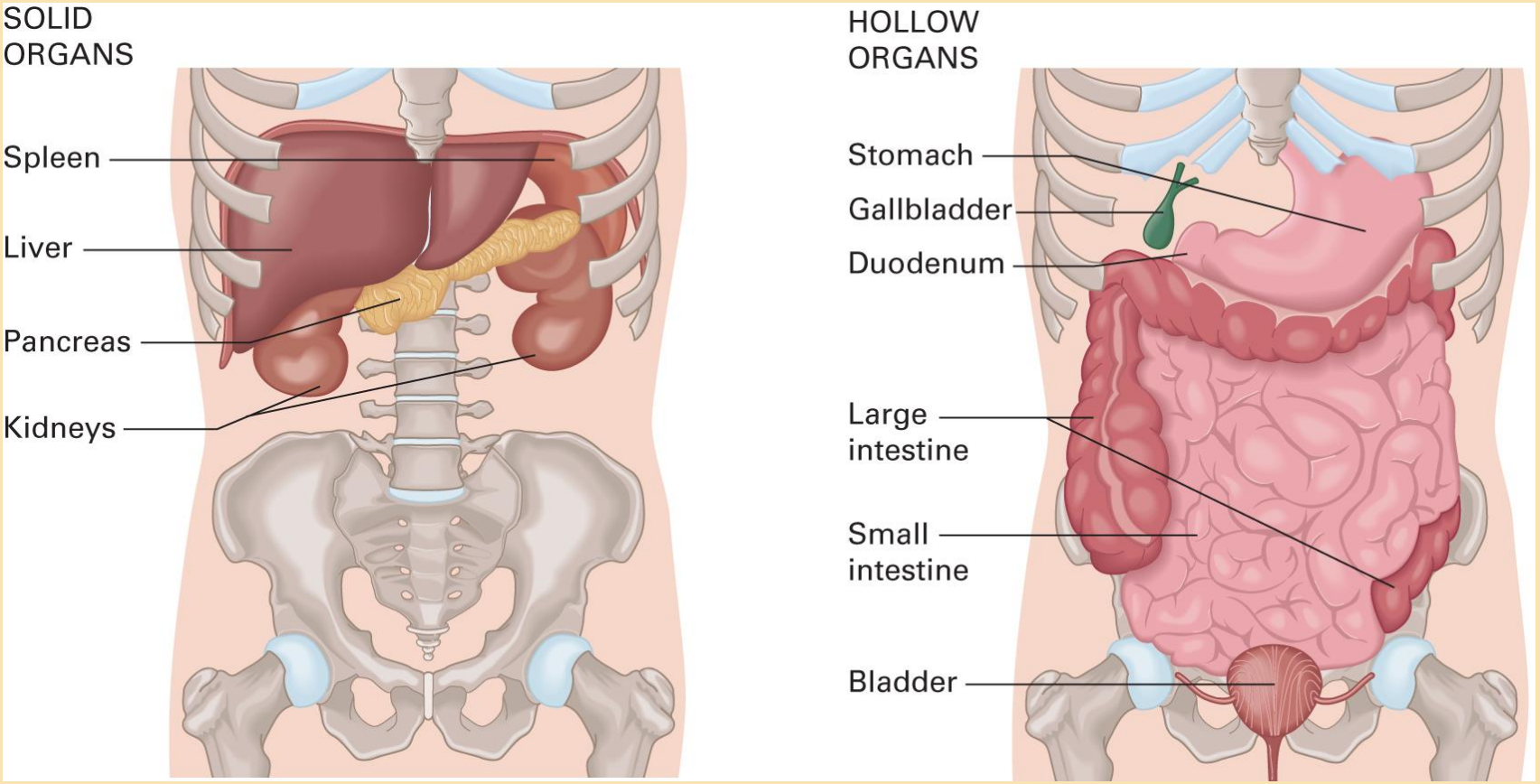
Chapter 18
Acute Abdominal Emergencies

Anatomy and Physiology

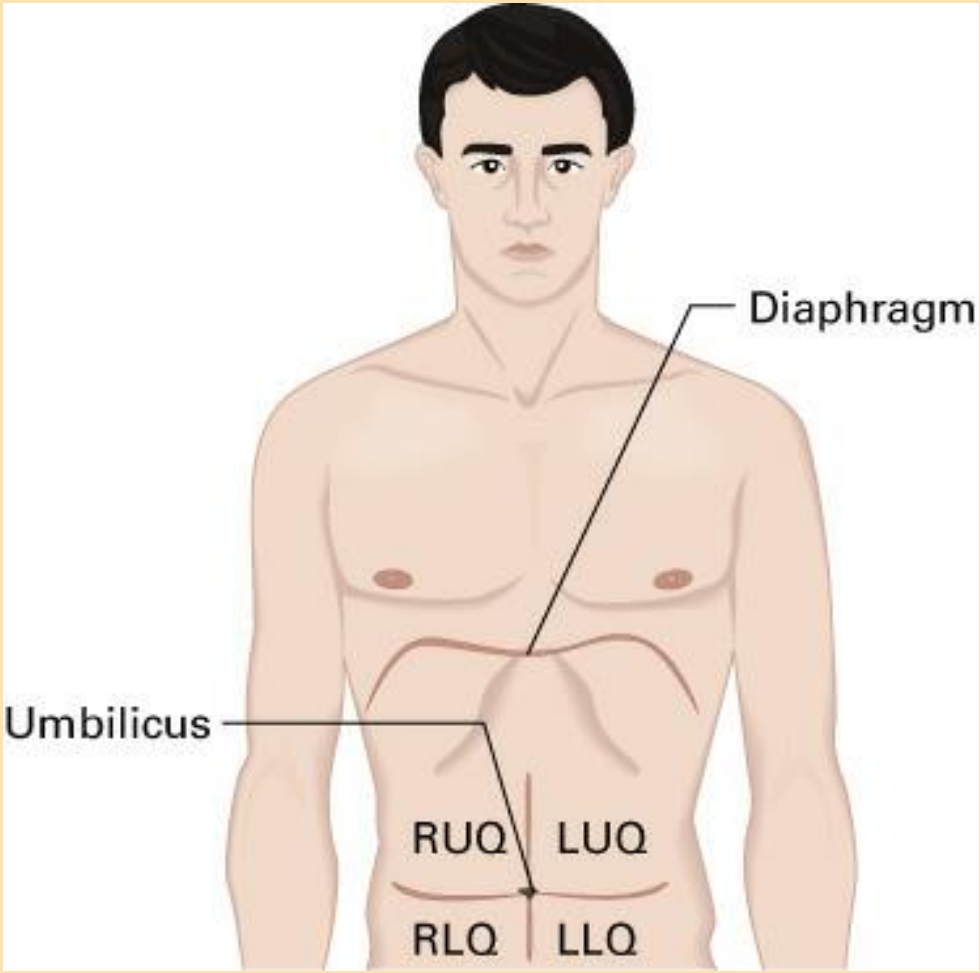
Abdominal Anatomy



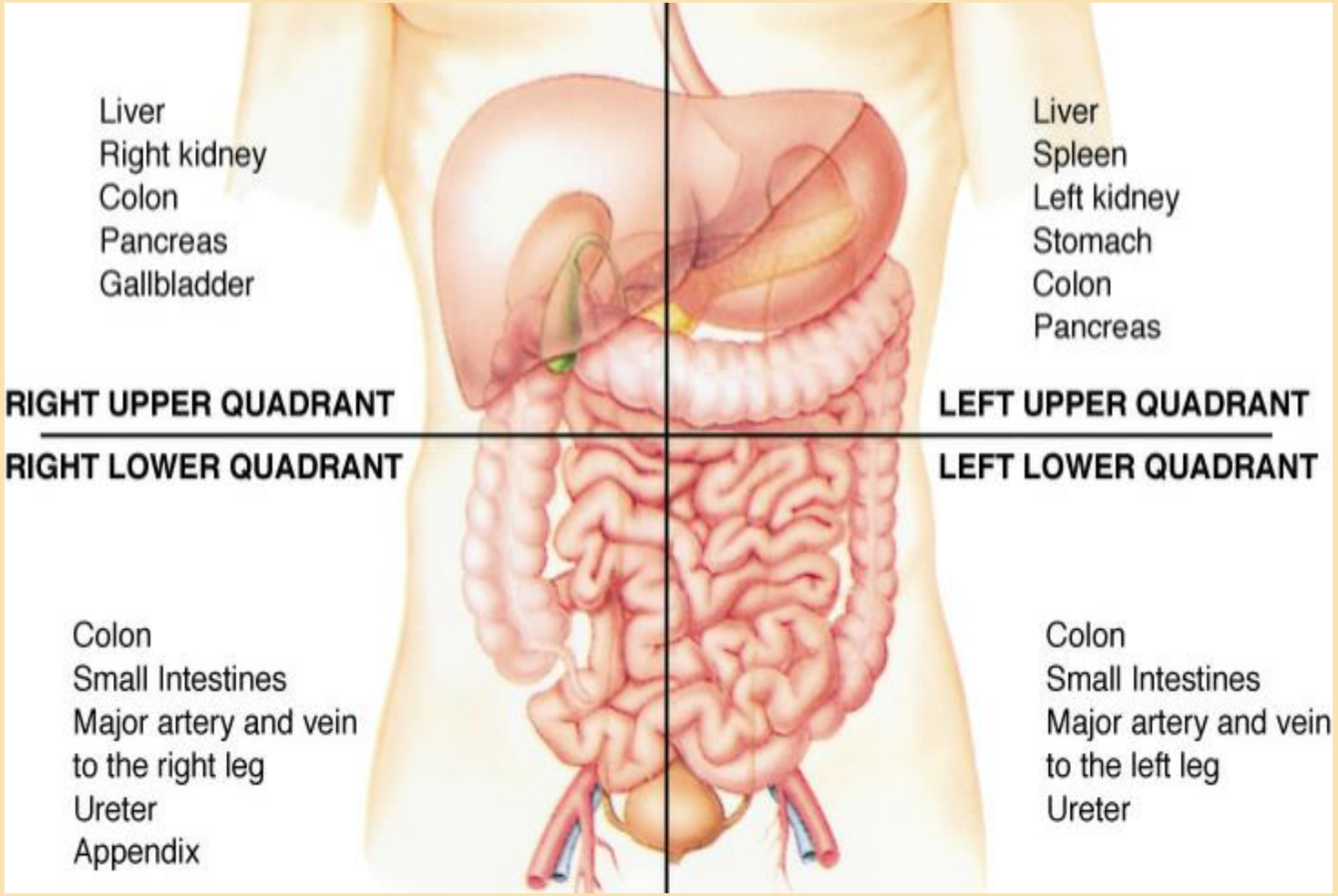
Abdominal Anatomy and Physiology

- Most organs contained in the peritoneum
- Visceral peritoneum
  - Covers organs
  - Parietal peritoneum
  - Attached to abdominal wall

Abdomen Divided into Four Quadrants



Abdominal Organs



Abdominal Quadrants

- Used to describe areas of:
  - Pain
  - Tenderness
  - Injury
  - Abnormalities

Types of Abdominal Pain

- Visceral pain
- Parietal pain
- Tearing pain
- Referred pain

Visceral Pain

- Originates from organs
- No one specific area of pain
- Intermittent, achy, crampy
  - Often from hollow organs
- Dull, persistent
  - Often from solid organs

Parietal Pain

- Originates from abdominal cavity lining
- May be irritation from internal bleeding or infection
- Sharp, constant pain
- Worse with movement

Tearing Pain

- Not very common
- Typically associated with abdominal aortic aneurysm (AAA)

Referred Pain

- Pain felt in area different from where it originates
- Caused by shared nervous pathways

Note

Any abdominal pain that is described as indigestion may have cardiac involvement. Consider treating the patient for a heart attack.

