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Session: Survey Measures to Evaluate Specialty Care Coordination Within and Outside of VA

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Dr. Varsha Vimalananda: I want to first of all thank you. I’m an endocrinologist and a health [inaudible 00:04], which is about 10 miles outside of Boston. I’m also faculty in the section of endocrinology, diabetes, nutrition, and weight management in the Boston University School of Medicine. Hold on one minute. Looks like I have a, okay. Here we go. I’m actually going to start out with a poll question, so I can better understand who is in the [unintelligible 00:28] seminar, and you can select all that apply. Options are an interest in survey methodology, an interest in care coordination, an interest in tools that can be used in evaluation of the MISSION Act, an interest in HSR&D CDA work in progress, or something else. And I think Rob is going to be receiving and displaying the responses.

Rob: Yes. Thanks, Varsha. That poll is up, and over 50% of your attendees have already made their choices. I won't read the question or the answer options because you did. And we're up almost, we're above 72%, and it usually levels off around 75 or 80%, so it won't be much longer now before I can go ahead and close the poll and share the results out.

Dr. Varsha Vimalananda: Okay.

Rob: Yeah. We're at 75%, and it's holding, so I’m going to go ahead and close the poll. Oh, it just jumped up to 80. Great. And share out the results and let you know, Varsha, that 31% of your attendees answered survey methodology, 38% answered care coordination, 19% answered evaluation of the MISSION Act, 13% answered HSR&D CDA work in progress, and 0% said other. And now we're back on your slides.

Dr. Varsha Vimalananda: Okay, great. All right. Hey, that's a sign of a good survey question. Thanks, folks, for doing that. [Inaudible 01:58] series, and my talk today is going to focus specifically on surveys that were developed during the course of my Career Development Award funding. My first CDA was through VISN 1. That was a two-year award. And then through the HSR&D mechanism, and I’m in year three of that. So these are the Coordination of Specialty [inaudible 02:17] in the VA, but we intended [inaudible 02:19]. These are all measures [unintelligible 02:22] specialty care coordination within VA, for VA-paid care in the community, and also in other healthcare settings, so they're intended to be broadly applicable.

In part one, I'll spend a little time talking about context, specifically what we know already about specialty care coordination, and also the measurement framework that we’ve used to guide our work. In part two, I'll spend some time talking about how the surveys were developed and their psychometric characteristic success. And in part three, I'll show some examples of how we've just gotten started leveraging these new tools to measure coordination of specialty care, and I'll briefly describe plans to apply those in near-term work.

So let's get started with part one, which is context. Referrals to specialty care are extremely common, and the trend is towards more referrals as care becomes increasingly specialized. From 1999 to 2009, there was 159% increase in the number of ambulatory care visits that resulted in a referral in the United States, and the numbers are really big. That increase represents an absolute increase of over 60 million referrals, up to 105 million referrals per year. So this presents some issues that do threaten the quality of care. Every time a patient sees someone new for care, that patient's information is more widely split across clinicians. Therefore, every referral contributes to care [inaudible 03:59]. Fragmented care leads to adverse [inaudible 04:02], and there's an exponential increase in risk with more sources of medical care, such that sicker patients are at greater risk of adverse outcomes.

Care coordination [inaudible 04:13] definition of care coordination that was developed by McDonald et al., following a systematic review of care coordination definitions in the literature. So that is the deliberate organization of care between two or more participants, including the patient, to facilitate appropriate delivery of healthcare services and account for each other's actions. In our work on coordination, we've chosen to focus on specialty care as a model for our study, because it's a well-defined unit of healthcare delivery that includes the patient as an active participant and also spans time, so it's a nice model to study. And the other thing about this definition that we like is that it describes two or more participants, and for specialty care, who are those participants exactly.

In the VA, the responsibility for overseeing and coordinating the care of complex patients rests fairly heavily on primary care and the patient-aligned care team, but in specialty visits, the reality is that important information flows in both directions along each side of what we are calling the specialty care triad. Patient-primary care clinician, PCC-specialist, and specialist‑patient. And to optimize care coordination, each dyad within this triad has to carry out specific tests. So there are a lot of people involved in the referral process, but where the rubber meets the road for referrals, the people who are most likely to know whether coordination of clinical care is working is this triad.

