Executive Summary

National Cancer Institute Cancer Care Delivery Research (CCDR) Steering Committee Health-Related Social Needs Clinical Trials Planning Meeting November 17–18, 2022 (Virtual and In-Person)

Co-Chairs: Ruth Carlos, MD, MS, and Scott Ramsey, MD, PhD, with Ann M. Geiger, PhD, MPH, and Deborah Jaffe, PhD

Introduction

The National Cancer Institute (NCI) Cancer Care Delivery Research (CCDR) Steering Committee convened a Clinical Trials Planning Meeting on Addressing Health-Related Social Needs (HRSN) on November 17 and 18, 2022. The hybrid meeting (virtual and in-person) was held at the NCI campus in Rockville, Maryland, and online. The primary goal of the meeting was to create consensus on the design of a multi-practice, multi-intervention prospective controlled study aimed at screening for and addressing HRSN among newly diagnosed cancer patients, specifically housing instability, food insecurity, transportation problems, utility help needs, and interpersonal safety.

Meeting Background

The United States consistently ranks lowest among high-income countries on measures of health care quality, including access to care, equity, and outcomes like maternal mortality and avoidable deaths. Although achieving better health outcomes ultimately requires policy changes within and beyond health care, oncology practices face increasing calls to address barriers to care experienced by individual patients. This includes a recent focus on assisting patients with HRSN, a sub-component of the larger domain often referred to as social determinants of health (SDOH).

SDOH are the social, environmental, or economic factors with direct or indirect effects on health. Social health integration occurs when health systems or clinics elevate social health alongside mental or physical health, which requires addressing HRSN. The process of such integration has been conceptualized as involving five activities: awareness, assistance, adjustment, alignment, and advocacy. Awareness occurs when the social risks of patients and populations are identified. Assistance refers to the process of connecting patients to relevant resources. Awareness and Assistance are most pertinent to the goals of this meeting.

Establishing a process of assessing patients' HRSN requires identification of the domains of interest and relevant screening tools. Existing systematic reviews and online collections of tools that can be useful in this process. Health systems and clinics must also select the patient population of interest and determine how to fit assessment into the clinic workflow. This must be done in a manner that does not stigmatize patients.

The first step in assisting patients is to define what responses to the screening tool indicate assistance is required. Health systems and clinics then need to be prepared to respond to that need. Common approaches currently include providing a list of potential community resources, referring patients to community-based organizations that have agreed to provide services, and actively assisting patients via a social worker or other type of navigators. Building assisting steps into clinical workflows is essential.

Understanding SDOH and HRSN will enable both better research and better health care. Significant knowledge gaps, and therefore research opportunities, exist regarding best practices for screening and addressing HRSN within health systems and clinic settings.

Meeting Objectives

- Design or adapt an HRSN screening tool and process for the study.
- Identify specific interventions that should be tested.
- Achieve consensus on essential elements of study design.
- Select a primary endpoint, along with key secondary and exploratory endpoints.

Meeting Deliverables

- Submission plan for one or more concepts. The concept(s) will undergo scientific peer review by the CCDR Steering Committee to determine whether it has sufficient merit to proceed to development of a protocol.

Meeting Summary

Breakout Group Recommendations: Screening Process

The Group reported consensus on several important points. First, there was strong support for routine screening, with an acknowledgement that screening tools have not been tested in oncology settings. Second, screening is generally acceptable to patients and health care providers. Finally, that NCORP practices' need for implementation support is just as important as the selection of screening tools.

An outstanding question is whether an HRSN screening intervention should focus on a single domain (e.g., transportation) or all domains simultaneously. Screening for a single domain improves the reliability of the screening process, reduces the burden for patients and practices, could enable practices to match HRSN screening items to available interventions, and offers a scalable solution for NCORP practices. Screening for all domains simultaneously acknowledges the reality that patients may have needs across several domains and provides more information to researchers about HRSN burden. Identifying multiple needs provides greater clinical utility to NCORP practices. However, many practices may have limited resources to address multiple domains.

