

COMPREHENSIVE MOCK EXAM 3

Supplemental to: Pediatric Hospital Medicine Board Review 2026-2027

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*American Board of Pediatrics (ABP) Pediatric Hospital Medicine Certification
Examination — 200 questions, single-best-answer, domain-weighted per official ABP
PHM content outline*

Board-Review Questions

1. A previously healthy 18-month-old has a 3-minute generalized tonic-clonic seizure during a fever of 39.4°C, then returns fully to baseline within 15 minutes with a normal neurologic exam. There is no history of prior afebrile seizures. Which of the following is the most appropriate next step?

- A. Reassurance and outpatient follow-up, since this presentation is consistent with a simple febrile seizure requiring no further emergent workup
- B. Emergent lumbar puncture in all cases regardless of exam findings — a reasonable differential consideration, though less consistent with the specific findings described here
- C. Immediate initiation of daily antiepileptic therapy to prevent recurrence — a plausible alternative that the particular details in this vignette argue against
- D. Emergent MRI of the brain before any other evaluation — worth considering, but not the best fit given the constellation of findings presented
- E. Admission to the ICU for continuous EEG monitoring — a genuine competing possibility that remains less well supported by this presentation

2. An 8-year-old with untreated sinusitis develops fever, worsening headache, and new focal weakness of the left hand over two days. MRI shows a ring-enhancing lesion with surrounding edema in the right frontal lobe. Which of the following is the most likely diagnosis?

- A. Simple sinusitis without intracranial extension
- B. Migraine with aura presenting atypically
- C. Brain abscess from contiguous spread of sinus infection
- D. Primary brain tumor unrelated to the sinus infection
- E. Post-infectious cerebellar ataxia presenting with focal signs

3. A 6-year-old develops progressive symmetric ascending weakness over 4 days, beginning in the legs, with absent deep tendon reflexes and preserved sensation, two weeks after a diarrheal illness. Which of the following is the most likely diagnosis?

- A. Guillain-Barré syndrome, which best explains the full combination of findings described in this vignette
- B. Transverse myelitis with a sensory level, which is not seen in this ascending symptom pattern

- C.** Duchenne muscular dystrophy, which does not present acutely following a preceding infection
- D.** Botulism from an unidentified toxin exposure, which causes descending rather than ascending weakness
- E.** Simple viral myositis, which would not explain the areflexia or progressive ascending pattern

4. A 9-year-old develops fever, headache, and behavioral change one week after a viral upper respiratory infection, followed by rapidly progressive multifocal neurologic deficits including ataxia and weakness. MRI shows multiple asymmetric white matter lesions. Which of the following is the most likely diagnosis?

- A.** Acute disseminated encephalomyelitis (ADEM)
- B.** HSV encephalitis with typical temporal lobe involvement
- C.** Simple post-infectious cerebellar ataxia
- D.** Bacterial meningitis with parenchymal extension
- E.** Multiple sclerosis presenting with a first attack

5. A 7-year-old with a severe traumatic brain injury has an intracranial pressure monitor showing sustained pressures above 22 mmHg despite head-of-bed elevation and adequate sedation. Which of the following is the most appropriate next step in management?

- A.** Discontinue sedation to allow a more accurate neurologic exam
- B.** Escalate therapy with hyperosmolar agents (hypertonic saline or mannitol) and reassess intracranial pressure
- C.** Lower the head of the bed to improve cerebral perfusion
- D.** Administer a fluid bolus to increase cerebral perfusion pressure without addressing the elevated pressure directly
- E.** Discontinue ICP monitoring since the trend is already known

6. A 13-year-old with a history of recurrent headaches presents with a headache that is worse in the morning, awakens her from sleep, and is now associated with new-onset early morning vomiting and a subtly abnormal gait on exam. Which of the following is the most appropriate next step?

- A.** Urgent neuroimaging given red-flag features suggesting a possible secondary cause rather than primary headache
- B.** Reassurance that this is a typical migraine pattern requiring no further workup — a consideration that does not fully account for all of the findings described
- C.** Trial of an oral triptan alone without any further evaluation — clinically plausible in isolation, but this case's specific findings point elsewhere
- D.** Discharge home with a headache diary to complete over the next month — a reasonable differential consideration, though less consistent with the specific findings described here
- E.** Lumbar puncture as the first diagnostic step without prior imaging — a plausible alternative that the particular details in this vignette argue against

7. A 4-week-old presents with constipation, poor feeding, a weak cry, and progressive descending symmetric weakness with a history of recent honey ingestion. Which of the following is the most likely diagnosis?

- A.** Infant botulism, the diagnosis most consistent with the clinical picture presented here
- B.** Guillain-Barré syndrome, which classically presents with an ascending rather than descending pattern
- C.** Spinal muscular atrophy presenting acutely at this age
- D.** Congenital myasthenic syndrome unrelated to the feeding history
- E.** Simple viral gastroenteritis with incidental weak cry

8. An 11-year-old develops acute bilateral leg weakness, a sensory level at the mid-thoracic region, and new bladder dysfunction over 24 hours. MRI shows a longitudinally extensive lesion within the spinal cord. Which of the following is the most likely diagnosis?

- A.** Guillain-Barré syndrome, which would not produce a discrete sensory level
- B.** Transverse myelitis, supported by the specific combination of findings in this case
- C.** Simple musculoskeletal back pain with referred leg weakness
- D.** Conversion disorder presenting with functional weakness
- E.** Spinal epidural abscess without a clear infectious source or fever

9. A 3-year-old presents with a tender, enlarging, fluctuant neck mass with overlying erythema and fever, without response to 3 days of oral antibiotics. Which of the following is the most appropriate next step?

- A.** Continue the same oral antibiotic for a longer course before considering other options — worth considering, but not the best fit given the constellation of findings presented
- B.** Reassure the family that this will resolve without further intervention — a genuine competing possibility that remains less well supported by this presentation
- C.** Obtain a thyroid ultrasound as the primary next step — a consideration that does not fully account for all of the findings described
- D.** Switch to a different oral antibiotic without further imaging or intervention — clinically plausible in isolation, but this case's specific findings point elsewhere
- E.** Obtain imaging (ultrasound) to evaluate for a drainable suppurative lymphadenitis, given fluctuance and antibiotic failure

10. A 10-year-old with a dental infection develops rapidly progressive bilateral submandibular swelling, tongue elevation, drooling, and early airway compromise. Which of the following is the most appropriate immediate priority?

- A.** Oral antibiotics alone as outpatient management given the dental source
- B.** Urgent airway management and surgical/ENT evaluation given the risk of rapid airway compromise from Ludwig angina
- C.** Observation with antibiotics only if swelling worsens further
- D.** Dental extraction as the first and only necessary intervention
- E.** Reassurance since submandibular swelling from dental infections is typically self-limited

11. An 8-year-old with sinusitis develops proptosis, limited extraocular movement, and worsening periorbital swelling. CT shows a subperiosteal fluid collection adjacent to the orbit. Which of the following is the most appropriate management approach?

- A.** Oral antibiotics alone without surgical consultation — a reasonable differential consideration, though less consistent with the specific findings described here
- B.** IV antibiotics with close monitoring and consideration of surgical drainage by ophthalmology/ENT given the subperiosteal collection with orbital signs

- C.** Observation without antibiotics given a well appearance otherwise — a plausible alternative that the particular details in this vignette argue against
- D.** Immediate radiation therapy directed at the sinus infection — worth considering, but not the best fit given the constellation of findings presented
- E.** Antihistamines as the primary treatment for this presentation — a genuine competing possibility that remains less well supported by this presentation

12. A 2-year-old presents with unilateral foul-smelling nasal discharge for one week without fever. Which of the following is the most likely diagnosis?

- A.** Viral upper respiratory infection, which typically causes bilateral rather than unilateral discharge
- B.** Allergic rhinitis, which typically presents bilaterally rather than with unilateral discharge
- C.** Bacterial sinusitis, which would not typically cause isolated unilateral foul-smelling discharge
- D.** Choanal atresia, which presents with breathing difficulty at birth rather than unilateral discharge later
- E.** Retained nasal foreign body, the best-supported explanation given the findings described

13. A 5-year-old unvaccinated for mumps develops bilateral parotid swelling, fever, and pain with chewing over 2 days without purulent drainage from Stensen duct. Which of the following is the most likely diagnosis?

- A.** Suppurative bacterial parotitis, which would classically show purulent ductal drainage
- B.** Sialolithiasis with obstruction, which typically presents unilaterally rather than bilaterally
- C.** Viral (mumps) parotitis, which best explains the full combination of findings described in this vignette
- D.** Cervical lymphadenitis mistaken for parotid swelling
- E.** Sjögren syndrome presenting acutely with bilateral swelling

14. A 9-year-old presents with severe tooth pain, facial swelling near the jaw, and low-grade fever, with a visibly decayed molar on exam. Which of the following is the most appropriate next step?

- A.** Reassurance and over-the-counter analgesics alone without further evaluation — a consideration that does not fully account for all of the findings described
- B.** Empiric antifungal therapy for the facial swelling — clinically plausible in isolation, but this case's specific findings point elsewhere
- C.** Immediate radiation therapy targeting the jaw swelling — a reasonable differential consideration, though less consistent with the specific findings described here
- D.** Observation only, since dental infections rarely require intervention — a plausible alternative that the particular details in this vignette argue against
- E.** Dental/oral surgery evaluation with antibiotics targeting an odontogenic infection, given risk of progression to deeper space infection

15. A 6-week-old infant has intermittent inspiratory stridor that worsens with feeding and crying and improves with prone positioning, without other signs of respiratory distress, growing well. Which of the following is the most likely diagnosis?

- A.** Bacterial tracheitis presenting atypically at this age
- B.** Vascular ring causing fixed, position-independent stridor
- C.** Laryngomalacia, the diagnosis most consistent with the clinical picture presented here
- D.** Subglottic hemangioma presenting with this stridor pattern alone
- E.** Croup presenting without a preceding viral prodrome

16. A 12-year-old presents with recurrent unilateral parotid swelling and pain that worsens specifically with meals. Ultrasound shows a hyperechoic focus with posterior shadowing within Stensen duct. Which of the following is the most likely diagnosis?

- A.** Viral mumps parotitis, which would not show a discrete ductal stone on ultrasound
- B.** Suppurative bacterial parotitis without an identifiable stone
- C.** Sjögren syndrome, which is uncommon in this age group and does not typically show a discrete stone
- D.** Parotid tumor, which would appear as a solid mass rather than a ductal stone
- E.** Sialolithiasis with obstructive sialadenitis, supported by the specific combination of findings in this case

17. A 15-year-old with chest trauma develops sudden severe respiratory distress, absent breath sounds on the right, tracheal deviation to the left, and hypotension. Which of the following is the most appropriate immediate management?

- A.** Obtain a chest radiograph before any intervention — worth considering, but not the best fit given the constellation of findings presented
- B.** Administer IV fluids alone without addressing the chest findings — a genuine competing possibility that remains less well supported by this presentation
- C.** Observe closely with supplemental oxygen only — a consideration that does not fully account for all of the findings described
- D.** Immediate needle decompression followed by chest tube placement for tension pneumothorax
- E.** CT chest to confirm the diagnosis before any intervention — clinically plausible in isolation, but this case's specific findings point elsewhere

18. A 6-week-old presents with a 10-day history of paroxysmal coughing fits followed by a whoop and post-tussive emesis, with a well appearance between episodes. Which of the following is the most likely diagnosis?

- A.** Pertussis, the best-supported explanation given the findings described
- B.** Bronchiolitis from RSV presenting with this cough pattern
- C.** Viral croup presenting atypically without stridor
- D.** Foreign body aspiration presenting with a chronic cough
- E.** Cystic fibrosis presenting for the first time with this cough pattern

19. A 10-year-old with a severe asthma exacerbation remains in significant distress despite continuous albuterol, ipratropium, IV corticosteroids, and IV magnesium, with rising CO₂ on venous blood gas. Which of the following is the most appropriate next step?

- A.** Discharge home once oxygen saturation is above 92% — a reasonable differential consideration, though less consistent with the specific findings described here
- B.** Escalate to ICU-level care with consideration of terbutaline infusion or heliox and close monitoring for impending respiratory failure

C. Discontinue all bronchodilators to reduce tachycardia — a plausible alternative that the particular details in this vignette argue against

D. Add oral antibiotics as the next step in escalation — worth considering, but not the best fit given the constellation of findings presented

E. Obtain outpatient pulmonology follow-up without further inpatient escalation — a genuine competing possibility that remains less well supported by this presentation

20. A 16-year-old on oral contraceptives presents with acute pleuritic chest pain, tachycardia, and hypoxia after a long car ride. Which of the following is the most likely diagnosis?

A. Simple musculoskeletal chest pain from prolonged sitting

B. Spontaneous pneumothorax unrelated to the described risk factors

C. Pulmonary embolism, which best explains the full combination of findings described in this vignette

D. Panic attack presenting with chest pain and tachycardia alone

E. Pneumonia presenting acutely without a preceding respiratory prodrome

21. A 12-year-old with septic shock develops progressive hypoxemia with bilateral diffuse infiltrates on chest radiograph and a PaO₂/FiO₂ ratio meeting criteria for a specific respiratory syndrome, without evidence of volume overload as the primary cause. Which of the following is the most likely diagnosis?

A. Simple cardiogenic pulmonary edema from volume overload

B. Bronchiolitis presenting atypically at this age

C. Acute respiratory distress syndrome (ARDS)

D. Pneumothorax presenting with bilateral findings

E. Pertussis with secondary bilateral pneumonia alone

22. A newborn develops progressive respiratory distress over the first weeks of life. Chest radiograph shows marked hyperinflation of the left upper lobe with mediastinal shift, without evidence of infection. Which of the following is the most likely diagnosis?

A. Meconium aspiration syndrome presenting at this age

- B.** Congenital diaphragmatic hernia, which would show bowel loops rather than hyperinflated lung
- C.** Pneumothorax, which would show a lucent pleural space rather than hyperinflated lung parenchyma
- D.** Bacterial pneumonia with secondary hyperinflation
- E.** Congenital lobar emphysema, the diagnosis most consistent with the clinical picture presented here

23. A 4-year-old with a history of prolonged intubation for a critical illness now has persistent stridor and difficulty weaning from respiratory support weeks after extubation. Which of the following is the most likely diagnosis?

- A.** Simple viral croup presenting weeks after extubation
- B.** Bacterial tracheitis presenting in this delayed timeframe
- C.** Foreign body aspiration coincidentally occurring after extubation
- D.** Subglottic stenosis from prior intubation injury
- E.** Vocal cord dysfunction unrelated to the prior intubation

24. A child with severe cerebral palsy and dysphagia has recurrent hospitalizations for pneumonia, predominantly affecting the right lower lobe on imaging each time. Which of the following is the most likely underlying mechanism?

- A.** Community-acquired pneumonia from typical respiratory pathogens unrelated to swallowing function
- B.** Chronic aspiration related to dysphagia, supported by the specific combination of findings in this case
- C.** Cystic fibrosis presenting for the first time in this context
- D.** Foreign body aspiration explaining each recurrent episode
- E.** Asthma exacerbations misclassified as pneumonia on imaging

25. A 20-month-old has had three prior episodes of wheezing with viral upper respiratory infections, is asymptomatic between episodes, and has no personal or family history of atopy. Which of the following best characterizes this presentation?

- A.** Definitive diagnosis of persistent asthma requiring daily controller therapy — a consideration that does not fully account for all of the findings described
- B.** Bronchiolitis obliterans requiring further pulmonary workup — clinically plausible in isolation, but this case's specific findings point elsewhere
- C.** Viral-induced wheeze, a common pattern in toddlers that does not necessarily indicate a diagnosis of asthma at this age
- D.** Cystic fibrosis presenting with this specific pattern — a reasonable differential consideration, though less consistent with the specific findings described here
- E.** Vocal cord dysfunction presenting as wheezing with viral illnesses — a plausible alternative that the particular details in this vignette argue against

26. A former 27-week preterm infant, now 6 weeks old and still hospitalized, has recurrent episodes of apnea, bradycardia, and desaturation without an identifiable infectious or metabolic trigger after appropriate workup. Which of the following is the most likely diagnosis?

- A.** Sepsis-related apnea, which has already been excluded by appropriate workup
- B.** Apnea of prematurity, the best-supported explanation given the findings described
- C.** Seizure-related apnea, which would be expected to show other seizure activity
- D.** Gastroesophageal reflux as the definitive and sole explanation without further consideration
- E.** Congenital central hypoventilation syndrome as the most likely explanation at this age

27. A 3-year-old presents with fever for 6 days, a strawberry tongue, and desquamation of the fingertips beginning in week 2 of illness, with a coronary artery aneurysm found on echocardiogram despite treatment with IVIG in the acute phase. Which of the following best describes the most appropriate ongoing management approach?

- A.** No further cardiac follow-up is needed once acute treatment is completed — worth considering, but not the best fit given the constellation of findings presented
- B.** Long-term cardiology follow-up with serial echocardiography and consideration of antiplatelet or anticoagulant therapy depending on aneurysm size

- C.** Immediate coronary artery bypass surgery regardless of aneurysm size — a genuine competing possibility that remains less well supported by this presentation
- D.** Discontinuation of all follow-up once fever resolves — a consideration that does not fully account for all of the findings described
- E.** A single repeat echocardiogram at one year with no interim monitoring — clinically plausible in isolation, but this case's specific findings point elsewhere

28. A 2-year-old with a known atrial septal defect and pulmonary hypertension develops progressive cyanosis, and echocardiogram shows new right-to-left shunting across the defect. Which of the following best describes this complication?

- A.** Simple worsening of the underlying ASD without a specific named phenomenon
- B.** A hypercyanotic spell as seen in tetralogy of Fallot
- C.** Coarctation of the aorta presenting with cyanosis
- D.** Eisenmenger syndrome, in which longstanding pulmonary hypertension reverses shunt direction
- E.** Pulmonary embolism causing acute right-to-left shunting

29. A newborn has a continuous 'machinery' murmur best heard at the left infraclavicular area, bounding peripheral pulses, and a wide pulse pressure. Which of the following is the most likely diagnosis?

- A.** Ventricular septal defect, which produces a holosystolic rather than continuous murmur
- B.** Atrial septal defect, which produces a systolic ejection murmur rather than a continuous one
- C.** Patent ductus arteriosus, which best explains the full combination of findings described in this vignette
- D.** Coarctation of the aorta, which would show diminished, not bounding, lower extremity pulses
- E.** Pulmonary stenosis presenting with this specific murmur pattern

30. A 2-week-old male presents in extremis with poor perfusion, absent femoral pulses, and metabolic acidosis. Echocardiogram shows a severely underdeveloped left ventricle and aorta. Which of the following is the most appropriate immediate management priority?

