• TEACH Cards (Teaching Evidence-based medicine And Clinical topics in the Hospital) is an inpatient curricular tool consisting of 50 topic-based cards designed to guide mini-teaching sessions that enhance both clinical knowledge and evidence-based medicine skills.

• TEACH Cards was developed at the University of Wisconsin-Madison Department of Family Medicine, along with contributions from Tufts University Department of Family Medicine and Saint Louis University Department of Family Medicine.

• Visit our website: www.fammed.wisc.edu/teachcards
INSTRUCTIONS

• Choose a card. It should take 5-10 minutes to use. Any team member can lead the discussion.
• Discuss the background questions as a group, and look up the answers as needed.
• Find the answer to the foreground question, or have everyone write their own PICO question.
• Take 5 minutes to look up the PICO answers.
• Share the PICO answers and resources used.
<table>
<thead>
<tr>
<th>Background Question</th>
<th>Foreground Question</th>
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| This is a more basic question that answers who, what, where, when, why, and how. | This is a specific clinical query: **PICO question**.  
**P**atient population/Problem  
**I**ntervention/exposure  
**C**omparison (if applicable)  
**O**utcome |

**Resources:**  
American Family Physician  
BMJ Clinical Evidence  
DynaMed Plus  
Essential Evidence Plus  
UpToDate

**Resources:**  
Cochrane Database  
DynaMed Plus  
Essential Evidence Plus  
PubMed  
TRIP Database

**What are some uses for the cards?**
- To initiate discussion among team members  
- To practice evidence-based medicine  
- To guide independent study  
- To create a mini presentation

*Answers are intentionally not provided.*
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<th>NEUROLOGIC</th>
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<td>Neuroleptic malignant</td>
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<td>syndrome</td>
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<td>Seizure</td>
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RENAL
Acidosis
Acute renal failure
Alkalosis
Hyperkalemia
Hypernatremia
Hypokalemia
Hyponatremia
Rhabdomyolysis

GASTROINTESTINAL
Acute abdominal pain
Gastrointestinal bleeding
Hepatic failure
Pancreatitis
Refeeding Syndrome

INFECTIONOUS DISEASE
Cellulitis
Nosocomial infections
Post-operative fever
Pressure ulcers
Sepsis

HEMATOLOGIC
Blood product transfusion
Heparin-induced thrombocytopenia
Sickle cell anemia

ENDOCRINE
Adrenal insufficiency
Diabetic ketoacidosis
Myxedema coma
Thyroid storm

END OF LIFE
Hospice
Organ donation/transplant
Pronouncement of death
Background Questions:

✓ List the key symptoms of withdrawal and time frame in which they usually occur.
✓ What is CIWA, and how can it be used in management?
✓ Discuss the decision to manage withdrawal in the outpatient versus inpatient setting.

Foreground Questions:

✓ In patients with alcohol withdrawal, are benzodiazepines more effective than non-benzodiazepines in preventing seizures?
✓ Write your own PICO question, and try to find the answer.
Background Questions:
✓ Discuss the use of stroke screening tools and the definition of TIA.
✓ List the imaging and labs used to evaluate patients with CVA and TIA.
✓ Discuss risk stratification criteria for evaluating TIA in the outpatient or inpatient setting.

Foreground Questions:
✓ In patients who have had a stroke, do antiepileptic medications prevent seizures?
✓ Write your own PICO question, and try to find the answer.

EBM Pearl:
Name two online resources that would assist you in finding recommendations for primary and secondary stroke prevention?
Background Questions:
✓ List common risk factors for and precipitants of delirium.
✓ Describe the clinical presentation of delirium and screening tools that help in diagnosis.
✓ Discuss the risks and benefits of pharmacologic and non-pharmacologic treatments of delirium.

Foreground Questions:
✓ In elderly post-operative hospitalized patients, does haloperidol prevent the development of delirium?
✓ Write your own PICO question, and try to find the answer.
Teaching Pearl:
Discuss the inheritance and triggering agents of malignant hyperthermia.

Background Questions:
✓ Describe the difference between heat cramps, heat exhaustion, and heat stroke.
✓ What are the potential sequelae of extreme or prolonged hyperthermia?
✓ Discuss are the goals of cooling treatment in heat illness?

