



Topic Brief: Social Determinants for Hospitalized Youth

Date: 01/10/2020

Nomination Number: 0878

Purpose: This document summarizes the information addressing a nomination submitted on 10/10/2019 through the Effective Health Care Website. This information was used to inform the Evidence-based Practice Center (EPC) Program decisions about whether to produce an evidence report on the topic, and if so, what type of evidence report would be most suitable.

Issue: Social determinants of health (SDOH) are important factors contributing to the long-term health of children and their families. The benefits and harms of screening and intervention for SDOH in children are uncertain.

Program Decision:

The EPC Program will not develop a new systematic review because we did not find enough existing primary studies addressing the concerns of this nomination.

Key Findings

- We identified one systematic review that assessed the accuracy of screening tools for SDOH in children.
- While we identified only one completed study investigating the effectiveness of interventions for SDOH on health outcomes in children, we identified seven in-process clinical trials to assess the effectiveness of screening (three trials) and interventions (an additional four trials) for SDOH on health outcomes in children.
- We did not identify any systematic reviews, completed primary studies, or in-process trials that evaluated harms of screening or interventions for SDOH in children.
- As very few completed studies were identified, and several studies are currently underway to investigate the effectiveness of screening and interventions for SDOH on health outcomes in children, a systematic review may be more appropriate when in-process studies are completed.

Background

Social determinants of health (SDOH) are factors in an individual's social and physical environments that impact their health. The U.S. Office of Disease Prevention and Health Promotion categorizes SDOH into five areas: economic stability, education, social and community context, health and health care, and neighborhood and built environment.¹ Poverty can negatively influence all of these categories of SDOH. In the U.S. in 2018, 16.2% of children under the age of 18 were living in poverty.²

Greater exposure to social risk factors is associated with greater harm to children's global health status.^{3,4} Efforts to screen for, and intervene in, areas of SDOH are emerging.⁵ The American Academy of Pediatrics recommends screening for risk factors related to SDOH during pediatric

visits and linking families to services.⁶ Intervention for reducing exposure to social risk factors may include building multidisciplinary networks that allow children and their families to better access community resources.^{7,8}

Nomination Summary

Given the harmful effects that conditions such as poverty can have on a child's health, the nominator would like an evaluation of the evidence on the effectiveness and harms of screening and interventions for SDOH to better determine the role of health care providers in engaging with social risk factors in health care settings. The nominator was originally interested in hospitalized youth, but the scope was expanded to include children seen by health care providers in any health care setting.

Scope

1. Does screening for SDOH in infants and children improve outcomes for the children and their families?
2. What is the accuracy of screening for SDOH?
3. What are the harms of screening?
4. Do interventions to address SDOH improve outcomes?
5. What are the harms of interventions to address SDOH?

Table 1. Questions and PICOS (population, intervention, comparator, outcome, and setting)

