Supplemental materials for:

Abramsohn E, DePumpo M, Boyd K, Brown T, Garrett MF, Kho A, Navalkha C, Paradise K, Lindau S. Implementation of community-based resource referrals for cardiovascular disease self-management. *Ann Fam Med*. 2020;18(6):485-495.

Supplemental Appendix 1. Healthy Hearts in the Heartland Practice Facilitator focus group guide

FOCUS GROUP GUIDE

WELCOME and INTRODUCTIONS (15 minutes)

Hello everyone, my name is [name] and I am the moderator for today's focus group.

This is [name] and he/she is here to take notes to ensure we accurately collect your thoughts and feedback.

As you all know, certain H3 clinical practices were randomized to deliver a resource guide, referred to as a HealtheRx, to patients with a list of community resources they could use to manage their heart health. As Practice Facilitators on the H3 project, you have a unique perspective on a number of topics including healthcare providers' and other staffs' use of the resource list to connect their patients to community resources for heart health, their experiences with connecting patients to community resources and major barriers to or facilitators of connecting patients to community resources for heart health. For this discussion, please focus on your experiences as a PF working with providers and staff at H3 clinical sites randomized to deliver the HealtheRx as their population management solution.

A few ground rules and reminders: When we ask questions of the group, everyone will have the opportunity to respond. Please feel free to be honest in your responses. As a reminder, this focus group will be audio-recorded to make sure we collect what you say correctly, but we will not start recording until after introductions and will not link your name or anything that could identify you to your responses. Your participation today will not affect your role as a PF on the H3 project in any way.

Are there any questions before we begin? Okay, let's start with introductions.

Please tell us your name and how long you have been a PF for H3.

PF 1

PF 2

PF 3…

DOMAIN I. PF ATTITUDES TOWARDS AND STRATEGIES USED TO SUPPORT HEALTHCARE PROVIDERS' EFFORTS TO MAKE COMMUNITY RESOURCE REFERRALS (10 minutes)

[TRANSITION] In this first section, we want to know how the clinical sites you work with have reacted to connecting patients to community resources, and the ways in which you have supported providers efforts to do so.

1. Describe the level of enthusiasm at clinical sites to connect patients to resources? Has this changed over time?
2. What challenges have providers or staff expressed to you when connecting patients to community-based resources? How have you responded?
3. What steps have you taken, if any, to encourage the use of the resource guide, referred to as a "HealtheRx" at your clinical sites?

DOMAIN II. PF'S INSIGHTS INTO HEALTHCARE PROVIDERS' EXPERIENCES WITH CONNECTING PATIENTS TO COMMUNITY RESOURCES (5 minutes)

[TRANSITION] Next, we want to hear from you about your insights into providers' or other staff's experiences with connecting patients to community resources

4. Would you say that the providers/staff at your clinical sites feel that access to community resources is an important part of clinical care? Did that attitude appear to change at all over the course of the HealtheRx implementation period?

DOMAIN III. PF'S INSIGHTS INTO HEALTHCARE PROVIDERS' USE OF THE RESOURCE LIST TO CONNECT PATIENTS TO COMMUNITY RESOURCES (15 minutes)

[TRANSITION] Next, we want to hear from you about your insights into providers'/staff use of the resource guide to connect patients to community resources.

5. From your standpoint, what is happening on the ground in your clinics to connect patients to community resources? Does this differ from site to site? Why?
6. In sites where there was greater buy-in, how was the resource guide being used? [PROMPT: is it being used consistently, with all relevant patients (meaning those with DM and HTN) or is it being used sporadically? Do you notice any other signs of usage?]
7. In sites where you may be getting some push-back, what are the signs of providers or other staff not using it?

DOMAIN IV. PF'S INSIGHTS INTO BARRIERS TO AND FACILITATORS OF CONNECTING PATIENTS TO COMMUNITY RESOURCES (15 minutes: 7 minutes to work in groups, 8 minutes to report out)

[TRANSITION] Lastly, we want to understand, from your point of view, the main barriers to and facilitators of connecting patients to community resources that you perceived when working with the providers and staff at your clinical sites.

[INSTRUCTIONS] Break up into teams of 2-3 with a list of the various providers/staff at each clinical site (doctor, nurse, PA, MA social worker, check in/out staff, other). Give them the following questions to answer among themselves, report to the group, and discuss:

In your small groups, discuss the questions here using the various types of providers and healthcare staff at clinical sites. We will then have each group report out and discuss.

