Providing Clinical Summaries to Patients after Each Office Visit: A Technical Guide

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Executive Summary

The Centers for Medicare and Medicaid Services (CMS) include the practice of giving a clinical summary to patients after each office visit as an element of Meaningful Use of an electronic health record (EHR) Stage One.

Giving every patient a clinical summary after each office visit is one of the most challenging of all meaningful use elements because of the complexity of both the information flow and the workflows involved.

This document is a guide to help eligible professionals and their organizations gain a better grasp of how to successfully meet the criteria of giving clinical summaries to patients after each office visit. It discusses the two requirements to accomplishing these goals and assists organizations in meeting them.

1) Assuring that the information for the AVS has been entered, updated, and validated in the EHR before the end of the visit.

2) Developing process steps for assuring that each patient receives an AVS before the end of the visit.

For each of these workflows, we describe in detail the steps required to successfully meet the demands of the task.

Clinical Summary—Defined

CMS has defined the clinical summary as "an after-visit summary (AVS) that provides a patient with relevant and actionable information and instructions containing the patient name, provider's office contact information, date and location of visit, an updated medication list, updated vitals, reason(s) for visit, procedures and other instructions based on clinical discussions that took place during the office visit, any updates to a problem list, immunizations or medications administered during visit, summary of topics covered/considered during visit, time and location of next appointment/testing if scheduled, or a recommended appointment time if not scheduled, list of other appointments and tests that the patient needs to schedule with contact information, recommended patient decision aids, laboratory and other diagnostic test orders, test/laboratory results (if received before 24 hours after visit), and symptoms."

Introduction

President Obama signed the Health Information Technology for Economic and Clinical Health (HITECH) Act, enacted under the American Recovery and Reinvestment Act signed into law as of February 17, 2009. Under HITECH, the Centers for Medicare and Medicaid Services (CMS) are able to provide financial incentives to eligible healthcare professionals (EPs) and hospitals for demonstrating "meaningful use" of their electronic health record (EHR) systems.

One of the criteria for meeting meaningful use for EPs is the ability to provide clinical summaries to patients within three business days of an office visit. This measure has been one of the most difficult for providers to meet because it requires significant workflow adjustments both from the perspective of entering information into the EHR before the end of the visit, as well as developing standard process steps for staff so that each patient receives a summary prior to leaving the clinic.

The Regional Extension Centers for Health Information Technology (REC) program was created through the HITECH Act to support primary care providers with selecting, implementing, and optimizing their use of EHRs, with the ultimate goal of helping EPs reach meaningful use. There are currently 62 RECs in the United States and US territories, one of which is the Washington & Idaho Regional Extension Center (WIREC). WIREC is operated by Qualis Health, a nonprofit healthcare consulting firm based in Seattle, Washington, and works with over 3,000 primary care providers in 600 practices to reach meaningful use. The workflow guidance in this document is based on the experiences of the WIREC, with feedback from other REC partners.

The Purpose of the After-Visit Summary

The AVS has three purposes.

1) Enhances the ability of patients to remember, and, if necessary, convey to family members, the content of interactions with their care team. (Lukoshek, 2003, Kessels, 2003, Throop, 2009).

2) Supports greater patient engagement in making good choices about healthy behaviors and the self-management of chronic conditions, which is essential to improving clinical- and patient-oriented quality outcomes. (Coulter, 2012).

3) Improves the quality of information in the EHR through transparency, by giving patients and family members an opportunity to see information in their records so they can help the care team identify and correct data errors. (Markle Foundation, 2012).

The components of a best practice to accomplish these purposes are shown in Table 1 on page 5. The information for the AVS must be gathered and validated prior to the end of the visit at which time the AVS is printed, given to and reviewed with the patient, and either printed or made accessible via a web portal for the patient to access at a later time.

Table 1: Contents of an After-Visit Summary

Section	Content
1. ID	Patient name, visit date, encounter provider, PCP
2. Provider comments	1. Here's what you have 2. Here's what it means 3. Here's what you do
3. Vital signs for visit	1. BP & Pulse 2. Weight and BMI
4. Encounter diagnoses	1. Reason for visit: chief complaint 2. Diagnoses corresponding to the issues addressed 3. Diagnoses associated with incidental orders

5. Encounter orders	1. Tests ordered
	2. Treatments
	   • Medications: ordered, reordered or discontinued
	   • Other treatments
	3. Referrals

6. Results of tests available by the end of the visit	1. Laboratory tests 2. Imaging tests 3. ECGs and other ancillary tests
7. Updated medication list	1. Medications 2. Date last updated
8. Current allergy list	1. Allergies 2. Dates last reviewed
9. Problem list	1. Acute and chronic problems by ICD/SNOMED 2. Dates last reviewed with updated status
10. Chronic condition monitoring	1. List of recommended monitoring with results and dates of last 2. List of recommended monitoring activities due 3. For tobacco users, resources available for cessation
11. Health maintenance (HM)	1. Reconcile patient information on most recent HM results/dates with EHR data 2. Order and pend interventions that are due

Key Components of a System for Assuring Patient Receives an After-Visit Summary at the End of the Office Visit

The order in which the information from Table 1 appears on the AVS is not the same as the order in which it is collected during a visit. Patients must be able to look at an AVS and quickly see the most important content of the visit, specifically what was decided during the visit, in a format that helps the patient easily understand what they need to do. On the other hand, the process of registration, rooming, and seeing the provider will determine the order in which information that goes into the AVS is collected.

The information for the AVS that non-provider members of the care team collect before the provider enters the exam room is of major value to the provider and the patient in making sound clinical decisions. The key steps in assembling the information for the AVS are shown in flow diagram format in Figure 1.

Figure 1. Key components of a system for assembling the AVS

1. The Huddle: Preparing the Care Team
2. The Pre-Visit Summary: Activating the Patient
3. Rooming the Patient: Synchronizing Patient and Care Team
4. The Visit: Productive Interactions
5. Publishing the After-Visit Summary (AVS)

These 5 key workflow components represent the steps necessary for a patient to receive an AVS at the end of an office visit. They are based on the Planned Care Model developed by Wagner and associates initially to describe the elements of chronic illness care shown in Figure 2 on page 7 (Glasgow, 2001). Using this model, the purpose of integrating delivery system design, decision support, and clinical information systems with community resources including self-management support, is to facilitate productive interactions between a prepared proactive practice team and an informed activated patient as a strategy for improving outcomes.

