

Workflow Redesign Templates

Provided By:

The National Learning Consortium (NLC)

Developed By:

Health Information Technology Research Center (HITRC)

Practice and Workflow Redesign Community of Practice



National Learning Consortium

- The National Learning Consortium (NLC) is a virtual and evolving body of knowledge and tools designed to support healthcare providers and health IT professionals working towards the implementation, adoption and meaningful use of certified EHR systems.
- The NLC represents the collective EHR implementation experiences and knowledge gained directly from the field of ONC's outreach programs ([REC](#), [Beacon](#), [State HIE](#)) and through the [Health Information Technology Research Center \(HITRC\)](#) Communities of Practice (CoPs).
- The following resource is a tool used in the field today and recommended by “boots-on-the-ground” professionals for use by others who have made the commitment to implement or upgrade to certified EHR systems.

Template Instructions: Mapping an Existing Workflow

- To use these templates, first identify the current type of workflow you want to redesign, and then identify the staff responsible for the activities in the workflow.
- In collaboration with the implementation team, they should review the workflow and adjust it as necessary to match the typical scenario in their office.
- Assign a note taker/recorder to enter the steps into the boxes and arrows on the PowerPoint slide. The note taker/recorder can move the PowerPoint boxes and arrows to reflect how the staff order the interactions.
- In the workflow templates, boxes indicate steps in the process. Blue diamonds indicate “yes or no” decision points and lead to appropriate next steps depending on the “yes or no” decision. Staff can indicate decision point steps by turning a sticky note sideways 45 degrees or by drawing a diamond on the box.

Note: Double-click workflow diagrams to make edits

Template Instructions :

Examining Areas for Improvement

- After mapping existing workflows, the staff should ask themselves the following questions:
 - What are the best steps in the process?
 - What makes those the best steps?
 - What are we doing right? (Best can be defined by practice goals and vision, such as efficiency, client satisfying, etc.)
 - What steps could use improvement?
 - What are the least effective?
 - What makes those steps the least effective?
 - How could we improve those steps?
- Use the answers to these questions to aid in planning a future workflow with the new EHR

Key Steps to Optimize Workflow Redesign

- Analyze current workflow
 - Document the practice's existing paper workflows in all areas of patient care
- Solicit clinician and staff input regarding roles in current paper workflows
 - Involve everyone who handles paperwork in the analysis and redesign
- Review and finalize documentation of current workflow
 - Ensure that the final diagram incorporates the entire “paper trail”
- Identify waste and opportunities; then redesign workflow
 - Recognizing the steps that should be changed to improve office functionality; the redesign will reveal the practice's needs regarding EHR system selection and training
- Identify and implement the EHR system and new workflow
 - Enlist the necessary support and work with the right EHR vendor to implement a system that meets the practice's needs; ensure proper EHR implementation through staff training on the new workflow
- Analyze new EHR workflow and refine as needed
 - Continue to monitor the EHR-driven workflow and adjust the workflow to optimize efficiencies

Patient Check-In

- **SUMMARY OF MODULE/SECTION:** This section will help practice staff map out the patient check-in process; it provides several different templates that can describe the existing check-in process and the check-in process that might be achieved with an EHR. These interactive templates focus on what happens once the patient enters the office until the patient meets with the physician or nursing staff.

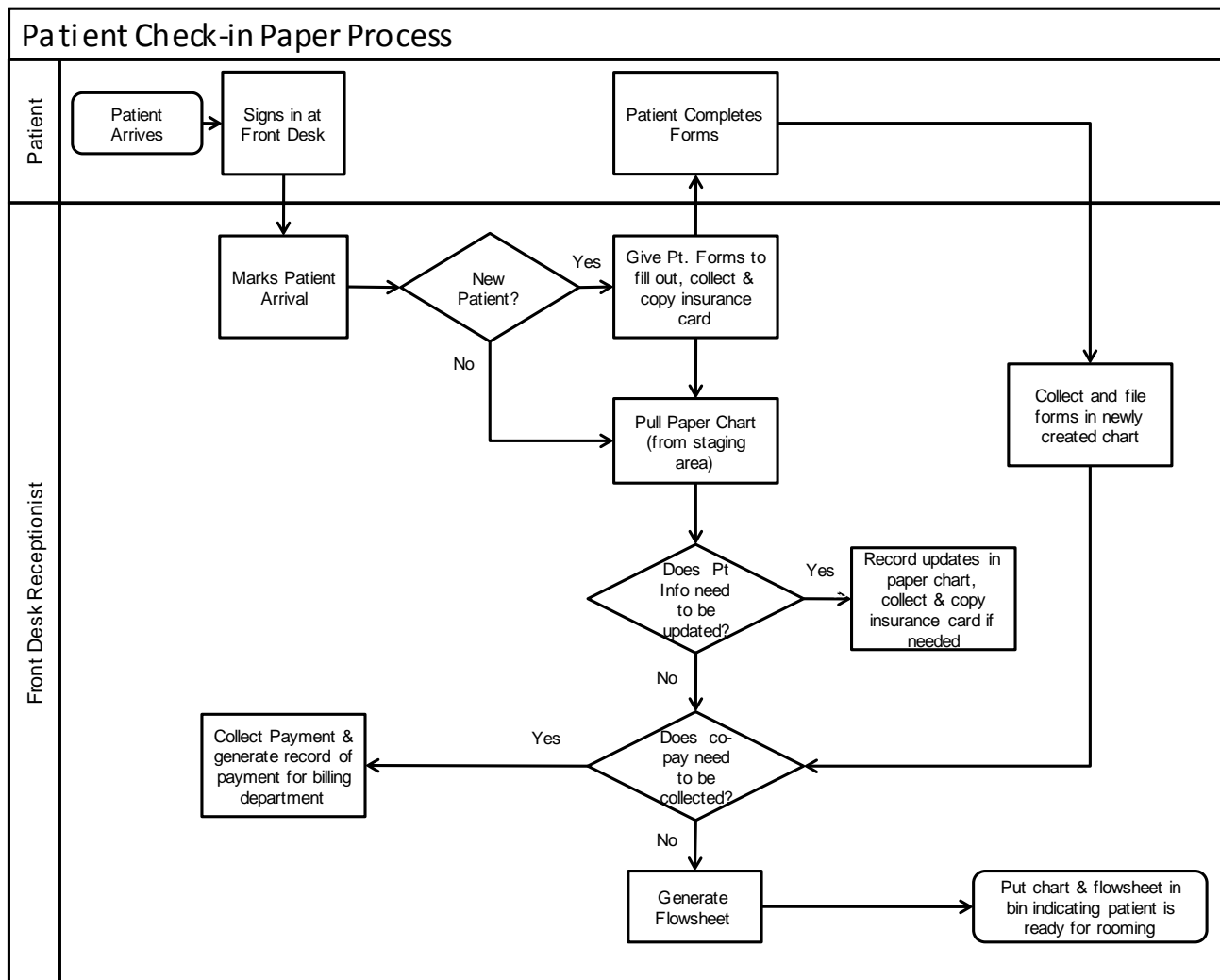
Templates included in this section include the following:

- Paper Process: The paper check-in template describes an office setting that relies solely on paper charts for patient documentation. This template will be useful for outlining the workflow of offices that currently do not have an EHR.
- EHR without Integration/Interface with Practice Management System (PMS): This template provides a draft workflow for an office with a non-integrated EHR. This template will be useful for offices that require front desk staff to enter patient documentation separately into the PMS and EHR.
- EHR is Fully Integrated/Interfaced with Practice Management System (PMS): This template outlines the check-in process for a practice that uses a single system for its check-in process and does not have separate EHR and PMS systems for managing patients. This template may be more useful when mapping out how the desired patient check-in process after implementing the EHR.