Foreground Questions:
✓ In patients with fever, are NSAIDs more effective than acetaminophen in reducing fever?
✓ Write your own PICO question, and try to find the answer.
HYPOTHERMIA

Background Questions:
✓ What are the signs and symptoms of hypothermia?
✓ What are the indications for therapeutic induced hypothermia?
✓ Discuss rewarming methods for hypothermia.
✓ Describe stages and treatment of frostbite.

Foreground Questions:
✓ In adults following surgery, is forced air warming superior to conventional care in preventing post-op hypothermia?
✓ Write your own PICO question, and try to find the answer.

Community Health Pearl:
Where can uninsured homeless people receive medical care in your community?
Background Questions:
- List the symptoms of acetaminophen and two other common medication overdoses.
- Discuss the initial clinical and lab evaluation for suspected overdose.
- Explain the appropriate use of gastrointestinal decontamination.

Foreground Questions:
- In patients with acetaminophen overdose and hepatotoxicity, does N-acetylcysteine improve mortality?
- Write your own PICO question, and try to find the answer.

Community Health Pearl:
How do you contact your local poison control, and what services do they provide?
MENINGITIS

Background Questions:
✓ Explain the history, exam, and lab findings of bacterial and aseptic meningitis.
✓ List the common pathogens and empiric treatment for adult patients with meningitis.
✓ Discuss the recommendations for immunizations and chemoprophylaxis for meningitis.

Foreground Questions:
✓ In adult patients with meningitis, do steroids improve morbidity and mortality?
✓ Write your own PICO question, and try to find the answer.

Teaching Pearl:
How do you discuss lumbar puncture with your patient or their family members?
Background Questions:
✓ Describe the typical clinical presentation of NMS.
✓ Discuss the difference between NMS, serotonin syndrome, and malignant hyperthermia.
✓ List 5 medications that can cause NMS.
✓ What are the general management goals for NMS?

Foreground Questions:
✓ In patients with NMS, does treatment with dantrolene or bromocriptine decrease mortality?
✓ Write your own PICO question, and try to find the answer.

EBM Pearl:
How would you explain the sensitivity and specificity of a test to a patient?
Teaching Pearl:
How do you talk about driving to patients who have had a seizure?

Background Questions:
- Describe the physiologic and clinical difference between generalized and focal seizures.
- How do psychogenic seizure, syncope, and seizure clinically differ?
- Discuss recommendations for imaging, lumbar puncture, and EEG after first seizure.

Foreground Questions:
- For adult patients in status epilepticus, is lorazepam or diazepam more effective in aborting the seizure?
- Write your own PICO question, and try to find the answer.
Background Questions:
✓ Define serotonin syndrome (SS) and describe its classic features.
✓ Name 5 non-SSRI medications that can cause SS.
✓ Discuss the use of the Hunter Serotonin Toxicity Criteria for diagnosis.
✓ What medications can help in symptom management of serotonin syndrome?

Foreground Questions:
✓ For patients with serotonin syndrome, does treatment with cyproheptadine improve symptoms?
✓ Write your own PICO question, and try to find the answer.

EBM Pearl:
Review the Strength of Recommendation Taxonomy (SORT) for grading medical evidence.
Background Questions:
✓ Discuss the clinical difference between mild and moderate/severe traumatic brain injury (TBI).
✓ Name and discuss clinical decision tools that help determine the need for head imaging.
✓ Review the components of the Glasgow Coma Scale.
✓ Describe the services provided on inpatient rehabilitation for patients with moderate to severe TBI.

Foreground Questions:
✓ In patients with TBI, does phenytoin compared to valproate decrease the incidence of seizures?
✓ Write your own PICO question, and try to find the answer.

Community Health Pearl:
What helmet or head safety programs are in your community?
ACUTE CORONARY SYNDROME

Teaching Pearl:
Discuss the different types of stress tests and the patients who are appropriate for each.

Background Questions:
✓ Describe anginal chest pain and non-anginal chest pain.
✓ List the common EKG changes for acute coronary syndrome.
✓ What are the initial medications used to treat acute coronary syndrome?

