## Data Supplement S1. Supplemental material

#### Appendix S1. Instrument, containing Section 1 (pages 1-4) and Section 2 (pages 5-7)

When you are in the Emergency Department, you may interact with nurses, social workers, patient assistants or **a doctor, physician's assistant or a nurse practitioner**. In this survey, we want to know your experience with the <u>doctor, physician's assistant or nurse practitioner</u> who is the primary person taking care of you today. The survey uses the term "<u>doctor</u>" to refer to any one of these three people who would be your primary provider while you are in our Emergency Department.

Diamaa lat wa kwaxy havy wayah	LALL ACREE AN DICACREE With statements that	fallow (Cincle the number)
PIPOSP IPT US KNOW NOW MUCH	ΙΟΠ ΑΓΙΚΕΕ ΟΓΙ ΓΙΝΑΓΙΚΕΕ WITH STATEMENTS THAT	
	ou AGREE or DISAGREE with statements that	Jonoth (en ele the namber)

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. I know enough about my health and my body to be involved in my medical decisions.	1	2	3	4	5
2. If you advocate for yourself or your loved one too much, the doctors might see you as difficult.	1	2	3	4	5
3. If given enough information, I am capable of participating in decisions about my medical care.	1	2	3	4	5
4. Whatever the doctor decides to do is ok with me, because s/he is the expert.	1	2	3	4	5
5. If something serious is going on with my health, I want to be involved in decisions about my health care.	1	2	3	4	5
6. I have had experiences making decisions together with a doctor.	1	2	3	4	5
7. In general, I would wait for a doctor to ask me to be involved <i>before</i> I get involved with decisions.	1	2	3	4	5
8. Generally, in the Emergency Department, the doctor does not usually ask for my input in decision-making.	1	2	3	4	5
9. Usually, I don't understand the medical issues enough to be involved in decision-making.	1	2	3	4	5
10. Doctors often use words I don't understand.	1	2	3	4	5
11. Generally, there is not enough time to discuss options in the Emergency Department.	1	2	3	4	5
12. I am comfortable asking the doctor to explain when I don't understand the plan.	1	2	3	4	5
13. I am comfortable telling the doctor if I <i>disagree</i> with their plan.	1	2	3	4	5
14. Having written information about my options would help me be involved in decision-making in the Emergency Department.	1	2	3	4	5
15. Having a friend or family member with me would help me be involved in decision-making in the Emergency Department	1	2	3	4	5

16. Is there anything else that would help you be involved in your health care decisions in the ED?

This next section is about your preferences regarding *involvement in decision-making*.

The doctor (or physician's assistant/nurse practitioner) is the one who talks to you about your medical problems, possible treatments, and other medical decisions. Your doctor may consider two or more reasonable options for your care in these matters. When there are two reasonable options, it might make sense for you to be involved in the decision-making. To better understand your concerns, we want to know how much you want to participate and share in the doctor's decision-making process.

In these examples, please rate how much you would like to be involved in making the decision.

17. In this example, the doctor has talked to you and examined you and believes there are *two reasonable options* regarding **TESTS** (like CT scans or ultrasounds) for you. There are potential harms and benefits to each option, like radiation to your body or how fast the test could be done. Your doctor can describe the potential harms and benefits of the options to you. What best describes your preference... (**Check only one**)

