Leveraging Electronic Health Record (EHR)-Sourced Measures to Improve Care Communication and Coordination

Shortened Final Recommendations Report
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Executive Summary

As healthcare becomes increasingly complex, patients interact with different clinicians in different settings. The entire care team (i.e., clinicians, non-clinicians, patients, and caregivers) must communicate seamlessly to ensure all aspects of care are effective and aligned with patient goals. Care communication and care coordination are central to the experience of patients and caregivers, particularly as they navigate transitions in care between providers and settings. Important gaps often exist in care communication and care coordination. Patients disproportionately affected by social determinants of health (SDOH) factors (i.e., nonmedical risk factors, such as food and housing insecurity) are at increased risk of negative outcomes when these gaps occur. Care communication and care coordination should be urgently improved to enhance these outcomes and make care more equitable.1,2

The concepts of care communication and care coordination are complementary but not interchangeable. Care cannot be coordinated effectively without successful communication. Care communication is the transfer of information for patient care. Care coordination is the deliberate synchronization of activities and information to improve health outcomes to ensure patients' and families' needs and preferences for healthcare and community services are met over the course of their treatment and care.3 While these concepts are not new, their measurement and improvement represent long-standing challenges. It is difficult to attribute improvements in outcomes to a particular intervention, as that intervention may be performed differently between clinicians and across settings, or the data on whether it was performed may not be captured in a standardized way. This also makes it difficult to hold individuals or organizations accountable for specific interventions.4,5

Electronic health records (EHRs), which are now used widely throughout the United States (U.S.),6 can help overcome some of these measurement and improvement challenges. For example, patient portals enable patients to view test results and communicate with clinicians. Using EHR-sourced measures (i.e., quality measures that rely on EHR data) also has advantages over traditional measurement approaches, such as chart review or insurance claims. EHRs capture detailed information through care delivery that is available electronically in a standardized way that can support automated measure calculation and reduce the burden of chart review and abstraction, which is both time- and resource-intensive. EHRs can also be designed to collect additional data elements that may be used in future quality measures.

In this project, the National Quality Forum (NQF), with funding from the Centers for Medicare & Medicaid Services (CMS), convened a multistakeholder Committee to identify ways that EHRs can improve care communication and care coordination and advance quality measurement. During the first phase, the Committee developed an environmental scan that identified definitions for care communication and care coordination and outlined measurement challenges.7 During the second phase, the Committee developed recommendations for using EHRs to effectively facilitate, measure, and improve care communication and care coordination.

EHR-sourced measurement is critical to driving quality improvement and equitable health outcomes by enhancing care communication and care coordination. The purpose of this Recommendations Report is to provide an overview of the opportunities for using EHR data to improve the measurement of care communication and care coordination.
The Committee identified five recommendations for how EHRs can facilitate effective care communication and care coordination for patient care and quality measurement:

**RECOMMENDATION 1: Collect and Share Standardized Data**

Stakeholders, including healthcare leadership, federal partners, EHR vendors, and clinicians, should focus on advancing interoperability and data standardization. Efforts should aim to enhance EHR functionalities to optimize care communication and care coordination. EHRs should also incorporate nationally vetted SDOH data elements (e.g., from the Gravity Project and United States Core Data for Interoperability [USCDI]) to help identify health disparities to improve equity and for use in measurement.

**RECOMMENDATION 2: Optimize EHR Usability for Patients and Caregivers**

Stakeholders should ensure EHRs are easy to use and intuitive for both patients and caregivers to improve care communication and care coordination (e.g., through patient portals and other virtual communication).

**RECOMMENDATION 3: Optimize EHR Usability for Clinicians**

Stakeholders should ensure EHRs are easy to use and intuitive for clinicians to support care communication and care coordination (e.g., by improving clinical workflow and enhancing evidence-based care).

**RECOMMENDATION 4: Develop Novel EHR Data Elements to Improve Measurement**

Stakeholders should develop new, standardized EHR data elements to document and assess care communication and care coordination (e.g., through expanding patient and caregiver data entry and other data elements).

**RECOMMENDATION 5: Leverage EHR Data to Fill Measurement Gaps**

Stakeholders should use existing and novel EHR data elements to fill high-priority care communication and care coordination measurement gaps (e.g., through developing new measures or respecifying existing measures).