Foreground Questions:
✓ In patients with unstable angina/NSTEMI, are invasive strategies associated with decreased mortality compared to conservative treatment?
✓ Write your own PICO question, and try to find the answer.
ATRIAL FIBRILLATION

Background Questions:
- Explain what CHA₂DS₂-VASC and HAS-BLED score are and how to use them.
- List secondary causes of atrial fibrillation.
- Discuss the medication options for the treatment of atrial fibrillation.
- When should patients be referred to cardiology?

Foreground Questions:
- In patients with a fib, is catheter ablation superior to medical therapy in reducing recurrence of a fib?
- Write your own PICO question, and try to find the answer.

Teaching Pearl:
Discuss foods and beverages that can affect INR in patients taking warfarin. (Do patients need to avoid these items?)
BRADYCARDIA

Background Questions:
✓ What are the most common causes of secondary bradycardia?
✓ Describe the difference between 1\textsuperscript{st} degree, 2\textsuperscript{nd} degree type I and II, and 3\textsuperscript{rd} degree heart block.
✓ What are the indications for pacemaker placement?
✓ Discuss treatment of acute symptomatic bradycardia.

Foreground Questions:
✓ In patients with bradycardia, are bi-ventricular pacemakers compared to single lead pacemakers associated with greater longevity?
✓ Write your own PICO question, and try to find the answer.

Teaching Pearl:
Discuss the pros and cons of transcutaneous, transvenous, and implantable pacemakers.
CONGESTIVE HEART FAILURE

Background Questions:

✓ Name signs and symptoms of congestive heart failure.
✓ List the lab tests and imaging used to support or exclude the diagnosis of heart failure.
✓ When is it appropriate to repeat imaging and laboratory tests for CHF?

Foreground Questions:

✓ In patients with heart failure, what is the number needed to treat for ACE inhibitors to reduce mortality?
✓ Write your own PICO question, and try to find the answer.

Teaching Pearl:
Discuss the evidence for cardiac resynchronization in patients with CHF.
EBM Pearl: Explain the difference between relative and absolute risk reduction.

HYPERTENSIVE URGENCY & EMERGENCY

Background:
✓ Explain the difference between hypertensive urgency and emergency.
✓ List the signs and symptoms of end organ damage.
✓ Discuss the considerations in choosing medications and follow up in treatment.

Foreground:
✓ In patients with hypertensive emergency, is there an optimal rate of blood pressure reduction to decrease morbidity and mortality?
✓ Write your own PICO question, and try to find the answer.
ACUTE RESPIRATORY DISTRESS SYNDROME

Background Questions:
✓ What is the Berlin Definition for diagnosing ARDS?
✓ Discuss common causes of indirect lung injury that lead to ARDS.
✓ Describe the work-up for suspected ARDS.
✓ What are the main treatment components for ARDS?

Foreground Questions:
✓ In adults with ARDS, does the use of surfactant improve survival?
✓ Write your own PICO question, and try to find the answer.

EBM Pearl: Define validity. What determines the validity of a study?
Teaching Pearl: What is an asthma action plan, and what are its components?

Background Questions:
- Discuss classification of asthma control and severity, and discuss risk factors for an asthma exacerbation.
- What is the differential diagnosis and diagnostic work-up of someone presenting with respiratory distress.
- When is inpatient admission warranted for asthma?
- Discuss inpatient management of asthma exacerbation.

Foreground Questions:
- In patients with persistent symptomatic asthma, does long term treatment with azithromycin vs placebo reduce frequency of hospitalizations?
- Write your own PICO question, and try to find the answer.
COMMUNITY-ACQUIRED PNEUMONIA

Background Questions:
✓ List the organisms that commonly cause community acquired pneumonia (CAP) in adults.
✓ When is it appropriate to obtain lab studies, and what labs would you order?
✓ Discuss differences in management of CAP in outpatient, inpatient, and ICU settings.

Foreground Questions:
✓ In patients with CAP, is procalcitonin useful for determining the need for antibiotics?
✓ Write your own PICO question, and try to find the answer.

