Identifying and Responding to Health Related Social Needs in Primary Care: Understanding the Impact and Planning for the Future

Kathleen Conroy MD MS[1,2], Snehal N. Shah MD MPH[1,2], Shannon Byler MD[1,2], Sara Cheek LICSW[3], Marissa Hauptman, MD MPH[1,2], Mariam Krikorian PhD[4], Mihail Samnaliev PhD[1,2], Eli Sprecher MD, MPP[1,2], Anuradha Vyavaharkar MSW LICSW[3], and Alyna T. Chien MD MS [1,2]

[1] Division of General Pediatrics, Boston Children's Hospital; [2] Harvard Medical School; [3] Boston Children's Hospital; [4] Harvard T.H. Chan School of Public Health

GOALS

STEP 1 Social Risk Screening

STEP 2 Subsequent System Response

STEP 3 Apply Social Complexity Tools

STEP 4 Measure System Response

STEP 5 Healthcare Utilization Impact

ACTIVITIES COMPLETED

- Established social risk screening rates
- Click the star to see our baseline screening & response rates
- Conducted qualitative interviews with patients, physicians, and social workers to understand baseline system
- Explored connection between positive social screens and response documentation
- Explored children's' 5-year health trajectory from the medical perspective
- Created interview protocol to explore children's 5-year health trajectory from the parent perspective
- Completed social work process maps for 20 different social issues across 2 primary care locations
- Examined the relationship between social worker involvement and healthcare utilization

EVALUATION

- Existing social risk screening rates are high and reliable
- About 40% children within the clinic are "positive" for ≥1 social risk and receive corresponding services
- Difficult to tell when services for social risk factors have been completed
- The medical perspective suggests that children's' 5-year health trajectory is slightly downward
- Parent perspective pilot interviews are in progress
- Social work processes more numerous and complex than previously appreciated
- Identified areas in which physicians have incorrect impression of available social work involvement
- Social work involvement is associated with increased subsequent healthcare utilization
- Click the star to learn more about the association between social work services & subsequent utilization

LESSONS LEARNED

- Parents are uncertain about purpose of social risk screening and about the response process
- Physicians and social workers are uncertain about screening and response process
- Physician-to-social work referrals tend to lack necessary or actionable information
- Learn more about provider, SW, and parent responses
- Difficult to ascertain patient health or health trajectory from multiple perspectives within budget and timeframe
- Difficult to tell when social work intervention is "done"
- "Treating" social risks may not generate expected reductions in medical spending

NEXT STEPS / SUSTAINABILITY

- Click the star to see our new screening tool
- Revised screening tool to (1) provide more information about how it will be used and(2) enhance domains/actionability
- Trained clinicians on how to use revised screening tool
- Plan to improve physician-social work communications and interactions
- Workflows may need redesigning
- Linking work to emerging Flexible Spending housing and food responses
- Trained physicians on social work and patient navigator response to set better shared expectations
- Documentation of social risk response likely needs enhancing
- Publish findings
- Identify additional funds to explore this issue further

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Health Related Social Needs Services in Primary Care and Healthcare Utilization Outcomes

Kathleen Conroy MD, MS[1,2], Mihail Samnaliev PhD[1,2], Snehal N. Shah, MD MPH[1,2], Eli Sprecher MD, MPP[1,2], Sara Cheek LISCW[1], Joanne Cox MD[1,2], Alyna T. Chien MD, MS[1,2]

[1]Division of General Pediatrics, Boston Children's Hospital; [2]Harvard Medical School

Background

- Medicaid is increasingly experimenting with value-based purchasing agreements which mandate that practices to screen for and address health related social needs (HRSN).
- Few studies have examined the effect of screening for HRSN on who ultimately receives services for these needs or the degree to which such services may be associated with future increased or decreased medical services.

Objective

In a primary care practice that screens for and has staff available for addressing HRSN, we examine:
1) which patients receive in-clinic HRSN resources; and 2) the relationship between using in-clinic HRSN resources and subsequent healthcare utilization.