Questions	1. Outcomes of screening	2. Accuracy of screening	3. Harms of screening	4. Outcomes of interventions	5. Harms of interventions
Population	Children 0-18 years old and their families	Children 0-18 years old and their families	Children 0-18 years old and their families	Children 0-18 years old and their families	Children 0-18 years old and their families
Interventions	<p>Screening for SDOH (i.e., economic stability, education, social and community context, health and health care, neighborhood and built environment):</p> <ul style="list-style-type: none"> • The Hunger Vital Sign • Income, Housing, Education, Legal Status, Literacy, and Personal Safety (IHELLP) • Well Child Care, Evaluation, Community Resources, Advocacy, Referral, Education Survey Instrument (WE CARE) • Safe Environment for Every Kid SEEK Parent Screening Questionnaire (SEEK) • Survey of Well-being of Young Children (SWYC) • Other screening tools for SDOH 	<p>Screening instruments for SDOH (i.e., economic stability, education, social and community context, health and health care, neighborhood and built environment):</p> <ul style="list-style-type: none"> • The Hunger Vital Sign • Income, Housing, Education, Legal Status, Literacy, and Personal Safety (IHELLP) • Well Child Care, Evaluation, Community Resources, Advocacy, Referral, Education Survey Instrument (WE CARE) • Safe Environment for Every Kid SEEK Parent Screening Questionnaire (SEEK) • Survey of Well-being of Young Children (SWYC) • Other screening tools for SDOH 	<p>Screening for SDOH (i.e., economic stability, education, social and community context, health and health care, neighborhood and built environment):</p> <ul style="list-style-type: none"> • The Hunger Vital Sign • Income, Housing, Education, Legal Status, Literacy, and Personal Safety (IHELLP) • Well Child Care, Evaluation, Community Resources, Advocacy, Referral, Education Survey Instrument (WE CARE) • Safe Environment for Every Kid SEEK Parent Screening Questionnaire (SEEK) • Survey of Well-being of Young Children (SWYC) • Other screening tools for SDOH 	<p>Interventions to address SDOH such as referral to resources to facilitate economic stability, education, social and community context, health and health care, neighborhood and built environment (e.g., provide list of resources, introduce a resource provider)</p>	<p>Interventions to address SDOH such as referral to resources to facilitate economic stability, education, social and community context, health and health care, neighborhood and built environment (e.g., provide list of resources, introduce a resource provider)</p>
Comparators	<ul style="list-style-type: none"> • Usual care • No screening 	<ul style="list-style-type: none"> • Other screening instrument 	<ul style="list-style-type: none"> • Usual care • No screening 	<ul style="list-style-type: none"> • Usual care • No intervention 	<ul style="list-style-type: none"> • Usual care • No intervention

Questions	1. Outcomes of screening	2. Accuracy of screening	3. Harms of screening	4. Outcomes of interventions	5. Harms of interventions
Outcomes	<ul style="list-style-type: none"> • Developmental milestones, • Behavioral/emotional health, • Physical health, • Hospitalizations • Physical/behavioral/emotional health of family members 	<ul style="list-style-type: none"> • Measures of validity (e.g., likelihood ratios, diagnostic odds ratios) 	<ul style="list-style-type: none"> • Harms (e.g., burden of screening process on patient/provider, psychological distress, separation of families (e.g., immigration complications, child abuse/neglect situations)) 	<ul style="list-style-type: none"> • Developmental milestones, • Behavioral/emotional health, • Physical health, • Hospitalizations Physical/behavioral/emotional health of family members 	<ul style="list-style-type: none"> • Developmental milestones, • Behavioral/emotional health, • Physical health, • Hospitalizations Physical/behavioral/emotional health of family members
Setting	Any medical setting (e.g., outpatient/inpatient)	Any medical setting (e.g., outpatient/inpatient)	Any medical setting (e.g., outpatient/inpatient)	Any medical setting (e.g., outpatient/inpatient)	Any medical setting (e.g., outpatient/inpatient)

Assessment Methods

See Appendix A.

Summary of Literature Findings

We identified a systematic review that addressed the accuracy of screening tools for SDOH in children (Question 2). While we identified only one completed study investigating the effectiveness of interventions for SDOH on health outcomes in children (Question 4), we identified in-process clinical trials to test the effectiveness of both screening (three clinical trials for Question 1) and interventions (four additional clinical trials for Question 4, for a total of seven clinical trials for Question 4) for SDOH on health outcomes in children. We did not identify any systematic reviews or primary studies addressing harms of screening (Question 3) or interventions (Question 5).

Table 2. Literature identified for each Question

Question	Systematic reviews (12/2016-12/2019)	Primary studies (12/2014-12/2019)
Question 1: Outcomes of screening	Total: 0	Total: 3 Clinicaltrials.gov (all studies identified also included for Question 4 below) <ul style="list-style-type: none">• Recruiting: 1⁹• Recruitment completed: 1¹⁰• Active, not recruiting: 1¹¹
Question 2: Accuracy of screening	Total: 1 ¹²	N/A
Question 3: Harms of screening	Total: 0	Total: 0
Question 4: Outcomes of interventions	Total: 0	Total: 8 <ul style="list-style-type: none">• RCT: 1¹³ Clinicaltrials.gov Recruiting: 4 ^{9, 14-16} Recruitment completed: 1 ¹⁰ Active, not recruiting: 2 ^{11, 17}
Question 5: Harms of interventions	Total: 0	Total: 0

See Appendix B for detailed assessments of all EPC selection criteria.