Okay. I want to spend a minute to think about what all is going on among members of the triad in the case of specialty care, and here are just some examples. So PCC-patient referral [inaudible 06:11] overall care plan afterwards. PCC-specialist interaction [inaudible 06:16] communication about the patient's [unintelligible 06:18] factors, and patients needs to understand their condition, as well as what the follow-up plan is.

Okay. So what do we know about how coordination of specialty care is going outside of VA, within VA, and across healthcare systems? So, failures [inaudible 06:36] these problems are not new. Referral requests from PCCs [inaudible 06:40] on roles and responsibilities when care for a condition [inaudible 06:43] both primary care and specialty care may be making changes to medication, may be managing the blood pressure, and other aspects of cardiovascular disease risk factors. So there's often, as an endocrinologist, a lot of overlapping confusion about who is doing what in that ray. But, in addition, we have more unique features related to how our healthcare system is structured. In one study among electronic [inaudible 07:10], there's often a contentious relationship between referring and [inaudible 07:14].

Cross-system care brings new challenges. Many of the mechanisms used to coordinate VA care are absent for community care, and these include things like a single administrative system, clinical information housed within a single EHR, care from clinicians who, if they don't have strong working relationships, they at least have the possibility of knowing who each other are, and an online platform for patients to coordinate with all their clinicians.

Community care-specific mechanism [inaudible 07:46]. Earlier CHOICE program, patients, and clinicians [inaudible 07:49] improve coordination [inaudible 07:51] other specialty care. [Inaudible 07:52] triad member and that other outcome, or is it because coordination was not actually achieved by that intervention? So I need a measure of coordination that's going to speak to my conceptual framework.

My work has been guided by this care coordination measurement framework that was also developed by Katheryn McDonald and adopted by AHRQ, A-H-R-Q, which stipulates that the goal of care in a given healthcare system is to provide high-quality, high-valued healthcare that meets patients' needs and preferences. Mechanisms are the means of achieving that goal, and we'll come back to mechanisms a little bit later in my talk. Effects of those mechanisms on coordination are experienced in different ways, depending on the perspective, needs, and priorities of the stakeholder.

The original framework has [inaudible 08:46], and that ideally enables comparison [inaudible 08:50] development. In doing that, [inaudible 08:52] satisfaction. So, satisfaction is very different, because two people with very different experiences [inaudible 09:00]. So the idea here is that once we have a specialty care, processes to [inaudible 09:06] different triad member [inaudible 09:08], but coordination also relates to quality of care, and those are some additional outcomes of interests on the right side. So there's good reason to believe that the [inaudible 09:19] will differ for each triad member. [Inaudible 09:22] with cost, but the specialist is most strongly associated with clinical outcome, and coordination as experienced by patients is most strongly associated with the patient's overall experience of receiving care in a given healthcare system. So, knowing where these leverage points are helps to guide improvement efforts, but those are all empirical questions that I hope to be able to address in future work.

We move on now to survey development, and here's an overview of the steps. [Inaudible 09:54] validation. So the above [inaudible 09:57] accumulated over time, but we have started to accumulate that evidence, but I can’t say that's something that's completed. We’ve taken steps towards establishing content and construct validity, and the patient survey, as I mentioned before, is underway [unintelligible 10:16], because those are the constructs that we want to [inaudible 10:20] that were common across triad members [inaudible 10:23] context that supports all of these. Do they understand what they need to do to take care of their conditions? [Inaudible 10:30] twenty-ten [inaudible 10:34] quality assurance tools and the twenty-thirteen systematic [inaudible 10:38]. We limited to measures from patient, PCC, or specialist perspective; to those developed for adult ambulatory care; to those which were not specific to a particular condition; and that had some evidence of reliability and validity testing. We also excluded measures of coordination with non-triad members such as nurses and pharmacists. So this resulted in 15 measures from the patient perspective and 4 from the clinician perspective.

So then we went through this very high-tech process, which I have added [inaudible 11:14] subdomain [inaudible 11:15] important that we identify [inaudible 11:16] they appear in different colors. That's because we try to keep intact [inaudible 11:22] that was selected for a detailed discussion [inaudible 11:24] group. [Inaudible 11:26] wanted to make sure that the [unintelligible 11:27] is applicable. [Inaudible 11:29] for each survey. [Inaudible 11:32] use and helpfulness of different mechanisms to coordinate, and I'll show an example of that in a little bit.