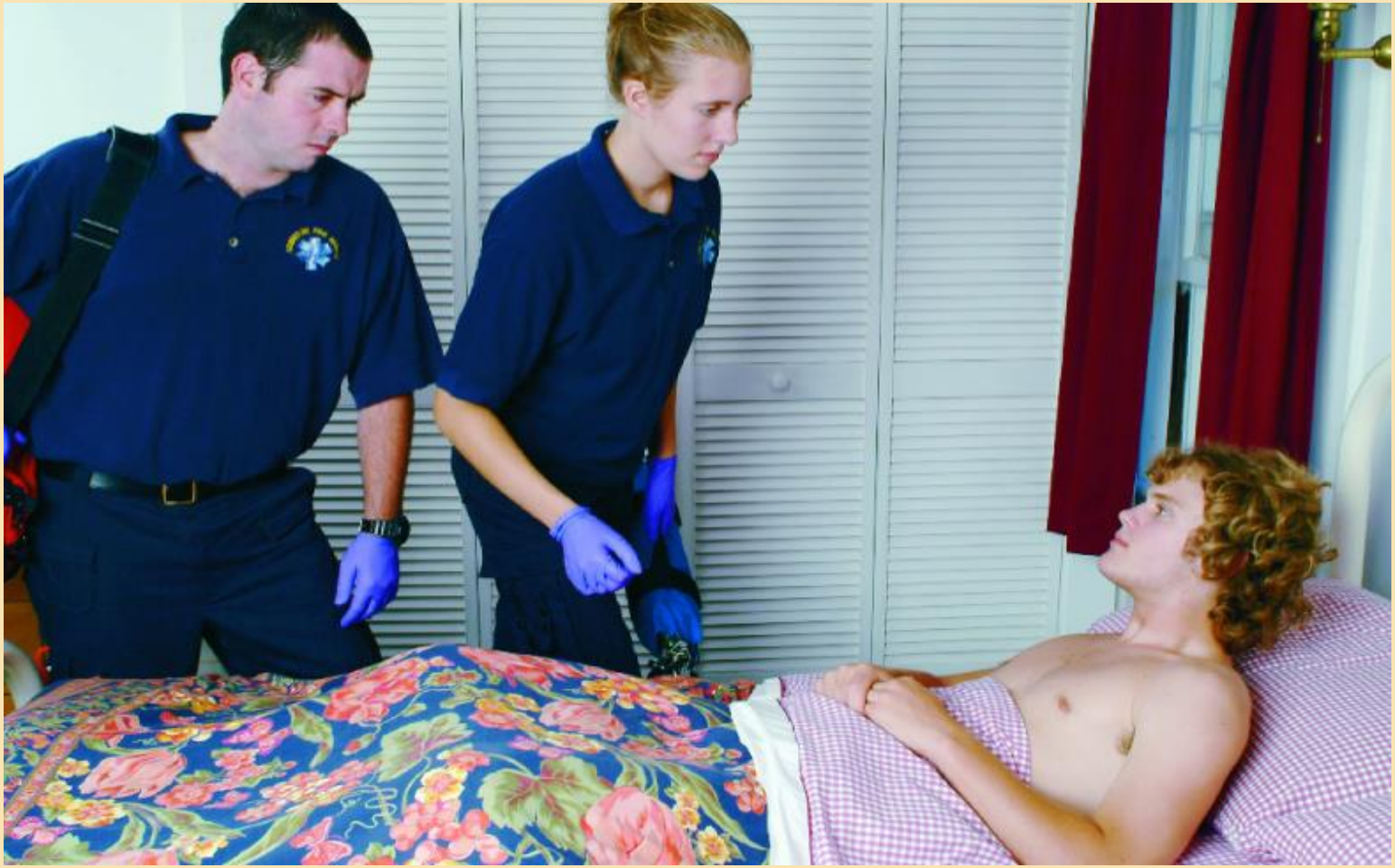
Assessment and Treatment

Scene Size-Up

- Note any odors present.
- Be aware of vomiting.
- Use scene clues for any indication of trauma.

(cont.)

Scene Size-Up



Limmer et al., *Emergency Care, 11th Edition*

Initial Assessment

- Determine level of consciousness.
- Ensure a patent airway.
- Assess for signs of shock.
- Note patient's body positioning.
- Administer high-concentration oxygen.