In terms of planning one or more NCORP CCDR intervention trials, the Group emphasized that screening involves three stages, each of which alone could be considered an intervention: needs identification, asking an individual if they want help, and connecting them to appropriate resources. It was noted that trial design should be pragmatic and allow participation from practices with varying levels of resources and readiness. Screening should be approached with empathy and respect and conducted in a way that honors patients' autonomy.

Ultimately the Group recommended two possible approaches, both employing questions that have been used in other healthcare settings. The first option would be a single step using a set of questions that each practice would have to implement. This has the advantage of being brief and suitable for practices not currently assessing HRSN, although the latter practices may find it challenging to implement screening. The second option would be two-step screening in which practices would continue their current approach as a first step, with a standardized screening tool to confirm trial eligibility as a second step. Relative to one-step screening, this presents fewer barriers to implementation and leverages existing processes. However, this introduces practice-level variability that may introduce design and analytic challenges.

Breakout Group Recommendations: Intervention

The Group opened with a summary of overarching themes. There were three key conclusions: (1) lack of robust evidence for intervention on any factor represents an opportunity; (2) HRSN identified via screening require intervention that should address barriers for patients, families, or caregivers; and (3) efforts should leverage existing navigation services (people and technology) for interventions. Key limitations were that HRSN evolve over time and interventions must be calibrated to the NCORP practices where they will be tested. A critical unresolved question was whether screening must be tied to intervention; some participants promoted the idea that "if you screen, you must intervene."

Ideas and considerations for several intervention options, broken out by HRSN factors, were discussed. A ridesharing and/or fuel reimbursement intervention to address transportation needs could be built into a randomized clinical trial, but there were concerns about trial eligibility related to patient insurance or health savings account (HSA) coverage. Interventions related to food insecurity could connect patients to one or more services. First would be sustained support via enrollment in Supplemental Nutrition Assistance Program (SNAP) or Special Supplemental Nutrition Program for Women, Infants, and Children (WIC). A second option would be connecting patients to a food bank, delivery service, or grocery voucher program. Finally, food support could be provided on site via a food pantry or cafeteria vouchers. Housing interventions could include referral to financial counseling or social work, referral to medical-legal partnerships on housing instability, or provision of emergency or short-term subsidy for hotel or rental assistance. The most complex HRSN to address may be intimate partner violence (IPV), which has a high incidence but little

evidence-based guidance on detection and intervention.

An important consideration in developing one or more HRSN interventions is whether the focus should be on addressing a single or multiple HRSN. Multiple HRSN are highly correlated and selecting a single HRSN could raise ethical or moral concerns. The potential synergy of addressing multiple HRSN is offset by the range of maturity of interventions, with transportation most and IPV least ready.

In the discussion, participants acknowledged that screening and intervention are interdependent and that, like the HRSN, the impacts of interventions are correlated. This introduces substantial challenges to designing a trial. Beyond methodological considerations, a major question was the availability of resources within clinics and at the community level. Drawing on local assets will be critical to the success of any intervention. Current practice at local practices can serve as an experimental control.

Breakout Group Recommendations: Endpoints

This Group opened with a summary of key points. They reported that it is critical that the endpoints be proximal within the care continuum, that health equity-focused endpoints are imperative, and that survival/progression endpoints are not feasible within the pre-specified follow-up time limit of six months. Limitations relevant to their work included a paucity of evidence on HRSN interventions in oncology and the absence of community-level endpoints in prior research. The Group noted that multi-domain endpoints may be challenging unless there is a global measure that can be consistently measured across groups.

The Group provided a menu of potential primary, secondary, and exploratory endpoints. The proposed primary endpoint, as outlined by Gany et al. (2022), is treatment completion in the first 6 months. From there, the recommendations branched. One secondary endpoint could be the number of missed appointments in the first 6 months—an endpoint included in most of the studies and protocols the group reviewed. A related exploratory outcome could be the number of emergency department visits or unplanned hospitalizations within the first 6 months (also included in most of the reviewed studies and protocols). The other proposed secondary endpoint concept is patient-reported outcomes like quality of life, distress, or patient satisfaction, all of which can be captured with existing measures. The associated exploratory endpoint is referral to social support services. The recommended endpoints are broadly applicable and should be re-prioritized to suit the study design and intervention.

