

Assessing Readiness, Achievement & Impact of Stage 3 Care Coordination Criteria

Summary of Key Findings for Policymakers
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Authors:

Julia Adler-Milstein

Genna R. Cohen

Dori Cross

Paige Nong

University of Michigan

Ann Arbor, MI

Anya-Victoria Day

Danielle Vibbert

Ramya Narahariseti

Altarum Institute

Ann Arbor, MI

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I. Introduction

The Health Information Technology for Economic and Clinical Health (HITECH) Act of 2009 laid out an approach to encourage providers to adopt and use health information technology in ways that are expected to improve the quality, safety, and efficiency of care. The centerpiece of HITECH is financial incentives for providers who implement electronic health records (EHRs) and use them in accordance with federally-specified meaningful use criteria. Criteria that promote care coordination are heavily emphasized because of the potential for EHRs, coupled with electronic health information exchange (HIE), to enable patients' health information to follow them between delivery settings. Care coordination criteria focus on summary care record exchange and reconciliation of medications, medication allergies, and problems. These criteria were, however, largely deferred to later stages of meaningful use because of the unique challenges they pose: (1) providers need to learn how to use EHRs to generate key pieces of information that should follow patients between settings; (2) providers need the capability to engage in HIE; and (3) providers need to become accustomed to receiving and incorporating data from other settings. Most providers have little experience exchanging or using electronically shared clinical data, limiting our understanding of how to ensure that the national investment in health IT results in more coordinated care.

Researchers at the University of Michigan, in partnership with the Altarum Institute, were funded by the Agency for Healthcare Research and Quality to conduct a study that (1) assessed the current readiness of primary care practices to meet proposed Stage 3 meaningful use care coordination criteria, (2) identified the underlying barriers and facilitators that enable criteria achievement, and (3) evaluated the potential for criteria achievement to improve care coordination. The findings offer specific guidance to policymakers on how to refine the criteria in ways that are likely to improve care coordination. For EHR vendors, the findings point to technology barriers that impede care coordination as well as EHR innovations that would address them. For primary care providers, the findings inform the design of effective strategies to meet the criteria in ways that facilitate more coordinated care.

This report focuses on how to improve the proposed Stage 3 care coordination criteria from a policy perspective.

II. Methods

Our study focused on the proposed Stage 3 meaningful use care coordination criteria from the perspective of primary care practices. At the time the study was designed, there were three proposed criteria, which are summarized in the table below. Stage 3 meaningful use criteria are expected to be finalized in 2015.

STAGE 2	STAGE 3
<p>Summary of Care Record</p> <ul style="list-style-type: none"> - Summary of Care Record sent for >50% of transitions of care or referrals <ul style="list-style-type: none"> o >10% sent electronically <p><i>Note: A Summary of Care Record must include Patient name, Referring or transitioning provider, Procedures, Encounter diagnosis, Immunizations, Laboratory test results, Vital signs, Smoking status, Functional status, Demographic information, Care plan field, including goals and instructions, Care team, Reason for referral, Current problem list, Current medication list, Current medication allergy list.</i></p>	<ul style="list-style-type: none"> - Summary of Care Record sent for ≥65% of transitions of care or referrals <ul style="list-style-type: none"> o ≥30% sent electronically - Summary of Care Record for referrals must also include a “concise narrative in support of care transitions” (free text that captures current care synopsis and expectations for referral)
<p>Referral Acknowledgement and Report Return</p> <p>NONE</p>	<ul style="list-style-type: none"> - Eligible professional or setting to whom the patient is referred: <ul style="list-style-type: none"> o acknowledges receipt of external information AND o returns referral results generated from the EHR for 50% of referrals, with 10% returned electronically
<p>Reconciliation</p> <ul style="list-style-type: none"> - Medication (for >50% of transitions of care) <p><i>Note: Reconciliation is the process of comparing information from multiple sources to ensure records are accurate and up-to-date</i></p>	<ul style="list-style-type: none"> - Medication (for >50% of transitions of care) - Medication Allergy (for >10% of transitions) - Problems (e.g., uncontrolled diabetes) (for >10% of transitions)