Figure 2. The Planned Care Model

Developed by The Sandy MacColl Institute ©
® ACP-ASIM Journals and Books
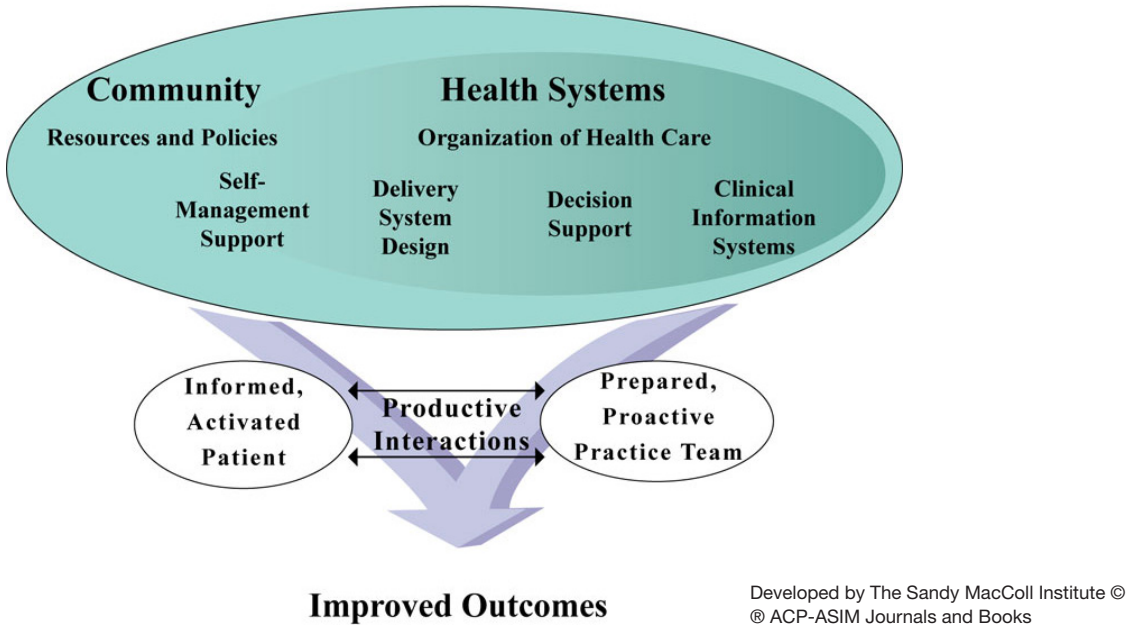
The steps presented here to produce an AVS serve to organize the visit by preparing the practice, activating the patients, and bringing both parties together for productive interactions. In most cases these steps will require planning, practice, and some degree of modification to individual clinical settings to be successful. The five steps are:

1) **The huddle** is a short meeting in which the care team, including the provider, prepare for each patient and plan their work at the start of each day.

2) The **pre-visit summary** is a short paper document the front desk clerk gives each patient upon arrival at the clinic containing key information from the medical record to review before seeing the care team.

3) While **rooming the patient,** the clinical assistant (CA)[1] gathers standard information such as vital signs, reviews the pre-visit summary with the patient to update information in the EHR, and addresses care gaps raised in the huddle, which may include entering pended orders and synchronizing goals of the patient with those of the care team.

4) During the **patient visit** the provider and the patient make clinical decisions, which the provider enters into the EHR as orders for tests, treatments and referrals. The provider enters these decisions into the EHR as orders.

5) At the end of the visit the **provider reviews the AVS** with the patient and prints a copy.

When these steps are performed reliably, giving an accurate clinical summary to the patient at the end of the visit is relatively straightforward. Omitting these information management steps makes it more difficult to assure that patients and their clinical team receive the full value from the visit and the clinical summary.

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1 For purposes of brevity, the term clinical assistant or CA has been applied to the back-office clinical personnel that most commonly work in a dyad with primary care providers. Depending on state scope of practice laws this role may also be filled by medical assistants, (MAs) licensed practical nurses (LPNs) or licensed vocational nurses (LVNs), with scopes of practice that vary from state to state. Best practice workflows can be modified to reflect scope of practice and composition of the primary care team.

The Five Steps to Developing a Successful After-Visit Summary Workflow Process

Step 1. The Huddle

Purpose:

The purpose of the huddle is to mentally prepare the clinical team, synchronize staff expectations, and assemble the information and equipment needed for the visit (Bodenheimer, 2007). The huddle is also an opportunity for team members to plan ways to effectively engage patients in gathering information that will be included in the AVS. This step of mental preparation for each patient on the day's schedule is designed to improve the team's efficiency in making clinical decisions during the limited time the patient is in the clinic.

In order to be of value, the huddle must result in actions that improve the efficiency of the clinical team for the rest of the day. Useful action items resulting from a huddle are of three types: 1) decisions to assemble information and resources prior to a patient's arrival, 2) decisions to close quality gaps in a patient's overall care, and 3) contingency planning for same-day access and other situations that may impact the care team's day (Murray, 2003).

Workflow Considerations:

The exact workflow of the huddle will depend on the team composition, how long they have been having huddles, and how innovative they have been in using the huddle to drive change. Whether the team consists of a provider and a single CA or a more complex configuration, the goal of the huddle is to rapidly review the charts of the patients on the day's schedule and make a list for each patient of missing information to retrieve prior to the visit and one or two care gaps to close while rooming the patient. Once the routine of the huddle has been established it makes sense for a designated team member in advance of the huddle to carefully "scrub" the chart of every patient making a complete list of missing information and all the care gaps that could be closed for each patient during their visit. Once this list for the day is complete, the provider joins the other team members for the huddle in which the action list for each patient is prioritized. The huddle itself should occur at the start of each day, and take no more than a total of 10 or 15 minutes.

Ideally, the EHR will have a dashboard or "snapshot" view displaying key information for each patient including demographics, PCP, reason for visit, problem list, medication and allergy lists, health maintenance actions highlighting those that are due, and the chart note from the most recent visit. It is easier to quickly assess each patient's care gaps during the huddle than after the patient arrives in the office with an agenda of their own that may take precedence. The provider and the CA should spend no more than an average of 30 seconds on each patient looking for action items that the CA will perform before the provider sees the patient. The CA should have a paper copy of the patient list for the day on which to quickly write down action item(s) resulting from the huddle.

