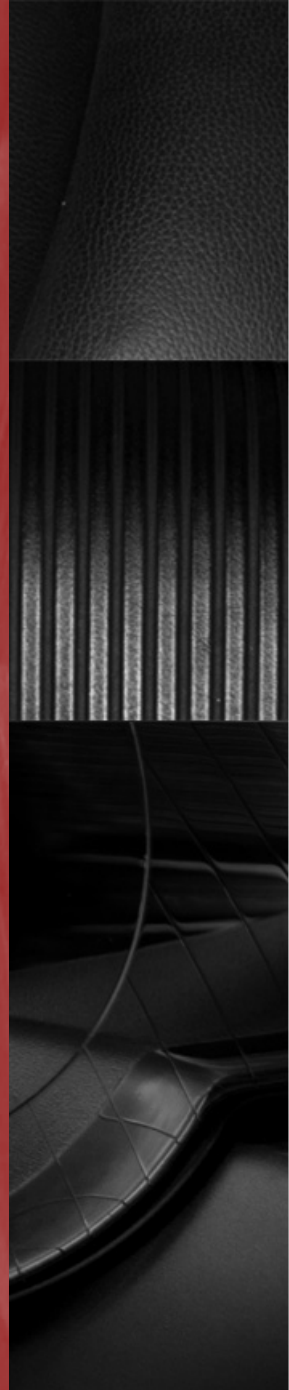


# Homegrown EMR

Carol O'Kupniak



Why do we need an EMR?



introducing EHR for  
**curmudgeons,  
control freaks,  
paper lovers and  
luddites.**

Find out how easy  
EHR can be with WebChart.



# Fidelity

The screenshot shows a 'Nurse Assessment' form with a blue header and a navigation bar. The form is divided into several sections for data entry:

- 1. Length of incontinence:** Radio buttons for 'Open admission', 'Days', 'Months', 'Years', 'None', and 'Unknown'.
- 2. Reason for incontinence if known:** A text input field.
- 3. Void elimination pattern:** Input fields for 'Frequency', 'Time', and 'Amount'.
- 4. Continence:** Checkboxes for 'Soft/Normal', 'Small/Dry', 'Fusty/Clay-like', 'Discharge', 'Hard', and 'Other'.
- 5. History of constipation:** Radio buttons for 'Constipation' (Yes/No) and an input field for 'Frequency'.
- 6. Stoolbase:** A dropdown menu.
- 7. Urinary use:** Radio buttons for 'Yes/No', 'Type', 'Frequency', and 'Odorless'.
- 8. Inactive use:** Radio buttons for 'Yes/No', 'Type', and 'Frequency'.
- 9. Physical problems:** Checkboxes for 'Hemorrhoids', 'Fistula/Anal fissure', 'Rectal bleeding', 'Irritation', and 'Other'.

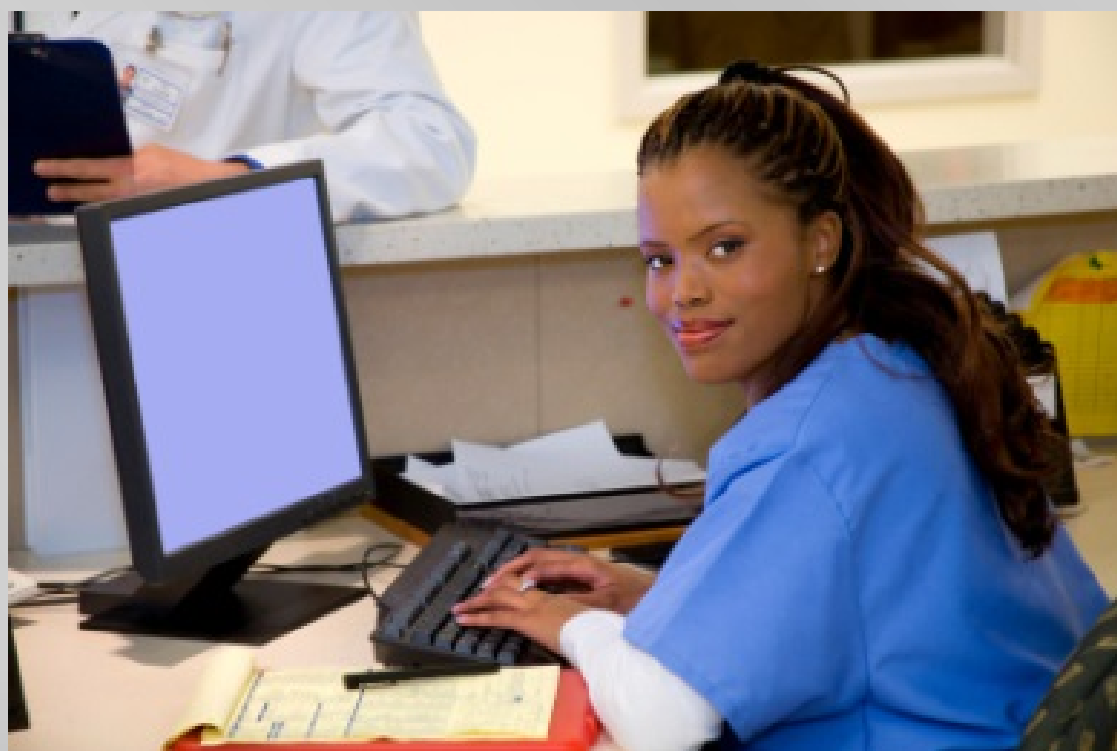
At the bottom, there are buttons for 'Save Record', 'Save All Nurse Work Without Signal', and 'Close'.

