The proposed primary endpoint is applicable to the highest number of trials and the broadest potential patient population. In discussion, participants raised key concerns about this endpoint, including that it may be too medically focused and that it may not be adequately responsive to HRSN interventions. In defense of this outcome, participants highlighted widespread health inequities related to treatment completion

and suggested that pursuing this endpoint may provide a necessary health equity lens for the study. Participants called for the elevation of secondary and exploratory endpoints, including those process outcomes that may be more proximate to the intent of the intervention itself.

Breakout Group Recommendations: Study Design

The Group opened by describing key strategies. They acknowledged the limited literature to support systems-level interventions or platform trials for this topic. Their recommendations reflected an understanding of the existing capacity of Research Bases and practices within NCORP Sites. The Group did not reach a final, single study design recommendation, and instead outlined considerations for each aspect of study design: population and eligibility; allocation to studies; randomization; control selection; phase/study designs; and sample size considerations.

Broad eligibility is important because HRSN have an impact on all cancer diagnoses. Pediatric, adolescent and young adult (AYA), and underserved populations should be kept in mind. The group recommended aiming for full NCORP representation and suggested allowing practices to participate in as many studies as they have interest in and capacity to conduct. Limiting individuals to one intervention at a time will minimize confounding between interventions and confusion for practice staff and participants, as well as limit logistical issues around data collection. Although selection of individual or cluster-level randomization depends on the intervention of interest (e.g., a systems- or provider-level intervention requires cluster randomization), individual randomization is preferred. Recruiting separate controls for each proposed study seems inefficient. Availability of historical baseline data for the proportion of patients affected by any HRSN is unclear and likely varies by practice. Multi-level data (i.e., practice, stakeholder, key staff, participant, and possibly community) collection and implementation metrics are necessary. The Group recommended conducting pilots before moving to a large randomized controlled trial. There was strong support for conducting incremental studies that are ends unto themselves while advancing toward the larger trial. Adaptive designs may be overly ambitious. More heterogeneous inclusion requires larger sample sizes; there was no consensus on enrichment of subgroups.

Stakeholders expressed a desire to reduce participant, practice, and research base burden; make studies clinically feasible; involve stakeholders in the design and throughout the study lifecycle; and measure implementation outcomes. In addition, they pointed out the need for an approach that streamlines data collection of primary and secondary outcomes at common time points, regardless of the intervention. Concerns were expressed about timing of intervention readiness and site capacity. Expanding generalizability of research outcomes to previously underrepresented populations necessitate a research method that accounts for the individual’s lived experience.

Stakeholder Group Report: Methods

Key discussion points included the capacity, role, and responsibility of practices and healthcare systems to address HRSN; how to layer implementation on top of interventions; and the lack of rigorous measures that can be harmonized across participating practices and studies. Combining an intervention with a descriptive study (for example, a longitudinal cohort study to understand clinic capacity and map to community resources) was recommended to help fill information gaps. Patient-reported outcomes would be helpful in understanding patient experience. The acknowledged gap in evidence regarding the impact of social support might be difficult to address in strained healthcare settings. Given the heterogeneity of patient populations, a universal intervention may not be feasible and may exacerbate health equity issues; an approach that allows practices to choose from a list of options may be preferable.

Group members debated screening alone as an intervention versus screening plus referral. Specific interventions—food banks versus unconditional cash transfers—were considered, with cash transfers receiving strong support with the caveat that this approach may not be effective in food deserts. The importance of engaging patients and practices in the design process was emphasized.

Stakeholder Group Report: Feasibility

The group focused on needs assessment and community resource mapping as activities to inform study design strategies or as part of an intervention. An effective needs assessment should clearly articulate its purpose to motivate practice respondents to drill down, engage multiple people at their practice, recognize the heterogeneity of their team, and highlight what the practice does well. Resource mapping is challenging; an initial study should identify structured methods for performing community mapping in medical oncology and identify barriers to the process. Findings from the 2022 NCORPS landscape assessment recommend “grouping up” approaches to address differences in practices across disease types.