Teaching Pearl:
Discuss the use of the Pneumonia Severity Index (PSI) and CURB-65.
Background Questions:
- Define COPD exacerbation.
- List the key medications for the treatment of mild, moderate, and severe exacerbation.
- When does a patient need to be admitted to the hospital for treatment of COPD exacerbation?

Foreground Questions:
- In hospitalized patients with a COPD exacerbation, do IV or oral corticosteroids lead to decreased mortality?
- Write your own PICO question, and try to find the answer.

Community Health Pearl:
What are the smoking cessation programs and resources in your community?
OBSTRUCTIVE SLEEP APNEA

Background Questions:
✓ What are the signs and symptoms of OSA?
✓ Describe the physiologic sequelae of OSA.
✓ Discuss the Epworth Sleepiness Scale.
✓ What are the differences between an attended sleep lab study versus a home sleep study?
✓ Describe how CPAP works.

Foreground Questions:
✓ For patients who are intolerant to CPAP, is surgery or oral appliance more effective at reducing OSA severity at 12 months?
✓ Write your own PICO question, and try to find the answer.

Teaching Pearl:
Discuss techniques to use when talking to patients about behavior change.
Teaching Pearl:
What criteria determines the duration of anti-coagulation therapy?

Background Questions:
✓ List the common risk factors for PE.
✓ What role do the D-dimer lab and imaging play in diagnosis of PE?
✓ Describe the acute and chronic treatment of PE.
✓ When is it appropriate to evaluate for thrombophilia, and what tests are included in the evaluation?

Foreground Questions:
✓ In patients with PE, is anticoagulation with rivaroxaban as effective as warfarin in preventing recurrent PE?
✓ Write your own PICO question, and try to find the answer.
Background Questions:
- List the common causes of secondary pulmonary hypertension (PH).
- Discuss the indications for and initial tests used to evaluate pulmonary hypertension.
- What are the common medications used in primary pulmonary hypertension?

Foreground Questions:
- In patients with pulmonary hypertension, does exercise improve endurance?
- Write your own PICO question, and try to find the answer.
ACIDOSIS

Background Questions:
✓ What are the common causes of anion gap and non-anion gap metabolic acidosis?
✓ What is the work-up for renal tubular acidosis?
✓ Discuss how to determine the primary etiology of an acid-base disorder based on ABG and how to calculate expected compensation?

Foreground Questions:
✓ For inpatients with mild-moderate acidosis (pH 7.1-7.35), does IV sodium bicarbonate lead to decreased mortality?
✓ Write your own PICO question, and try to find the answer.

Teaching Pearl:
What is the delta delta ratio (delta gap)?
Background Questions:
✓ What are common causes of acute pre-renal, intra-renal, and post renal failure?
✓ How do you determine the etiology of acute renal failure?
✓ When is it appropriate to obtain imaging studies, and what studies would you order?

Foreground Questions:
✓ For adults taking metformin, do NSAIDs increase the likelihood of lactic acidosis?
✓ Write your own PICO question, and try to find the answer.
Teaching Pearl: What are the differences between arterial and venous blood gas analysis?

Background Questions:
✓ What are the common causes of metabolic and respiratory alkalosis?
✓ Discuss the pathophysiology and treatment of chloride-responsive (contraction) metabolic alkalosis.
✓ How would you adjust mechanical ventilation settings to correct respiratory alkalosis?

Foreground Questions:
✓ For ICU patients with metabolic alkalosis, is a single dose of acetazolamide as effective as multiple doses for treatment of metabolic alkalosis?
✓ Write your own PICO question, and try to find the answer.
EBM Pearl: Define relative risk.

**Background Questions**
✓ What are the complications of hyperkalemia?
✓ Describe the EKG changes in hyperkalemia.
✓ How should medications for hyperkalemia be given, and when should labs be checked?

**Foreground Questions:**
✓ In patients taking both ACE inhibitors and ARBs, what is the relative risk of hyperkalemia?
✓ Write your own PICO question, and try to find the answer.
Background Questions:
- Describe the classification of hypernatremia based on volume status.
- What is the work-up for hypernatremia?
- Discuss methods and potential complications of hypernatremia correction.
- What medications can treat diabetes insipidus?