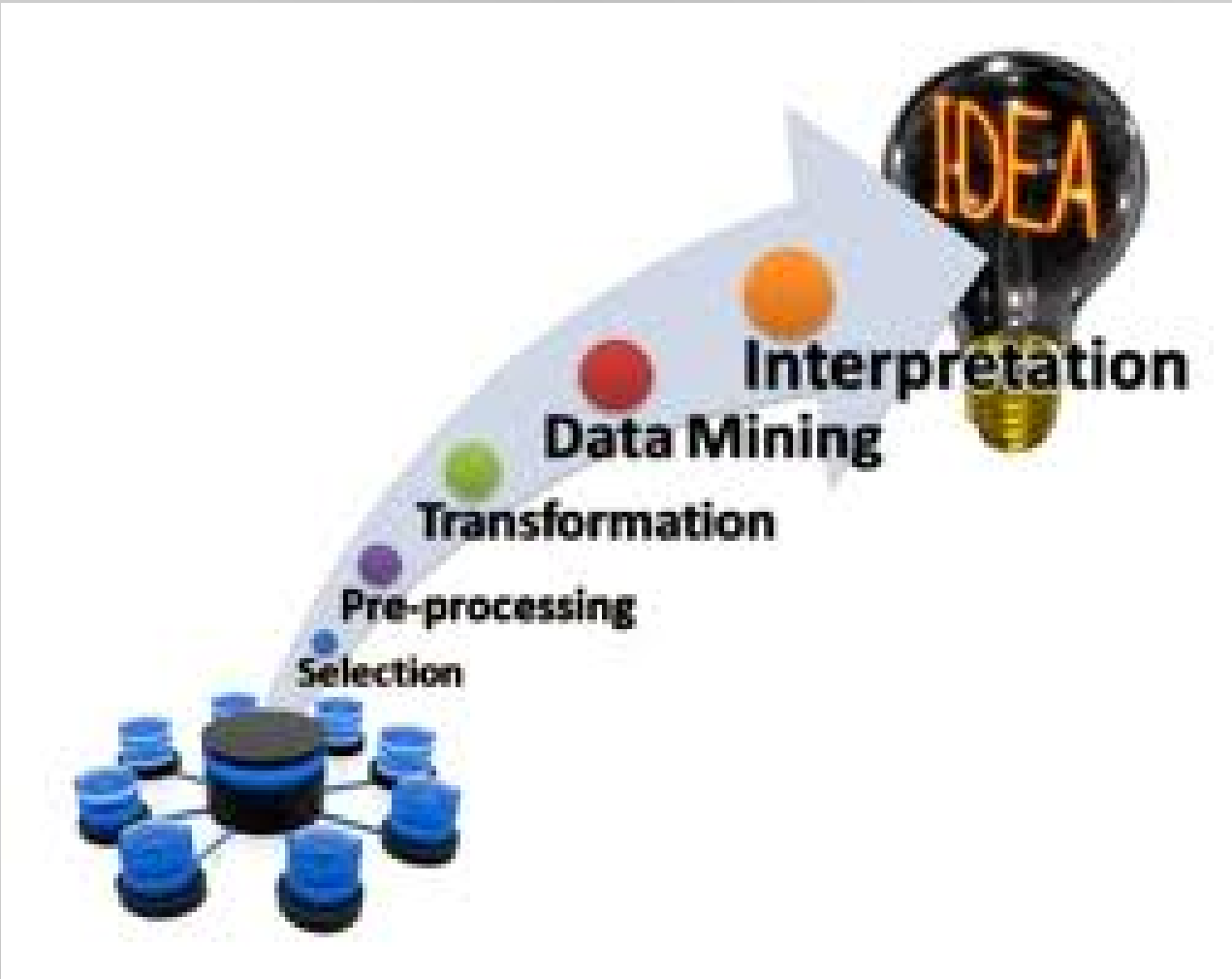








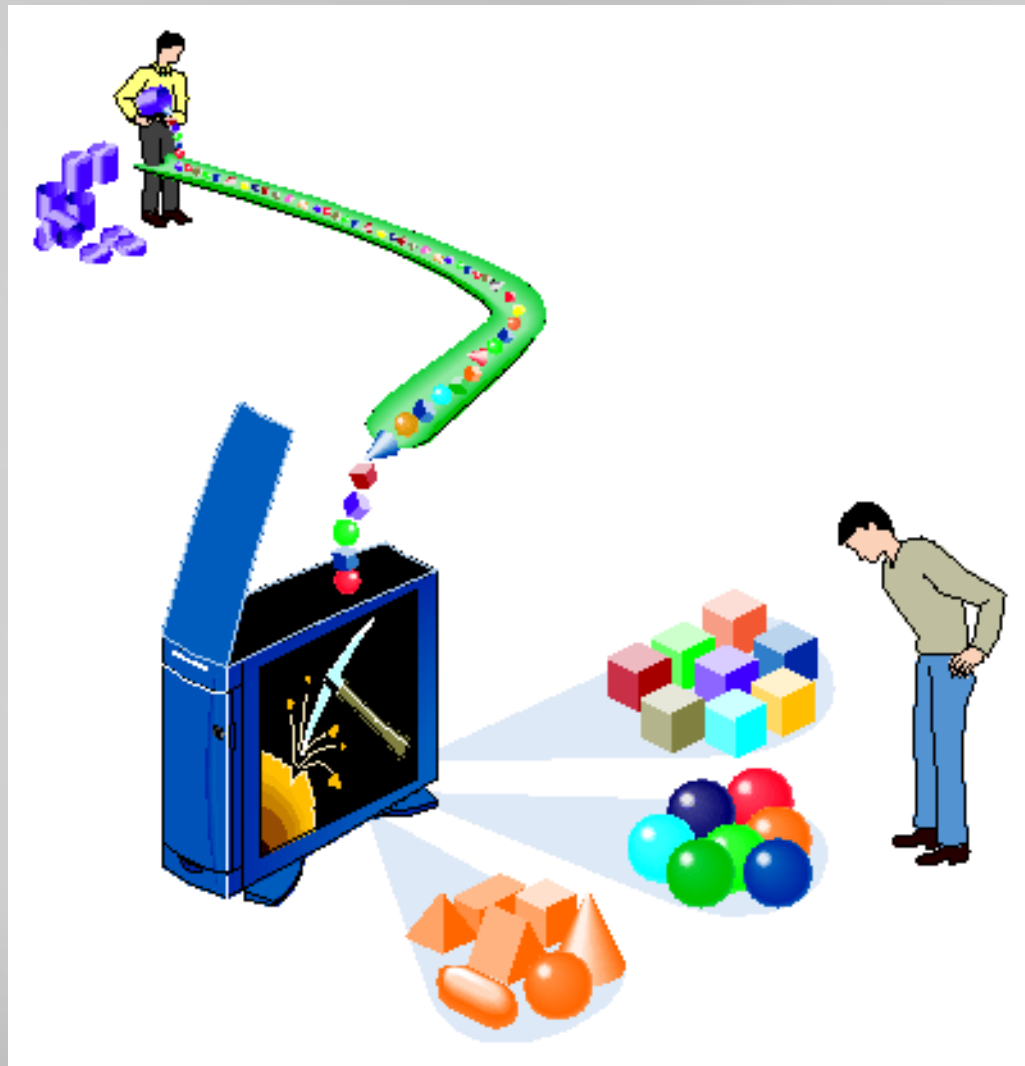














MEANINGFUL  
USE 101





# Future Healthcare

- <http://www.youtube.com/watch?v=oHL6R4kfWbk>