- A.** Immediate diuresis to reduce volume overload as the priority intervention

- B.** High-flow supplemental oxygen alone as the priority intervention
- C.** Beta-blocker therapy as the priority intervention
- D.** Prostaglandin E1 infusion to maintain ductal patency in this duct-dependent systemic circulation
- E.** Immediate surgical repair without any medical stabilization first

31. A 16-year-old with a history of a repaired congenital heart defect presents with fever, malaise, and a new regurgitant murmur. Blood cultures grow viridans group streptococci. Which of the following is the most likely diagnosis?

- A.** A simple viral illness, which would not explain a new regurgitant murmur or a positive blood culture
- B.** Acute rheumatic fever, which does not explain a positive blood culture for viridans streptococci
- C.** Infective endocarditis, the diagnosis most consistent with the clinical picture presented here
- D.** Pericarditis, which would not explain a new regurgitant murmur or positive blood culture
- E.** Kawasaki disease, which does not typically present with a positive bacterial blood culture

32. A 6-year-old with a family history of long QT syndrome is found to have a corrected QT interval of 490 ms on a routine ECG. Which of the following is the most important next step?

- A.** Cardiology referral for further risk stratification and consideration of QT-prolonging medication avoidance and possible therapy
- B.** No further evaluation needed since the child is currently asymptomatic — a reasonable differential consideration, though less consistent with the specific findings described here
- C.** Immediate implantation of a defibrillator without further evaluation — a plausible alternative that the particular details in this vignette argue against
- D.** Reassurance that family history is not relevant to this finding — worth considering, but not the best fit given the constellation of findings presented
- E.** Repeat ECG in five years with no interim precautions — a genuine competing possibility that remains less well supported by this presentation

33. A 4-year-old post-cardiac surgery develops fever, chest pain, and a pericardial friction rub two weeks after the procedure, with a small pericardial effusion on echocardiogram. Which of the following is the most likely diagnosis?

- A.** Postpericardiotomy syndrome, supported by the specific combination of findings in this case
- B.** Acute bacterial endocarditis presenting with these findings
- C.** Recurrent congenital heart disease requiring repeat surgery
- D.** Simple wound infection unrelated to the pericardium
- E.** Kawasaki disease presenting for the first time after surgery

34. A 5-year-old with a supraventricular tachycardia at a rate of 220 bpm is hemodynamically stable with good perfusion. Vagal maneuvers have failed. Which of the following is the most appropriate next step?

- A.** Immediate cardioversion, reserved for hemodynamically unstable rather than stable SVT
- B.** Observation alone, which is not appropriate given the persistently rapid rate requiring treatment
- C.** Oral beta-blocker therapy, which acts too slowly for acute termination of this rhythm
- D.** Rapid IV adenosine administration, the best-supported explanation given the findings described
- E.** Digoxin, which is not first-line for acute termination given its slower onset

35. A 3-year-old with cystic fibrosis presents with recurrent greasy, foul-smelling stools and poor weight gain despite adequate caloric intake. Which of the following best explains this presentation?

- A.** Simple lactose intolerance unrelated to the underlying diagnosis
- B.** Celiac disease presenting coincidentally in this patient
- C.** Exocrine pancreatic insufficiency causing fat malabsorption
- D.** Inflammatory bowel disease presenting with these specific findings
- E.** Giardiasis as the most likely explanation for chronic symptoms

36. A 6-year-old presents with recurrent episodes of abdominal pain and vomiting that are stereotyped, self-limited, and separated by symptom-free intervals, with a family history of migraine. Extensive GI workup has been unremarkable. Which of the following is the most likely diagnosis?

- A.** Malrotation with intermittent volvulus, which would not have a normal workup between episodes
- B.** Inflammatory bowel disease, which would be expected to show abnormalities on workup
- C.** Peptic ulcer disease, which would be expected to show endoscopic findings
- D.** Chronic pancreatitis, which would be expected to show imaging or laboratory abnormalities
- E.** Cyclic vomiting syndrome, which best explains the full combination of findings described in this vignette

37. A 6-month-old with a history of significant prematurity presents with feeding difficulty, arching with feeds, and poor weight gain. Which of the following is the most appropriate initial approach?

- A.** Immediate surgical fundoplication without a trial of conservative measures — a consideration that does not fully account for all of the findings described
- B.** Reassurance alone without further evaluation given the history of prematurity — clinically plausible in isolation, but this case's specific findings point elsewhere
- C.** Empiric antibiotics for a presumed infectious cause of the feeding difficulty — a reasonable differential consideration, though less consistent with the specific findings described here
- D.** Evaluation for gastroesophageal reflux disease with consideration of feeding modifications and, if needed, acid suppression
- E.** Immediate gastrostomy tube placement without trying other measures first — a plausible alternative that the particular details in this vignette argue against

38. A 10-year-old presents with severe epigastric pain radiating to the back, vomiting, and elevated lipase three times the upper limit of normal. Which of the following is the most appropriate initial management?

- A.** Immediate surgical intervention without a trial of supportive care
- B.** Supportive care with IV fluids, pain control, and early enteral feeding as tolerated
- C.** Strict prolonged bowel rest with no enteral feeding for at least two weeks

- D.** Broad-spectrum antibiotics as the primary initial treatment
- E.** Discharge home with oral analgesics alone

39. A 4-year-old with a history of chronic constipation presents with encopresis and a large amount of stool palpable on abdominal exam, with a normal rectal exam otherwise and normal growth. Which of the following is the most appropriate initial management?

- A.** Immediate surgical referral for suspected Hirschsprung disease
- B.** Reassurance alone without any treatment plan
- C.** Strict dietary fiber restriction as the primary treatment
- D.** Disimpaction followed by a maintenance laxative regimen and behavioral strategies
- E.** Rectal biopsy as the first step before any treatment

40. A 14-year-old presents with several months of intermittent bloody diarrhea, weight loss, and growth deceleration. Colonoscopy shows continuous inflammation limited to the colon with rectal involvement. Which of the following is the most likely diagnosis?

- A.** Crohn disease, which typically shows skip lesions and can involve any part of the GI tract
- B.** Irritable bowel syndrome, which would not explain the colonoscopy findings or growth deceleration
- C.** Ulcerative colitis, the diagnosis most consistent with the clinical picture presented here
- D.** Infectious colitis, which would not typically cause growth deceleration over months
- E.** Celiac disease, which primarily affects the small intestine rather than the colon

41. A 16-year-old presents with several months of intermittent abdominal pain, diarrhea, weight loss, and perianal skin tags. Colonoscopy shows patchy, discontinuous inflammation with skip areas extending from the terminal ileum through the colon. Which of the following is the most likely diagnosis?

- A.** Ulcerative colitis, which characteristically shows continuous rather than patchy involvement
- B.** Infectious colitis, which would not typically produce perianal skin tags or a chronic course
- C.** Celiac disease, which does not typically involve the colon or cause perianal findings

- D.** Irritable bowel syndrome, which would not explain the colonoscopy findings
- E.** Crohn disease, supported by the specific combination of findings in this case

42. A 2-year-old presents with recurrent episodes of abdominal distension, vomiting, and failure to thrive since introduction of wheat-containing foods. Serologic testing shows elevated tissue transglutaminase IgA. Which of the following is the most likely diagnosis?

- A.** Cow's milk protein allergy, which is not specifically associated with elevated tissue transglutaminase antibodies
- B.** Cystic fibrosis, which would not explain this specific serologic finding
- C.** Inflammatory bowel disease, which is not diagnosed with this specific antibody
- D.** Celiac disease, the best-supported explanation given the findings described
- E.** Irritable bowel syndrome, which would not produce a positive serologic marker

43. A 3-week-old exclusively breastfed infant presents with bloody, mucous-streaked stools, mild fussiness, and normal growth, otherwise appearing well. Which of the following is the most likely diagnosis?

- A.** Intussusception, which would present with more acute, severe symptoms and a palpable mass
- B.** Hirschsprung disease, which presents with delayed meconium passage and distension rather than this pattern
- C.** Necrotizing enterocolitis, which typically occurs in preterm infants with a more acute, ill presentation
- D.** Bacterial gastroenteritis, which would be expected to cause a more acutely ill appearance
- E.** Food protein-induced allergic proctocolitis, which best explains the full combination of findings described in this vignette

44. A 5-year-old presents with recurrent right upper quadrant pain, jaundice, and dark urine. Ultrasound shows a choledochal cyst. Which of the following is the most appropriate next step?

- A.** Observation alone since choledochal cysts typically resolve spontaneously — worth considering, but not the best fit given the constellation of findings presented

- B.** Surgical referral for evaluation and likely resection given the risk of complications including malignancy if untreated
- C.** Antiviral therapy as the primary treatment for this finding — a genuine competing possibility that remains less well supported by this presentation
- D.** ERCP alone as definitive treatment without surgical involvement — a consideration that does not fully account for all of the findings described
- E.** Reassurance with no further imaging or referral needed — clinically plausible in isolation, but this case's specific findings point elsewhere

45. A 10-year-old presents with gross hematuria, sensorineural hearing loss, and a family history of chronic kidney disease on the maternal side. Which of the following is the most likely diagnosis?

- A.** Post-streptococcal glomerulonephritis, which would not explain the hearing loss or family history pattern
- B.** Alport syndrome, the diagnosis most consistent with the clinical picture presented here
- C.** Minimal change disease, which does not typically cause hematuria or hearing loss
- D.** IgA nephropathy, which does not typically include sensorineural hearing loss
- E.** Hemolytic uremic syndrome, which would not explain the chronic family history or hearing loss

46. A 7-year-old presents with recurrent gross hematuria that occurs concurrently with upper respiratory infections, with normal complement levels and normal blood pressure between episodes. Which of the following is the most likely diagnosis?

- A.** Post-streptococcal glomerulonephritis, which classically presents 1-2 weeks after infection rather than concurrently
- B.** Alport syndrome, which would be expected to show progressive findings and often hearing loss
- C.** Minimal change disease, which presents with proteinuria and edema rather than gross hematuria
- D.** Hemolytic uremic syndrome, which would show the additional triad of anemia and thrombocytopenia
- E.** IgA nephropathy, supported by the specific combination of findings in this case

47. A newborn boy is noted on prenatal ultrasound to have bilateral hydronephrosis, and postnatal ultrasound confirms bilateral hydroureteronephrosis with a distended, thick-walled bladder. Which of the following is the most likely diagnosis?

- A.** Simple unilateral ureteropelvic junction obstruction, which would not explain bilateral findings with bladder involvement
- B.** Vesicoureteral reflux alone, which would not typically cause a thick-walled, distended bladder
- C.** Posterior urethral valves, the best-supported explanation given the findings described
- D.** Multicystic dysplastic kidney, which typically presents unilaterally rather than with bladder findings
- E.** Simple physiologic hydronephrosis of the newborn, which would not include bladder wall thickening

48. A 4-year-old presents with edema, proteinuria, hematuria, hypertension, and low C3 and C4 complement levels that remain persistently low beyond 8 weeks. Which of the following is the most likely diagnosis?

- A.** Post-streptococcal glomerulonephritis, in which complement levels typically normalize within 6-8 weeks
- B.** Minimal change disease, which does not typically cause low complement levels
- C.** Membranoproliferative glomerulonephritis, which best explains the full combination of findings described in this vignette
- D.** IgA nephropathy, which does not typically show persistently low complement
- E.** Alport syndrome, which does not typically show low complement levels

49. A 16-year-old male presents with dysuria and a mucopurulent urethral discharge. Which of the following is the most appropriate initial management approach?

- A.** Reassurance alone without testing or treatment — a reasonable differential consideration, though less consistent with the specific findings described here
- B.** Oral antifungal therapy as the first-line treatment — a plausible alternative that the particular details in this vignette argue against

- C.** Observation with repeat exam in one month — worth considering, but not the best fit given the constellation of findings presented
- D.** Antihistamines for symptomatic relief only — a genuine competing possibility that remains less well supported by this presentation
- E.** Testing for and empiric treatment of common sexually transmitted infections (eg, gonorrhea and chlamydia) given the clinical presentation

50. A 14-year-old girl presents with lower abdominal pain, and ultrasound reveals a simple, thin-walled ovarian cyst measuring 3 cm without concerning features (normal Doppler flow, no septations or solid components). Which of the following is the most appropriate management?

- A.** Observation with expectant management, since small simple cysts commonly resolve spontaneously
- B.** Immediate surgical removal regardless of the benign appearance
- C.** Empiric antibiotics for a presumed infectious process
- D.** Hormonal suppression as the mandatory first-line treatment
- E.** Immediate MRI to further characterize a lesion that is already reassuring on ultrasound

51. A 2-year-old boy has a history of two prior febrile urinary tract infections. Renal ultrasound is normal. Which of the following best reflects current evidence-based recommendations regarding further imaging?

- A.** A voiding cystourethrogram (VCUG) is mandatory after every single febrile UTI regardless of ultrasound findings — a consideration that does not fully account for all of the findings described
- B.** No further evaluation is ever indicated after a normal ultrasound — clinically plausible in isolation, but this case's specific findings point elsewhere
- C.** Prophylactic antibiotics are mandatory for all children after a single febrile UTI — a reasonable differential consideration, though less consistent with the specific findings described here
- D.** A DMSA renal scan is required emergently during the acute infection in all cases — a plausible alternative that the particular details in this vignette argue against
- E.** Further imaging (such as VCUG) may be considered selectively based on clinical risk factors, including recurrent febrile UTIs, rather than being mandatory after every episode

52. A 15-year-old boy presents with painless testicular enlargement. Ultrasound shows a solid mass, and serum alpha-fetoprotein and beta-hCG are markedly elevated. Which of the following is the most likely diagnosis?

- A.** Simple hydrocele, which would not produce elevated tumor markers
- B.** Epididymitis, which would not produce a solid mass with elevated tumor markers
- C.** Varicocele, which would not present as a solid mass with these findings
- D.** Testicular torsion, which presents acutely and painfully rather than as a painless mass with these markers
- E.** Testicular germ cell tumor, the diagnosis most consistent with the clinical picture presented here

53. A 7-year-old falls onto an outstretched hand and presents with elbow pain and swelling. Radiograph shows a supracondylar humerus fracture with posterior displacement. The hand is cool with a weak radial pulse and the child has pain with passive finger extension. Which of the following is the most appropriate immediate management?

- A.** Urgent orthopedic evaluation for reduction/fixation given signs of vascular compromise and possible compartment syndrome
- B.** Splinting alone with elective outpatient orthopedic follow-up in one week
- C.** Observation overnight with repeat exam in the morning before any intervention
- D.** Application of a circumferential cast without addressing the vascular findings
- E.** Discharge home with instructions to elevate the arm and follow up as needed

54. A 13-year-old obese boy presents with several weeks of vague hip and knee pain and a limp, with limited internal rotation of the hip on exam. Radiographs show posterior and inferior displacement of the femoral epiphysis relative to the femoral neck. Which of the following is the most likely diagnosis?

- A.** Slipped capital femoral epiphysis, supported by the specific combination of findings in this case
- B.** Legg-Calvé-Perthes disease, which typically shows femoral head flattening rather than epiphyseal displacement
- C.** Transient synovitis, which would not show this radiographic finding
- D.** Septic arthritis, which would present acutely with fever and inflammatory markers

E. A simple growth-related knee pain syndrome unrelated to the hip findings

55. A 6-year-old develops joint pain and swelling in the knees and ankles two weeks after an episode of gastroenteritis, without evidence of ongoing infection on joint aspiration. Which of the following is the most likely diagnosis?

- A. Septic arthritis, which would show evidence of infection on joint aspiration
- B. Systemic juvenile idiopathic arthritis, which would be expected to show a quotidian fever pattern
- C. Acute rheumatic fever, which requires a preceding streptococcal, not gastrointestinal, infection
- D. Henoch-Schönlein purpura, which would be expected to show the characteristic purpuric rash
- E. Reactive arthritis, the best-supported explanation given the findings described

56. A 5-year-old presents with swelling and pain in five or more joints for over 6 weeks, including small joints of the hands, with morning stiffness and no systemic fever pattern. Which of the following is the most likely diagnosis?

- A. Systemic-onset juvenile idiopathic arthritis, which would be expected to show a quotidian fever and rash
- B. Reactive arthritis, which is typically self-limited and involves fewer joints
- C. Polyarticular juvenile idiopathic arthritis, which best explains the full combination of findings described in this vignette
- D. Septic arthritis, which would not typically involve five or more joints simultaneously
- E. Acute rheumatic fever, which classically causes migratory rather than persistent polyarthritis

57. A 12-year-old boy presents with chronic low back pain and stiffness worse in the morning, along with heel pain at the site of Achilles tendon insertion, and is HLA-B27 positive. Which of the following is the most likely diagnosis?

- A. Polyarticular juvenile idiopathic arthritis, which does not typically feature enthesitis or axial involvement in this pattern
- B. Enthesitis-related arthritis (juvenile spondyloarthritis)
- C. Reactive arthritis alone without axial or enthesitis involvement

D. Fibromyalgia, which would not explain the objective enthesitis findings

E. Simple mechanical back pain from overuse, which would not explain the enthesitis or HLA association

58. A 9-year-old presents with a localized area of thickened, hyperpigmented, hardened skin on one leg that has been slowly enlarging over several months, without systemic symptoms or Raynaud phenomenon. Which of the following is the most likely diagnosis?

A. Localized (linear) scleroderma (morphea), the diagnosis most consistent with the clinical picture presented here

B. Systemic sclerosis, which would be expected to include Raynaud phenomenon and systemic organ involvement

C. Juvenile dermatomyositis, which would show a heliotrope rash and Gottron papules rather than this finding

D. Eczema, which would not present as a hardened, thickened, expanding localized plaque

E. Cellulitis, which would present acutely with warmth, tenderness, and often fever

59. A 14-year-old presents with sinusitis, hemoptysis, and hematuria with red cell casts on urinalysis. ANCA testing is positive. Which of the following is the most likely diagnosis?

A. Henoch-Schönlein purpura, which is not typically ANCA-associated and does not usually present with hemoptysis

B. Post-streptococcal glomerulonephritis, which is not ANCA-associated

C. Kawasaki disease, which does not typically involve the sinuses, lungs, and kidneys in this pattern

D. Goodpasture syndrome, which is anti-GBM antibody-associated rather than ANCA-associated

E. Granulomatosis with polyangiitis (ANCA-associated vasculitis)

60. A 7-year-old develops fever, urticarial rash, joint pain, and lymphadenopathy 10 days after receiving an antibiotic for a prior infection. Which of the following is the most likely diagnosis?

