

Intro Level SimEMR® Use Cases

4.2 ADVANCED PROVIDER PROGRAMS

Introduction

This lesson will introduce learners in advanced provider roles (MD/PA/NP) to the inner workings of an electronic medical record system while reviewing and managing a patient case. Learners will review basic order entry, data review, and clinical assessment documentation. The forms and documents within SimEMR®, a system designed exclusively for charting in a clinical simulation context, are a representation of charting elements included in real-world EMR systems.

Learning Objectives

- Navigate components of SimEMR®
- Engage with common medical terminology in an EMR
- Perform basic documentation in an EMR
- Practice basic Provider Order entry
- Incorporate diagnostic testing and review to support clinical decision making

Resources Needed

- SimEMR® login
- Internet access
- Web capable device

Content

- Introduction to common healthcare provider documentation using SimEMR®
- Patient case review

Teaching Strategies

- Tutorial review
- Review of information
- Hands on practice
- Documentation of clinical data

Time

- *15-20 minutes:* Administration: Patient Profile creation
- *20 minutes:* Learner practice
- *10-15 minutes:* Review & evaluate learner work

Patient Case & Scenario Overview

ADVANCED PROVIDER PROGRAMS

Patient Profile Name: Anthony Palermo **DOB:** 06/01/1959

Scenario: Mr. Palermo is a 61-year-old male who presents with possible gastroenteritis. He reports a 3-day history of nausea, vomiting (occurring occasionally) and watery diarrhea (occurring at least 4-5 times daily). He and his wife attended a local outdoor gathering recently and he thought he had gotten food poisoning. Symptoms have not relented; upon arising today, he became lightheaded, and his wife insisted he be seen. He states he did continue his anti-hypertensive as able. He presents to the Emergency department for evaluation.

Profile Overview: The following patient case includes an overview of the scenario, an overview of learner objectives, and administrative steps required to get started. As you review these materials, bear in mind some similar terms. Patient Profile refers to the electronic patient in SimEMR®. Patient case refers to your overall scenario that uses that patient profile.

Profile Objectives: Acclimate the Advanced provider learner to common documentation practices within an Electronic Medical Record, SimEMR®.

Applications for learners, will include, but are not limited to:

- a. Introduction to an EMR: Identifying the importance of using one as well as safety factors
- b. Navigate the components of SimEMR®
- c. Engage with common medical terminology in an EMR

Patient Profile - Anthony Palermo

Getting Started

1. Review the Patient Kit Addendum on pages 12 – 14.
2. Create the Patient Profile in SimEMR®.

Refer to the How To: Create a Patient Profile guide for more detailed directions. Overview instructions to create a patient profile are as follows:

- a. At the SimEMR® login screen enter your username and password. Select **[LOGIN]**.
- b. On the dashboard, select either the **[PATIENT PROFILES]** button, or **[PATIENT PROFILES]** in the left side menu.
- c. Click **[+ CREATE NEW PATIENT PROFILES]** in the top right.
- d. Enter Anthony Palermo information. Select **[CREATE]**.
- e. Navigate to your newly created patient, and select the **[⚙️]** on the patients row. Select **[👤 PERMISSIONS]** from the dropdown menu.

- f. Uncheck the *Locked* box. Select **[SAVE]**.
 - g. Navigate back to Anthony, and select the **[⚙️]** on the patient row. Select **[📄 EDIT]**.
 - h. Select **[+ ADD NEW FORM]** to add all forms according to Anthony's Patient Kit.
3. Identify learner objectives.
4. Create a course to assign the newly created profile to. If you are adding it to an existing course, move to step 5.

Refer to the SimEMR® Quick Start guide pages 2 – 4 for more detailed directions. Overview instructions to create a course are as follows:

- a. On the dashboard, select either the **[MANAGE COURSES]** button, or **[MANAGE COURSES]** in the left side menu.
 - b. Click **[+ CREATE NEW COURSE]** in the top right.
 - c. Enter relevant course information and select **[CREATE]**.
 - d. Navigate to the newly created course, and select the **[⚙️]** on the course row. Using this menu, you can add learners, instructors, and edit the course.
5. Assign the patient profile to learners.

Refer to the SimEMR® Quick Start guide pages 10 – 14 for more detailed directions. Overview instructions to assign a patient profile to learners are as follows:

- a. On the dashboard, select either the **[PATIENT ASSIGNMENTS]** button, or **[PATIENT ASSIGNMENTS]** in the left side menu.
 - b. Select the course you are assigning Anthony to. Click **[SELECT COURSE]**.
 - c. Locate Anthony and select **[CONTINUE TO NEXT STEP]**.
 - d. Select simulation time. Click **[CONTINUE TO NEXT STEP]**.
 - e. Add any additional goals and options to the profile. Click **[CONTINUE TO NEXT STEP]**.
 - f. Select **[CONFIRM ASSIGNMENT]**.