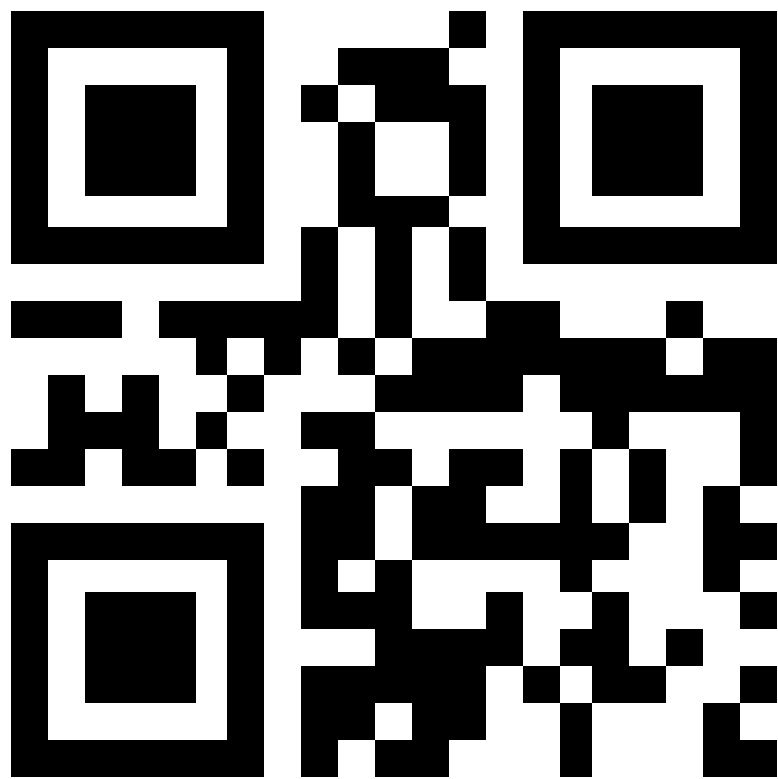
# Homegrown EMR

- PDF Form
- Word-based – GOOGLE Docs
- Access – a true database
- PowerPoint – excellent
- Excel – SMILE<sup>®</sup> – Simulated Medical Information Learning Experience



