

Using Common EHR Functionality in Epic* to Help Improve Population Health

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- This document summarizes common functionality in Electronic Health Record (EHR) software and the corresponding nomenclature used by Epic to describe a particular function.
- The functionality described in this document may help health care systems and health care providers improve clinical quality and population health through more consistent patient identification, communication, and adherence to clinical pathways.

Objective	Functionality
1 Identifying gaps in care; assessing patient adherence and practicing performance	<u>Registry Reports</u> <u>Dashboards / Summary Report</u>
2 Expanding communications with patients via the patient portal, email, or hard copy	<u>Appointment & Health Maintenance Reminders</u> <u>After Visit Summary (AVS)</u>
3 Enhancing point-of-care interactions	<u>Immunization Schedule / Health Maintenance (HM)</u> <u>Best Practice Advisory / Alert (BPA)</u> <u>SmartSets</u> <u>Notewriter Templates</u>

Please note:

- This document has not been reviewed or endorsed by Epic. The user is solely responsible for implementation, testing, and monitoring to ensure proper orientation in the EHR system. Merck does not take responsibility to revise this high-level summary if the software changes.
- The high-level summary document is for the Epic EHR software. The functionality described in this summary may not apply to all available versions of Epic and capabilities may vary based on each individual EHR system.
- While EHRs may assist providers in identifying appropriate patients for vaccination, the decision regarding whom to vaccinate should ultimately be decided by a provider in consultation with a patient, after a review of the patient's records.

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Identifying gaps in care; assessing patient adherence and practicing performance

Functionality: Dashboard / Summary Report

To Monitor Progress in Reducing Gaps in Care:

1. In Hyperspace, navigate to the **Rule Editor** (Epic button > Tools > Rule Editor Tools > Rule Editor) and search for **My Panel Metrics (MPM)** to determine which **MPM** are available
2. Select the registry metrics to be included
3. Navigate to the **Rule Editor** in Hyperspace (Epic button > Tools > Rule Editor Tools > Rule Editor) and create rule(s) with the **My Panel Metrics** context

Example

Rule Selection

Select an existing rule

Context:

Rule:

Create a new rule

Context: My Panel Metrics

Name: ID:

Copy from:

Accept Cancel

MY PANEL METRICS

	Q1 '11	Q2 '11	Q3 '11	Q4 '11	QTD
▶ Hemoglobin A1c Control	42	43	43	39	37
▶ Blood Pressure Control	69	72	67	68	73
▶ Cervical Cancer Screening	88	87	86	89	90
▶ Colorectal Cancer Screening	59	61	63	63	65
▶ Breast Cancer Screening	74	69	76	77	77
▶ Childhood Immunization Status	84	83	84	82	84

MEANINGFUL USE QUALITY MEASURES

	Q1 '11	Q2 '11	Q3 '11	Q4 '11	QTD
▶ Use of Appropriate Medications for Asthma	91	94	95	93	93

MEANINGFUL USE OBJECTIVES

- ▶ Enter Orders Using CPOE
- ▶ Maintain an Active Problem List
- ▶ Prescribe Medications Electronically
- ▶ Maintain an Active Medication List
- ▶ Maintain an Active Allergy List
- ▶ Record Patient Demographics
- ▶ Record Vitals
- ▶ Record Smoking Status
- ▶ Provide After Visit Summaries

2: MPM Metric >Value (Numeric)

Metric ID: OVERDUE FOR IMMUNIZATION

Metric ID: VALUE (1)

Operator: =

Value: 13

Property or Rule:

Result type: Property/Rule Column Value

Result: MPM Metrics > MPM. Save Outcome

Outcome: EXCLUDED

Accept Cancel

quick tips

- Quality Dashboards are used to view the entire patient population.
- Snapshot is used to view an individual patient.

Expanding communications with patients using patient portal, email, or hard copy

Functionality: Appointment & Health Maintenance Reminders

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To Send Pre-Visit Reminders for Scheduled Appointments:

1. Navigate to **Reports, My Reports**, select appropriate **Appointment Criteria**
2. In the **Results List** window, choose **Communications** to send the appointment reminder to the patient's preferred communication type (portal, phone, or mail)

Example

Filters	Options	Chart	Encounter	Communication	HM Modifiers	Add to List	Questionnaire Series			
MRN				MRN	Patient	DOB	Age	Sex	PCP	Last CRC Scre
Patient										
DOB										
Age										
Sex										
Contains: <input type="text"/>										
From: <input type="text"/>										
To: <input type="text"/>										
<input type="checkbox"/> (Blanks)										
<input type="checkbox"/> (Non-blanks)										

quick tips

- Make sure patient demographics include entering the patient's preferred communication method (portal, phone, or mail).
- Include **Immunizations** in the visit reason of the appointment reminder text, when possible.
- When an Immunization is due, and no appointment exists, use Health Maintenance reminders to notify patients.
- Annual Wellness Exams also include immunizations.