Our study included a statewide survey of primary care practices, complemented by three rounds of interviews in 12 primary care practices that attempted to achieve the proposed Stage 3 care coordination criteria. The *statewide survey* captured practice demographics, readiness for Stage 2 and Stage 3 meaningful use care coordination criteria, health information exchange (HIE) participation, facilitators and barriers to meeting Stage 3 criteria, perceived impact of Stage 3 criteria and optimal approach to information sharing to support care coordination. A subset of questions was targeted specifically to PCPs. The survey was administered in late 2013 to a random sample of 328 primary care practices in Michigan that had achieved Stage 1 Meaningful Use with support from the Michigan Center for Effective IT Adoption (M-CEITA), the Michigan Regional Extension Center. We received responses from 233 practice managers (71% response rate) and 174 primary care providers (53% response rate). All reported figures were estimated using survey sampling weights based on our sampling strategy in order to

generalize results to the statewide population of primary care practices that had achieved Stage 1 meaningful use.

In the *implementation arm* of our study, 12 practices attempted to achieve the proposed Stage 3 care coordination criteria with support from an implementation specialist from M-CEITA. Practices ranged in size from 1 to 19 full-time physicians and used EHRs from nine different vendors. All practices had achieved Stage 1 meaningful use with the support of M-CEITA as of September 1, 2013, as well as participated in Michigan Health Connect (MHC), a regional health information organization in western Michigan. M-CEITA implementation specialists conducted an on-site initial assessment, identified barriers, developed a plan to achieve target criteria, and supported plan execution. We assessed the implementation experience by conducting three rounds of semi-structured interviews with key practice staff (the practice manager and at least one PCP) between October 2013 and June 2014: interviews were in person at the outset of implementation, by phone three months later, and again in person six months following initiation of implementation. The initial round of interviews focused on current state processes of supporting care coordination using EHRs. The second round of interviews focused on barriers to achieving Stage 3 care coordination measures and potential strategies to overcome them. The final round of interviews focused on progress towards achieving the criteria, suggested changes to the criteria, strategies for increasing the impact of the criteria, and EHR innovations to support criteria achievement. Interview transcripts were coded and analyzed to extract key findings.

III. Recommended Changes to Proposed Stage 3 Care Coordination Criteria

a) Sending Information during Care Transitions: Summary of Care Records (SCRs)

Recommendation Changes:

Create more flexibility on information included in SCR. Consider limiting the breadth of fields required in SCRs, particularly clinical data fields, to allow providers to send only the subset of information relevant to the specific care transition.

Clarify the definition of the concise narrative included in SCRs. Consider providing parameters to guide the free-text narrative that is included in SCRs, with a particular emphasis on what constitutes “concise” and how the narrative relates to the progress note and other components of the SCR.

Context for Recommendations

The vast majority of primary care providers in the statewide sample felt that sending the SCR and concise narrative would substantially improve care coordination (Appendix Table 3). In our statewide sample, sixty-six percent of practices were able to send an SCR during transitions of care and 45% were able to do so electronically. Forty-three percent of practices were able to include a concise narrative in the SCR (Appendix Table 4). In our implementation sample, practices identified two primary challenges to meeting the proposed Stage 3 SCR criterion in a meaningful way. First, practices perceived that their EHR produced an SCR containing extraneous information. A common workaround was to print the SCR, remove pages, and then scan the shortened document to send. Practices therefore expressed a desire to customize the information included in an SCR according to the specific needs of each care transition. Second, implementation sample practices reported that progress notes typically contain a concise narrative, but it is not clearly differentiated from the rest of the progress note and it is not clear whether this would fulfill the Stage 3 criterion. Practices were confident that they could meet this dimension of the

criterion if the relevant portion of their progress note could be parsed, but felt that generating additional (and often duplicative) text would negatively impact workflow.

b) Receiving Information during Care Transitions: Referral Report Receipt

Recommendation Changes:

Specify that eligible professionals and eligible hospitals should send SCRs to primary care providers within 1-3 days of the referral or discharge. Including in the SCR criterion a timeframe in which the SCR must be sent would substantially decrease the burden currently placed on practices to search for missing information. The recommended timeframe is based on statewide survey data in which the largest group of respondents reported an optimal window of 1 day (24 hours) for receiving information, closely followed by 3 days (or 72 hours) (Appendix Table 5).