Summary of Selection Criteria Assessment

We identified one systematic review that addressed the accuracy of screening tools for SDOH in children (Question 2). The systematic review included studies that used single and multiple domain SDOH screening tools. The most common domain assessed was economic stability, and none of the studies included questions addressing each of the five domains of SDOH. In eight of the thirteen studies, tools were not validated.¹²

We did not find sufficient evidence for a systematic review for the remainder of the nomination, though we identified several in-process clinical trials, suggesting that a systematic review may be most appropriate in the future when more studies examining the effectiveness of screening and intervention for SDOH on health outcomes in children have been completed.

Please see Appendix B for detailed assessments of individual EPC Program selection criteria.

Related Resources

We identified additional resources that did not qualify as evidence for the research questions posed, but were relevant to Questions 1, 2 and 3.

We identified a scoping review that included an assessment of the effectiveness of screening on improving health and social outcomes (Question 1). The authors reported a large literature base for single SDOH domains, particularly SDOH related to violence, and did not identify findings in support of screening. They reported a smaller body of evidence for screening for multiple SDOH.¹⁸ While this review is informative as to the state of the literature for the question of the effectiveness of screening on improving health and social outcomes, the studies were not limited to the child/family population, the current population of interest.

The above scoping review included a systematic review that aimed to identify SDOH screening tools appropriate for hospitalized children, which we are highlighting here since the nominators were particularly interested in screening for SDOH in hospitalized children. The reviewers did not identify any instruments specifically designed to screen SDOH in hospitalized children. From 44 screening tools for SDOH in children, the reviewers selected 537 individual questions that they felt were relevant for hospitalized children. These questions reflected 19 social risk themes that the reviewers considered relevant to the population of hospitalized children. None of the identified screening tools included questions that represented all 19 themes. The methodological quality (including validity) of the screening instruments was assessed and the strongest tools included the Community Child Hunger Identification Project, the Radimer/Cornell Questionnaire of Food Insecurity, the Food and Nutrition Technical Assistance Household Food Insecurity Measure, and the Canadian Community Health Survey.¹⁹

As described above, we identified a systematic review that included an evaluation of the validity of pediatric screening tools for SDOH, which addresses Question 2. In addition, we identified a more recent systematic review that evaluated eleven screening tools, three of which evaluated validity of the tool.²⁰ While this review was of value, we did not present it as covering Question 2, as it only included studies that screened for multiple, and not single, SDOH.

While we did not identify any quantitative evidence that assessed the harms of screening for SDOH in children (Question 3), we did identify a systematic review that included a range of publication types (e.g., editorials, opinion pieces, qualitative or quantitative studies, policy recommendations) and reviewed reasons for and against inquiring about patients' socioeconomic contexts. Reasons not to screen for SDOH included potential harms, breach of professional boundaries, and inaccuracy of, or a perceived lack of need for, the information.²¹ The populations of the included publications were not restricted to children and their families, the current population of interest.

References

1. Healthy People 2020. Office of Disease Prevention and Health Promotion. doi: <https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-of-health>.
2. Bureau USC. Income and Poverty in the United States: 2018. doi: <https://www.census.gov/library/publications/2019/demo/p60-266.html>.
3. Larson K, Russ SA, Crall JJ, et al. Influence of multiple social risks on children's health. *Pediatrics*. 2008 Feb;121(2):337-44. doi: 10.1542/peds.2007-0447. PMID: 18245425.

