

# Intro Level SimEMR® Use Cases

## 3.5 HIGH SCHOOL PROGRAMS

### Introduction

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This lesson will introduce learners to basic components and procedures for charting in an electronic medical record system while reviewing and managing a patient case. 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®
- Perform basic documentation in an EMR

#### Resources Needed

- SimEMR® login
- Internet access
- Web capable device

#### Content

- Introduction to 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

## HIGH SCHOOL PROGRAMS

**Patient Profile Name:** Hugo Stone    **DOB:** 05/19/1958

**Scenario:** This is a basic patient case that involves Mr. Hugo Stone, a 62-year-old male who was brought to the emergency room by his wife after multiple bee stings. Mr. Stone was working in his yard where he unknowingly disrupted a nest and was stung by wasps to multiple areas of his upper body. He has developed a growing rash, and started noting shortness of breath, at which point he called his wife for assistance. Mr. Stone has been otherwise healthy to this point.

**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 High School 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
- d. Complete basic documentation practices

### Patient Profile - Hugo Stone

### Getting Started

1. Review the Patient Kit Addendum on pages 10 – 12.
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 Hugo Stone 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 Hugo, and select the **[⚙️]** on the patient row. Select **[📄 EDIT]**.
        - h. Select **[+ ADD NEW FORM]** to add all forms according to Hugo'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 Hugo to. Click **[SELECT COURSE]**.
  - c. Locate Hugo 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 - Hugo Stone

This lesson will introduce you to data entry in a medical record. Common terminology and experience will be provided. Instructors should feel free to adapt the lessons provided to meet their curricular requirements.

As you may be considering a healthcare career, you may find it interesting to know that clinical providers amass a number of different terms to describe a problem, update or other fact that is pertinent to the patient experience. In addition to the medical terminology you are learning as part of your educational program, you will find a number of terms are used in abbreviated form for efficiency. That is not to say that all terms with abbreviations are permissible and/or legal, which is especially true when discussions of medications arise. A number of previously used abbreviations have been removed due to lack of clarity, or actual patient harm occurrences.

Documentation in the clinical record by any healthcare provider is extremely important to be accurate in content, concise and comprehensive. A missed or inaccurate data point can be utilized that may not be accurate and could interfere with patient safety.

In this lesson you will review a number of forms to identify the common medical terms used in Mr. Stone's case, as well locating and translating the potential acronyms or abbreviations you find.

### 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®

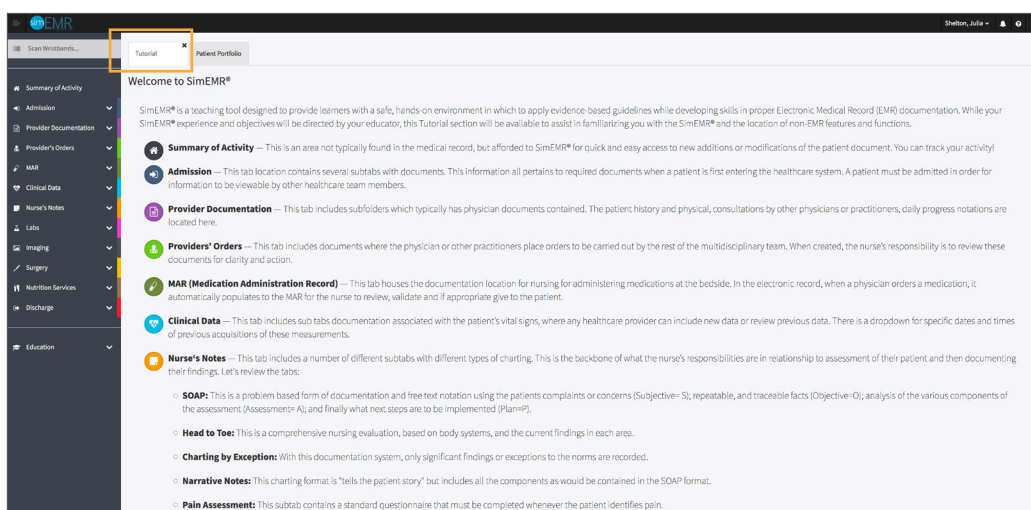
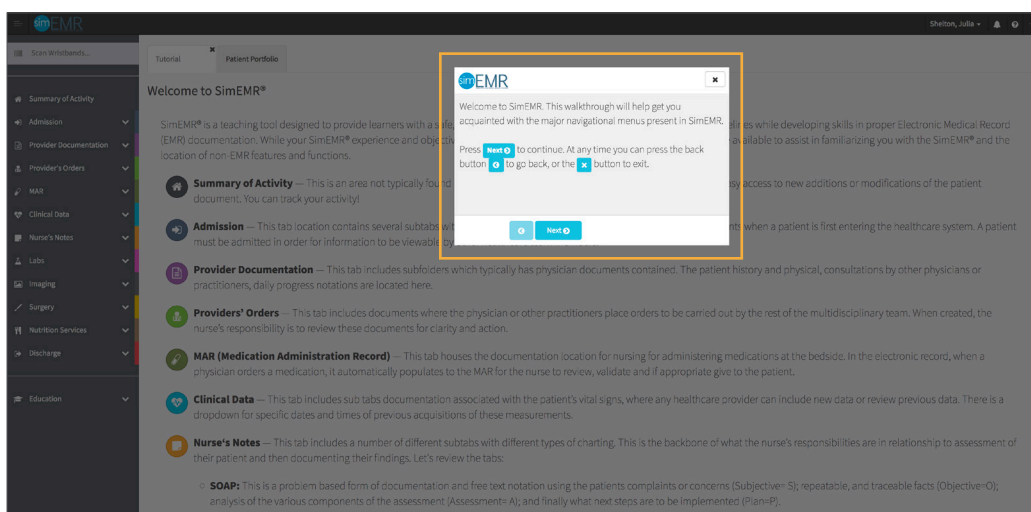
### Resources Needed