ind benefits of the options to your mat sest describes your preferencem (encert only one)
<sup>1</sup> I prefer to make decisions about which <b>tests</b> I will have.
<sup>2</sup> I prefer to make decisions about which <b>tests</b> I will have, <i>after seriously considering my doctor's opinion.</i>
<sup>3</sup> I prefer that my doctor and I <i>share responsibility</i> for deciding which <b>tests</b> I will have.
<sup>4</sup> I prefer that my doctor make the decisions about which <b>tests</b> I will have after hearing and considering my input and opinions.
<sup>5</sup> I prefer to leave all decisions regarding tests <i>to my doctor</i> .
18. In this example, your doctor has diagnosed your problem and believes there are <i>two reasonable options</i> regarding <b>TREATMENTS</b> for you (like different pills or a surgery). Each treatment option has potential harms and benefits, like different side effects. Your doctor can describe the potential harms and benefits of the options to you. What best describes your preference ( <b>Check only one</b> )
<sup>1</sup> I prefer to make decisions about which <b>treatments</b> I will have.
<sup>2</sup> I prefer to make decisions about which <b>treatments</b> I will have, <i>after seriously considering my doctor's opinion</i> .
<sup>3</sup> I prefer that my doctor and I <i>share responsibility</i> for deciding which <b>treatments</b> I will have.
<sup>4</sup> I prefer that my doctor make the decisions about which <b>treatments</b> I will have after hearing and considering my input and opinions.
<sup>5</sup> I prefer to leave all decisions regarding <b>treatments</b> to my doctor.
19. In this example, after the exam and testing, your doctor believes that being <b>ADMITTED or being DISCHARGED</b> (going home) would both be safe and reasonable options for you. Your doctor can describe the potential harms and benefits of these options to you. What best describes your preference ( <b>Check only one</b> )
<sup>1</sup> I prefer to make decisions about <b>admission</b> versus discharge.
<sup>2</sup> I prefer to make decisions about <b>admission</b> versus discharge, after seriously considering my

- *doctor's opinion.* I prefer that my doctor and I *share responsibility* for deciding about **admission** versus discharge.
- <sup>4</sup> I prefer that *my doctor make the decisions* about **admission** versus discharge *after hearing and considering my input and opinions.*
- <sup>5</sup> I prefer to leave all decisions regarding **admission** versus discharge *to my doctor*.

About You and Your Visit	
20. Your Age:	
21. Your Gender:	
22. What was the main reason for this visit to the emerged	gency room today?
<sup>1</sup> An accident or injury	<sup>4</sup> Other/not sure:
<sup>2</sup> A new health problem	
<sup>3</sup> An existing health problem that got wo	rse
23. Other than this visit, approximately how many times past year?	s have you been to an Emergency Department in the
<sup>1</sup> 0 (No other visits in the past year)	
$2 \boxed{1-2}$	
<sup>3</sup> 3-5 <sup>4</sup> 6 or more	
24. In general, how would you rate your overall health?	
<sup>1</sup> Excellent <sup>4</sup> Fair	
<sup>2</sup> Very good <sup>5</sup> Poor	
3 Good	
25. What type of insurance do you have? (Check all that	t apply)
	isurance
<sup>2</sup> Medicaid $5$ Othe	r:
<sup>3</sup> Commercial (e.g.	
Anthem Blue Cross)	
26. What is the highest grade or level of school that you	
<sup>1</sup> 8th grade or less	<sup>4</sup> Some college or 2-year degree
<sup>2</sup> Some high school, but did not graduate	
<sup>3</sup> High school graduate or GED	<sup>6</sup> More than 4-year college degree
27. Are you of Hispanic or Latino origin or descent?	
<sup>1</sup> Yes, Hispanic or Latino	<sup>2</sup> No, not Hispanic or Latino
28. What is your race? (Please mark one or more.)	
<sup>1</sup> White	<sup>4</sup> Native Hawaiian or Other Pacific Islander
<sup>2</sup> Black or African American	<sup>5</sup> American Indian or Alaskan Native
<sup>3</sup> Asian	<sup>b</sup> Other:
29. What language do you mainly speak at home?	
	<sup>3</sup> Chinese
<sup>2</sup> Spanish	<sup>4</sup> Another language (please print):

# Thank you. This is the end of Part 1.

Please return Part 1. Please complete Part 2 once you know whether you are going home or being admitted. It can be returned to the Research Staff or your nurse or doctor.