Foreground Questions:
- In patients on lithium who develop diabetes insipidus and hypernatremia, does stopping lithium correct hypernatremia?
- Write your own PICO question, and try to find the answer.

Teaching Pearl:
How do you calculate free water deficit?
HYPOKALEMIA

Background Questions:
✓ What are the common causes of hypokalemia?
✓ Describe the clinical manifestations of hypokalemia.
✓ What are the potential complications of hypokalemia?
✓ Discuss principles of potassium replacement.

Foreground Questions:
✓ In patients taking potassium-wasting diuretics, is a potassium rich diet as effective as a potassium supplement in maintaining a normal potassium level?
✓ Write your own PICO question, and try to find the answer.

Teaching Pearl:
Discuss ways to minimize discomfort with IV potassium replacement.
Background Questions:
✓ Describe how hyponatremia is classified.
✓ Name lab tests to help determine the cause of hyponatremia.
✓ What are the different methods of treating hyponatremia?

Foreground Questions:
✓ In elderly patients, is chlorthalidone or HCTZ associated with a higher mortality rate?
✓ Write your own PICO question, and try to find the answer.

Teaching Pearl: Discuss how to determine when hyponatremia requires immediate treatment.
RHABDOMYOLYSIS

Background Questions:
✓ Discuss the pathophysiology and diagnosis of rhabdomyolysis.
✓ Explain how IV fluids are used in treatment.
✓ Discuss the common complications of rhabdomyolysis.
✓ When should hemodialysis, sodium bicarbonate, and/or mannitol be used in treatment?

Foreground Questions:
✓ When rhabdomyolysis is due to statin use, which other lipid medications reduce cardiovascular mortality?
✓ Write your own PICO question, and try to find the answer.

Teaching Pearl: Discuss the medications and toxins that increase the risk of rhabdomyolysis.
ACUTE ABDOMINAL PAIN

Background Questions:
✓ List history and exam findings that differentiate obstruction and peritonitis from other abdominal pain.
✓ Discuss considerations for appropriate imaging for abdominal pain evaluation.
✓ Discuss indications for immediate surgical consultation.

Foreground Questions:
✓ In patients with acute abdominal pain, is the Alvarado score or Appendicitis Inflammatory Response (AIR) score more sensitive for predicting appendicitis?
✓ Write your own PICO question, and try to find the answer.

Teaching Pearl: Discuss how your evaluation changes in women of child-bearing age.
GASTROINTESTINAL BLEEDING

Background Questions:
✓ Explain the expected symptoms and causes of upper and lower GI bleeding.
✓ Discuss indications for inpatient evaluation and management of GI bleeding.
✓ Discuss medications to initiate or discontinue during upper and lower GI bleeding.

Foreground Questions:
✓ In patients with upper GI bleed, does treatment with IV PPI vs no PPI decrease the risk of rebleeding?
✓ Write your own PICO question, and try to find the answer.

Teaching Pearl:
Discuss the indications and logistics of blood transfusions during a GI bleed.
HEPATIC FAILURE

Background Questions:
- List common risk factors for development of cirrhosis.
- Describe the common physical exam findings in patients with cirrhosis.
- Discuss labs and images used to diagnose cirrhosis.
- Explain the indications for medicinal and surgical treatment of ascites and cirrhosis.

Foreground Questions:
- In cirrhotic patients with ascites, is spironolactone or furosemide more effective at treating ascites?
- Write your own PICO question, and try to find the answer.

Community Health Pearl:
Where is the nearest liver transplant center, and what is the average waiting time?
PANCREATITIS

Background Questions:
✓ Discuss the risk factors for acute pancreatitis.
✓ List the components and use of at least one acute pancreatitis scoring system.
✓ Explain the indications for ERCP.

Foreground Questions:
✓ In patients with severe acute pancreatitis, is enteral feeding associated with increased mortality compared to parenteral feeding?
✓ Write your own PICO question, and try to find the answer.