Functionality: After Visit Summary (AVS)

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To generate the After Visit Summary:

1. From the patient's encounter, select the **Visit Navigator** activity
2. Navigate to the **AVS**
3. Click on the Print button that appears in this section

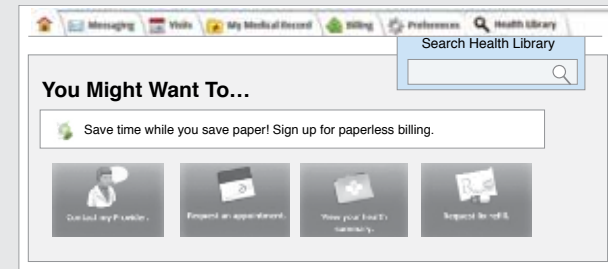
To customize AVS documents:

1. From **Clinic Administration**, navigate to **Reports, Print Groups, Reports** and create a new report
2. Select the appropriate report content type
3. Choose items such as the Encounter Summary, Patient Snapshot, Chart Review-Visit Detail to be included in the AVS
4. **SmartText** and **Rules** can be used to provide Immunization-specific information to a Print Group

quick tips

- The AVS can be configured to print in the patient's primary language.
- Include pertinent after visit care and instructions based on the type of visit.

Example



Visit Summary		As of Jul. 01. 2015	
Patient Demographics			
Patient Address	Communication	Language	Race / Ethnicity
	@gmail.com	English (Preferred)	White or Caucasian / Not Hispanic or Latino
Reason for Visit			
Reason	Comments		
	Hypertension Hyperglycemia Vaccination		
Encounter Details			
Date	Type	Department	Care Team
06/01/2015	Office Visit	FAMILY PRACTICE	
Active Allergies and Adverse Reactions - as of 07/01/2015			
No Known Allergies			
Current Medications - as of 07/01/2015			
Prescription	Sig.	Disp.	Refills Start Date End Date Status
aspirin 81 MG tablet	Take 81 mg by mouth daily		
levocetirizine 5 MG tablet	TAKE 1 TABLET BY MOUTH EVERY EVENING	90 tablet 1	06/03/2015 Active
amlodipine-benazepril 5-20	TAKE 1 CAPSULE BY MOUTH EVERY DAY	90 tablet 1	06/03/2015 Active
Active Problems - as of 07/01/2015			
Problem	Noted Date		
Increased fasting blood sugar	12/09/2014		
Nasal inflammation due to allergen	12/09/2014		
High blood pressure	12/09/2014		
History of urinary stone	12/09/2014		
High cholesterol, LDL goal below 130	12/09/2014		
Immunizations - as of 07/01/2015			
Name	Dates Previously Given	Next Due	
Tdap	01/01/2010	01/01/2020	
Influenza	06/11/2015	07/11/2016	
Social History - as of 07/01/2015			
Tobacco use	Types	Packs/Day	Years used Date
Never smoker		0	0
Last Filed Vital Signs			
Vital Sign	Reading	Time Taken	
Blood Pressure	110/78	06/11/2015 9:10 AM EDT	
Pulse	60	06/11/2015 9:10 AM EDT	
Temperature	36.8 °C (98.2 °F)	06/11/2015 9:10 AM EDT	
Respiratory Rate	16	06/11/2015 9:10 AM EDT	
Height	-	-	
Weight	87.998 kg (194 lb)	06/11/2015 9:10 AM EDT	
Body Mass Index	31.33	06/11/2015 9:10 AM EDT	
Oxygen Saturation	-	-	
Prescriptions Ordered During Visit			
Prescription	Sig.	Disp.	Refills Start Date End Date
methypREDNISolone 4 mg tablet	Take 1 tablet (4 mg total) by mouth daily, follow package directions	21 tablet 0	06/11/2015 06/11/2016
Plan of Care			
Upcoming Encounters	Type	Specialty	Providers
07/24/2015	Appointment	Cardiology	
12/11/2015	Appointment	Family Medicine	

Enhancing point-of-care interactions

Functionality: Immunization Schedule / Health Maintenance (HM)

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Using the Immunization Schedule:

Epic includes prebuilt immunization-specific rules. Using these rules along with practice built Health Maintenance topics can alert the health care provider of:

- Next dose due
- Validation of proper times and spaces for doses

Due dates and overdue doses appear in **HM activity** and in **SnapShot reports**.