Some tests can be predicted based on the patient's reason for visit and can be ordered during the huddle. Placing orders in the huddle can also serve as an alternative workflow if the EHR does not allow a CA to place a pended order while rooming the patient for the provider to sign during the visit. The advantage of having the test results available at the start of the visit must be weighed against the disadvantages of:
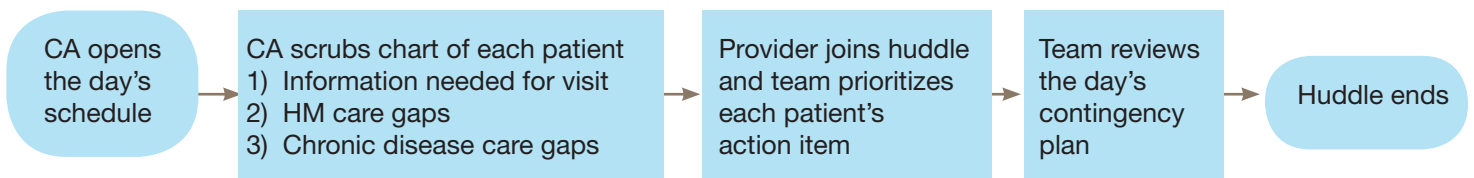
1) Assuming the information in the EHR on which the decision to place the order is based is correct (which may not the case),

2) The risk of having to send the patient back to the laboratory for a second blood draw for tests that could not be predicted at the time of the huddle, and

3) The fact that the patient has no opportunity to participate in clinical decisions made in the huddle.

Figure 3 illustrates the huddle workflow of a high-performance care team.

Getting Started — Tips for Success:

- The key to getting started is to keep the focus fairly specific and not do too much. It is important to set a limit on the length of a huddle. A huddle lasting longer than 10-15 minutes may not be sustainable for a team.

- Limit the scope of the huddle to what can be reasonably accomplished. It is better to do less and stay on schedule than to try to do more and disrupt the care team's day. With time, a team will become adept at handling more clinical tasks, and the burden of overdue health maintenance issues will gradually decline.

- A good way to get started is to generate only one action item for each patient and prioritize the action items. If a critical report is missing and must be obtained prior to the visit, then that becomes the action. If no such information exists then the team should identify one health maintenance action item. If there are no overdue health maintenance issues then the team should proceed to the next patient. Chronic conditions can wait until the team has become adept at the mechanics of a huddle and carrying out a handful of simple action items. At some point these starting activities will become second nature, and the team can start to add chronic conditions.

Figure 3. The huddle

| CA opens the day's schedule | → | CA scrubs chart of each patient
1) Information needed for visit
2) HM care gaps
3) Chronic disease care gaps | → | Provider joins huddle and team prioritizes each patient's action item | → | Team reviews the day's contingency plan | → | Huddle ends |

Common Issues:

1. *Not my patient:* If a patient on a provider's schedule has a different PCP, and the PCP is in the clinic that day, it makes sense for the two providers to talk in advance of the visit to decide how the patient should be handled. If the patient's PCP is not in the clinic then the team should treat the patient as they would their own patients in terms of action items from the huddle.

2. *Not my CA:* If the provider is working with a clinical assistant other than the usual team member it is prudent for the provider to assure the assistant knows how to carry out specific action items decided in the huddle. Different teams in the same clinic may be at different stages of huddle proficiency

3. *Patients added to the schedule after the huddle:* It is usually not necessary to huddle more than once daily. The goal is to make the team's work go smoother by having a systematic approach to planning their day. More is not necessarily better, however, in the event the team is suddenly overwhelmed by unforeseen circumstances, the team should be prepared to call an ad hoc huddle to coordinate their change in plans.

The huddle is not a direct requirement for the creation of an AVS or reaching other aspects of meaningful use. However, the integration of information technology into clinical workflows requires so much sharing of clinical care with non-provider clinical team members that a huddle should be an essential part of any clinical team's strategy for meeting a number of challenging requirements for meaningful EHR use, including successfully producing a clinical summary at the end of each office visit.

Step 2. Pre-visit Summary

Purpose:

Like the huddle, a pre-visit summary is not a requirement for meaningful use of an EHR. However, the accuracy of information obtained from patients is time limited and must be updated by the clinical team if it is to be accurate enough to use in clinical decision-making and included in the clinical visit summary. The pre-visit summary is an efficient way to 1) engage and activate patients in thinking about specific details of their health information, 2) ensure accurate current information by showing the patient the EHR record of recommended health maintenance issues and have the patient identify gaps, and 3) reduce the time required to update patient charts prior to their seeing the provider (Beard 2012, Keshavjee 2008, Krist 2011).

Giving patients an opportunity to think about their medications in advance reduces the time and effort spent by the CA updating the medication list. The pre-visit summary allows patients to see information in the chart at the start of the visit and identify errors that are more easily corrected during the visit than after the AVS is printed.
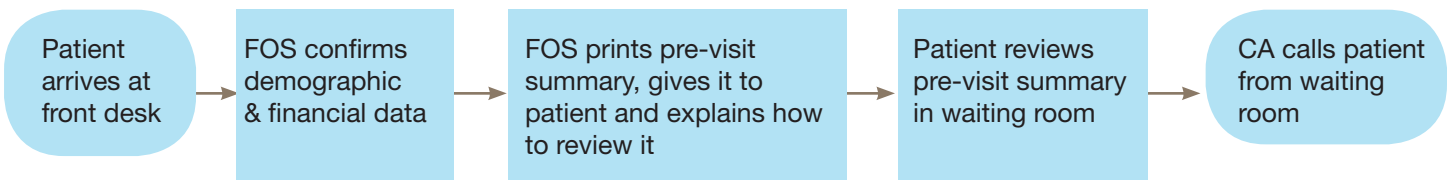
Workflow Considerations:

The information gathered for the AVS at the front desk will include patient name, visit date, location of the encounter, provider name, the patient's PCP. In addition, the front office staff will collect and/or verify race, ethnicity and language preference information, as this is also part of the meaningful use criteria.