4. Frank DA, Casey PH, Black MM, et al. Cumulative hardship and wellness of low-income, young children: multisite surveillance study. *Pediatrics*. 2010 May;125(5):e1115-23. doi: 10.1542/peds.2009-1078. PMID: 20385641.
5. Screening for Social Determinants of Health: Children's Hospitals Respond. Children's Hospital Association. doi: <https://www.childrenshospitals.org/Issues-and-Advocacy/Population-Health/Reports/Screening-for-Social-Determinants-of-Health>.
6. Poverty and Child Health in the United States. *Pediatrics*. 2016 Apr;137(4). doi: 10.1542/peds.2016-0339. PMID: 26962238.
7. Gilbert AL, Downs SM. Medical legal partnership and health informatics impacting child health: Interprofessional innovations. *J Interprof Care*. 2015;29(6):564-9. doi: 10.3109/13561820.2015.1029066. PMID: 26120893.
8. Rine CM. Social Determinants of Health: Grand Challenges in Social Work's Future. *Health & social work*. 2016;41(3):143-5. doi: <https://doi.org/10.1093/hsw/hlw028>. PMID: 29206954.
9. Howard B, Sturner R. A Clinical Process Support System for Primary Care to Address Family Stress. *Clinicaltrials.gov*. 2021. doi: <https://clinicaltrials.gov/ct2/show/NCT03700697>.
10. Lopez M. Transforming Care and Payment Priorities for Vulnerable Families. *Clinicaltrials.gov*. 2018. doi: <https://clinicaltrials.gov/ct2/show/study/NCT03416712?titles=Transforming+care+and+payment+priorities+for+vulnerable+families&draw=2&rank=1>.
11. Long D, Thakur N. Pediatric ACEs Screening and Resiliency Study (PEARLS). *Clinicaltrials.gov*. 2020. doi: <https://clinicaltrials.gov/ct2/show/NCT04182906>.
12. Morone J. An Integrative Review of Social Determinants of Health Assessment and Screening Tools Used in Pediatrics. *J Pediatr Nurs*. 2017 Nov - Dec;37:22-8. doi: 10.1016/j.pedn.2017.08.022. PMID: 28811057.
13. Gottlieb LM, Hessler D, Long D, et al. Effects of Social Needs Screening and In-Person Service Navigation on Child Health: A Randomized Clinical Trial. *Jama, Pediatr*. 2016 11 07;170(11):e162521. doi: <https://dx.doi.org/10.1001/jamapediatrics.2016.2521>. PMID: 27599265.
14. Rucker AC, Goyal MK. Social Navigation for Adolescents in ED. *Clinicaltrials.gov*. 2019. doi: <https://clinicaltrials.gov/ct2/show/NCT03700697?term=%22social+determinants+of+health%22&recrs=adef&age=0&draw=2&rank=4>.
15. Hetteema JE, Cockrell SA. Brief Intervention for Teen Pregnancy Prevention (TEMPO). *Clinicaltrials.gov*. 2020. doi: <https://clinicaltrials.gov/ct2/show/NCT02816424>.
16. Hawkes CP, Lipman TH. Integrating Community Health Workers Into the Care of Children With Type 1 Diabetes. *Clinicaltrials.gov*. 2020. doi: <https://clinicaltrials.gov/ct2/show/NCT03475108>.
17. Gottlieb LM. SFGH Health Advocates Stage II Study. *Clinicaltrials.gov*. 2020. doi: <https://clinicaltrials.gov/ct2/show/NCT02746393>.
18. Andermann A. Screening for social determinants of health in clinical care: moving from the margins to the mainstream. *Public Health Rev*. 2018;39:19. doi: 10.1186/s40985-018-0094-7. PMID: 29977645.
19. Pai N, Kandasamy S, Uleryk E, et al. Social Risk Screening for Pediatric Inpatients. *Clin Pediatr (Phila)*. 2016 Dec;55(14):1289-94. doi: 10.1177/0009922815623498. PMID: 26712932.
20. Sokol R, Austin A, Chandler C, et al. Screening Children for Social Determinants of Health: A Systematic Review. *Pediatrics*. 2019 Oct;144(4). doi: 10.1542/peds.2019-1622. PMID: 31548335.
21. Moscrop A, Ziebland S, Roberts N, et al. A systematic review of reasons for and against asking patients about their socioeconomic contexts. *Int J Equity Health*. 2019 Jul 23;18(1):112. doi: <https://doi.org/10.1186/s12939-019-1014-2>. PMID: 31337403.

