BRIEF REPORT

Adjusting Clinical Plans Based on Social Context

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Background: **Social risk data collection is expanding in community health centers (CHCs). We explored clinicians' practices of adjusting medical care based on their awareness of patients' social risk factors—that is, changes they make to care plans to mitigate the potential impacts of social risk factors on their patients' care and health outcomes—in a set of Texas CHCs.**

Methods: **Convergent mixed methods. Surveys/interviews explored clinician perspectives on adjusting medical care based on patient social risk factors. Survey data were analyzed with descriptive statistics; interviews were analyzed using thematic analysis and inductive coding.**

Results: **Across 4 CHCs, we conducted 15 clinician interviews and collected 97 surveys. Interviews and surveys overall indicated support for adjustment activities. Two main themes emerged: 1) clinicians reported making frequent adjustments to patient care plans based on their awareness of patients' social contexts, while simultaneously expressing concerns about adjustment; and 2) awareness of patients' social risk factors, and clinician time, training, and experience all influenced clinician adjustments.**

Conclusions: **Clinicians at participating CHCs described routinely adjusting patient care plans based on their patients' social contexts. These adjustments were being made without specific guidelines or training. Standardization of adjustments may facilitate the contextualization of patient care through shared decision making to improve outcomes. (J Am Board Fam Med 2024;00:000–000.)**

Keywords: **Community Health Centers, Health Disparities, Health Equity, Outcomes Assessment, Patient-Centered Care, Shared Decision-Making, Social Determinants of Health, Social Risk Factors, Surveys and Questionnaires, Texas**

Introduction

The health care sector's dual aims of improving care equity and quality[1] have increased efforts to integrate social and medical care.[2–6] A key component of this integration involves applying information about patients' social risk factors to clinical care to mitigate the potential negative impacts of social risks on patients' care and health outcomes.[7] This is especially timely given that collection of social risk data are increasingly incentivized by both state and national health care payers and accreditation bodies through standardized screening efforts.[8–10] Sometimes referred to as "social care adjustment" in the literature, tailoring care based on information about patients' social conditions can include a wide range of clinical decisions and activities. These might include changing a patient's insulin dose based on food access to mitigate the risk of hypoglycemia or enabling walk-in visits for patients who lack reliable transportation.[7,11,12] Social care adjustments can complement efforts to connect patients with social services, though connections to social services have been the disproportionate focus of existing social care outcomes research.[13–20] Relatively little research has in parallel examined how the growing availability of social risk information may also influence clinical decision making.[21–25] This brief report explores both

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clinicians' practices and perspectives on social care adjustment in 4 Texas community health centers (CHCs).

Methods

This is an analysis of data collected to understand the barriers and facilitators to social care activities at Texas community health centers (CHCs). Data recruitment and collection methods have been reported previously.[26] This report focuses exclusively on clinician perspectives on clinical care adjustments, whereas the original study was designed to more broadly explore social care practices. All study activities were approved by the University of California, San Francisco Institutional Review Board.

Data Sources

We used a convergent/concurrent mixed methods approach that included 1) semistructured interviews and 2) surveys with clinicians. Recruitment was done through e-mail by study staff using a list of eligible participants at each study site. Clinicians included physicians, nurse practitioners (NPs), physician assistants (PAs), and dentists. We aimed to recruit a convenience sample of 4 clinicians for interviews from each site based on prior experience reaching thematic saturation.[27] Interviews were conducted by trained study staff, and took approximately 45 to 60 minutes.[26] We invited all clinicians at participating CHCs to complete a Qualtrics survey about adjustment activities.

Surveys were designed to be anonymous to increase respondent comfort responding to survey questions; we could not assess whether all interviewees completed surveys. All data collection and analyses were conducted by the study team. Interviews occurred from November 2020-July 2021; survey responses were collected from November 2020-August 2021. Analyses focused on this report occurred from April to May 2023.

Measures

Semistructured interview guides were designed to explore both perspectives and practices related to adjusting clinical care based on patient social risk information. Clinician surveys asked about individual adjustment practices. (Appendix 1 includes full text of interview guides and surveys.) Survey questions used 10-point Likert scales about frequency of making adjustments based on patients' social risks (1 = Never, 10 = Always), and the importance of different factors in influencing adjustment decision making (1 = Not important, 10 = Very important).

