Supplementary Online Content

Curtis JR, Downey L, Back AL, et al. Effect of a patient and clinician communication-priming intervention on patient-reported goals-of-care discussions between patients with serious illness and clinicians: a randomized clinical trial. *JAMA Intern Med.* Published online May 26, 2018. doi:10.1001/jamainternmed.2018.2317

Supplement Table of Contents

Section A.   Patient Surveys
IMPROVING COMMUNICATION ABOUT SERIOUS ILLNESS (ICSI)

UNIVERSITY OF WASHINGTON

BASELINE QUESTIONNAIRE for PATIENTS:
ITEMS USED FOR JUMPSTART-TIPS AND OUTCOMES

TALKING ABOUT HEALTH CARE

This group of questions is about discussions you may have had with _____, (the doctor or nurse practitioner who is in this study with you) and your family and/or friends. We are interested in knowing about discussions concerning the medical care you would want if you were too sick and couldn't speak for yourself. For example, these discussions might include whether you would want to receive the following types of medical care if you needed any of them: the intensive care unit (ICU), CPR, a nursing home, or hospice.

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1. **Have you ever discussed with <u>this doctor</u>, in a face-to-face discussion, the kind of medical care you would want if you were too sick to speak for yourself?** *(Please check one box)*

    1 ☐ Yes

    0 ☐ No

    9 ☐ I don't know

2. If "NO" or "I DON'T KNOW": **Would you like to have a discussion of this type with this doctor?** *(Please check one box)*

    1 ☐ Yes

    0 ☐ No

    9 ☐ I don't know

3. If "YES": **To what extent did these discussion(s) with this doctor meet your needs for information about your medical care?** *(Please check one   box)*

    Not at all   Completely
       0   1   2   3   4   5   6   7   8   9   10

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

4. Would you like to have additional discussions with this doctor about this? *(Please check one box)*

1 ☐ Yes

0 ☐ No

9 ☐ I don't know

CHOOSING CARE

We are also interested in the kind of care you might choose at this time. The next questions are about those choices.

1. If you had to make a choice at this time, would you prefer a plan of medical care that focuses on <u>extending your life as much as possible</u>, even if it means having more pain and discomfort, or would you want a plan of medical care that focuses on <u>relieving your pain and discomfort as much as possible</u>, even if that means not living as long? *(Please check one box)*

0 ☐ Extending life, even if it means having more pain and discomfort

1 ☐ Relieving pain and discomfort as much as possible, even if that means not living as long

9 ☐ I'm not sure which I would choose

2. Using those same categories, which of the following best describes the focus of the medical care you are currently receiving? *(Please check one box)*

0 ☐ Extending life, even if it means having more pain and discomfort

1 ☐ Relieving pain and discomfort as much as possible, even if that means not living as long

9 ☐ I don't know, not sure

For these next questions, we would like to ask you about your preferences about CPR, a treatment that is administered if a person's heart stops. CPR, or cardiopulmonary resuscitation, consists of electric shocks to the heart, pumping on the chest, and help with breathing. Possible side effects of CPR include broken ribs and memory loss. It is important to realize that, for most people, CPR doesn't work and they do not survive the attempt of CPR.

3. **In your <u>current health</u>, would you want CPR if your heart were to stop beating?** *(Please check one box)*

    0 ☐ Definitely No

    1 ☐ Probably No

    2 ☐ Probably Yes

    3 ☐ Definitely Yes

4. **If you were confined to bed and <u>dependent on others</u> for all your care, would you want CPR if your heart were to stop?** *(Please check one box)*

    0 ☐ Definitely No

    1 ☐ Probably No

    2 ☐ Probably Yes

    3 ☐ Definitely Yes

TALKING ABOUT CARE: WHAT MAKES TALKING HARDER?

> Which, if any, of the following statements are reasons that you might <u>not</u> want to talk with
>
> _____ about care that you would choose if you were to become very sick?

Barriers	Applies To Me (True)	Does Not Apply To Me (False)
1. I don't know what kind of care I would want if I were to get very sick.	1 ☐	0 ☐
2. I'm not ready to talk about the care I would want if I were to get very sick.	1 ☐	0 ☐
3. I don't like to talk about getting very sick.	1 ☐	0 ☐
4. My doctor never seems to have the time to talk about issues like end-of-life care.	1 ☐	0 ☐
5. I would rather concentrate on staying alive than talk about death.	1 ☐	0 ☐
6. I feel that talking about death can bring death closer.	1 ☐	0 ☐
7. I have a living will, and that means I don't need to talk with my doctor about the care I would want if I were too sick to speak for myself.	1 ☐	0 ☐
8. My ideas about the kind of medical care I want change at different times.	1 ☐	0 ☐
9. I have <u>not</u> felt sick enough to talk with my doctor about end-of-life care.	1 ☐	0 ☐
10. I'm not sure which doctor would be taking care of me if I were to get very sick.	1 ☐	0 ☐
11. If any of these reasons apply to you, which ONE is the <u>biggest barrier</u> that makes you not want to talk with your doctor about care you might choose? *Please fill in the number of that item in this box.* →		

TALKING ABOUT CARE: WHAT MAKES TALKING EASIER?

People also have a number of reasons for <u>wanting</u> to talk about care that they might choose if they were to become very sick. Which, if any, of the following statements are reasons you might <u>want</u> to discuss care choices with _____?

Facilitators	Applies To Me (True)	Does Not Apply To Me (False)
1. I <u>have</u> been very sick so it is easier to talk about.	1 ☐	0 ☐
2. I have had family or friends who have died so it is easier to talk about.	1 ☐	0 ☐
3. I worry about the quality of my life in the future.	1 ☐	0 ☐
4. I worry that I could be a burden on my friends and family if I were to become very sick.	1 ☐	0 ☐
5. If any of these reasons apply to you, which ONE is the <u>biggest facilitator</u> that makes you want to talk with your doctor about care you might choose? *Please fill in the number of that item in this box.*		

QUALITY OF COMMUNICATION

The following questions are about how well _____ talks with you about your care. We know that many people think very highly of their doctors. To help us improve communication between doctors and patients, please be critical.

Please rate _____ on each of the following questions using a scale from 0, "The very worst I could imagine" to 10, "The very best I could imagine." If you cannot rate your doctor on a question because he or she has not done it, please check the box, "My doctor has not done this." You may also check the box, "I do not know."

How good is your doctor at: *(Please check one box for each item)*

1. **Talking with you about your <u>feelings</u> concerning the possibility that you might get sicker?**

The very worst I could imagine										The very best I could imagine	*My doctor has not done this*	*I do not know*
0	1	2	3	4	5	6	7	8	9	10	888	999
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

2. **Talking with you about the <u>details</u> concerning the possibility that you might get sicker?**

The very worst I could imagine										The very best I could imagine	*My doctor has not done this*	*I do not know*
0	1	2	3	4	5	6	7	8	9	10	888	999
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

3. **Talking to you about how long you might have to live?**

The very worst I could imagine										The very best I could imagine	*My doctor has not done this*	*I do not know*
0	1	2	3	4	5	6	7	8	9	10	888	999
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

4. **Talking with you about what dying might be like?**

The very worst I could imagine										The very best I could imagine	*My doctor has not done this*	*I do not know*
0	1	2	3	4	5	6	7	8	9	10	888	999
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

5. **Involving you in the decisions about the treatments that you want if you get too sick to speak for yourself?**

The very worst I could imagine										The very best I could imagine	*My doctor has not done this*	*I do not know*
0	1	2	3	4	5	6	7	8	9	10	888	999
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

6. **Asking about the things in life that are important to you?**

The very worst I could imagine										The very best I could imagine	*My doctor has not done this*	*I do not know*
0	1	2	3	4	5	6	7	8	9	10	888	999
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

7. **Asking about your spiritual or religious beliefs?**

The very worst I could imagine										The very best I could imagine	*My doctor has not done this*	*I do not know*
0	1	2	3	4	5	6	7	8	9	10	888	999
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Please continue to the next page.