Patient Check-In, continued

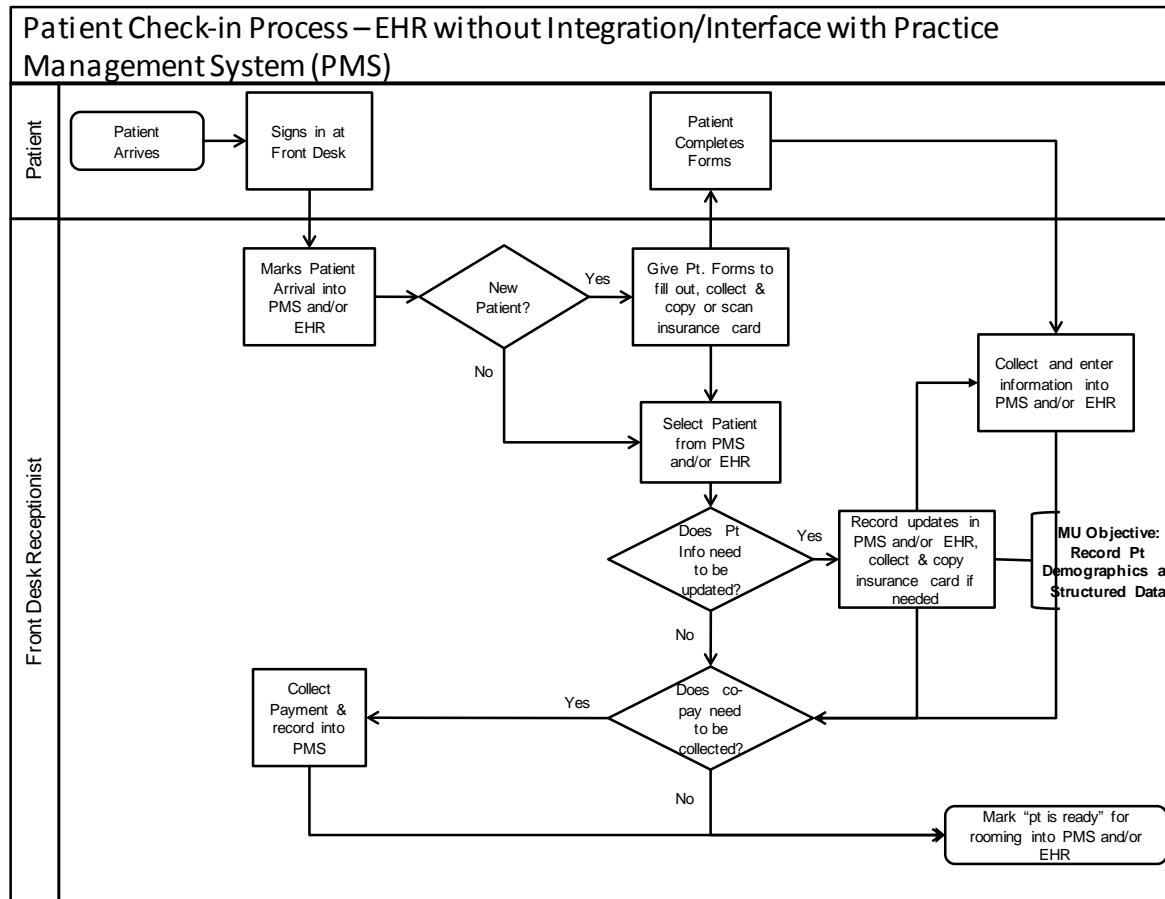
- **RATIONALE/PURPOSE OF THE SECTION:** The front desk/reception staff play a critical role in the practice: they serve as the welcoming face of the practice, gather important patient history and updates and manage payment collection. They do all of these things during the check-in process. Before transitioning to a fully integrated EHR check-in process, mapping out the existing paper check-in or non-integrated EHR check-in process will help the front desk/reception staff to identify current workflows could be adapted to accommodate the forthcoming EHR.
- **MEANINGFUL USE OBJECTIVES:**
 - Use of the paper process does not meet any of the meaningful use requirements. Use of a non-integrated EHR or an integrated EHR satisfies the meaningful use requirement: Core 7 - record patient demographics as structured data.

Patient Check-In Paper Process



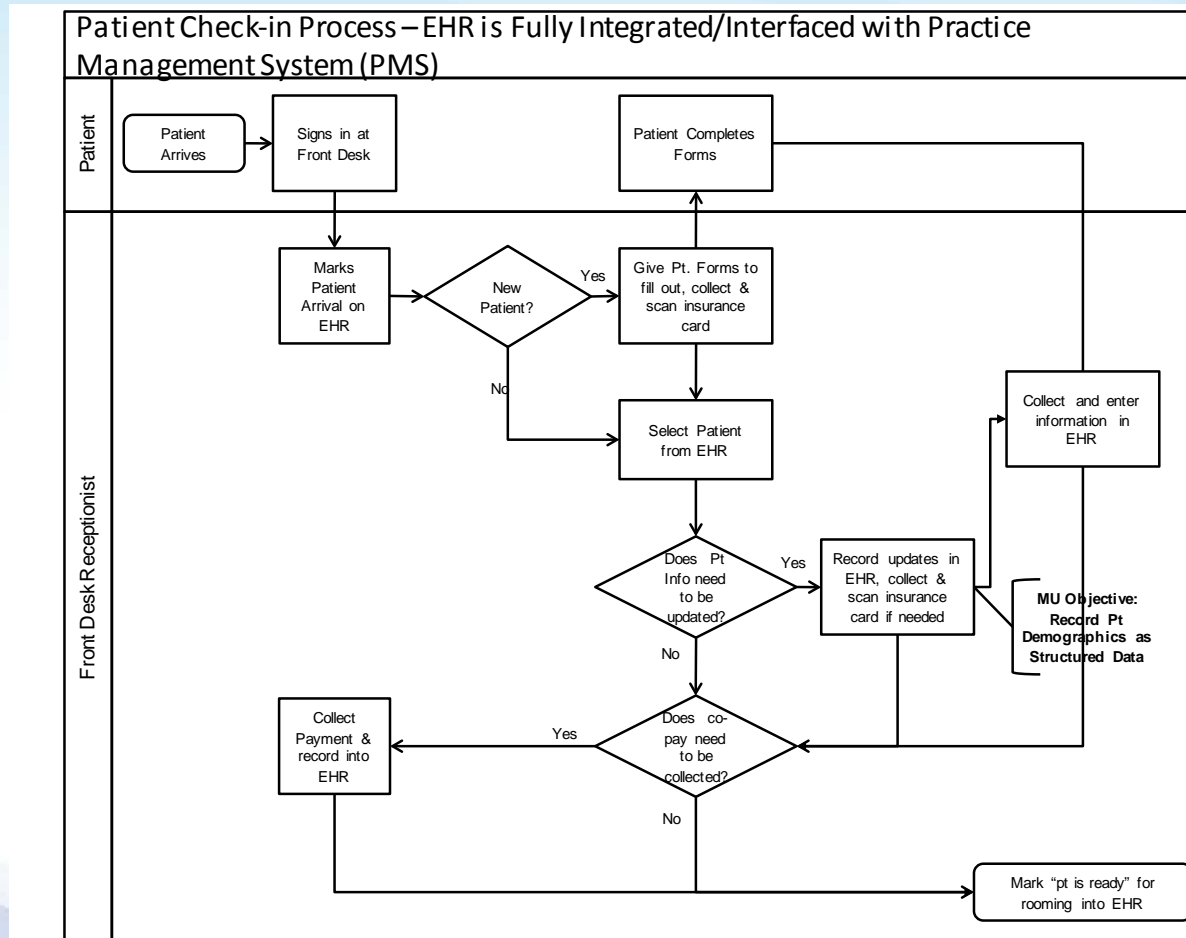
Note: Double-click workflow diagram to make edits