Data Analyses

Details about interview transcription and coding have been published elsewhere.[26] In brief, 3 study researchers developed the preliminary codebook (EHD, BA, NR), which was then applied to all transcripts by 2 researchers (EHD, BA) who met to discuss and resolve discrepancies with the broader research team as needed.[26] In this report, we focused on codes related to clinical adjustment, defined as making changes to medical care plans based on knowledge of patients' experience of social risks. Basic thematic analysis and constant comparative methods were used to analyze transcripts.[28] Survey data were analyzed using descriptive statistics. Interview and survey data were analyzed by the study team first independently and then in comparison, to complement and inform each other. Relevant survey items were identified and compared/contrasted to interview themes after interviews were coded. We followed guidelines for reporting findings from mixed methods studies,[29] as well as recommendations for data integration using joint displays.[30,31]

Results

We interviewed 15 clinicians; 97/321 eligible clinicians completed surveys (average response rate 30%; range by CHC 25 to 47%). See Table 1 for participant demographics. Additional data on study CHCs is available in a related publication.[26] Two main themes emerged across surveys and interviews: 1) clinicians reported making frequent adjustments to patient care plans based on their awareness of patients' social contexts, while simultaneously expressing concerns about adjustment; and 2) awareness of patients' social risk factors, and clinician time, training, and experience all influenced clinician adjustments. See Table 2 for thematic results joint display, including representative quotes.

Theme 1: Clinicians reported making frequent adjustments to patient care plans based on their awareness of patients' social contexts, while simultaneously expressing concerns about adjustment

All interviewees acknowledged that patients experienced multiple forms of social risks that impacted health care access and quality. Clinicians

Table 1. Demographics of Participating Clinicians at Four Texas Community Health Centers (CHCs)

	Interviews N = 15	Surveys N = 97
	n (%)	N (%)
Age		
20 to 24	0	0
25 to 34	6 (40)	29 (33)
35 to 44	7 (47)	33 (38)
45 to 75+	2 (13)	22 (25)
Sex		
Men	5 (33)	22 (25)
Women	10 (67)	61 (70)
Non-binary	0	1 (1)
Prefer not to answer	0	3 (4)
Race/ethnicity		
Non-Hispanic White	1 (7)	34 (39)
Non-Hispanic Black	4 (27)	7 (8)
Hispanic	4 (27)	15 (17)
Non-Hispanic Asian	6 (40)	16 (18)
Other/Non-Hispanic multiple races	0	9 (10)
Prefer not to answer	0	6 (7)
Years working at clinic		
<1 year	2 (13)	11 (12)
1 to <3 years	3 (20)	33 (37)
3 to <5 years	4 (27)	26 (29)
5+ years	6 (40)	26 (29)
Number of half days of direct patient care per week		
0 to 4	n/a*	32 (36)
5 to 7	n/a	28 (32)
8 to 10	n/a	28 (32)
CHC		
Site 1	5 (33)	9 (9)
Site 2	3 (20)	31 (32)
Site 3	3 (20)	45 (46)
Site 4	4 (27)	12 (12)

*n/a, not asked.

often initially struggled to conceptualize and define social care adjustments, yet universally described examples of adjustments they were routinely making, especially related to medication prescribing practices. Less consensus emerged in interviews about ways clinicians should use information about patients' social risks in clinical decisions. In clinician surveys, 25% of respondents reported always adjusting medical care based on patients' social needs; 5% noted never making adjustments. When asked about factors that influenced their decisions around making adjustments, respondents were most concerned about quality of care (mean, 7.1/10 importance), followed by concerns about patient comfort/satisfaction (mean, 6.1/10 importance) and that adjusting care was unethical (mean, 5.8/10). Few interviewees explicitly referenced including patients in shared decision making around clinical care adjustments based on social conditions, but among clinicians who voiced concerns about adjustments, shared decision making was acknowledged as a possible way to mitigate risks to quality of care. (Table 2)

Theme 2. Awareness of patients' social risk factors, and clinician time, training, and experience all influenced clinician adjustments