YOUR FEELINGS

These questions are about feelings you may have experienced **over the last two weeks**. We are interested in your feelings because having a serious illness may affect how you feel emotionally as well as physically. Please check the box that best describes how often, over the **last two weeks**, you have been bothered by any of the following problems. Answers range from "Not at all" to "Nearly every day". Please check **one** box for each problem. You may skip any question that you do not want to answer.

	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things	0 ☐	1 ☐	2 ☐	3 ☐
2. Feeling down, depressed or hopeless	0 ☐	1 ☐	2 ☐	3 ☐
3. Trouble falling, staying asleep, or sleeping too much	0 ☐	1 ☐	2 ☐	3 ☐
4. Feeling tired or having little energy	0 ☐	1 ☐	2 ☐	3 ☐
5. Poor appetite or overeating	0 ☐	1 ☐	2 ☐	3 ☐
6. Feeling bad about yourself or that you are a failure or have let yourself or your family down	0 ☐	1 ☐	2 ☐	3 ☐
7. Trouble concentrating on things, such as reading the newspaper or watching television	0 ☐	1 ☐	2 ☐	3 ☐
8. Moving or speaking so slowly that other people could have noticed, or the opposite - being so fidgety or restless that you have been moving around a lot more than usual	0 ☐	1 ☐	2 ☐	3 ☐

If you checked off any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people? *(Please check one box)*

Not difficult at all	Somewhat difficult	Very difficult	Extremely difficult
0 ☐	1 ☐	2 ☐	3 ☐

YOUR FEELINGS - A FEW MORE QUESTIONS

Over the **last two weeks**, how often have you been bothered by any of the following problems? Answers range from "Not at all" to "Nearly every day". Please check **one** box for each problem.

	Not at all	Several days	More than half the days	Nearly every day
1. Feeling nervous, anxious or on edge	0 ☐	1 ☐	2 ☐	3 ☐
2. Not being able to stop or control worrying	0 ☐	1 ☐	2 ☐	3 ☐
3. Worrying too much about different things	0 ☐	1 ☐	2 ☐	3 ☐
4. Trouble relaxing	0 ☐	1 ☐	2 ☐	3 ☐
5. Being so restless that it is hard to sit still	0 ☐	1 ☐	2 ☐	3 ☐
6. Becoming easily annoyed or irritated	0 ☐	1 ☐	2 ☐	3 ☐
7. Feeling afraid as if something awful might happen	0 ☐	1 ☐	2 ☐	3 ☐

If you checked off any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people? *(Please check one box)*

Not difficult at all	Somewhat difficult	Very difficult	Extremely difficult
0 ☐	1 ☐	2 ☐	3 ☐

Section B.   Jumpstart-Tips

Algorithm Matrix for Generating Clinician Jumpstart-Tips forms – "Our Recommendations/Study Suggestion"

Item 1: **Is your patient ready?**

		b. Want to discuss / discuss more?		
		Yes*	No	Don't Know
a. Ever discussed preferences if/when too sick to speak for self?	Yes	Go for it! Ask if there have been any changes since the last time your patient talked to you or to another clinician.	Check what you know; reinforce why it's important to repeat periodically. Try saying: "It is helpful for me if I make sure I am up-to-date on your views about the care you want."	Ask the patient's permission to talk about preferences; reinforce why these discussions are important. Try saying: "It is helpful for me if I make sure I understand your views about the care you want."
	No*	Go for it! Try saying: "I am interested in knowing your thoughts about that Jumpstart form."	Ask the patient's permission to talk about preferences; reinforce why these discussions are important. Try saying: "It is helpful for me if I make sure I understand your views about the care you want."	Ask the patient's permission to talk about preferences; reinforce why these discussions are important. Try saying: "It is helpful for me if I make sure I understand your views about the care you want."
	Don't remember	Go for it! Try saying: "I am interested in knowing your thoughts about that Jumpstart form."	Ask the patient's permission to talk about preferences; reinforce why these discussions are important. Try saying: "It is helpful for me if I make sure I understand your views about the care you want."	Ask the patient's permission to talk about preferences; reinforce why these discussions are important. Try saying: "It is helpful for me if I make sure I understand your views about the care you want."

Item 2: **What is your patient's perception of care currently? [quality of life or extending life]**

		b. Patient perceives that healthcare currently received is focused on:		
		EXTENDING LIFE	QUALITY OF LIFE	NOT SURE
a. At this time, if patient had to choose, he/she prefers to focus on:	EXTENDING LIFE	Your patient seems to feel he/she is getting the care he/she wants at this point. Because the patient is focused on extending life, see the items below about thinking about the future.	Your patient seems to feel his/her current care does not match his/her goals. It may be worthwhile to check this. Try saying: "Some people prefer care focused on extending life even if it means they might be uncomfortable; other people prefer care focused on quality of life even if it means they may not live as long. If you had to choose, what would you say is more important?"	It would be worthwhile to review what you perceive to be the focus of the patient's care since the patient isn't sure. Because the patient prefers to focus on extending life, see the items below about thinking about the future. Try saying: "Would it be helpful for me to clarify how I see the focus of your care?"
	*QUALITY OF LIFE	Your patient seems to feel his/her current care does not match his/her goals. It may be worthwhile to check this. Try saying: "Some people prefer care focused on extending life even if it means they might be uncomfortable; other people prefer care focused on quality of life even if it means they may not live as long. If you had to choose, what would you say is more important?" [*If ever=NO and want=YES then add: Assess if patient is interested in Palliative Care referral.]	Your patient seems to feel he/she is getting the care he/she wants at this point. Because the patient is focused on quality of life, consider whether completion of a POLST form or identifying a surrogate decision-maker would be useful. [*If ever=NO and want=YES then add:] Assess if the patient is interested in Palliative Care referral.	It would be worthwhile to review what you perceive to be the focus of the patient's care since the patient isn't sure. Try saying: "Would it be helpful for me to clarify how I see the focus of your care?" Because the patient prefers to focus on quality of life, consider whether completion of a POLST form or identifying a surrogate decision-maker would be useful.
	NOT SURE	Since your patient isn't sure what he/she would choose as his/her focus of care, try saying: "Some people prefer care focused on extending life even if it means they might be uncomfortable; other people prefer care focused on quality of life even if it means they may not live as long. If you had to choose, what would you say is more important?"	Since your patient isn't sure what his/her focus of care is, try saying: "Some people prefer care focused on extending life even if it means they might be uncomfortable; other people prefer care focused on quality of life even if it means they may not live as long. If you had to choose, what would you say is more important?"	Since your patient isn't sure what his/her focus of care is, try saying: "Some people prefer care focused on extending life even if it means they might be uncomfortable; other people prefer care focused on quality of life even if it means they may not live as long. If you had to choose, what would you say is more important?"