Teaching Pearl:
What is the evidence for using antibiotics in acute pancreatitis?
REFEEDING SYNDROME

Background Questions:
- Describe 3 risk factors for refeeding syndrome.
- Which nutritional deficiency is most profound in refeeding syndrome?
- Describe 3 dangerous clinical complications of refeeding syndrome.
- How can you prevent refeeding syndrome in patients?

Foreground Questions:
- For patients with anorexia nervosa, does family therapy compared to individual therapy reduce relapse rates?
- Write your own PICO question, and try to find the answer.

EBM Pearl:
Try to find a critical appraisal worksheet for a randomized control trial.
Background Questions:
✓ What is the difference between cellulitis and erysipelas?
✓ Which populations are at higher risk for community-acquired MRSA?
✓ What are signs and symptoms that should increase your suspicion for necrotizing fasciitis?
✓ What oral and IV antibiotics are used to treat cellulitis?

Foreground Questions:
✓ For adults in the ICU, does decolonization prevent MRSA infections?
✓ Write your own PICO question, and try to find the answer.
Background Questions:
✓ What is the difference between hospital acquired pneumonia (HAP) and healthcare associated pneumonia (HCAP)?
✓ What empiric antibiotic regimen would you initiate for suspected HCAP?
✓ List risk factors for Clostridium difficile infection.
✓ Discuss five interventions that decrease the incidence of nosocomial infections.

Foreground Questions:
✓ For adults requiring antibiotics, do probiotics decrease the likelihood of acquiring C. difficile-associated diarrhea?
✓ Write your own PICO question, and try to find the answer.

Community Health Pearl:
Review your state level healthcare-associated infections progress report on www.cdc.gov. Where can you find your own hospital data?
Background Questions:
✓ What are the 5 “W’s” for causes of post-op fever?
✓ Discuss differential diagnosis based on the timing of the fever.
✓ What are the most likely pathogens causing surgical site infections?
✓ Discuss the work-up and treatment of post-op fever.

Foreground Questions:
✓ In post-operative patients does the use of incentive spirometry compared to observation reduce the risk of pneumonia?
✓ Write your own PICO question, and try to find the answer.

EBM Pearl:
How does pretest probability affect the predictive value of a test?
Community Health Pearl:
Review healthypeople.gov to find national benchmarks for different diseases. e.g. Find national goals for pressure ulcer-related hospitalization.

PRESSURE ULCERS

Background Questions:
✓ What are the stages of a pressure ulcer?
✓ Discuss risk factors for developing a pressure ulcer.
✓ Review 3 types of wound dressings including an advantage and disadvantage of each.
✓ What is the imaging method of choice to evaluate for osteomyelitis?

Foreground Questions:
✓ For elderly patients does vitamin C prevent pressure ulcers?
✓ Write your own PICO question, and try to find the answer.
Teaching Pearl:
Discuss IV access options, and explain how to obtain IV access in patients with sepsis.

Background Questions:
- Define SIRS, sepsis, severe sepsis, and septic shock.
- Explain the initial evaluation of sepsis.
- Discuss the management of blood pressure in patients with sepsis.
- Discuss the choice and management of antibiotics in patients with sepsis.

Foreground Questions:
- In patients with sepsis does early enteral feeding compared to fasting improve survival?
- Write your own PICO question, and try to find the answer.
Background Questions:
✓ Discuss indications and contraindications for transfusion of PRBCs, platelets, and FFP.
✓ When should irradiated blood products be used?
✓ Discuss management of mild to severe transfusion reactions.
✓ Discuss how to correct elevated INR.

Foreground Questions:
✓ In patients undergoing blood transfusion, do prophylactic loop diuretics decrease transfusion-related morbidity?
✓ Write your own PICO question, and try to find the answer.

Teaching Pearl:
What is the difference between type & screen and type & cross match?
TEACHING PEARL:
Review the 4T’s Score and how you would use it.

BACKGROUND QUESTIONS:
- What are the two types of HIT?
- When does HIT typically present?
- For whom should you consider obtaining HIT antibody testing? When is testing not helpful?