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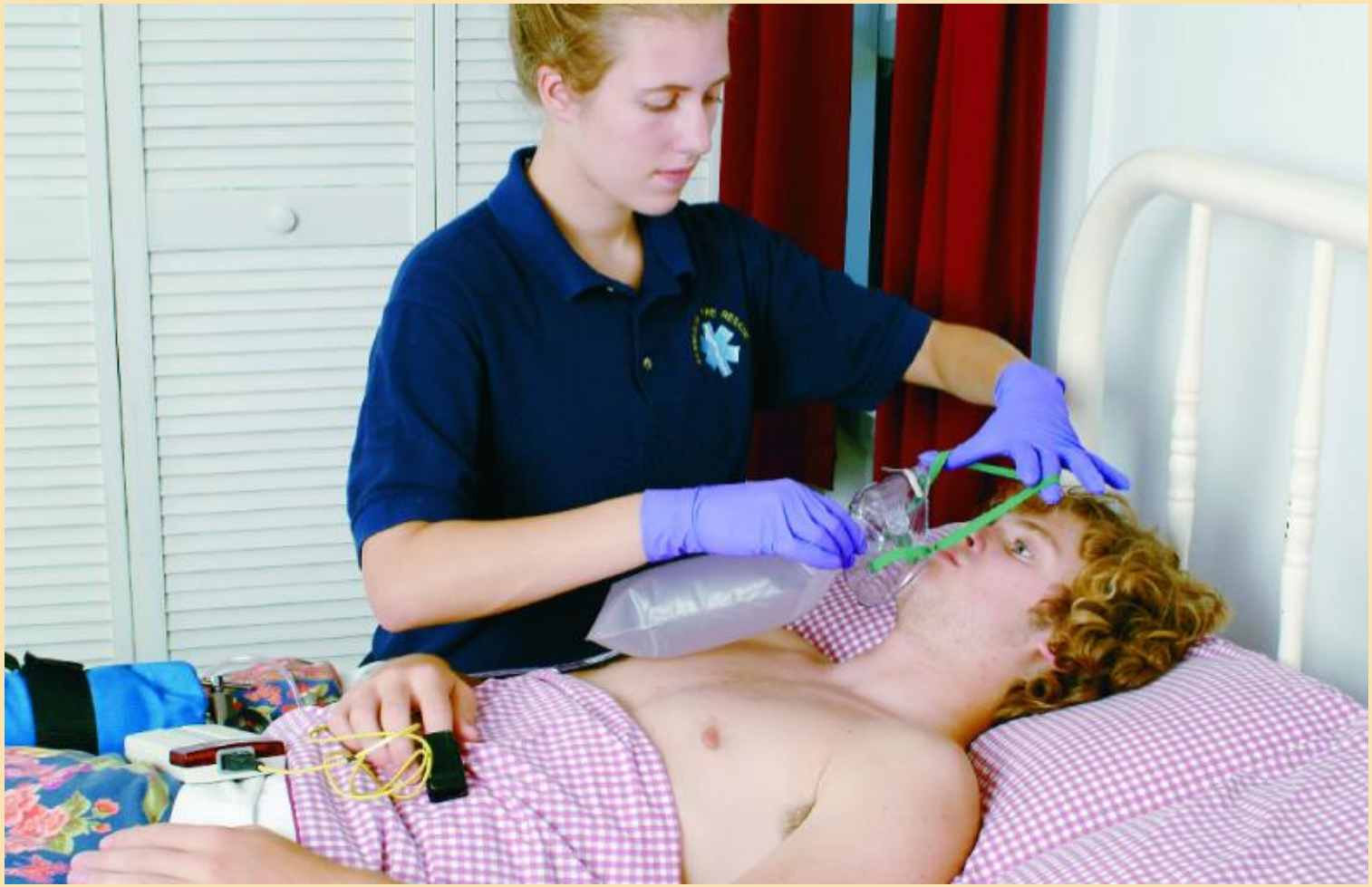
Initial Assessment



Limmer et al., *Emergency Care, 11th Edition*

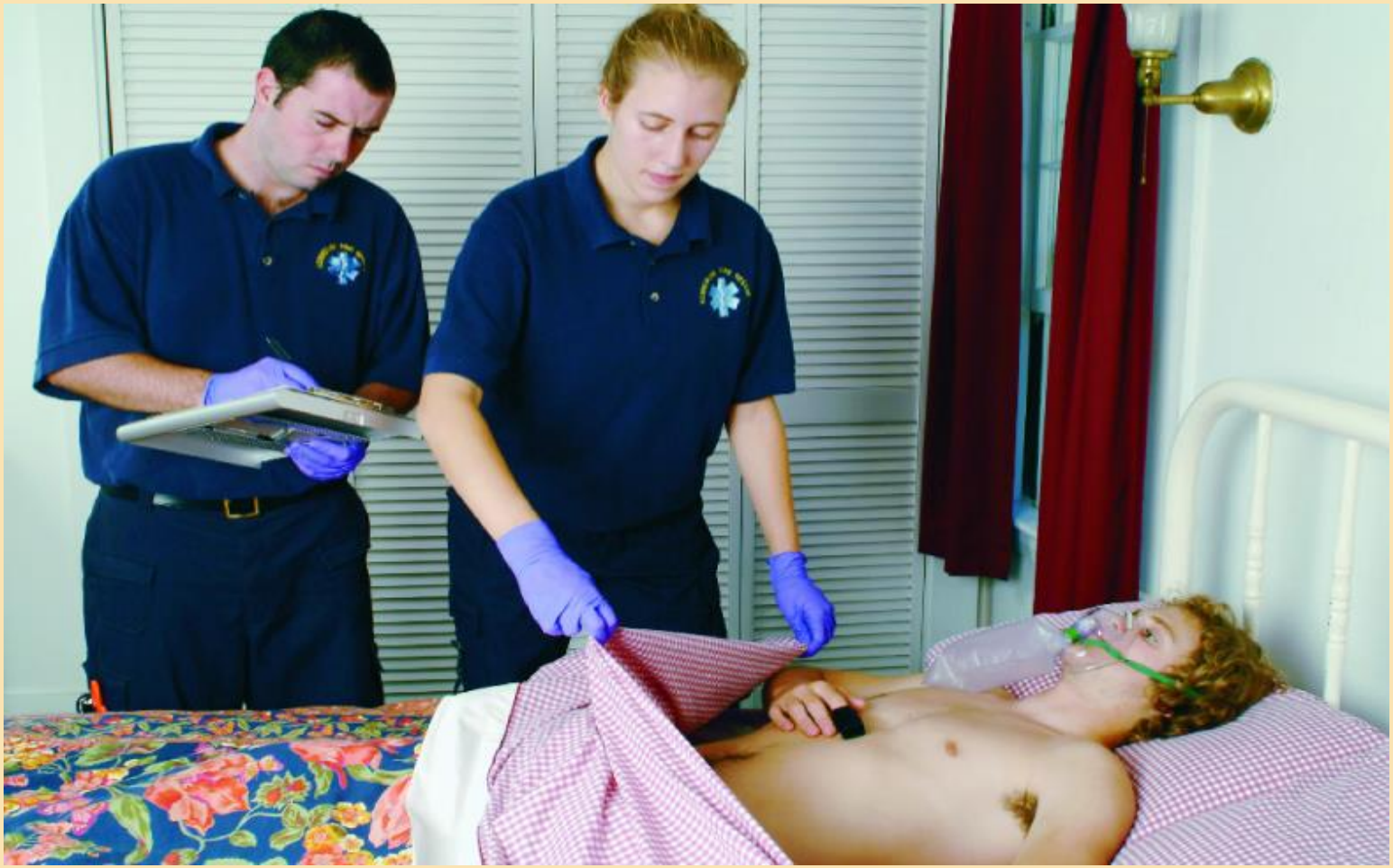
Obtain a SAMPLE History

(cont.)