# Word

- Scan a QR Code





# Bennett EMR\_Complex ☆

File Edit View Insert Format Tools Table Help Last edit was made on March 9, 2012 by Kris Eden

Normal text Arial 11 B I U A A [Icons]



MR# :	<b>PCS 110500</b>
Patient:	<b>Bennett, Lloyd</b>
DOB:	<b>11-05-</b> 76 Years Old
Gender:	<b>Male</b>
Height / Weight:	<b>75" / 165lb</b>
<b>Allergies</b>	
Physician:	<b>T.R. Little</b>
Contact:	Kevin Bennett (Son)



# Access

- Platform for other educational-based EMRs
- Steep learning curve



# PowerPoint

- Easy
- Quick
- Uni-directional
  - Info for students only



# Excel

- Workbook – chart
- Worksheet – pages in the chart
- Bi-directional
  - Gives info
  - Student can also chart



# SMILE

- **S** imulated
- **M** edical
- **I** nformation
- **L** earning
- **E** xperience



# Simulated Medical Information Learning Experience.

<b>Last Name:</b>	Bowman	<b>First Name:</b>	Jennifer	<b>DOB:</b>	01/ 21/ 1979	<b>Rel:</b>	None
<b>Sex:</b>	Female	<b>MR#</b>	123456789	<b>Age:</b>	32	<b>Advanced Directives:</b>	Does not have

Admission	Location	Allergy	Admission Diagnosis	Height	Weight	Code Status
Today	Sim 2-C	NKDA	R lower abd pain	54 in.	162 lbs	Full Code

**Physician Service: Emergency Medicine**



**Past Medical History:**

IBS  
 Torn Meiscus Right Knee  
 Seasonal Allergies

**OB/GYN History**

G3P3  
 Voluntary Sterility

**Past Surgical History:**

Meniscus Repair R Knee 2008  
 Tubal Ligation 2008

**Medications Taken at Home:**

Claritin PRN  
 Ibuprofen PRN

**Insurance:**

BC/BS NJ - #RBCY34195

**Address:**

742 School Lane  
 Runnameade, NJ 08006  
 Telephone: 856 - 555 - 4321

**Contact:**

Daniel Bowman, Jr.  
 Relationship: Husband  
 742 School Lane



# Simulated Medical Information Learning Experience.

Last Name:	Bowman	First Name:	Jennifer	DOB:	01/ 21/ 1979	Rel:	None
Sex:	Female	MR#	123456789	Age:	32	Advanced Directives:	Does not have

Admission	Location	Allergy	Admission Diagnosis	Height	Weight	Code Status
Today	Sim 2-C	NKDA	R lower abd pain	54 in.	162 lbs	Full Code

**Physician Service: Emergency Medicine**



**Past Medical History:**

- IBS
- Torn Meiscus Right Knee
- Seasonal Allergies

**OB/GYN History:**

- G3P3
- Voluntary Sterilization

**Past Surgical History:**

- Meiscus Repair R Knee 2008
- Abdominal Ligation 2008

G - Gravida  
P - Para  
**Terms associated with pregnancy. What do they mean?**

**Medications Taken at Home:**

- Claritin PRN
- Ibuprofen PRN



## Simulated Medical Information Learning Experience®

Last Name:	Bowman	First Name:	Jennifer	DOB:	01/ 21/ 1979	Rel:	None
Sex:	Female	MR#	123456789	Age:	32	Advanced Directives:	Does not have
Admission	Location	Allergy	Admission Diagnosis	Height	Weight	Code Status	
Today	Sim 2-C	NKDA	R lower abd pain	54 in.	162 lbs	Full Code	

Physician Service: Emergency Medicine

### Chief Complaint

"I've been having pain on my right side for the last week that comes and goes. Last night it got really sharp and it made me throw up. I couldn't sleep. IT felt like when I was n labor with my 1st son. I had to come into the emergency room."

### History of Present Illness

32 year old, previously healthy caucasian femal, who presents to the ED today with one week history of intermittent RLQ abdominal pain for the last one week, which is markedly worse today. The pain was accompanied by dizziness, nausea, and vomiting. The pain during the episodes is 9 out of 10, stabbing, and radiating to her back. The patient reports a similar pain, not as severe, 3 years ago when she was diagnosed with an ovarian cyst. The pain went away spontaneously. She has not had a gyn follow-up since that episode. Patient reports she cannot find a comfortable position or stay still when the pain starts. She denies fever, chills, or sweats. She denies diarrhea, constipation, dysuria, hematuria, or





# Simulated Medical Information Learning Experience®

Last Name:	Bowman	First Name:	Jennifer	DOB:	01/ 21/ 1979	Rel:	None
Sex:	Female	MR#	123456789	Age:	32	Advanced Directives:	Does not have

Admission	Location	Allergy	Admission Diagnosis	Height	Weight	Code Status
Today	Sim 2-C	NKDA	R lower abd pain	54 in.	162 lbs	Full Code

Physician Service: Emergency Medicine

## Physical Exam

### General:

Patient is an average weight female. She is awake, alert, and appropriately oriented cannot lay still and appears moderately uncomfortable.