22. Davidson KW, McGinn T. Screening for Social Determinants of Health: The Known and Unknown. *Jama*. 2019 Aug 29. doi: 10.1001/jama.2019.10915. PMID: 31465095.
 23. Garg A, Boynton-Jarrett R, Dworkin PH. Avoiding the Unintended Consequences of Screening for Social Determinants of Health. *Jama*. 2016 Aug 23-30;316(8):813-4. doi: <https://doi.org/10.1001/jama.2016.9282>. PMID: 27367226.
 24. Schickedanz A, Hamity C, Rogers A, et al. Clinician Experiences and Attitudes Regarding Screening for Social Determinants of Health in a Large Integrated Health System. *Med Care*. 2019 Jun;57 Suppl 6 Suppl 2:S197-s201. doi: 10.1097/mlr.0000000000001051. PMID: 31095061.
-

Author

Emily Gean
Rose Revelo
Robin Paynter
Kimberly Hubbard

Acknowledgements

Christine Chang

Conflict of Interest: None of the investigators have any affiliations or financial involvement that conflicts with the material presented in this report.

This report was developed by the Scientific Resource Center under contract to the Agency for Healthcare Research and Quality (AHRQ), Rockville, MD (Contract No. HHS-A-290-2017-00003C). The findings and conclusions in this document are those of the author(s) who are responsible for its contents; the findings and conclusions do not necessarily represent the views of AHRQ. No statement in this article should be construed as an official position of the Agency for Healthcare Research and Quality or of the U.S. Department of Health and Human Services.

Persons using assistive technology may not be able to fully access information in this report. For assistance contact EPC@ahrq.hhs.gov.

Appendix A: Methods

We assessed nomination for priority for a systematic review or other AHRQ Effective Health Care report with a hierarchical process using established selection criteria. Assessment of each criteria determined the need to evaluate the next one. See Appendix B for detailed description of the criteria.

Appropriateness and Importance

We assessed the nomination for appropriateness and importance.

Desirability of New Review/Absence of Duplication

We searched for high-quality, completed or in-process evidence reviews published in the last three years September 31, 2016 – December 31, 2019 on the questions of the nomination from these sources:

- AHRQ: Evidence reports and technology assessments
 - AHRQ Evidence Reports <https://www.ahrq.gov/research/findings/evidence-based-reports/index.html>
 - EHC Program <https://effectivehealthcare.ahrq.gov/>
 - US Preventive Services Task Force <https://www.uspreventiveservicestaskforce.org/>
 - AHRQ Technology Assessment Program <https://www.ahrq.gov/research/findings/ta/index.html>
- US Department of Veterans Affairs Products publications
 - Evidence Synthesis Program <https://www.hsrd.research.va.gov/publications/esp/>
 - VA/Department of Defense Evidence-Based Clinical Practice Guideline Program <https://www.healthquality.va.gov/>
- Cochrane Systematic Reviews <https://www.cochranelibrary.com/>
- PROSPERO Database (international prospective register of systematic reviews and protocols) <http://www.crd.york.ac.uk/prospero/>
- PubMed <https://www.ncbi.nlm.nih.gov/pubmed/>
- PsycINFO <https://www.apa.org/pubs/databases/psycinfo/>

Impact of a New Evidence Review

The impact of a new evidence review was qualitatively assessed by analyzing the current standard of care, the existence of potential knowledge gaps, and practice variation. We considered whether it was possible for this review to influence the current state of practice through various dissemination pathways (practice recommendation, clinical guidelines, etc.).