Obtain a SAMPLE History

- Questions specific to female patients:
  - Any possibility of being pregnant?
  - Where are you in your menstrual cycle? Is it late?
  - Any vaginal bleeding?
  - Any previous history of similar problems?

Visually Inspect the Abdomen



Inspect the Abdomen

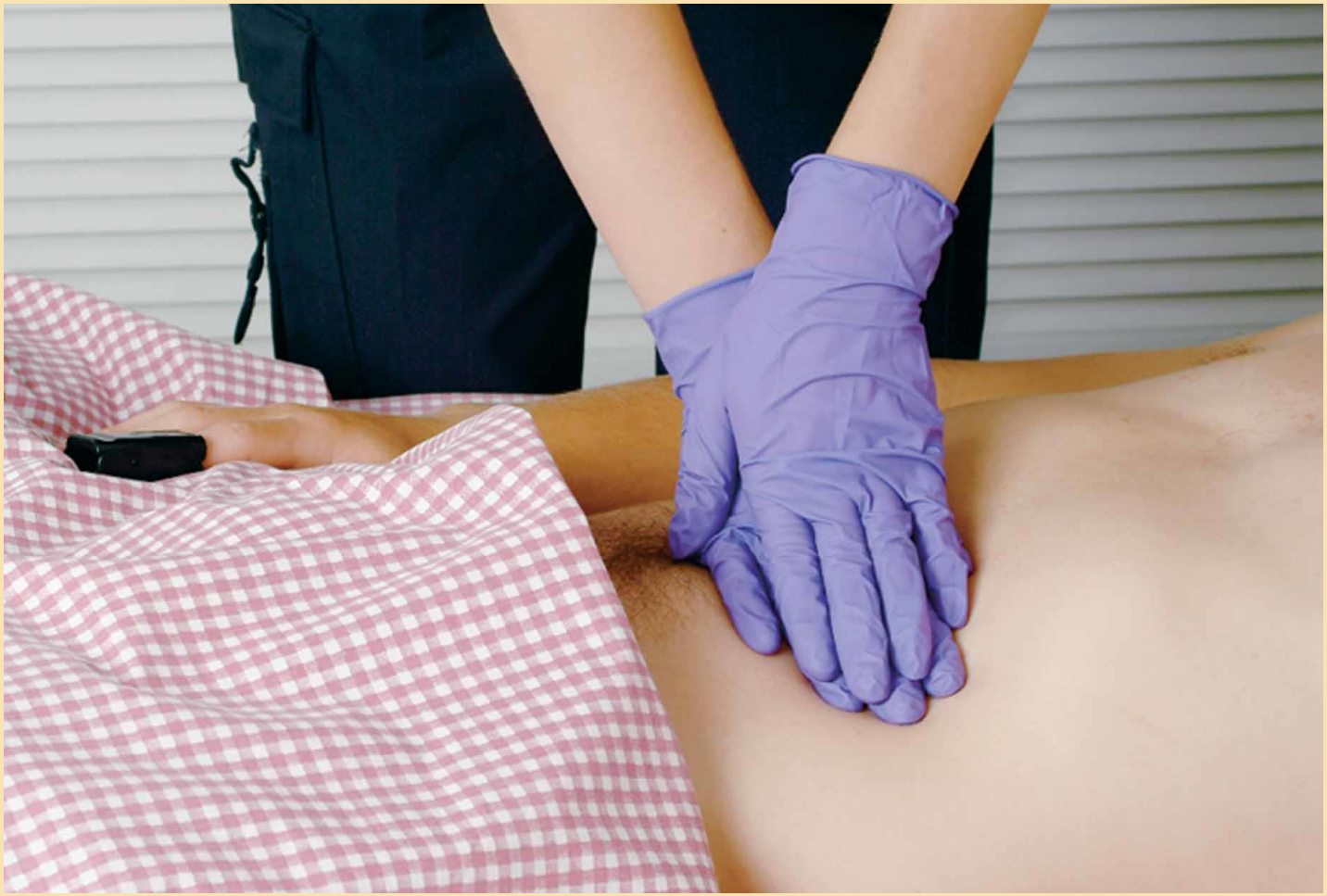
- **Inspect for:**
  - **Discoloration**
  - **Distention**
  - **Bloating**
  - **Protrusions**
  - **Any other abnormalities**

Palpate the Abdomen

- Palpate area of pain last.
- Use fingertips to palpate.
- Loosen clothing to palpate lower quadrants.
- Only palpate each area once.

(cont.)