Item 3: **What makes it harder for your patient to talk about this? [barriers]**

1. I don't know what kind of care I would want if I were to get very sick.	Explain that the patient doesn't need to know what he/she wants. Try saying: "Even if you aren't sure what kind of care you want in the future, it is very helpful to me if we talk about the things that are most important to you about your quality of life and healthcare."
2. I'm not ready to talk about the care I would want if I were to get very sick.	Acknowledge patient's uncertainty and worry (emotion). Try saying: "Some people find it hard to talk about their healthcare in the future. Would you consider giving it a try for a few minutes? At any time, you can just say, 'Ok, that's enough for today.'"
3. I don't like to talk about getting very sick.	
4. My doctor never seems to have the time to talk about issues like end-of-life care.	Explore patient's beliefs and acknowledge discomfort. Try saying: "Sometimes people worry that doctors don't have enough time or wouldn't agree with your thoughts. I want you to know that I consider this topic really important."
5. I would rather concentrate on staying alive than talk about death.	Acknowledge patient's worry (emotion). Try saying: "Some people find it hard to talk about their healthcare in the future. Would you consider giving it a try for a few minutes? At any time, you can just say, 'Ok, that's enough for today.'"
6. I feel that talking about death can bring death closer.	
7. I have a living will, and that means I don't need to talk with my doctor about the care I would want if I were too sick to speak for myself.	Explore patient's beliefs, acknowledge discomfort, explain why it's good to check-in and verify. Try saying: "If I have worked with a patient, I usually have some idea of how he/she feels about these decisions; but I appreciate checking with you to make sure I have it right."
8. My ideas about the kind of medical care I want change at different times.	Explain that talking now starts a process of learning for you and your patient. Try saying: "This is a big topic. Some people need time before they know what decisions would be best. Others worry that they might change their mind in the future. Either way, it still helps me to know something about what you think, even if it's not final."
9. I have not felt sick enough to talk with my doctor about end-of-life care.	Encourage patient to be thinking and talking with you about this topic. Try saying: "If I am taking care of a patient, I usually have some idea of how he/she feels about these decisions. But I appreciate checking with you to make sure I have it right."
10. I'm not sure which doctor would be taking care of me if I were to get very sick.	Explain that the patient doesn't need to know which clinician will be caring for him/her at the end of life. Try saying: "Although you may see a lot of doctors and it is hard to know which of us will be there if you get very sick, it is still important to talk with me about these issues and I will document it so other doctors have access to this information."

** If there is no single "biggest / most important" barrier endorsed, we will feedback one barrier, chosen at random, of those that were endorsed.

** If no barriers are endorsed, then facilitators will be included.

** If no barriers OR facilitators are endorsed then use… Explain that talking now starts a process of learning for you and your patient. Try saying: "If I am taking care of a patient, I usually have some idea of how he/she feels about these decisions, but I appreciate checking with you to make sure I have it right."

Item 3{alt}: **<u>What makes it easier for your patient to talk about this? [facilitators]</u>**

1. I <u>have</u> been very sick so it is easier to talk about.	Reinforce patient's decision-making that was helped by prior experiences. Try saying: "You mentioned on the survey that you have some personal experience with this. Could you tell me about how your experience influences your thinking?"
2. I have had family or friends who have died so it is easier to talk about.	
3. I worry about the quality of my life in the future.	Acknowledge that concerns about quality of life make advance care planning important. Try saying: "You mentioned on the survey that you worry about your quality of life in the future. It would be helpful for me if I understood what you consider to be important for your quality of life."
4. I worry that I could be a burden on my friends and family if I were to become very sick.	Acknowledge that advance care planning can reduce burden on family/friends. Try saying: "It can reduce the burden on your family and friends if you talk with me and with them about the kind of care you would want if you got very sick."

** If there is no "biggest / most important" facilitator endorsed, we will feedback one facilitator, chosen at random, of those that were endorsed.

** If no barriers OR facilitators are endorsed then use… Explain that talking now starts a process of learning for you and your patient. Try saying: "If I am taking care of a patient, I usually have some idea of how he/she feels about these decisions, but I appreciate checking with you to make sure I have it right."

Item 4: **In the future: [want/don't want CPR]**

		b. In state of dependence on others for ADLs [confined to bed]	
		DEFINITELY or PROBABLY WANTS CPR	DEFINITELY or PROBABLY DOES <u>NOT</u> WANT CPR
a. In current state of health	DEFINITELY or PROBABLY WANTS CPR	Confirm patient's desire to receive CPR. Try saying: "You have indicated that you would want to receive CPR if your heart were to stop beating. Is that correct? Are there any other treatments or situations that we should talk about?"	Confirm patient's desire to receive CPR. Try saying: "You have indicated that you would want to receive CPR if your heart were to stop beating in your current health, but not if you were to get much sicker and be dependent on others. Is that correct?"
	DEFINITELY or PROBABLY DOES <u>NOT</u> WANT CPR	These responses seem inconsistent. Assess patient's wishes about CPR. Try saying: "You have indicated that you would not want to receive CPR if your heart was to stop beating in your current health, but you would want it if you were much sicker and dependent on others. Is that correct? Can you tell me more about that?"	Confirm patient's desire not to receive CPR. Try saying: "You have indicated that you would not want to receive CPR if your heart were to stop beating. Is that correct?" If yes, consider completing a POLST form or a referral to Palliative Care.

**   If there is no information for this section, e.g. patient skipped this page, then use: "[skipped this page of survey]" or "[skipped this item]" and recommend:

Because your patient did not provide any answers to this item/these items, our recommendation is only to address this topic in light of the patient's answer about his/her preferences for focusing on extending life/quality of life.

Item 5: **Wrap-up**

Please don't forget to document any discussions you have with the patient in the medical record.

```
I   improving
  C   communication about
    S   serious
      I   illness
```
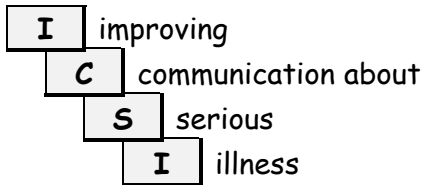
Algorithm for Clinician Version, Jumpstart-Tips
Form: "Your Patient's Perceptions of Communication
and Care

Here's a summary of what your patient, [patient name], endorsed on our questionnaire about goals of care. Your appointment with this patient is coming up on [appointment date]. We're providing this information to help facilitate a discussion about his/her goals of care, both currently and in the event he/she was unable to speak for him/herself in the future. Feel free to use or adapt these suggestions to your style and your patient.

Is your patient ready to discuss goals of care or end of life wishes/preferences?

Ever discussed preferences if/when too sick to speak for self? .... YES
Ever discussed preferences if/when too sick to speak for self? .... NO
Ever discussed preferences if/when too sick to speak for self? .... DON'T KNOW
Ever discussed preferences if/when too sick to speak for self? .... [other comment]
Want to discuss / discuss more? .... YES
Want to discuss / discuss more? .... NO
Want to discuss / discuss more? .... DON'T KNOW
Want to discuss / discuss more? .... [other comment]

STUDY SUGGESTION: [matrix]

What is your patient's perception of care currently? [quality of life (relieving pain/discomfort); extending life]

Prefers to focus on .... EXTENDING LIFE
Prefers to focus on .... QUALITY OF LIFE
Prefers to focus on .... NOT SURE
Perception that care now is focusing on .... EXTENDING LIFE
Perception that care now is focusing on .... QUALITY OF LIFE
Perception that care now is focusing on .... NOT SURE

STUDY SUGGESTION: [matrix]

What makes it harder for your patient to talk about this? [barriers]

- "I don't know what kind of care I would want if I were to get very sick."
- "I'm not ready to talk about the care I would want if I were to get very sick."
- "I don't like to talk about getting very sick."
- "My doctor never seems to have the time to talk about issues like end-of-life care."
- "I would rather concentrate on staying alive than talk about death."
- "I feel that talking about death can bring death closer."
- "I have a living will, and that means I don't need to talk with my doctor about the care I would want if I were too sick to speak for myself."
- "My ideas about the kind of medical care I want change at different times."
- "I have not felt sick enough to talk with my doctor about end-of-life care."
- "I'm not sure which doctor would be taking care of me if I were to get very sick."

What makes it easier for your patient to talk about this? [facilitators]

- "I have been very sick so it is easier to talk about."