Surveys suggested that the most important factor that affected clinician decision making about adjustments was being aware of patients' social conditions at the point of care (mean, 8.3/10 importance), followed by clinician time, training, and experience to make adjustments (mean, 7.8/10 importance) (Table 2). In interviews, while clinicians reported confidence that their existing relationships with patients/families ensured they were familiar with their patients' social contexts, they in parallel indicated that the availability of patients' responses to social risk screening forms helped them to make clinical care adjustments. In interviews, commonly endorsed facilitators for medication adjustments (eg, strategies to decrease patients' out-of-pocket medication costs) were the availability of CHC-based pharmacies, embedded clinical pharmacists, or clinician knowledge of pharmacies with low-cost medication lists.

Discussion

Our findings from surveys and interviews with clinicians working in 4 Texas CHCs are largely consistent with other studies indicating that clinicians at CHCs are adjusting their medical care based on information about patients' social conditions.[24] Our findings suggest, however, that social care adjustments are highly clinician-dependent both in terms of how frequently and how it is done (eg, degree to which shared decision making is included). If awareness of patients' social risks increases clinicians' delivery of patient-centered care and shared decision making based on identified social risks, adjustment activities may positively impact patients' care.

Conversely, social care adjustments have the potential to perpetuate health disparities or inequitable standards of care for patient populations that

Table 2. Study Themes with Supporting Data

Theme	Representative quotes	Supporting survey data
Theme 1. Clinicians reported making frequent adjustments to patient care plans based on their awareness of patients' social contexts, though concerns about adjustment were raised		
Subtheme		
Examples of social care adjustments acknowledged in interviews focused primarily on medication prescribing[††]		*How often do you change medical plans based on social needs?*
Adjusting medication by cost	"I have to make sure that everything that I ever prescribed to them, is going to either be on the $4 list, or it's going to be very, very cheap, or have to do a separate coupon or something for them so they're able to actually fill it. I think, and then obviously, the amount of tests that I can order, or the amount of work up I can do, or if the patient needs a specialist, that's where my hands get really tied, because then I just don't know what to do, because we don't have specialists at the clinic. It gives me a heads up to what I'm walking into, and how I have to change stuff around for the patient. . ."	*1 = Never, 10 = Always:* (n = 89*) Mean 7.4/10, 95% Confidence interval (CI)[†] 6.9, 7.9
Adjusting medication by side effects/monitoring parameters	"Hypertension and diabetes is [sic] the biggest example. . . .it really does impact how I practice. In hypertension, people that aren't housed I try to give a lot of amlodipine because I don't have to monitor and dehydration usually won't affect them . . .And then with diabetes, where insulin can be stored, if someone's insulin dependent, and which types of insulin I'm giving are affected by, if they have a fridge, access to a fridge or not."	
Adjusting the pharmacy used	"if there is even a speck of anything on the [social risk] questionnaire then I know that I have to change the patient's pharmacy . . .to [a] cheaper pharmacy."	
Adjusting diagnostic work-up	"Some patients say, 'I can't. I'm not going to do it because I can't afford it,' so I do adjust for that. For example, if there's a patient that has postmenopausal bleeding, yes ideally we do have an ultrasound, but if they really cannot do the ultrasound at least I'm going to do the endometrium biopsy and go from that because they're already telling me they cannot do it."	
Adjusting follow-up care plans	"There's a couple patients like this, but people who really don't have access to transportation to get to the clinic or they're very dependent on their family for financial means, for example, even just to get medications and stuff like that, adults. So I think when I know that that's an issue, I again, try to just anticipate what they need and maybe even potentially at some visits, do a little bit more at one time, because I know that maybe they won't be able to get to the next visit"	
Concerns around providing lower quality care.	"I don't know if I would be more comfortable with changing a treatment plan . . . because I cannot offer you information on how you can save your tooth because I'm assuming that you can't afford it. . . .if I'm ready to alter my treatment plan and just only present extractions, really it's unethical because if this person can find a way to save their tooth, they should save their tooth if they want to. So I don't know about altering the treatment plan. Maybe it would be better for me when I'm discussing the treatment plan or my assistant is discussing the treatment plan to say, "These are	*There are many factors that might influence how and when providers use social information to inform clinical decision making. How important is each of the factors below? (1 = Not important; 10 = Very important):* *I am concerned that I am not giving my patients the best care:* (n = 88) Mean 7.1, 95% CI 6.5 to 7.6 *I am concerned that my patients might feel uncomfortable or as if they're not getting the best care:* (n = 88) Mean 6.1, 95% CI 5.5 to 6.7 *I am concerned that changing medical decision*