Expand the referral acknowledgement criterion to include more granular referral tracking status. The ability of primary care practices to track scheduled/rescheduled referral appointments and whether or not they occurred would go even further in supporting care coordination and in alleviating the burden of searching for referral status.

Context for Recommendations

The vast majority of primary care providers in the statewide survey felt that receiving an SCR, from specialists following a referral and from hospitals following a discharge, would improve care coordination. A majority of PCPs also saw value in receiving acknowledgement from specialists that the referral request was received (Appendix Table 6). Implementation sample practices reported spending a significant amount of time tracking down referral status and information from specialists and hospitals. They therefore valued receiving information electronically because it arrived more quickly and was easier to integrate into their EHRs. They also felt that adding a timeframe in which the SCR is sent would increase the value of the Stage 3 criterion. As reported in the box above, data from the statewide survey suggests that 1-3 days is the optimal timeframe.

In our statewide sample, 60% of practices reported readiness to receive referral reports for at least half of their referrals, and 38% reported being able to do so electronically for 10% of referrals (Appendix Table 7). Implementation sample practices identified a difference between their readiness and actual receipt, however, as many specialists failed to send referral reports in a timely fashion. When reports were received, implementation sample practices reported numerous shortcomings of reports generated from specialists' EHRs, including lack of clarity, excessive length, and poor organization.

c) Reconciling Information during Care Transitions: Medications, Medication Allergies, and Problems

Recommendation Changes:

Proposed thresholds for reconciliation should be increased. Consider raising thresholds for both the percent of care transitions for which information (medication, medication allergy and problems) is reconciled and for the percent of care transitions for which reconciliation is performed electronically.

Clarify the level of detail required for problem list reconciliation. Consider specifying that problem list reconciliation may be performed at a less granular level than is contained in the SCR or other care

transition document (e.g., XXX or XXX.X levels vs XXX.XX level).

Clarify whether acute problems and short-term medications need to be reconciled. Clarify what types of problems and medications should be reconciled to resolve heterogeneity in current practices that impede care coordination.

Context for Recommendations

A majority of primary care providers in the statewide survey felt that performing reconciliation of medications, medication allergies, and problems after a care transition would improve care coordination (Appendix Table 8). Implementation sample practices felt that raising the thresholds could increase the value of the criterion; while they felt that a threshold of 100% would be too high, a substantial increase would ensure that reconciliation becomes a standard workflow, which would meaningfully improve care coordination. Most statewide survey practices reported that they were ready to meet the proposed Stage 3 requirements to reconcile medications for more than 50% of care transitions required in Stage 2 as well as the new Stage 3 requirements for reconciling medication allergies (86%) and problems (78%) for more than 10% of transitions (Appendix Table 9).

There were, however, several potential challenges to meeting the criterion in a meaningful way. First, although statewide survey data revealed agreement that problem lists, medications and medication allergies should be reconciled following a care transition, among other types of information (see Appendix Table 10), some implementation sample providers felt that it was unnecessary, or that they were unqualified, to reconcile ICD codes at the level of specificity provided by specialists.

Second, practices differed in whether or not they included acute problems on the problem list and short-term medications on the medication list. These decisions were partially a result of poor EHR usability, but some providers also questioned the value of investing time in reconciling short-term/acute information, such as an ankle fracture or ear infection, since it would likely have to be removed during the next encounter. There was recognition, however, that this heterogeneity in provider behavior would impact the value of meeting the criterion.

IV. Additional Resources

In this report, we suggest seven changes to improve the value of the proposed Stage 3 care coordination criteria from a policy perspective. Additional findings from our study are available in a report *to EHR vendors* that identifies technology barriers that impede care coordination as well as innovations that would address them, and in a report *to primary care practices* that focuses on strategies for practices to enhance care coordination using an EHR, and the value of meeting the stage 3 care coordination criteria.

In brief, the *vendor report* identifies key innovations, including (1) ability to generate more customized SCRs, (2) EHR features that facilitate a team-based care delivery such as task management, internal communication systems and embedded templates or guided workflows for staff, and (3) functionality to more effectively manage patient care in an information-rich environment, such as EHR tools to track communication with external settings and design features to maintain more user-friendly patient records.