For these recommendations, the Committee acknowledged both the current and future states of EHR systems with respect to interoperability (i.e., the ability to share information within and between healthcare facilities and settings) and other functionalities. Ongoing national initiatives to improve and incentivize interoperability and systematic measurement are foundational to improving care communication and care coordination and provide a critical backdrop to the recommendations in this report.

Improving the measurement of care communication and care coordination should be an urgent priority for all stakeholders, and EHRs are an important vehicle to achieve this. These recommendations create the opportunity to advance the use of EHR-sourced data to improve and measure care communication and care coordination in parallel with the national work to advance interoperability and data standardization.
Background on Care Communication and Care Coordination

Over the past several decades, healthcare has become increasingly complex. New treatments, increased specialization, and advanced technology may require patients to receive care from different clinicians in different settings. Additional factors contributing to the intricacies of healthcare include a greater recognition of disparities; difficulty in assessing needed services; and more advanced, prolonged treatment regimens for chronic illnesses. Care teams, including nontraditional providers, such as care coordinators, home visitors, community health workers, and doulas, increasingly must effectively communicate with each other and with the patient and their family to coordinate care, ensuring all aspects of care are aligned with patient goals and that patients receive high quality care.

**CARE COMMUNICATION** is the transfer of information for patient care.

**CARE COORDINATION** is the deliberate synchronization of activities and information to improve health outcomes to ensure patients’ and families’ needs and preferences for healthcare and community services are met over the course of their treatment and care.

An important part of ensuring that healthcare systems and clinicians are communicating and coordinating care effectively is to assess how they are using these functions. Healthcare systems and clinicians can assess their effectiveness internally as part of their continuous quality improvement activities. External organizations can also hold them accountable by tying assessment to levers such as payment and accreditation. Measuring and improving care communication and care coordination using traditional quality measurement approaches have been a long-standing challenge. Care communication and care coordination activities are multifaceted, involving numerous steps across a wide range of clinicians, community health resources, and settings. Therefore, simply measuring whether a particular action occurred, such as patient information being transferred from the hospital to a patient’s primary care provider, may not fully capture whether care was delivered effectively. Additionally, a patient’s condition and comorbidities might have a greater effect on outcomes (e.g., whether the patient is readmitted to the hospital after discharge) than care communication and care coordination. This makes it difficult to hold healthcare systems and clinicians accountable for the full scope of outcomes that may be related to care communication and care coordination.

EHRs can help untangle some of these challenges. While originally designed to support clinical care and to bill insurance companies, well-designed EHRs can be a tool to improve care communication and care coordination. For example, when EHRs share standardized data across settings and effectively present information to both clinicians and patients, the usability of information increases for the entire care team. The availability of information shared across EHRs can potentially reduce diagnostic and treatment errors and care fragmentation, improve treatment recommendations, and enhance patient trust. EHRs can also help the care team identify social risks and assist in linking the patient and their family with services that are foundational to health and productivity, both within the healthcare setting and the community. In addition, EHRs can improve measurement and quality improvement activities by using the detailed data captured during routine clinical care. EHRs can enhance the accuracy and decrease the burden of traditional measurement approaches by:

- capturing comprehensive clinical data in structured fields as opposed to insurance claims-based measures, which use less granular data;
- extracting clinical data automatically as opposed to requiring chart reviews; and
- enabling measures to be calculated in near real time instead of months later.

Using EHRs to better measure and improve care communication and care coordination requires the following:

- EHRs that share health-related data securely and seamlessly with other EHR systems and stakeholders (i.e., EHRs that are “interoperable”)
• Industry-wide data standardization (e.g., widespread use of a data standard to ensure a measure calculated from one location is the same as a measure calculated in another). The federal government and other stakeholders are working to achieve these requirements through multiple initiatives (See below). CMS and the Office of the National Coordinator of Health Information Technology (ONC) both have rules requiring implementation of these initiatives to support the sharing of health information. The implementation of these and future efforts will ensure that standardized, interoperable data are usable for clinicians, patients, and caregivers. These efforts will also help move the field towards the use of digital quality measures (dQMs). The improved data and progress toward dQMs will facilitate the use of EHRs to improve the measurement and efficacy of care communication and care coordination efforts.