Among clinical sites where enthusiasm around the resource guide was **high**:

8. **Who on the healthcare team, if anyone, was most enthusiastic about connecting patients to community resources to manage their heart health?** Did any one type of provider or staff emerge as a champion in using the HealtheRx to its full potential? Did this differ by site? Why?

Among clinical sites where enthusiasm around the resource guide was **low**:

9. **Who on the healthcare team, if anyone, was seen as a barrier to connecting patients to community resources to manage their heart health?**

10. Overall, **who on the healthcare team, if anyone, is best suited to deliver a resource guide like the HealtheRx** to patients in order to create the biggest health impact?

Thank you for your time. Before we end are there any other comments or feedback you have about how your clinical sites connected/referred to community resources that we may not have touched on?

Supplemental Appendix 2. Healthy Hearts in the Heartland Practice Facilitator focus group codebook

H3 PF FOCUS GROUP QUALITATIVE DATA ANALYSIS CODEBOOK

Notes:

The term “provider” is used as an abbreviation of “healthcare provider,” and may refer to physicians, nurses, physician assistants, medical assistants, and social workers.

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The term “staff” may refer check in/out staff, practice managers, translator interpreters, and other staff members not providing direct medical care at the clinical sites.

The term “PF” refers to Practice Facilitators and is used throughout.

“Referrals” is used to indicate, specifically, referrals to community resources.

CATEGORY 1: PF ATTITUDES TOWARD AND STRATEGIES USED TO SUPPORT PROVIDERS’ EFFORTS TO MAKE REFERRALS

Attitudes

- Positive attitude toward referrals
- Negative attitude toward referrals
- Disappointment that the HealtheRx wasn’t incorporated into the EHR
- Change in attitude over time

Positive attitude toward referrals: Practice facilitators provided examples or anecdotes that showed higher engagement or interest in facilitating referrals to community-based resources. For example, some providers worked with their PF to ensure local places they knew about were added to the HealtheRx and to see they could have the HealtheRx customized to include resources and information outside of the domain of the initial HealtheRx template (e.g. local fire stations offering free blood pressure screening or additional websites providing information on cardiovascular health).

Negative attitude toward referrals: PFs provided examples or anecdotes that showed lower provider engagement or interest in facilitating referrals to community-based resources. Some providers resisted integration of HealtheRx, or other community resource referrals, into their workflow and cited time constraints and/or disruption of their typical way of caring for patients.

Disappointment around HealtheRx incorporation into the EHR: PFs noted that once it became apparent that the HealtheRx wouldn’t print from the EHR providers lost interest in the HealtheRx. PFs cited added steps to the clinician workflow as a barrier to HealtheRx uptake and distribution.

Change in attitude towards HealtheRx: In some cases, providers who were resistant to a resource list to facilitate referrals became more open to this strategy over the course of working with a PF and in other cases, enthusiasm waned.

Strategies

- PF communication with provider/staff
- Leaving print outs of HealtheRx with staff
- Following up on proactive change requests

PF communication with provider/staff: PFs reported communicating with providers and staff about how to incorporate the HealtheRx into workflow.

Leaving print outs of HealtheRx with staff: PFs reported leaving print outs of the HealtheRx with the clinic staff so that they would not have the burden of printing.

Following up on proactive change requests: PFs engaged with providers by following up on changes to the resource list they wanted made, which encouraged buy-in by clinic staff to use the HealtheRx.

CATEGORY 2: PROVIDER EXPERIENCES WITH CONNECTING PATIENTS TO COMMUNITY RESOURCES

Experiences

- Providers already referring patients to community resources
- Providers and clinical staff learned about community resources
- Urban vs. rural
- Clinic staff was not overly enthusiastic about referring to community resources

Providers already referring patients to community resources: Some clinics already had protocol in place for referring people to places in the community prior to the implementation of the HealtheRx through informal knowledge or small books providers would use to refer patients to community resources

Providers and clinic staff learned about community resources: PFs reported that some providers were surprised to learn about resources in their area and it encouraged them to look for more

Urban vs. rural: PFs note that clinics had different experiences with the HealtheRx reflective of their geographic location (rural vs. urban)

Clinic staff was not overly enthusiastic about referring to community resources: Practice staff were disappointed that the HealtheRx was “just another sheet of paper” and expressed doubt or were hesitant that their patients would utilize resources. Many practices did not ask PF for more HealtheRx’s after the initial delivery of printed HealtheRxs.