# The rest of this page is for the research staff only.

1. Study ID: \_\_\_\_ \_\_\_ \_\_\_

2. Date of Visit (mm/dd/yy): \_\_\_\_/ \_\_\_\_/

3. Time of day of arrival to ED:

<sup>1</sup> 6am – 11:59am

<sup>2</sup> 12 noon – 5:59pm

<sup>3</sup> 6pm – 11:59 pm

<sup>4</sup> 12 midnight – 5:59 am

4. ESI at presentation: (circle) 1 2 3 4 5 Unk

5. Disposition:

<sup>1</sup> Admit

<sup>2</sup> Discharge

<sup>3</sup> Observation

<sup>4</sup> Other:

<sup>5</sup> Unknown

6. Site Code: BMC MS UCSF BF

7. RA Initials: \_\_\_\_\_

## Part 2:

How w	How was communication today?									
During		••								
	today's vis									
1Hov	v much <i>eff</i>	ort was m	ade to hel	p you unde	erstand yo	ur health is	ssues? (Cire	cle one n	umber)	
<u>N</u>	o effort at	all was m	<u>ade</u>					<u>Ever</u>	y effort wa	<u>as made</u>
	1	2	3	4	5	6	7	8	9	10
	w much eff rcle one nu		nade to <i>list</i>	en to the t	hings that	matter mo	ost to you a	about you	ur health is	ssues?
<u>N</u>	o effort at	<u>all was m</u>	<u>ade</u>					Ever	y effort wa	as made
	1	2	3	4	5	6	7	8	9	10
3Hov number		ort was m	ade to <i>incl</i>	ude what	matters m	ost to you	in choosing	g what to	o do next?	(Circle one
<u>N</u>	o effort at	all was m	ade					Ever	y effort wa	as made
	1	2	3	4	5	6	7	8	9	10
	l <b>Experien</b> d you reco		nis emerge	ncy depar	tment to y	our friends	s and famil	γ?		
1	Definit									

- <sup>1</sup> Definitely No <sup>2</sup> Probably No
- <sup>3</sup> Probably Yes
- <sup>4</sup> Definitely Yes

5. Using any number from 0 to 10, where 0 is the worst care possible and 10 is the best care possible, what number would you use to rate your care during this emergency room visit? (Circle one number)

<u>Worst C</u>	<u>are</u>									<u>Best Care</u>
<u>Possible</u>										<u>Possible</u>
0	1	2	3	4	5	6	7	8	9	10

Part 2:
Your Involvement Today
6. Did you and your doctor <u>discuss</u> any of the following <u>decisions</u> today? (That means, discuss <u>more than one</u>
option, not just talk about one option.) Check all that apply
<sup>1</sup> Being admitted to the hospital versus going home
<sup>2</sup> Going to an observation unit, or physical rehabilitation versus going home or being admitted
<sup>3</sup> One test versus another test or no test (like CT scan, blood tests, or ultrasound)
Treatment options like:
<sup>4</sup> Medications (one medication versus another, or versus no medication)
<sup>5</sup> Antibiotics versus no antibiotics or another option
<sup>6</sup> Surgery or a procedure
<sup>7</sup> Different options for follow-up care after you leave the Emergency Department
<sup>8</sup> Breathing tubes, ventilators, or life support (ex. "What would you want done if you stopped breathing on your own?")
<sup>9</sup> CPR and aggressive care versus comfort care
<sup>10</sup> Other: What option:
<sup>11</sup> No, I did not discuss any decisions with my Emergency Department doctors today.
7. Were you as involved in today's decisions as you would have liked to be?
<sup>1</sup> Yes, I was as involved as I wanted to be
<sup>2</sup> No, I would have liked to be more involved
<sup>3</sup> Not Applicable, there were no decisions for me to be involved in today <b>(Stop here, you are done)</b>
If you answered "NOT APPLICABLE, there were no decisions" to Question 7, you can STOP HERE.
Think of a decision (any decision) that was made today during your ED visit. The following questions (on the

next page) are about that decision.

Which decision are you thinking about? \_\_\_\_\_

\_\_\_

## Part 2:

#### Please answer the following questions regarding <u>the conversation about the decision</u> that was made today: Please mark your level of agreement with the following statements.