Considerations for including all versus some practices from a NCORP Site include the need for obtaining buy-in from leadership at each practice and understanding practice participation is reasonable given the available resources. Small practices do some things well that large practices do not and vice versa. For example, smaller practices may excel at a screening study but lack the depth to succeed at an intervention. The potential for exhausting social work resources should be taken into account when assessing feasibility of conducting activities at multiple time points; it is important to identify which tasks would be assigned to social workers versus those that could be done by navigators without social work backgrounds. Group members discussed limitations on the value of what institutions can provide (e.g., value of gas cards) due to the Physician Self-Referral (Stark) Law.

Steering Committee Concept Development Exercise

Four groups met to use the Group recommendations to begin outlining concepts for pre-specified scenarios. Those varied as to the extent of treatment side effects, potential HRSN, adverse family impacts, and end-of-life concerns.

Group 1 discussed a potential concept relevant to patients with any cancer type being treated with curative intent requiring more than four chemotherapy cycles or more than 10 radiation treatments. They advocated very broad screening for HRSN, including transportation, food security, and housing. In-depth needs assessments for patients should be conducted upon entry into the healthcare system and prior to first treatment. Based on an assumption that screening has been optimized and standardized, the group proposed sending teams on practice visits to conduct comprehensive community resource mapping, working with practices to identify two or more items to implement within their workflow, and continue building implementation strategies. Essentially, the project would create a toolkit with a menu of options and support. The concept would be practice-randomized with a wait list crossover design so that at the end of data collection, practices can add items if they wish. The primary endpoint would be the proportion of prescribed treatments received.

Group 2 was charged with designing a concept for patients with any cancer type being treated with palliative intent requiring intravenous systemic therapy. They recommended comprehensive screening for cancer-specific and community-based needs, including information about end-of-life needs. The distinction between screening for risk and identifying a need upon which to intervene was emphasized. The group opted for a team approach for conducting assessments, acknowledging the need for a safe, private space for self-administration. A specific team member (e.g., nurse, social worker) would communicate needs to the rest of the clinical team. Assessment should occur after trial enrollment, including for patients who may have been in the system for a while and previously screened for HRSN. Specific measures would prioritize patient experience (e.g., shared decision-making, quality-of-life, or functional outcome) with a system- or practice-level measure around cost and impact. The study would be randomized at the NCORP Site level with the option of including all practices or a single practice.

Group 3 discussed a potential concept relevant to patients with locally advanced (Stage III) small or non-small lung cancer being treated with curative intent (typically six weeks of radiation plus concurrent radiation with or without adjuvant immunotherapy for six months). Participants focused on the scope of the research with an emphasis on sustainability, limited resources, and investment of practice resources for maximum impact. After debating the value of infrastructure for assessment of issues versus a small, provocative pilot, the group opted to design a pilot study randomized to eight or more practices. The pilot would aim to compare implementation of (a) routine clinic-based assessments every 30 days using the Centers for Medicare & Medicaid Services (CMS) HRSN tool (minus the five IPV items) with follow-up by a practice navigator and (b) a pre-/post-research-based

assessment conducted by a practice coordinator using the CMS HRSN tool that provides unconditional cash transfer upon entry to the study. Endpoints would be adherence to treatment, reduced HRSN concerns, and patient experience and quality of life. The goal would be to model comparative effectiveness of investing in this system of de-implementing the current process, implementing a new screener, and having a navigator routinely follow up with the patient over time versus directly investing in patients with an unconditional cash transfer.

Group 4 was charged with designing a concept for head and neck patients receiving curative intent radiotherapy (primary or adjuvant, with daily and/or weekly treatments over six to seven weeks). Note that this population generally experiences more side effects than patients in the other three scenarios. Participants recognized that this patient group crosses the lifespan, has general HRSN, and requires management of symptoms that develop for nearly everyone receiving this type of treatment. Clinicians are aware that this population is at risk, and many make adjustments in an *ad hoc* manner. The proposed core intervention would be universal screening at multiple time points and capturing adjustments occurring at the clinic level toward understanding what those adjustments mean. The timeline would include a wash-in study period where serial screening would be conducted, observations made, and persistent gaps identified that would provide a framework for a follow-up study. The group discussed whether randomization was feasible and whether practices would be willing to join a usual care study. Active controls, cross-over controls, and unknowns around effect size were considered. Practice engagement will be critical at every stage.