- SimEMR® login
- Internet access
- Web capable device

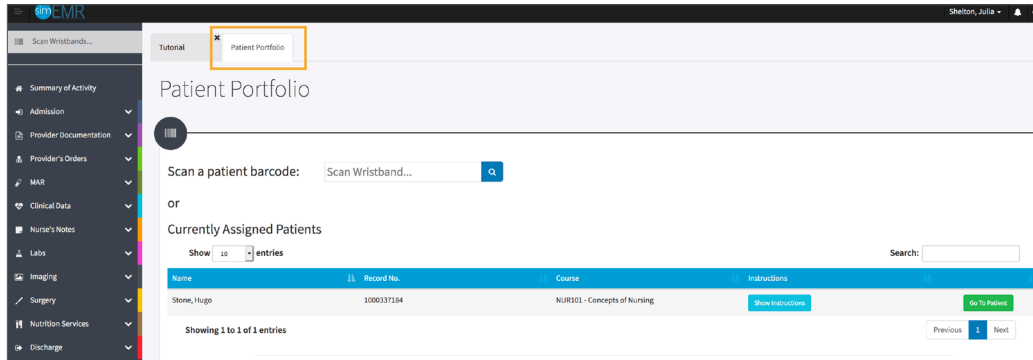
## Learner Actions: Data Mining

This lesson will focus on locating supportive information to help clinicians assess and provide patient care more effectively and safely. For purposes of this lesson we will focus on laboratory and other diagnostic testing pertinent to Mr. Stone's case and care.

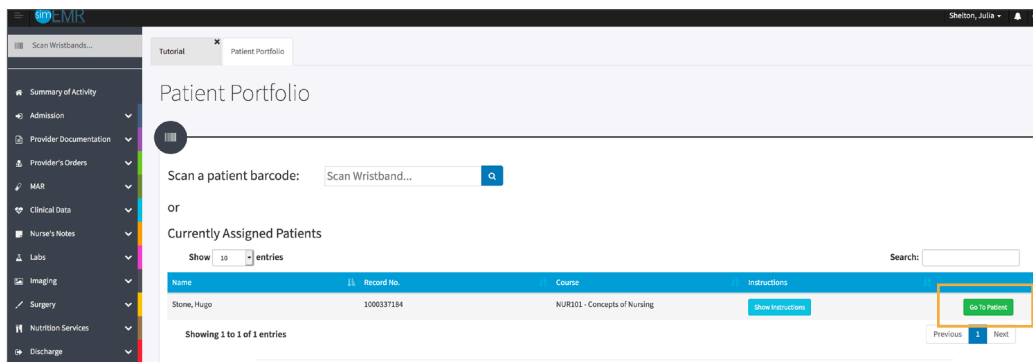
1. Open SimEMR® in a web browser.
2. At the login screen, enter your username and password. Select **[LOGIN]**.
3. If needed, review the tutorial options presented in the *Tutorial* tab.
4. Review and familiarize yourself with the tutorial options in the pop up as well as the *Tutorial* page.