6. After learners have completed the assigned patient, review their work.

Refer to the SimEMR® Quick Start guide pages 17 – 18 for more detailed directions. Overview instructions to review learner work are as follows:

- a. On the dashboard, select either the **[LEARNER'S WORK]** button, or **[LEARNER'S WORK]** in the left side menu.
 - b. Click **[REVIEW BY PATIENT]** to review all learners in the course at once. Click **[REVIEW BY LEARNER]** to review individual learners.

Learner Assignment: Patient Profile - Anthony Palermo

This lesson will introduce the advanced practice learner to adding clinical assessment data to SimEMR®. Common terminology and experiences will be provided. The forms and documents within SimEMR®, a system designed exclusively for charting in a clinical simulation context, are a representation of charting elements included in real-world EMR systems.

This lesson will focus on seeking and adding supportive information in SimEMR® to help clinicians identify critical information to include in a physical assessment and supportive documentation in a number of form options.

Learning Objectives

- Identify the importance of using an EMR
- Safety factors required of an EMR
- Navigate the components of SimEMR®
- Engage with common medical terminology in an EMR
- Perform basic documentation in SimEMR®

Resources Needed

- SimEMR® login
- Internet access
- Web capable device

GENERAL INFORMATION

EMR BENEFITS

Clinical documentation and record retention are critical facets of health care. The ability to easily locate information is often hampered by inability to locate past data, missing pages in the chart or legibility issues when confronted with a paper medical record.

One of the key benefits of using an electronic health record is the ability to find information centrally located in one document, rather than through multiple paper records in various locations. The development of Computerized Physician Order Entry (CPOE) has enhanced expediency and accuracy of care, but still has some limitations based on the providers capability of utilizing the system to its best benefit.

While real EMR documentation programs are variable in format and presentation, the ability

for learners to practice the process of data search and documentation inclusion into an electronic record will provide basic repetitive practice which can be used in any format.

EMR REQUIREMENTS

Patient safety and security of data are two key variables required in any EMR format.

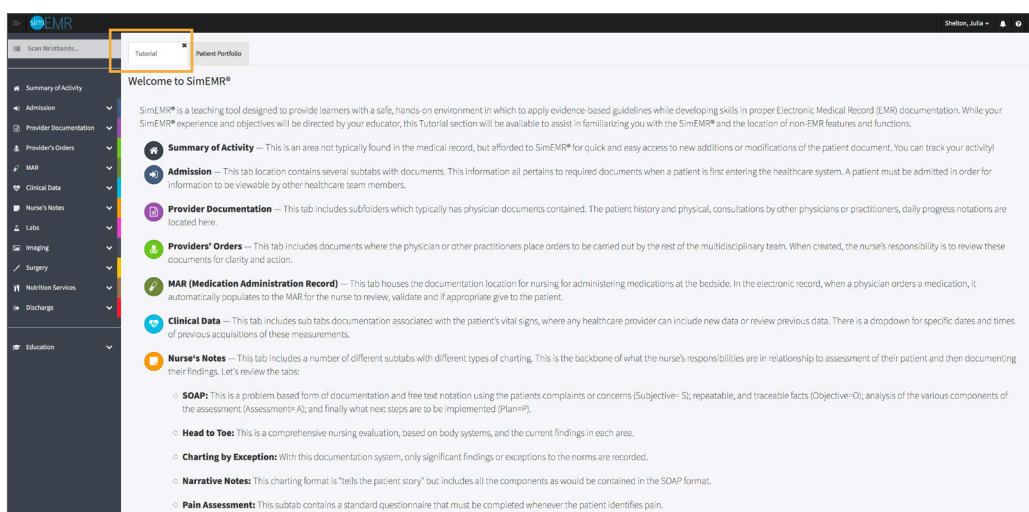
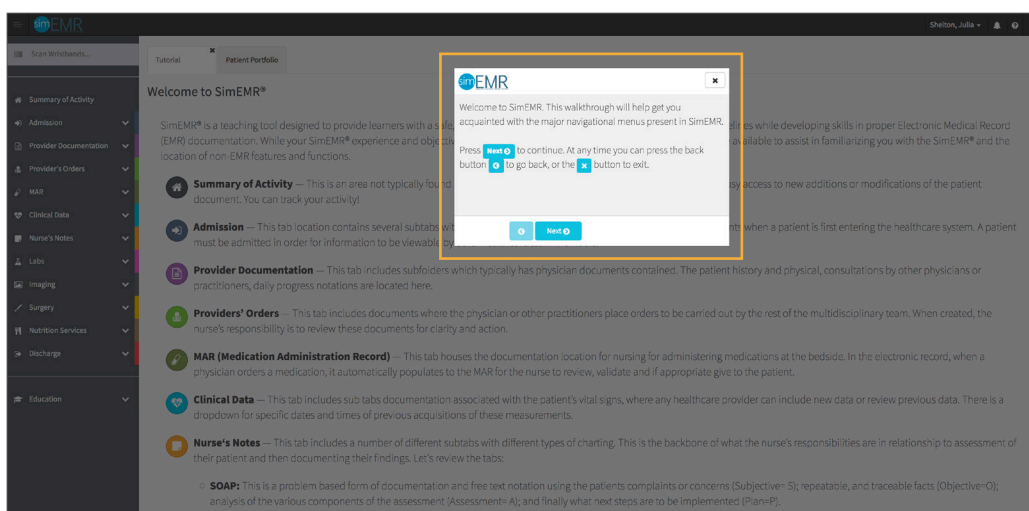
The ability to maintain patient confidentiality is critical. The U.S. Congress enacted the Health Insurance Portability and Accountability Act (HIPAA) in 1996 in order to protect private healthcare and medical information for patients.