The pre-visit summary requires the front office staff (FOS) to print a short paper report that is given to the patient upon registration at the front desk. The report is made up of print groups containing information in the EHR of greatest importance to the care team for the patient to validate. This information may include the patient's current

medications and allergies as well as health maintenance and chronic illness activities that are due. The pre-visit summary should be given to the patient with instructions to look for errors in the medication and allergy lists or health maintenance information in the chart. Patients should understand that the CA will review the pre-visit summary with them before they see the provider.

Figure 4. The pre-visit summary

| Patient arrives at front desk | → | FOS confirms demographic & financial data | → | FOS prints pre-visit summary, gives it to patient and explains how to review it | → | Patient reviews pre-visit summary in waiting room | → | CA calls patient from waiting room |

Getting Started – Tips for Success

- The pre-visit summary should be designed with sufficient patient input to assure that a person with a sixth-grade reading level will understand what the report shows and what the patient is supposed to do with it.

- A pre-visit summary with a very limited amount of information (e. g., just the current medication list) may be more useful than one with too much information that risks confusing or overwhelming patients.

- The best strategy may be to start with a single information type based on the team's need and add others as the care team and the patients in the practice become more adept at integrating the pre-visit summary into their tools for efficiency.

- Information that should be updated upon rooming the patient includes: medications, allergies, smoking status and the action items that the care team will have identified in the huddle. The clinical team will need to decide how much of this information to include in the pre-visit summary, based on competing priorities. The value of a pre-visit summary is greatest

if it is designed to address specific issues of high importance to the clinical team related to information gathering and accuracy. Types of information a care team is likely to find valuable to include in the pre-visit summary include:

1. Medication list
2. Allergy list
3. Health maintenance items
4. Tobacco use status
5. Problem list
6. Evidence-based monitoring for certain chronic illnesses

- The pre-visit summary instructions to the patient should be simple and clear, for example, "According to our records, here is a list of the medications you are taking. Let us know if the list has errors. If you have stopped taking any of these medicines, be sure to tell your care team. If you are taking medicines that are not on this list, try to remember or find out their names before you review this list with your care team."

Common Issues:

1. *Privacy and Security:* It is important to understand that by giving patient a copy of his or her health information the clinic is not a creating a HIPAA violation, nor is the clinic responsible if the patient loses that information. It is prudent nevertheless for a clinic to take steps to minimize the risk of a pre- and after visit summary being inappropriately seen.

   - It is wise to place secure containers to dispose of paper for shredding in convenient locations.
   - The pre-visit summary should contain instructions to patients explaining how to dispose of it.
   - Both front office and back office staff should be trained to look for abandoned pre-visit summaries and properly dispose of them.

2. *Front office staff and clinical information:* There is no reason that front office staff cannot see this type of clinical information. Front office staff members should undergo the same privacy and security training and comply with HIPAA regulations. Printing a pre-summary does not give front office staff direct access to the clinical record. They only can see the information printed on the pre-visit summary.

3. *Printing the pre-visit summary:* It is crucial that printing of the pre-visit summary does not create a bottleneck at the front desk. This means there cannot be a significant delay between the time the front office staff member presses the print button for the pre-visit summary and the time it actually prints. The front desk clerk should be able get the pre-visit summary from the printer without leaving his or her seat.

4. *Scripting the front office staff:* Front office staff members should be scripted so that the patient receives a clear message stating what information the patient is being given and what he or she should do with it.

Step 3. Rooming the Patient

Purpose:

The complexity of clinical practice has increased dramatically in recent years, with patients having more chronic illnesses, taking more medications, and requiring more information for providers to make informed clinical decisions. As a result, there is a current trend supported by the medical homes literature, toward healthcare staff working in more complex teams that, in addition to the provider and one or more CAs, may include a registered nurse, a dietician or a pharmacist (Coleman, 2010). Regardless of the team configuration it is essential that everyone on the team, including the member who rooms the patient and obtains basic information before the provider sees the patient be working at the top of his or her licensure.

The purpose of rooming the patient, in addition to physically ushering the patient to a private setting for the exam, is to gather as much information as possible for the visit and enter it correctly into the EHR before the provider and patient use that information to make clinical decisions. This is the point in the workflow at which the proactive practice team that has prepared for the visit in the huddle first meets the informed patient who has been activated with the pre-visit summary. The scope of information that needs to be gathered for the provider-patient interaction to be productive will vary according to the patient's needs. Some of that information is standardized and conforms to meaningful use elements including:

- vital signs
- medications
- allergies
- smoking history

Other information requirements are related to closing individual gaps in health maintenance recommendations or chronic illness care and can be decided during the morning huddle as the team quickly reviews the chart of each patient on the schedule for the day.

Workflow Considerations:

While rooming the patient, the CA enters the vital signs that will be included in the AVS. The CA then reviews the pre-visit summary with the patient. The steps in this process are as follows:
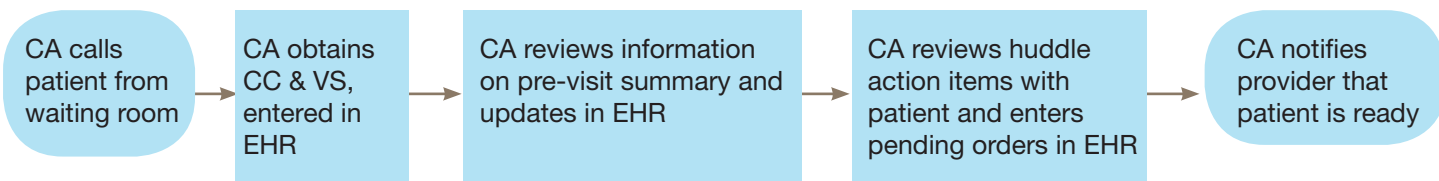
1. Obtain vital signs - weight, height, blood pressure, and pulse.

2. Check the patient's tobacco use status. For tobacco users, the CA will activate the clinic's protocol to assist in tobacco cessation.

3. Update the medication list by discontinuing any medications on the list that the patient is no longer taking and adding as historical meds any medications the patient is taking that are not included in the medication list. (Note: This is a process that should be discussed at the clinic, and may require its own workflow analysis, as providers may vary in comfort level with having their CA update the medication list. *See See Medication List Workflow on page 15*).

4. Review and update the allergy list.

5. Review the health maintenance issues for which the patient is due to determine whether the patient has had a missing test or preventive care at some other facility. The team will need to decide on a protocol for entering information on immunizations and screening tests done elsewhere that are captured as structured data. The CA can then enter pended orders for the overdue tests and interventions. In this way, the provider will have the orders preloaded into the order menu and ready to be signed during the encounter.