### Head, Ears, Eyes, Nose, Throat:

There is no evidence of head trauma. Pupils are equal, round, and reactive from 6mm to 4 mm. Extraocular movements are fully intact. Ears are normal, there is no discharge, the tympanic membranes are lear, with good light reflex, no evidence of perforation. No mucus membrane rashes, dryness, or swelling.

### Skin:

Pale and mildly diaphoretic. No rashes, petchia, or purpura; no lesions.

### Lungs:

Clear to auscultation without wheezes, crackles, or rales. Equal breath sounds bilaterally.

### Abdomen:

Admission	Location	Allergy	Admission Diagnosis	Height	Weight	Code Status
Today	Sim 2-C	NKDA	R lower abd pain	54 in.	162 lbs	Full Code

**Physician Service:** Emergency Medicine

### Physical Exam

#### General:

Patient is an average weight female. She is awake, alert, and appropriately oriented cannot lay still and appears moderately uncomfortable.

#### Head, Ears, Eyes, Nose, Throat:

There is no evidence of head trauma. Pupils are equal, round, and reactive from 6mm to 4 mm. Extraocular movements are fully intact. Ears are normal, there is no discharge, the tympanic membranes are clear, with good light reflex, no evidence of perforation. No mucous membrane rashes, dryness, or swelling.

#### Skin:

Pale and mildly diaphoretic. No rashes, petechia, or purpura; no lesions.

#### Lungs:

Clear to auscultation without wheezes, crackles, or rales. Equal breath sounds bilaterally.

#### Abdomen:

Bowel sounds hypoactive. Localized tenderness both lower quadrants R>L. Involuntary guarding and rebound tenderness is present R>L lower quadrants. Palpation suggests R lower quadrant mass and fullness above the pubic area.

What is another name for rebound tenderness?

#### Back:

No tenderness to palpation, no costovertebral angle tenderness.

Navigation tabs: Face Sheet | Medical Hx | **Physical Exam** | Orders | Med Admin | Lab Results | NSG DX | Vital Signs | Assessment | Progress Note



# Simulated Medical Information Learning Experience®

<b>Last Name:</b>	Bowman	<b>First Name:</b>	Jennifer	<b>DOB:</b>	01/ 21/ 1979	<b>Rel:</b>	None
<b>Sex:</b>	Female	<b>MR#</b>	123456789	<b>Age:</b>	32	<b>Advanced Directives:</b>	Does not have
<b>Admission</b>	<b>Location</b>	<b>Allergy</b>	<b>Admission Diagnosis</b>	<b>Height</b>	<b>Weight</b>	<b>Code Status</b>	
Today	Sim 2-C	NKDA	R lower abd pain	54 in.	162 lbs	Full Code	

**Physician Service: Emergency Medicine**

**Physician Orders**

6/3/2013

* Vital Signs every 1 hour	Order Cancelled
* NPO	Order Completed
* IV NSS @ 80 mL/hr	Order Completed
	Order Completed
	N/A
	N/A
	N/A

**Labs @ 08:50**

6/3/2013

* CBC	Order Completed
* UA	Order Completed
* Serum Beta HCG	Order Completed
* Electrolytes	Order Needs Action
* Blood Glucose	Order Completed
* Creatinine	Order Completed
* Amylase	Order Completed
* Lipase	Order Completed
* Type & Screen	Order Completed
* Abdominal Ultrasound	Order Completed



# Simulated Medical Information Learning Experience®

Last Name:	Bowman	First Name:	Jennifer	DOB:	01/ 21/ 1979	Rel:	None
Sex:	Female	MR#	123456789	Age:	32	Advanced Directives:	Does not have
Admission	Location	Allergy	Admission Diagnosis	Height	Weight	Code Status	
Today	Sim 2-C	NKDA	R lower abd pain	54 in.	162 lbs	Full Code	

Physician Service: Emergency Medicine

**Physician Ord**

- \* Vital Signs ev
- \* NPO
- \* IV NSS @ 80

**Labs @ 08:50**

- \* CBC
- \* UA
- \* Serum Beta H
- \* Electrolytes

**Order Sets:**  
Common sets of orders for patients with similar diagnosis. Created for specific physicians. Instead of entering individual orders, physician can choose a "set" of customized orders and then remove any within the set that do not apply.

6/3/2013	Order Cancelled
	Order Completed
	Order Completed
	Order Completed
	N/A
	N/A
	N/A
6/3/2013	Order Completed
	Order Completed
	Order Completed
	Order Needs Action

**Physician Orders**

6/3/2013

- \* Vital Signs every 1 hour
- \* NPO
- \* IV NSS @ 80 mL/hr

Order Cancelled  
 Order Completed  
 Order Completed  
 Order Completed  
 N/A  
 N/A  
 N/A

**Labs @ 08:50**

6/3/2013

- \* CBC
- \* UA
- \* Serum Beta HCG
- \* Electrolytes
- \* Blood Glucose
- \* Creatinine
- \* Amylase
- \* Lipase
- \* Type & Screen
- \* Abdominal Ultrasound