To Link a Health Maintenance item to an Immunization:

1. Create appropriate HM topics for multi-dose immunization series
2. Determine the rules to be used with the immunization HM topics
3. In **Clinical Administration**, navigate to **Immunizations**, and open the appropriate immunization record to be linked
4. Go to the **HM** screen to enter the **HM topic** in the **Related Health Maintenance topics** list
5. Detailed configuration information is available on Epic Nova UserWeb in these topics:
 - Build HM Topics for Immunization Series
 - Configure HM Plan Rules for Immunization Series
 - Link HM Topics to Immunizations

Example

Health Maintenance					
Postpone	X Remove Postpone	Override	X Remove Override	Edit Modifiers	Report
Update HM		ClinkB			
Due Date	Topic	Date (Reason)			
7/1/2015	INFLUENZA (1# OF 2)	3/27/2015	1/13/2015	11/13/2014	
5/11/2015	Tdap IMMUNIZATION (#3 - DTAP)	3/27/2015	1/13/2015		

Health Maintenance Report		Patient:	MRN:
Health Maintenance Summary			
Tdap IMMUNIZATION	Overdue	5/11/2015	
	Done	3/27/2015	Imm Admin: Tdap
	Done	1/13/2015	Imm Admin: Tdap
INFLUENZA	Overdue	5/11/2015	
	Done	3/27/2015	Imm Admin: Pcv13
	Done	1/13/2015	Imm Admin: Pcv13

quick tips

- Epic updates and publishes immunization scheduling rules when the CDC adjusts recommendations and when new immunizations become available.
- Alerts for Due Date can be displayed in a Patient Header, a Best Practice Advisory/Alert (BPA), or a Snapshot.

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Functionality: Best Practice Advisory / Alert (BPA)

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Using a BPA to Notify the health care provider of Due or Past Due Vaccines:

There are many ways to trigger BPA, as listed in the BPA base record. The criteria upon which these Alerts can be triggered are located within one or multiple BPA criteria records.

1. BPA messages are displayed when the patient meets the criteria
2. System users **view** the messages and select **Accept** to acknowledge the BPA and initiate action to satisfy the alert

Example

Record Summary for : Influenza immunization				
General Information				
Record name:	Influenza Immunization	Contact date:		1
Type:	Base	Contact:		Yes
Importance level:		Contact released		
Display Text:	Patient has overdue Flu Vaccine			
SmartLink:	SmartLink Parameter:			
Show last order date?	Yes	Show last health maintenance date?		No
Linked Criteria				
Linked Criteria				
1 CRITERIA INFLUENZA CANDIDATE				
2 USER INFLUENZA IMMUNIZATION ORDERS				
3 CRITERIA INFLUENZA REMINDER HAS FIRED				
4 CRITERIA PATIENT IMMUNIZED MORE THAN 12 MONTHS PRIO				
5 CRITERIA PATIENT AGE				
Logic: (1 AND 2 AND 3 AND 4)				
Restrictions				
Encounter limitation inclusions:				
	Service Area	Location	Specialty	Department
1				
2				
Advisory targeting:				
Potential Triggering Actions				
1	Open Patient Chart (60)			

Best Practice Advisory

Patient has overdue Flu vaccine

Acknowledge Reason

Open Smart Set AMB IMMUNIZATION INFLUENZA ORDERS

Patient has overdue Tdap vaccine

Acknowledge Reason

Open S Tdap ORDERS

Accept

quick tips

- "Accepting" the BPA opens a SmartSet which enables action to satisfy the alert.

Enhancing point-of-care interactions

Functionality: SmartSets

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SmartSets are groups of clinical orders that are grouped together for easy selection. Rather than ordering a number of items individually, the health care provider can access a single SmartSet and place multiple orders with a single click.

SmartSets can contain diagnostic tools such as screeners, documentation templates, orders for lab, radiology or other tests, referrals, prescriptions, patient education materials, followup activities and appointments.

Using a Smart-Set in Epic:

1. From the **Visit Writer**, select **SmartSets** from the top navigation bar
2. Select the appropriate **SmartSets** for the visit type
3. Select **items** to be ordered
4. Select **Sign** to complete issue orders for all items checked

quick tips

- SmartSets are typically created by care condition.
- SmartSets can be combined (i.e more than one SmartSet can be used per patient).
- The best SmartSets are comprehensive so that there is not a need to add an activity which is not included in the SmartSet.