Patient Check-In Process: EHR without Integration/Interface with Practice Management System (PMS)



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Patient Check-In Process: EHR is Fully Integrated/Interfaced with Practice Management System (PMS)



Note: Double-click workflow diagram to make edits

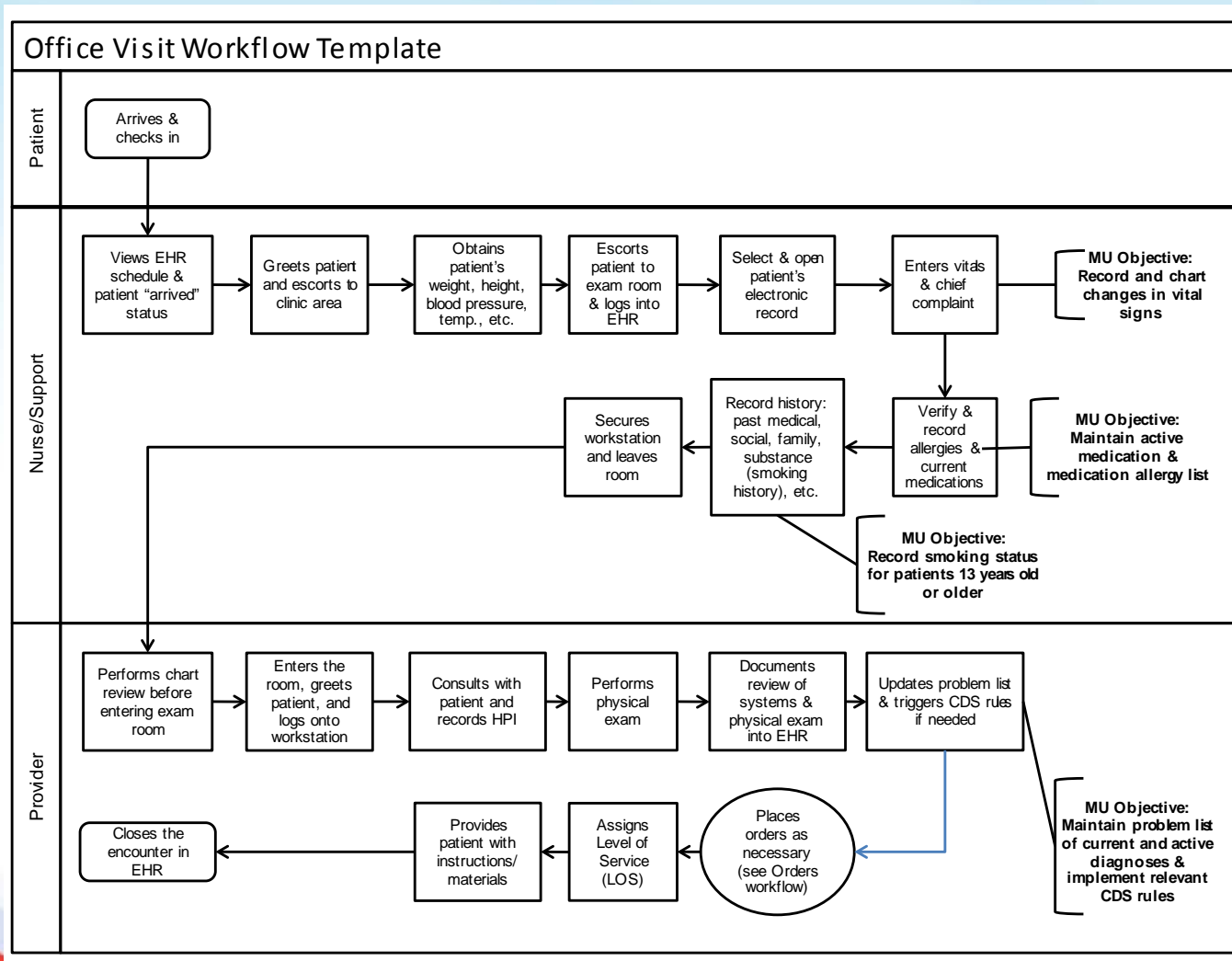
Office Visit

- **SUMMARY OF MODULE/SECTION:** This section covers the office visit workflow. It should help you and your practice staff detail what happens when a patient enters your practice for an appointment and what should happen once the EHR is implemented. This interactive template contains:
 - Patient arrival at the office and checks in through the encounter close out in the EHR;
 - How nursing, support and provider staff roles interacts with the patient and EHR;
 - Measurement and entry of vital signs, medication updates, and patient complaints;
 - Patient examination; and,
 - How the EHR supports decision making and prescribing (see e- Prescribing section for more information and instructions on mapping e- Prescribing workflows).

Office Visit, continued

- **RATIONALE/PURPOSE OF THE SECTION:** As office visits are the primary activity of most practices, It is essential to navigating the patient as efficiently as possible through a typical office visit. Research has shown that an EHR can increase patient volume between 2 and 15% (Keshajvee 2001; MedicaLogic), In addition, the data collected will enable time savings associated with quality reporting as well as conduct population health activities. Integrating an EHR into that office visit can also improve the quality of care and patient safety by offering electronic triggers to remind staff about patient considerations (e.g., allergies, pre-existing conditions) and to prevent drug interactions (see e-Prescribing workflows for more details).
- **MEANINGFUL USE OBJECTIVES:**
 - Core 3 - maintain an up-to-date problem list of current and active diagnosis
 - Core 5 - Maintain active medication list
 - Core 6 - Maintain active medication allergy list
 - Core 8 - Record and chart changes in vital signs
 - Core 9 - Record smoking status for patients 13 yrs or older
 - Core 11- Implement one CDS rule