Examples of Initiatives to Advance Interoperability and Data Standardization

• United States Core Data for Interoperability (USCDI) An ONC initiative that establishes a standard set of health data classes and data elements for nationwide, interoperable health information exchange (HIE) through a new public health application programming interface (API).17

• Trusted Exchange Framework and Common Agreement (TEFCA) An ONC initiative that establishes a universal floor for interoperability nationwide by creating the infrastructure model and governing approach for users in different networks to share basic clinical information.18

• Health Level Seven International (HL7) Fast Healthcare Interoperability Resources (FHIR) An internet-based approach to transferring and sharing health information to provide seamless interoperability and patient-centered, data-driven care. It includes specifications for how one system requests and receives data.19

• Gravity Project A multistakeholder, public collaborative sponsored by HL7 with the goal to develop, test, and validate standardized SDOH data within the EHR using identified coded data elements for several social risk domains.20

EHR-sourced measurement is critical to driving quality improvement and equitable health outcomes by enhancing care communication and care coordination. In 2021-2022, NQF, with funding from CMS, convened a multistakeholder Committee to identify ways that EHRs can improve care communication and care coordination and advance quality measurement. The Committee identified five recommendations for how EHRs can facilitate effective care communication and care coordination for patient care and quality measurement:

RECOMMENDATION 1: Collect and Share Standardized Data

RECOMMENDATION 2: Optimize EHR Usability for Patients and Caregivers

RECOMMENDATION 3: Optimize EHR Usability for Clinicians

RECOMMENDATION 4: Develop Novel EHR Data Elements to Improve Measurement

RECOMMENDATION 5: Leverage EHR Data to Fill Care Measurement Gaps

This report describes the Committee's five recommendations, presenting a specific recommendation statement, rationale, and examples for how each recommendation could be implemented in practice. The audience for this report includes changemakers, policy and legislative professionals, clinicians, patient advocates, and members of the public. Additional details about these recommendations can be found in the longer, more technical Final Recommendations Report.
Ensuring EHRs Can Support Care Communication and Care Coordination

To develop practical recommendations for the current and future state of EHR development, the Committee considered the concepts of interoperability and EHR maturity to assess an EHR’s readiness to support care communication and care coordination. Interoperability is a cornerstone of effective care communication and care coordination because it supports the ability of care teams to have access to complete information at every encounter. A related concept is EHR maturity, which combines the concept of interoperability with EHR functionalities. This was modified from the ONC Interoperability Roadmap and the Healthcare Information and Management Systems Society (HIMSS) Electronic Medical Record Adoption Model (EMRAM). The Committee needed to consider both interoperability and EHR maturity because they assess different ways that EHRs can facilitate care communication and care coordination. Additionally, since different settings are at different EHR maturity levels, it allows for clear actions that can be taken to advance these concepts for all settings.

- **Interoperability** is the ability to share information easily between different systems and is essential for effective care communication and care coordination. Without interoperability, there is an increased burden on patients and their caregivers to be the communicator of their care. The movement towards fully interoperable data will facilitate the sharing of information that is essential for care communication and care coordination and should decrease the burden on patients, their caregivers, and the care team.

- **EHR maturity** is the level of functionality within the EHR to support care communication and care coordination. Specifically, it is how advanced an EHR system is in achieving the goals of interoperability; data standardization; usability; and other features, such as tools to improve care communication and care coordination. Differences in maturity are related to healthcare settings using different EHR vendors, leveraging their expertise in clinical informatics, and allocating strategies and budgets to implement and customize EHRs. EHR maturity ranges from simple (e.g., limited clinical documentation, basic communication with ancillary clinical systems) to more advanced functionalities (e.g., complete clinical document, communication with health information exchanges [HIEs] to share data) across a continuum.

To improve care communication and care coordination, stakeholders should focus on achieving more advanced levels of EHR interoperability and maturity within and across all healthcare settings. This is important because greater interoperability and higher levels of maturity allow for more advanced and effective tools for care communication and care coordination, making it easier for clinicians to deliver the best care and for patients and families to navigate the complexity of their care. It is important to note that because the phases of EHR maturity are a continuum, it is possible that different aspects of the same EHR system may be at different phases of maturity with respect to different elements of interoperability and functionality related to care communication and care coordination. Examples of the recommended EHR features are provided for each EHR maturity phase because different healthcare facilities use different kinds of EHR systems that have different baseline functionalities. This enables stakeholders to both act on the recommendations with their current EHR system and plan for future advancements.
RECOMMENDATION 1: Collect and Share Standardized Data

Stakeholders should focus on advancing interoperability and data standardization. Efforts should aim to enhance EHR functionalities to optimize care communication and care coordination. EHRs should also incorporate nationally vetted SDOH data elements (e.g., from the Gravity Project and USCDI) to help identify health disparities to improve equity and for use in measurement.