Some required safety factors included in any EMR include access restrictions to the program, individual logins, and timeouts for inactivity in attempts to limit inappropriate access to a person's personal information.

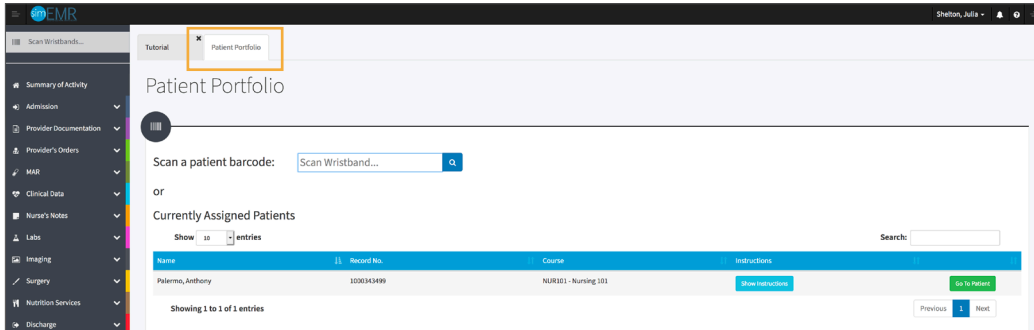
Learner Actions: Introduction to an Provider Documentation

Following your instructor's guidance, you will proceed to gain access to SimEMR® to investigate medical record information. Prior to moving forward your instructor will have provided you instructions on how to create your account as a new user in SimEMR®. You must have an individual account to access the product (this is a security feature).

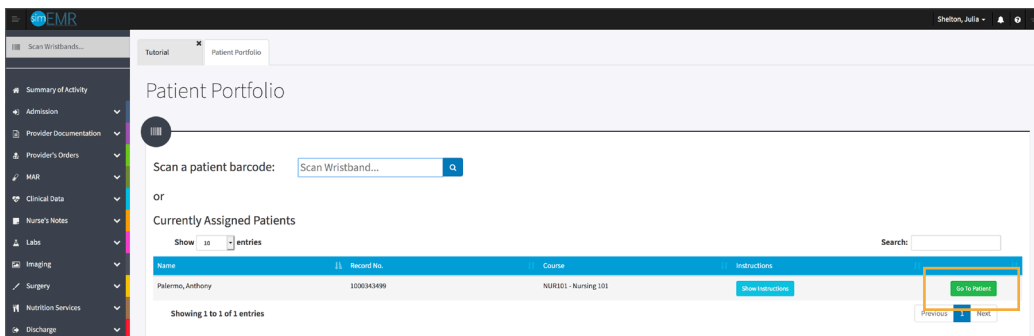
1. Open SimEMR® in a web browser.
2. At the login screen, enter your username and password. Select **[LOGIN]**.
3. If needed, review the tutorial options presented in the *Tutorial* tab.
4. Review and familiarize yourself with the interface and content.