- "I have had family or friends who have died so it is easier to talk about."
- "I worry about the quality of my life in the future."
- "I worry that I could be a burden on my friends and family if I were to become very sick."

What makes it harder or easier for your patient to talk about this? [barriers/facilitators]
- (Your patient did not endorse any of the barriers or facilitators that were presented.)

STUDY SUGGESTION: [matrix]

In the future: [CPR]
In current state of health ……………………………………………………………… DEFINITELY DOES NOT WANT CPR
In current state of health ……………………………………………………………… PROBABLY DOES NOT WANT CPR
In current state of health ……………………………………………………………… PROBABLY WANTS CPR
In current state of health ……………………………………………………………… DEFINITELY WANTS CPR

In state of dependent on others for ADLs …………………………………………… DEFINITELY DOES NOT WANT CPR
In state of dependent on others for ADLs …………………………………………… PROBABLY DOES NOT WANT CPR
In state of dependent on others for ADLs …………………………………………… PROBABLY WANTS CPR
In state of dependent on others for ADLs …………………………………………… DEFINITELY WANTS CPR

STUDY SUGGESTION: [matrix]

Wrap-up & Thank you

Thank you for your participation and please remember to document any discussions you have with the patient in the medical record.

I improving	
C communication about	
S serious	
I illness	
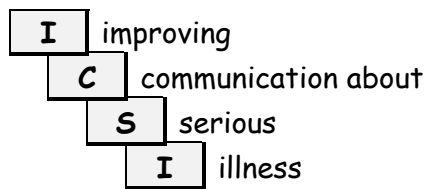
Algorithm for Patient Jumpstart-Tips Form:

"Getting a "jumpstart" on your appointment with your doctor."

Thank you for being in our study. You filled out a questionnaire for us a little while ago. This is a friendly reminder that you will have an appointment with your doctor soon. We want to help you make the most of your appointment.

Talking to your doctor about your medical care: It's easier than you think.

Your doctor is interested in hearing your thoughts and worries about your medical care. The doctor and nurse will be grateful that you are willing to talk. You don't have to go into lots of detail. Just get the conversation started.

Here are 2 important questions: [Take this sheet of paper in to your appointment!]

1. Could we talk about what I want if something serious were to happen *now* in my current health?
2. I am hoping for the best, but I also want to plan if something serious were to happen *in the future*. Could we talk about that?

If you feel a little nervous…

It's ok! Many people think that the doctor might not have time, or might know best – but remember that you are the expert on what is important in your life. So just give these questions a try!

Here is some information from your questionnaire. These are just reminders for you. You can change your mind at any time.

|	
We asked:	*Have you talked to your doctor about medical care you want if you got too sick to speak for yourself?*
	You answered: Yes \ No \ I don't know
We asked:	*Would you like to talk about what is important in your medical care if you got too sick to speak for yourself?*
	You answered: Yes \ No \ I don't know
We asked:	*Do you prefer that your medical care is more focused on extending life, or on quality of life?*
	You answered: My priority is on EXTENDING LIFE
	You answered: My priority is on QUALITY OF LIFE (relieving pain and discomfort)
	You answered: I am NOT SURE
We asked:	*Is your current medical care more focused on extending life, or on quality of life?*
	You answered: Seems focused on EXTENDING LIFE
	You answered: Seems focused on QUALITY OF LIFE (relieving pain and discomfort)
	You answered: I am NOT SURE
We asked:	*Have you thought about whether you would want CPR?*
	You answered: If my health is like it is today, I would DEFINITELY NOT WANT CPR
	You answered: If my health is like it is today, I would PROBABLY NOT WANT CPR
	You answered: If my health is like it is today, I would PROBABLY WANT CPR
	You answered: If my health is like it is today, I would DEFINITELY WANT CPR
	You answered: If I was confined to bed & dependent on others, I'd DEFINITELY NOT WANT CPR
	You answered: If I was confined to bed & dependent on others, I'd PROBABLY NOT WANT CPR
	You answered: If I was confined to bed & dependent on others, I'd PROBABLY WANT CPR
	You answered: If I was confined to bed & dependent on others, I'd DEFINITELY WANT CPR

We hope this information is useful. Feel free to take this to your appointment – pull it out when you are talking to your doctor or nurse.

```
I  improving
   C  communication about
      S  serious
         I  illness
```
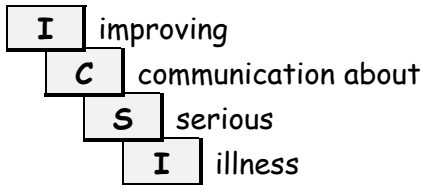
"Jumpstart" Form: Your Patient's Perceptions of
Communication and Care

CLINICIAN SAMPLE

This is information for your patient, [patient name], that may help you have a conversation about goals of care. Your appointment with this patient is coming up on [appointment date].

Here's a summary of what your patient endorsed on our questionnaire about medical care choices. Some of these choices concern medical care in current health and others are about medical care if your patient's health was to worsen. You can use this Jumpstart Form to save time and do a few minutes of advance planning.

Is your patient ready? [yes or no]
> Ever discussed preferences if/when too sick to speak for self? ....NO
> Want to discuss / discuss more? ....YES

STUDY SUGGESTION:	Go for it! Try saying: "I am interested in knowing your thoughts about that Jumpstart form."

What is your patient's perception of care currently? [quality of life (relieving pain/discomfort); extending life]
> Prefers to focus on ……………………………………………………………………… QUALITY OF LIFE
> Perception that care now is focusing on ………………………………………………QUALITY OF LIFE

STUDY SUGGESTION:	Your patient seems to feel [he/she] is getting the care [he/she] wants at this point. Because the patient is focused on quality of life, consider whether completion of a POLST form or identifying a surrogate decision-maker would be useful. Assess if the patient is interested in Palliative Care referral.

What makes it harder for your patient to talk about this? [barriers]
- "I would rather concentrate on staying alive than talk about death."

STUDY SUGGESTION:	Acknowledge patient's worry (emotion). Try saying: "Some people find it hard to talk about their healthcare in the future. Would you consider giving it a try for a few minutes? At any time, you can just say, 'Ok, that's enough for today.'"

In the future: [want/don't want CPR]
> In current state of health ………………………………………………………………DEFINITELY WANTS CPR
> In state of dependent on others for ADLs ..……………………………………….DEFINITELY DOES NOT WANTS CPR

STUDY SUGGESTION:	Confirm patient's desire to receive CPR currently. Try saying: "You have indicated that you would want to receive CPR if your heart were to stop beating, but not if you become permanently dependent on others. Are there any other treatments or situations that we should talk about?"

Wrap-up & Thank you

Thank you for your participation and please remember to document any discussions you have with the patient in the medical record.

I	improving
C	communication about
S	serious
I	illness

PATIENT SAMPLE

Getting a "jumpstart" on your appointment with your doctor.

Thank you for being in our study. You filled out a questionnaire for us a little while ago. This is a friendly reminder that you will have an appointment with your doctor soon. We want to help you make the most of your appointment.

Talking to your doctor about your medical care: It's easier than you think.

Your doctor is interested in hearing your thoughts and worries about your medical care. The doctor will be grateful that you are willing to talk. You don't have to go into lots of detail. Just get the conversation started.

Here are 2 important questions: [Take this sheet of paper in to your appointment!]

3. Could we talk about what I want if something serious were to happen *now* in my current health?
4. I am hoping for the best, but I also want to plan if something serious were to happen *in the future*. Could we talk about that?

If you feel a little nervous…

It's ok! Many people think that the doctor might not have time, or might know best – but remember that you are the expert on what is important in your life. So just give these questions a try!

Here is some information from your questionnaire. These are just reminders for you. You can change your mind at any time.