Because patients receive care across settings, patient information stored within EHRs needs to be timely, accurate, and complete to facilitate effective care. However, the accuracy and completeness of the information depend on an EHR’s interoperability and whether the data are standardized. For example, a patient’s lab value in one EHR should seamlessly map to a data field for the same lab value in other systems. Additionally, SDOH data must be standardized so that the information can be shared across systems to provide the best care. On the next page, there are example EHR features that should be in place to facilitate the collection and sharing of standardized data and are aligned with the goals of federal initiatives.
### Examples of EHR Features for Collecting and Sharing Standardizing Data by EHR Maturity Phase

<table>
<thead>
<tr>
<th>EHR Feature</th>
<th>Early EHR Maturity</th>
<th>Intermediate EHR Maturity</th>
<th>Advanced EHR Maturity</th>
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<tbody>
<tr>
<td><strong>Interoperability of Patient Information</strong></td>
<td>Data are shared locally within health systems (e.g., between hospitals and affiliated primary care offices) and with local HIEs</td>
<td>Data are shared within and across health systems (e.g., between hospitals and primary care offices that are not affiliated) and with local HIEs</td>
<td>Data are shared within and across health systems and with nontraditional settings (e.g., community-based organizations and wearable health technology, such as heart monitors). Information within local HIEs is available within EHRs.</td>
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<tr>
<td><strong>Standardization of EHR Data Fields</strong></td>
<td>Demographics (e.g., name, address, and date of birth) and diagnoses (e.g., International Classification of Diseases, 10th Revision [ICD-10] codes)</td>
<td>Additional fields for laboratory results, medications, and chief complaints</td>
<td>Additional fields for interventions (e.g., complex care plans) and social risk and other factors (e.g., SDOH)</td>
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RECOMMENDATION 2:
Optimize EHR Usability for Patients and Caregivers

Stakeholders should ensure EHRs are easy to use and intuitive for both patients and caregivers to improve care communication and care coordination (e.g., through patient portals and other virtual communication).

EHRs must be usable for patients and their caregivers for them to actively participate in care communication and care coordination. Patients and caregivers have varied health literacy, which may limit their ability to understand complex medical jargon and navigate the healthcare system. EHRs can help patients and caregivers communicate with their care team, particularly if patient-facing EHR-based tools are user friendly. Stakeholders must also identify who controls patient information, enable patients or their caregivers to provide feedback on the information’s inclusion and accuracy, and foster trust that the information will be used appropriately and equitably to advance care. Stakeholders should use standardized data elements for patient-entered information, and EHRs should be accessible in a patient’s preferred language. Lastly, patient portals should be easy to use, confidential, and allow for direct connection between the patient and the care team and be accessible to at-risk populations. On the next page, there are example EHR features that should be in place to optimize the usability of EHRs for patients and caregivers for effective care communication and care coordination.
## Examples of EHR Features for Optimizing Usability for Patients and Caregivers by EHR Maturity Phase

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<th>Advanced EHR Maturity</th>
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</thead>
<tbody>
<tr>
<td>Ownership of Patient Information</td>
<td>Commonly clinicians, health systems, and/or EHR vendors are owners</td>
<td>Commonly clinicians, health systems, and/or EHR vendors are owners</td>
<td>Patient owns and controls their information and shares it with providers at their discretion</td>
</tr>
<tr>
<td>Patient-Entered Data Fields In the EHR</td>
<td>No patient-entered data capabilities</td>
<td>Intake forms to collect basic information electronically (e.g., through a patient portal or at a kiosk)</td>
<td>Clinical, SDOH, or engagement questions are entered into the EHR to monitor treatments or be used as patient-reported outcome measures; patients can upload their own information into the EHR and review information for accuracy</td>
</tr>
<tr>
<td>Languages of Patient Information</td>
<td>Limited patient information available (e.g., discharge instructions) in some non-English languages</td>
<td>More information available in a limited set of non-English languages</td>
<td>All patient-facing information is automatically presented in a patient’s preferred language</td>
</tr>
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<td>Communication Methods Between Patients and Clinicians</td>
<td>Patients and their clinicians communicate asynchronously (e.g., through secure emails via the patient portal)</td>
<td>Patients and their clinicians communicate asynchronously and synchronously (e.g., through EHR-based telemedicine visits)</td>
<td>Patients and the entire care team (including non-clinicians) can communicate securely through the EHR, both synchronously and asynchronously</td>
</tr>
<tr>
<td>Features of Patient Portals</td>
<td>Basic data (e.g., laboratory results, visit summaries) are accessible</td>
<td>Data can be accessed, and there is a focus on developing improved interfaces and enhancing patient engagement; considerations are made for patients with difficulties interacting with the portal</td>
<td>User experience design is implemented to present patient information and to identify care gaps; data are summarized in an understandable level of complexity to be transparent to the patient; prioritized action items are identified for patients (e.g., need for follow-up care); alerts are sent as needed to notify the patient of outstanding actions</td>
</tr>
</tbody>
</table>
RECOMMENDATION 3:
Optimize EHR Usability for Clinicians