A. IgE-mediated anaphylaxis, which would present acutely rather than 10 days after exposure

B. Serum sickness-like reaction, supported by the specific combination of findings in this case

C. DRESS syndrome, which typically involves more prominent organ (eg, liver) involvement and eosinophilia

D. Simple viral exanthem unrelated to the antibiotic exposure

E. Henoch-Schönlein purpura, which would show palpable purpura rather than urticaria as the primary rash

61. An 8-year-old girl presents with breast development and pubic hair, with a bone age significantly advanced beyond chronological age. Which of the following is the most appropriate next step?

A. Endocrinology referral for evaluation of precocious puberty, including consideration of central versus peripheral causes

B. Reassurance that this is a normal variant requiring no evaluation at this age — worth considering, but not the best fit given the constellation of findings presented

C. Immediate initiation of pubertal suppression without further workup — a genuine competing possibility that remains less well supported by this presentation

D. Karyotype testing as the sole next step without endocrine evaluation — a consideration that does not fully account for all of the findings described

E. No further evaluation needed since bone age is not relevant to this presentation — clinically plausible in isolation, but this case's specific findings point elsewhere

62. A 10-year-old presents with perioral numbness, muscle cramps, and carpal spasm when a blood pressure cuff is inflated (positive Trousseau sign). Serum calcium is low with an inappropriately low or normal parathyroid hormone level. Which of the following is the most likely diagnosis?

A. Primary hyperparathyroidism, which would show elevated, not low/normal, PTH with elevated calcium

B. Vitamin D deficiency rickets, which would typically show elevated, not low/normal, PTH

C. Hypoparathyroidism, the best-supported explanation given the findings described

D. Chronic kidney disease-related mineral bone disease, which would show elevated PTH

E. Simple hyperventilation syndrome, which would not explain the low calcium

63. A 6-year-old presents with fatigue, weight loss, hyperpigmentation of the skin and gums, and hypotension. Labs show hyponatremia and hyperkalemia. Which of the following is the most likely diagnosis?

- A.** Cushing syndrome, which would present with weight gain and hypertension rather than these findings
- B.** Primary adrenal insufficiency (Addison disease), which best explains the full combination of findings described in this vignette
- C.** Central hypothyroidism, which would not explain the electrolyte pattern or hyperpigmentation
- D.** Diabetes insipidus, which would not explain the hyperpigmentation or electrolyte pattern described
- E.** SIADH, which would cause hyponatremia without the hyperpigmentation or hyperkalemia described

64. A 2-year-old with limited sun exposure and an exclusively unfortified milk diet presents with bowed legs, widened wrists, and delayed fontanelle closure. Labs show low vitamin D, low-normal calcium, and elevated alkaline phosphatase. Which of the following is the most likely diagnosis?

- A.** Nutritional rickets from vitamin D deficiency, the diagnosis most consistent with the clinical picture presented here
- B.** Osteogenesis imperfecta, which would present with fractures rather than this specific metabolic pattern
- C.** Hypoparathyroidism, which would show low, not elevated, alkaline phosphatase with a different calcium pattern
- D.** Achondroplasia, a skeletal dysplasia unrelated to these lab findings
- E.** Simple physiologic bowing of the legs, which would not explain the abnormal labs

65. A 15-year-old with known Graves disease who has stopped taking her medication presents with fever, severe tachycardia, agitation, and altered mental status. Which of the following is the most likely diagnosis and priority management approach?

- A.** Thyroid storm, requiring urgent treatment with beta-blockade, antithyroid medication, and supportive care in a monitored setting

B. Simple medication non-adherence requiring only resumption of her prior outpatient dose — a reasonable differential consideration, though less consistent with the specific findings described here

C. An unrelated febrile illness with incidental tachycardia from fever alone — a plausible alternative that the particular details in this vignette argue against

D. Myxedema coma, which would present with hypothermia and bradycardia rather than these findings — worth considering, but not the best fit given the constellation of findings presented

E. Anxiety disorder presenting acutely, requiring only reassurance — a genuine competing possibility that remains less well supported by this presentation

66. A 4-year-old presents with growth failure, and labs show low IGF-1, low free T4 with low TSH, and low cortisol with low ACTH. MRI shows a pituitary abnormality. Which of the following is the most likely diagnosis?

A. Isolated growth hormone deficiency, which would not explain the additional low thyroid and adrenal axis findings

B. Primary hypothyroidism, which would show an elevated, not low, TSH

C. Panhypopituitarism, supported by the specific combination of findings in this case

D. Primary adrenal insufficiency, which would show an elevated, not low, ACTH

E. Constitutional growth delay, which would not show these hormonal abnormalities

67. A 14-year-old with obesity is found on routine screening labs to have elevated fasting glucose, elevated triglycerides, low HDL, and hypertension. Which of the following best describes this constellation of findings?

A. Features consistent with metabolic syndrome, warranting counseling on lifestyle modification and further evaluation

B. Normal findings expected for this age and body habitus requiring no further action

C. Type 1 diabetes, which would not typically present with this lipid and blood pressure pattern

D. Cushing syndrome as the definitive diagnosis without further evaluation

E. An isolated incidental finding unrelated to any broader metabolic risk

68. A 9-year-old presents with bone pain, fatigue, and is found to have an elevated serum calcium, low phosphate, and elevated parathyroid hormone level. Which of the following is the most likely diagnosis?

- A.** Hypoparathyroidism, which would show low, not elevated, calcium and PTH
- B.** Vitamin D deficiency rickets, which typically shows low or low-normal calcium rather than elevated calcium
- C.** Primary hyperparathyroidism, the best-supported explanation given the findings described
- D.** Chronic kidney disease-mineral bone disorder, which typically shows low, not elevated, calcium
- E.** Familial hypocalciuric hypercalcemia, which would not show an elevated PTH out of proportion to calcium in this way

69. A 3-month-old presents with lethargy and is found to have subdural hemorrhages of different ages and extensive retinal hemorrhages on ophthalmologic exam, without a history of significant trauma provided by caregivers. Which of the following is the most likely explanation for these findings?

- A.** A benign birth-related subdural hemorrhage persisting at this age without other explanation
- B.** Abusive head trauma, which best explains the full combination of findings described in this vignette
- C.** A bleeding disorder as the sole and complete explanation without further evaluation for trauma
- D.** Meningitis alone, which would not explain retinal hemorrhages or subdurals of different ages
- E.** A metabolic disorder as the most likely and complete explanation for these specific findings

70. A 4-year-old with a known chronic medical condition requiring regular medication and follow-up has had repeated missed appointments, is noted to be significantly underweight, and the home environment is reported to lack access to the prescribed medication despite documented resources being available to the family. Which of the following is the most appropriate next step?

- A.** Evaluation for medical neglect, including social work involvement to assess and address barriers to care
- B.** No action needed since missed appointments are common and not inherently concerning
- C.** Immediate removal from the home without further assessment or social work involvement
- D.** Discharge with a new prescription and no further follow-up planning

E. Assume the family is non-adherent by choice without exploring underlying barriers

71. A caregiver repeatedly brings a child for medical evaluation reporting symptoms and events (such as apnea or seizures) that are never witnessed by medical staff and do not correlate with objective findings on monitoring, and the child's symptoms consistently resolve when separated from this caregiver. Which of the following should be considered?

- A.** A rare unwitnessed seizure disorder as the most likely and sole explanation
- B.** Simple parental anxiety requiring reassurance alone
- C.** An undiagnosed cardiac arrhythmia as the most likely explanation without further concern
- D.** Medical child abuse (factitious disorder imposed on another), warranting careful multidisciplinary evaluation
- E.** A normal variant of caregiver reporting requiring no further action

72. A 6-year-old discloses inappropriate touching by a family member. Genital exam is normal. Which of the following is the most appropriate next step?

- A.** Referral to a child abuse specialist/multidisciplinary team for a forensic interview and further evaluation, since a normal exam does not rule out abuse
- B.** No further evaluation is needed since the genital exam is normal — a consideration that does not fully account for all of the findings described
- C.** Repeated detailed questioning of the child by multiple different providers to confirm the disclosure — clinically plausible in isolation, but this case's specific findings point elsewhere
- D.** Immediate confrontation of the named family member by the medical team — a reasonable differential consideration, though less consistent with the specific findings described here
- E.** Dismissal of the disclosure since it was not corroborated by physical exam findings — a plausible alternative that the particular details in this vignette argue against

73. A 5-year-old presents with a few target-shaped lesions with a dusky center on the extremities, well overall, with no mucosal involvement and no recent medication changes, one week after a cold sore. Which of the following is the most likely diagnosis?

- A.** Stevens-Johnson syndrome, which requires mucosal involvement by definition

- B.** Toxic epidermal necrolysis, which requires extensive skin sloughing not described here
- C.** Urticaria, which would present as evanescent wheals rather than fixed target lesions
- D.** Erythema multiforme minor, commonly associated with a preceding HSV infection
- E.** Staphylococcal scalded skin syndrome, which presents with diffuse erythema and skin sloughing rather than target lesions

74. A 6-year-old presents with fever, a sandpaper-textured erythematous rash, a strawberry tongue, and circumoral pallor, following a positive rapid strep test. Which of the following is the most likely diagnosis?

- A.** Scarlet fever, the diagnosis most consistent with the clinical picture presented here
- B.** Kawasaki disease, which would not be explained by a positive strep test as the primary driver
- C.** Staphylococcal scalded skin syndrome, which is not associated with a positive strep test in this way
- D.** Measles, which presents with a different rash pattern and typically a preceding prodrome of cough, coryza, and conjunctivitis
- E.** Toxic shock syndrome, which would be expected to show hypotension and multi-organ involvement

75. A 3-year-old presents with fever, oral ulcers, and vesicular lesions on the palms, soles, and buttocks. Which of the following is the most likely diagnosis?

- A.** Herpangina, which typically involves only the posterior oropharynx without the palm/sole/buttock distribution
- B.** Varicella, which presents with lesions in different stages distributed diffusely rather than this specific distribution
- C.** Hand-foot-mouth disease, supported by the specific combination of findings in this case
- D.** Eczema herpeticum, which occurs on a background of eczematous skin rather than in this classic distribution
- E.** Impetigo, which presents with honey-colored crusted lesions rather than vesicles in this distribution

76. A 4-year-old with fever and lethargy is found to have a rapidly spreading, non-blanching purpuric rash with irregular borders. Which of the following is the most appropriate immediate management?

- A.** Observation with outpatient follow-up given a well appearance — worth considering, but not the best fit given the constellation of findings presented
- B.** Oral antibiotics as outpatient management — a genuine competing possibility that remains less well supported by this presentation
- C.** Antihistamines for symptomatic relief of the rash — a consideration that does not fully account for all of the findings described
- D.** Immediate IV antibiotics and aggressive supportive care given concern for meningococemia with purpura fulminans
- E.** Topical corticosteroids for the rash as the primary treatment — clinically plausible in isolation, but this case's specific findings point elsewhere

77. A 3-year-old presents with a diffuse maculopapular rash, mild fever, and recent exposure to a new medication for an ear infection, with the child otherwise well-appearing and no mucosal, systemic organ, or eosinophilia findings. Which of the following is the most likely diagnosis?

- A.** DRESS syndrome, which requires more significant systemic organ involvement and eosinophilia
- B.** Stevens-Johnson syndrome, which requires mucosal involvement not present here
- C.** A simple morbilliform drug reaction, the best-supported explanation given the findings described
- D.** Serum sickness-like reaction, which typically also includes joint pain and urticaria rather than this pattern alone
- E.** Toxic epidermal necrolysis, which requires extensive skin sloughing not seen here

78. A 6-year-old presents with a scaly, patchy area of hair loss with broken-off hairs and mild scalp swelling with tender posterior cervical lymphadenopathy. Which of the following is the most likely diagnosis?

- A.** Alopecia areata, which would not typically show scale or lymphadenopathy
- B.** Trichotillomania, which would show irregular, non-scaly patches without lymphadenopathy
- C.** Seborrheic dermatitis, which does not typically cause patchy hair loss with broken hairs

D. Psoriasis of the scalp, which presents with well-demarcated silvery plaques rather than this pattern

E. Tinea capitis with kerion formation, which best explains the full combination of findings described in this vignette

79. A 6-year-old with sickle cell disease presents with sudden right-sided weakness and slurred speech. Which of the following is the most appropriate immediate management?

A. Observation alone with reassessment in the morning — a reasonable differential consideration, though less consistent with the specific findings described here

B. Oral analgesics only, treating this as a typical pain crisis — a plausible alternative that the particular details in this vignette argue against

C. Iron chelation therapy as the priority intervention — worth considering, but not the best fit given the constellation of findings presented

D. Hydroxyurea initiation as the immediate priority intervention — a genuine competing possibility that remains less well supported by this presentation

E. Emergent evaluation for stroke, including neuroimaging and urgent exchange transfusion given the high risk of ischemic stroke in sickle cell disease

80. A 2-year-old presents with irritability, periorbital ecchymoses, and a firm, fixed abdominal mass crossing the midline. Urine catecholamine metabolites (VMA/HVA) are elevated. Which of the following is the most likely diagnosis?

A. Wilms tumor, which typically presents as a mass that does not cross the midline and is not associated with elevated catecholamine metabolites

B. Hepatoblastoma, which would present with an elevated alpha-fetoprotein rather than elevated catecholamine metabolites

C. Simple constipation with a palpable stool mass, which would not explain the periorbital ecchymoses or elevated metabolites

D. Neuroblastoma, the diagnosis most consistent with the clinical picture presented here, supported by the specific combination of findings in this case

E. Lymphoma, which would not typically present with this specific pattern of elevated catecholamine metabolites

81. A 3-year-old presents with a painless, firm abdominal mass discovered incidentally, that does not cross the midline, with hematuria and hypertension. Which of the following is the most likely diagnosis?

- A.** Neuroblastoma, which more commonly crosses the midline and presents with elevated catecholamine metabolites
- B.** Hepatoblastoma, which would arise from the liver rather than presenting with this specific renal-associated finding pattern
- C.** Wilms tumor, the best-supported explanation given the findings described, which best explains the full combination of findings described in this vignette
- D.** Simple hydronephrosis, which would not typically present as a firm mass with hematuria and hypertension
- E.** Lymphoma, which does not typically present as a solitary unilateral abdominal mass with this pattern

82. A 15-year-old presents with painless cervical lymphadenopathy, night sweats, weight loss, and occasional fevers. Lymph node biopsy shows Reed-Sternberg cells. Which of the following is the most likely diagnosis?

- A.** Reactive lymphadenitis from a viral infection, which would not show Reed-Sternberg cells on biopsy
- B.** Hodgkin lymphoma, the diagnosis most consistent with the clinical picture presented here
- C.** Acute lymphoblastic leukemia, which would be expected to show peripheral blood abnormalities and marrow blast infiltration rather than this biopsy finding
- D.** Infectious mononucleosis, which would not show Reed-Sternberg cells on biopsy
- E.** Cat-scratch disease, which would not show this specific pathologic finding

83. A 5-year-old presents with jaundice, splenomegaly, and a family history of similar findings. Peripheral smear shows spherocytes, and osmotic fragility testing is abnormal. Which of the following is the most likely diagnosis?

- A.** Sickle cell disease, which would show sickled cells rather than spherocytes on smear
- B.** Glucose-6-phosphate dehydrogenase deficiency, which does not typically show spherocytes on smear

- C. Autoimmune hemolytic anemia, which would show a positive direct Coombs test as the key distinguishing feature
- D. Hereditary spherocytosis, supported by the specific combination of findings in this case
- E. Thalassemia, which shows target cells and microcytosis rather than spherocytes

84. A 4-year-old with septic shock develops widespread bleeding from IV sites, petechiae, and labs showing prolonged PT/PTT, low fibrinogen, elevated D-dimer, and thrombocytopenia. Which of the following is the most likely diagnosis?

- A. Hemophilia A, which would not explain the low platelet count or elevated D-dimer
- B. Immune thrombocytopenic purpura, which would not explain the coagulation abnormalities or low fibrinogen
- C. Von Willebrand disease, which would not explain this full pattern of coagulation and platelet abnormalities
- D. Disseminated intravascular coagulation, the best-supported explanation given the findings described
- E. Vitamin K deficiency, which would not explain the thrombocytopenia or elevated D-dimer

85. A 4-month-old develops profuse, repetitive vomiting and lethargy approximately 2 hours after first exposure to a milk-based formula, without hives or respiratory symptoms, and appears pale and dehydrated. Which of the following is the most likely diagnosis?

- A. IgE-mediated anaphylaxis, which would be expected to show hives, respiratory symptoms, or hypotension rather than this delayed, purely GI presentation
- B. Simple viral gastroenteritis, which would not typically be temporally linked this closely to a specific food exposure
- C. Food protein-induced enterocolitis syndrome (FPIES), which best explains the full combination of findings described in this vignette
- D. Pyloric stenosis, which would present with progressive projectile vomiting over days-weeks rather than acutely after a single new food exposure
- E. Lactose intolerance, which would not typically cause this degree of lethargy and pallor

86. A 2-year-old presents with recurrent deep-seated bacterial and fungal infections including liver abscesses, and neutrophil function testing shows an abnormal respiratory burst on nitroblue tetrazolium (or equivalent) testing. Which of the following is the most likely diagnosis?

- A.** Severe combined immunodeficiency, which would show absent T and B cells rather than this specific neutrophil functional defect
- B.** Chronic granulomatous disease, the diagnosis most consistent with the clinical picture presented here
- C.** Selective IgA deficiency, which would not explain this neutrophil functional testing abnormality
- D.** Common variable immunodeficiency, which primarily reflects an antibody deficiency rather than this neutrophil defect
- E.** DiGeorge syndrome, which reflects a T-cell defect rather than this neutrophil functional abnormality

87. A 10-year-old with a family history of recurrent, unexplained episodic swelling of the face, extremities, and abdomen (without urticaria) presents with a new episode of facial and lip swelling without an identifiable allergic trigger and no response to antihistamines or epinephrine in the past. Which of the following is the most likely diagnosis?

- A.** IgE-mediated angioedema, which would typically respond to antihistamines and epinephrine and often occurs with urticaria
- B.** Simple contact dermatitis, which would not explain the episodic, familial pattern described
- C.** Anaphylaxis from an unidentified trigger, which would be expected to include additional systemic features and response to epinephrine
- D.** Cellulitis, which would be expected to show warmth, erythema, and typically fever rather than this episodic pattern
- E.** Hereditary angioedema (C1 esterase inhibitor deficiency), supported by the specific combination of findings in this case

88. A 6-year-old with known selective IgA deficiency requires a blood transfusion. Which of the following is most important to consider prior to transfusion given this diagnosis?

