

Supplemental Material

Description of the pilot phase of the screening tool

The pilot period of the screening tool was initiated from August 2017 to December 2017. During this time, in-person administration of the screening tool occurred in a gynecologic oncology outpatient clinic at The Johns Hopkins Hospital in Baltimore, MD. Women were screened on a convenience basis determined by the availability of the study staff. This allowed us to collect pilot information and refine the screening tool to develop a written questionnaire to administer to all patients. Women who screened positive and desired assistance were referred to Health Leads for resources.

On December 2017, data were reviewed for the first 50 patients, and the questionnaire was adapted as follows before implementation of written screening of all patients. A second question to assess financial strain was added. In addition, owing to a number of patients verbally reporting the need for basic commodities to the study staff and the ability of Health Leads to readily address this need, a question was added asking women about their needs regarding basic commodities like furniture and clothing. Because the question format would now be written and reviewed regularly, but not in real time, women were asked the following: "If you said yes to any of the above, would you like to receive assistance with any of these needs?" and "Are any of your needs urgent? For example: I don't have food

tonight. I don't have a place to sleep tonight." The latter question allowed for identification of patients who warranted urgent referral to social work and Health Leads. This written questionnaire was then administered for 1 month in a subset of clinics to assess feasibility of a more widespread dissemination, and then based on successful implementation, a final written version was given to every patient who presented to the clinic from January 2018 to May 2018.

Questions assessing food insecurity, housing insecurity, utility needs, childcare, difficulty reading hospital materials, and mental health needs were asked as a yes or no question and treated as binary outcomes. The domain of transportation was assessed with the following 2 questions: (1) "Are you regularly able to get a friend or relative to take you to your doctor's appointments?" and (2) "How often do you miss or need to delay appointments due to lack of transportation?" The second question was measured on a 5-point Likert scale, and responses of sometimes, often, or always, were considered positive for transportation needs. A positive response to either question was considered as having a transportation need. Financial strain was also addressed with the following 2 questions: the question "In the last 12 months, have you needed to see a doctor but could not because of cost?" was added to the written form but not included on the initial pilot screening; and the question "Please indicate how

often this describes you: I don't have enough money to pay my bills" was assessed on a 5-point Likert scale. Women who answered sometimes, often, or always to the latter or "yes" to the former were considered to have a positive screen for financial strain.

One key feature of a social needs screening tool is to keep it short and simple.¹⁴ As such, we included the aforementioned 8 social needs assessments on the first page of the intake. On the second page, additional questions were included that were of interest but not critical to our identification of basic social resource needs.

The Health Leads Screening Toolkit suggests using separate, validated resources to assess the domains of mental and behavioral health needs, and that these needs "will likely require a more highly skilled workforce to address than other types of social needs." However, including a brief screening question in the tool can help in identifying women who may warrant additional screening or questioning and possible referral to resources. Therefore, some brief unvalidated questions were included to understand more about our population, including the question "Have you recently experienced changes in your mood, such as feeling more anxious, down, or depressed?" with follow-up questions to assess their interest in referral if they expressed a mental health change. In addition, women were asked whether they had a good support system and to identify who makes up that support system.

SUPPLEMENTAL FIGURE

The final written basic social resource needs screening tool

Version 1.0

Name: _____ Phone Number: _____ Date: _____



In the last 12 months, did you ever eat less than you felt you should because there wasn't enough money for food?	Yes	No
Are you worried that in the next two months, you may not have stable housing?	Yes	No
In the past 12 months, has the utility company shut off your service for not paying your bills?	Yes	No
Please indicate how often this describes you: I don't have enough money to pay my bills. ___ Never ___ Rarely ___ Sometimes ___ Often ___ Always		
In the last 12 months, have you needed to see a doctor, but could not because of cost?	Yes	No
Are you regularly able to get a friend or relative to take you to your doctors' appointments?	Yes	No
How often do you miss or need to delay appointments due to lack of transportation? ___ Never ___ Rarely ___ Sometimes ___ Often ___ Always		
Do problems getting childcare make it difficult for you to get to appointments?	Yes	No
Do you ever need help reading hospital materials?	Yes	No
→ If yes, do you feel comfortable asking for help reading hospital material when you need it?	Yes	No
Do you need help finding household items such as furniture or clothing?	Yes	No
If you said YES to any boxes above, would you like to receive assistance with any of these needs?	Yes	No
Are any of your needs urgent? For example: I don't have food tonight. I don't have a place to sleep tonight.	Yes	No

Please See Back

Place patient sticker here

SUPPLEMENTAL FIGURE
(Continued)

Have you recently experienced changes in your mood, such as feeling more anxious, down, or depressed?	Yes	No
→ If yes: Have you spoken to a mental health provider?	Yes	No
→ If no: Would you like a referral to a mental health provider?	Yes	No
Do you feel comfortable talking to the provider you are seeing today about the questions you just answered?	Yes	No
Have you ever had a conversation with the provider you are seeing today about these topics?	Yes	No
Have you ever had a conversation with any doctor about these topics?	Yes	No
Have you ever had a conversation with a social worker about these topics?	Yes	No
Do you own a smart phone?	Yes	No
→ If no: Do you have access to a smart phone?	Yes	No
Do you feel as though you have a good support system?	Yes	No
Who would you identify as your support system? (check all that apply)		
<input type="checkbox"/> Family <input type="checkbox"/> Friends <input type="checkbox"/> Religious group <input type="checkbox"/> Other		
How well do you feel you understand your diagnosis and treatments?		
<input type="checkbox"/> Very well <input type="checkbox"/> Well <input type="checkbox"/> Neutral <input type="checkbox"/> Poorly <input type="checkbox"/> Not at all		

If there is anything else you would like to include, feel free to write below

SUPPLEMENTAL TABLE

A list of potential resources (not comprehensive)

Online resource	Description and use
https://healthleadsusa.org/	Health Leads website tools and resources; the Health Leads Social Needs Screening Toolkit can be accessed here
www.auntbertha.com	Aunt Bertha website An online portal with free access to a nationwide database of community-based organizations addressing the social determinants of health. Organizations can be searched by need and zip code
Cancer-specific resources	
https://www.cancer.org/treatment/support-programs-and-services.html	American Cancer Society website Use this link to search for programs and services available in your local area for patients with cancer and survivors
https://www.cancer.org/treatment/caregivers/caregiver-resource-guide.html#caregiver_resources	American Cancer Society website This link provides resources specific to caregivers of those with cancer
https://www.livestrong.org/we-can-help/planning-medical-care/transportation-and-other-cancer-support-services	Livestrong website This link provides access to Livestrong resources that can help patients with cancer, including direct services and community programs offered by Livestrong and resources from other national organizations
https://www.nccn.org/reimbursement_resource_room/default.aspx	National Comprehensive Cancer Network (NCCN) website This link provides access to resources from the NCCN that can help patients with cancer find reimbursement resources to ease financial toxicity because of cancer care

Beavis et al. Basic social resource needs screening in the gynecologic oncology clinic: a quality improvement initiative. *Am J Obstet Gynecol* 2020.