Feasibility of New Evidence Review

We conducted a limited literature search in PubMed for the last five years December 20, 2014-December 20, 2019. Because a large number of articles were identified, we reviewed a random sample of 200 titles and abstracts for Questions 1-3 and Questions 4-5 for inclusion. We classified identified studies by question and study design, to assess the size and scope of a potential evidence review. We then calculated the projected total number of included studies based on the proportion of studies included from the random sample.

Search strategy

Ovid MEDLINE(R) ALL

Date searched: December 23, 2019

1 "Social Determinants of Health"/ (2582)

2 (((social or socio* or health) adj5 determinant*) or SDOH or SDH or (social adj3 (advers* or needs or risk or risks)) or homeless* or hunger or "food insecurity").ti,ab,kf. (55504)

3 or/1-2 (56452)

4 Mass Screening/ or Interviews as Topic/ or "Questionnaires and Surveys"/ (585273)

5 (screen* or assess* or checklist or checklists or interview* or instrument* or scale or scales or questionnaire or questionnaires or survey* or "adverse childhood experience" or ((ACE or SEEK) adj (screen* or questionnaire)) or "Family Resource Scale" or "Hunger Vital Sign" or "Income, Housing, Education, Legal Status, Literacy, and Personal Safety" or IHELLP or

"Parent Screening Questionnaire" or PSQ or "Well Child Care, Evaluation, Community Resources, Advocacy, Referral, Education Survey Instrument" or "WE CARE" or "Safe Environment for Every Kid"

or "Parent Screening Questionnaire" or "Survey of Well-being of Young Children" or SWYC).ti,ab,kf. (4784866)

6 or/4-5 (4891770)

7 Health Care Organizations/ or Primary Health Care/ or Health Promotion/ or Delivery of Health Care, Integrated/ or Delivery of Health Care/ or Patient Care Management/ or exp Academic Medical Centers/ or exp Ambulatory Care Facilities/ or Birthing Centers/ or exp Hospital Units/ or exp Hospitals/ or exp Health Personnel/ 1085097

8 (healthcare or "health care" or hospital* or inpatient* or in-patient* or outpatient* or out-patient* or doctor* or physician* or clinic* or nurse* or assistant or caregiver* or patient* or personnel or staff or worker*).ti,ab,kf.(9239316)

9 or/7-8 (9612640)

10 and/3,6,9 (14005)

11 limit 10 to english language (13260)

12 11 and (*Adolescent/ or *Child/ or *Child, Preschool/ or *Infant/ or *Infant, Newborn/ or (adolescen* or child* or boy* or girl* or infant* or juvenile* or newborn* or paediatr* or pediater* or preschool or pre-school or school* or teen* or youth* or "young adult*").ti,ab,kf.) (3633)

13 (controlled clinical trial or randomized controlled trial).pt. (585339)

14 (trial or random*).ti,ab. (1358480)

15 or/13-14 (1534145)

16 and/12,15 (470)

17 limit 16 to yr="2014 -Current" (274)

18 Cohort Studies/ or Controlled Before-After Studies/ or Interrupted Time Series Analysis/ (253376)

19 (Comparative Study or Evaluation Studies or Observational Study).pt. or ("controlled before-after" or cohort or cohorts or "evaluation study" or "interrupted time series" or "observational study").ti,ab,kf. (2624998)

20 or/18-19 (2695475)

21 and/12,20 (634)

22 limit 21 to yr="2014 -Current" (320)

23 "Referral and Consultation"/ or Social Support/ or Social Welfare/ or Social Work/ (154333)

24 (advocate or advocacy or intervention* or refer* or resource* or service* or "social work" or "social workers").ti,ab,kf. (2332744)

25 or/23-24 (2412919)

26 and/3,25 (22384)