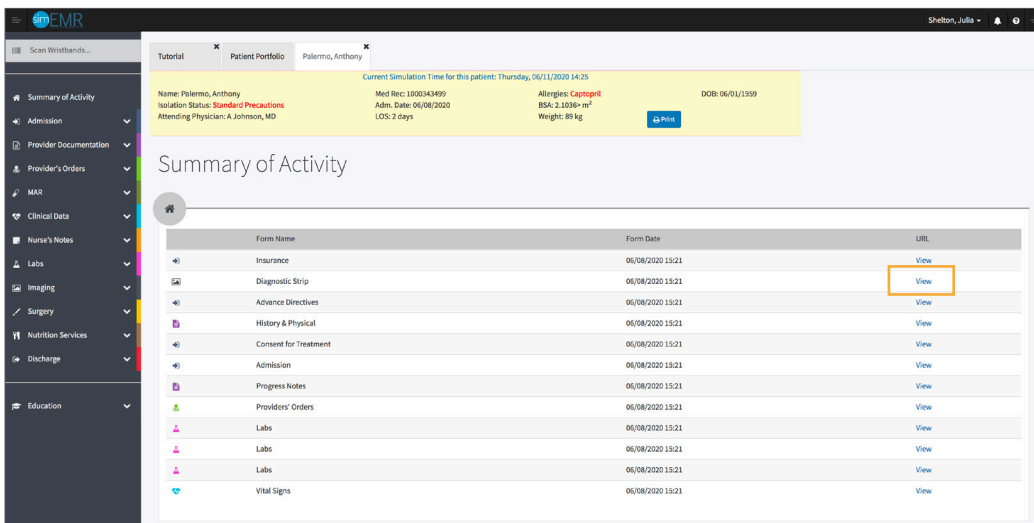
5. Locate the *Patient Portfolio* tab. This will house any patient profile records assigned to you. Current assignments will be presented at the top of the page, any past completed assignments will be located at the bottom of the page for reference and review at any time.



6. Locate Anthony Palermo and select **[GO TO PATIENT]**.



7. You will be redirected to the *Summary of Activity* page, which includes any recent changes or additions to the patient profile history. To review a new piece of data, click the **[VIEW]** hyperlink at the far right on any document listed.



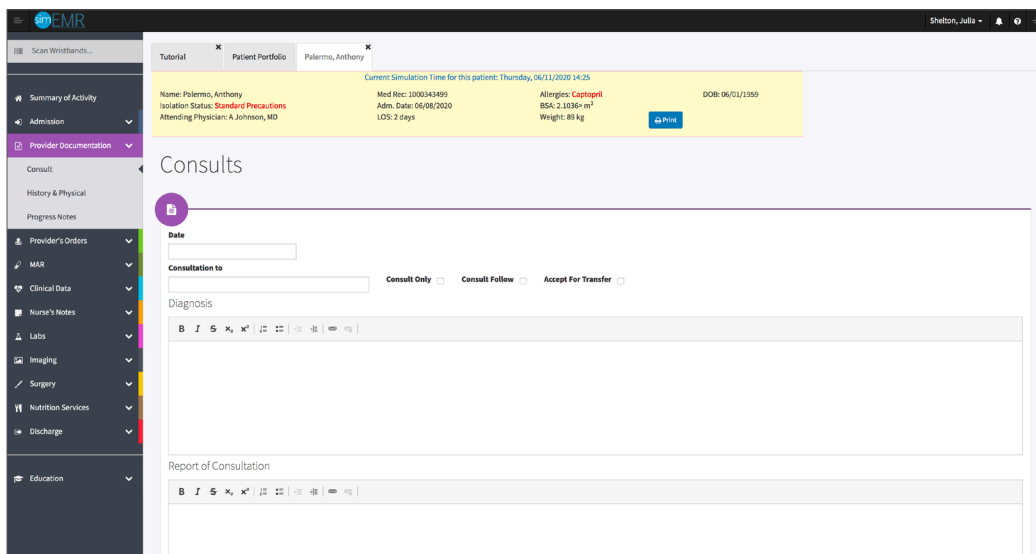
8. Validate Anthony Palermo is the chart you are working in.

Note that Mr. Palermo was recently admitted to the Medical Surgical Unit and may not have a full healthcare record as of yet.

9. Click **[PROVIDER DOCUMENTATION]** from the left menu and then select **[CONSULT]**. Note the other forms located in the menu. These forms are typically completed by the MD/PA/NP provider.

The *Consult* form is a free text option for inclusion of information by a collaborating specialist or referring provider. Professional impressions and supportive care or treatment recommendations are presented in these forms. In lieu of specific forms for additional providers in SimEMR®, you may find notes from nutrition, PT/OT or surgical professionals located in this form tab.