Office Visit Workflow Template



Note: Double-click workflow diagram to make edits

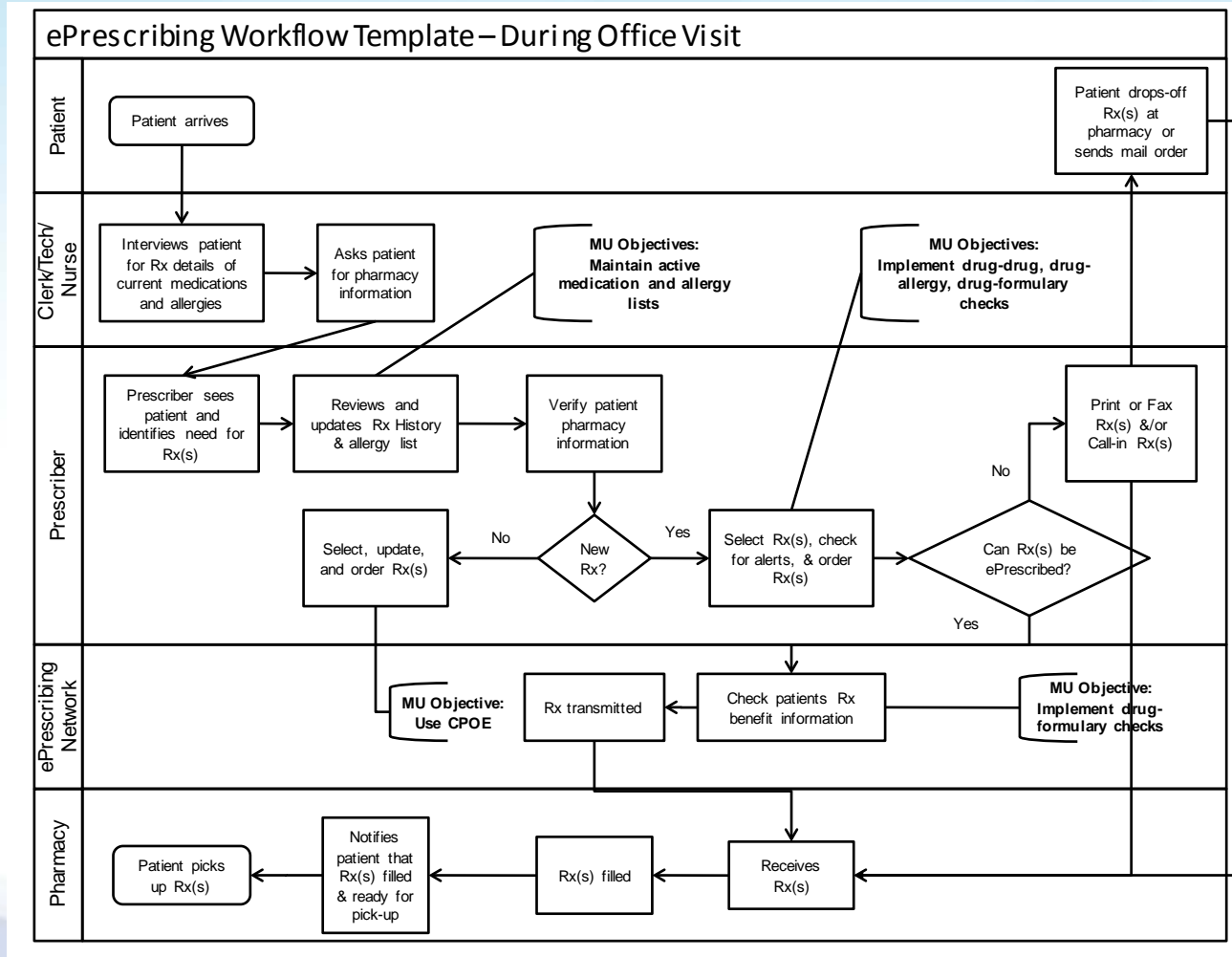
e-Prescribing

- **SUMMARY OF MODULE/SECTION:** This section will help practice staff map out the e-prescribing workflow, both during an office visit and out of an office visit for renewal requests. These interactive templates focus on what steps need to be taken to:
 - Populate an EHR with the current medications and existing medication allergies for the patient;
 - Enter an order in the EHR, including updating medication history, checking drug formulary data (if enabled), and selecting the medication;
 - Transmit the prescription order to the pharmacy, which may be manual (by the patient), fax/e-fax, or electronically (e.g., through the e-Prescribing networks available);
 - Process the prescription at the pharmacy; and,
 - Pick up by the patient

e-Prescribing, continued

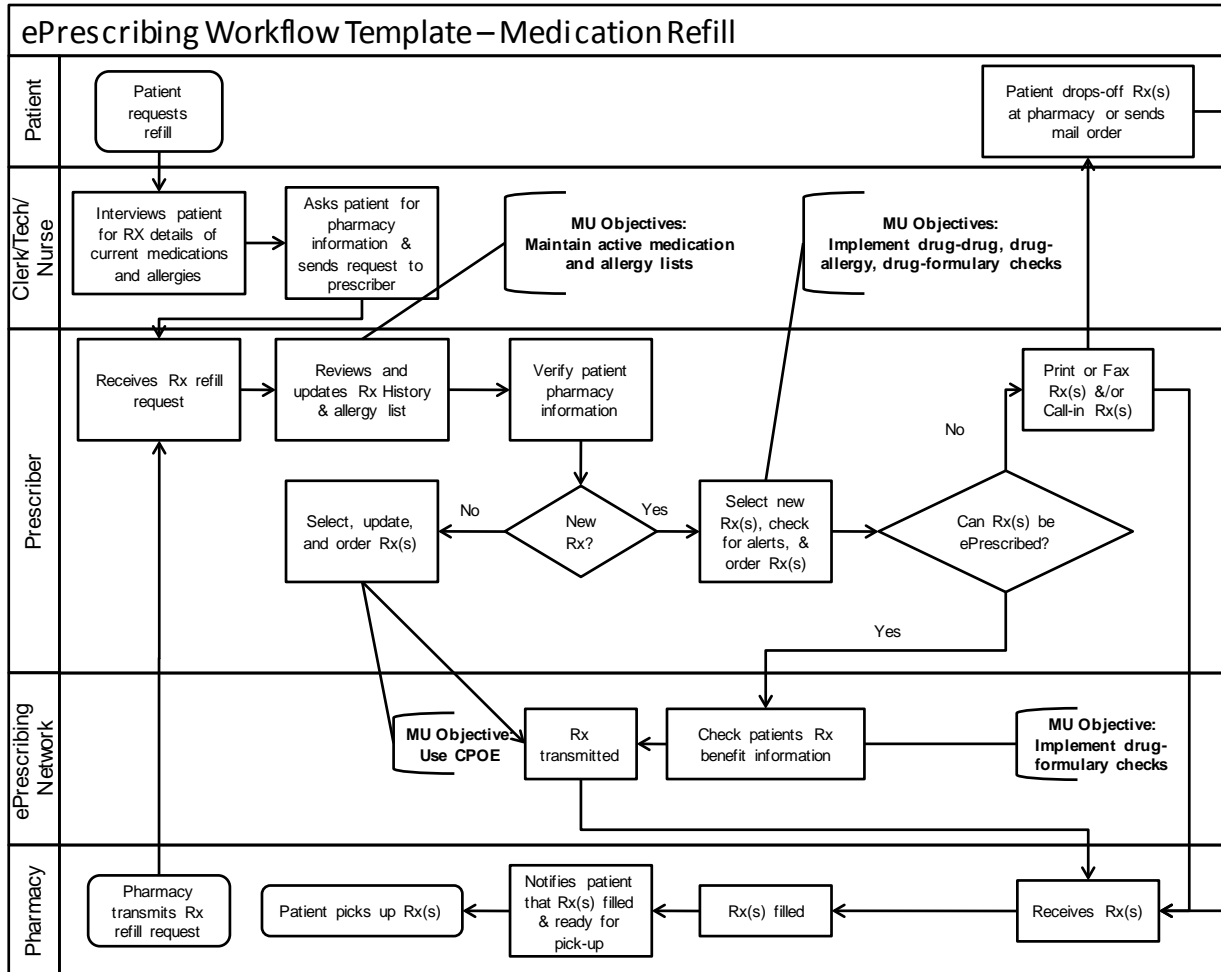
- **RATIONALE/PURPOSE OF THE SECTION:** E-prescribing represents an opportunity to greatly streamline practices in the office. Research has shown that there are significant time savings from processing prescription renewals, with 80 to 95% reductions in renewal times that average 18 minutes (Corley 2005, MedicaLogic). It presents an opportunity to remove the chart pulls and office worker handling of the renewals, sending requests directly to a prescribing provider who can access the patient's medical history and select a previously prescribed medicine. There are also safety benefits that need to be considered, as adverse drug events, including drug-drug and drug-allergy interactions, can be reduced by 23-34% (Smith 2006, Wang 2003). In addition, drug-formulary checks can help save patients 15-20% on their prescription drug costs (Wang 2003, MedicaLogic). It is therefore important that the person entering the medication order into the e-prescribing system be able to process any alerts properly or that an alert processing steps are streamline to mitigate their impact on workflow.
- **MEANINGFUL USE OBJECTIVES:**
 - Core 1 - Use CPOE for medication orders
 - Core 2 - Implement drug-drug and drug allergy checks
 - Core 4 - Generate and transmit permissible prescriptions electronically (eRx)
 - Core 5 - Maintain active medication list
 - Core 6 - Maintain active medication allergy list
 - Menu 1 - Implement drug-formulary checks