6. Review the list of overdue chronic illness monitoring tests with the patient. For tests the patient agrees to have done during the visit the CA can again enter pended orders that are ready for the provider's signature.

It must be recognized that some EHR products do not allow the CA to write a pended order. This is unfortunate because the workarounds tend to be more error prone. The team must either actually order the overdue tests and procedures during the huddle, thereby leaving the patient out of the decision, or the team must figure out another way to remind the provider to place the order during the visit with the patient.

Standard information gathering processes facilitate identifying and sharing the most efficient workflows. This includes placement of equipment, the need (or lack thereof) for patients to be undressed and protocols for the use of disease-specific information gathering tools, such as when to obtain a peak flow for patients with respiratory problems.

Figure 5. Rooming the patient.

| CA calls patient from waiting room | → | CA obtains CC & VS, entered in EHR | → | CA reviews information on pre-visit summary and updates in EHR | → | CA reviews huddle action items with patient and enters pending orders in EHR | → | CA notifies provider that patient is ready |

Getting Started—Tips for Success:

- Like other parts of the overall office visit that must be carefully choreographed to reliably produce a useful AVS, it is almost always better to start small and stay on schedule than try to do too much at the outset and risk major disruption of clinical operation. The first step might be to have the CA review and update the medication list on every patient in addition to obtaining vital signs and chief complaint. Once this process is running smoothly, other tasks can be added one or two at a time.

- It is important to synchronize the emphasis of the huddle with the most recent addition to the list of tasks the CA is performing while rooming patients. The huddle is an ideal setting for the team to fine-tune the efficiency of the rooming task until the CA is ready to add a new task.

- Many EHRs do not allow multiple team members to enter information into the chart at the same time. Therefore, each care team member should strive to enter all information into the chart as it is gathered, and not write information down on paper to be entered later.

- Data errors in EHRs are common. One of the most effective ways to reduce errors is to encourage patients to watch the information as it is entered. Patients have a natural investment in the accuracy of the information in their charts and will often spot errors more quickly than care team members.

Common Issues:

1. *Sharing of Information-Gathering Tasks:* It is essential for both providers and CAs to understand that adding to the rooming job is not workload shifting from the providers to CAs. The additional tasks that CAs are asked to do are things that providers have great difficulty doing reliably because their emphasis is, as it should be, on making clinical decisions such as establishing a diagnosis or deciding on complex care management issues. The message should be that the team is sharing the care for these important information-gathering tasks.

Medication List Workflow

Assuring that the medication list is accurate is a task that lends itself to being shared among providers, the CA, and the patient. The provider is responsible for clinical decisions that involve starting, stopping or changing medications. To make these decisions the provider must be able to count on a validated and updated EHR medication list. Updating and validating the medication list is a job that can be performed at least in part by the patient and a CA member of the care team.

a. A workflow to accomplish updating the medication list starts in the huddle when the care team scans the medication list looking for things that don't make sense such as duplicate entries, short-term medications like antibiotics that the patient is unlikely to still be taking, high risk medications prescribed for reasons that aren't clear and prescriptions that are about to expire and may need to be reordered during the visit.

b. Next the patient is instructed to review the medication list in the pre-visit summary and identify medications on the list no longer being taken as well as list medications being taken that are not on the list.

c. When the patient is roomed the CA and the patient can go over the medication list in the EHR adding and/or subtracting entries until the list is accurate.

d. Finally, when the provider goes to the order entry screen and is prompted to perform the final review of the medication list, the process is completed. The amount of time the provider must spend validating the medication list is a fraction of the time he or she would have had to spend had the preliminary work not been done by the patient and the CA.

Sharing the care on medication list management can be a challenge because many CAs have had only limited training in pharmacology, and require supervision to perform this task. However, most patients also have had no pharmacology training, and we expect them to know the medications they are taking. With a little coaching both in the huddle and as needed between patients CAs can learn to do this job reliably. Several tactics make this activity more efficient.

• Maximizing the use of generic names for all prescriptions limits the number of names that providers, CAs and patients need to learn.

• Having patients review their medication lists in advance with the pre-visit summary gives patients and CAs the same frame of reference for identifying medications that the patient is, or may be taking, thereby speeding up the medication list verification process (Hummel, 2010).

• Answering questions CAs may have about medications during the huddle and during downtime is very effective in improving CA competence and confidence in updating the medication list.

• Leveraging the technology by flagging medications on the medication list, allowing CAs to add medications to the list without sending the prescription to the pharmacy until the licensed provider signs the order, and utilizing the view function to review medications that have been completed or discontinued (along with the reason).

2. *Gathering information takes time:* There is often ambiguity as to actual timeline of a patient's office visit on a provider's schedule. A patient may appear at the front desk on time for an appointment at the same moment the provider thinks he or she is supposed to enter the exam to see the patient in order to stay on schedule. This can lead to providers expecting CAs to room the patient as fast as possible so that the provider can begin their interaction with the patient. In order to assure that CAs have sufficient time to gather all of the information required for the visit and the information shows up accurately on the AVS, there needs to be a shared understanding of when the patient should arrive at the front desk and when the patient should be ready for the provider that takes into account the time needed for the CA to adequately room the patient and enter all relevant data into the EHR.

3. *Time Limits on Gathering Information:* It is completely acceptable to place a limit on the amount of time a CA spends while rooming a patient when his or her needs are excessive. Not everything needs to be done on every patient at each visit. It is often impossible to get every bit of information on the first visit, particularly with new patients who have multiple medical problems. The team should establish a prioritization framework to get the most important information such as medications and allergies on the first visit and then attend to less crucial tasks at subsequent visits.
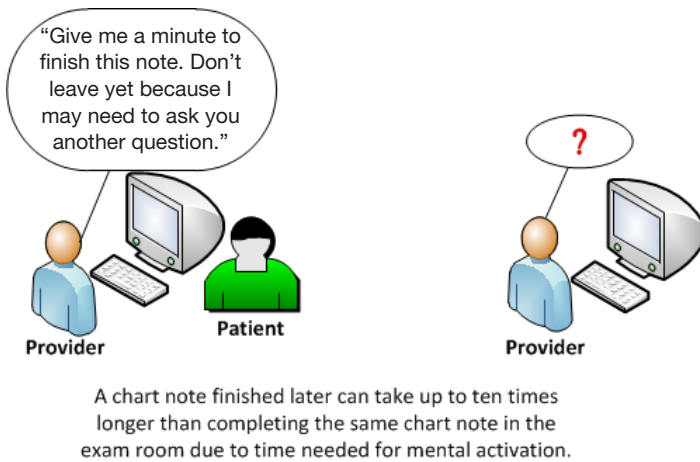
Step 4. The Visit

Purpose:

The office visit choreography described here is designed to assure that the AVS is accurate and complete at the end of the visit by engaging patients in their care, empowering support staff to be active members in the care team, and leveraging the technology. The few additional tasks that are performed by the provider must add clear real value for the patient. The visit framework shown in Figure 6 on page 17 can be used regardless of whether the purpose of the encounter is to make a diagnosis or to manage a condition for which the diagnosis is known (Christiansen, 2008).