We asked:	*Have you talked to your doctor about medical care you want if you got too sick to speak for yourself?*
	You answered: <u>NO</u>
We asked:	*Would you like to talk about what is important in your medical care if you got too sick to speak for yourself?*
	You answered: <u>YES</u>
We asked:	*Do you prefer that your medical care is more focused on extending life, or on quality of life?*
	You answered: <u>My priority is on QUALITY OF LIFE (relieving pain and discomfort)</u>
We asked:	*Is your current medical care more focused on extending life, or on quality of life?*
	You answered: <u>Seems focused on QUALITY OF LIFE</u>
We asked:	*Have you thought about whether you would want CPR?*
	You answered: If my health is like it is today, I would <u>DEFINITELY WANT CPR</u>
	You answered: If I was permanently confined to bed and dependent on others, I would <u>DEFINITELY NOT WANT CPR</u>

We hope this information is useful. Feel free to take this to your appointment – pull it out when you are talking to your doctor or nurse.

Section C.   Resources for Intervention Implementation

eTable 1. Implementation of the intervention in a healthcare system would require the following resources:

TASK	RESOURCES NEEDED
Adaptation of the Jumpstart-Tips and survey items upon which the Jumpstart-Tips forms are built	• Participation by key stakeholders (i.e., administrators, clinicians, patients, families) to review the Jumpstart-Tips form and relevant survey items and provide site-specific feedback and recommendations; • Staff familiar with survey adaptation and implementation to revise the Jumpstart-Tips form and relevant survey items to address stakeholder concerns.
Identification of eligible patients	• IT staff to develop automatic screening of EHR and clinic schedules to identify eligible patients; • Clinical staff (physician or nurse) to review a sample of identified patients to ensure reliability of screening methods.
Distribution of the survey items upon which the Jumpstart-Tips are built	• Personnel to send surveys out to patients; • Current personnel for patient satisfaction surveys could be re-purposed for this usage, but usual response rates for satisfaction surveys would have to be enhanced with standard methods to increase response rates • Optional: Personnel to call patients to determine if they received the survey and have any questions.
Tracking of individual patient responses to be able to use individual patient-level data to create and feedback the appropriate Jumpstart-Tips form	• Tracking systems are not usually used for patients satisfaction surveys, which are presented as aggregate data and these tracking systems would have to be put in place and tested to ensure patients and clinicians receive the correct Jumpstart-Tips form
Collation of the survey results and generation of the Jumpstart-Tips	• IT or research staff to create database and link to Jumpstart-Tips algorithm to generate patient-specific Jumpstart-Tips.
Distribution of the Jumpstart-Tips	• Clerical staff to send Jumpstart-Tips to patients and clinicians.
Evaluation of implementation and impact	• IT and administrative staff to create system for tracking distribution and receipt of Jumpstart-Tips. • IT and administrative staff to create system for tracking clinician documentation of goals-of-care discussions.

D. Supplementary Analyses

1.Confirmatory factor analysis results for the quality of communication 4-item scale, PHQ-2, and GAD-2

<u>A priori quality of communication (QOC) 4-item scale:</u>
We used confirmatory factor analysis (CFA) to test the four selected items for unidimensionality and scalar measurement invariance between groups (intervention and control) and over two assessments (baseline and two weeks). The items were defined as censored from below (due to high frequencies of "did not do") and analyzed with Tobit regression models, constraining each indicator's loading and intercept to equality over the two groups and two time periods. Fit of the model with measurement invariance imposed was assessed with the χ^2 test of fit, with a *p*-value >0.05 required as evidence of non-significant misfit. The model produced *p*=0.7773 when based on all cases; *p*=0.8031 when based on patients with complete data.

<u>PHQ-2:</u>
We used CFA to analyze the PHQ-2, a two-item abbreviated measure of depressive symptoms. A latent construct based on these two items, with scalar measurement invariance imposed between groups (intervention and control) and over three time periods (baseline, 3-month, 6-month), constrained each indicator's loadings and thresholds to equality between groups and over time. This model showed non-significant misfit (*p* for the χ^2 test of fit = 0.0897 based on all cases; *p* = 0.1609 based on cases with complete data).

<u>GAD-2:</u>
We investigated whether a construct of the GAD-7, based on a smaller number of indicators, might provide an appropriate latent measure. Using exploratory factor analysis in a confirmatory analysis framework (E/CFA) and beginning with all seven items, we identified a two-indicator construct (items 1 and 3, defined as ordered categorical variables and analyzed with probit regression), with measurement invariance imposed between groups and over time; the χ^2 test of fit had *p*=0.7687 for all cases; *p*=0.6227 for cases with complete data.

eTable 2. Clinician and Patient Characteristics for Participants and non-Participants

Sample	Characteristic	Number eligible	Percent participating (%)	b[a]	p
Clinicians	Race/ethnicity				
	White non-Hispanic	174	54.0		
	Minority	48	62.5	0.22	0.295
	Gender				
	Male	226	25.7		
	Female	259	25.5	-0.01	0.965
	Age				
	28-47	106	65.1		
	48-73	105	52.4	-0.33	0.061
	Type				0.861
	Physician	435	26.4	0.29	0.189
	Physician's assistant	10	0.0)	-3.52	0.944
	Nurse practitioner	40	22.5	-0.11	0.644
	Specialty[b]				**<0.001**
	Family medicine	170	17.1	-0.52	**<0.001**
	Internal medicine	126	27.0	-0.05	0.715
	Oncology	49	49.0	0.63	**0.001**
	Pulmonology	10	80.0	1.51	**0.001**
	Cardiology	49	32.7	0.52	0.522
	Gastroenterology	14	21.4	-0.40	0.354
	Nephrology	22	31.8	0.16	0.566
	Geriatrics	5	60.0	0.89	0.120
Patients	Race/ethnicity				
	White non-Hispanic	694	56.3		
	Minority	199	51.8	-0.12	0.235
	Gender				
	Male	476	54.4		
	Female	441	53.3	-0.03	0.736
	Age				
	Below median	458	54.8		
	At or above median	459	52.9	-0.05	0.570
	Qualifying conditions				
	Advanced cancer				
	No	756	53.4		
	Yes	161	55.9	0.06	0.494
	Chronic lung disease				
	No	841	53.2		
	Yes	76	61.8	0.22	0.267
	Heart failure				
	No	857	53.9		
	Yes	60	53.3	-0.01	0.936
	Liver failure				
	No	913	53.8		
	Yes	4	75.0	0.58	0.234
	Renal failure				
	No	882	53.6		
	Yes	35	60.0	0.16	0.446
	Age 75-89 w/chronic condition				
	No	596	52.7		
	Yes	321	56.1	0.09	0.387
	Age 90+				
	No	834	55.0		

Sample	Characteristic	Number eligible	Percent participating (%)	b[a]	p
	Yes	83	42.2	-0.32	**0.020**
	Hospitalization				
	No	760	54.3		
	Yes	157	51.6	-0.07	0.547
	Charlson score 6+				
	No	226	37.2		
	Yes	691	59.3	0.56	**<0.001**

a   Coefficients and *p*-values based on probit regression models, estimated with weighted least squares with mean and variance adjustment (WLSMV), with participation status (0=non-participant, 1=participant) as the outcome and the clinician or patient characteristic as the predictor. Models of patient participation included clustering of patients under clinicians. For non-binary characteristics (clinician type and physician specialty), the *p* for the omnibus test was based on the Wald test of parameter constraints, and *p*-values for the separate characteristics were based on binary predictors (0=didn't have the characteristic, 1=had the characteristic).

b   The specialty predictor was tested for physicians only.

eTable 3. Association between Use of Jumpstart-Tips Forms at Target Visit and Occurrence of Goals-of-Care Discussions[a]