CATEGORY 3: PF'S INSIGHTS INTO HEALTHCARE PROVIDERS' USE OF RESOURCE LIST TO CONNECT PATIENTS TO COMMUNITY RESOURCES

Current practices for referral

- Customization of resource list by clinic

Customization of resource list by clinic: PFs reported clinics adding/removing resources from the HealtheRxs to suit the individual needs of their clinic/patient population (example: some clinics didn't want Walgreens listed because they sold cigarettes)

HealtheRx

- Novel HealtheRx usage by clinics
- HealtheRx helpful in facilitating referrals
- HealtheRx confusing for patients or providers
- Provider worry over extraneous resources
- Consistent distribution/use
- Sporadic distribution/use
- General "politeness" by clinics showed disinterest in HealtheRx
- Optimization

Novel HealtheRx usage by clinics: Some clinics hung a copy of the HealtheRx for patients to take pictures of, others left out copies, and other clinics included it in the check-out paperwork

HealtheRx helpful in facilitating referrals: Clinics generally found the customization of the HealtheRx a useful tool when referring their patients to resources

HealtheRx confusing for patients or providers: Information displayed on the HealtheRx hard for patients to interpret (example: patients confused by who "Kelsey" was and if they should call). Providers express confusion over why they would use the HealtheRx, for whom and/or why certain resources are on it.

Provider worry over extraneous resources: Providers worried that including extraneous resources (i.e., suicide hotline #) might be anxiety inducing for patients

Consistent distribution/use: HealtheRxs were distributed at clinics consistently

Sporadic distribution/use: HealtheRxs were distributed at clinics sporadically

General "politeness" by clinic showed disinterest in HealtheRx: Clinics did not say outright that they wouldn't use it, but many would be overtly polite and non-committal when PFs showed up or when PFs asked questions about usage

Optimization: strategies or insights that would improve future iterations of the HealtheRx. PFs often expressed these organically as we did not specifically ask about this.

CATEGORY 4: PF'S INSIGHTS INTO BARRIORS TO AND FACILITATORS OF CONNECTING PATIENTS TO COMMUNITY RESOURCES

Facilitators to connecting patients to community resources

- Clinician or provider champion
- Engaged Practice Manager
- Practices with a community or population health focus
- Translator/interpreter
- Integration with EHR

Clinician or provider champion: practices that had a clinician or provider champion that constituted buy-in at a high level would facilitate use of the HealtheRx among the other staff to connect patients to community resources.

Practice manager: Many clinics noted that the practice manager was typically the person championing the HealtheRx and making sure patients received it

Practices with a community or population health focus: often described in context of larger, community based health systems, those practices that already saw community or population health as an important issue were more likely to use and embrace the concept of the HealtheRx. PFs noted that staff working in community health centers, where there was more of a focus on population health, were more accustomed to facilitating referrals to community resources than in other more rural practices.

Translator/interpreter: For clinics with a non-English speaking population, having a HealtheRx in Spanish or a translator on hand facilitated use within the clinic

Integration with EHR: Many clinics noted enthusiasm about a possible integration with EHR and that this *would be* a potential facilitator of HealtheRx use.

Barriers to connecting patients to community resources, including clinician/staff challenges

- Clinician or provider apathy
- Skepticism of resources being up-to-date
- Technology/printing
- Times spent contacting community resources
- Lack of familiarity with community resources
- Lack of community resources
- Resistance to change
- Tight workflow
- Staff turnover

Clinician or provider apathy: PFs noted that if the doctor or NP isn't interested in resource referrals or isn't enthusiastic about it, it will be harder to get the rest of the staff on board and it ultimately won't happen.

Skepticism of resources being up-to-date: PFs indicated that while some practices appreciated the level of detail about services offered at community resources, they expressed skepticism that the document could remain up-to-date with changes and turnover of resource/service availability.

Technology/printing: Time and resource cost associated with printing the HealtheRx for the clinic acted as a barrier to use

Time spent contacting community resources: Some clinics wanted to make contact with the community resources before endorsing them to send patients to which delayed use of the HealtheRx in some cases

Lack of familiarity with community resources: Some clinics were hesitant to refer patients to community resources they weren't as familiar with or had heard negative feedback on

Lack of community resources: Some clinics noted a lack of nearby resources from which to refer to

Resistance to change: Clinical staff were resistant to changes in referral workflow (example: Time spent explaining resource list to patients) which acted as a barrier to use of the HealtheRx

Tight workflow: Some PFs mentioned that clinic staff did not have time to follow up with patients about use of community resources; providers expressed doubt that patients would follow-up on referrals provided to them.

Staff turnover: Turnover of medical staff produced a barrier to consistent distribution of HealtheRxs

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