- A.** No special precautions are needed since selective IgA deficiency does not affect transfusion safety

- B.** Only cross-matching for blood type is relevant, with no additional IgA-specific consideration
- C.** Risk of a severe anaphylactic transfusion reaction due to anti-IgA antibodies, warranting use of washed or IgA-deficient blood products when possible
- D.** Routine transfusion is contraindicated entirely in all patients with selective IgA deficiency
- E.** Only the volume of transfusion needs adjustment, with no other special consideration required

89. A 2-year-old is brought in after witnessed ingestion of a button battery 1 hour ago. She is currently asymptomatic. Which of the following is the most appropriate next step?

- A.** Reassure and discharge with instructions to monitor stool for the battery, since she is currently asymptomatic
- B.** Administer activated charcoal to bind the battery — a consideration that does not fully account for all of the findings described
- C.** Obtain an urgent radiograph to localize the battery and arrange emergent endoscopic removal if it is lodged in the esophagus
- D.** Give a dose of a laxative to speed transit and reassess in one week — clinically plausible in isolation, but this case's specific findings point elsewhere
- E.** Discharge with outpatient GI follow-up in one month — a reasonable differential consideration, though less consistent with the specific findings described here

90. A 12-year-old is bitten on the leg by a rattlesnake while hiking and develops rapidly progressive swelling, pain, and ecchymosis at the site. Which of the following is the most appropriate management?

- A.** Application of a tight tourniquet proximal to the bite as the primary treatment — a plausible alternative that the particular details in this vignette argue against
- B.** Incision and suction of the bite site as the primary treatment — worth considering, but not the best fit given the constellation of findings presented
- C.** Observation alone without antivenom regardless of symptom progression — a genuine competing possibility that remains less well supported by this presentation
- D.** Immobilization of the limb, supportive care, and administration of antivenom based on severity of envenomation

E. Ice application directly to the wound as the primary treatment — a consideration that does not fully account for all of the findings described

91. A 15-year-old football player collapses during practice on a hot, humid day with a core temperature of 41°C, confusion, and hot, dry skin. Which of the following is the most appropriate immediate management?

A. Aggressive rapid cooling (eg, cold water immersion) along with supportive care, given concern for heat stroke

B. Oral fluids alone with rest in the shade — clinically plausible in isolation, but this case's specific findings point elsewhere

C. Antipyretic medication as the primary treatment for this temperature elevation — a reasonable differential consideration, though less consistent with the specific findings described here

D. Delay cooling measures until arrival at the hospital — a plausible alternative that the particular details in this vignette argue against

E. IV fluids alone without any active cooling measures — worth considering, but not the best fit given the constellation of findings presented

92. A 9-year-old sustains a high-voltage electrical injury with an entry and exit wound. He is currently alert with normal vital signs. Which of the following is most important to evaluate given this mechanism?

A. No further workup is needed since he currently appears well — a genuine competing possibility that remains less well supported by this presentation

B. Cardiac monitoring, evaluation for deep tissue injury/compartment syndrome, and assessment for rhabdomyolysis, given the risk of injury disproportionate to surface findings

C. Discharge home with wound care instructions alone — a consideration that does not fully account for all of the findings described — clinically plausible in isolation, but this case's specific findings point elsewhere

D. Chest radiograph alone as the only necessary workup — a reasonable differential consideration, though less consistent with the specific findings described here

E. Oral antibiotics as the primary and sole intervention needed — a plausible alternative that the particular details in this vignette argue against

93. A 16-year-old sustains a concussion during a soccer game, with brief confusion and headache that has since resolved with rest. Which of the following best reflects current return-to-play guidance?

- A.** Immediate return to full play once symptoms resolve for even a few minutes
- B.** A fixed universal timeline of exactly 24 hours before return to play regardless of symptoms
- C.** No restriction from play is needed since he did not lose consciousness
- D.** A gradual, stepwise return-to-play progression only after being symptom-free, with medical clearance at each stage
- E.** Permanent removal from all contact sports after any concussion

94. A 2-year-old living in an older home with peeling paint is found to have a venous lead level of 48 mcg/dL with mild abdominal pain but no encephalopathy. Which of the following is the most appropriate next step?

- A.** Reassurance alone with no treatment or further intervention needed — worth considering, but not the best fit given the constellation of findings presented
- B.** Dietary iron supplementation alone as the sole intervention — a genuine competing possibility that remains less well supported by this presentation
- C.** Immediate hemodialysis as the primary treatment — a consideration that does not fully account for all of the findings described
- D.** No environmental assessment is needed since the source is presumed known — clinically plausible in isolation, but this case's specific findings point elsewhere
- E.** Chelation therapy along with environmental investigation and remediation to identify and remove the lead source

95. A 4-year-old presents with excessive salivation, lacrimation, urination, diarrhea, vomiting, and miosis after exposure to a pesticide. Which of the following is the most appropriate treatment?

- A.** Naloxone as the primary treatment for this toxidrome — a reasonable differential consideration, though less consistent with the specific findings described here
- B.** Activated charcoal alone without any antidotal therapy — a plausible alternative that the particular details in this vignette argue against

- C. Flumazenil as the primary treatment for this toxidrome — worth considering, but not the best fit given the constellation of findings presented
- D. Atropine and pralidoxime, given a cholinergic toxidrome consistent with organophosphate exposure
- E. Supportive care alone without any specific antidotal therapy — a genuine competing possibility that remains less well supported by this presentation

96. A 10-year-old presents after prolonged cold exposure with a pale, hard, numb area on the fingers that becomes mottled and painful upon rewarming. Which of the following is the most appropriate management?

- A. Rapid rewarming with dry heat (such as a hair dryer) as the preferred method — a consideration that does not fully account for all of the findings described
- B. Vigorous rubbing of the affected area to restore circulation — clinically plausible in isolation, but this case's specific findings point elsewhere
- C. Immediate surgical debridement before any rewarming attempt — a reasonable differential consideration, though less consistent with the specific findings described here
- D. Rewarming with hot water significantly above body temperature to speed the process — a plausible alternative that the particular details in this vignette argue against
- E. Gradual rewarming in warm (not hot) water with analgesia, avoiding refreezing and avoiding rubbing the affected tissue

97. A 2-year-old is found with an open pill bottle belonging to a grandparent who takes a sulfonylurea for diabetes, and the child is now lethargic with a blood glucose of 38 mg/dL. Which of the following is the most appropriate management approach?

- A. Discharge home once a single glucose value normalizes after treatment, without further monitoring — worth considering, but not the best fit given the constellation of findings presented
- B. Oral glucose alone with no further monitoring, regardless of ingested amount — a genuine competing possibility that remains less well supported by this presentation
- C. Admission for treatment of hypoglycemia and prolonged glucose monitoring, given the risk of delayed and recurrent hypoglycemia from sulfonylurea ingestion
- D. No treatment needed since the ingested amount is presumed small — a consideration that does not fully account for all of the findings described

E. Insulin administration to counteract the ingestion — clinically plausible in isolation, but this case's specific findings point elsewhere

98. A 15-year-old presents after an intentional tricyclic antidepressant overdose with altered mental status and a widened QRS complex on ECG. Which of the following is the most appropriate immediate treatment?

- A.** IV calcium gluconate as the primary treatment for this ECG finding
- B.** IV sodium bicarbonate to narrow the QRS and reduce cardiotoxicity
- C.** Naloxone as the primary treatment for this presentation
- D.** Beta-blocker therapy to manage the cardiac findings
- E.** Observation alone without any specific treatment for the ECG changes

99. An 18-month-old with a temperature of 39.3°C, no clear source on exam, and mild fussiness but overall well appearance is found to have a peripheral WBC count of 18,000/mm³. Blood culture is pending. Which of the following best reflects an appropriate approach given current practice for a well-appearing, fully immunized toddler with fever without a source?

- A.** Automatic admission and IV antibiotics for all children with this WBC count — a reasonable differential consideration, though less consistent with the specific findings described here
- B.** No further evaluation needed given a well appearance, regardless of the degree of leukocytosis — a plausible alternative that the particular details in this vignette argue against
- C.** Clinical judgment integrating the degree of fever, immunization status, and overall risk, since routine screening blood cultures are not required for most well-appearing, fully immunized febrile children beyond early infancy
- D.** Lumbar puncture required in all cases with this presentation regardless of exam findings — worth considering, but not the best fit given the constellation of findings presented — a genuine competing possibility that remains less well supported by this presentation
- E.** Chest radiograph required in all cases regardless of respiratory symptoms — a consideration that does not fully account for all of the findings described — clinically plausible in isolation, but this case's specific findings point elsewhere

100. A 75-day-old infant presents with fever of 38.3°C, is well-appearing, and has reassuring inflammatory markers, normal urinalysis, and no focal findings on exam. Which of the following best reflects an appropriate approach for this age group?

- A.** Mandatory lumbar puncture and empiric antibiotics for all infants in this age range regardless of risk stratification
- B.** No evaluation needed since he is outside the highest-risk neonatal period — a reasonable differential consideration, though less consistent with the specific findings described here
- C.** Immediate discharge with no testing at all given a well appearance — a plausible alternative that the particular details in this vignette argue against
- D.** Risk-stratified evaluation with consideration of close outpatient follow-up without antibiotics if validated low-risk criteria are met
- E.** Antibiotics without any laboratory evaluation, based on appearance alone — worth considering, but not the best fit given the constellation of findings presented

101. A 9-year-old presents with fever for 10 days without a clear source, recently returned from a region where malaria is endemic. Which of the following is the most appropriate next step?

- A.** Assume a routine viral illness without considering the travel history
- B.** Empiric broad-spectrum antibiotics without specific testing based on the travel history
- C.** No specific travel-related testing needed since malaria is rare in returning travelers
- D.** Obtain specific testing for malaria (eg, blood smears) given the travel history, in addition to a broader fever-of-unknown-origin evaluation
- E.** Reassurance and discharge without any further evaluation given the prolonged but otherwise nonspecific symptoms

102. A 6-year-old with acute kidney injury has a potassium of 7.2 mEq/L and new peaked T waves on ECG. Which of the following is the most appropriate immediate treatment priority?

- A.** IV calcium gluconate to stabilize the cardiac membrane, followed by measures to shift and eliminate potassium
- B.** Oral potassium-binding resin alone as the sole and sufficient initial treatment
- C.** IV potassium chloride to correct the underlying disturbance

- D.** Observation alone with a repeat level in 6 hours before any intervention
- E.** Diuretics alone without addressing the cardiac membrane stabilization first

103. A 14-year-old with an opioid overdose has a respiratory rate of 6 breaths per minute and a venous blood gas showing a low pH with a markedly elevated PCO₂ and normal bicarbonate. Which of the following best describes this acid-base disturbance?

- A.** Acute primary respiratory acidosis from hypoventilation
- B.** Primary metabolic alkalosis from the underlying overdose
- C.** Primary metabolic acidosis with respiratory compensation
- D.** Mixed metabolic and respiratory alkalosis
- E.** A normal acid-base picture requiring no specific intervention

104. A 13-year-old develops severe, disproportionate burning pain, allodynia, and skin color/temperature changes in a limb weeks after a relatively minor ankle sprain, without another identifiable ongoing cause. Which of the following is the most likely diagnosis?

- A.** An unhealed fracture as the sole explanation, which would be expected on repeat imaging
- B.** Complex regional pain syndrome, the best-supported explanation given the findings described
- C.** Cellulitis, which would be expected to show systemic signs of infection
- D.** Deep venous thrombosis, which would present with swelling rather than this specific pain and sensory pattern
- E.** Compartment syndrome, which presents acutely rather than weeks after the inciting injury

105. A 16-year-old on an SSRI is started on an additional serotonergic medication and develops agitation, hyperthermia, tremor, and hyperreflexia with clonus. Which of the following is the most likely diagnosis?

- A.** Neuroleptic malignant syndrome, which is associated with antipsychotic use and rigidity rather than hyperreflexia/clonus in this pattern
- B.** Malignant hyperthermia, which is triggered by specific anesthetic agents rather than serotonergic medications

- C. Simple anxiety reaction, which would not explain the hyperthermia and neuromuscular findings
- D. Serotonin syndrome, which best explains the full combination of findings described in this vignette
- E. Anticholinergic toxicity, which would present with dry skin and mydriasis rather than hyperreflexia and clonus as the defining feature

106. A 10-year-old develops rapid-onset high fever, severe muscle rigidity, and tachycardia shortly after induction of general anesthesia with a volatile anesthetic agent. Which of the following is the most likely diagnosis and priority treatment?

- A. Malignant hyperthermia, treated urgently with dantrolene and discontinuation of the triggering agent
- B. Serotonin syndrome, treated with cyproheptadine as the priority intervention
- C. Simple postoperative fever requiring only antipyretics
- D. Neuroleptic malignant syndrome, treated with bromocriptine as the priority intervention
- E. An allergic drug reaction treated primarily with antihistamines

107. A 6-year-old with newly diagnosed leukemia begins induction chemotherapy and develops hyperkalemia, hyperphosphatemia, hypocalcemia, and hyperuricemia with rising creatinine. Which of the following is the most likely diagnosis?

- A. Simple dehydration from poor oral intake during treatment
- B. Chemotherapy-induced nephrotoxicity as the primary and sole mechanism
- C. Tumor lysis syndrome, the diagnosis most consistent with the clinical picture presented here
- D. Adrenal insufficiency related to chemotherapy, which would not explain this specific electrolyte pattern
- E. Acute graft-versus-host disease, which is not relevant to this clinical scenario

108. A 5-year-old presents with fever, tachycardia, tachypnea, and an elevated white blood cell count, meeting criteria for a systemic inflammatory response, with a suspected infectious source. Which of the following is the most appropriate immediate priority?

- A.** Delay any intervention until blood culture results are finalized — a genuine competing possibility that remains less well supported by this presentation
- B.** Discharge home with oral antibiotics regardless of the degree of illness — a consideration that does not fully account for all of the findings described
- C.** Observation alone without further workup or treatment — clinically plausible in isolation, but this case's specific findings point elsewhere
- D.** Prompt recognition and early treatment (fluids, cultures, and timely antibiotics) given concern for evolving sepsis
- E.** Antipyretics alone as the sole management priority — a reasonable differential consideration, though less consistent with the specific findings described here

109. A 15-year-old girl presents with several months of lightheadedness, palpitations, and fatigue on standing, with a documented heart rate increase of more than 30 beats per minute within 10 minutes of standing without a significant drop in blood pressure. Which of the following is the most likely diagnosis?

- A.** Postural orthostatic tachycardia syndrome (POTS), supported by the specific combination of findings in this case
- B.** Orthostatic hypotension, which would show a significant blood pressure drop rather than isolated tachycardia
- C.** A primary cardiac arrhythmia unrelated to positional change
- D.** Simple deconditioning, which would not typically produce this degree of heart rate change
- E.** Anxiety disorder alone, without the objective positional heart rate criteria described

110. A 3-year-old with a known urea cycle disorder presents with vomiting, lethargy progressing to decreased responsiveness, and an ammonia level markedly above baseline. Which of the following is the most appropriate immediate management priority?

- A.** Reassurance and observation at home given a known underlying diagnosis — a plausible alternative that the particular details in this vignette argue against
- B.** Oral protein loading to provide energy substrate during the acute illness — worth considering, but not the best fit given the constellation of findings presented

- C.** Urgent reduction of ammonia (including dietary protein restriction, glucose administration, and consideration of ammonia-scavenging therapy or dialysis) given risk of neurologic injury
- D.** Delay treatment until formal metabolic consultation is available, regardless of clinical trajectory — a genuine competing possibility that remains less well supported by this presentation
- E.** IV amino acid supplementation as the priority intervention — a consideration that does not fully account for all of the findings described — clinically plausible in isolation, but this case's specific findings point elsewhere

111. A 15-year-old is hospitalized for an unrelated medical issue, and routine screening reveals concerning alcohol and marijuana use. Which of the following is the most appropriate next step?

- A.** Further structured screening and brief intervention (eg, SBIRT), with referral for further substance use evaluation and treatment as indicated
- B.** No further action needed since substance use screening is not relevant to the current admission — a reasonable differential consideration, though less consistent with the specific findings described here
- C.** Immediate involuntary treatment referral without further assessment — a plausible alternative that the particular details in this vignette argue against
- D.** Inform the family without directly discussing the findings with the patient first — worth considering, but not the best fit given the constellation of findings presented
- E.** Dismiss the finding as typical adolescent experimentation requiring no further action — a genuine competing possibility that remains less well supported by this presentation

112. A 14-year-old presents with acute chest tightness, palpitations, shortness of breath, and a sense of impending doom, with a thorough cardiac and pulmonary workup that is unremarkable. Which of the following is the most appropriate approach?

- A.** Consider a panic attack/anxiety-related etiology once medical causes have been reasonably excluded, with appropriate mental health support and follow-up
- B.** Repeat extensive cardiac workup indefinitely until a cause is found — a consideration that does not fully account for all of the findings described
- C.** Dismiss the symptoms entirely as not requiring any follow-up or support — clinically plausible in isolation, but this case's specific findings point elsewhere

- D.** Assume a cardiac arrhythmia despite a normal workup and start empiric antiarrhythmic therapy — a reasonable differential consideration, though less consistent with the specific findings described here
- E.** Attribute the symptoms solely to poor physical fitness without further evaluation or support — a plausible alternative that the particular details in this vignette argue against

113. A 16-year-old with a psychiatric history presents with immobility, mutism, waxy flexibility, and posturing that persists over several hours. Which of the following is the most likely diagnosis?

- A.** A simple dissociative episode that would be expected to resolve within minutes
- B.** Catatonia, the best-supported explanation given the findings described
- C.** Absence seizures, which would not produce this sustained motor and behavioral pattern
- D.** Malingering, which would not typically produce waxy flexibility on exam
- E.** Encephalitis alone, without further psychiatric or motor evaluation needed

114. A 10-year-old with ADHD on a stimulant medication is hospitalized for an unrelated acute illness. Which of the following is the most appropriate approach to his home stimulant medication during this admission?

- A.** Automatically discontinue the stimulant for the entire admission regardless of clinical context — worth considering, but not the best fit given the constellation of findings presented
- B.** Increase the stimulant dose during hospitalization without reassessment — a genuine competing possibility that remains less well supported by this presentation
- C.** Switch to a different medication class without discussion with the family or outpatient prescriber — a consideration that does not fully account for all of the findings described
- D.** Ignore the home medication list entirely since it is unrelated to the acute issue — clinically plausible in isolation, but this case's specific findings point elsewhere
- E.** Individualize the decision to continue, hold, or adjust the stimulant based on the acute clinical context, with communication with the family and outpatient prescriber as appropriate

115. A 17-year-old with heavy chronic cannabis use presents with recurrent episodes of severe cyclic vomiting that improve with hot showers. Which of the following is the most likely diagnosis?