Methods

Setting and Population

- Urban, academic primary care practice serving 15,000 patients, 65% insured through Medicaid, 80% of color
- The clinic launched universal HRSN screening in 2012 and has staffing available to respond to such screening (e.g., a ratio of 1:2500 social workers and 1:5000 resource specialists to patients)
- Over the 4 year study period, 45% of patients utilized in-clinic HRSN resources

Study Design

- Cross-sectional for Aim 1. Four years of data (2012-2015) for a 50% random subsample of patients with at least one primary care clinic visit in 2015 (N=7300)
- Propensity matched case-comparison for Aim 2. Sample above separated into Cases (those who received in-clinic HRSN) and Comparisons (those that did not) using 1:1 propensity score matching based on age, sex, clinical condition severity and socioeconomic background (n=2944)

Data Sources & Variable definitions

- Demographic, clinical, and utilization data drawn from the electronic medical record
- Socioeconomic information was obtained through geocoding participants' addresses and linking them to information in the American Community Survey using established methods.
- To categorize medical complexity we used a 4-level system combining the Children with Disabilities Algorithm and the Pediatric Medical Complexity Algorithm.

Analysis

- We used descriptive statistics to examine overall rates of receiving HRSN services and multivariate logistic regression to examine predictors
- Poisson regression compared rates of practice-based urgent care and hospital-based emergency department (ED) and inpatient services among patients who received HRSN resources versus those who did not.

Results

Table 1. Study Population, n=7300

Predictor		Prevalence
Age (years)	0-5	37%
	6-10	29%
	11-15	23%
	16-26	11%
Gender	Female	48%
Race/Ethnicity	White	9%
	African American	44%
	Hispanic/Latino	27%
	Asian	3%
	Other	17%
Language	English	75%
	Spanish	15%
	Other	10%
Interpreter Need	Interpreter Needed	14%
Medical Complexity	Non-chronic	51%
	Non-complex chronic	20%
	Complex chronic	24%
	Disabled	5%
Insurance	Commercial	33%
	Medicaid	67%
Socioeconomic Background (Compared to state mean=0)	Low (< -10)	34%
	Medium (-10 – 0)	43%
	High (>0)	23%

Table 2. Odds of HRSN Resource Use, n=7300

Predictor	Odds Ratio	95% CL
Age	0.88	0.85-0.91
Age squared	1.01	1.00-1.01
Male (ref: Female)	1.13	1.02-1.25
Race/Ethnicity (ref: white)		
African American	1.33	1.10-1.61
Hispanic/Latino	1.29	1.05-1.59
Asian	0.69	0.50-0.99
Other	0.94	0.75-1.16
Language (ref: English)		
Spanish	1.18	0.91-1.38
Other	0.68	0.57-0.83
Interpreter needed (ref: No interpreter needed)		
Interpreter Needed	1.28	1.04-1.56
Medical complexity (ref: non-chronic)		
Non-complex chronic	2.39	2.09-2.72
Complex chronic	2.76	2.43-3.13
Disabled	9.81	7.39-13.01
Insurance (Ref: Commercial) Medicaid	2.09	1.87 – 2.33
Socioeconomic background (ref: High)		
Low socioeconomic background	1.40	1.21-1.61
Medium socioeconomic background	1.21	1.06-1.34

± Clinic has in-person, telephonic, or screen-based interpreter services at all times

Table 3. Relationship Between HRSN Resource Use and Subsequent Healthcare Utilization, n=2944

Outcome		p-value	Percentage change associated with HRSN resource use
Emergency department visits			
All visits	All patients (N=2,944)	0.0001	+24
	Pts with prior ED (n=1,570)	0.0142	+18
	Pts without prior ED (n=1,374)	0.0025	+34
Ambulatory sensitive conditions±	All patients (N=2,944)	0.677	+4
Non-ambulatory sensitive conditions±	All patients (N=2,944)	<.0001	+30
Inpatient Hospitalizations			
	All patients (N=2,944)	<.0001	+195
	Pts with prior INP (n=164)	0.4907	+294
	Pts without prior INP (n=2,780)	<.0001	+186
Urgent care			
	All patients (N=2,944)	<.0001	+29
	Pts with prior UC (n=2,587)	<.0001	+24
	Pts without prior UC (n=357)	0.0004	+50

± These findings did not differ between those with and without prior ED visits.