Mr. Palermo as a new admission, has not had consultative services as yet, but as his case continues, options for Gastroenterology may be needed.

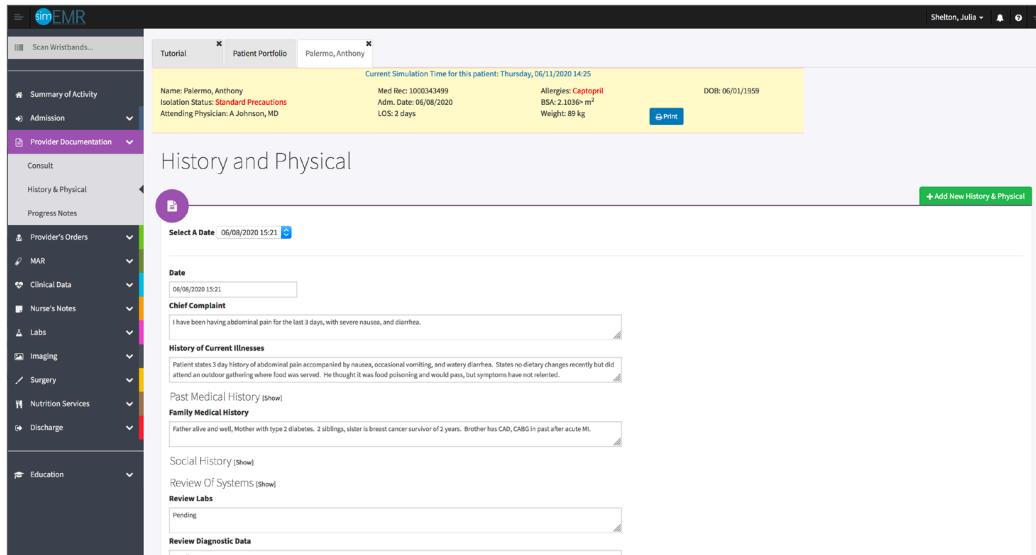


The screenshot displays the SimEMR interface for patient Anthony Palermo. The left sidebar menu is open to 'Provider Documentation', with 'Consult' selected. The main content area shows the 'Consults' form. At the top, patient information is displayed: Name: Palermo, Anthony; Med Rec: 1000343899; Allergies: Castor Oil; Adm. Date: 06/08/2020; BSA: 2.1036 m²; LOS: 2 days; Weight: 89 kg; and DOB: 06/01/1999. The form includes fields for 'Date', 'Consultation to', and 'Diagnosis'. Below these are radio buttons for 'Consult Only', 'Consult Follow', and 'Accept For Transfer'. There are also text areas for 'Report of Consultation' and 'Diagnosis' with rich text editors.

10. Under **[PROVIDER DOCUMENTATION]** in left menu, select **[HISTORY & PHYSICAL]**. Note the other forms located in the menu.

The *History & Physical* form is a full health history created by the MD, NP, or PA, which involves questioning the patient's current and past status as well as a physical exam. This form has a number of components that make up a comprehensive collection of patient specific data. Mr. Palermo will need his H&P completed in this activity.

Note the **[SHOW/HIDE]** options which when enabled will expose more options for inclusion of patient specific information. As you begin working with the form, review the options presented to increase your knowledge. Note that to the far right of the form, a new H&P can be added at any time by clicking the **[ADD NEW HISTORY & PHYSICAL]** button.



Select A Date: when creating a H&P form, clicking here will select the current date and time as a default, however you can change it using the calendar

Chief Complaint: verbalized information as to why the patient is presenting for care, or what the problem is; Mr. Palermo is reporting signs of gastroenteritis after attending a picnic 3 days prior to presentation

History of Current Illness: more specifics as to why the patient is presenting for care, such as when the symptoms began, previous contributing factors, and any measures taken prior to seeking care are some items to include here

11. Click **[SHOW]** next to *Past Medical History*.

Adult Diseases/Illnesses: includes any past adult medical history; Mr. Palermo has a history of hypertension and extremity osteoarthritis

Childhood Diseases/Illnesses: includes childhood illnesses, or other problems; this section is not pertinent to Mr. Palermo's presentation

Immunizations: includes childhood and adult vaccinations

Operations/Procedures: past surgical or investigative procedures; Mr. Palermo has none

12. Click **[HIDE]** next to *Past Medical History* if needed. Note *Family Medical History*, which includes all pertinent history regarding the patient's maternal and paternal parents, and siblings.

Important information includes current state of health of family members and/or deaths of same. Mr. Palermo's history includes mother with type 2 diabetes, sister with breast CA 2 years survivorship, and brother with cardiac history of CAD and CABG.