Palpate the Abdomen



Palpation Findings

- **Guarding**
  - **Protective defense to prevent pain**
  - **Arms drawn across abdomen**
  - **Abdominal muscle clenching**
- **Masses**
  - **Pulsating may indicate aneurysm.**

Guarding of the Abdomen

Focused History and Physical Exam

Identify Area of Pain

Inspection

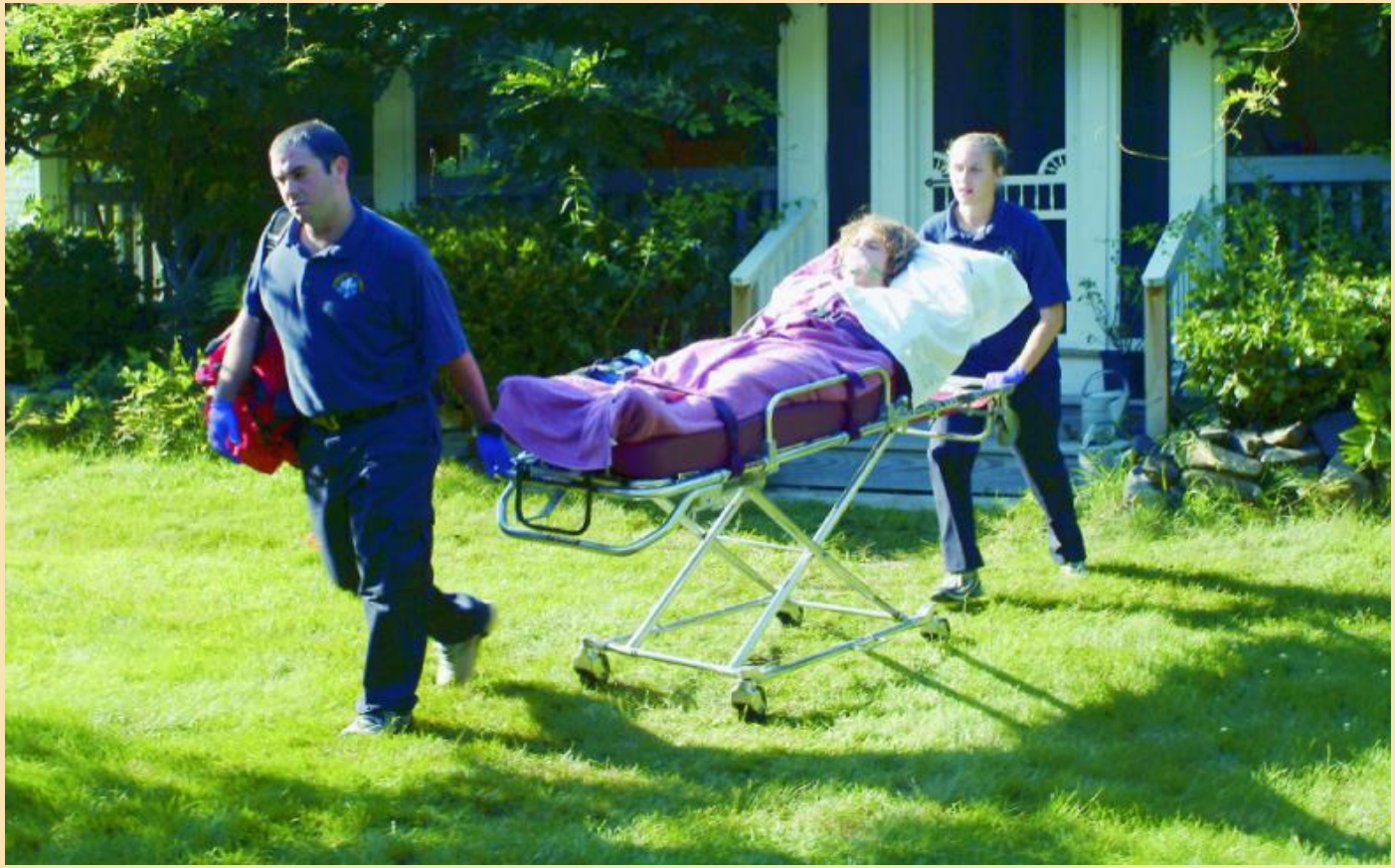
Common Signs and Symptoms

- Pain or tenderness
- Anxiety and fear
- Guarded positioning
- Rapid and shallow breathing
- Rapid pulse, or changes in blood pressure
- Nausea, vomiting, or diarrhea
- Rigid or distended abdomen

Ongoing Assessment

- Perform an ongoing assessment during transport.
- Document and record all vital signs.

Transport, and Assess Vital Signs Every 5 Minutes



Abdominal Conditions

Types of Abdominal Conditions

- Appendicitis
- Cholecystitis/gallstones
- Pancreatitis
- Ulcer/internal bleeding
- Abdominal aortic aneurysm (AAA)
- Hernia
- Renal colic

Appendicitis

- Inflammation of appendix
- If left untreated, can lead to swelling and rupture

(cont.)

Appendicitis

- **Common findings with appendicitis:**
  - **Abdominal pain around umbilicus, and eventually to the RLQ (McBurney's Point)**
  - **Nausea and vomiting**
  - **Low-grade fever and chills**
  - **Lack of appetite**
  - **Abdominal guarding**

Cholecystitis/Gallstones

- Inflammation of the gallbladder
- Gallbladder may also become obstructed by gallstones.

(cont.)

Cholecystitis/Gallstones

- Common findings with cholecystitis:
  - Sudden onset of pain to epigastric and RUQ
  - More common at night, and after eating fatty foods
  - Tenderness to palpation to RUQ
  - Low-grade fever
  - Nausea and vomiting
  - Most common to females between 30 and 50 years of age

Pancreatitis

- Inflammation of the pancreas
- May be triggered by ingestion of alcohol or large amount of food

(cont.)

Pancreatitis

- **Common findings with pancreatitis:**
  - **Severe pain in the middle of the upper quadrants**
  - **Nausea and vomiting**
  - **Abdominal pain with radiation from umbilicus to the back and shoulders**
  - **Severe cases may have fever, tachycardia, and hypoperfusion.**

Ulcer/Internal Bleeding

- Open wounds or sores to the digestive tract
- Common to stomach and small intestines
- Caused by gastric fluids deteriorating walls

(cont.)

Ulcer/Internal Bleeding

- Sudden burning pain to epigastric and LUQ before meals or during stressful situations
- Nausea and vomiting (possible hematemesis)
- If bleeding severe, possible hypoperfusion findings
- Indications of possible peritonitis

Abdominal Aortic Aneurysm (AAA)

- Weakening of descending aortic wall
- Most lethal cause of abdominal pain

(cont.)