Continued

Table 2. Continued

Theme	Representative quotes	Supporting survey data
	the options. But we understand that this may not be an option for you."	*making based on social/economic needs is unethical:* (n = 85) Mean 5.8, 95% CI 5.2 to 6.4
Role of shared decision-making	"I try to include the patients as part of the medical decision-making and see what they can or cannot [do], because I don't like to just order a test and assume the patient is going to go and do it or order a treatment and assume they're going to go and buy it. I guess I just try to get feedback to see if that makes sense."	-
Theme 2. Awareness of patients' social risk factors, and clinician time, training, and experience all facilitated clinician adjustments		
Importance of social risk factor awareness, time, training or experience	"[Social risk screening] gives me a heads up to what I'm walking into, and how I have [to] change stuff around for the patient… it's not just me sending the prescription to the pharmacy electronically, the patient needs to fill it, and take it, as well."	*There are many factors that might influence how and when providers use social information to inform clinical decision making. How important is each of the factors below? (1 = Not important; 10 = Very important):* *I am aware of patients' social/economic needs at the point of care:* (n = 88) Mean 8.3, 95% CI 7.8-8.7 *I have enough time to consider social needs when making treatment plans:* (n = 87) Mean 7.8, 95% CI 7.3 to 8.3 *I have enough training or experience to change medical care based on patients' social/economic needs:* (n = 88) Mean 7.8, 95% CI 7.3 to 8.2

[*] Participants could skip any question; total number of respondents can vary by question.

[†] For each survey question, the confidence interval represents the mean response value for all survey respondents.

[††] Examples reproduced, with permission, De Marchis EH, Aceves BA, Razon N, Chang Weir R, Jester M, Gottlieb LM. Lessons from Texas: Social care activities in four community health centers. 2022. San Francisco, CA: Social Interventions Research and Evaluation Network. Available at: Available at: https://sirenetwork.ucsf.edu/tools-resources/resources/lessons-texas-social-care-activities-four-community-health-centers. (Accessed August 1, 2023).

[¶] Same question stem used.

experience marginalization, including discriminatory practices stemming from interpersonal or structural racism. Related, emerging literature that patients are not being screened for social risks at equal rates based on their preferred language, age, race, and ethnicity,[10,26,32] raises concerns that not all patients may equally benefit from adjustments, given our finding that social risk screening facilitated clinician adjustments activities. The dependence of adjustment activities on having information about patients' social risks at the point of care has implications for the implementation and documentation of patient social risk screening. Future studies should explore the patient and clinician impacts of adjustments made based on information about patients' social conditions and explore ways to standardize adjustment decision making in ways that can maximize their benefits and avoid harms. Standardized social care interventions tracking based on social risks may help us better understand and standardize adjustment activities. Shared decision making is a potential solution to avoiding harms from adjustments, but shared decision making needs to be informed by a recognition that it can also be influenced by structural racism.[33,34]

The preponderance of adjustment activities focused on medication access raised by interviewees underscores that clinical teams are eager to expand access to low-cost pharmaceuticals. This may be especially important in states like Texas that have not expanded Medicaid. Given that close to 10% of Americans report not taking prescribed medications due to cost—a percentage that is higher for those with disabilities and inadequate insurance coverage[35]—adjustments may be one avenue to assist patients and their care teams in contextualizing and improving accessibility of care.

More attention to defining a suite of impactful clinical adjustments that should be considered for patients experiencing financial strain will likely lead to more uptake. Clinical activities to mitigate the impact of social adversity on health outcomes will always need to be accompanied by more widespread structural changes that work at the community level to improve living conditions.