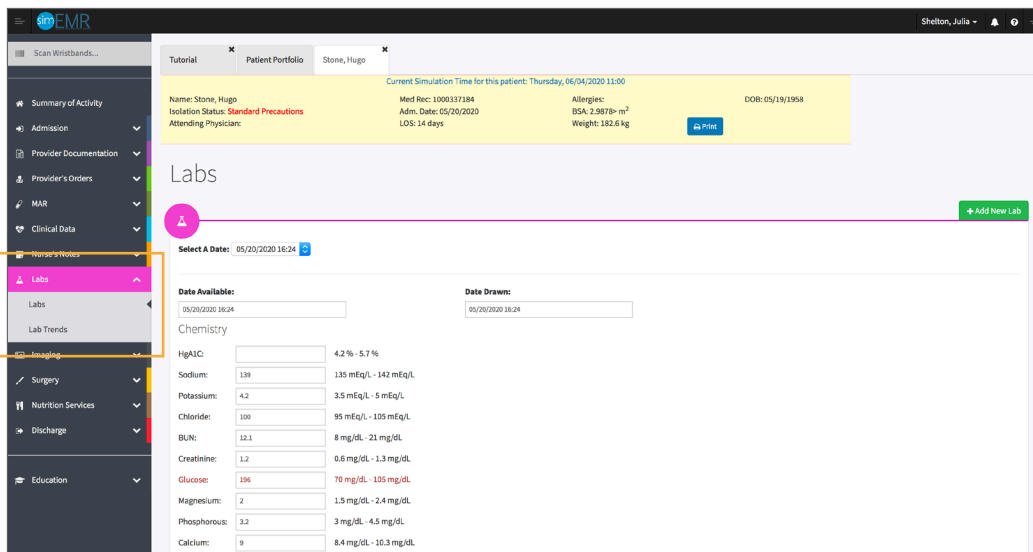
- Locate the *Patient Portfolio* tab. This will house any patient profile records assigned to you. Current assignments will be presented at the top of the page, any past completed assignments will be located at the bottom of the page for reference and review at any time.



- Locate Hugo Stone and select **[GO TO PATIENT]**.



- Click **[LABS]** from the left menu and then select **[LABS]**.



8. Validate Hugo Stone is the chart you are working in.
9. Note *Labs* include any number of different blood or other body fluid or tissue testing that may be obtained for a patient.

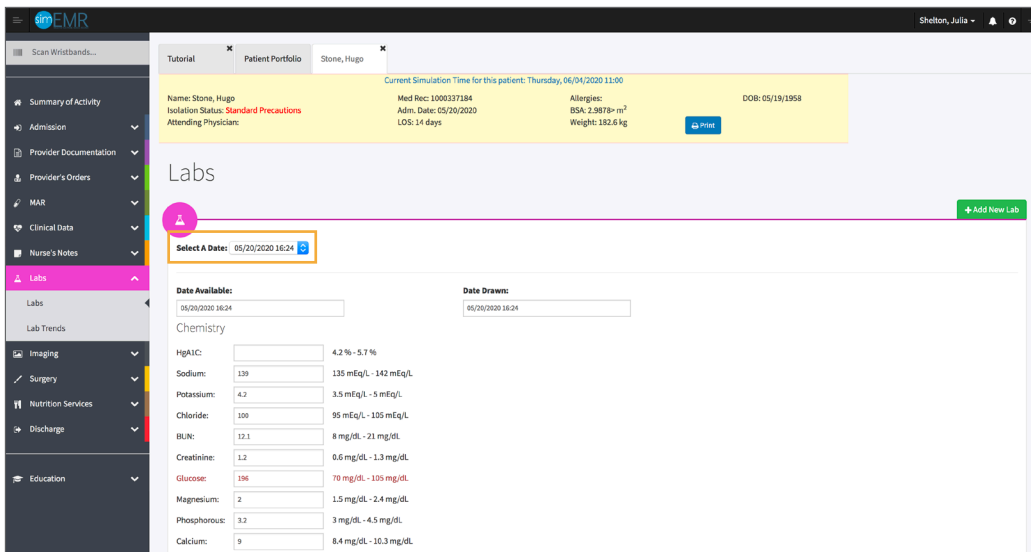
If you are studying the Medical Laboratory Technician pathway, note as the tests are completed, data is fed to the electronic record for each patient, where it can then be reviewed by the clinical providers. Mr. Stone has had several blood tests completed. The page opens to the most recently resulted lab tests.