FOREGROUND QUESTIONS:
- For adults requiring heparin, is low molecular weight heparin compared to unfractioned heparin less likely to cause HIT?
- Write your own PICO question, and try to find the answer.
Teaching Pearl:
Read “Voices of Adults Living with Sickle Cell Disease Pain”
http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3804106

SICKLE CELL ANEMIA

Background Questions:
✓ Discuss diagnostic criteria for acute chest syndrome?
✓ Discuss pain management for someone experiencing a sickle cell vaso-occlusive crisis requiring hospitalization.
✓ What are the indications for a blood transfusion in a patient with a sickle cell vaso-occlusive crisis?
✓ What immunizations should sickle cell patients receive?

Foreground Questions:
✓ For adults hospitalized with a painful sickle cell crisis, does incentive spirometry reduce the risk of acute chest syndrome?
✓ Write your own PICO question, and try to find the answer.
EBM Pearl:
What is the difference between incidence and prevalence?

Background Questions:
✓ What are the main causes of primary, secondary, and critical illness-related adrenal insufficiency?
✓ Discuss how the ACTH stimulation test is performed and how to interpret the results.
✓ What imaging test is indicated if secondary adrenal insufficiency is suspected?
✓ Describe the treatment of acute adrenal insufficiency.

Foreground Questions:
✓ In women with primary adrenal insufficiency, does DHEA improve symptoms and quality of life?
✓ Write your own PICO question, and try to find the answer.

ADRENAL INSUFFICIENCY
Background Questions:
✓ Describe the pathophysiology of DKA.
✓ What are the laboratory and physiologic differences between DKA and hyperosmolar hyperglycemic state?
✓ Discuss treatment of DKA. What is an indication for delaying insulin therapy?
✓ What are the early signs of cerebral edema, and how can it be prevented?

Foreground Questions:
✓ In patients with DKA is subcutaneous insulin as effective as IV insulin drip in treating DKA?
✓ Write your own PICO question, and try to find the answer.

Teaching Pearl:
What is the difference between osmolality and osmolarity?
Teaching Pearl:
Read about the history of iodized salt in the US. Which populations are still at risk for iodine deficiency?

Background Questions:
✓ Discuss the definitions of and distinctions between hypothyroidism, myxedema, and myxedema coma.
✓ What medications can cause hypothyroidism?
✓ Discuss principles of treatment for myxedema coma.
✓ What is the prognosis for patients with myxedema coma?

Foreground Questions:
✓ In patients with subclinical hypothyroidism, does levothyroxine treatment result in decreased cardiovascular morbidity?
✓ Write your own PICO question, and try to find the answer.
THYROID STORM

Background Questions:
✓ Discuss the definitions of and distinctions between hyperthyroidism, thyrotoxicosis, and thyroid storm.
✓ What are common triggers of thyroid storm?
✓ What laboratory findings are common in thyrotoxicosis?
✓ Discuss principles of treatment for thyroid storm?

Foreground Questions:
✓ In pregnant patients with hyperthyroidism, is treatment with methimazole or propylthiouricil safer in the first trimester?
✓ Write your own PICO question, and try to find the answer.

EBM Pearl:
Discuss limitations of EBM in clinical decision making.
Background Questions:
- List services that hospice provides.
- Discuss patient qualifications for admission to hospice.
- When and how do you present hospice to your patients?

Foreground Questions:
- In cancer patients is oxycodone superior to morphine in alleviating pain?
- Write your own PICO question, and try to find the answer.

Community Health Pearl:
What county or state resources are available for your patients requiring end of life care?
Background Questions:
✓ Describe the necessary consent for organ donation.
✓ What are exclusion criteria to receive an organ transplant?
✓ Discuss the time frame for organ procurement.
✓ Discuss health considerations for transplant recipients on immunosuppressive medications.

Foreground Questions:
✓ In a country/population, do presumed consent laws increase the rate of organ donation?
✓ Write your own PICO question, and try to find the answer.
Background Questions:

- List the key information to know prior to death pronouncement.
- Identify the important information for documentation.
- What decisions need to be made if the death is unexpected?

Foreground Questions:

- For family members of patients requiring CPR, does observing CPR or not observing CPR increase the likelihood of PTSD?
- Write your own PICO question, and try to find the answer.

Community Health Pearl:
What is the age-adjusted death rate due to cancer for African Americans in your county?