Sample	Form use by …	Clinician number	Patient number	% with Goals-of-care discussion	b (95% CI)[a]	p
All patients	Clinicians[b,c]	118	369	50.9		
	Control group		211	31.3	0.000	
	Intervention group, didn't use form		20	50.0	0.49 (-0.167,1.139)	0.144
	Intervention group, used form		138	81.2	1.37 (1.062, 1.681)	<0.001
	Clinicians, intervention-group only[b]	54	158	77.2		
	Didn't use form		20	50.0	0.000	
	Used form		138	81.2	0.88 (0.182, 1.584)	0.014
	Patients[c,d]	120	386	50.8		
	Control group		211	31.3	0.000	
	Intervention group, didn't use form		60	51.7	0.53 (0.138, 0.921)	0.008
	Intervention group, used form		115	86.1	1.57 (1.186, 1.957)	<0.001
	Patients, intervention-group only[d]	56	175	74.3		
	Didn't use form		60	51.7	0.000	
	Used form		115	86.1	1.04 (0.614, 1.470)	<0.001
Patients open to goals-of-care discussion[e]	Clinicians[b,c]	111	280	50.4		
	Control group		160	27.5	0.000	
	Intervention group, didn't use form		12	58.3	0.81 (0.075, 1.538)	0.031
	Intervention group, used form		108	83.3	1.57 (1.171, 1.960)	<0.001
	Clinicians, intervention-group only[b]	49	120	80.8		
	Didn't use form		12	58.3	0.000	
	Used form		108	83.3	0.76 (-0.089, 1.602)	0.079
	Patients[c,d]	115	295	50.8		
	Control group		160	27.5	0.000	
	Intervention group, didn't use		41	53.7	0.69 (0.247,	0.002

	form				1.131)	
	Intervention group, used form		94	89.4	1.84 (1.411, 2.275)	<0.001
	Patients, intervention-group only[d]	53	135	78.5		
	Didn't use form		41	53.7	0.000	
	Used form		94	89.4	1.15 (0.661, 1.647)	<0.001

a   Data on occurrence of goals-of-care discussion were taken from questionnaires distributed to patients 2 weeks after the target visit. Results are based on probit regression models, estimated with weighted least squares with mean and variance adjustment (WLSMV), and with clustering of patients under clinicians. No covariate adjustments were made.

b   Data on intervention-group clinicians' use of the Jumpstart-Tips form were taken from questionnaires distributed to clinicians' immediately after the target visit.

c   Model had two indicators as predictors, with the control group (which did not receive a Jumpstart-Tips form) constituting the reference category and coded zero on both indicators.

d   Data on intervention-group patients' use of the Jumpstart-Tips form were taken from questionnaires distributed to patients 2 weeks after the target visit.

e   Patients who, on the baseline questionnaire, did not state objection to a future goals-of-care discussion with their enrolled clinician.

eTable 4. Heterogeneity of Treatment Effects by Patient Diagnosis (Cancer vs. No Cancer)

Outcome	Predictor	Number of patients / Number of clinicians[b]	b (95% CI)	p
Goals-of-care discussion at target visit[c]	Randomization group	395/121	1.06 (0.716, 1.395)	<0.001
	Cancer diagnosis		-0.53 (-0.895, -0.165)	0.004
	Interaction		0.40 (-0.215, 1.023)	0.201
Goal-concordant care at 3 months[c,d]	Randomization group	281/116	0.26 (-0.176, 0.692)	0.245
	Cancer diagnosis		-0.12 (-0.512, 0.283)	0.572
	Interaction		0.20 (-0.405, 0.808)	0.516
PHQ-8 (standard scale score)[e]				
3 months	Randomization group	359/119	-0.19 (-1.184, 0.806)	0.709
	Cancer diagnosis		-0.24 (-1.172, 0.685)	0.607
	Interaction		1.46 (-0.045, 2.958)	0.057
6 months	Randomization group	314/118	0.25 (-0.784, 1.278)	0.639
	Cancer diagnosis		0.02 (-1.045, 1.092)	0.966
	Interaction		0.25 (-1.618, 2.112)	0.795
GAD-7 (standard scale score)[f]				
3 months[g]	Randomization group	366/122	-0.85 (-2.064, 0.364)	0.170
	Cancer diagnosis		-0.82 (-2.028, 0.380)	0.180
	Interaction		2.37 (0.443, 4.289)	**0.016**
6 months	Randomization group	327/119	-0.03 (-1.317, 1.257)	0.963
	Cancer diagnosis		-0.12 (-1.457, 1.221)	0.863
	Interaction		-0.35 (-2.424, 1.726)	0.742

a   Results are based on clustered (patients under clinicians) models in which study outcomes were regressed on the cancer indicator, randomization group, and the interaction between those two predictors. All models were automatically adjusted for three covariates, selected *a priori*: patient age, gender, and racial/ethnic minority status. All models were based on patients with complete data on the outcome, diagnosis indicator, and covariates.
b   Number of patients/clinicians.
c   Outcome was defined as categorical and modeled with probit regression, using a weighted least squares estimator with mean and variance adjustment (WLSMV).
d   This model was also adjusted for treatment preference at 3 months.
e   Outcome was defined as continuous linear and modeled with robust linear regression, estimated with restricted maximum likelihood. The model was also adjusted for the baseline value on the outcome variable
f   Outcome was defined as censored from below and modeled with Tobit regression, using a weighted least squares estimator with mean and variance adjustment (WLSMV).
g   Analysis of patients with cancer showed significantly higher anxiety scores for patients in the intervention group than for those in the control group (b=1.623, *p*=0.021).

eTable 5. Heterogeneity of Treatment Effects by Patient Diagnosis (Heart Disease vs. No Heart Disease)

Outcome	Predictor	Number of patients / Number of clinicians[b]	b (95% CI)	p
Goals-of-care discussion at target visit[c]	Randomization group	395/121	1.39 (0.941, 1.845)	<0.001
	Heart disease diagnosis		0.34 (-0.041, 0.729)	0.080
	Interaction		-0.34 (-0.949, 0.271)	0.276
Goal-concordant care at 3 months[c,d]	Randomization group	281/116	0.37 (-0.155, 0.895)	0.168
	Heart disease diagnosis		0.02 (-0.400, 0.445)	0.917
	Interaction		-0.06 (-0.732, 0.618)	0.869
PHQ-8 (standard scale score)[e]		359/119		
3 months	Randomization group		0.32 (-0.923, 1.562)	0.614
	Heart disease diagnosis		-0.21 (-1.211, 0.794)	0.683
	Interaction		0.08 (-1.419, 1.583)	0.915
6 months[g]	Randomization group	314/118	1.71 (0.063, 3.360)	0.042
	Heart disease diagnosis		0.06 (-0.870, 0.984)	0.904
	Interaction		-2.13 (-4.038, 0.212)	**0.029**
GAD-7 (standard scale score)[f]				
3 months	Randomization group	366/122	-0.13 (-1.885, 1.631)	0.887
	Heart disease diagnosis		-0.85 (-2.058, 0.349)	0.164
	Interaction		0.54 (-1.533, 2.608)	0.611
6 months	Randomization group	327/119	-1.15 (-2.680, 0.384)	0.142
	Heart disease diagnosis		-1.39 (-2.703, -0.068)	0.039
	Interaction		1.85 (-0.151, 3.857)	0.070

a Results are based on clustered (patients under clinicians) models in which study outcomes were regressed on the heart disease indicator, randomization group, and the interaction between those two predictors. All models were automatically adjusted for three covariates, selected *a priori*: patient age, gender, and racial/ethnic minority status. All models were based on patients with complete data on the outcome, diagnosis indicator, and covariates.