Stakeholders should ensure EHRs are easy to use and intuitive for clinicians to support care communication and care coordination (e.g., by improving clinical workflow and enhancing evidence-based care).

EHRs must also be usable for clinicians and non-clinicians (e.g., case managers, patient advocates and community health workers) for care communication and care coordination to occur. EHRs serve various functions in care delivery, including documenting care, ordering tests, obtaining and reviewing test results, and prescribing treatments. In addition, the care team can use EHRs to gain insight about diagnoses and patient and caregiver goals; implement best practices; and communicate with patients, caregivers, and other clinicians. EHRs should summarize data elements and care gaps for clinicians. This should be done in such a way that presents clinical data so clinicians can more easily identify plans of care, care trajectories, and gaps in care. In addition, clinicians should be able to retrieve data easily rather than needing to search through multiple documents to find information. EHR usability can be enhanced when EHR-based documentation aligns with clinical workflows for in-person and virtual telehealth care, which may also facilitate the collection of EHR data for performance measures. On the next page, there are example EHR features that should be in place to optimize the usability of EHRs for the clinician for effective care communication and care coordination.
### Examples of EHR Features for Optimizing Usability for Clinicians by EHR Maturity Phase

<table>
<thead>
<tr>
<th>EHR Feature</th>
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<th>Intermediate EHR Maturity</th>
<th>Advanced EHR Maturity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Data Organization and Summarization in the EHR</strong></td>
<td>Data are in lists in discrete sections of the EHR (e.g., problem lists, medications, other structured data, and PDF documents of signed forms); data are not summarized</td>
<td>Data are organized in sections of the EHRs, which makes it more intuitive to find; data are summarized in intuitive ways that generate clinical insight</td>
<td>User experience design is employed to ensure EHR data are intuitive to clinicians and patients, summarized, and integrated into clinical workflows</td>
</tr>
<tr>
<td><strong>Care Team Identification</strong></td>
<td>Clinical and nonclinical members (e.g., case managers, patient advocates, and community health workers) of the care team are identified only based on each record created</td>
<td>Clinical and nonclinical members of the care team are identified only based on each record created</td>
<td>EHRs identify all care team members and provide a summary of the role of the team in clinical activities and contribute to outcomes (i.e., enable attribution)</td>
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<tr>
<td><strong>EHR-Based Clinical Protocols (e.g., Best-Practice Approaches)</strong></td>
<td>Evidence-based, best-practice protocols are available without integration with EHR data</td>
<td>Standardized data are used to populate and calculate clinical risk scores</td>
<td>Compliance with evidence-based, best-practice protocols is assessed and dashboards can be used to improve quality</td>
</tr>
<tr>
<td><strong>Clinical, Social, and Rising Risk Identification</strong></td>
<td>Basic risk identification (e.g., highlighting of abnormal lab results, drug interactions)</td>
<td>Focus is on developing tools to identify clinical risks (e.g., worsening of clinical status) and social risks (e.g., SDOH factors that contribute to poorer health)</td>
<td>Useful advanced tools are available to monitor clinical risks and become part of clinical workflows</td>
</tr>
<tr>
<td><strong>Ability to Search the EHR</strong></td>
<td>Basic search filters</td>
<td>Search functions and filters available using structured fields</td>
<td>Search functions and filters available using structured and unstructured fields (e.g., able to Google the chart, which can currently be done in some EHR systems)</td>
</tr>
<tr>
<td><strong>Customized Tools Created by Clinicians</strong></td>
<td>No customization available</td>
<td>Basic customization is available</td>
<td>Customized tools can be created by clinicians who facilitate care communication and care coordination (e.g., when the patient takes a specific action)</td>
</tr>
<tr>
<td><strong>Facilitate Shared Decision Making Among Patients and Clinicians</strong></td>
<td>No tools for shared decision making</td>
<td>Basic EHR-based tools are available to guide shared decision making</td>
<td>EHR-based tools are available that use structured data for shared decision making with transparent risk assessment to clinicians and patients (e.g., narrative care plans)</td>
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RECOMMENDATION 4: Develop Novel EHR Data Elements to Improve Measurement