1. My doctor mad	le clear that a deci	sion needs to be m	ade.		
Completely	Strongly	Somewhat	Somewhat	Strongly	Completely
Disagree	Disagree	Disagree	Agree	Agree	Agree
2. My doctor wan	ted to know exact	ly how I want to be	involved in makin	g the decision.	
Completely	Strongly	Somewhat	Somewhat	Strongly	Completely
Disagree	Disagree	Disagree	Agree	Agree	Agree
3. My doctor told	me that there are	different options f	or my medical con	dition.	
Completely	Strongly	Somewhat	Somewhat	Strongly	Completely
Disagree	Disagree	Disagree	Agree	Agree	Agree
	• •	e advantages and d		· ·	
Completely	Strongly	Somewhat	Somewhat	Strongly	Completely
Disagree	Disagree	Disagree	Agree	Agree	Agree
		l all the information			
Completely	Strongly	Somewhat	Somewhat	Strongly	Completely
Disagree	Disagree	Disagree	Agree	Agree	Agree
6 My doctor aske	ed me which option	n I profer			
Completely	Strongly	Somewhat	Somewhat	Strongly	Completely
	• ·			Strongly	
Disagree	Disagree	Disagree	Agree	Agree	Agree
7. My doctor and	I thoroughly weigh	ned the different o	ptions.		
Completely	Strongly	Somewhat	Somewhat	Strongly	Completely
Disagree	Disagree	Disagree	Agree	Agree	Agree
Ū I	П	Ū.	Ū	Ū Ū	Ŭ
8. My doctor and	I selected an optic	on together.			
Completely	Strongly	Somewhat	Somewhat	Strongly	Completely
Disagree	Disagree	Disagree	Agree	Agree	Agree
0 Mudesterrer			up op o d		
		ement on how to p		Chara I	Complete
Completely	Strongly	Somewhat	Somewhat	Strongly	Completely
Disagree	Disagree	Disagree	Agree	Agree	Agree

#### Appendix S2: Additional details on covariates used in exploratory analysis

In Section I of the survey, we collected participants' perceived barriers to SDM, including health literacy; previous experience with SDM; comfort with self-advocacy; and concerns about the seriousness/emergent nature of the ED encounter. This data was summarized and used as a "barriers" covariate (with a mean of 30.5, standard deviation of 6.1, a range of 15-75, and a higher score indicating a stronger endorsement of barriers). Additionally, we used the Control Preferences Scale<sup>2,23</sup> to assess participants' desired role in the decisionmaking process related to their treatment.

## Appendix S3. Exploratory regression analysis

CollaboRATE Score (linear)

Variable		Estimate	
Control Preferences Scale Scor	e		0.98 (-0.13, 2.10)
Barriers			-0.40 (-0.90, 0.09)
Admit			
	No		Reference
	Yes		-3.45 (-9.87, 2.96)
Emergency Severity Index			2.90 (-0.66, 6.45)
Gender			
	Female		Reference
	Male		3.92 (-1.76, 9.61)
Age			0.14 (-0.04, 0.32)
Race			
	White		Reference
	Black	- <del>-</del>	6.93 (-1.07, 14.92)
	Other	L L	7.70 (-0.15, 15.55)
Hispanic			
	Non Hisp		Reference
	Hisp		0.81 (-7.08, 8.70)
Education			
	Not-HS grad		Reference
	HS grad GED		2.42 (-5.92, 10.77)
	Some college 2-year		4.57 (-4.26, 13.41)
	College_gte_4-year		1.64 (-7.79, 11.07)
Insurance		1	
	Comm		Reference
	Medicaid		-0.27 (-8.12, 7.58)
	Medicare		-2.07 (-10.38, 6.24)
	None		-5.97 (-20.04, 8.10)
	Other		-3.65 (-13.73, 6.43)
Site			0.00 (10.10, 0.10)
	bmc		Reference
	ucsf		-5.62 (-12.02, 0.77)
(Intercept)	0.001		69.23 (45.08, 93.37)
Intercept		-20 0 20 40 60	80