Workflow Considerations:

This workflow is aligned to 1) help the provider and patient stay focused on the highest priority issues for the encounter, 2) help patients remember the most important points of the conversation with the provider, and 3) encourage the provider to do as much of the charting during the visit as possible (if not all), which takes far less provider time than completing the chart later and reduces errors of omission due to challenges with recall at a later time.

Figure 6. Completing the chart during the visit

"Give me a minute to finish this note. Don't leave yet because I may need to ask you another question."

Provider — **Patient** — **Provider**

A chart note finished later can take up to ten times longer than completing the same chart note in the exam room due to time needed for mental activation.

Each visit is different, yet there can be a structure to the provider-patient interaction in the form of a series of steps to increase the likelihood that the information in the AVS is complete and accurate at the end of the visit. The steps include 1) orders pended by the CA or by the provider must be signed, 2) the medication list must be finalized, 3) the problem list must be updated, and 4) patient instructions and follow-up plan should be typed in.

1. Orders that were pended by the CA while rooming the patients are signed at the time the provider enters orders for clinical decisions made with the patient. If the patient decides to not carry out a pended order, the provider can delete or inactive it and include information on why the patient opted not to obtain recommended treatment. As long as the provider enters and signs all orders in the exam room before the end of the visit, all of the orders and visit diagnoses for the visit will be in the EHR ready to be included in the AVS without additional work on the part of the provider.

2. The medication list must be updated. This process can begin when the CA is rooming the patient and completed by the provider during the visit.

3. If the problem list in the AVS is to be accurate it must be reviewed and updated during the visit. Placing a problem on the problem list is a clinical decision and therefore a task for which the provider is responsible. Nevertheless, the task of identifying patients with disorderly problem lists is something the CA can do while scrubbing the chart, and the decision to devote provider time to updating a particular patient's problem list can be made in the huddle. A best practice to assure the accuracy of the problem list in the AVS is for the provider to review the problem list with the patient during the visit. Both acute and chronic problems must be included in the problem list and must be entered as structured data.

4. Whether this is a visit to establish a diagnosis or a visit to manage a known diagnosis, at some point the provider and patient arrive at clinical decisions that are reflected as orders. Those orders can be characterized as orders for tests, orders for treatments (including medications) or orders for a referral. In addition, the provider usually develops a treatment plan and gives the patient advice. Orders in the EHR must be linked to a diagnosis. As long as the provider enters and signs all orders in the exam room before the end of the visit, all of the orders and visit diagnoses for the visit will be in the EHR ready to be included in the AVS without additional work on the part of the provider.

5. Tests (e.g. ECGs, spirometry, INRs, urinalyses, rapid strep or influenza tests, etc.) done in the clinic and resulted in the EHR before the end of the visit need be included in the AVS.

6. Although patient instructions that include advice and/or patient education are not a required component of the AVS for meaningful use, that information represents a clinical decision and is often the most valuable part of the visit for the patient. A practical format for including advice information in the AVS is for the provider to type four short sentences in the patient instructions portion of the chart that will be included in the AVS. Those sentences are as follows:
   a. A positive statement acknowledging the patient's situation and effort.
   b. Here is what you have
   c. Here is what it means
   d. Here is what you need to do

Finally the provider should include the follow-up plan so that the patient has a record of this in the AVS for future reference and for family members.

The goal for the visit should be for the provider to fill in as much of the information from the exam (completing the history, review of systems, assessment, and plan) as possible during the encounter and to complete the chart note in the exam room. This is preferable to waiting until the visit is over and the patient has left at which point reconstructing a prior thought process usually takes the provider an order of magnitude more time than it does to complete the same task in the room.

Figure 7. Provider assures data entry for AVS
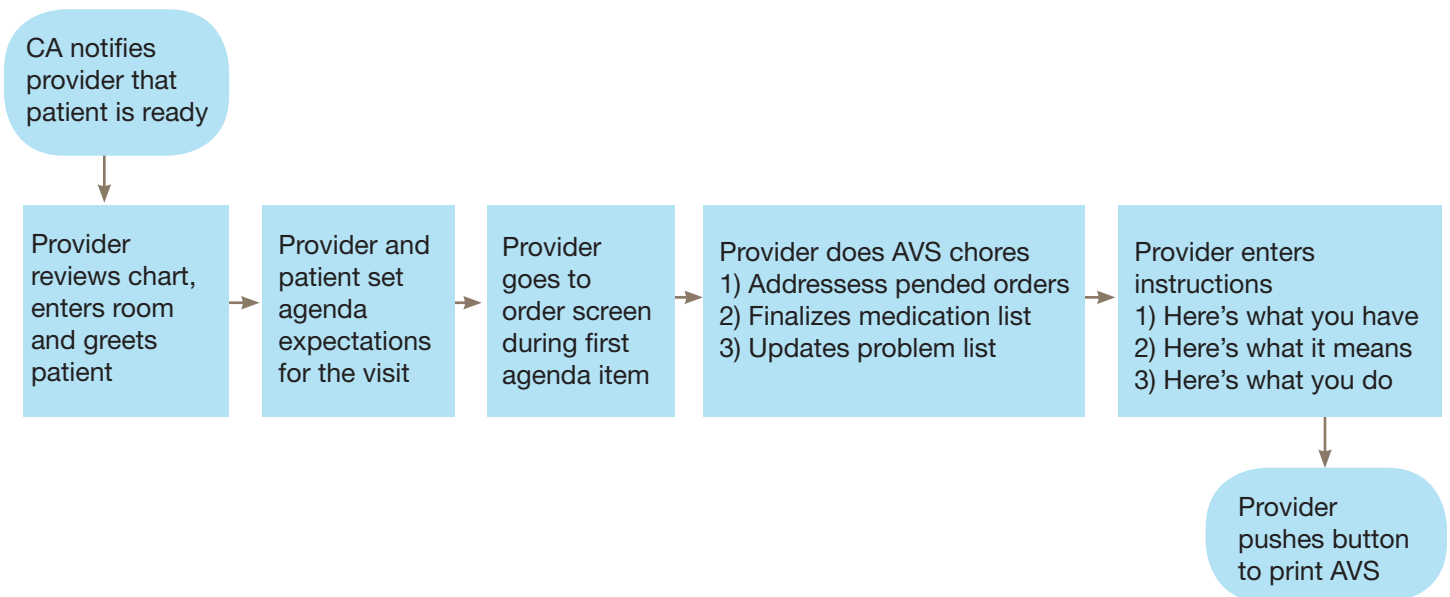
Getting Started – Tips for Success