CONCLUSIONS:

1. Patients with more severe clinical conditions and from lower socioeconomic backgrounds were more likely to receive clinic based HRSN services, suggesting that these resources are reaching those in greater need.
2. Receipt of in-clinic HRSN services was associated with greater not lesser use of subsequent urgent, emergency, and inpatient utilization.
3. Ongoing studies are examining the relationship between HRSN resource use and patient-reported health outcomes.

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What happens after screening?
Responding to health-related social needs in two pediatric primary care practices

Snehal N. Shah MD MPH[1,2], Kathleen Conroy MD MS[1,2], Sara Cheek LICSW[3] , Anuradha Vyavaharkar MSW LICSW[3], Alexandra Epee-Bounya MD [1,2], Joanne Cox MD [1,2] and Alyna T. Chien MD MS [1,2]

[1] Division of General Pediatrics, Boston Children's Hospital; [2] Harvard Medical School; [3] Boston Children's Hospital

Significance

- Health-related social needs (HRSN) screening may provide little benefit if clinical settings cannot respond meaningfully or reliably
  - Responding to health-related social needs could support better health
  - However, screening but not responding to HRSN could cause harm including lost opportunity to connect to resources, frustration for families and staff, and disruption of relationship with primary care provider

Objectives

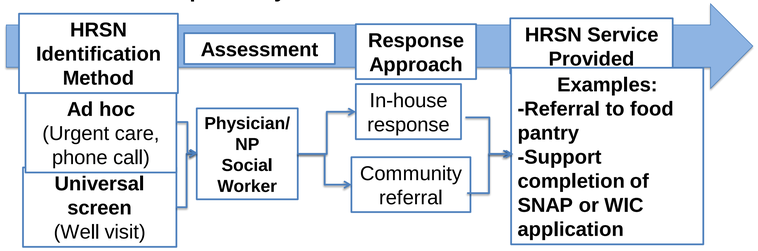
- To assess rates of HRSN screening, positive screens, and documented HRSN responses
- To understand parent, physician and social worker perspectives on the HRSN screening and response system

Methods

Setting

- Two primary care practices: one hospital-based and one community-based
  - 22,000 patients served
  - 60% are insured by Medicaid
  - 30% of patients have complex or disabling health conditions
- Universal HRSN screening has been occurring at all well child visits since 2012
- Current HRSN response system includes licensed social workers (1 SW:2500 patients), patient navigators and resource specialists (1 PN/RS: 2500 patients)

Current HRSN Response System:



Study Design: Mixed Methods

- Chart abstraction of 68 randomly selected charts, reviewed for 12 months following a well-visit and double-abstracted by ≥1 MD and ≥ 1 social worker (816 person-months)
- Reported: % Screened, % with HRSN reported, % of those without HRSN with later report of HRSN, % of those with HRSN with documented response
- Semi-structured interviews with a convenience sample of 12 parents, 12 physicians and 8 SW to assess their understanding of screening and response

Analysis: Calculated percentages and used qualitative approaches to synthesize informant sentiments.

Results

Figure 1
Screening and Response

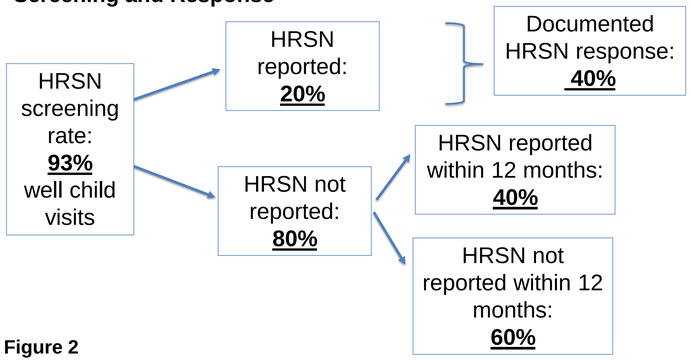


Figure 2
Parent perspective on HRSN screening (n=12)

Some parents are not sure why clinic collects HRSN information

"I do not know why you are asking these questions…why would [clinic] need this information about anyone?"