Example

The screenshot shows the Epic SmartSet interface for a visit titled "visit for FLU VAX - Flu vaccine". The interface is divided into several sections:

- Navigation:** Includes "Images", "References", "Media Manager", and "Print AVS".
- SmartSet Selection:** A sidebar on the left lists "Charting", "Allergies", "SmartSets" (selected), "Immunizations", and "Close Encounter".
- OPENED SMART SETS:**
 - Buttons: "Associate", "Primary Dx", "Providers", "Next", "Pend", "Sign", "Remove".
 - Section: "FLU VACCINE" with an "Add Order" button.
 - Section: "Reason for Visit and Documentation" (0 of 2 selected):
 - RFV and Progress Notes
 - Flu Vaccine [edit](#)
 - IMMUNIZATION TODAY [edit](#)
 - Section: "Select for Appropriate Order":
 - Influenza Injectable (6-35 months)**
 - Flu Vaccine 6-35mo split IM
 - Flu Vaccine 6-35mo preservative free IM
 - Influenza Injectable (36+ months)**
 - Flu Vaccine greater than or equal to 3yo split IM
 - Flu Vaccine greater than or equal to 3yo split preservative free IM
 - Influenza Nasal (24+ months)**
 - Flu vaccine nasal
 - Section: "Diagnosis" (0 of 1 selected)
 - Section: "Additional SmartSet Orders" with an "Add Order" button and a note: "Click on the Add Order button to add an order in this section."
- Bottom Navigation:** Includes "Associate", "Primary Dx", "Providers", "Next", "Pend", "Sign", "Remove", and "Navigator Hotkeys".

Enhancing point-of-care interactions

Functionality: NoteWriter Templates

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To create a NoteWriter Template, with appropriate permissions:

1. From the **Epic** button, navigate to **Tools, SmartTool Editors, Note Template**
2. **Create** and name the template
3. Use **SmartBlocks**, **SmartText** and **SmartLists** to structure the note
4. When the note is complete, select **Release**, and then **Accept** to complete the template
5. In **Clinical Administration**, navigate to **Transcription, NoteWriter Templates**
6. **Associate** the Note Template with the note type of **Progress Note**

quick tips

- Use of templates helps to ensure consistency of care by enabling a uniform mechanism to evaluate patients.
- NoteWriter Templates can be shared for use by multiple health care providers
- NoteWriter Templates can be single purpose (eg, a single condition or diagnosis), or multi-purpose (across multiple conditions)

Example

The screenshot displays the NoteWriter interface for a Physical Exam template. At the top, there are navigation buttons: HOME, IDENTIFY, EXPAND, and > ENHANCE. The interface is titled 'Note Writer' and includes a 'Smart Forms' section with a search icon, a 'Resize' button, and a 'Close X' button. Below this is a navigation bar with tabs for 'HPI', 'ROS', 'Physical Exam', and 'Note'. The main content area is organized into several panels, each representing a clinical category with expandable sections (+) and collapseable sections (-). The categories include:

- Constitutional**: Well-developed, Well-nourished, Diaphoretic, Distressed.
- HENT**: Normocephalic, Attramatic, Right ext ear nl, Left ext ear nl, Oropharynx clear & moist, Nose nl.
- Eyes**: PERRL, Conj nl, EOM nl (Right, Left), Scleral icterus.
- Neck**: ROM nl, Supple, Thyromegaly, Tracheal deviation, Stridor, JVD, Cervical adenopathy.
- Pulmo/Chest wall**: Effort nl, Breath sounds nl, Murmur, Rub, Gallop, Respiratory distress, Wheezes, Rales, Chest tenderness.
- Abdominal**: Soft, Bowel sounds nl, Distension, Tenderness, Rebound, Guarding, Mass.
- Genitourinary / Anorectal**: Vagina nl, Uterus nl, Guaiac result, Vaginal discharge.
- Musculoskeletal**: Normal ROM, Edema, Tenderness.
- Neurological**: Alert, Oriented x 3, DTRs nl, Cranial nerve deficit, Abnl coordination, Abnl DTRs, Abnl tone.
- Skin**: Warm, Dry, Erythema, Rash, Pale, Mood/Affect nl, Behavior nl, Thought content nl, Judgment nl.

 At the bottom of the interface, there is a 'Sign at close encounter' dropdown menu and a set of buttons: Sensitive, Bookmark, Accept, and Cancel.