13. Click **[SHOW]** next to *Social History*, which includes options referring to personal habits such as alcohol, tobacco, and drug use.

An additional text box is available that can include employment, living situation, and supportive information regarding education to cessation efforts and education for addictive practices such as a tobacco.

14. Click **[SHOW]** next to *Review of Systems*, to expand more information related to the physical exam performed.

First are the patient's current vital signs, height, and weight. This information may have been included in the admission documents or the vital signs form. New vital signs obtained by the advanced provider should be included here.

Skin: includes skin appearance, temperature, any abrasions, injuries, or rashes

Neck: includes any visible or palpable aberrations regarding the neck; tracheal position, swallowing difficulties, and abnormal movements are some possible assessed options

Respiratory: includes the respiratory assessment and any abnormalities related to the lungs; breathing pattern, lung sounds, and cough are assessment variables to investigate

Cardiovascular: includes the cardiac evaluation; heart sounds, peripheral perfusion, pain (current and past) are sample assessment variables to consider

Gastrointestinal: includes the GI assessment; abdominal appearance, palpated abnormalities of the abdomen and liver, bowel sounds, and eating habits are options

Genitourinary: includes information related to the urinary tract and genitalia history; voiding, urinary characteristics, and prostate concerns are some options

Gynecological: involves female gynecologic and obstetric history and/or current concerns

LMP: Denotes "Last Menstrual Period," typically identified with the gynecologic evaluation

Pregnancy Assessment: includes Yes or No radio buttons for response from the patient

Musculoskeletal: includes any specifics regarding muscle strength, assessed parameters for movement and joint function, gait, skeletal abnormalities if present; Mr. Palermo notes hip and knee arthritis when questioned

Neurologic: includes information regarding the central nervous system evaluation both current and historic; level of consciousness, awareness, pain, and nerve response upon testing, are some evaluation options

Psychiatric: includes any mental health concerns, such as bipolar disorder, depression, autism spectrum disorder, current mental state, and behavior

Drug Sensitivity: includes any medications or alternatives that the patient may have an allergy or sensitivity to

Communicable Diseases: includes any current or past transmissible infections such as tuberculosis, or the Flu

The screenshot shows a 'Review of Systems' form in an EMR system. The form is titled 'Review of Systems' and includes sections for Skin, Neck, Respiratory, Cardiovascular, Gastrointestinal, Genitourinary, Gynecological, LMP, Pregnant, Musculoskeletal, Neurological, and Psychiatric. The Musculoskeletal section is highlighted, showing the text: 'MSE with full strength and no limitations to movement. Identifies some hip and knee "arthritis"'. The form also includes fields for Age, Height, Weight, Temperature, Pulse, Respiration, Systolic, and Diastolic.

15. Note the other options in the *History & Physical* form.

Review Labs: free text that provides the option for the provider to include new lab results pertinent to the patient's current and past conditions; Mr. Palermo will have lab results available for review and impression

Review Diagnostic Data: free text that can include provider review of any testing such as X- rays, Electrocardiograms, and CT Scans pertinent to the current presentation; Mr. Palermo will have Diagnostic testing for review

Review Medications: includes the provider investigation to the patient's current medication regime, both prescribed and over the counter medications; Mr. Palermo has a cardiac history and is prescribed Metoprolol for his blood pressure management

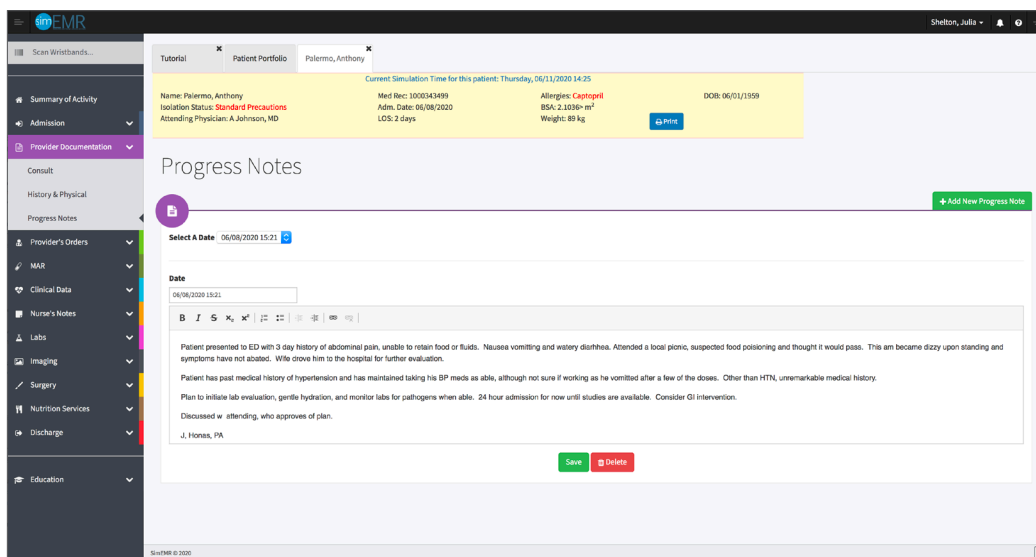
Impression: culminates in the provider review of the current physical assessment and patient report symptoms to define the presenting problem