## CollaboRATE - All 3 top-box (dichotomous)

Variable		Odds	Ratio	
Control Preferences Scale Scor	e			1.08 (0.97, 1.21)
Barriers			_	0.93 (0.88, 0.98)
Admit				
	No			Reference
	Yes	· · · · · · · · · · · · · · · · · · ·		0.46 (0.24, 0.85)
Emergency Severity Index			L	1.01 (0.71, 1.42)
Gender				1.01 (0.11, 1.12)
Gender	Female			Reference
	Male			1.23 (0.71, 2.16)
0.00	ware			
Age		-		1.03 (1.01, 1.04)
Race	White		1	Reference
		_		
	Black	1.		2.41 (1.11, 5.33)
	Other			2.17 (1.02, 4.67)
Hispanic				
	Non_Hisp			Reference
	Hisp		·	1.08 (0.51, 2.30)
Education				
	Not-HS_grad			Reference
	HS_grad_GED		<u> </u>	0.77 (0.34, 1.72)
	Some_college_2-year		_	1.54 (0.66, 3.64)
	College_gte_4-year	· · · ·		0.50 (0.20, 1.25)
Insurance	0 _0 _ /			
	Comm			Reference
	Medicaid		·	0.89 (0.41, 1.90)
	Medicare			0.44 (0.19, 1.01)
	None			1.25 (0.32, 5.27)
	Other			0.58 (0.21, 1.56)
Site		-		0.00 (0.21, 1.00)
	bmc			Reference
	ucsf			1.23 (0.66, 2.31)
(Intercept)				
(intercept)			· · ·	 1.18 (0.11, 12.43)

### Appendix S3. Exploratory regression analysis (cont.)

SDM-Q-9 Score (linear)

Variable		Estimate	
Control Preferences Scale Scor	e		0.32 (-0.70, 1.35)
Barriers			-0.44 (-0.90, 0.03)
Admit		<u> </u>	
	No		Reference
	Yes	- <u>+</u>	-3.92 (-8.71, 0.87)
Emergency Severity Index			-0.73 (-3.50, 2.04)
Gender			
	Female		Reference
	Male		7.90 (3.29, 12.51)
Age			0.04 (-0.13, 0.22)
Race		<u> </u>	
	White		Reference
	Black		-0.93 (-7.17, 5.32)
	Other	<u>ч</u>	5.02 (-1.79, 11.83)
Hispanic			
	Non Hisp		Reference
	Hisp		-1.72 (-8.22, 4.78)
Education			
	Not-HS_grad		Reference
	HS grad GED		2.81 (-4.64, 10.26)
	Some_college_2-year	<u> </u>	2.76 (-5.14, 10.67)
	College gte 4-year		0.92 (-7.74, 9.59)
Insurance		1	
	Comm		Reference
	Medicaid		2.40 (-3.77, 8.57)
	Medicare	<u>+</u>	-5.29 (-12.06, 1.47)
	None -		-10.48 (-25.99, 5.04)
	Other		-2.68 (-10.57, 5.20)
Site			
	bmc		Reference
	ucsf	-	0.23 (-4.72, 5.19)
(Intercept)		· · · · · ·	38.49 (14.49, 62.49)
	· · · · · · · · · · · · · · · · · · ·	20 0 20 40	