The *primary care practice report* describes three specific challenges, and proposed solutions, to meeting Stage 3 care coordination criteria from the perspective of primary care practices. First, practices faced difficulty generating transition-of-care documents from the EHR, including a usable SCR. In response, practices found it useful to create processes to clearly identify required data during a care transition and remove or distinguish extraneous data. Second, practices faced difficulty tracking referral requests

throughout the referral process. In response, practices leveraged existing HIE options and developed standard processes with individual specialists where possible. Third, practices struggled to process incoming information from referrals and discharges. In response, practices established clear protocols for where referral report and discharge information is stored in the EHR, by whom and by when, and leveraged automated processes when possible.

Through action on the part of policymakers, EHR vendors, and primary care practices, our results suggest that the proposed Stage 3 meaningful use criteria have the ability to significantly improve the quality of care coordination.

V. Appendix

Additional results from statewide survey

Readiness to Meet Care Coordination Criteria

Based on statewide survey data, the majority of practices primarily rely on mail or fax to send and receive patient information across care settings. Electronic forms of information sharing were used to a lesser extent (Appendix Table 1).

Overall, 11.7% of statewide sample practices reported that they can currently meet all new proposed Stage 3 care coordination criteria. Readiness did not vary by (1) practice size, (2) whether or not the practice was part of an integrated delivery network, or (3) whether or not they participated in an HIE.

Perceived Impact of Care Coordination Criteria

Over three-quarters of primary care providers in our statewide sample strongly or somewhat agreed that meeting the proposed criteria would improve information completeness, clarity, timeliness, and responsiveness to support care coordination. There was less agreement about whether meeting the criteria would help with key clinical activities, such as assisting with diagnosis, treatment, and management of the patient’s health problem. Nonetheless, the majority of primary care providers felt that meeting the criteria would reduce duplicative utilization of diagnostic tests (78%), adverse drug events (70%), and hospital admissions and readmissions (57%) (Appendix Table 2).

Perceived Facilitators and Barriers to Meeting Care Coordination Criteria

In the statewide sample, 73% of practices felt that better options to send and receive information electronically across settings would help them meet the criteria, and 72% of practices felt that additional financial incentives would be helpful (Appendix Figure 1). Lack of provider and practice staff time was most often cited as a barrier to meeting the criteria (by 69% of practices) followed by the complexity of required workflow changes (68% of practices) (Appendix Figure 2).

Figure 1. Facilitators of Achieving Stage 3 Care Coordination Criteria (% of practices)