- Providers and patients often have different expectations for the agenda of an office visit, which can lead to frustration and inefficiency. One of the most effective ways to assure that the patient receives a clear clinical summary at the end of the visit is by starting the visit with a clear agenda and shared expectations for the content of the visit (Mauksch, 2001). There are three factors that should determine the agenda. The first is the total list of things the patient would like to talk about. The second is the list of things the provider would like to talk about. The third is the amount of time available. In order to reconcile these factors, the provider should help the patient create a list of all the topics the patient would like to address, without diving into any of them in detail. This is a skill that requires practice, but once mastered it should take no more than 2 minutes. The provider asks the patient which issues on the list are of highest priority, reserving the right to move a topic to the top of the list if the provider deems it high priority (e.g., patient's prime concern is lack of sleep but also complains of chest pain with exertion). The provider sets expectations for how many issues can realistically be addressed in the allotted time, with the understanding that those lower priority issues, for which there is insufficient time can be addressed at a future visit. This avoids the inefficient and stressful experience of having the patient unveil a serious concern at the end of the visit or having the patient feel like some of their concerns were ignored or not addressed.

- The most effective way to avoid forgetting to perform the tasks needed for a complete AVS is to have a standard place in the encounter at which to do them. One effective place to perform all but the final step of handing the AVS to the patient is when the provider first goes to the order screen or module, which usually happens while discussing the first item on the agenda for the visit. When the provider first goes to the order screen he or she can stop the conversation with a comment such has, "Now that we're on this screen, let's make sure your medication list is accurate", or "Let's take a look at your problem list and make sure it is correct." This approach works best when the provider has turned the computer screen so the patient can see the EHR user interface, and rather than being something that distracts the provider from the patient, the computer is something both provider and patient are looking at together. This approach does three things: 1) it minimizes the disruption in the conversation caused by attending to these essential tasks, 2) it uses a clear visual cue to the provider to remember to perform these steps, thereby minimizing the risk they will be overlooked, and 3) it reduces the patient's perception that the provider is absorbed with the computer rather than with them.

continued

- Orders written during the visit for medications, tests and referrals are action items. The written instructions portion of the AVS is a place to list additional action items such as advice or agreements that won't show up as orders. It also gives the patient a context for these orders. Writing a separate, additional note with instructions for the patient has the potential to create significant extra work for the provider. An effective and manageable approach would be for the provider to view the patient instructions page with the patient and type a very short positive statement such as, "You are doing a great job in your effort to get more exercise." This is then followed by three sentences:
  - Here is what you have: (e.g., your blood pressure is still too high)
  - Here is what it means: (e.g., this means we need to add another medication)
  - Here is what you do: (e.g., take the lisinopril every morning and try walking to the mailbox twice a day)

This short and succinct framework for personalized instructions can make a huge difference in helping the patient remember the most important parts of the conversation they had with their provider.

- Disrupting providers' stable habits for organizing and charting office visits in the EHR can be very difficult, and the changes proposed here to support the AVS may feel overwhelming to many providers. As with every other part of the AVS workflow the key is to start with small steps, practice them until they become manageable and then take another small step. Some providers may be motivated by avoiding the discomfort of a problem list printing out without having been cleaned up, while others may be motivated by learning to set expectations at the beginning of the encounter in order to reduce the inefficiencies of poorly managing unrealistic expectations for the visit.

Common Issues

1. *Provider engagement:* Like the other parts of the AVS workflow this part is dependent (in this case completely) upon providers embracing the changes to make this workflow function properly. It is very difficult for one provider to tell another provider how to conduct a visit. The most effective approach is for the clinical leadership to set a standard for the percent of visits for which the AVS is required to be provided to patients and then provide care teams with resources and coaching focused on reducing inefficiency and improving the quality of care patients receive.

2. *Finishing the chart in the exam room.* Although it isn't necessary for the provider to leave the exam room with the chart note completed in order to produce an accurate and value-added AVS, there are clear advantages for everyone if the provider can manage to do that. The most important elements of the provider portion of the AVS workflow are finalizing the medication list, updating the problem list, entering all of the orders during the visit and creating a short set of patient instructions. The other parts of the workflow, including setting expectations for what can be accomplished during the encounter and finishing the chart in the room, are simply tools to make the provider more efficient. These parts are more likely to be accepted if they are viewed as such rather than the imposition of someone else's methods for conducting a visit.

Step 5. Printing the AVS

Purpose:

The purpose of publishing the AVS is to give the patient easy access to a record of what happened in the office visit for later reference, to share with a caregiver or family member, or to take to an encounter with a different provider. For patients who are comfortable using electronic media and who avoid extensive paper files, being able to access the AVS through a patient portal will have greater utility for each of these purposes than receiving a paper copy.

Workflow Considerations:

Giving the patient an AVS should become a ritual marking the end of the visit. There are several ways to set up this workflow. In each case the provider should review the content of the visit with the patient either in the chart or using the printed AVS to assure that the patient understands the clinical summary.

a. If there are printers in the exam rooms the provider can print the AVS and hand it to the patient. This has the advantage of making it easy for the provider to review the AVS together with the patient.

b. If the printers are located in the hallway or nursing station the CA or the provider can retrieve the AVS from the printer and give it to the patient upon leaving the room. This requires someone to remember to notice that the AVS has printed and actively hand it to the patient, and it risks the patient leaving without the AVS.

c. If the printer is located at the front desk patients can be told to stop at the front desk where they will receive the AVS. This workflow risks the patient leaving without getting the AVS, and it risks creating additional traffic at the front desk, which may already be a bottleneck with patients checking in.

d. For patients who wish to review their clinical through the patient portal rather than receive a paper copy, the AVS can be reviewed on the screen without a copy being printed.

