt. Do you have a personal VA doctor or nurse? [Response options: Yes, No] Responses to Question 20 were used only if response to Question 13 was 'yes' or blank . Question 20 has the following response scale: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10. The reporting measure is calculated as the percentage of responses that fall in the top two categories (9, 10).
Getting Needed Care Score	Question 12. In the past 12 months, how often was it easy to get the care, tests or treatment you thought you needed through VA?  Filter: Question 11. In the past 12 months, did you try to get any care, tests or treatment through VA? [Response options: Yes, No] Response to Question 12 was used only if response to Question 11 was 'yes' or blank.  Question 22. In the last 12 months, how often was it easy to get appointments with VA specialists? Filter: Question 21.  Specialists are doctors like surgeons, heart doctors, allergy doctors, skin doctors, and other doctors who specialize in one area of healthcare. In the last 12 months, did you try to make any appointments to see a VA specialist? [Response options: Yes, No] Response to Question 22 was used only if response to Question 21 was 'yes' or blank.

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	Questions 12 and 22 have the following response scale: Never, Sometimes, Usually, Always. The score on each item is calculated as the percentage of responses that fall in the top category (Always). Getting Needed Care is then calculated as the average of the site's scores on the two items.
Overall Rating of VA Healthcare Score	Question 10. Using any number from 0 to 10, where 0 is the worst healthcare possible and 10 is the best healthcare possible, what number would you use to rate all your VA healthcare in the last 12 months? Question 10 has the following response scale: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10. The reporting measure is calculated as the percentage of responses that fall in the top two categories (9, 10).
Getting Care Quickly Score	Question 2. In the last 12 months, when you needed care right away, how often did you get care as soon as you thought you needed?  Filter: Question 1. In the last 12 months, did you have an illness, injury, or condition that needed care right away in a clinic, emergency room, or doctor's office? [Response options: Yes, No] Response to Question 2 was used only if response to Question 1 was 'yes' or blank. Question 4. In the past 12 months, not counting the times you needed care right away, how often did you get an appointment as soon as you thought you needed? Filter: Question 3. In the last 12 months, not counting the times you needed care right away, did you make any appointments for your healthcare at a doctor's office or clinic? [Response options: Yes, No] Response to Question 4 was used only if response to Question 3 was 'yes' or blank. Questions 2 and 4 have the following response scale: Never, Sometimes, Usually, Always. The score on each item is calculated as the percentage of responses that fall in the top category (Always). Getting Care Quickly is then calculated as the average of the site's scores on the two items.

**eTable 2.** The effect of interaction PCP turnover and Usual Provider of Care (UPC) on patient experience of care

	Adjusted percentage point difference associated	95% Confidence	P-
	with the interaction between 1 SD change in UPC	Interval	Value
	and PCP turnover		
How well			
doctor/nurse			
communicate			
(n=223,384)	-0.72	-1.2 to -0.2	0.01
Rating of personal			
doctor/nurse			
(n=228,122)	-0.84	-1.4 to -0.3	0.004
Getting needed care	-0.001	-0.8 to 0.8	0.99
(n=131,420)			
Getting care quickly	0.07	-0.8 to 0.9	0.87
(n=90,831)			
Overall rating of VA			
healthcare			
(n=244,064)	-0.04	-0.6 to 0.5	0.88

<sup>\*</sup>Mean (standard deviation) UPC: 0.90 (0.20)

<sup>\*\*</sup>Analysis is adjusted for age, gender, race, income, baseline illness severity, and include clinic-level fixed effects

**eTable 3.** The effect of interaction PCP turnover and Usual Provider of Care (UPC) on ambulatory quality of care

	Adjusted percentage point difference associated with the interaction between 1 SD change in UPC and PCP turnover	95% Confidence Interval	P- value
Diabetes:			
<ul> <li>Retinal eye exam         (n=54,786)</li> </ul>	0.57	-0.2 to 1.3	0.12
• Testing HbA1c (n=54,812)	0.01	-0.3 to 0.3	0.92
• HbA1c <=9 (n=54,812)	-0.43	-1.3 to 0.5	0.35
Testing LDL cholesterol level (n=54,782)	-0.05	-0.4 to 0.3	0.80
• Control LDL cholesterol level (LDL < 100) (n=54,774)	-1.04	-2.1 to 0.04	0.06
Coronary Artery Disease:  • Testing LDL cholesterol level (n=34,639)	-0.02	-0.6 to 0.5	0.94
• Control LDL cholesterol level (LDL < 100) (n=34,635)	-1.56	-2.8 to -0.2	0.03
Hypertension:  • Control of blood pressure (blood pressure below 140/90 mmHg) (n=114,930)	-1.00	-1.7 to -0.3	0.003
Screening/Prevention:  • Breast cancer screening (n=16,431)	0.48	-1.0 to 2.0	.53
• Colon cancer screening (n=122,804)	-0.12	-0.7 to 0.4	.68
• Influenza vaccine (n=35,321)	-0.23	-1.3 to 0.9	.68

<sup>\*</sup>Mean (standard deviation) UPC: 0.87 (0.23)

<sup>\*\*</sup>Analysis is adjusted for age, gender, race, income, baseline illness severity, and include clinic-level fixed effects