Order Completed  
 Order Completed  
 Order Completed

Order Needs Action

- Order Completed
- Order Pending
- Order Cancelled
- Order Needs Action
- N/A

Order Completed  
 Order Completed

**Medication Orders**

6/3/2013

N/A  
 N/A  
 N/A  
 N/A





## Simulated Medical Information Learning Experience®

<b>Last Name:</b>	Bowman	<b>First Name:</b>	Jennifer	<b>DOB:</b>	01/ 21/ 1979	<b>Rel:</b>	None
<b>Sex:</b>	Female	<b>MR#</b>	123456789	<b>Age:</b>	32	<b>Advanced Directives:</b>	Does not have

<b>Admission</b>	<b>Location</b>	<b>Allergy</b>	<b>Admission Diagnosis</b>	<b>Height</b>	<b>Weight</b>	<b>Code Status</b>
Today	Sim 2-C	NKDA	R lower abd pain	54 in.	162 lbs	Full Code

**Physician Service:** Emergency Medicine

### LAB RESULTS

CBC with Diff  
Specimen: Blood

Collected: 6/3/2013 @06:18

Name	Results	Reference Range
<a href="#">WBC</a>	H 12.7	5.0 - 10.0
NRBV	0.0	
RBC	3.8	4.5 - 5.5
<a href="#">Hemoglobin</a>	L 7.0	14 - 18
Hematocrit	L 32.1	40.0 - 54.0
MCV	83.6	80 - 100
<a href="#">MCH</a>	L 27.7	28 - 32
MCHC		32 - 36
RDW		11.5 - 15.0
Platelets		140 - 450
MPV		6.5 - 10.4
<a href="#">Granularcytes %</a>	H 76.5	55 - 75
<a href="#">Lymph %</a>	L 17.3	20 - 45
Monocytes %	5.9	0 - 12
<a href="#">Eos %</a>	L 0.2	2 - 6

<http://www.labtestsonline.org/> - Click once to follow. Click and hold to select this cell.

Microsoft Excel - SMILE i204

Blood Typing	O Negative	N/A
<hr/> Serum Beta HCG Specimen: Blood Collected: 6/3/2013 @8:18		
<b>Name</b>	<b>Results</b>	<b>Reference Range</b>
Beta Human Chorionic Gonadotrophin	478 mIU/mL	< 5 mIU/mL
<hr/> Electrolytes Specimen: Blood Collected: 6/3/2013 @8:18		
<b>Name</b>	<b>Results</b>	<b>Reference Range</b>
Sodium	141 mEq/L	135 - 145 mEq/L
Bicarbonate	23 mEq/L	22 - 26 mEq/L
Calcium	9.8 mg/dL	
Chloride	102 mEq/L	
Magnesium	1.8 mg/dL	
Potassium	3.8 mEq/L	
Osmolality	276 mOsm/L	275 - 295 mOsm/L
Anion Gap	12.8 mEq/L	12 - 14 mEq/L

What is the normal reference range of calcium? Is this patient's value normal?





# Simulated Medical Information Learning Experience.

Last Name:	Bowman	First Name:	Jennifer	DOB:	01/ 21/ 1979	Rel:	None
Sex:	Female	MR#	123456789	Age:	32	Advanced Directives:	Does not have

Admission	Location	Allergy	Admission Diagnosis	Height	Weight	Code Status
Today	Sim 2-C	NKDA	R lower abd pain	54 in.	162 lbs	Full Code

Physician Service: Emergency Medicine

## 1. Nursing Diagnosis

Document where you found the evidence for this information.

--	--

### Interventions for your Nursing Diagnosis

1	
2	
3	

## 2. Nursing Diagnosis

Document where you found the evidence for this information.

--	--

### Interventions for your Nursing Diagnosis

1	
2	



# Simulated Medical Information Learning Experience<sup>®</sup>

<b>Last Name:</b>	Bowman	<b>First Name:</b>	Jennifer	<b>DOB:</b>	01/ 21/ 1979	<b>Rel:</b>	None
<b>Sex:</b>	Female	<b>MR#</b>	123456789	<b>Age:</b>	32	<b>Advanced Directives:</b>	Does not have