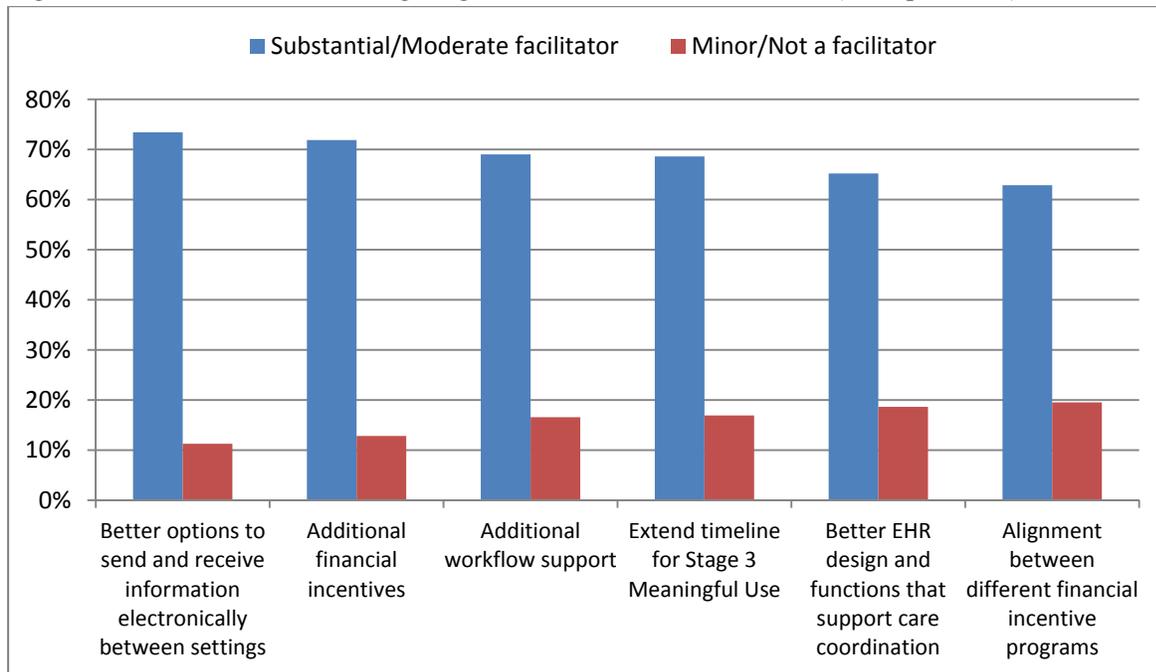


Figure 2. Barriers to Achieving Stage 3 Care Coordination Criteria (% of practices)

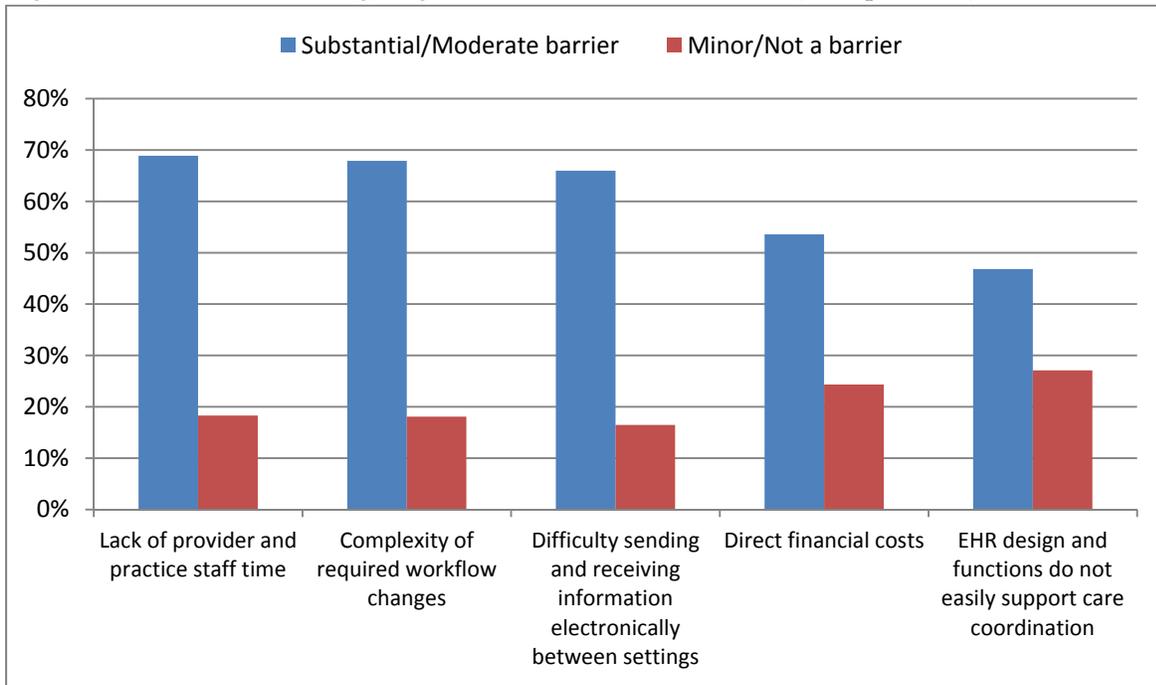


Table 1. Forms of Sharing Patient Information (% of practices)

	Mail	Fax/eFax	Shared EHR/HIT Platform	Local or regional HIE
Substantially	15%	56%	20%	8%
Moderately	29%	31%	20%	12%
Minimally	48%	8%	21%	21%
Never	3%	1%	34%	49%
Not Reported	6%	4%	6%	10%

Table 2. Perceived Impact of Stage 3 Care Coordination Criteria – Dimensions of Care Coordination(% of PCPs)