Status of Concept

Once one or more concepts have been developed, the Cancer Care Delivery Research Steering Committee will review it/them to determine whether it has sufficient merit to proceed to the development of a protocol.

This Executive Summary presents the consensus arising from the CTPM. These recommendations are not meant to address all clinical contexts, but rather represent priorities for publicly funded clinical research.

In summary, clinical trial planning will proceed via the formation of working groups, composed of NCORP Research Base representatives. The initial working group will be a governance group. From the governance group's work will flow additional groups focused on pre-assessment, methodology, study design, and stakeholder engagement.

References

Gany, Francesca, Melnic, Irina, Wu, Minlun. "Food to Overcome Outcomes Disparities: A Randomized Controlled Trial of Food Insecurity Interventions to Improve Cancer Outcomes." *Journal of Clinical Oncology: 40(31), 3603–3612 (2022).* https://doi.org/10.1200/JCO.21.02400

National Cancer Institute Cancer Care Delivery Research (CCDR) Steering Committee
Health-Related Social Needs Clinical Trials Planning Meeting
November 17–18, 2022 (Virtual and In-Person)

Agenda

Thursday, November 17th – Day 1 General Session

9:00 AM Welcome and Call to Order

NCI: Ann Geiger, PhD, MPH & Deborah Jaffe, PhD

CTPM Co-Chairs: Ruth Carlos, MD, MS, and Scott Ramsey, MD, PhD

Planning Team: *Alyce Adams, PhD, Bárbara Segarra-Vázquez, DHSc, and William "Alex" Wilson, MD, DABR*

Breakout Group Leaders:
Screening: Kathryn Weaver, PhD, MPH & Mark Wojtowicz, MBA, MS
Intervention: Rick Bangs, MBA, PMP & Simon C. Lee, PhD, MPH
Endpoints: Matthew "Mateo" Banegas, PhD, MPH & Amylou Dueck, PhD
Study Design: Emily Dressler, PhD & Susan Parsons, MD, MRP

9:15 AM Meeting Goals and Expectations
Ann Geiger, PhD, MPH

9:30 AM Keynote Address – A baseline understanding of how unmet health-related social needs influence outcomes.
Lori Pierce, MD

9:50 AM Context Discussion/Q&A

10:05 AM Keynote Address – Study design considerations and implementation questions.
Cara Lewis, PhD

10:25 AM Context Discussion/Q&A

11:00 AM Break

11:30 AM Presentation and Discussion of Recommendations – Screening
Moderators: *Kathryn Weaver, PhD, MPH and Mark Wojtowicz, MBA, MS*

12:30 PM Lunch

1:15 PM Presentation and Discussion of Recommendations – Intervention
Moderators: *Rick Bangs, MBA, PMP and Simon C. Lee, PhD, MPH*

2:15 PM Presentation and Discussion of Recommendations – Endpoints
Moderators: *Mateo Banegas, PhD, MPH and Amylou Dueck, PhD*

3:15 PM Break

3:45 PM Presentation and Discussion of Recommendations – Study Design
Moderators: *Emily Dressler, PhD and Susan Parsons, MD, MRP*

4:50 PM Stakeholder Discussions – Subgroups convene separately
Subgroup 1: Methods (methodological concerns & recommendations)
Subgroup 2: Feasibility (feasibility concerns & recommendations)

5:40 PM Stakeholder Group Reports

6:00 PM Adjourn

Friday, November 18th – Day 2 General Session

9:00 AM Welcome and Call to Order

NCI: Ann Geiger, PhD, MPH & Deborah Jaffe, PhD

CTPM Co-Chairs: Ruth Carlos, MD, MS, and Scott Ramsey, MD, PhD

9:15 AM Clinical Trial Concept Components
Ann Geiger, PhD, MPH

9:30 AM Consensus Building and Topics for Further Discussion
Moderator: *Ann Geiger, PhD, MPH*

9:40 AM Concept Development Exercise
Ruth Carlos, MD, MS

9:50 AM Stakeholder Discussions – Subgroups convene separately
4 subgroups/4 clinical trial scenarios (*1 scenario/subgroup*)