### Were you involved as you wanted to be? (Yes/No)

Variable		Odds Ratio	
Control Preferences Scale Scor	re l		0.97 (0.86, 1.08)
Barriers			0.96 (0.91, 1.01)
Admit		Ī	
	No		Reference
	Yes		1.68 (0.91, 3.14)
Emergency Severity Index		· · · · · · · · · · · · · · · · · · ·	1.11 (0.78, 1.58)
Gender		<u> </u>	
	Female		Reference
	Male		0.89 (0.51, 1.54)
Age	indic.		0.99 (0.98, 1.01)
Race			0.00 (0.00, 1.01)
Nace	White		Reference
	Black		0.90 (0.41, 1.97)
	Other		1.20 (0.56, 2.60)
Hispanic	one		1.20 (0.00, 2.00)
Inspanic	Non_Hisp	i i i i i i i i i i i i i i i i i i i	Reference
	Hisp		1.32 (0.61, 2.84)
Education	Hisp		1.32 (0.01, 2.04)
Education	Not-HS_grad	<u> </u>	Reference
	HS_grad_GED	1	0.73 (0.32, 1.66)
	Some_college_2-year		0.72 (0.30, 1.72)
	College_gte_4-year		1.07 (0.42, 2.71)
Insurance			
	Comm		Reference
	Medicaid		0.91 (0.43, 1.93)
	Medicare		0.81 (0.38, 1.82)
	None		0.31 (0.04, 1.42)
	Other		0.69 (0.26, 1.80)
Site		-	
	bmc		Reference
	ucsf		0.34 (0.18, 0.63)
(Intercept)		<u> </u>	8.14 (0.76, 91.61)

0.050.10.2 0.5 1 2 5 10 20 50

Box 1. CollaboRATE Scale

During today's visit...

1	1How much effort was made to help you understand your health issues? (Circle one number)										
	No effort at all was made Every effort was made										
	1	2	3	4	5	6	7	8	9	10	
2	How muc (Circle one			to <i>listen t</i> e	o the thing	gs that ma	atter most	<i>to you</i> al	oout your	health issues	?
	<u>No effort</u>	at all was	<u>made</u>					Eve	ery effort v	<u>vas made</u>	
	1 2 3 4 5 6 7 8 9 10										
3	How muc	h effort w	as made t	to include	what mat	ters most	to you in	choosing	what to	do next? (Circ	le one

3. ... How much effort was made to *include what matters most to you in choosing* what to do next? (Circle one number)

No effort at all was made								ery effort v	<u>vas made</u>
1	2	3	4	5	6	7	8	9	10

Box 2. SDM-Q-9 Questions

1. My doctor made clear that a decision needs to be made.								
Completely	Strongly	Somewhat	Somewhat	Strongly	Completely			
Disagree	Disagree	Disagree	Agree	Agree	Agree			

	2. My doctor wanted to know exactly how I want to be involved in making the decision.								
Completely Strongly Somewhat Somewhat Strongly Completely									
	Disagree	Disagree	Disagree	Agree	Agree	Agree			

3. My doctor told me that there are different options for my medical condition.								
Completely Strongly Somewhat Somewhat Strongly Completely								
Disagree	Disagree	Disagree	Agree	Agree	Agree			

4. My doctor precisely explained the advantages and disadvantages of the options.									
Completely Strongly Somewhat Somewhat Strongly Completely									
Disagree	Disagree	Disagree	Agree	Agree	Agree				

5. My doctor helped me understand all the information.								
Completely Strongly Somewhat Somewhat Strongly Completely								
Disagree	Disagree	Disagree	Agree	Agree	Agree			

6. My doctor aske	6. My doctor asked me which option I prefer.							
Completely	Completely Strongly Somewhat Somewhat Strongly Completely							

Disagree	Disagree	Disagree	Agree	Agree	Agree

7. My doctor and I thoroughly weighed the different options.								
Completely Strongly Somewhat Somewhat Strongly Completely								
Disagree	Disagree	Disagree	Agree	Agree	Agree			

8. My doctor and I selected an option together.							
Completely	Strongly	Somewhat	Somewhat	Strongly	Completely		
Disagree	Disagree	Disagree	Agree	Agree	Agree		

9. My doctor and I reached an agreement on how to proceed.								
Completely Strongly Somewhat Somewhat Strongly Completely								
Disagree	Disagree	Disagree	Agree	Agree	Agree			

Box 3. "Choice Awareness" question, developed by study team based on qualitative work and cognitive interviewing.

7. Were you as involved in today's decisions as you would have liked to be?

<sup>1</sup> Yes, I was as involved as I wanted to be

 $^{2}$  No, I would have liked to be more involved

<sup>3</sup> Not Applicable, there were no decisions for me to be involved in today (Stop here, you are done)

If you answered "NOT APPLICABLE, there were no decisions" to Question 7, you can STOP HERE.