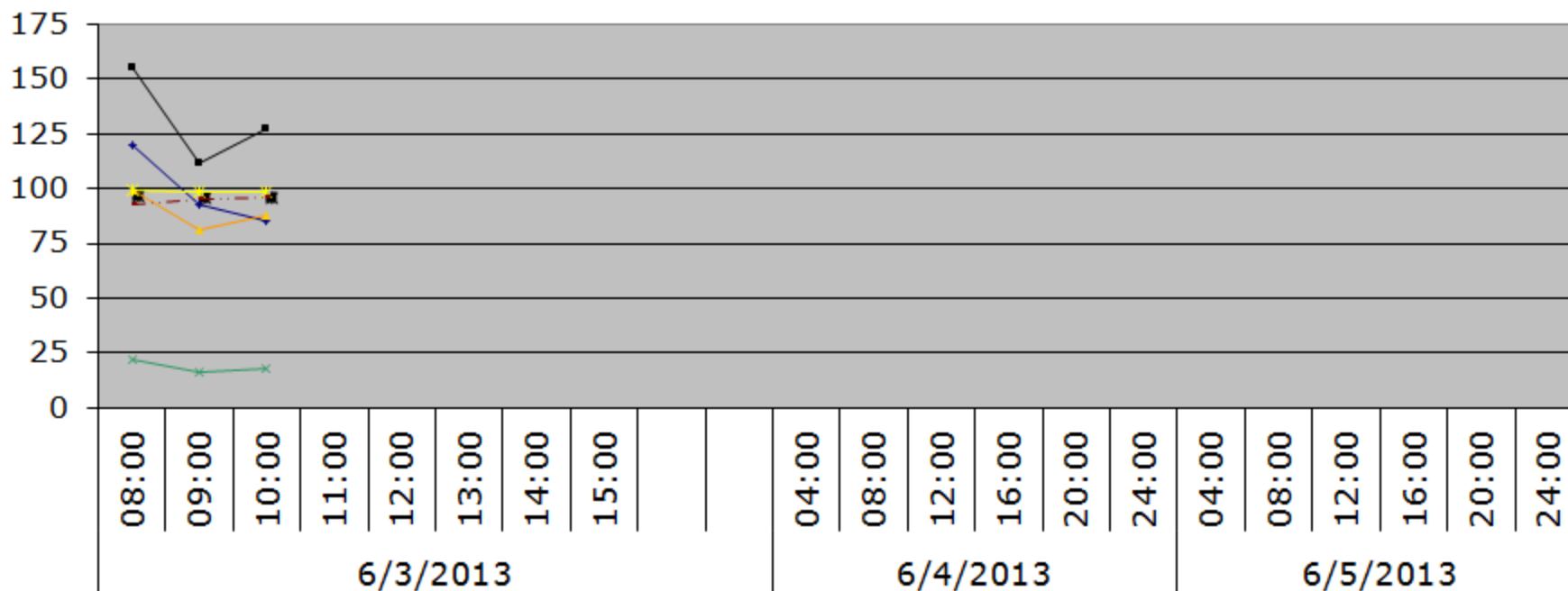
<b>Admission</b>	<b>Location</b>	<b>Allergy</b>	<b>Admission Diagnosis</b>	<b>Height</b>	<b>Weight</b>	<b>Code Status</b>
Today	Sim 2-C	NKDA	R lower abd pain	54 in.	162 lbs	Full Code

**Physician Service: Emergency Medicine**

Date	Time	Pulse	Systolic BP	Diastolic BP	Respiratory	Temperature	Pulse Ox
6/3/2013	08:00	120	155	99	22	99.4	93
	09:00	93	112	81	16	98.7	95
	10:00	85	127	88	18	98.4	96
	11:00						
	12:00						
	13:00						
	14:00						
15:00							

# Vital Signs

- Pulse
- Systolic BP
- Diastolic BP
- Respiratory
- Temperature
- Pulse Ox



Date/Time

# Heart Rate



# Simulated Medical Information Learning Experience®

Last Name:	Bowman	First Name:	Jennifer	DOB:	01/ 21/ 1979	Rel:	None
Sex:	Female	MR#	123456789	Age:	32	Advanced Directives:	Does not have

Admission	Location	Allergy	Admission Diagnosis	Height	Weight	Code Status
Today	Sim 2-C	NKDA	R lower abd pain	54 in.	162 lbs	Full Code

Physician Service: Emergency Medicine

## Respiratory - Cardiac - Bowel Assessment Drop-Down Menu

<b>Respiratory Assessment</b>	R Lung	Upper Lobe	Clear	L Lung	Upper Lobe	Clear
		Middle Lobe	Rales		Lower Lobe	Diminished
		Lower Lobe	Rhonchi			
<b>Cardiac Assessment</b>	Normal Sinus Rhythm					
<b>Bowel Assessment</b>	Hypoactive					

- Clear
- Rales
- Rhonchi
- Wheezes
- Stridor
- Pleural Friction Rub
- Diminished

Respiratory - R Lung - Upper Lobe      Clear      Middle Lobe      Clear      Lower Lobe      Diminished



## Simulated Medical Information Learning Experience.

Last Name:	Bowman	First Name:	Jennifer	DOB:	01/ 21/ 1979	Rel:	None
Sex:	Female	MR#	123456789	Age:	32	Advanced Directives:	Does not have

Admission	Location	Allergy	Admission Diagnosis	Height	Weight	Code Status
Today	Sim 2-C	NKDA	R lower abd pain	54 in.	162 lbs	Full Code

Physician Service: Emergency Medicine

Date/Time	Note
6/3/2013 7:56	Patient admitted to ED bay Sim 1 B, husband with patient. Physician notified. IV started, 20 g, R Forearm.ID band placed on L wrist. Patient instructed to remain NPO-----CO
6/3/2013	
6/3/2013	

Progress Notes Completed by all health care professionals caring for the patient. Chart by exception - chart only what is not on flow sheets.Timed. Can read ongoing report on patient's condition from multiple disciplines.



# Simulated Medical Information Learning Experience.

Last Name:	Bowman	First Name:	Jennifer	DOB:	01/ 21/ 1979	Rel:	None
Sex:	Female	MR#	123456789	Age:	32	Advanced Directives:	Does not have

Admission	Location	Allergy	Admission Diagnosis	Height	Weight	Code Status
Today	Sim 2-C	NKDA	R lower abd pain	54 in.	162 lbs	Full Code

Physician Service: Emergency Medicine

Pain Assessment is considered one of the "Vital Signs". If patient reports pain and an intervention is given for that pain, a reassessment should always be performed.