27 limit 26 to english language 21297)
28 27 and (*Adolescent/ or *Child/ or *Child, Preschool/ or *Infant/ or *Infant, Newborn/ or (adolescen* or child* or boy* or girl* or infant* or juvenile* or newborn* or paediatr* or pediater* or preschool or pre-school or school* or teen* or youth* or "young adult*").ti,ab,kf.) (6569)
29 and/15,28 (729)
30 limit 29 to yr="2014 -Current" (428)
31 Cohort Studies/ or Controlled Before-After Studies/ or Interrupted Time Series Analysis/ (253376)
32 (Comparative Study or Evaluation Studies or Observational Study).pt. or (before-after or cohort or cohorts or "evaluation study" or "interrupted time series" or observational).ti,ab,kf. (2683801)
33 or/31-32 (2753603)
34 and/28,33 (961)
35 limit 34 to yr="2014 -Current" (462)

PsycINFO

Date searched: December 23, 2019

1 Psychosocial Factors/ or Sociocultural Factors/ or Socioeconomic Status/ (100801)
2 (((social or socio* or health) adj5 determinant*) or SDOH or SDH or (social adj3 (advers* or needs or risk or risks)) or homeless* or hunger or "food insecurity").ti,ab. (35800)
3 or/1-2 (133637)
4 Screening/ or Health Screening/ (12717)
5 (screen* or assess* or checklist or checklists or interview* or instrument* or scale or scales or questionnaire or questionnaires or survey* or "adverse childhood experience" or ((ACE or SEEK) adj (screen* or questionnaire)) or "Family Resource Scale" or "Hunger Vital Sign" or "Income, Housing, Education, Legal Status, Literacy, and Personal Safety" or IHELLP or "Parent Screening Questionnaire" or PSQ or "Well Child Care, Evaluation, Community Resources, Advocacy, Referral, Education Survey Instrument" or "WE CARE" or "Safe Environment for Every Kid" or "Parent Screening Questionnaire" or "Survey of Well-being of Young Children" or SWYC).ti,ab. (1532672)
6 or/4-5 (1533251)
7 exp Health Care Services/ or exp Mental Health Services/ or exp Health Care Delivery/ or Primary Health Care/ or exp Hospitals/ or exp Psychiatric Hospitals/ or exp Health Personnel/ or exp Mental Health Personnel/ or exp Therapists/ or exp Social Workers/ or exp Counselors/ 379456
8 (healthcare or "health care" or hospital* or inpatient* or in-patient* or outpatient* or out-patient* or doctor* or physician* or clinic* or nurse* or assistant or caregiver* or patient* or personnel or staff or worker*).ti,ab. (1339941)
9 or/7-8 (1440041)
10 and/3,6,9 (19969)
11 limit 10 to english language (18576)
12 limit 11 to (childhood <birth to 12 years> or adolescence <13 to 17 years>) (3840)
13 11 and (adolescen* or child* or boy* or girl* or infant* or juvenile* or newborn* or paediatr* or pediater* or preschool or pre-school or school* or teen* or youth* or "young adult*").ti,ab. (5614)
14 or/12-13 (6420)
15 limit 14 to "0300 clinical trial" (50)
16 limit 15 to yr="2014 -Current" (36)

17 limit 14 to ("0430 followup study" or "0450 longitudinal study" or "0451 prospective study" or "0453 retrospective study") (826)
18 14 and ("controlled before-after" or cohort or cohorts or "evaluation study" or "interrupted time series" or "observational study").ti,ab. (359)
19 or/17-18 (997)
20 limit 19 to yr="2014 -Current" (372)
21 Professional Referral/ or Social Support/ or exp Social Services/ or Housing/ or Community Services/ or Social Programs/ or Human Services/ or Integrated Services/ or exp Social Casework/ (144389)
22 (advocate or advocacy or intervention* or refer* or resource* or service* or "social work" or "social workers").ti,ab. (918398)
23 or/21-22 (978969)
24 and/3,9 (40325)
25 and/23-24 (19755)
26 limit 25 to (childhood <birth to 12 years> or adolescence <13 to 17 years>) (3631)
27 25 and (adolescen* or child* or boy* or girl* or infant* or juvenile* or newborn* or paediatr* or pediater* or preschool or pre-school or school* or teen* or youth* or "young adult*").ti,ab. (6042)
28 or/26-27 (6659)
29 limit 28 to "0300 clinical trial" (54)
30 limit 29 to yr="2014 -Current" (35)
31 limit 28 to ("0430 followup study" or "0450 longitudinal study" or "0451 prospective study" or "0453 retrospective study") (607)
32 limit 31 to yr="2014 -Current" (229)