10:55 AM Subgroup Reports

11:30 AM Adjourn

Friday, November 18th – Day 2 Executive Session (*closed by invitation only)*

12:15 PM Call to Order and Meeting Goal
Deborah Jaffe, PhD

12:20 PM Prioritization of Concept Components
Moderator: *Ann Geiger, PhD, MPH*

- Population(s) and Screening Approach(es)
- Intervention Approach(es)
- Design Considerations/Endpoints
- Feasibility Considerations
- Plans to Involve Stakeholders in Concept Development

1:25 PM Research Base Responsibilities and Next Steps
Moderator: *Ann Geiger, PhD, MPH*

1:40 PM Dissemination Plans
Moderators: *Deborah Jaffe, PhD, Scott Ramsey, MD, PhD, and Ruth Carlos, MD, MS*

1:55 PM Closing Remarks
Deborah Jaffe, PhD

2:00 PM Adjourn

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Meeting Leadership Roster

CTPM Co-Chairs

Ruth	Carlos	University of Michigan
Scott	Ramsey	Fred Hutchinson Cancer Research Center

Breakout Group Co-Chairs

Matthew	Banegas	University of California, San Diego
Rick	Bangs	Cancer Research Advocacy Leadership, SWOG
Emily	Dressler	Wake Forest University School of Medicine
Amylou	Dueck	Mayo Clinic
Simon C.	Lee	University of Kansas Medical Center
Susan	Parsons	Tufts University School of Medicine
Kathryn	Weaver	Wake Forest University School of Medicine
Mark	Wojtowicz	Geisinger Cancer Institute

NCI

Ann M.	Geiger	Division of Cancer Control and Population Sciences
Deborah	Jaffe	Office of the Director Coordinating Center for Clinical Trials

Meeting Participants Roster

Alyce	Adams	Stanford University
Brenda	Adjei	National Cancer Institute
Gilbert	Baez	Morristown Medical Center
Melissa	Beauchemin	Columbia University Herbert Irving Comprehensive Cancer Center
Amy	Berman	The John A. Hartford Foundation
Mary	Brown	Adena Cancer Center
Kate	Castro	National Cancer Institute
Mary E.	Cooley	Dana-Farber Cancer Institute
Katherine	Crew	Columbia University
Melyssa	Foust	Gibbs Cancer Center and Research Institute
Sarah	Gabriel	Helen F. Graham Cancer Center & Research Institute
Ilana	Gareen	Brown University
Laure	Gottlieb	University of California, San Francisco
Evan	Graboyes	Medical University of South Carolina
Emily	Haines	Wake Forest University School of Medicine
Dawn	Hershman	Columbia University
Libby	Hoy	PFCCpartners
Charles	Kamen	University of Rochester Medical Center
Ann-Marie	Langevin	University of Texas Health San Antonio
Cara	Lewis	University of Washington
Stacy T.	Lindau	University of Chicago
Worta	McCaskill-Stevens	National Cancer Institute
Jean	McDougall	University of New Mexico
Michelle D.	Messer	Helen F. Graham Cancer Center & Research Institute
Tammie	Mlodozyniec	Essentia Health
Heather	Neuman	University of Wisconsin
Mary	Ontko	Dayton Clinical Oncology Program

Sheree	Oxley	Columbus NCI Community Oncology Research Program
Lori	Pierce	University of Michigan
Manali	Patel	Stanford University
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Bárbara	Segarra-Vázquez	University of Puerto Rico
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Rebecca	Snyder	University of Texas MD Anderson Cancer Center
Diane	St. Germain	National Cancer Institute
Catherine M.	Tangen	Fred Hutchinson Cancer Research Center
Carla	Tardif	Family Reach
Joseph	Unger	Fred Hutchinson Cancer Research Center
Angela	Usher	University of California Davis Comprehensive Cancer Center
Lynne	Wagner	Wake Forest University School of Medicine
Joan	Walker	University of Oklahoma Stephenson Cancer Center
Christina	Washington	University of Oklahoma Stephenson Cancer Center
Jennifer	Wenzel	Johns Hopkins University
William A.	Wilson	Adena Cancer Center