e-Prescribing Workflow Template: During Office Visit



Note: Double-click workflow diagram to make edits

e-Prescribing Workflow Template: Medication Refill

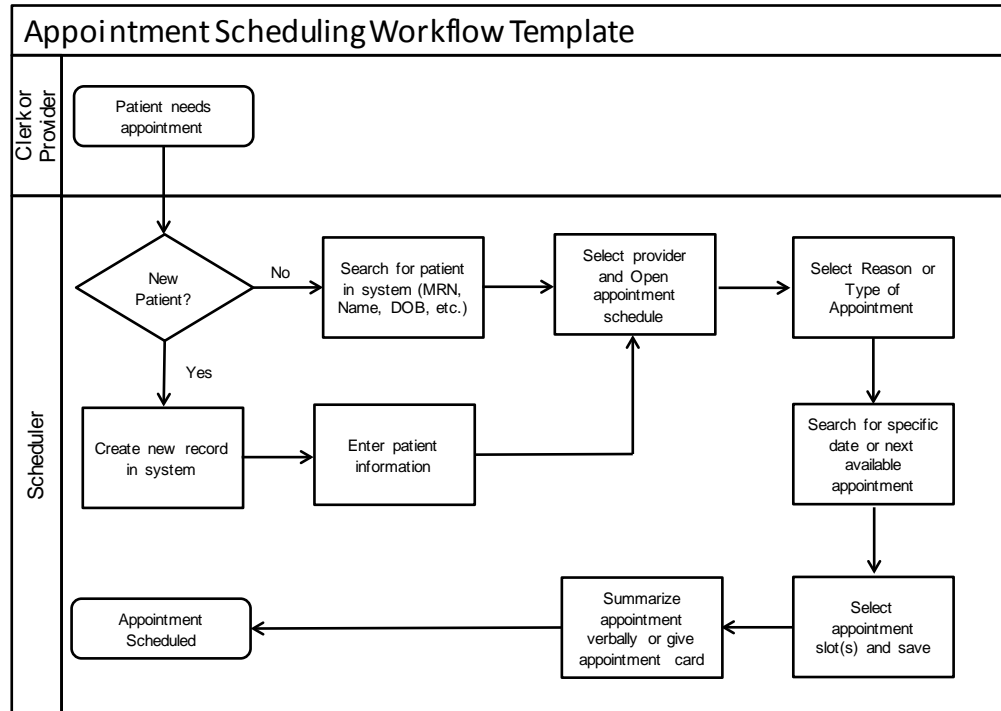


Note: Double-click workflow diagram to make edits

Appointment Scheduling

- **SUMMARY OF MODULE/SECTION:** This section will help practice staff map out the appointment scheduling process during an office visit. This section covers:
 - Finding the patient in the EHR;
 - Creating a new patient record (if applicable);
 - Selecting a reason for an appointment;
 - Finding a time for the appointment; and,
 - Finalizing with the patient.
- **RATIONALE/PURPOSE OF THE SECTION:** Appointment scheduling is likely to vary depending on the communication method (i.e., phone call, post-visit, or email). In addition, interfacing between the practice management system and the EHR will vary depending on the vendor products installed at the practice. It is important to ensure a proper process is in place to sync these two systems.
- **MEANINGFUL USE OBJECTIVES:**
 - There are none that apply with the current stage of Meaningful Use criteria