ClinicalTrials.gov link

https://clinicaltrials.gov/ct2/results?cond=&term=%22social+determinants+of+health%22&type=&rslt=&recrs=a&recrs=f&recrs=d&recrs=e&age_v=&age=0&gndr=&intr=&titles=&outc=&sp ons=&lead=&id=&cntry=&state=&city=&dist=&locn=&strd_s=&strd_e=&prcd_s=&prcd_e=&sfpd_s=&sfpd_e=&lupd_s=&lupd_e=&sort=

Appendix B. Selection Criteria Assessment

Selection Criteria	Assessment
1. Appropriateness	
1a. Does the nomination represent a health care drug, intervention, device, technology, or health care system/setting available (or soon to be available) in the U.S.?	Yes.
1b. Is the nomination a request for an evidence report?	Yes.
1c. Is the focus on effectiveness or comparative effectiveness?	Yes.
1d. Is the nomination focus supported by a logic model or biologic plausibility? Is it consistent or coherent with what is known about the topic?	Yes.
2. Importance	
2a. Represents a significant disease burden; large proportion of the population	In the U.S. in 2018, 16.2% of children under the age of 18 were living in poverty. ²
2b. Is of high public interest; affects health care decision making, outcomes, or costs for a large proportion of the US population or for a vulnerable population	Yes. An inverse relationship between number of social risk factors and global health in children has been demonstrated. ³
2c. Incorporates issues around both clinical benefits and potential clinical harms	Yes.
2d. Represents high costs due to common use, high unit costs, or high associated costs to consumers, to patients, to health care systems, or to payers	Yes. An inverse relationship between number of social risk factors and global health in children has been demonstrated. ³
3. Desirability of a New Evidence Review/Absence of Duplication	
3. A recent high-quality systematic review or other evidence review is not available on this topic	No. We identified a systematic review ¹² that covered the assessment of accuracy of screening tools for SDOH in children (Question 2). There were no other systematic reviews that addressed any of the remaining questions.
4. Impact of a New Evidence Review	
4a. Is the standard of care unclear (guidelines not available or guidelines inconsistent, indicating an information gap that may be addressed by a new evidence review)?	Yes. While the American Academy of Pediatrics recommends ongoing surveillance for risk factors related to SDOH, ⁶ there is controversy regarding the conditions under which screening is appropriate. ^{22, 23}
4b. Is there practice variation (guideline inconsistent with current practice, indicating a potential implementation gap and not best addressed by a new evidence review)?	Yes. Controversies regarding screening for SDOH exist and screening is not consistently conducted in healthcare settings. ²²⁻²⁴

Selection Criteria	Assessment
5. Primary Research	
<p>5. Effectively utilizes existing research and knowledge by considering:</p> <ul style="list-style-type: none"> - Adequacy (type and volume) of research for conducting a systematic review - Newly available evidence (particularly for updates or new technologies) 	<p>Estimated size of a review = 3 primary studies</p> <p>We identified one completed study (Question 1) and seven in-process clinical trials (Question 1 (three trials) and Question 4 (four additional trials)).</p> <p>The one completed primary study assessed the effects on children’s global health (physical and mental health status) of an in-person community navigation meeting, followed by telephone follow-up meetings every two weeks for up to three months. Results indicated that children’s global health measured at four months, per caregiver report, was improved with the intervention.¹³</p> <p>In-process clinical trials will assess screening tools including a survey called We Care Houston,¹⁰ and a tool for screening adverse childhood experiences.¹¹ Interventions will include various supports for navigating access to resources, and outcomes will include various measures of health, including development and hospitalizations.</p>

Abbreviations: AHRQ=Agency for Healthcare Research and Quality