Limitations

First, this a study of 4 urban/suburban CHCs in Texas, which limits its generalizability both to other geographies and populations and to non-CHC health care settings. It is similarly subject to participation bias related to both CHC and individual participant decisions to participate. Survey response rates were low. Second, by design, the wording of questions about adjustment in the survey contained more explanation/examples as compared with the initial probe used in interviews. A less explicit explanation of adjustment in initial interview probing may have contributed to clinicians' challenges conceptualizing adjustment. Third, the convergent/concurrent mixed methods design precluded us from following up with interviewees about what ethical concerns they may have had about adjustment when completing the surveys. Similarly, we did not ask about shared decision making in the survey, nor explicitly ask about it in interviews, which would have expanded our understanding of clinicians' perspectives on its role in mitigating potential harms of social care adjustments. Finally, patients were not included in this study.

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Appendix.

Clinician Interview Guides and Survey Tool

Appendix 1a.

Clinician Key Informant Interview Guide

We are collecting some demographic information about interview participants. Would you be willing to share this information?

- a. What's your medical specialty?
- b. Years working at this clinic?
- c. Total years working/in practice? (since med school)
- d. How do you identify your race/ethnicity?
- e. Age?
- f. Gender?

Intro

I'm going to start by asking you some questions about your current role, your prior experiences with finding out about your patients' social risk factors, and what happened as a result.

1. What is your specific role around social risk screening and referral to resources in the clinic?
    - a. How frequently do you yourself ask patients about their social risks?

2. Can you give us an overview of your clinic's efforts to understand and address patients' social needs?
    - History of interest in/efforts to address SDH
    - Recent screening/referral efforts
        - How decisions are made? (if relevant)
        - How are things going?
        - What support has been helpful (inside or outside org, including training, financial/technical support)?

Walk-through of a patient with social risk(s): Awareness to Assistance and Adjustment

3. Think about one of your patients who has a socially complex life—maybe has food insecurity or is homeless.
How did you find out about "X" risk?

4. Did knowing about your patient's social risk impact your medical decisions around their health care?
    If yes, how did you make these changes? (how did you discuss this with patient?)
    Are there things that would be helpful to assist you with making changes to medical plans based on patients' social risks?

EHR integration

I'm going to now ask you some questions about documentation for these activities around identifying and intervening on social risks in your clinic.

5. When you find out about a patient's social risk factor—whether or not you intervene on it--do you typically document that information in the patient's medical record?

6. What are your concerns about documenting patients' social risk information in the EHR (e.g. adding social risks to problem list)?
Can you tell me about a time you had concerns about documenting, or something happened that made you concerned?

COVID19 Questions

7. What was the clinic's response to patients' increased hardship brought on by COVID-19? Do you have any examples?

8. How has this impacted your understanding of your patients risks?
How has this impacted your ability to address patients' social needs?

9. Assuming many of your clinic visits moved to being televisits, how did the clinic respond to patients who didn't have broadband or video access?

- What was the impact of trying to address social risks through telehealth?
- How has the clinic addressed digital literacy, either through technical support or the way the clinic uses technology?

Facilitators/Barriers

10. What are some things that make it easier/harder to screen and assist patients with social needs at this clinic? What are the major barriers your organization faces to social care activities?

-Institutional, financial, etc.

-Influence of past year's events - pandemic, focus on structural racism?

Assessing success and sustainability

11. Given all of your experiences, do you know how the clinic is thinking about social risk screening and resource linkage for the immediate future? Do you want to see these programs continue or let them go? What would it take? Why? What would you like to see the clinic focus on/prioritize?

- **Probe:** Will you base this decision on documented benefits?
- **Probe:** Are you measuring how often screening is happening?

Wrap up

Is there anything else you'd like to share with me?
What questions do you have for us?
Thank you for being willing to talk with me about these topics. It's so helpful to hear how folks on the ground are really engaging with these new initiatives around SDH.

Appendix 1b.