Stakeholders should develop new, standardized EHR data elements to document and assess care communication and care coordination (e.g., through expanding patient and caregiver data entry and other data elements).

As EHR functionalities continue to evolve and advance, resulting EHR-based data can facilitate care communication and care coordination for clinical care as well as quality measurement. While many existing quality measures use claims-based data, EHRs provide detailed clinical data. Committee discussions highlighted that both types of data are helpful and complementary. For example, claims may be more comprehensive than EHR data when measuring whether billable care events occurred or measuring costs in value-based care programs. However, EHR data may be more comprehensive in assessing the effectiveness of care communication and care coordination activities. Used together, these measures can give a clearer picture of the quality of care communication and care coordination and costs of care across settings. Stakeholders, including CMS and ONC, continue to prioritize transitioning to the use of dQMs, measures for assessing care quality, which use electronic data from EHRs and other digital data sources. A major facilitator of this transition is the USCDI standardization of data elements across EHRs, now in version 3. The transition to using EHR-based data in quality measures allows for the development of new measures that were not previously feasible and the revision of existing measures to capture additional, relevant information. EHR data can be used for continuous quality improvement and feedback and for accountability through the assessment of institutional or clinical performance by tracking care outcomes and essential processes. While EHRs provide a large list of data elements that are potentially useful for care communication and care coordination and measurement, additional data elements can be easily captured in EHRs. The Committee identified several additional EHR data elements, including data collected directly from patients, that would be beneficial for measuring effective care communication and care coordination and could serve as the basis of novel quality measures or to expand the specificity of existing measures.
### Examples of EHR Data Elements for Care Communication and Care Coordination

<table>
<thead>
<tr>
<th>EHR Data Element Category</th>
<th>Examples</th>
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</table>
| **Care Communication and Care Coordination Actions**          | • Shared decision making  
• Elements of care planning                                                  |
| **Goals of Care and the Ability to Identify Tailored Goals for the Patient** | • To be able to attend a daughter’s wedding  
• To run a marathon                                                      |
| **Details on Transitions in Care Across Settings**              | • Problems in care coordination  
• Identification of diagnostic errors  
• Clinicians or team members who are signing off of a case               |
| **Communication Between Patients and Clinicians**              | • When test findings are communicated  
• To ask questions about a treatment plan                                 |
| **Social Determinants of Health**                              | • Domains within the Gravity Project  
• Elements from USCDI, Version 2  
• Disability status  
• Culture or religion that could affect care delivery                   |
| **Patient-Entered Data**                                      | • Patient engagement (e.g., involvement in shared decision making)  
• Perceived correctness of clinical notes  
• Care processes (e.g., problems with care navigation)  
• Perceived alignment of care or patient participation in developing care plans  
• Self-management and activation  
• Equity of care  
• Trust in clinicians  
• Perspectives on specific goals of care  
• Preferences and needs for specific care (e.g., advanced directives, details related to how blood is drawn, such as with topical anesthetic or through ultrasound guidance) |
RECOMMENDATION 5: 
Leverage EHR Data to Fill Measurement Gaps

Stakeholders should use existing and novel EHR data elements to fill priority care communication and care coordination measurement gaps (e.g., through developing new measures or respecifying existing measures).

The availability of additional EHR data elements related to care communication and care coordination increases the ability to measure these functions using EHRs. Specifically, the Committee recommended attention to areas of care communication and care coordination, including care planning, shared decision making, and initiating and completing communication between involved participants (referred to as closed loop communication). Care planning is the process of clinicians working with patients and caregivers to ensure that all clinicians are aligned when it comes to important decision making, such as advanced directives for end-of-life care. The Committee highlighted the importance of including patient-specific care goals shaped by the needs of the patient within the care plan. There was also discussion about using the EHR to gather additional data from the patient, which could be used for novel quality measures, and to monitor specific clinical actions related to care communication and care coordination. In addition, measures could assess whether actions related to care logistics and navigation are effective or accurate, such as whether the patient was able to follow up after a hospitalization within a recommended time frame or whether there were errors in the medical record. Lastly, the Committee discussed how the EHR could be better leveraged for the patient to communicate with the clinical team through assessments of functional status, SDOH, and whether care communication and care coordination are effective.