b Number of patients/clinicians.

c Outcome was defined as categorical and modeled with probit regression, using a weighted least squares estimator with mean and variance adjustment (WLSMV).

d This model was also adjusted for treatment preference at 3 months.

e Outcome was defined as continuous linear and modeled with robust linear regression, estimated with restricted maximum likelihood. The model was also adjusted for the baseline value on the outcome variable

f Outcome was defined as censored from below and modeled with Tobit regression, using a weighted least squares estimator with mean and variance adjustment (WLSMV).

g Stratified analyses of the heart-disease and no-heart-disease groups showed non-significant effects of the intervention in both groups (b= 1.583, *p*=0.052 among patients without heart disease; b=-0.322, *p*=0.547 among patients with heart disease).

eTable 6. Heterogeneity of Treatment Effects by Patient Diagnosis (Lung Disease vs. No Lung Disease)

Outcome	Predictor	Number of patients / Number of clinicians[b]	b (95% CI)	p
Goals-of-care discussion at target visit[c]	Randomization group	395/121	1.20 (0.859, 1.538)	<0.001
	Lung disease diagnosis		0.29 (-0.098, 0.682)	0.142
	Interaction		0.09 (-0.465, 0.637)	0.760
Goal-concordant care at 3 months[c,d]	Randomization group	281/116	0.30 (-0.144, 0.742)	0.185
	Lung disease diagnosis		0.01 (-0.498, 0.519)	0.968
	Interaction		0.12 (-0.600, 0.832)	0.751
PHQ-8 (standard scale score)[e]		359/119		
3 months	Randomization group		0.02 (-0.866, 0.895)	0.974
	Lung disease diagnosis		0.48 (-0.733, 1.694)	0.438
	Interaction		0.95 (-0.818, 2.720)	0.292
6 months[g]	Randomization group	314/118	0.98 (-0.098, 2.060)	0.075
	Lung disease diagnosis		0.38 (-0.511, 1.272)	0.403
	Interaction		-2.20 (-4.090,-0.315)	**0.022**
GAD-7 (standard scale score)[f]				
3 months	Randomization group	366/122	-0.25 (-1.470, 0.976)	0.692
	Lung disease diagnosis		0.75 (-0.673, 2.169)	0.302
	Interaction		0.85 (-1.056, 2.747)	0.384
6 months	Randomization group	327/119	0.02 (-1.261, 1.309)	0.971
	Lung disease diagnosis		0.22 (-1.291, 1.727)	0.777
	Interaction		-0.55 (-2.819, 1.726)	0.638

a   Results are based on clustered (patients under clinicians) models in which study outcomes were regressed on the lung disease indicator, randomization group, and the interaction between those two predictors. All models were automatically adjusted for three covariates, selected *a priori*: patient age, gender, and racial/ethnic minority status. All models were based on patients with complete data on the outcome, diagnosis indicator, and covariates.

b   Number of patients/clinicians.

c   Outcome was defined as categorical and modeled with probit regression, using a weighted least squares estimator with mean and variance adjustment (WLSMV).

d   This model was also adjusted for treatment preference at 3 months.

e   Outcome was defined as continuous linear and modeled with robust linear regression, estimated with restricted maximum likelihood. The model was also adjusted for the baseline value on the outcome variable

f   Outcome was defined as censored from below and modeled with Tobit regression, using a weighted least squares estimator with mean and variance adjustment (WLSMV).

g   Stratified analyses of the lung-disease and no-lung-disease groups showed non-significant effects of the intervention in both groups (b= 1.001, *p*= 0.063 among patients without lung disease; b=-0.961, *p*= 0.218 among patients with lung disease).

eTable 7. Heterogeneity of Treatment Effects by Patient's Self-Reported Health Status (Poor/Fair vs. Good/Very Good/Excellent)

Outcome	Predictor	Number of patients / Number of clinicians[b]	b (95% CI)	p
Goals-of-care discussion at target visit[c]	Randomization group	394/121	1.13 (0.710, 1.543)	<0.001
	Better health		-0.20 (-0.516, 0.114)	0.212
	Interaction		0.19 (-0.343, 0.722)	0.485
Goal-concordant care at 3 months[c,d]	Randomization group	280/116	0.57 (0.028, 1.104)	0.039
	Better health		0.01 (-0.383, 0.394)	0.979
	Interaction		-0.37 (-0.970, 0.225)	0.222
PHQ-8 (standard scale score)[e]		358/119		
3 months	Randomization group		0.85 (-0.512, 2.209)	0.222
	Better health		-0.67 (-1.795, 0.448)	0.239
	Interaction		-1.00 (-2.576, 0.577)	0.214
6 months	Randomization group	314/118	-0.67 (-2.343, 1.014)	0.438
	Better health		-2.13 (-3.271,-0.978)	<0.001
	Interaction		1.69 (-0.199, 3.583)	0.080
GAD-7 (standard scale score)[f]				
3 months	Randomization group	365/122	0.07 (-1.248, 1.384)	0.919
	Better health		-0.83 (-2.114, 0.455)	0.205
	Interaction		-0.14 (-2.100, 1.813)	0.886
6 months	Randomization group	326/119	-0.38 (-1.897, 1.136)	0.623
	Better health		-1.53 (-2.938,-0.120)	0.033
	Interaction		0.34 (-1.678, 2.366)	0.739

a   Results are based on clustered (patients under clinicians) models in which study outcomes were regressed on the a binary indicator measuring the patient's self-assessed health (0=poor or fair health; 1=good, very good, or excellent health), randomization group, and the interaction between those two predictors. All models were automatically adjusted for three covariates, selected *a priori*: patient age, gender, and racial/ethnic minority status. All models were based on patients with complete data on the outcome, health status, and covariates.

b   Number of patients/clinicians.

c   Outcome was defined as categorical and modeled with probit regression, using a weighted least squares estimator with mean and variance adjustment (WLSMV).

d   This model was also adjusted for treatment preference at 3 months.

e   Outcome was defined as continuous linear and modeled with robust linear regression, estimated with restricted maximum likelihood. The model was also adjusted for the baseline value on the outcome variable

f   Outcome was defined as censored from below and modeled with Tobit regression, using a weighted least squares estimator with mean and variance adjustment (WLSMV).

eTable 8. Heterogeneity of Treatment Effects by Patients' Baseline Ratings of Their Clinician's Quality of Communication[a]

Outcome	Predictor	n[b]	b (95% CI)	p
Goals-of-care discussion at target visit[c]	Randomization group	328/115	1.939 (1.391, 2.486)	<0.001
	Latent QOC variable (baseline)		0.03 (-0.024, 0.085)	0.273
	Interaction		-0.01 (-0.075, 0.068)	0.923
Goal-concordant care at 3 months[c,d]	Randomization group	239/107	0.41 (-0.251, 1.061)	0.226
	Latent QOC variable (baseline)		0.03 (-0.027, 0.085)	0.312
	Interaction		0.01 (-0.072, 0.082)	0.893
PHQ-8 (standard scale score)[e]				
3 months[f]	Randomization group	301/112	0.55 (-0.341, 1.447)	0.225
	Latent QOC variable (baseline)		0.02 (-0.056, 0.088)	0.655
	Interaction		0.05 (-0.044, 0.138)	0.313
6 months[f]	Randomization group	266/112	0.23 (-0.774, 1.242)	0.649
	Latent QOC variable (baseline)		0.01 (-0.065, 0.090)	0.746
	Interaction		-0.02 (-0.146, 0.100)	0.716
GAD-7 (standard scale score)[g]				
3 months[f]	Randomization group	306/115	-0.02 (-1.099, 1.063)	0.974
	Latent QOC variable (baseline)		9.39 (-9.639, 28.412)	0.334
	Interaction		-16.94 (-41.656, 7.783)	0.179
6 months[f]	Randomization group	277/112	-0.47 (-10.182,34.880)	0.447
	Latent QOC variable (baseline)		12.35 (-34.289, 33.060)	0.283
	Interaction		-0.62 (-1.690, 0.745)	0.971

a   Results are based on clustered (patients under clinicians) regression models in which study outcomes were regressed on the 4-indicator latent quality-of-communication variable, randomization group, and the interaction between those two predictors. The four QOC indicators were defined as censored from below, and estimation was done with restricted maximum likelihood. All models included automatic adjustment for three covariates, selected *a priori*: patient age, gender, and racial/ethnic minority status. All models were based on patients with complete data on the outcome, QOC indicators, and covariates.
b   Number of patients/clinicians.
c   Outcome was defined as categorical.
d   This model was also adjusted for treatment preference at 3 months.
e   Outcome was defined as continuous linear.
f   This model was also adjusted for the baseline value on the outcome variable.
g   Outcome was defined as censored from below.