**Note:** Ranges of normal values associated with SimEMR®. These may/may not align with your reference text or healthcare system; they are the most nationally ranged results Healthcare systems may have slight variances in their normal and critical findings, so it is best to be aware of common *normal values*. When employed in the future, clinicians will follow the directives of their healthcare organization for evaluation.

10. Note the abnormality with Mr. Stone's *Glucose*. This is represented in red order to alert the healthcare provider that additional evaluation or treatment may be needed.

If this were a critical value (surpassing the normal low or high values), the test result would be red in color, including a red triangle indicating more urgency for the practitioner. Mr. Stone does not have this indicator at present.

11. Click the *Select a Date* field. Click any of the dates to see other laboratory data.



As new laboratory values are added to the EMR, the clinician can be notified in a number of ways. In the case of SimEMR®, an alert will propagate in the upper right banner bar on the *Notification* bell icon.

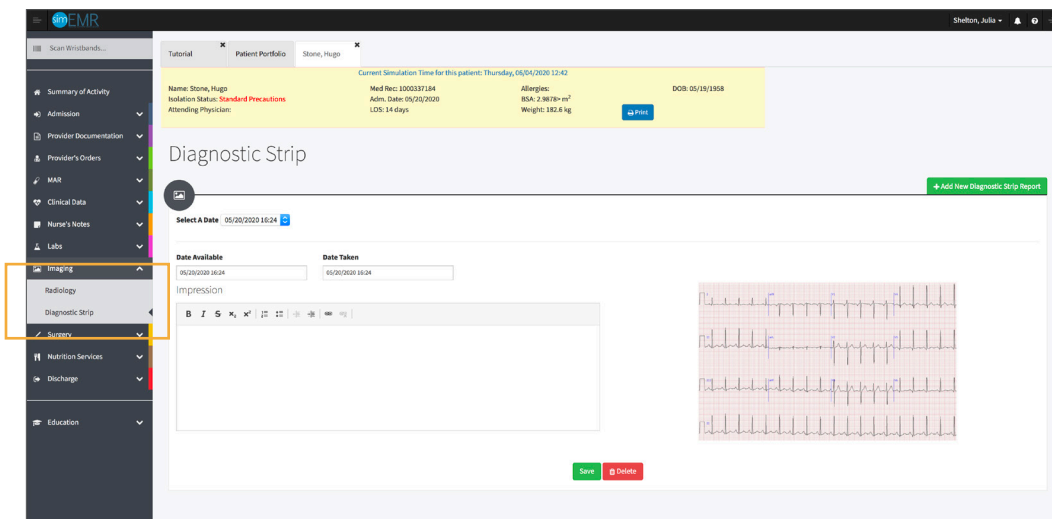
12. Click **[LABS]** from the left menu and then select **[LAB TRENDS]**. Review any Lab data

Lab Trends houses all laboratory data completed on a patient to date for comparison day by day, hour by hour, etc.

Mr. Stone is newly engaging the healthcare system so he does not have any tests for comparison at this time, but be aware of this option should your instructor assign you a different case study that is more involved.

Note, should the RN or CNA obtain bedside laboratory testing to be added to the medical record if ordered by the physician, the **[ADD NEW LAB TEST]** option is available.

A series of options for testing and the type of test are available. Typical bedside tests include Capillary Blood Glucoses (also called Metered Blood Sugars), a form of point of care testing.



13. Click **[IMAGING]** from the left menu and then select **[RADIOLOGY]**.

**Electrocardiogram (ECG or EKG):** is revealed for Mr. Stone, completed by a technician or clinical staff member on arrival to the hospital due to the patient's reported cardiac history.

Note the date and time the testing was completed as well as the Impression; this is a result of the findings based on an expert medical reviewer skilled at ECG evaluation.

14. Click **[IMAGING]** from the left menu and then select **[DIAGNOSTIC STRIP]**.

This area houses X- ray testing completed for a patient. Mr. Stone has not had any radiology tests at this time, but another patient you may be assigned could have a test for review.