Treatment Plan: identifies the providers intent on future therapy, laboratory testing, and collaboration with other providers if needed

Signature and Date: includes the provider completing the documentation in the history and physical form; in some instances, an attending physician may need to validate the trainee's findings for comprehensiveness and impression prior to proceeding with the plan

16. Under **[PROVIDER DOCUMENTATION]** in left menu, select **[PROGRESS NOTES]**.

This is a general communication document that is short in format or can be used for daily updates as the patient care situation expands over days for ongoing communication of care and patient status. Note Mr. Palermo was seen in the ED prior to admission to the floor and has a documented progress note from the initial physician provider.



The screenshot displays the SimEMR interface for patient Anthony Palermo. The left sidebar shows the navigation menu with 'Provider Documentation' selected and 'Progress Notes' highlighted. The main content area shows the 'Progress Notes' form for patient Palermo, Anthony. The patient's information is displayed at the top, including Name, Med Rec, Adm. Date, LOS, Allergies, BSA, Weight, and DOB. The form includes a 'Select A Date' dropdown set to 06/08/2020 15:21, a 'Date' field, and a rich text editor with the following text: 'Patient presented to ED with 3 day history of abdominal pain, unable to retain food or fluids. Nausea vomiting and watery diarrhea. Attended a local picnic, suspected food poisoning and thought it would pass. This am became dizzy upon standing and symptoms have not abated. Wife drove him to the hospital for further evaluation. Patient has past medical history of hypertension and has maintained taking his BP meds as able, although not sure if working as he vomited after a few of the doses. Other than HTN, unremarkable medical history. Plan to initiate lab evaluation, gentle hydration, and monitor labs for pathogens when able. 24 hour admission for now until studies are available. Consider GI intervention. Discussed w attending, who approves of plan. J. Homes, PA'. The form also includes 'Save' and 'Delete' buttons and an 'Add New Progress Note' button.

17. For any of the forms discussed, add new data to gain comfort.
18. Close the patient chart by clicking the X on the *Anthony Palermo* tab.
19. Logout by locating the dropdown with your name at the top right of the page, select *Sign Out*.

Patient Kit Addendum

ANTHONY PALERMO

Name: Anthony Palermo **DOB:** 6/01/1959 **Gender:** M_x F__ **Age:** 61
Race: Caucasian **Weight:** 89 kg/195.8 lbs **Height:** 179 cm/5'10"
Religion: Methodist **CODE STATUS:** Full **Advance Directive:** Y_x N__
Major Support: Josie, wife **Phone:** 654-999-0000 **Isolation Status:** Std Precautions

Allergies & Reactions: CAPTOPRIL: Shortness of breath and tongue swelling.

Immunizations: Childhood only

Attending Physician/Team: Andrew Johnson, MD

Primary Diagnosis: Gastroenteritis, hypovolemia

History of Present Illness: Patient states 3-day history of abdominal pain accompanied by nausea, occasional vomiting, and watery diarrhea. States no dietary changes recently, but did attend an outdoor gathering where food was served. He thought it was food poisoning and would pass, but symptoms have not relented.

PMH: Hypertension, Osteoarthritis

Surgeries/Procedures: NONE

Social History: Married to wife Josie Palermo for 39 years, 2 children not living in the home. Denies tobacco and drug use. Rare social alcohol use, "2 beers monthly." Couple live in a single story home in local area.

Data: Blood pressure: 98/50, Heart Rate: 100, Respirations: 20, Temp: 38.8° C

Review of Systems:

CNS: PERRLA, follows commands. Denies visual or auditory changes recently. No fall history. Ambulation not tested but patient walked into triage on his own. Hand grasps and pedal pushes = in strength. Admits to some occasional hip & knee pain due to arthritis. **Pt became lightheaded this am when arising**, prompting wife to bring him in for evaluation. No history of lightheadedness prior to this event.