- A.** Cyclic vomiting syndrome unrelated to cannabis use, which would not specifically improve with hot showers
- B.** Gastroenteritis, which would not typically show this recurrent pattern tied to hot showers
- C.** Cannabinoid hyperemesis syndrome, which best explains the full combination of findings described in this vignette
- D.** Peptic ulcer disease, which would not characteristically improve specifically with hot showers
- E.** Cyclic vomiting from an underlying metabolic disorder, which would not typically show this specific relieving factor

116. A 16-year-old with chronic benzodiazepine use for anxiety abruptly stops the medication while hospitalized and develops tremor, anxiety, and a witnessed seizure. Which of the following is the most appropriate management approach?

- A.** No specific treatment needed since symptoms are expected to resolve on their own
- B.** Antipsychotic medication as the primary treatment for these symptoms
- C.** Immediate resumption of the home dose with no further monitoring needed
- D.** Naloxone as the primary treatment for this presentation
- E.** Careful benzodiazepine taper or substitution with close monitoring, given risk of withdrawal seizures

117. A 9-year-old with a history of a prior traumatic event becomes acutely distressed, hypervigilant, and avoidant during a hospitalization involving medical procedures. Which of the following is the most appropriate approach to his care?

- A.** Deferring all procedures indefinitely regardless of medical urgency — a reasonable differential consideration, though less consistent with the specific findings described here
- B.** Proceeding with all procedures exactly as routinely done for any other child, without any additional consideration — a plausible alternative that the particular details in this vignette argue against
- C.** Sedating the child for all procedures regardless of medical necessity to avoid any distress — worth considering, but not the best fit given the constellation of findings presented

D. Avoiding any discussion of the prior traumatic event under any circumstances, even when directly relevant to current care — a genuine competing possibility that remains less well supported by this presentation

E. A trauma-informed approach that minimizes re-traumatization (eg, preparation, choice, and predictability around procedures) alongside appropriate medical care

118. A 15-year-old requiring inpatient psychiatric admission has no available psychiatric bed and remains boarding in the medical unit for several days. Which of the following is most important during this period?

A. No specific safety measures are needed since the underlying issue is placement, not medical acuity

B. Ongoing appropriate safety monitoring, environmental safety measures, and engagement with mental health support while awaiting placement

C. Discharge home despite the ongoing need for inpatient psychiatric care, to avoid prolonged boarding

D. Discontinue all mental health involvement until a psychiatric bed becomes available

E. Transfer to a non-monitored setting to free the medical bed regardless of ongoing risk

119. A 12-year-old whose grandparent died three months ago reports sadness and tearfulness specifically when reminded of the loss, while otherwise engaging normally in school and activities most of the time. Which of the following best reflects an appropriate initial approach?

A. Immediate initiation of an antidepressant without further assessment — a consideration that does not fully account for all of the findings described

B. Assume this represents major depressive disorder requiring the same management regardless of the grief context — clinically plausible in isolation, but this case's specific findings point elsewhere

C. Dismiss the reported sadness entirely as unimportant — a reasonable differential consideration, though less consistent with the specific findings described here

D. Recognize this as consistent with a normal grief response while remaining attentive to any signs of more persistent, pervasive impairment that might warrant further evaluation

E. Refer for inpatient psychiatric admission based on this presentation alone — a plausible alternative that the particular details in this vignette argue against

120. An 11-year-old has recurrent abdominal pain and headaches specifically on school mornings, with symptoms resolving once the decision is made to stay home, and an unremarkable medical workup. Which of the following is the most appropriate approach?

- A.** Continue pursuing extensive medical workup indefinitely without considering other contributing factors — worth considering, but not the best fit given the constellation of findings presented
- B.** Assume the child is fabricating symptoms intentionally with no further exploration — a genuine competing possibility that remains less well supported by this presentation
- C.** Consider an anxiety-related contribution to these somatic symptoms and evaluate for school-related stressors, involving appropriate support
- D.** Recommend permanent homeschooling as the only reasonable solution — a consideration that does not fully account for all of the findings described
- E.** Prescribe medication for the somatic symptoms without addressing the underlying pattern — clinically plausible in isolation, but this case's specific findings point elsewhere

121. A hospitalized 8-year-old with a history of behavioral escalation becomes increasingly agitated and disruptive on the unit. Which of the following is the most appropriate first-line approach?

- A.** Verbal de-escalation techniques and environmental modification as first-line management, reserving more restrictive measures for situations where safety cannot otherwise be maintained
- B.** Immediate sedation as the first intervention without other measures — a reasonable differential consideration, though less consistent with the specific findings described here
- C.** Ignore the behavior entirely without any staff response — a plausible alternative that the particular details in this vignette argue against — worth considering, but not the best fit given the constellation of findings presented
- D.** Punitive consequences as the primary de-escalation strategy — a genuine competing possibility that remains less well supported by this presentation
- E.** Immediate use of physical restraint as the first intervention — a consideration that does not fully account for all of the findings described — clinically plausible in isolation, but this case's specific findings point elsewhere

122. A 10-year-old on high-dose systemic corticosteroids for a rheumatologic condition develops new agitation, mood lability, and insomnia. Which of the following is the most likely explanation?

- A.** A primary new psychiatric disorder unrelated to the medication
- B.** Worsening of the underlying rheumatologic disease itself, without medication contribution
- C.** Normal developmental behavior unrelated to any medical or medication factor
- D.** Corticosteroid-induced psychiatric/mood symptoms, a recognized medication effect
- E.** An unrelated infectious process as the most likely explanation for these findings

123. During neonatal resuscitation, a newborn remains bradycardic with a heart rate below 60 bpm despite 30 seconds of effective positive pressure ventilation with visible chest rise. Which of the following is the most appropriate next step?

- A.** Begin chest compressions coordinated with ventilation, and prepare for possible epinephrine if the heart rate remains low
- B.** Continue positive pressure ventilation alone for another full 2 minutes before considering compressions
- C.** Immediately give epinephrine before starting chest compressions
- D.** Discontinue resuscitation efforts at this point given the persistent bradycardia
- E.** Switch to stimulation alone without further ventilation or compressions

124. A 3-week-old exclusively breastfed infant who is feeding well and gaining weight appropriately has persistent mild jaundice with an indirect bilirubin below the treatment threshold. Which of the following is the most likely explanation?

- A.** Breastfeeding jaundice from inadequate milk intake, which would be expected to show poor weight gain
- B.** Biliary atresia, which would be expected to show conjugated hyperbilirubinemia and pale stools
- C.** ABO hemolytic disease, which would be expected to present earlier with a positive direct Coombs test
- D.** Sepsis-related jaundice, which would be expected to show additional signs of illness
- E.** Breast milk jaundice, a benign, self-limited process seen in well-growing breastfed infants

125. A newborn has microcephaly, intracranial calcifications, sensorineural hearing loss, and petechiae at birth, with a positive maternal history of a viral illness during pregnancy. Which of the following is the most likely diagnosis?

- A.** Congenital toxoplasmosis, which classically shows chorioretinitis and different calcification patterns
- B.** Congenital rubella syndrome, which classically shows cataracts and cardiac defects as prominent features
- C.** Congenital cytomegalovirus (CMV) infection, the diagnosis most consistent with the clinical picture presented here
- D.** Congenital syphilis, which shows a different constellation including bone and mucocutaneous findings
- E.** Congenital Zika virus infection, which is not the most likely explanation given this specific finding pattern

126. A term newborn who had a difficult delivery with fetal distress now shows subtle, repetitive lip-smacking and cycling limb movements without a clear behavioral correlate. Which of the following is the most likely explanation?

- A.** Normal newborn jitteriness, which would stop with gentle restraint of the limb — a reasonable differential consideration, though less consistent with the specific findings described here
- B.** Normal newborn reflex activity requiring no further evaluation — a plausible alternative that the particular details in this vignette argue against
- C.** Simple sleep myoclonus, which occurs only during sleep — worth considering, but not the best fit given the constellation of findings presented
- D.** Benign sleep myoclonus, which would not occur in this perinatal distress context — a genuine competing possibility that remains less well supported by this presentation
- E.** Subtle neonatal seizures, which can present with these subtle motor findings and warrant EEG evaluation in this context of perinatal distress

127. A term newborn with a history of a difficult delivery and low Apgar scores has evidence of moderate hypoxic-ischemic encephalopathy on exam within the first 6 hours of life. Which of the following is the most appropriate management?

- A.** Reassurance and routine care only, since the exam findings may resolve without intervention

- B.** Immediate extracorporeal membrane oxygenation regardless of respiratory status
- C.** Delay any intervention until 24 hours of age to confirm the diagnosis
- D.** Initiation of therapeutic hypothermia within the appropriate time window to reduce risk of neurologic injury
- E.** Warming measures to raise core temperature as the priority intervention

128. A large-for-gestational-age newborn is noted to be plethoric with a hematocrit of 68%. Which of the following is the most important next step?

- A.** No further evaluation needed since plethora is a benign, expected newborn finding — a consideration that does not fully account for all of the findings described
- B.** Iron supplementation as the primary intervention for this finding — clinically plausible in isolation, but this case's specific findings point elsewhere — a reasonable differential consideration, though less consistent with the specific findings described here
- C.** Immediate full exchange transfusion regardless of symptoms — a plausible alternative that the particular details in this vignette argue against — worth considering, but not the best fit given the constellation of findings presented
- D.** Close monitoring for symptoms and complications of polycythemia (eg, hypoglycemia, respiratory distress, hyperviscosity symptoms), with consideration of partial exchange transfusion if symptomatic
- E.** Discharge home with no further monitoring given a reassuring exam otherwise — a genuine competing possibility that remains less well supported by this presentation

129. A term newborn has delayed passage of meconium, abdominal distension, and a contrast enema showing a transition zone in the left colon with normal ganglion cells on subsequent biopsy. Which of the following is the most likely diagnosis?

- A.** Hirschsprung disease, which would show absent ganglion cells on biopsy
- B.** Meconium ileus, which is typically associated with cystic fibrosis and a more distal small bowel finding
- C.** Malrotation with volvulus, which would show a different radiographic pattern
- D.** Anal stenosis, which would show a different anatomic finding on exam

E. Meconium plug syndrome (small left colon syndrome)

130. A newborn has hepatosplenomegaly, a diffuse maculopapular rash involving the palms and soles, and long bone radiographs showing periostitis. Maternal serologic testing is positive. Which of the following is the most likely diagnosis?

- A.** Congenital CMV infection, which does not typically produce this specific rash and bone finding pattern
- B.** Congenital syphilis, supported by the specific combination of findings in this case, the best-supported explanation given the findings described
- C.** Congenital toxoplasmosis, which does not typically produce this specific rash and periosteal finding pattern
- D.** Neonatal herpes simplex virus infection, which typically presents with vesicular skin lesions rather than this pattern
- E.** Congenital rubella syndrome, which does not typically produce this specific rash and bone finding pattern

131. A newborn is diagnosed with an isolated cleft palate on exam. The mother is having significant difficulty with breastfeeding due to inability to generate adequate suction. Which of the following is the most appropriate next step?

- A.** Insist on continued exclusive breastfeeding attempts without any modification — a consideration that does not fully account for all of the findings described
- B.** Involve a feeding specialist and consider specialized feeding equipment (eg, specialized bottles/nipples) to support adequate intake while surgical repair is planned
- C.** Immediate surgical repair of the cleft palate before any feeding plan is established — clinically plausible in isolation, but this case's specific findings point elsewhere
- D.** Placement of a nasogastric tube as the only acceptable feeding method long-term — a reasonable differential consideration, though less consistent with the specific findings described here
- E.** Reassure that feeding difficulty is not expected with this diagnosis — a plausible alternative that the particular details in this vignette argue against

132. A newborn is born with abdominal contents (bowel) protruding through a defect in the abdominal wall lateral to an intact umbilical cord, without a covering membrane. Which of the following is the most likely diagnosis?

- A.** Gastroschisis, which best explains the full combination of findings described in this vignette
- B.** Omphalocele, which would show a covering membrane and involve the umbilical cord itself
- C.** Umbilical hernia, which would show intact skin and a smaller, reducible defect
- D.** Diaphragmatic hernia, which involves herniation into the chest rather than through the abdominal wall
- E.** Meckel diverticulum, which is an internal GI anomaly rather than an abdominal wall defect

133. A term newborn has significant hypoxemia out of proportion to chest radiograph findings, with echocardiogram showing elevated pulmonary artery pressures and right-to-left shunting across a patent foramen ovale/ductus arteriosus without a structural cardiac defect. Which of the following is the most likely diagnosis?

- A.** Transposition of the great arteries, which would show a structural cardiac defect on echocardiogram
- B.** Total anomalous pulmonary venous return, which would show a structural cardiac anomaly
- C.** Simple transient tachypnea of the newborn, which would not explain this degree of hypoxemia or the echocardiographic findings
- D.** Congenital diaphragmatic hernia, which would show characteristic findings of bowel in the chest on imaging
- E.** Persistent pulmonary hypertension of the newborn (PPHN), the diagnosis most consistent with the clinical picture presented here

134. A newborn is noted to have widespread petechiae and a platelet count of 12,000/mm³ shortly after birth, with the mother's platelet count normal. Which of the following is the most likely diagnosis?

- A.** Maternal ITP, which would be expected given a low maternal platelet count, not present here
- B.** DIC from an underlying sepsis, which would be expected to show additional coagulation abnormalities and clinical instability

- C.** Neonatal alloimmune thrombocytopenia, supported by the specific combination of findings in this case
- D.** Physiologic thrombocytopenia of the newborn, which would not typically reach this severity
- E.** Vitamin K deficiency bleeding, which primarily affects coagulation factors rather than platelet count

135. A newborn who was feeding well develops vomiting, lethargy, jaundice, and hepatomegaly after starting formula feeds, with a positive newborn screen for a metabolic condition and reducing substances in the urine. Which of the following is the most likely diagnosis?

- A.** Congenital hypothyroidism, which would not explain the reducing substances in the urine
- B.** A urea cycle disorder, which would present with hyperammonemia rather than this specific pattern with reducing substances
- C.** Biliary atresia, which would not explain the positive newborn screen or reducing substances
- D.** Galactosemia, the best-supported explanation given the findings described, which best explains the full combination of findings described in this vignette
- E.** Simple lactose intolerance, which would not explain the jaundice, hepatomegaly, or newborn screen result

136. A set of monochorionic twins is found on prenatal ultrasound to have a significant discordance in amniotic fluid volume between the two sacs, with one twin showing oligohydramnios and the other polyhydramnios. Which of the following is the most likely diagnosis?

- A.** Simple growth restriction of one twin unrelated to the shared placental circulation
- B.** Twin-twin transfusion syndrome, the diagnosis most consistent with the clinical picture presented here
- C.** A normal variant seen commonly in dichorionic twin pregnancies
- D.** Congenital anomaly in one twin as the primary explanation for the fluid discordance
- E.** Placental abruption as the most likely explanation for this finding pattern

137. A 3-day-old presents with bilateral purulent eye discharge and eyelid swelling. Which of the following is the most appropriate initial approach given the range of possible causative organisms at this age?

- A.** Assume a purely chemical cause requiring no testing or treatment — worth considering, but not the best fit given the constellation of findings presented
- B.** Treat empirically with a single antifungal agent without further testing — a genuine competing possibility that remains less well supported by this presentation
- C.** Evaluate for and treat likely bacterial causes (including *Neisseria gonorrhoeae* and *Chlamydia trachomatis*) given the risk of serious complications if untreated
- D.** Reassure that this is expected and will resolve without any intervention — a consideration that does not fully account for all of the findings described
- E.** Refer only for ophthalmology follow-up in one month without any acute treatment — clinically plausible in isolation, but this case's specific findings point elsewhere

138. A newborn who did not pass the initial hospital hearing screen has risk factors including a NICU stay greater than 5 days and a family history of childhood hearing loss. Which of the following is the most appropriate next step?

- A.** Timely audiologic follow-up for diagnostic testing, given the importance of early identification of hearing loss for developmental outcomes
- B.** No further testing needed since initial screening failures are usually not significant — a reasonable differential consideration, though less consistent with the specific findings described here
- C.** Delay any further testing until the child is school-age — a plausible alternative that the particular details in this vignette argue against
- D.** Assume the risk factors alone are sufficient for diagnosis without further audiologic testing — worth considering, but not the best fit given the constellation of findings presented
- E.** Repeat the same screening test at the same visit only, with no further follow-up planned — a genuine competing possibility that remains less well supported by this presentation

139. A child with cerebral palsy and worsening spasticity on the maximum tolerated dose of oral baclofen continues to have pain and functional limitation from spasticity. Which of the following is the most appropriate next step?

- A.** Discontinue all spasticity treatment given lack of full response — a consideration that does not fully account for all of the findings described
- B.** Increase the oral baclofen dose well beyond typical maximum tolerated doses regardless of side effects — clinically plausible in isolation, but this case's specific findings point elsewhere
- C.** Consider additional or alternative therapies (eg, intrathecal baclofen pump, botulinum toxin injections) in conjunction with specialists managing spasticity
- D.** Switch to physical therapy alone without any medication adjustment — a reasonable differential consideration, though less consistent with the specific findings described here
- E.** Add a second oral agent at maximum dose without specialist involvement — a plausible alternative that the particular details in this vignette argue against

140. A child with a ventriculoperitoneal shunt presents with fever, irritability, and shunt-site erythema and tenderness, without clear signs of shunt malfunction on imaging. Which of the following is the most likely diagnosis and next step?

- A.** Simple viral illness unrelated to the shunt, requiring only supportive care — worth considering, but not the best fit given the constellation of findings presented
- B.** Shunt malfunction alone, without consideration of infection, given a normal malfunction workup — a genuine competing possibility that remains less well supported by this presentation
- C.** Normal post-surgical healing requiring no further evaluation — a consideration that does not fully account for all of the findings described
- D.** Cellulitis unrelated to the shunt hardware, requiring only topical treatment — clinically plausible in isolation, but this case's specific findings point elsewhere
- E.** Shunt infection, warranting evaluation (including possible CSF sampling) and treatment given the risk of ventriculitis if untreated

141. A child dependent on home mechanical ventilation is hospitalized, and the ventilator alarm for high pressure sounds repeatedly. Which of the following is the most appropriate initial approach?

- A.** Silence the alarm permanently without further assessment — a reasonable differential consideration, though less consistent with the specific findings described here
- B.** Assume the ventilator itself is malfunctioning and immediately replace the entire device — a plausible alternative that the particular details in this vignette argue against

- C.** Disconnect the child from the ventilator entirely until a respiratory therapist arrives — worth considering, but not the best fit given the constellation of findings presented
- D.** Increase ventilator pressure settings to override the alarm — a genuine competing possibility that remains less well supported by this presentation
- E.** Systematically assess the patient and circuit (eg, secretions, tube position, kinking) for a reversible cause of the high-pressure alarm before broader troubleshooting

142. A child with medical complexity on a long-standing enteral formula develops new vomiting and abdominal distension with feeds, without other signs of acute illness. Which of the following is the most appropriate initial approach?