Some parents were not sure what clinic does with information

"If something is going on and [the parent] says yes [on the screening tool], then the clinic alerts the police and do a welfare check on the child."

Figure 3
Physician/NP perspective on HRSN screening and response process (n=12)

Physicians do not consistently review screener

"I do not always get the [screener] or review it. I do not seek it is out if is not present with paperwork …is not a priority and I don't always review"

Some physicians are not sure how clinic can support patients

"It is important to ask about some issues but is there anything we can really do about these issues?"

Figure 4
SW perspective on HRSN screening and response process (n=8)

Social workers are not universally aware that a screener exists

"I was not aware this tool was being used in clinic."

Social workers do not always get the information they need prior to seeing patients

"MD pages the SW and relates the message which is not always detailed, sometimes very generic: "Please speak with the family in room XX"."

Conclusions

- Screening is not the only way in which HRSN are identified
- Documentation of clinic response to HRSN is limited
- Some parents are not sure why information is collected or what is done with it
- While mechanisms to provide HRSN services are triggered by physician review of screener, some physicians/NPs do not seem to be actively engaged in this role
- Hand-offs to social workers lack the information necessary to meet identified needs

Implications

- Consider other ways to identify HRSN beyond screening
- Limited documentation of HRSN services may reflect several issues including service delivery and should be better understood
- Parent understanding of process could affect rates of reported HRSN and willingness to engage
- Role of the physician in HRSN screening and response may benefit from re-evaluation
- Social work team should have direct access to information needed to provide HRSN services

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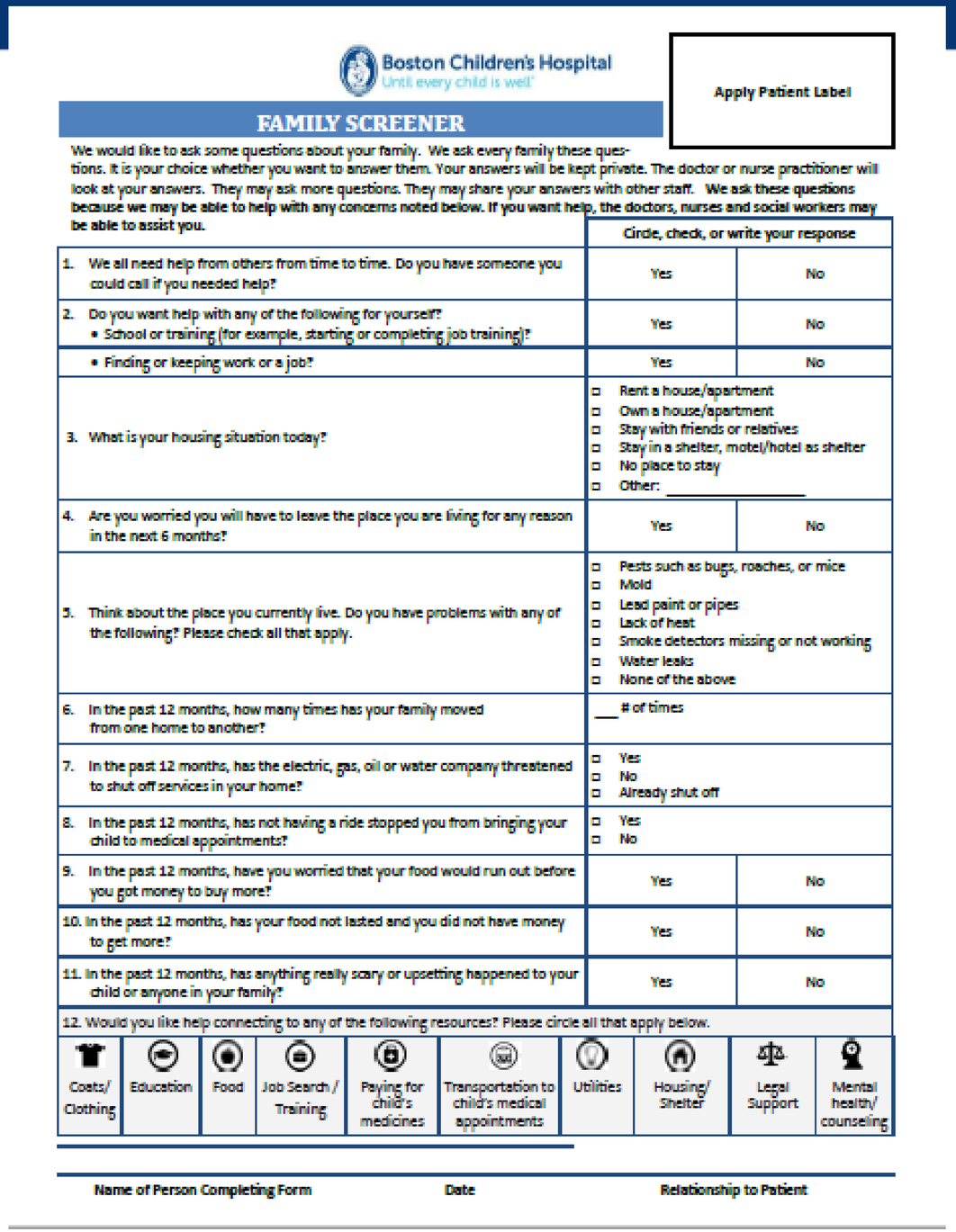
Health Related Social Needs Screener