Cardiovascular: Regular rate and rhythm, extrasystoles noted. Peripheral pulses = throughout and weak. No edema noted. Denies chest pain prior to event or current. Skin intact without abrasions. Capillary refill delayed at 3+

Pulmonary: Lungs clear to auscultation, no oxygen in use presently. Denies cough or shortness of breath during event.

Gastrointestinal: **Abdomen rounded, slightly tender to palpation in lower quads. Hyperactive bowel sounds noted in all quads. States initial event started with nausea, and progressed to frequent watery stools 4-5 x day.** Tolerating small fluids initially and has been taking his antihypertensive when able. Attended picnic and anticipated food poisoning was cause of this, but that was 4 days ago.

Hepato/Renal: States voids without difficulty

Endocrine: No history of diabetes or thyroid issues

Hematologic: Non-contributory

Musculoskeletal: Hand grasps = and full strength, dorsi-plantar flexation is equal and full.

Integumentary: Skin is warm and dry, intact without bruising or abrasions noted

Developmental: N/A, well developed male, behavior is appropriate to situation

Psychological: Noncontributory at present

Current Medications:

Patient verbalized medications

Medication (Generic/Trade)	Dose Available	Dose Ordered	Route	Frequency	Parameters/ Instructions	Provider Ordering
Metoprolol (LOPRESSOR)	25 mg	same	PO	2x Daily		Johnson
Aspirin (baby)	81 mg	same	PO	Daily		Johnson

Laboratory Values, Radiology, or Diagnostic Testing:

Arterial Blood Gas	Chemistry	Chemistry	Hematology	Microbiology	Toxicology
pH:	Na:	AST:	WBC:	Blood C/S:	Dig:
paO2:	K:	ALT:	Hgb:	Urine C/S	ETOH:
pcO2:	Cl:	Amylase:	Hct:	Sput C/S	Opioids:
HCO3:	Co2:	Lipase:	Platelets:	VRE:	Coc:
BE/D:	BUN:	Tot Prot:	ESR:	MRSA:	Amph/Meth:
Lactate:	Cr:	Albumin:	Other:	C-Diff:	PCP;
PA Sat:	Ca:	LDL:		GNR:	THC:
Coagulation	Mg:	HDL:	Other Tests	MDRO:	Lidocaine:
PT:	Phos:	Trig:	CBS:	VDRL:	MetHgb:
PTT:	Gluc:	CPK total:		GBS:	
INR:	HgA1C:	CPK MB:			
d-Dimer	Lactate:	Troponin:			

CXR:

CT/MRI:

US:

EEG:

ECG: Pending Order

Other:

SimEMR® Forms

Below contains an explanation of how the patient is entered into SimEMR®, as well as the reasoning behind each of the patient forms created as a part of that process.

LAB TIP



Simulation Start is the time the student first begins the encounter. This notation is part of SimEMR's innovative SimTime™ system. *Simulation Start* will be replaced in the patient's chart by whatever time the encounter begins, and all other dates are described relative to that time. For example, if an encounter begins 04/15/2017 at 13:00, an event with a time of 1 day before simulation start would display a date of 04/14/2017.

At Simulation Start

Purpose: All activities are designed to allow the learner to evaluate initial findings

Insurance

Description: All insurance information is documented including the patient name, address, employer and employer phone

Diagnostic Strip

Description: A Diagnostic Strip report is available

History & Physical

Description: All *Past Medical History*, *Review of Systems* and *Social History* fields are complete

Consent for Treatment

Description: Shows the patient and witness have signed the form

Admission

Description: Info selected include *Standard Precautions* check box under *Isolation Status*, the admitting physicians and diagnosis, as well as *Patient Information*

Progress Notes

Description: The patient's status is documented

Provider's Orders

Description: Order for 25 mg Demo Dose® Lopre 25mg Tablet BID PO Scheduled Hold for SBP < 90, or apical HR < 50., 1000 mL Normal Saline 0.9% Solution 1000mL IV ONCE IV Continuous Infusion, and 4 mg Demo Dose® Ondansetron (Zofran) 2mg Injection 12 HR IV PRN Nausea

Labs

Description: Chemistry, Hematology, and Coagulation labs were all documented

Vital Signs

Description: Vital inputs for include *Temperature* (38.2° C), *Temperature Method* (Tympanic), *Blood Pressure* (98/50), *Blood Pressure Method* (NIBP), *Pulse* (88), *Pulse Location* (Apical), *Oxygen Saturation* (99), *Oxygen Device* (Room Air), *Respirations per Minute* (20)