Section E: Qualitative Data: methods, analyses and findings

Methods:
We collected qualitative data from a small number of participants randomized to the intervention to obtain information about their experience with the intervention. Experienced qualitative interviewers conducted semi-structured interviews with 10 patients, 5 family members, and 10 clinicians who had been randomized to the intervention group. Participants were identified by purposive sampling. Subjects who had indicated that they would be open to these interviews were approached for participation. Indications took the form of expressing interest in the study itself during participation or sharing additional information about their experiences via comments written in returned materials, for example. These interviews were conducted by in person and by telephone and occurred after participants had completed all of their study activities (range: from 6 to 19 months from the participants' intervention target visits). Structured interviews were designed to address 4 thematic areas: Jumpstart-Tips strengths; Jumpstart-Tips recommendations for improvements; strengths of the study and procedures; and, recommendations or improvements for the study and procedures. The interviews were audio recorded, transcribed and analyzed using thematic analyses.

Analyses:
Two study staff reviewed the transcripts and completed thematic analyses, sorting the responses into the four thematic areas and noting additional commentary provided by the interviewee (e.g. personal history of end-of-life decision-making).

Patient (n=10) interviews generally conveyed positive support for the Jumpstart-Tips form, although there were some criticisms. Positive reflections on the Jumpstart-Tips form included that it was helpful, highlighted important points, opened dialog, and made conversations easier with both clinician and family members. Patients also said the form helped them reach a comfort level with advance care planning (ACP) topics, introduced new ideas ('extending life vs. quality of life' and CPR decisions), and was easy to understand and use. Some patients felt they might use the form in the future and had the expectation that their clinician might as well. Patients also expressed some criticisms. For example, some felt the form's content was redundant and that it did not reflect patient's care preferences if they changed over time. The SUPPORT items required a choice that some respondents didn't see as necessary—that is, they expressed wanting to both extend life and enhance quality and not having to pick one or the other. Others thought that the intervention had little effect; one of the 2 patients making these comments had already had ACP conversations with their caregivers and/or clinicians prior to their study enrollment. Patients' recommendations for improving the Jumpstart-Tips included: a) the form should be redone or reviewed periodically to ensure that it still covers the patient's wishes; and b) the form should include preferences about family involvement in care and decision-making. People should be reminded to review these issues periodically. One participant suggested using a more subtle or lighthearted approach to ACP.

Family members (n=5) had similar feedback about the Jumpstart-tips form. They thought it was helpful, caused them to think more deeply about details, alleviated concerns, and clarified information. They also felt the form gave them a head-start on ACP conversations, helped them feel more involved in the patient's care, and increased their awareness, expectations and preparation. For the 2 family members who had had ACP discussions, the form facilitated a reevaluation of their ACP. Family members' criticism's included: they were trying to "stay positive" for the patient (with the implication that the study focus may have made that more difficult), and the study was "one more thing to deal with." Family members recommended that the form include a closing statement that "addresses the heart of all this" to acknowledge the difficulty of the task and reiterate the support of the healthcare team. Family wanted more information about the goal of the form and more specific information about the patient's disease. Family also wanted the form to be tailored to the needs of a specific disease and include information about whether or not the patient had a POLST form completed, a prior DNR order, or advance directives.

Patients and family members also provided feedback about their perceptions of overall study participation, and most of these comments were positive. Respondents noted that they found participation to be beneficial even if somewhat difficult, that it helped raise important issues that they would not have otherwise discussed, strengthened bonds between patient-family-clinician and helped them feel like a team, prompted them to complete ACP paperwork (living wills, POLST) and increased their awareness of thinking and planning for the future. Participants also commented that it was helpful to go through the surveys. Some framed their own participation as contributing to society, noting that the study

could benefit all by helping people understand their own roles as a patient and empowering them to regain control over their own care. Other participants felt that their participation could "provide information that might help other people in this difficult journey." While this feedback was positive, we also received some critical comments: a) some participants felt it was too early for ACP discussions based on their perception of illness or the current treatment plan; b) some noted that they felt uncomfortable with participation and participation was stressful; c) others noted that they had already discussed these issues making participation redundant; and d) some felt that the current system of multispecialty care by multiple providers inhibited effective ACP communication.

Participating clinicians (n=10) were also asked to reflect on their experiences with the Jumpstart-Tips form and the study in general. Most clinicians found the form helpful: a) good starting point/conversation starter/icebreaker; b) helpful to have patients think about these issues beforehand so that they were able to come into the visit with ideas about ACP; c) provided structure/allowed for understanding patient goals quickly and objectively and provided a snapshot that helped keep ACP simple; and d) provided good framing for ACP discussions. In response to our request for recommendations, some clinicians again noted that having conversations prior to the target visit, such as those that occurred with the study coordinator during the baseline survey, may have been more influential than the form itself, and also suggested that patients might benefit from better understandings of what ACP is. Two clinicians reported that a few patients said their answers on the form no longer reflected their thoughts about their care (their ideas had changed or they did not understand the concept e.g. "preferred vs. perceived"). Suggested changes to the form itself included: adding whether or not patient already had a POLST form, and providing recommendations to the clinician that were less "wordy."

In general, while a few clinicians raised questions about the timing of ACP and the awkwardness of an imposed conversation, the majority noted that participation modestly enhanced the frequency and quality of advance care planning discussions with their patients – those in the study and in their practices generally. Participation brought more awareness of needs for ACP and documentation and served as a good reminder not to assume knowledge of patient's wishes without discussion.

Summary of findings from qualitative interviews:
Overall, patients and family members reported that the intervention strengthened bonds between the patient, family, and clinician, helping them feel like a team; that completing the surveys was helpful; and that participation had increased their awareness of planning for the future and of the importance of completing advance care planning paperwork. With regard to the Jumpstart-Tips form, patients indicated that it was helpful, highlighting important points that warranted discussion; assisted in opening the dialogue; made conversations easier; increased their comfort level with advance care planning topics; and introduced new ideas (e.g., making a distinction between extending life and quality of life). Some indicated that they might use the form in the future and suspected that their clinicians might, as well. However, they noted that the form did not capture changes in care preferences over time and would need to be reviewed periodically to ensure that it still covered their wishes. Some objected to having to make a binary choice between life extension and quality of life; some mentioned that preferences about family involvement in care and decision-making should be added; and some patients who had already had had advance care planning discussions felt the intervention had little benefit. Clinicians also indicated that the Jumpstart-Tips form was a good icebreaker/conversation starter and that having it available to patients before their visit allowed them to come to the clinic already having some ideas about advance care planning. Clinicians noted that some patients reported at the target visit that the form no longer correctly reflected their preferences for care, even though they had completed the baseline assessment fairly recently.