[Inaudible 11:43] summarize the findings rather than getting into the analytic detail because I think the findings are more of interest to folks. So, data collection [inaudible 11:54] online, and we used survey [inaudible 11:56] question from the medical specialist.

This is a screenshot of [inaudible 12:04] coordination of outpatient among 7,900, and [inaudible 12:09] used the ethic of practice characteristics in these multivariable regression models, we found that the scales explained 67% of the variant in overall coordination. So that was good and shows that the scales do seem to measure different aspects of coordination, and also that there are some aspects of coordination that aren’t captured by the scales.

The CSC-specialist was administered online among 1,576 VA medical subspecialists with a response rate of 25%. And here, we used multi-trade analysis and confirmatory factor analysis to identify 13 items across 4 scales. Multivariable regression [inaudible 12:54].

[Inaudible 12:55] American College of Physicians to validate the [inaudible 12:58] intervention pilot study, and they were willing to work with us to fix our survey up for those purposes and its measurement in the private sector.

So we adapted the survey [inaudible 13:08] through interviews with several clinicians, some additional literature review, and we found that the greatest differences between VA and the non-VA setting were in interclinician relationships and in data transfer. So it was much less likely [inaudible 13:25] between referring primary care and consulting specialist, clinicians in the private sector, and also much less likely that data transfer went fluidly because there's a lack of a shared [inaudible 13:38].

ACP provided a survey incentive to their own member panel. [Inaudible 13:42] items distributed across four scales. [Inaudible 13:45] and you can see how the questions are very similar. [Inaudible 13:48]. And then we asked the primary care clinician [inaudible 13:51] four items, which are about coordination [inaudible 13:55].

Go on to part three now, and as I mentioned in the very beginning of this talk, we're only just starting to apply these measures to answer interesting questions about coordination, and we're also just learning a lot about how the surveys and scales perform. And again as I mentioned before, that's part of establishing validity of these measures.

So we're exploring, and we started out with [unintelligible 14:24]. We were just interested in what different targets of opportunity might be and what might be interesting to look at. So we started to think, okay, the VA has CBOCs [inaudible 14:36]. So you can see that the difference in scale scores that we expected to see did not manifest. I haven't showed any specific, I haven't showed p-values in question. [Inaudible 14:52] none or very few [inaudible 14:54]. Tukey post-hoc comparisons between each [inaudible 14:58]. And [inaudible 15:02] of shared EHR, and that scale includes data transfer, the accuracy, and whether it's in a format that can be easily [inaudible 15:10].

Results that we found made a lot of sense in these domains. Well, what if you actually know people personally? What does that interaction look like? Having a shared EHR and the referring and the consulting providers knowing each other. So we used that to investigate that question and used overall coordination as an outcome, and that score could range from 0 to 10.

So we looked at the [inaudible 15:41]. It's not about [inaudible 15:43]. So maybe this kind of phenomenon is what's at play [unintelligible 15:48] VAMCs and CBOCs.

Another interesting point is we're only at [inaudible 15:55]. Likely, it's a combination of many things. [Inaudible 15:58] illustrate how these surveys could be used.

In this next study, before we look at all the numbers, I just want to say how this was set up. So this is a study that we did about mechanisms to improve referrals to specialty care. So again we used that mechanism of data from the periphery, and instead of scales or overall coordination, we actually used individual items from the medical subspecialist survey. [Inaudible 16:25] different mechanisms were associated with [inaudible 16:28] characteristics. We looked at referral templates and service agreements, and both of these are mechanisms, for those of you on the call who may not know, both referral templates [inaudible 16:40] through collaboration between primary [inaudible 16:43] service agreements were associated with no referral [inaudible 16:46] are very focused. They structure the content and referral. They're integrated into the workflow. Service agreements are much more comprehensive, but they're generally not well‑integrated into the workflow. And in our qualitative work, we heard a lot of [inaudible 17:03] why it's important to measure coordination as experience rather than just the presence of mechanisms to coordinate. We did come across surveys in our initial review that asked about whether you have this mechanism in place or that mechanism in place, but whether or not they're actually working is another question that could be gotten at with surveys that are structured like these.