For clinical staff of any discipline caring for a patient, it is important to be aware of any new or current laboratory findings that will impact the patient physical condition and for corrections as quickly as possible if need to assure the best patient outcome.



Review of clinical data on a frequent basis enables this, and especially important is comparison of trends to assure the patient is progressing in the healthcare plan.

15. Close the patient chart by clicking the X on the *Hugo Stone* tab.
16. Logout by locating the dropdown with your name at the top right of the page, select *Sign Out*.

# Patient Kit Addendum

## HUGO STONE

**Name:** Hugo Stone                      **DOB:** 5/19/1958                      **Gender:** M\_x F\_\_                      **Age:** 62  
**Race:** Caucasian                      **Weight:** 69 kg/137 lbs                      **Height:** 165 cm/5'5"  
**Religion:** Catholic                      **CODE STATUS:**                      **Advance Directive:** Y\_\_ N\_\_  
**Major Support:** Mary, wife                      **Phone:** 814-555-1212                      **Isolation Status:** Std Precautions

**Allergies & Reactions:** None Known

**Immunizations:** Tetanus booster, 1985

**Attending Physician/Team:** Cardiologist: Jason Miller, MD

**Primary Diagnosis:** Insect stings with possible allergic reaction

**History of Present Illness:** Pt doing yard work at his home, disrupted a wasp nest accidentally and was stung multiple times to upper body. Initially no sequelae but noted reddened rash within 30-45 minutes and began having shortness of breath. Called to his wife for assistance.

**PMH:** Hypertension, Angina Pectoris, "heartburn sometimes that I take Pepcid for"

**Surgeries/Procedures:** NONE

**Social History:** Married to wife Mary Stone for 35 years, 3 children not living in the home. Denies tobacco use, but former heavy cigar smoker. Rare social alcohol use admitted, denies drug use other than those prescribed. Couple live in 2 story home in local area.

**Data:** Blood pressure: 168/92, Heart Rate: 104, Respirations: 28, Temp: 37.8° 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 elbow pain due to arthritis.

**Cardiovascular:** Regular rate and rhythm, no murmurs, rubs or gallops on auscultation. Tachycardia noted. Peripheral pulses equal throughout and full. No edema noted. Denies chest pain prior to event or current. Skin is erythematous to upper torso and arms, non-blistered. Mild diaphoresis noted.

**Pulmonary:** Lungs clear to auscultation with few inspiratory wheezes, no oxygen in use presently. Mild tachypnea noted. States occasionally difficulty to get full inspiration since event. SpO2 91+ %. 2 Liters nasal cannula applied.

**Gastrointestinal:** Abdomen flat, soft. Normoactive bowel sounds noted in all quads. Denies N/V/C/D. Denies difficulty with meals, but admits to post-prandial upper GI discomfort. Relieved with Pepcid OTC, prn.

**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:** Dry skin, otherwise intact, Capillary refill WNL

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

**Psychological:** Noncontributory at present, pt in mild distress due to low-level insect bite reaction

## 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		Miller
Famotidine (PEPCID)	10 mg	OTC	PO	As Needed	When heartburn happens	Self
Nitroglycerine Patch (NitroDUR 0.3%)	1 patch		TOP	Daily	Change at Night	Miller

## 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:
<b>Coagulation</b>	Mg:	HDL:	<b>Other Tests</b>	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

#### SOAP

**Description:** All *Subjective, Objective, Assessment, and Plan* 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 (*Insect stings w. possible allergic reaction*), as well as *Patient Information*

#### Progress Notes

**Description:** The patient's status is documented

### Provider's Orders

**Description:** Order for 50 mg Demo Dose® Diphenhydramin (Benadr) 50mg/1mL Injection ONCE IV NOW, 25 mg Demo Dose® Benadr 25mg Tablet 8 HR PO PRN Itching, 1000 mL Normal Saline 0.9% Solution 1000mL IV ONCE IV Continuous Infusion

#### Labs

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

#### Vital Signs

**Description:** Vital inputs for include *Temperature (37.8° C), Temperature Method (Oral), Blood Pressure (186/92), Blood Pressure Method (NIBP), Pulse (104), Pulse Location (Radial), Oxygen Saturation (91), Oxygen Device (Room Air), Respirations per Minute (28)*