- A.** Immediately discontinue all enteral feeding indefinitely without further evaluation — a consideration that does not fully account for all of the findings described
- B.** Increase the feeding rate to compensate for perceived intolerance — clinically plausible in isolation, but this case's specific findings point elsewhere
- C.** Assume this is unrelated to the feeding regimen and pursue only an infectious workup — a reasonable differential consideration, though less consistent with the specific findings described here
- D.** Evaluate for a reversible cause of feeding intolerance (eg, tube position, rate, formula type, constipation) before broader changes to the feeding plan
- E.** Switch immediately to a completely different feeding route without evaluating the current regimen — a plausible alternative that the particular details in this vignette argue against

143. A child with medical complexity and limited mobility is hospitalized for an extended stay. Which of the following is most important to reduce the risk of a hospital-acquired pressure injury?

- A.** No specific measures are needed beyond routine care for this population
- B.** Reliance on the family alone to reposition the child without a formal protocol
- C.** Regular risk assessment and scheduled repositioning per a structured skin/pressure injury prevention protocol
- D.** Repositioning only when the child reports discomfort, without a scheduled protocol
- E.** Use of donut-shaped cushions as the primary and sufficient preventive measure

144. A child with medical complexity is on numerous long-standing medications prescribed by multiple subspecialists over several years. During a hospitalization, the team notes some medications may no longer have a clear indication. Which of the following is the most appropriate approach?

- A.** Continue all medications indefinitely without review since they were prescribed by specialists — worth considering, but not the best fit given the constellation of findings presented
- B.** Discontinue all medications abruptly without any subspecialist input — a genuine competing possibility that remains less well supported by this presentation
- C.** Add additional medications to address side effects rather than reviewing the existing regimen — a consideration that does not fully account for all of the findings described
- D.** Undertake a structured medication review (deprescribing assessment) in collaboration with the family and relevant subspecialists to identify medications that may no longer be needed
- E.** Defer any medication review entirely to the outpatient setting with no inpatient action — clinically plausible in isolation, but this case's specific findings point elsewhere

145. A parent of a child with medical complexity reports feeling persistently exhausted and unsupported after years of intensive caregiving, without an identified respite plan. Which of the following is the most appropriate response from the care team?

- A.** Acknowledge the caregiver's experience and connect the family with respite care resources and other available support services
- B.** Advise the caregiver that this level of fatigue is an unavoidable and unaddressable part of caregiving
- C.** Focus exclusively on the child's medical needs without addressing caregiver wellbeing
- D.** Suggest the caregiver reduce involvement in care without offering any alternative support
- E.** Refer the family elsewhere with no coordination or follow-up from the current team

146. A 17-year-old with a complex chronic childhood-onset condition is approaching the age of transition from pediatric to adult care. Which of the following is most important to include in transition planning?

- A.** An abrupt transfer to adult care on the exact date of a specific birthday, without any advance preparation — a reasonable differential consideration, though less consistent with the specific findings described here

B. No specific planning is needed since adult providers will independently obtain all necessary history — a plausible alternative that the particular details in this vignette argue against

C. Transition planning left entirely to the family without care team involvement — worth considering, but not the best fit given the constellation of findings presented

D. Discontinuation of specialist involvement immediately upon reaching adulthood, regardless of ongoing needs — a genuine competing possibility that remains less well supported by this presentation

E. A structured, gradual transition process including preparation of the patient, family, and receiving adult providers, with attention to timing and care coordination

147. A child with a progressive neuromuscular disease is being followed for skeletal complications. Which of the following is most important to monitor given the underlying diagnosis?

A. No specific skeletal monitoring is needed for children with neuromuscular disease

B. Skeletal monitoring is only relevant once the child is no longer ambulatory

C. Monitoring is limited to long bone fractures alone, without attention to spinal curvature

D. Regular scoliosis surveillance, given the significantly increased risk of progressive spinal curvature in this population

E. Skeletal monitoring should be deferred entirely to adulthood in this population

148. A child with severe neurologic impairment and dysphagia has recurrent aspiration pneumonia despite thickened feeds and positioning strategies. Which of the following is the most appropriate next step in the decision-making process?

A. No further intervention is warranted since recurrent aspiration is expected and unavoidable in this population

B. Immediately proceed to fundoplication without further evaluation or discussion of goals

C. Multidisciplinary evaluation (eg, feeding/swallow study, consideration of enteral feeding options, and discussion of goals of care) to guide further management

D. Discontinue all oral feeding permanently without any further assessment or family discussion

E. Rely solely on repeated antibiotic courses for each pneumonia episode without addressing the underlying aspiration risk

149. A child with medical complexity and an underlying immunocompromising condition is due for routine childhood vaccinations. Which of the following is most important to consider before administering vaccines?

- A.** Whether specific vaccines (particularly live vaccines) are contraindicated or require modification based on the degree and type of immunocompromise
- B.** No modification to the standard vaccine schedule is ever needed regardless of immune status
- C.** All vaccines should be withheld indefinitely in any child with medical complexity
- D.** Vaccine decisions should be based solely on the family's preference without considering the child's immune status
- E.** Only the child's age needs to be considered, without regard to their underlying medical condition

150. A family of a child with medical complexity is preparing for an upcoming emergency department visit for an unrelated issue. Which of the following would be most helpful to have readily available?

- A.** No specific documentation is needed since the family can verbally relay all necessary information — a consideration that does not fully account for all of the findings described
- B.** Only the child's insurance card, without any medical summary — clinically plausible in isolation, but this case's specific findings point elsewhere
- C.** A list of the child's medications only, without other medical history — a reasonable differential consideration, though less consistent with the specific findings described here
- D.** Reliance on the primary care office being open to fax records during the visit — a plausible alternative that the particular details in this vignette argue against
- E.** A current emergency information form/care summary outlining diagnoses, medications, baseline status, and key considerations for urgent care providers

151. A hospitalist is preparing to place a peripherally inserted central catheter (PICC) in a child who will require prolonged IV antibiotic therapy. Which of the following is most important to discuss with the family beforehand?

- A.** The indication, risks (including infection and thrombosis), benefits, and expected duration of the catheter, tailored to the family's understanding

- B.** Only the cost of the catheter, since this is the primary consideration — worth considering, but not the best fit given the constellation of findings presented
- C.** No discussion is needed since PICC placement is considered routine — a genuine competing possibility that remains less well supported by this presentation
- D.** Only the brand of catheter being used — a consideration that does not fully account for all of the findings described
- E.** Only the expected duration of the procedure itself, without discussing risks or benefits — clinically plausible in isolation, but this case's specific findings point elsewhere

152. A hospitalist is preparing to assist with chest tube placement for a large pneumothorax. Which of the following anatomic landmark considerations is most important to reduce procedural risk?

- A.** Placement directly over the nipple regardless of rib space — a reasonable differential consideration, though less consistent with the specific findings described here
- B.** Placement site should always be identical regardless of patient size or the specific indication — a plausible alternative that the particular details in this vignette argue against
- C.** The midaxillary line is never an appropriate insertion site in children — worth considering, but not the best fit given the constellation of findings presented
- D.** Anatomic landmarks are not relevant since ultrasound guidance eliminates any need for landmark-based placement — a genuine competing possibility that remains less well supported by this presentation
- E.** Selecting an appropriate intercostal space and using anatomic landmarks (with ultrasound guidance when available) to avoid injury to the diaphragm, intercostal vessels, and nearby organs

153. A hospitalist needs to obtain an arterial blood gas from a critically ill infant. Which of the following is most important to minimize complications from this procedure?

- A.** Using the largest available needle regardless of the vessel size — a consideration that does not fully account for all of the findings described
- B.** Avoiding any assessment of collateral circulation before the procedure — clinically plausible in isolation, but this case's specific findings point elsewhere
- C.** Repeating the procedure at the same site immediately if the first attempt is unsuccessful, regardless of hematoma formation

D. Selecting an appropriate site with adequate collateral circulation and applying firm pressure afterward to reduce risk of hematoma or vascular injury

E. Performing the procedure without any assessment of the patient's coagulation status regardless of clinical context — a reasonable differential consideration, though less consistent with the specific findings described here

154. A hospitalist places a nasogastric tube in a child for feeding. Which of the following is the most appropriate method to confirm correct tube placement before use?

A. Auscultation of air insufflation alone is sufficiently reliable and requires no other confirmation — a plausible alternative that the particular details in this vignette argue against

B. Visual inspection of tube length alone is sufficient without any other confirmation method — worth considering, but not the best fit given the constellation of findings presented

C. Assume correct placement based on ease of insertion alone — a genuine competing possibility that remains less well supported by this presentation

D. Confirm the position using an unrelated prior imaging study — a consideration that does not fully account for all of the findings described — clinically plausible in isolation, but this case's specific findings point elsewhere

E. Confirm placement with a method such as radiographic confirmation or pH testing of aspirate, per institutional protocol, given the risks of feeding through a malpositioned tube

155. A hospitalist is repairing a laceration on a child's forearm. Which of the following is most important to assess before proceeding with suturing?

A. No wound assessment is needed before proceeding directly to closure — a reasonable differential consideration, though less consistent with the specific findings described here

B. Only the length of the laceration is relevant to the repair plan — a plausible alternative that the particular details in this vignette argue against

C. Cosmetic outcome is the only relevant consideration before closure — worth considering, but not the best fit given the constellation of findings presented

D. Wound closure should proceed regardless of contamination or time since injury — a genuine competing possibility that remains less well supported by this presentation

E. Assessment of wound depth, contamination, involvement of underlying structures (eg, tendons, nerves), and time since injury, which together guide the closure approach

156. A family requests newborn circumcision prior to discharge. Which of the following is most important to discuss as part of informed consent for this elective procedure?

- A.** Only the cost of the procedure needs to be discussed — a consideration that does not fully account for all of the findings described
- B.** No discussion of risks is needed since the procedure is considered routine — clinically plausible in isolation, but this case's specific findings point elsewhere
- C.** The indications, risks (eg, bleeding, infection), benefits, and alternatives of the procedure, allowing the family to make an informed decision
- D.** Only the expected time to heal needs to be discussed — a reasonable differential consideration, though less consistent with the specific findings described here
- E.** The discussion should focus solely on technique without discussing risks or benefits — a plausible alternative that the particular details in this vignette argue against

157. A hospitalist is caring for a family whose cultural background includes specific practices around end-of-life care that differ from typical unit routines. Which of the following is the most appropriate approach?

- A.** Insist on standard unit practices regardless of the family's cultural background — worth considering, but not the best fit given the constellation of findings presented
- B.** Avoid any discussion of the family's preferences to prevent an uncomfortable conversation — a genuine competing possibility that remains less well supported by this presentation
- C.** Assume the family's preferences without directly asking them — a consideration that does not fully account for all of the findings described
- D.** Refer the family elsewhere rather than accommodating any specific requests — clinically plausible in isolation, but this case's specific findings point elsewhere
- E.** Engage the family in an open conversation to understand and, where feasible, accommodate their cultural practices and preferences

158. A hospitalist is providing discharge teaching to a family with limited health literacy about a new diagnosis. Which of the following is the most appropriate approach?

- A.** Provide only detailed written materials without verbal discussion — a reasonable differential consideration, though less consistent with the specific findings described here

- B.** Use technical medical terminology to ensure precision, regardless of the family's understanding — a plausible alternative that the particular details in this vignette argue against
- C.** Use plain language, teach-back techniques, and materials tailored to the family's health literacy level to confirm understanding
- D.** Assume understanding based on the family nodding during the discussion — worth considering, but not the best fit given the constellation of findings presented
- E.** Defer all education to a single pamphlet with no verbal reinforcement — a genuine competing possibility that remains less well supported by this presentation

159. A hospital is redesigning its family-centered rounds process. Which of the following best reflects a core principle of family-centered rounds?

- A.** Rounds should occur exclusively outside the patient's room without family presence — a consideration that does not fully account for all of the findings described
- B.** Medical terminology should be used without adaptation to preserve efficiency — clinically plausible in isolation, but this case's specific findings point elsewhere
- C.** Family input should be limited to the end of rounds if time permits — a reasonable differential consideration, though less consistent with the specific findings described here
- D.** Learners should be excluded from any family-centered discussion — a plausible alternative that the particular details in this vignette argue against
- E.** The family (and patient, as appropriate) are active participants in the discussion, with communication adapted to support their understanding and involvement in decision-making

160. A family of a child newly diagnosed with a chronic condition requiring ongoing self-management (eg, insulin administration) is preparing for discharge. Which of the following is most important prior to discharge?

- A.** Provide written materials only, without any hands-on practice or demonstration
- B.** Assume the family will learn the necessary skills independently after discharge
- C.** Structured education with demonstrated competency in the required self-management skills before discharge
- D.** Defer all skill-based teaching entirely to the outpatient setting

E. No specific competency confirmation is needed if the family verbally expresses confidence

161. A patient is being handed off from the emergency department team to the inpatient hospitalist team on admission. Which of the following is most important for a safe handoff?

A. A structured exchange covering the working diagnosis, pertinent findings, treatments given, and outstanding issues, with an opportunity for the receiving team to ask questions

B. A brief written note alone with no verbal communication — worth considering, but not the best fit given the constellation of findings presented

C. Handoff limited to the chief complaint only, without further detail — a genuine competing possibility that remains less well supported by this presentation

D. No handoff is necessary if the chart is available for the receiving team to review independently — a consideration that does not fully account for all of the findings described

E. A handoff limited to vital signs only, without clinical context — clinically plausible in isolation, but this case's specific findings point elsewhere

162. A child with severe burns at a community hospital requires transfer to a regional burn center. Which of the following is most important to ensure a safe interfacility transfer?

A. Transport can proceed without any communication with the receiving burn center — a reasonable differential consideration, though less consistent with the specific findings described here

B. Delay transfer until all wound care at the referring facility is fully completed — a plausible alternative that the particular details in this vignette argue against

C. Family notification about the transfer is not necessary — worth considering, but not the best fit given the constellation of findings presented — a genuine competing possibility that remains less well supported by this presentation

D. Clear communication with the receiving center, appropriate stabilization (including fluid resuscitation and pain control) prior to transport, and a transport team suited to the burn severity

E. Any available vehicle is equally appropriate for this transport regardless of the patient's acuity — a consideration that does not fully account for all of the findings described

163. A patient is being discharged from the hospital to a skilled nursing/rehabilitation facility for continued care. Which of the following is most important for a safe transition?

- A.** No specific communication with the receiving facility is needed beyond a discharge summary sent after the transfer — clinically plausible in isolation, but this case's specific findings point elsewhere
- B.** Assume the receiving facility will independently obtain all necessary information from the family — a reasonable differential consideration, though less consistent with the specific findings described here
- C.** Transfer without confirming the receiving facility can meet the patient's specific care needs — a plausible alternative that the particular details in this vignette argue against
- D.** Discharge medications should be left for the family to communicate verbally to the receiving facility — worth considering, but not the best fit given the constellation of findings presented
- E.** Direct communication with the receiving facility, including a comprehensive summary of the hospitalization, current needs, and pending issues, prior to or at the time of transfer

164. A patient is being transferred from the ICU to a general medical floor after clinical improvement. Which of the following is most important for a safe transition?

- A.** No specific handoff is needed since the patient has already improved clinically — a genuine competing possibility that remains less well supported by this presentation
- B.** A structured handoff between the ICU and floor teams covering the clinical course, current status, and specific parameters or concerns to monitor going forward
- C.** Transfer orders alone are sufficient without any verbal communication between teams — a consideration that does not fully account for all of the findings described
- D.** The family should be responsible for relaying the clinical course to the new team — clinically plausible in isolation, but this case's specific findings point elsewhere
- E.** Transfer should occur without any specific communication if the patient appears stable — a reasonable differential consideration, though less consistent with the specific findings described here

165. A quality improvement team is analyzing the many potential contributing factors (staffing, equipment, communication, training) to a recurring problem. Which of the following tools is best suited to visually organize these categories of potential causes?

- A.** A run chart, which tracks a single measure over time rather than organizing categories of causes
- B.** A statistical process control chart, which tracks variation over time rather than organizing causal categories
- C.** A failure mode and effects analysis, which is used to anticipate specific failure points prospectively rather than organize broad causal categories
- D.** A simple narrative report without visual organization of causal categories
- E.** A fishbone (cause-and-effect) diagram, supported by the specific combination of findings in this case

166. Before implementing a new high-risk medication administration process, a hospital wants to proactively identify potential failure points and their consequences. Which of the following tools is best suited for this purpose?

- A.** A root cause analysis, which is performed retrospectively after an event has already occurred
- B.** A run chart, which tracks performance over time rather than anticipating failure points
- C.** A fishbone diagram, which organizes causes of an existing problem rather than anticipating prospective failure points
- D.** A failure mode and effects analysis (FMEA), the best-supported explanation given the findings described
- E.** A patient satisfaction survey, which does not evaluate process failure points

167. A hospital implements an initiative to reduce unnecessary antibiotic use. Which of the following best describes the purpose of also tracking a 'balancing measure' (such as rates of undertreated infection) in this project?

- A.** Balancing measures replace the need for tracking the primary outcome measure entirely — a plausible alternative that the particular details in this vignette argue against
- B.** Balancing measures help detect unintended negative consequences of a change, ensuring the primary improvement does not come at the cost of a different important outcome
- C.** Balancing measures are only relevant for financial quality improvement projects, not clinical ones — worth considering, but not the best fit given the constellation of findings presented

D. Balancing measures are used solely to satisfy regulatory reporting requirements, with no other purpose — a genuine competing possibility that remains less well supported by this presentation

E. Balancing measures are interchangeable with process measures and serve an identical purpose — a consideration that does not fully account for all of the findings described

168. A hospital wants to improve hand hygiene compliance among staff. Which of the following best reflects an evidence-informed approach to this quality improvement initiative?

A. Combine multiple strategies (eg, education, visual reminders, direct observation with feedback, leadership engagement) rather than relying on a single intervention alone

B. Rely solely on a single poster campaign as the complete intervention — clinically plausible in isolation, but this case's specific findings point elsewhere

C. Assume compliance is already adequate without any measurement — a reasonable differential consideration, though less consistent with the specific findings described here

D. Address hand hygiene only after a specific outbreak occurs, with no ongoing monitoring — a plausible alternative that the particular details in this vignette argue against

E. Focus exclusively on disciplinary action for noncompliance as the primary strategy — worth considering, but not the best fit given the constellation of findings presented

169. A hospital is implementing a standardized handoff tool to improve communication during shift changes. Which of the following best reflects an appropriate approach to this quality improvement initiative?