And the last example that I would like to share is [inaudible 17:33] toolkit. [Inaudible 17:35] specialty practices. They wanted to use those surveys. So after we validated those in the private sector, they did do that. So the pilot study [inaudible 17:45] steps over six months, and they administered [inaudible 17:48] primary care, the specialist surveys before and [inaudible 17:54].

So this figure shows the pre and post scale scores for primary care clinicians. And the sample sizes were pretty small here. [Unintelligible 18:03 to 18:05]. So we conducted Wilcoxon matched-pairs signed-rank tests of significance for the differences, and these differences were not statistically significant. We think at least [inaudible 18:15] saw increases in the mean scale r-values to estimate effect size, and [unintelligible 18:20], and yellow is medium. And it's very hard to demonstrate to see that they may actually be capturing some real change.

So, qualitatively, the ACP got a lot of information [inaudible 18:33] ways of getting care during the COVID pandemic. We got 300, I’m sorry, 200 back, so about 33% response rate. Data quality looks good, and we're just doing some initial psychometric analyses on that. So, that is promising. We would also like to adapt the surveys for use outside [inaudible 18:54] questions that we ask in a survey are fairly important to most specialty care, so I don't think that we're too far from that, but that's formal work that needs to be done and checked. And also, we are working on [inaudible 19:07]. And then other things that are going on with the surveys are related to evaluation of special care coordination under the MISSION Act. So we have some things from an HSR&D field-originated project [inaudible 19:23] and another [inaudible 19:26] private sector [inaudible 19:28] will be administered [inaudible 19:29] United States [inaudible 19:31] effort.

[Unintelligible 19:36]. And, like I said, we're just starting to apply the surveys, answering those kinds of questions. [Inaudible 19:43] Public Health [inaudible 19:45]. Dr. Graeme Fincke [inaudible 19:46], Amanda Solch. [Inaudible 19:49] questions. I don't know, Rob, if you read those or [inaudible 19:54].

Rob: I also have to field the questions. [Inaudible 19:56]

Dr. Varsha Vimalananda: [Inaudible 19:58] of the ACP pilot intervention. So, one of my goals eventually is to do that myself, is to develop and test and implement an intervention and then measure our outcomes with the surveys, kind of like what the ACP did, and yes, on a larger scale. So that's in the future plans, although not on the schedule quite yet. I hope that answers the question.

Rob: Thank you. We have another one. What happens now when the PCC now sends the consult to the VA specialist who is then required to manage the interaction with the private sector specialist? There is now a fourth individual in the mix.

Dr. Varsha Vimalananda: [Inaudible 20:46] tease out the different ways that that [inaudible 20:48].

Rob: [Inaudible 20:49] each survey, and then in parentheses, PCC [inaudible 20:52].

Dr. Varsha Vimalananda: I guess, I think, okay. Go ahead and read it one more time, Rob.

Rob: Certainly. The scale construction process was a little confusing. How many items were on each survey [inaudible 21:03], and then in parentheses, PCC versus specialist?

Dr. Varsha Vimalananda: Let's see. I’m going to, I hope you guys can see the slide. [Inaudible 21:10] this table will be [inaudible 21:12]. So relationship, communication [inaudible 21:14] the item assignment and CSC-specialist, that item assignment is the same in specialist 2.0. The 2.0 has two additional items in data transfer and I think three additional items in communication. I would have to go back and look exactly at the table. So really, what we ended up doing was just adding five new items, but we didn’t change anything else from the CSC-specialist when we made the private sector version. The CSC-PCC has six scales, and those are indicated with an asterisk at the bottom. Two of those scales are identical to scales in the CSC‑specialist to an interesting extent, such that you can make comparisons between those.

Rob: [Inaudible 22:06] at the time. We still have a few minutes left if anybody has questions that they were holding back and weren't sure if they wanted to ask. So we have a couple of minutes to address them if you like. But, in the meantime, Varsha, while we're waiting to see if anybody else has any questions, do you have any closing comments you'd like to make?

Dr. Varsha Vimalananda: I would just say that additional questions or [inaudible 22:34] might want to [inaudible 22:35] think about ways to do that. I’m very open to chatting with people. I’m really interested in seeing the different ways that these work in different context, so [inaudible 22:46].

Rob: Do you have your [inaudible 22:47]?

Dr. Varsha Vimalananda: [Inaudible 22:47] last name at VA dot gov.

Rob: Great. Thank you.

[ END OF AUDIO ]