Appointment Scheduling Workflow Template



Note: Double-click workflow diagram to make edits

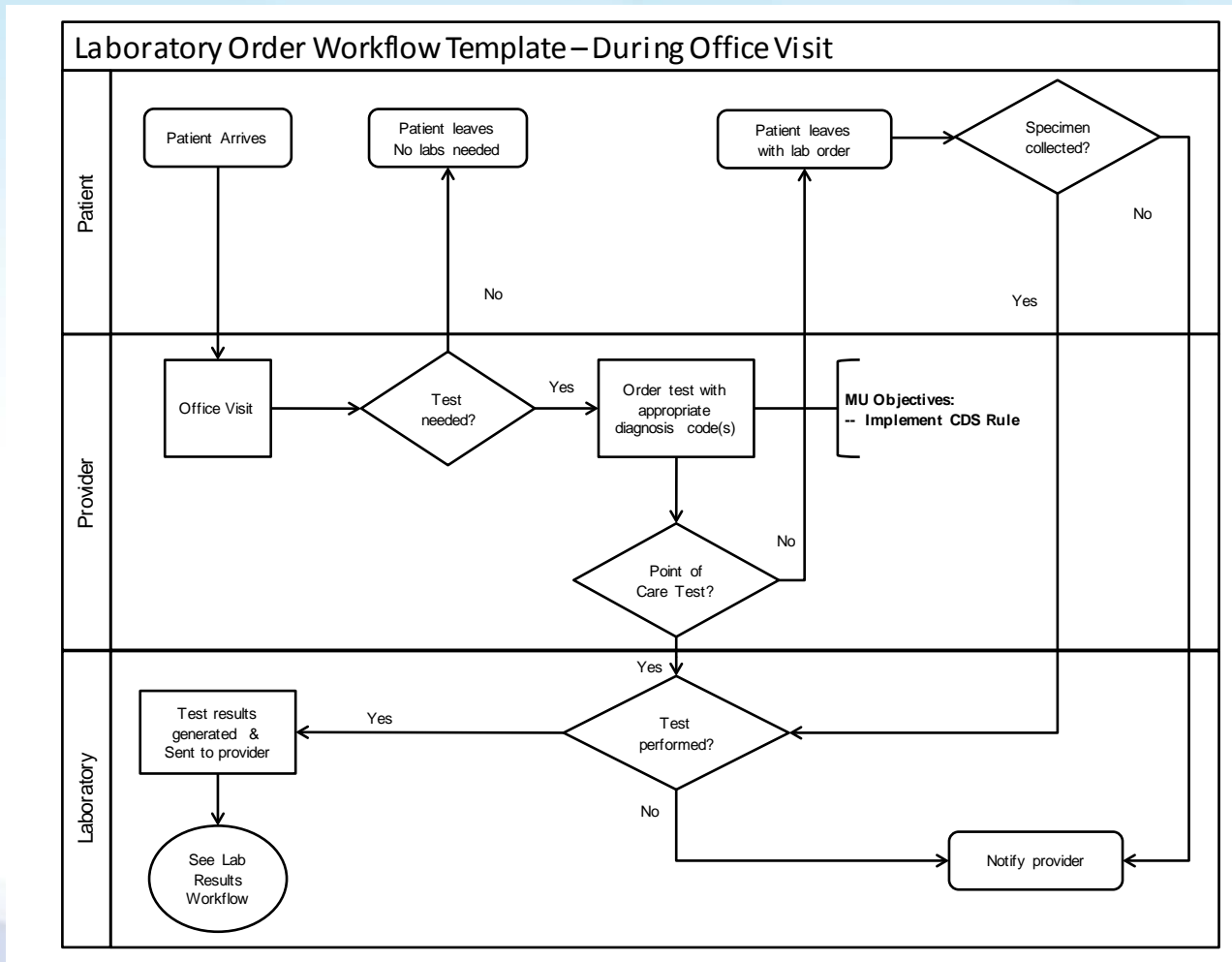
Laboratory Orders

- **SUMMARY OF MODULE/SECTION:** This section will help practice staff map out the laboratory ordering process during an office visit. This section covers three different workflows:
 - **Laboratory Ordering in the Office:** This workflow focuses on what happens to laboratory tests under two different scenarios: 1) the laboratory test is conducted during the office visit; or 2) the patient leaves the office visit with a laboratory test order.
 - **Laboratory Results:** This workflow captures handling of the laboratory results receipt and entry into the EHR.
 - **Laboratory Orders and Results Management:** This workflow focuses on what happens to the results of laboratory orders under three different scenarios: 1) the office staff generate a list of orders; 2) the patient calls the office for results; or 3) the provider receives the results from the laboratory.

Laboratory Orders, continued

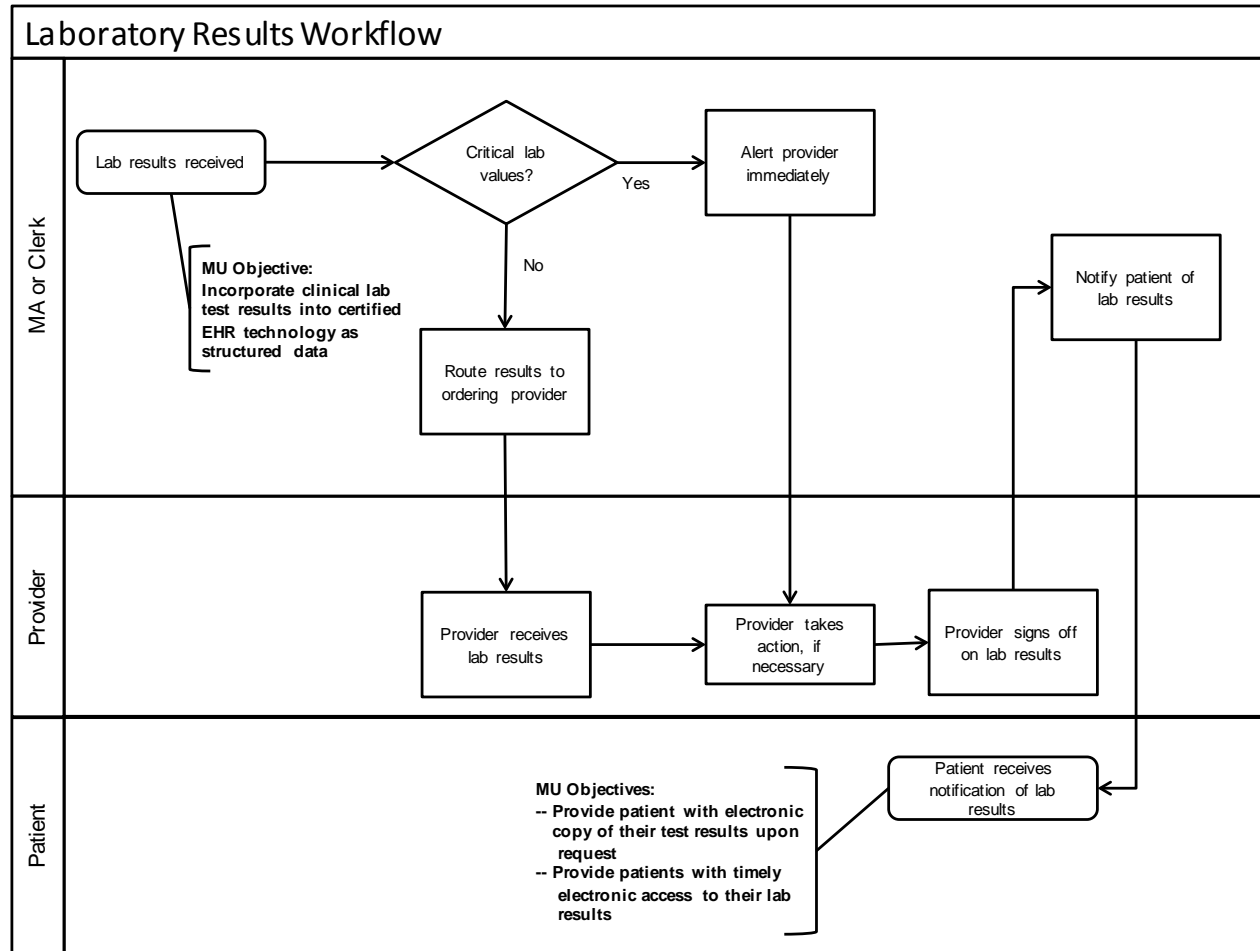
- **RATIONALE/PURPOSE OF THE SECTION:** Laboratory tests are critical component of patient care. Office staff are responsible for ensuring that both the test and the results are completed communicated to the patient and the provider in a timely fashion. Before transitioning to an EHR with electronic laboratory ordering features, mapping out the existing workflow for ordering laboratory tests and tracking the results will help the office staff to identify how the workflow needs to be adapted to accommodate the forthcoming EHR. The office staff responsible for laboratory orders, in collaboration with the implementation team, should imagine each of the steps involved in ordering laboratory tests, tracking their status, and obtaining the results and communicating those results to the patient and provider. An EHR can improve the efficiency and timeliness of laboratory orders by eliminating paper documentation, integrating an current freestanding database with the EHR, or simply eliminating redundancies. Research has shown that between 4 and 23% of lab costs are for redundant testing (Wang 2003, Girosi 2005, Garrido 2005), the majority of which could be avoided by recording the results electronically and sharing that data with other providers.
- **MEANINGFUL USE OBJECTIVES:**
 - Core 11 - Implement one CDS rule
 - Menu 2 - Incorporate clinical lab-test results into EHR as structured data