The Committee identified specific, high-priority, EHR-sourced measure concepts for care communication and care coordination based on existing measures that could be respecified to be EHR-sourced and new measures that should be created. Notably, some of the measure concepts do exist today in various forms, such as measures of hospital readmissions and follow-up care. The Committee believed that additional measures could be developed in these areas using EHR data, such as other measures of follow-up care in other settings or with additional details about follow-up care that do not exist today. The Committee identified three top priorities, which were determined to have the highest impact in moving the field forward in the short term. Additional measure concepts can be found in the Final Recommendations Report.
### Priority Measurement Areas to Address Critical Care Communication and Care Coordination Measure Gaps

<table>
<thead>
<tr>
<th>Measurement Area</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>Develop an EHR-sourced measure or measures that identify the solicitation of patient-prioritized goals and reflect whether they are being achieved</strong></td>
<td>The Committee viewed this as a high priority that may be an adjunct to the care plan and is more specific to what the patient perceives as their needs. For example, a patient may set a care goal of wanting their depression to improve within a 12-month period, or alternatively, a patient may have a goal about wanting to be able to dance with their daughter at her wedding. The Committee emphasized that the intent is to assist the patient to set realistic goals with guidance from their care team. EHR functionality could be leveraged to create this patient-prioritized goal, and an EHR-sourced measure should not place additional burden on clinicians. Importantly, capturing the outcome of a patient-prioritized goal would be critical to ensure equitable and optimal health outcomes.</td>
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<tr>
<td><strong>Develop SDOH measures</strong></td>
<td>Specific topical areas could include food insecurity, housing stability, or transportation access. EHR-based SDOH measures could be designed to assess screening, interventions for patients with positive screens, and reassessing whether interventions were effective. The Committee saw this as a high priority due to the large impact of SDOH on clinical outcomes, particularly when it comes to these particular SDOH issues.</td>
</tr>
<tr>
<td><strong>Improve the specificity of existing measures related to downstream care after an index visit</strong></td>
<td>Follow-up measures could be respecified to assess critical care coordination and help identify fragmentation (e.g., SDOH, readmissions, duplicate testing, and follow-up care). The Committee viewed this as important due to limitations of existing measures and the granularity that EHR data could provide to make the measures more specific and actionable.</td>
</tr>
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</table>
Conclusion

While improving care communication and care coordination are central goals of healthcare delivery, large gaps remain in how these functions are implemented and measured. EHRs with improved data sharing and standardization represent an important solution for closing these gaps. Federal programs, such as USCDI, will continue to require new data standardization approaches and facilitate their implementation to enhance interoperability and EHR maturity across settings. The recommendations in this report are intended to complement this work by providing practical solutions for leveraging EHRs to facilitate care communication and care coordination for patient care and quality measurement. These solutions include specific ways to optimize EHR functionalities by collecting and sharing standardized data and to be more usable for patients, caregivers, and clinicians to improve care communication and care coordination. The recommendations in this report also include identification of novel EHR data elements that would be needed to improve measurement and prioritized next steps for leveraging EHR data to fill measurement gaps. To optimize EHRs for clinical use and quality measurement and to improve care communication and care coordination, stakeholders, including healthcare leadership, EHR vendors, and clinicians, should focus on achieving more advanced levels of EHR maturity within and across all healthcare settings. Stakeholders need to continue to develop incentives to encourage increased adoption of the interoperability and data standards required to measure care communication and care coordination. In addition, stakeholders need to focus on creating novel EHR-based measures, particularly pertaining to patient-prioritized goals, SDOH, and downstream care. Lastly, through the process of improving EHRs for care communication and care coordination and creating measures, it is vital for stakeholders to engage patients, families, and caregivers to amplify their voices, improve clinical outcomes, and reduce disparities in healthcare.

RESOURCES

FINAL RECOMMENDATIONS REPORT

KEY TERMS AND DEFINITIONS

PUBLIC COMMENTS AND COMMITTEE RESPONSES

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