Clinician Survey Questions Relevant to Adjustment

1. We'd like to start off by asking you a few questions about your role at **[INSERT NAME OF SITE]**.

1.1 Which of the following best describes your job position?

- ○ Physician (7)
- ○ Resident (8)
- ○ Nurse Practitioner (9)
- ○ Physician Assistant (10)
- ○ Other (11) ____

1.2 What is your specialty?

- ○ Family Medicine (1)
- ○ Internal Medicine (2)
- ○ Pediatrics (3)
- ○ Obstetrics (4)
- ○ Other (5) ____

D 6.1 The following questions are only included in the clinician surveys. In this section we ask about your perceptions and practices related to **changing medical care based** on patient social/economic needs.

6.1 In an ideal world, the best medical care should be available to all patients. In reality, that is not the case. How often do you change your medical care plans (e.g. medication choices/doses/formulations, treatment goals, and specialty referrals) when patients are facing social/economic hardships? Please note, **this does not include referrals to social work or community health workers/navigators**.

○ 1 (Never) (0)

○ 2 (1)

○ 3 (2)

○ 4 (3)

○ 5 (4)

○ 6 (5)

○ 7 (6)

○ 8 (7)

○ 9 (8)

○ 10 (Always) (9)

6.3 There are many factors that might influence how and when providers use social information to inform clinical decision making. How important is each of the factors below?

	1 (Not important) (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	8 (8)	9 (9)	10 (Very important) (10)
I am aware of patients' social/economic needs at the point of care. (1)	○	○	○	○	○	○	○	○	○	○
I have enough time to consider social needs when making treatment plans. (2)	○	○	○	○	○	○	○	○	○	○
I have enough training or experience to change medical care based on patients' social/economic needs. (3)	○	○	○	○	○	○	○	○	○	○
I am concerned that my patients might feel uncomfortable or as if they're not getting the best care. (4)	○	○	○	○	○	○	○	○	○	○
I am concerned that I am not giving my patients the best care. (5)	○	○	○	○	○	○	○	○	○	○
I am concerned that changing medical decision making based on social/economic needs is unethical. (6)	○	○	○	○	○	○	○	○	○	○
Other: (7)	○	○	○	○	○	○	○	○	○	○

Almost there! The following questions help us understand the range of people responding to this survey.

6.1 How many years have you worked at your current clinic?

○ Less than 1 year (1)
○ 1 to less than 3 years (2)
○ 3 to less than 5 years (3)
○ 5 or more years (4)

6.2 In total, how many half days a week do you interact with patients who receive care at this clinic?

○ 0 (I don't interact with patients at this clinic) (22)
○ 0.5 (1)
○ 1 (2)
○ 1.5 (3)
○ 2 (4)
○ 2.5 (5)
○ 3 (6)
○ 3.5 (7)
○ 4 (8)
○ 4.5 (9)
○ 5 (10)
○ 5.5 (11)
○ 6 (12)
○ 6.5 (13)
○ 7 (14)
○ 7.5 (15)
○ 8 (16)
○ 8.5 (17)
○ 9 (18)
○ 9.5 (19)
○ 10 (20)

6.3 What is your age?

○ 18 to 24 (1)
○ 25 to 34 (2)
○ 35 to 44 (3)
○ 45 to 54 (4)
○ 55 to 64 (5)
○ 65 to 74 (6)
○ 75 or older (7)
○ Prefer not to answer (8)

6.4 How would you describe your gender?

- ○ Woman (1)
- ○ Man (2)
- ○ Transgender woman (3)
- ○ Transgender man (4)
- ○ Genderqueer (5)
- ○ Agender or Genderless (6)
- ○ Nonbinary (7)
- ○ Another gender identity (8)
- ○ Prefer not to answer (9)

6.5 How would you describe your race/ethnicity? (Mark all that apply)

- ☐ African American/Black (1)
- ☐ American Indian/Alaskan Native (2)
- ☐ Asian/Asian American (3)
- ☐ Hispanic/Latinx/Chicanx (4)
- ☐ Middle Eastern/North African (5)
- ☐ Native Hawaiian/Pacific Islander (6)
- ☐ White/European descent (7)
- ☐ Mixed race/ethnicity: (8) ____
- ☐ Another identity: (9) ____
- ☐ Prefer not to answer (10)

7.1 Please share with us any thoughts about clinical innovations or changes that your clinic has made around social/economic needs screening and/or referrals since the start of the COVID-19 pandemic.

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