Laboratory Order Workflow Template: During Office Visit



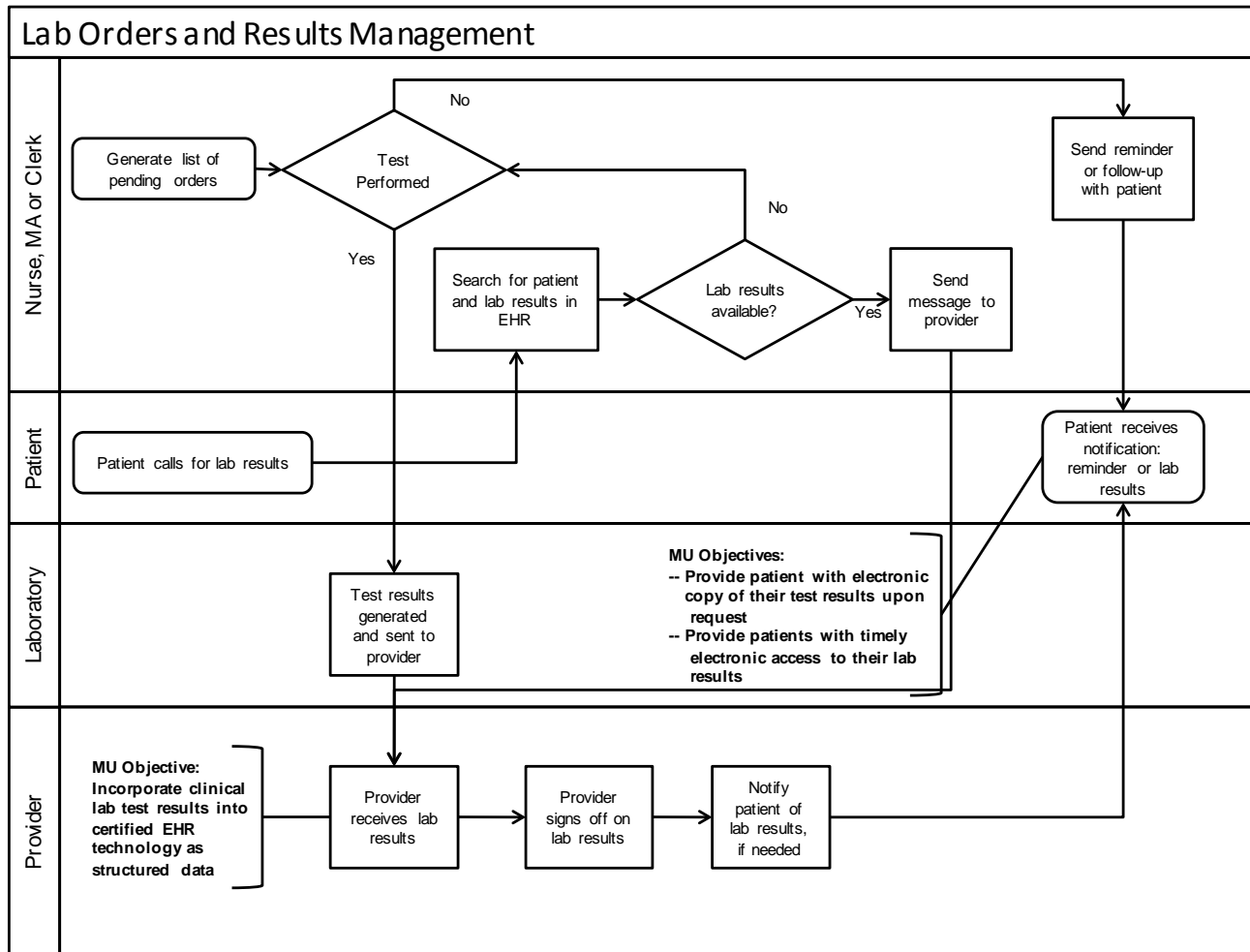
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to make edits**

Laboratory Results Workflow



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Lab Orders and Results Management



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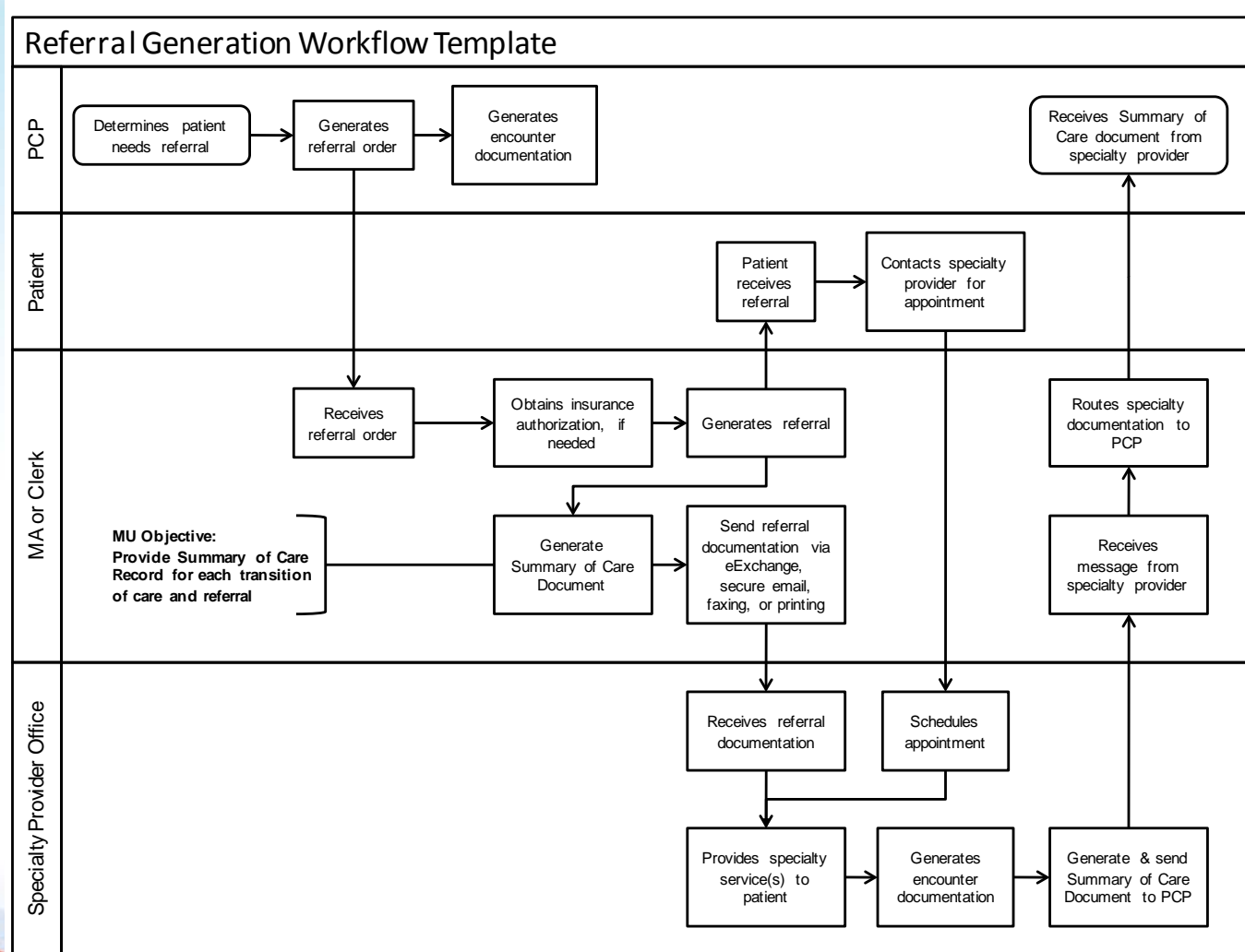
Referral Generation

- **SUMMARY OF MODULE/SECTION:** This section will help practice staff map out the referral generation process. This interactive template focuses on what steps need to be taken to:
 - Generate a referral request by the provider;
 - Create the referral order, including insurance checks and generation of necessary data from EHR;
 - Send the referral order to the referred provider;
 - Visit with the referred physician and patients; and,
 - Communicate results from the referred to the referring provider.