	Know about visits that my patients make to other physicians	Send the specialist notification of the patient's history and reason for the consultation when referring a patient	Talk with my patient or their family member(s) about the results of their visit(s) with a specialist
Strongly/somewhat agree	82%	82%	76%
Neither agree nor disagree	10%	10%	13%
Strongly/somewhat disagree	7%	7%	10%
	The clarity of specialist correspondence	The timeliness of specialist correspondence	The responsiveness to referral questions in specialist correspondence
Strongly/somewhat agree	78%	76%	75%
Neither agree nor disagree	11%	15%	13%
Strongly/somewhat disagree	10%	8%	11%
	Assist with diagnosis of the patient's health problem	Assist with treatment and management of the patient's health problem	Help the patient overall
Strongly/somewhat agree	43%	47%	46%
Neither agree nor disagree	37%	37%	38%
Strongly/somewhat disagree	17%	12%	12%
	A reduction in duplication of ordered labs and other diagnostic tests	A reduction in adverse drug events	A reduction in hospital admissions and readmissions*
Strongly/somewhat agree	78%	70%	57%
Neither agree nor disagree	9%	17%	23%
Strongly/somewhat disagree	12%	11%	19%

* Note: We asked separately about admissions and readmissions but the proportion of responses by category were identical.

Table 3. Perceived Impact of SCR Criterion (% of PCPs)

Impact on care coordination	Sending an SCR with key clinical information when a patient is referred to a specialist	Sending a current care synopsis and expectations when a patient is referred to a specialist
Substantially/ moderately improve	93%	89%
No Impact	4%	8%
Substantially/ moderately worsen	2%	1%

Table 4. Readiness for Stage 3 SCR Criterion (% of practices)

Can the practice currently attest to criteria?	Provide a summary of care record for at least 65% of TOCs and referrals	Include in the Summary of Care Record a concise narrative in support of referrals	Provide a summary of care record electronically for at least 30% of TOCs and referrals
Yes	66%	43%	45%
No	29%	44%	51%
Unsure	4%	14%	4%

Table 5. Optimal Timing for Receiving Information after Transitions of Care (% of PCPs)

	RECEIVED after the patient sees the specialist	RECEIVED after the patient is discharged from the hospital
Immediately (i.e., during encounter)	10%	14%
Within 24 hours of encounter	39%	56%
Within 72 hours of encounter	34%	25%
Within 1 week of patient encounter	20%	6%

Table 6. Perceived Impact of Referral Report Criterion (% of PCPs)

Impact on care coordination	Receiving an acknowledgement from the specialist that the referral was received	Receiving an SCR with key clinical information when a patient returns from a specialist or is discharged from the hospital
Substantially/ moderately improve	75%	92%
No Impact	21%	4%
Substantially/ moderately worsen	2%	2%

Table 7. Readiness for Stage 3 Referral Report Criterion (% of practices)

Can the practice currently attest to criteria?	Receive referral results for at least 50% of referrals	Receive at least 10% of referral results electronically
Yes	60%	38%
No	34%	58%
Unsure	6%	5%

Table 8. Perceived Impact of Reconciliation Criterion (% of PCPs)

Impact on care coordination	Reconciling key clinical information when a patient returns from a specialist or is discharged from the hospital
Substantially/ moderately improve	87%
No Impact	9%
Substantially/ moderately worsen	2%

Table 9. Readiness for Stage 3 Reconciliation Criterion (% of practices)

Can the practice currently attest to criteria?	Reconcile medication allergies during a relevant encounter for more than 10% of TOCs	Reconcile problems during a relevant encounter for more than 10% of TOCs
Yes	86%	78%
No	9%	17%
Unsure	5%	5%

Table 10. Critical Types of Information to Reconcile after Transitions of Care (% of PCPs)

	RECONCILE after seeing a patient post-referral or post-discharge
Problem list	72%
Assessment (e.g., notes summarizing key problems)	70%
Medication allergies	70%
Radiology reports	62%
Lab test results	66%
Known contra-indications for medications patient is taking	64%
Care plan	70%
Radiology images	33%
Social history	24%
Assessment of functional status (e.g., ability to perform ADLs)	53%