- One screening tool shared by CHPCC, Martha Eliot, and the Adolescent Division
- The screen includes key domains:
  - Food insecurity
  - Housing insecurity
  - Transportation
  - Utilities
  - Social isolation
  - Trauma Exposure
  - Education & job training needs

Required as part of our Mass Health ACO roll-out

- The screener allows us to
  - Understand the needs of our primary care population
  - Intervene on key modifiable issues
- We are already iterating on this & have a new screener that will be released shortly



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Apply Patient Label

FAMILY SCREENER

We would like to ask some questions about your family. We ask every family these questions. It is your choice whether you want to answer them. Your answers will be kept private. The doctor or nurse practitioner will look at your answers. They may ask more questions. They may share your answers with other staff. **We ask these questions because we may be able to help with any concerns noted below. If you want help, the doctors, nurses and social workers may be able to assist you.**

	Circle, check, or write your response	
1. We all need help from others from time to time. Do you have someone you could call if you needed help?	Yes	No
2. Do you want help with any of the following for yourself? • School or training (for example, starting or completing job training)?	Yes	No
• Finding or keeping work or a job?	Yes	No
3. What is your housing situation today?	☐ Rent a house/apartment ☐ Own a house/apartment ☐ Stay with friends or relatives ☐ Stay in a shelter, motel/hotel as shelter ☐ No place to stay ☐ Other: _____	
4. Are you worried you will have to leave the place you are living for any reason in the next 6 months?	Yes	No
5. Think about the place you currently live. Do you have problems with any of the following? Please check all that apply.	☐ Pests such as bugs, roaches, or mice ☐ Mold ☐ Lead paint or pipes ☐ Lack of heat ☐ Smoke detectors missing or not working ☐ Water leaks ☐ None of the above	
6. In the past 12 months, how many times has your family moved from one home to another?	___ # of times	
7. In the past 12 months, has the electric, gas, oil or water company threatened to shut off services in your home?	☐ Yes ☐ No ☐ Already shut off	
8. In the past 12 months, has not having a ride stopped you from bringing your child to medical appointments?	☐ Yes ☐ No	
9. In the past 12 months, have you worried that your food would run out before you got money to buy more?	Yes	No
10. In the past 12 months, has your food not lasted and you did not have money to get more?	Yes	No
11. In the past 12 months, has anything really scary or upsetting happened to your child or anyone in your family?	Yes	No

12. Would you like help connecting to any of the following resources? Please circle all that apply below.

Costs/ Clothing	Education	Food	Job Search / Training	Paying for child's medicines	Transportation to child's medical appointments	Utilities	Housing/ Shelter	Legal Support	Mental health/ counseling

Name of Person Completing Form Date Relationship to Patient

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