Another popular option is to empower other office staff (e.g. CAs) to do a warm hand-off with the patient as part of the discharge process, making sure that the patient has the AVS in hand and has all their questions addressed upon leaving the clinic. In this situation it may make sense for the CA to print the AVS, although the provider should still review it on the screen with the patient beforehand.
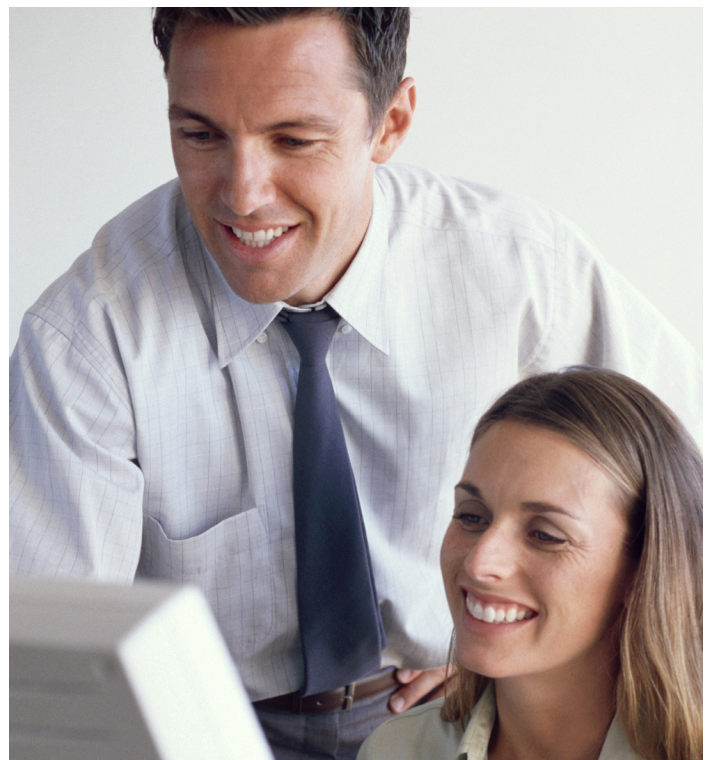
Getting Started – Tips for Success

- It is useful to create a weekly report showing the percent of patients by provider who received an AVS at the end of their visit. This allows the clinic to identify teams that are having difficulty with one or more steps in the workflow. Each of the steps outlined above requires learning, adapting and perfecting skills that may represent significant changes from usual care and each of the steps requires the clinic to standardize certain parts of the workflow. The challenge in this type of workflow is to determine which aspects of the workflow must be standardized and which aspects can be customized to meet unique needs of individual teams.

- It may be easiest to start with a centralized back office printer in the CA work area and develop a workflow to assure that patients are given their AVS upon leaving the room. If this approach is unsatisfactory then the other options should be considered.

Common Issues:

1. *The provider frequently forgets to print the AVS.* In order for the AVS to be a provider priority it needs to be an organizational priority. It is the job of leadership to articulate the priority and oversee policies that drive the priority down to every level of the organization. For those providers with consistent difficulty achieving the goal, a more in-depth analysis is in order. If the AVS information is being prepared and organized in the manner outlined in the earlier steps, getting a provider to make printing the document part of the end of visit ritual is often relatively straight forward. If the task of producing an AVS is something that the provider is expected to tack onto the end of the visit with no workflow assistance, no amount of telling the provider to try harder is going to help. The earlier steps need to be addressed.

2. *Patients are leaving the AVS in the clinic.* If the provider takes the lead in reviewing the AVS on the computer screen with the patient, the message is clear, "this is a document that I created for you because I think it is important." On the other hand, if the AVS is simply handed to the patient without any context, or the provider says, "You don't want this, do you?" it is likely to be treated as one more piece of paper to get rid of.

3. *Patients don't understand the information in the AVS.* Since the AVS is comprised of print groups from EHR data, the information that is printed may be formatted is a way that makes it difficult for patients to understand. It is useful when reviewing the AVS with patients to ask, "Does this make sense?" "Is there some way we could change the order of this information, or add a label that would make it easier to understand?" If there is a clear pattern in what patients suggest, it is worth discussing with the IT support or software vendor what options there may be to use different formatting, or add explanatory language to improve the value of the AVS to patients. The design of the AVS is an excellent project with which to engage a patient advisory committee as a practice seeks to transform itself into a patient centered medical home.

Conclusion

The clinical summary measure for meaningful use is one of the hardest for providers to meet in part because it requires substantial workflow changes. Our intention for creating this technical guide is to provide specific workflow change suggestions so that providers can take the first steps toward a successful process of giving patients an AVS after each office visit. Not only does providing an AVS help providers meet the meaningful use criteria, it is also good practice for engaging patients in their own care and helping them to remember what happened during the office visit. When done right, the AVS process may also ultimately assist with better quality of data in the EHR because patients and their caregivers can review the information for accuracy and correct errors.

About WIREC

Led by Qualis Health, WIREC provides technical assistance, guidance, vendor-neutral EHR adoption services, and information to eligible healthcare professionals to help them achieve meaningful use of EHRs and qualify for CMS incentive payments. WIREC was selected through an objective review process by the U.S. Department of Health and Human Services' Office of the National Coordinator for Health IT (ONC). WIREC serves as a direct pipeline to the national Regional Extension Center program, leveraging our connection to a national collaborative of RECs while bringing local expertise to support providers across the region with technical assistance for successful EHR adoption.

About Qualis Health

Qualis Health is a national leader in improving care delivery and patient outcomes, working with clients throughout the public and private sector to advance the quality, efficiency and value of healthcare for millions of Americans every day. We deliver solutions to ensure that our partners transform the care they provide, with a focus on process improvement, care management and effective use of health information technology. For more information, visit www.qualishealth.org.

For more information, contact Jeff Hummel at jeffh@qualishealth.org.

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