Referral Generation, continued

- **RATIONALE/PURPOSE OF THE SECTION:** A major source of health care fragmentation, duplication and miscommunication is in the transition of care from one provider to another or the co-management of patient care among two or more providers. Office staff are responsible for ensuring that referrals are generated to both the patient and the specialist and that the status outcomes of those referrals or transitions are closely monitored and documented. Before transitioning to an EHR with electronic laboratory ordering features, mapping out the existing workflow for transitions and will help the office staff to identify how the workflow needs to be adapted to accommodate the forthcoming EHR. Staff should identify how and where an EHR can improve the tracking and documentation of referrals by streamlining the point of entry, providing prompts or reminders, and allowing all who need the referral information ready access to it. Research has shown that EHRs can save up to 210 hours per physician per year through use of electronic referral generation (MedicaLogic).
- **MEANINGFUL USE OBJECTIVES:**
 - Menu 8 - Provide a summary *of care record* for each transition of care or referral

Referral Generation Workflow Template



Office Discharge

- **SUMMARY OF MODULE/SECTION:** This section will help practice staff map out the office visit discharge process, including steps that need to be taken post-visit to ensure the practice meets Stage 1 Meaningful Use criteria. This interactive template focuses on what steps need to be taken to:
 - Complete visit documentation;
 - Provide the patient with all necessary orders and information, including electronic transmittal depending on the type of order;
 - Schedule any follow-up appointments; and,
 - Send any public health data to the necessary local, state, and/or federal agencies.

Office Discharge, continued

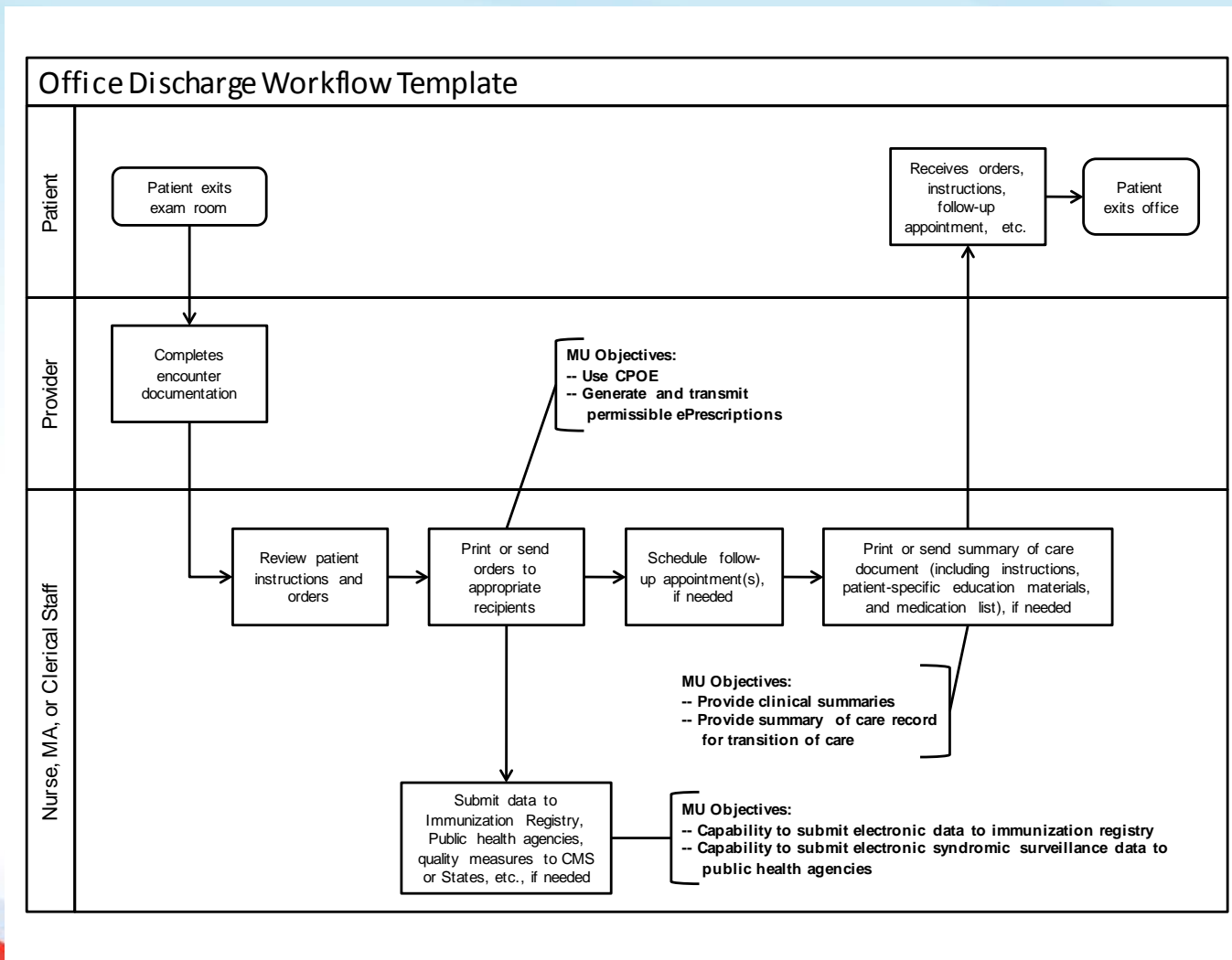
- **RATIONALE/PURPOSE OF THE SECTION:** The office visit discharge largely encompasses those activities that provider patients with any data or orders that are ready when they are leaving. By the Stage 1 Meaningful Use criteria, clinical summaries (Core 13) are required within a specified time and are not necessarily part of the discharge process. Care transition summaries (Menu 8), which will be required by Stage 2 criteria, do not have a time requirement, and may be transmitted at any time prior to the patient's first appointment with the new provider (likely when the referral order is completed). In addition, submission of immunization data (Menu 9) or syndromic surveillance data (Menu 10), which are also to be required by Stage 2, do not require that data be transmitted at the duration of any appointment, or at any time at all; they are only required to test this capability to support future requirements in this arena. It is important to note that majority of activities with this workflow can be conducted outside of a patient visit, along with other requirements of Stage 1 Meaningful Use. As these are non-value-added activities (i.e., they don't generate revenue per se), it is important to understand the time it takes to do these activities and how these processes can be streamlined with the adoption of an EHR.

Office Discharge, continued

- **MEANINGFUL USE OBJECTIVES:**

- Core 1 - Use CPOE for medication orders
- Core 4 - Generate and transmit permissible prescriptions electronically (eRx)
- Core 13 - Provide clinical summaries for each office visit
- Menu 8 - Provide a summary of care record for each transition of care or referral
- Menu 9 - Capability to submit electronic data to immunization registries or immunization information systems
- Menu 10 - Capability to submit electronic syndromic surveillance data to public health agencies

Office Discharge Workflow Template



Note: Double-click workflow diagram to make edits