Abdominal Aortic Aneurysm (AAA)

- Common findings with an AAA:
  - Onset of lower lumbar and abdominal pain
  - Possible "tearing" sensation
  - Nausea and vomiting
  - Mottled or spotty abdominal skin
  - Decreased/absent femoral/pedal pulses
  - Rigidity/tenderness if the aneurysm bursts

Hernia

- Caused by a small hole forming in the peritoneum
- The “strangulated” tissue may then become necrotic.

(cont.)

Hernia

- **Common findings with a hernia:**
  - **Sudden onset of abdominal pain (usually after heavy lifting or straining)**
  - **Fever**
  - **Rapid pulse**
  - **Other findings similar to intestinal obstruction**

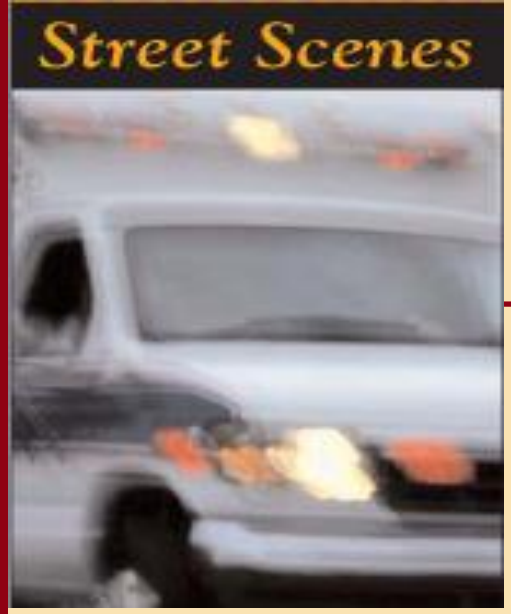
Review Questions

1. List five signs and symptoms of abdominal distress.
2. Describe the differences between visceral and parietal pain and describe a condition that may be responsible for each.

(cont.)

Review Questions

3. **Describe the emergency care for a patient experiencing abdominal pain or distress.**
4. **Name the four abdominal quadrants and explain how the quadrants are determined.**



Street Scenes

- What is your initial impression of this patient?
- What is the significance of the patient's initial presentation?
- Why would you want to see the trash can?

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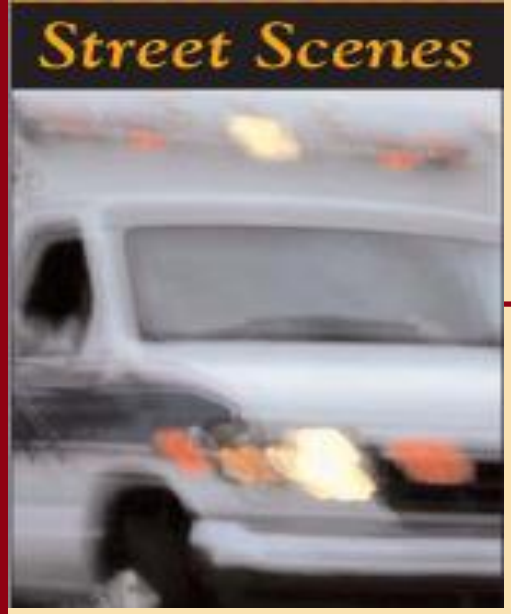

Street Scenes

- **Why would you request advanced life support?**
- **Do you agree with the transport priority? Why or why not?**