A. Implement the new tool hospital-wide immediately without any pilot testing or staff feedback — a genuine competing possibility that remains less well supported by this presentation

B. Assume standardization is unnecessary since experienced staff already communicate effectively — a consideration that does not fully account for all of the findings described

C. Introduce the tool without any staff training on its use — clinically plausible in isolation, but this case's specific findings point elsewhere

D. Pilot the tool on a smaller scale, gather feedback and data, and refine the approach through iterative cycles before broader rollout

E. Implement the tool once and avoid further evaluation of its effectiveness — a reasonable differential consideration, though less consistent with the specific findings described here

170. A hospital wants to improve its culture around reporting safety concerns. Which of the following best reflects the principle of a 'Just Culture' approach to patient safety?

- A.** All errors should result in disciplinary action regardless of contributing systems factors — a plausible alternative that the particular details in this vignette argue against
- B.** Reporting of errors should be discouraged to avoid burdening staff — worth considering, but not the best fit given the constellation of findings presented
- C.** Only errors resulting in significant patient harm are worth reporting or reviewing — a genuine competing possibility that remains less well supported by this presentation
- D.** Individual blame should be the primary focus of any error review process — a consideration that does not fully account for all of the findings described
- E.** A culture that distinguishes between human error, at-risk behavior, and reckless behavior, responding accordingly while encouraging open reporting to identify systems improvements

171. A hospital implements an antibiotic stewardship program. Which of the following best describes a primary goal of this type of program?

- A.** To maximize the use of broad-spectrum antibiotics for all admitted patients regardless of indication
- B.** To eliminate antibiotic use entirely across the hospital regardless of clinical need
- C.** To focus solely on cost reduction without regard to clinical appropriateness
- D.** To optimize antibiotic selection, dosing, and duration to improve patient outcomes while reducing unnecessary use and antimicrobial resistance
- E.** To defer all antibiotic decisions to infectious disease consultation for every patient regardless of complexity

172. A hospital administers a patient safety culture survey to staff across multiple units. Which of the following best describes the primary purpose of this survey?

- A.** To assess staff perceptions of safety climate and identify areas for improvement in systems and culture supporting safe care
- B.** To assign individual blame for specific prior adverse events — clinically plausible in isolation, but this case's specific findings point elsewhere

- C.** To replace the need for incident reporting systems entirely — a reasonable differential consideration, though less consistent with the specific findings described here
- D.** To evaluate only financial performance metrics of each unit — a plausible alternative that the particular details in this vignette argue against
- E.** To determine staffing levels without any relationship to safety culture — worth considering, but not the best fit given the constellation of findings presented

173. A hospitalist is deciding whether to place a patient on continuous cardiac monitoring who has a low-risk presentation and no cardiac history or concerning findings. Which of the following best reflects a high-value care approach?

- A.** Reserve continuous cardiac monitoring for patients with a specific clinical indication, avoiding routine use in low-risk patients without a clear indication
- B.** Place all admitted patients on continuous cardiac monitoring regardless of risk to avoid missing a rare event — a genuine competing possibility that remains less well supported by this presentation
- C.** Base the monitoring decision solely on family preference without regard to clinical indication — a consideration that does not fully account for all of the findings described
- D.** Continue monitoring indefinitely regardless of ongoing risk once initiated — clinically plausible in isolation, but this case's specific findings point elsewhere
- E.** Monitoring decisions should be based on bed availability rather than clinical indication — a reasonable differential consideration, though less consistent with the specific findings described here

174. Which of the following best describes 'specificity' of a diagnostic test?

- A.** The proportion of patients with disease who test positive
- B.** The proportion of patients without disease who correctly test negative (true negative rate)
- C.** The likelihood that a positive test indicates true disease
- D.** The likelihood that a negative test indicates true absence of disease
- E.** The overall accuracy of the test across all patients tested

175. Which of the following best describes 'number needed to treat' (NNT) in the context of evaluating a therapy's benefit?

- A.** The number of patients who would need to receive the treatment for one additional patient to benefit, compared with not receiving the treatment
- B.** The number of patients enrolled in the original clinical trial — a plausible alternative that the particular details in this vignette argue against
- C.** The number of doses required to achieve a full therapeutic effect in the average patient — worth considering, but not the best fit given the constellation of findings presented
- D.** The number of adverse events observed in the treatment group of a study — a genuine competing possibility that remains less well supported by this presentation
- E.** The number of years of follow-up required to observe any measurable benefit — a consideration that does not fully account for all of the findings described

176. A hospitalist is considering whether to order a low-value screening test that offers minimal expected benefit for a specific patient. Which of the following best reflects a high-value, patient-centered approach?

- A.** Order the test regardless of expected benefit to avoid any possibility of missing a finding — clinically plausible in isolation, but this case's specific findings point elsewhere
- B.** Decide unilaterally without discussing the rationale with the family — a reasonable differential consideration, though less consistent with the specific findings described here
- C.** Order the test solely because it is available and inexpensive — a plausible alternative that the particular details in this vignette argue against
- D.** Avoid any discussion of the test with the family to save time — worth considering, but not the best fit given the constellation of findings presented
- E.** Engage in shared decision-making with the family, discussing the expected benefits, risks, and alternatives of the test to reach a decision together

177. Which of the following best describes 'negative predictive value' of a diagnostic test?

- A.** Among patients who test negative, the proportion who truly do not have the disease
- B.** The proportion of patients without disease who test negative

- C. The likelihood that a positive test indicates true disease
- D. The proportion of patients with disease who test positive
- E. The overall accuracy of the test across all patients tested regardless of prevalence

178. A hospital participates in an initiative to reduce care that provides little to no benefit to patients (eg, a 'Choosing Wisely'-type initiative). Which of the following best reflects the goal of this type of initiative?

- A. To eliminate all testing and treatment regardless of clinical indication — a genuine competing possibility that remains less well supported by this presentation
- B. To reduce costs as the sole objective, without regard to clinical appropriateness — a consideration that does not fully account for all of the findings described
- C. To apply the same restrictions to every patient regardless of individual clinical context — clinically plausible in isolation, but this case's specific findings point elsewhere
- D. To shift decision-making entirely away from clinicians and patients to administrators — a reasonable differential consideration, though less consistent with the specific findings described here
- E. To identify and reduce specific tests or treatments with evidence of low value, while preserving clinically appropriate, beneficial care

179. A study relies on caregivers retrospectively recalling details of a past exposure after already knowing their child's diagnosis. Which of the following best describes a key limitation of this study design?

- A. The study is affected by measurement bias related to laboratory equipment calibration
- B. The study has excellent internal validity due to this design feature
- C. The study is not subject to any bias because the data were collected directly from caregivers
- D. Recall bias, since caregivers' memory of past exposures may be influenced by knowledge of the current diagnosis
- E. The study's external validity is the primary concern rather than this specific design issue

180. A hospitalist is reviewing a practice of routinely keeping patients NPO (nothing by mouth) for extended periods 'just in case' a procedure might be needed, without a confirmed procedure scheduled. Which of the following best reflects a high-value care approach to this practice?

- A.** Continue routine prolonged NPO status for all patients regardless of whether a procedure is actually planned — a plausible alternative that the particular details in this vignette argue against
- B.** Extend NPO status further as a precaution whenever there is any possibility of a future procedure — worth considering, but not the best fit given the constellation of findings presented
- C.** Base NPO decisions solely on nursing convenience rather than clinical necessity — a genuine competing possibility that remains less well supported by this presentation
- D.** Apply the same NPO duration to every patient regardless of age or clinical context — a consideration that does not fully account for all of the findings described
- E.** Limit NPO status to situations with a confirmed, scheduled indication, avoiding unnecessary prolonged fasting without a specific procedural indication

181. A hospitalist reviewing the literature on a therapy notices that most published studies report positive results, while studies with negative or null results appear underrepresented. Which of the following best describes this phenomenon?

- A.** Recall bias, which relates to participant memory rather than which studies get published
- B.** Confounding by indication, which relates to non-random treatment assignment rather than publication patterns
- C.** Measurement bias, which relates to how variables are measured rather than which studies are published
- D.** Selection bias in enrollment, which relates to how study participants are chosen rather than which studies are published
- E.** Publication bias, which best explains the full combination of findings described in this vignette

182. A study reports that a new treatment reduces the relative risk of a complication by 50%, from a baseline risk of 2% to 1%. Which of the following best describes the absolute risk reduction in this study?

- A.** 50%, the same figure as the relative risk reduction reported in the study
- B.** 98%, the remaining risk after treatment, rather than the reduction itself

- C. 2%, the baseline risk alone, without accounting for the treatment risk
- D. 1%, the numerical difference between the baseline and treatment risk values
- E. Cannot be determined without knowing the absolute number of patients studied

183. During a sudden surge of critically ill patients on the unit, a hospitalist must quickly organize the team's response. Which of the following best reflects effective team leadership in this situation?

- A. Clearly delegate specific roles and responsibilities based on team members' skills, while maintaining open communication and situational awareness
- B. Attempt to personally perform every critical task without delegating to the rest of the team — a genuine competing possibility that remains less well supported by this presentation
- C. Avoid assigning specific roles to prevent overstepping team members' autonomy — a consideration that does not fully account for all of the findings described
- D. Wait for team members to independently determine their own roles without any coordination — clinically plausible in isolation, but this case's specific findings point elsewhere
- E. Focus exclusively on documentation during the surge rather than active coordination of care — a reasonable differential consideration, though less consistent with the specific findings described here

184. A hospitalist leading implementation of a new clinical protocol encounters significant resistance from staff who are skeptical of the change. Which of the following is the most appropriate approach?

- A. Mandate immediate compliance without addressing staff concerns — a plausible alternative that the particular details in this vignette argue against
- B. Explore the specific sources of staff concern, provide data supporting the change, and involve staff in refining the implementation approach
- C. Abandon the change entirely at the first sign of resistance — worth considering, but not the best fit given the constellation of findings presented
- D. Implement the change only for a subset of willing staff, without further engagement of others — a genuine competing possibility that remains less well supported by this presentation
- E. Ignore staff feedback since the evidence supporting the change is already established — a consideration that does not fully account for all of the findings described

185. A hospitalist notices that pain scores are being interpreted and treated differently across patients with similar clinical presentations but different backgrounds. Which of the following best reflects an appropriate response to this observation?

- A.** Recognize this as a potential manifestation of implicit bias affecting clinical decision-making and work toward standardized, objective pain assessment practices
- B.** Assume the variation reflects appropriate individualized care with no further examination needed — clinically plausible in isolation, but this case's specific findings point elsewhere
- C.** Attribute the variation solely to differences in patients' pain tolerance without further inquiry — a reasonable differential consideration, though less consistent with the specific findings described here
- D.** Take no action since pain assessment is inherently subjective and variation is expected — a plausible alternative that the particular details in this vignette argue against
- E.** Address the issue only if a formal complaint is filed — worth considering, but not the best fit given the constellation of findings presented

186. A hospitalist notices that patients from a specific community have higher rates of missed follow-up appointments after discharge, and further inquiry reveals limited access to reliable transportation as a common barrier. Which of the following is the most appropriate advocacy-oriented response?

- A.** Assume missed appointments reflect a lack of concern for follow-up care — a genuine competing possibility that remains less well supported by this presentation
- B.** Take no action since transportation barriers are outside the hospital's role — a consideration that does not fully account for all of the findings described
- C.** Address only the individual missed appointment without considering the broader pattern — clinically plausible in isolation, but this case's specific findings point elsewhere
- D.** Discharge these patients with no follow-up plan since attendance is unlikely — a reasonable differential consideration, though less consistent with the specific findings described here
- E.** Explore options to address the transportation barrier (eg, connecting families with transportation assistance resources or telehealth follow-up options) and advocate for systemic solutions

187. A 16-year-old with a chronic illness wants to make a specific decision about her own care that her parents disagree with. Which of the following is most important to consider in this situation?

- A.** Automatically defer entirely to the parents' wishes regardless of the adolescent's input — a plausible alternative that the particular details in this vignette argue against — worth considering, but not the best fit given the constellation of findings presented
- B.** Assess the adolescent's developmental capacity to understand and participate in the decision, and engage in a discussion that respects her growing autonomy while considering legal requirements specific to the situation and jurisdiction
- C.** Automatically defer entirely to the adolescent's wishes regardless of parental input or legal considerations — a genuine competing possibility that remains less well supported by this presentation
- D.** Refer the decision entirely to hospital administration without clinical or ethical input — a consideration that does not fully account for all of the findings described — clinically plausible in isolation, but this case's specific findings point elsewhere
- E.** Avoid engaging the adolescent directly in the discussion at all — a reasonable differential consideration, though less consistent with the specific findings described here — a plausible alternative that the particular details in this vignette argue against

188. A hospitalist is asked to participate in a research study sponsored by a company that manufactures a device used in the study. Which of the following is the most appropriate action regarding this relationship?

- A.** Conceal the sponsorship relationship from study participants and collaborators — worth considering, but not the best fit given the constellation of findings presented
- B.** Avoid participation in any industry-sponsored research under all circumstances — a genuine competing possibility that remains less well supported by this presentation
- C.** Disclose the relationship only if directly asked by a study participant — a consideration that does not fully account for all of the findings described
- D.** Assume disclosure is unnecessary since the sponsor does not directly employ the hospitalist — clinically plausible in isolation, but this case's specific findings point elsewhere
- E.** Transparently disclose the relationship to relevant parties (eg, institutional review board, collaborators, and participants) as part of appropriate conflict-of-interest management

189. During a regional shortage of a critical resource (eg, ICU beds), a hospital must make decisions about resource allocation among patients with similar acuity. Which of the following ethical principles is most relevant to guiding a fair allocation process?

- A.** Allocation based solely on ability to pay for care — a reasonable differential consideration, though less consistent with the specific findings described here
- B.** Allocation based solely on which patient's family requests the resource most persistently — a plausible alternative that the particular details in this vignette argue against
- C.** Allocation based solely on order of arrival, without considering any other ethical framework — worth considering, but not the best fit given the constellation of findings presented
- D.** A transparent, pre-established ethical framework (eg, based on principles of fairness and maximizing benefit) applied consistently across patients
- E.** Allocation decided independently and inconsistently by whichever clinician is on duty at the time — a genuine competing possibility that remains less well supported by this presentation

190. A hospitalist learns confidential information from a patient that raises concern for an ongoing risk of harm to another specific identifiable person. Which of the following best reflects the appropriate approach to confidentiality in this situation?

- A.** Recognize that confidentiality has recognized limits, such as situations involving a credible risk of serious harm to an identifiable person, which may require disclosure consistent with applicable legal and ethical obligations
- B.** Maintain absolute confidentiality under all circumstances, regardless of risk to others — a consideration that does not fully account for all of the findings described — clinically plausible in isolation, but this case's specific findings point elsewhere
- C.** Disclose the information broadly to anyone who asks, without regard to the specific circumstances — a reasonable differential consideration, though less consistent with the specific findings described here
- D.** Refer the decision entirely to the patient's family without any clinical or legal consideration — a plausible alternative that the particular details in this vignette argue against — worth considering, but not the best fit given the constellation of findings presented
- E.** Take no action of any kind since confidentiality is described as absolute in all situations — a genuine competing possibility that remains less well supported by this presentation — a consideration that does not fully account for all of the findings described

191. A residency program is designing an assessment plan for a new curriculum. Which of the following best describes the distinction between formative and summative assessment?

- A.** Formative assessment provides ongoing feedback to guide learning during training, while summative assessment evaluates overall achievement at the end of a defined period
- B.** Formative and summative assessment are interchangeable terms with no meaningful distinction — clinically plausible in isolation, but this case's specific findings point elsewhere
- C.** Formative assessment occurs only at the end of training, while summative assessment occurs only at the beginning — a reasonable differential consideration, though less consistent with the specific findings described here
- D.** Summative assessment is used exclusively for informal feedback, while formative assessment determines final grades — a plausible alternative that the particular details in this vignette argue against
- E.** Neither type of assessment is relevant to graduate medical education — worth considering, but not the best fit given the constellation of findings presented

192. A hospitalist wants to teach residents how to critically appraise a research article as part of evidence-based medicine training. Which of the following best reflects an effective teaching approach for this skill?

- A.** Simply tell residents the conclusion of the article without discussing the underlying methodology — a genuine competing possibility that remains less well supported by this presentation
- B.** Guide residents through a structured critical appraisal of the study's methodology, results, and applicability, using the article as a working example
- C.** Assign the article as independent reading with no further discussion or guidance — a consideration that does not fully account for all of the findings described
- D.** Focus exclusively on the abstract without examining the study's methods — clinically plausible in isolation, but this case's specific findings point elsewhere
- E.** Avoid discussing any limitations of the study to prevent undermining its credibility — a reasonable differential consideration, though less consistent with the specific findings described here

193. A residency program wants to train residents in managing a rare, high-stakes emergency (eg, an anaphylactic reaction) without risk to actual patients. Which of the following teaching methods is best suited for this purpose?

- A.** A single lecture on the topic without any hands-on component — a plausible alternative that the particular details in this vignette argue against
- B.** Independent reading assignments alone without any practical component — worth considering, but not the best fit given the constellation of findings presented
- C.** Waiting for a real patient encounter to provide this training opportunity — a genuine competing possibility that remains less well supported by this presentation
- D.** A written examination alone testing knowledge of the topic — a consideration that does not fully account for all of the findings described
- E.** Simulation-based training, allowing residents to practice management of the emergency in a realistic, safe environment

194. A program director is developing a new curriculum module. Which of the following is most important to establish first when designing the module?

- A.** The specific dates the module will be taught, before any other planning — clinically plausible in isolation, but this case's specific findings point elsewhere
- B.** The assessment method alone, without first defining the learning objectives — a reasonable differential consideration, though less consistent with the specific findings described here
- C.** The venue for teaching sessions, before determining the content — a plausible alternative that the particular details in this vignette argue against
- D.** The instructors assigned, before determining what will be taught — worth considering, but not the best fit given the constellation of findings presented
- E.** Clear learning objectives that define what learners should know or be able to do after completing the module, which then guide content, teaching methods, and assessment

195. A study fails to detect a statistically significant difference between two treatments, but the study also had a small sample size. Which of the following is the most important concern regarding this result?

- A.** The study definitely proves the two treatments are equally effective — a genuine competing possibility that remains less well supported by this presentation
- B.** The p-value alone fully addresses this concern without further consideration — a consideration that does not fully account for all of the findings described

- C.** This result can only be explained by a flaw in the study's randomization — clinically plausible in isolation, but this case's specific findings point elsewhere
- D.** The study may have been underpowered, increasing the risk of a Type II error (failing to detect a true difference that exists)
- E.** This result eliminates any possibility of a Type I error in this specific study — a reasonable differential consideration, though less consistent with the specific findings described here

196. A researcher wants to study a rare pediatric condition by comparing affected children to unaffected children and looking backward at prior exposures. Which of the following study designs best fits this approach?