## Pain Assessment



0

2



4



6



8



10

Date	Time	0-10 Scale	Quality	Relief	Reassess	Scale
6/3/2013	08:00	9	Throbbing	Demerol IV	08:35	7



# Simulated Medical Information Learning Experience®

<b>Last Name:</b>	Bowman	<b>First Name:</b>	Jennifer	<b>DOB:</b>	01/ 21/ 1979	<b>Rel:</b>	None
<b>Sex:</b>	Female	<b>MR#</b>	123456789	<b>Age:</b>	32	<b>Advanced Directives:</b>	Does not have

<b>Admission</b>	<b>Location</b>	<b>Allergy</b>	<b>Admission Diagnosis</b>	<b>Height</b>	<b>Weight</b>	<b>Code Status</b>
Today	Sim 2-C	NKDA	R lower abd pain	54 in.	162 lbs	Full Code

**Physician Service: Emergency Medicine**

Date/Time	Intake			Output			
	PO(mL) /Source	IV /Source	Other(mL) /Source	Urine(mL) /Source	Drains(mL) /Source	Other(mL) /Source	
6/3/2013 10:48	500						
	500						
<b>Total:</b>	1000 mL	0 mL	0 mL	0 mL	0 mL	0 mL	
<b>Intake Total:</b>			1000 mL	<b>Output Total:</b>			0 mL

Intake			Output		
--------	--	--	--------	--	--



## Simulated Medical Information Learning Experience.

Last Name:	Bowman	First Name:	Jennifer	DOB:	01/ 21/ '1979	Rel:	None
Sex:	Female	MR#	123456789	Age:	32	Advanced Directives:	Does not have

Admission	Location	Allergy	Admission Diagnosis	Height	Weight	Code Status
Today	Sim 2-C	NKDA	R lower abd pain	54 in.	162 lbs	Full Code

Physician Service: Emergency Medicine

### Ultrasound





## Advanced Directive -

### Directive to Physicians

Directive made this day of in the year .

I, , being of sound mind, willfully and voluntarily make known my desire that my life shall not be artificially prolonged under the circumstances set forth in this directive.

- 1 If at any time I should have an incurable or irreversible condition caused by injury, disease, or illness certified to be a terminal condition by two physicians, and if the application of life-sustaining procedures would serve only to artificially postpone the moment of my death, and if my attending physician determines that my death is imminent or will result within a relatively short time without the application of life-sustaining procedures. I direct that those procedures be withheld or withdrawn, and that I be permitted to die naturally.
- 1 In the absence of my ability to give directions regarding the use of those life-sustaining procedures, it is my intention that this directive be honored by my family and physicians as the final expression of my legal right to refuse medical or surgical treatment and accept the consequences from that refusal.
- 3 If I have been diagnosed as pregnant and that diagnosis is known to my physician, this directive has no effect during my pregnancy.
- 4 This directive is in effect until it is revoked.
- 5 I understand the full import of this directive and I am emotionally and mentally competent to make this directive.
- 6 I understand that I may revoke this directive as any time.
- 7 I request that only comfort care be provided to me, no antibiotics, no artificial nutrition, mechanical ventilation, and no hydration. It is my strong preference to be allowed to die outside of a care facility if possible, even if that preference is determined by my physician to shorten my period of dying. The only condition under which I desire these



# SMILE 2.0



# Drexel University Hospital

<b>Name</b>	Dee, Joseph	<b>Date of Birth</b>	9/15/34	<b>Age</b>	78	<b>Sex</b>	Male
	<small>Last, First</small>		<small>m/d/yy</small>				
<b>MRN</b>	987050398	<b>Allergies</b>	PCN, ASA, Sulfa, Jelly, Rhino Horn				
<b>Admission Diagnosis</b>	Otitis Media			<b>Code Status</b>	Unknown		
<b>Primary Care Practice</b>		<b>Height</b>	in	<b>Weight</b>	lb	<b>Religion</b>	N/A



Past Medical History

Past Surgical History

Medications Taken at Home

**Address:** 2759 Whiniepopo Street  
 Philadelphia, PA 19138


**Telephone:** 215-555-0983  
**Cell Phone:** N/A  
**Work Phone:** N/A

<b>Name</b>	Dee, Joseph	<b>Date of Birth</b>	9/15/34	<b>Age</b>	78	<b>Sex</b>	Male
	<small>Last, First</small>		<small>m/d/yy</small>				
<b>MRN</b>	987050398	<b>Allergies</b>	PCN, ASA, Sulfa, Jelly, Rhino Horn				
<b>Admission Diagnosis</b>	Otitis Media			<b>Code Status</b>	Unknown		
<b>Primary Care Practice</b>		<b>Height</b>	in	<b>Weight</b>	lb	<b>Religion</b>	N/A

**Report to Students:**

**Recent Medical History:**

**Clinical Signs Immediately Visible:**

- 
- Thank you!
  - [co33@drexel.edu](mailto:co33@drexel.edu)