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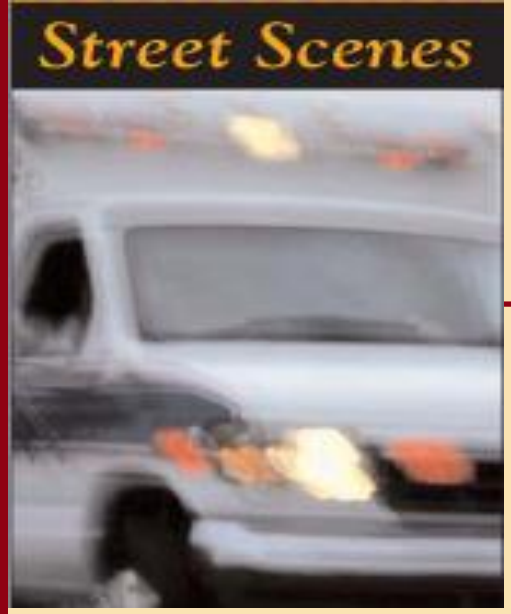
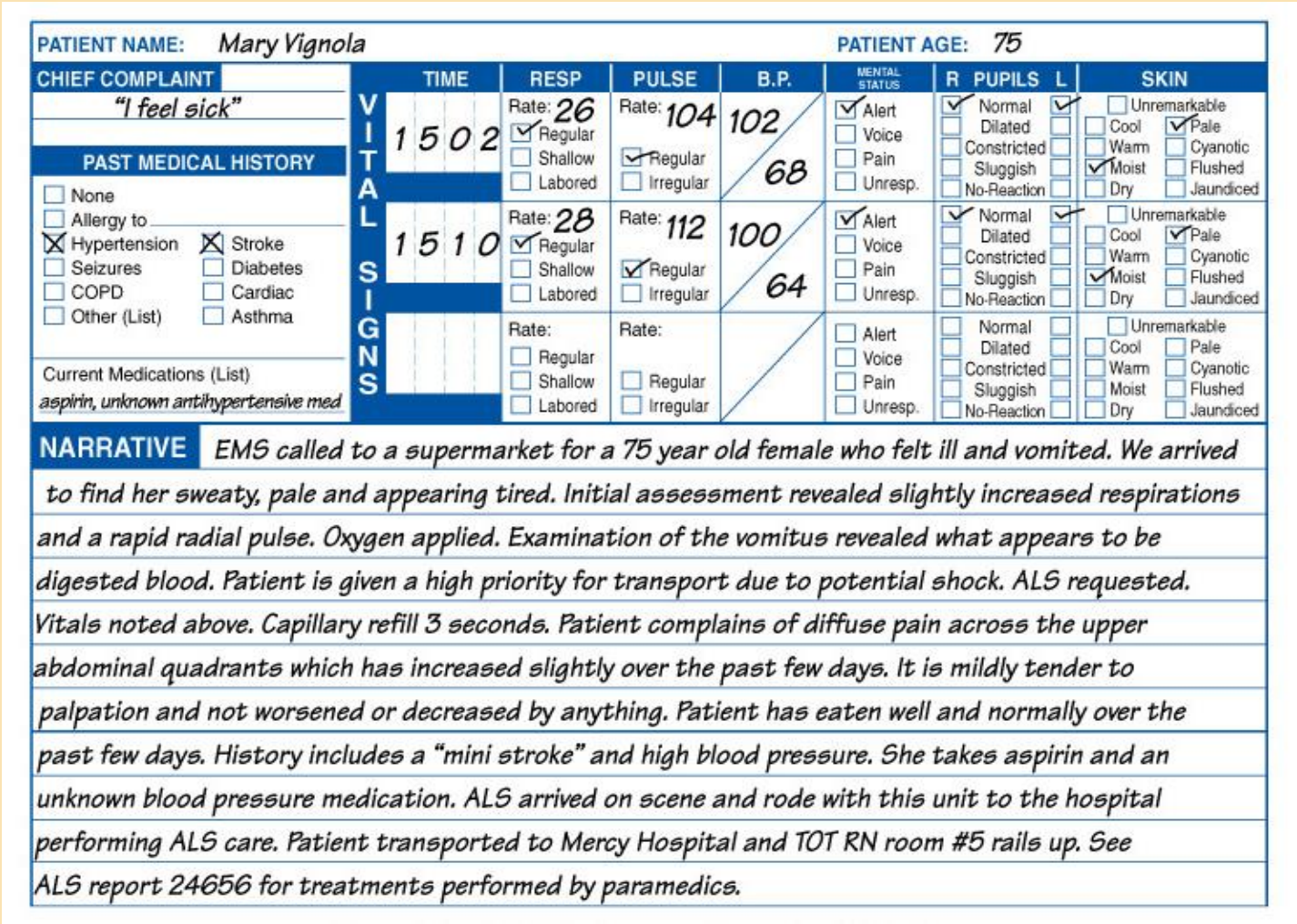


Street Scenes

- Do you believe this patient is in shock? Explain your reasons.
- What effect might her history have on her current condition?
- What position should the patient be placed in?

Sample Documentation



PATIENT NAME: Mary Vignola — PATIENT AGE: 75

CHIEF COMPLAINT: "I feel sick"

PAST MEDICAL HISTORY
- [ ] None
- [ ] Allergy to
- [x] Hypertension
- [x] Stroke
- [ ] Seizures
- [ ] Diabetes
- [ ] COPD
- [ ] Cardiac
- [ ] Other (List)
- [ ] Asthma

Current Medications (List): aspirin, unknown antihypertensive med

VITAL SIGNS

TIME	RESP	PULSE	B.P.	MENTAL STATUS	R PUPILS L	SKIN
1502	Rate: 26; [x] Regular; [ ] Shallow; [ ] Labored	Rate: 104; [x] Regular; [ ] Irregular	102/68	[x] Alert; [ ] Voice; [ ] Pain; [ ] Unresp.	[x] Normal; [ ] Dilated; [ ] Constricted; [ ] Sluggish; [ ] No-Reaction — [x]	[ ] Unremarkable; [ ] Cool; [x] Pale; [ ] Warm; [ ] Cyanotic; [x] Moist; [ ] Flushed; [ ] Dry; [ ] Jaundiced
1510	Rate: 28; [x] Regular; [ ] Shallow; [ ] Labored	Rate: 112; [x] Regular; [ ] Irregular	100/64	[x] Alert; [ ] Voice; [ ] Pain; [ ] Unresp.	[x] Normal; [ ] Dilated; [ ] Constricted; [ ] Sluggish; [ ] No-Reaction — [x]	[ ] Unremarkable; [ ] Cool; [x] Pale; [ ] Warm; [ ] Cyanotic; [x] Moist; [ ] Flushed; [ ] Dry; [ ] Jaundiced
	Rate: [ ] Regular; [ ] Shallow; [ ] Labored	Rate: [ ] Regular; [ ] Irregular	/	[ ] Alert; [ ] Voice; [ ] Pain; [ ] Unresp.	[ ] Normal; [ ] Dilated; [ ] Constricted; [ ] Sluggish; [ ] No-Reaction — [ ]	[ ] Unremarkable; [ ] Cool; [ ] Pale; [ ] Warm; [ ] Cyanotic; [ ] Moist; [ ] Flushed; [ ] Dry; [ ] Jaundiced

NARRATIVE

EMS called to a supermarket for a 75 year old female who felt ill and vomited. We arrived to find her sweaty, pale and appearing tired. Initial assessment revealed slightly increased respirations and a rapid radial pulse. Oxygen applied. Examination of the vomitus revealed what appears to be digested blood. Patient is given a high priority for transport due to potential shock. ALS requested. Vitals noted above. Capillary refill 3 seconds. Patient complains of diffuse pain across the upper abdominal quadrants which has increased slightly over the past few days. It is mildly tender to palpation and not worsened or decreased by anything. Patient has eaten well and normally over the past few days. History includes a "mini stroke" and high blood pressure. She takes aspirin and an unknown blood pressure medication. ALS arrived on scene and rode with this unit to the hospital performing ALS care. Patient transported to Mercy Hospital and TOT RN room #5 rails up. See ALS report 24656 for treatments performed by paramedics.