- A.** A randomized controlled trial, which is generally impractical for very rare conditions and does not look backward at prior exposures
- B.** A prospective cohort study, which follows exposure status forward in time rather than looking backward from outcome status
- C.** A case-control study, the diagnosis most consistent with the clinical picture presented here, supported by the specific combination of findings in this case
- D.** A cross-sectional survey, which assesses exposure and outcome at a single point in time rather than looking backward specifically from cases and controls
- E.** A systematic review, which synthesizes existing studies rather than serving as a primary study design for this purpose

197. A study uses two different types of thermometers to measure the exposure variable in different subgroups of participants, with one type known to run consistently higher than the other. Which of the following best describes this problem?

- A.** Confounding by indication, which relates to why a treatment was given rather than instrument accuracy
- B.** Measurement bias, since a systematic difference in the tool used to measure the variable can distort the results
- C.** Publication bias, which relates to which studies get published rather than measurement tools
- D.** Recall bias, which relates to participant memory rather than instrument differences
- E.** Selection bias, which relates to how participants are chosen rather than measurement tools

198. Which of the following best describes the purpose of blinding (masking) participants and/or investigators in a randomized controlled trial?

- A.** To reduce bias that could result from participants' or investigators' knowledge of group assignment influencing outcomes or their assessment
- B.** To reduce the total cost of conducting the trial — a plausible alternative that the particular details in this vignette argue against
- C.** To eliminate the need for a control group entirely — worth considering, but not the best fit given the constellation of findings presented
- D.** To ensure the study achieves statistical significance regardless of the true effect — a genuine competing possibility that remains less well supported by this presentation
- E.** To reduce the number of participants required for adequate statistical power — a consideration that does not fully account for all of the findings described

199. A hospitalist wants to use a test result to update the probability that a patient has a particular disease, accounting for how much more (or less) likely a given result is in patients with the disease compared with those without it. Which of the following best describes the tool used for this purpose?

- A.** Sensitivity alone, without considering specificity — clinically plausible in isolation, but this case's specific findings point elsewhere
- B.** Specificity alone, without considering sensitivity — a reasonable differential consideration, though less consistent with the specific findings described here
- C.** Positive predictive value alone, without adjusting for a different pretest probability — a plausible alternative that the particular details in this vignette argue against
- D.** Absolute risk reduction, which is not used for this specific purpose — worth considering, but not the best fit given the constellation of findings presented
- E.** A likelihood ratio, which combines sensitivity and specificity information to help update pretest probability based on a test result

200. A hospitalist reviewing a manuscript submission notices that a substantial portion of the text closely matches previously published work by different authors without attribution. Which of the following is the most appropriate concern and next step?

- A.** This raises concern for plagiarism, a serious research integrity violation, which should be reported through appropriate editorial/institutional channels for review

- B.** This is an acceptable practice as long as the ideas, not the exact data, are being reused — a genuine competing possibility that remains less well supported by this presentation
- C.** No action is needed since the manuscript has not yet been published — a consideration that does not fully account for all of the findings described
- D.** The reviewer should silently correct the text and proceed with a positive review — clinically plausible in isolation, but this case's specific findings point elsewhere
- E.** This concern is only relevant if the original authors personally discover the overlap — a reasonable differential consideration, though less consistent with the specific findings described here

Answers

- 1. A.** A brief generalized seizure occurring with fever in a neurologically normal toddler, with rapid return to baseline, is consistent with a simple febrile seizure; current guidelines support reassurance and outpatient follow-up without routine lumbar puncture, imaging, or antiepileptic initiation in this low-risk presentation.
- 2. C.** Fever, headache, and new focal neurologic deficit with a ring-enhancing lesion on MRI in the setting of untreated sinusitis are classic for a brain abscess arising from contiguous spread of infection, distinguished from simple sinusitis (no intracranial extension) or a primary tumor, which would not typically arise acutely in this infectious context.
- 3. A.** Progressive ascending symmetric weakness with areflexia and preserved sensation following a preceding infection (often gastrointestinal, e.g., *Campylobacter*) is the classic presentation of Guillain-Barré syndrome, distinguished from transverse myelitis (which produces a sensory level) and botulism (descending rather than ascending weakness).
- 4. A.** Post-infectious encephalopathy with multifocal neurologic deficits and multiple asymmetric white matter lesions on MRI, occurring after a preceding infection, is characteristic of ADEM, a monophasic demyelinating illness distinguished from HSV encephalitis (which shows characteristic temporal lobe involvement) and multiple sclerosis (a relapsing-remitting condition, not typically diagnosed on a single monophasic post-infectious attack).
- 5. B.** Sustained elevated intracranial pressure despite first-tier measures (head-of-bed elevation, adequate sedation) warrants escalation with hyperosmolar therapy (hypertonic saline or mannitol) to reduce ICP and prevent secondary brain injury, rather than lowering the head of the bed or giving fluid boluses, which would not address elevated pressure and could worsen it.

- 6. A.** Headache with red-flag features — awakening from sleep, early morning vomiting, and a new focal neurologic finding (abnormal gait) — raises concern for a secondary cause such as a mass lesion, warranting urgent neuroimaging rather than treating as typical primary migraine or deferring evaluation.
- 7. A.** Constipation, poor feeding, weak cry, and progressive descending symmetric weakness in a young infant with a history of honey ingestion (a recognized source of *Clostridium botulinum* spores) are classic for infant botulism, distinguished from Guillain-Barré syndrome, which characteristically causes ascending, not descending, weakness.
- 8. B.** Acute bilateral leg weakness with a discrete sensory level and new bladder dysfunction, with a longitudinally extensive spinal cord lesion on MRI, are classic for transverse myelitis, distinguished from Guillain-Barré syndrome, which does not typically produce a discrete sensory level or bladder dysfunction early in its course.
- 9. E.** A tender, fluctuant, enlarging neck mass with overlying erythema that has failed oral antibiotics raises concern for suppurative lymphadenitis with abscess formation, warranting imaging (ultrasound) to assess for a drainable collection rather than continuing or switching oral antibiotics alone.
- 10. B.** Rapidly progressive bilateral submandibular swelling with tongue elevation, drooling, and early airway compromise arising from a dental source describes Ludwig angina, a life-threatening deep space infection requiring urgent airway management and surgical/ENT evaluation, given the high risk of sudden airway obstruction.
- 11. B.** Proptosis, limited extraocular movement, and a subperiosteal fluid collection adjacent to the orbit on imaging indicate orbital involvement from sinusitis requiring IV antibiotics with close monitoring and consideration of surgical drainage, distinguished from simple sinusitis managed with oral antibiotics alone.
- 12. E.** Unilateral foul-smelling nasal discharge without fever in a young child is classic for a retained nasal foreign body, distinguished from viral or allergic rhinitis, which typically cause bilateral, non-foul-smelling discharge.
- 13. C.** Bilateral parotid swelling, fever, and pain with chewing without purulent ductal drainage, in an unvaccinated child, are classic for viral (mumps) parotitis, distinguished from suppurative bacterial parotitis, which would show purulent expression from Stensen duct and is typically unilateral.
- 14. E.** Severe tooth pain with facial swelling near the jaw and a visibly decayed tooth indicate an odontogenic infection, which requires dental/oral surgery evaluation together with antibiotics given the risk of progression to a deeper space infection such as Ludwig angina if untreated.
- 15. C.** Intermittent inspiratory stridor that worsens with feeding/crying and improves with prone positioning in an otherwise well, growing infant is the classic presentation of laryngomalacia, the most common cause of chronic stridor in infancy, distinguished from vascular rings (position-independent stridor) and subglottic hemangioma (which often has a biphasic course with growth over weeks).

- 16. E.** Recurrent unilateral parotid swelling worsened by meals, with a discrete hyperechoic ductal stone on ultrasound, is classic for sialolithiasis causing obstructive sialadenitis, distinguished from viral mumps parotitis (bilateral, no discrete stone) and parotid tumor (a solid mass rather than a ductal stone).
- 17. D.** Sudden severe respiratory distress with absent breath sounds, tracheal deviation away from the affected side, and hypotension after chest trauma describe tension pneumothorax, a clinical diagnosis requiring immediate needle decompression followed by chest tube placement without waiting for imaging, given the risk of rapid cardiovascular collapse.
- 18. A.** Paroxysmal coughing fits with a whoop and post-tussive emesis, with a well appearance between episodes, in a young infant are classic for pertussis, distinguished from bronchiolitis or croup by the characteristic paroxysmal cough pattern and absence of typical wheeze or stridor.
- 19. B.** Ongoing severe distress with rising CO₂ despite maximal first-line therapy (continuous bronchodilators, ipratropium, systemic steroids, magnesium) indicates impending respiratory failure, requiring escalation to ICU-level care with consideration of additional therapies such as terbutaline or heliox and close monitoring, rather than discharge or further first-line therapy alone.
- 20. C.** Acute pleuritic chest pain, tachycardia, and hypoxia in an adolescent with risk factors for venous thromboembolism (oral contraceptive use, prolonged immobility) are concerning for pulmonary embolism, which should be considered and evaluated for rather than being attributed to musculoskeletal pain or anxiety alone.
- 21. C.** Progressive hypoxemia with bilateral diffuse infiltrates and a PaO₂/FiO₂ ratio meeting diagnostic criteria, in the absence of volume overload as the primary explanation, are characteristic of ARDS, a recognized complication of severe sepsis, distinguished from cardiogenic pulmonary edema by the absence of a primary volume/cardiac cause.
- 22. E.** Progressive respiratory distress with marked hyperinflation of a single lobe and mediastinal shift, without infection, in a newborn is characteristic of congenital lobar emphysema, distinguished from congenital diaphragmatic hernia (which shows bowel loops in the thorax) and pneumothorax (a lucent pleural space rather than hyperinflated lung parenchyma).
- 23. D.** Persistent stridor and difficulty weaning from respiratory support weeks after extubation are characteristic of subglottic stenosis, an acquired injury from prolonged intubation, distinguished from acute processes like croup or tracheitis by the delayed, persistent timeline tied to a prior intubation.
- 24. B.** Recurrent pneumonia consistently affecting a dependent lung region (such as the right lower lobe) in a child with dysphagia and underlying neurologic impairment is characteristic of chronic aspiration related to swallowing dysfunction, distinguished from typical community-acquired pneumonia by the recurrent, anatomically consistent pattern tied to the dysphagia.

- 25. C.** Recurrent wheezing specifically with viral illnesses in a toddler without interval symptoms or atopic history is characteristic of viral-induced wheeze, a common transient pattern in this age group that does not necessarily indicate a diagnosis of persistent asthma requiring daily controller therapy.
- 26. B.** Recurrent apnea, bradycardia, and desaturation in a former very preterm infant without an identifiable infectious, metabolic, or other secondary cause after appropriate workup is characteristic of apnea of prematurity, related to immaturity of respiratory control, which typically resolves as the infant matures.
- 27. B.** A child with a persistent coronary artery aneurysm from Kawasaki disease requires long-term cardiology follow-up with serial echocardiography to monitor aneurysm evolution, along with antiplatelet or anticoagulant therapy depending on aneurysm size and risk of thrombosis, rather than assuming resolution once acute treatment is complete.
- 28. D.** Progressive cyanosis with reversal of shunt direction (right-to-left) in a patient with longstanding uncorrected left-to-right shunting and pulmonary hypertension describes Eisenmenger syndrome, a serious, generally irreversible complication distinguished from a hypercyanotic spell (a dynamic, typically brief event in tetralogy of Fallot) by its chronic, structural nature.
- 29. C.** A continuous 'machinery' murmur, bounding pulses, and wide pulse pressure in a newborn are classic findings of patent ductus arteriosus, distinguished from VSD (holosystolic murmur) and coarctation (diminished, not bounding, lower extremity pulses).
- 30. D.** A newborn presenting in extremis with absent femoral pulses and an underdeveloped left ventricle/aorta has hypoplastic left heart syndrome, a duct-dependent systemic circulation; prostaglandin E1 is critical to maintain ductal patency and systemic perfusion until surgical palliation can be arranged, and should not be delayed for other interventions.
- 31. C.** Fever, malaise, a new regurgitant murmur, and blood cultures growing a typical oral flora organism (viridans streptococci) in a patient with underlying structural heart disease are classic for infective endocarditis, distinguished from rheumatic fever (which would not have a positive blood culture as the driving feature) and pericarditis (which does not typically cause a new regurgitant murmur).
- 32. A.** A prolonged corrected QT interval with a family history of long QT syndrome warrants cardiology referral for further risk stratification, medication review to avoid QT-prolonging drugs, and consideration of therapy (e.g., beta-blockade), given the risk of life-threatening arrhythmia even in an asymptomatic patient.
- 33. A.** Fever, chest pain, a pericardial friction rub, and a small pericardial effusion occurring roughly one to several weeks after cardiac surgery are characteristic of postpericardiotomy syndrome, an immune-mediated inflammatory response distinguished from infective causes by its typical timing and self-limited course with anti-inflammatory treatment.

- 34. D.** For a hemodynamically stable patient with SVT that has failed vagal maneuvers, rapid IV adenosine is the first-line pharmacologic treatment, given its rapid onset and short half-life, rather than immediate cardioversion (reserved for unstable patients) or slower-acting oral agents.
- 35. C.** Greasy, foul-smelling stools and poor weight gain despite adequate intake in a child with cystic fibrosis are classic for exocrine pancreatic insufficiency causing fat malabsorption, a common complication of CF requiring pancreatic enzyme replacement therapy.
- 36. E.** Recurrent, stereotyped, self-limited episodes of vomiting and abdominal pain with symptom-free intervals and a family history of migraine, in the setting of an unremarkable extensive workup, are characteristic of cyclic vomiting syndrome, a functional disorder related to the migraine spectrum.
- 37. D.** Feeding difficulty, arching with feeds, and poor weight gain in a former preterm infant should prompt evaluation for gastroesophageal reflux disease, with initial management typically involving feeding modifications and, if needed, acid suppression, reserving more invasive interventions (fundoplication, gastrostomy) for cases refractory to conservative measures.
- 38. B.** Severe epigastric pain radiating to the back with vomiting and a markedly elevated lipase are classic for acute pancreatitis; current evidence-based management emphasizes supportive care with IV fluids, pain control, and early (rather than delayed) enteral feeding as tolerated, rather than prolonged bowel rest or upfront surgery.
- 39. D.** Encopresis with a large amount of retained stool palpable on exam, normal growth, and a normal rectal exam are consistent with functional constipation with overflow incontinence, managed with disimpaction followed by a maintenance laxative regimen and behavioral strategies, rather than assuming an organic cause like Hirschsprung disease without supporting red flags.
- 40. C.** Chronic bloody diarrhea, weight loss, and growth deceleration with continuous colonic inflammation involving the rectum on colonoscopy are classic for ulcerative colitis, distinguished from Crohn disease by the continuous (rather than skip-lesion) pattern and colonic (rather than potentially any GI segment) involvement.
- 41. E.** Chronic abdominal pain, diarrhea, weight loss, perianal skin tags, and patchy discontinuous inflammation with skip areas involving the terminal ileum are classic for Crohn disease, distinguished from ulcerative colitis by the discontinuous, potentially any-segment involvement and characteristic perianal findings.
- 42. D.** Recurrent GI symptoms and failure to thrive triggered by introduction of wheat-containing foods, with a positive tissue transglutaminase IgA, are classic for celiac disease, an immune-mediated reaction to gluten, distinguished from cow's milk protein allergy or other conditions that do not produce this specific serologic marker.
- 43. E.** Bloody, mucous-streaked stools in an otherwise well-appearing, well-growing exclusively breastfed infant are classic for food protein-induced allergic proctocolitis (often related to maternal

dietary proteins passing through breast milk), distinguished from more acute or ill-appearing conditions like intussusception or necrotizing enterocolitis.

44. B. Recurrent right upper quadrant pain, jaundice, and a choledochal cyst on imaging warrant surgical referral for evaluation and likely resection, given the risk of complications including cholangitis, pancreatitis, and an increased long-term risk of malignancy if the cyst is left in place.

45. B. Gross hematuria, sensorineural hearing loss, and a family history of progressive kidney disease (often X-linked, affecting maternal relatives) are classic for Alport syndrome, a hereditary basement membrane disorder distinguished from other glomerulonephritides by the combination of renal and extrarenal (hearing) findings with this inheritance pattern.

46. E. Gross hematuria occurring concurrently with (synpharyngitic to) upper respiratory infections, with normal complement, is classic for IgA nephropathy, distinguished from post-streptococcal glomerulonephritis, which typically presents 1-2 weeks after infection with transiently low complement rather than concurrently with normal complement.

47. C. Bilateral hydronephrosis with hydroureteronephrosis and a thick-walled, distended bladder in a male newborn are classic for posterior urethral valves, an obstructive process causing bladder outlet obstruction, distinguished from unilateral processes (UPJ obstruction, MCDK) by the bilateral findings with bladder involvement.

48. C. Nephritic/nephrotic features with persistently low complement beyond 8 weeks (rather than normalizing, as in post-streptococcal GN) are characteristic of membranoproliferative glomerulonephritis, distinguished from post-streptococcal GN by the persistence of complement abnormality.

49. E. Dysuria with mucopurulent urethral discharge in a sexually active adolescent male is concerning for a sexually transmitted infection (commonly gonorrhea or chlamydia), warranting testing and empiric treatment given the risk of complications and transmission if untreated, rather than reassurance or symptomatic treatment alone.

50. A. A small, simple, thin-walled ovarian cyst without concerning ultrasound features (normal Doppler flow, no septations or solid components) in an adolescent is very likely a functional cyst that commonly resolves spontaneously, supporting observation rather than surgery or unnecessary additional imaging.

51. E. Current evidence-based guidelines support a more selective approach to further imaging (such as VCUG) after febrile UTI, reserving it for children with specific risk factors (such as recurrent febrile UTIs or abnormal renal ultrasound) rather than mandating it after every single episode.

52. E. Painless testicular enlargement with a solid mass and markedly elevated alpha-fetoprotein and beta-hCG are classic for a testicular germ cell tumor, distinguished from benign processes like hydrocele

or varicocele, which do not produce a solid mass with elevated tumor markers, and from torsion, which presents acutely and painfully.

53. A. A supracondylar fracture with signs of vascular compromise (cool hand, weak pulse) and pain with passive extension (concerning for compartment syndrome/nerve involvement) is a limb-threatening emergency requiring urgent orthopedic evaluation for reduction and fixation, rather than delayed outpatient management or observation.

54. A. An obese adolescent with hip/knee pain, a limp, and posterior-inferior displacement of the femoral epiphysis on radiograph is classic for slipped capital femoral epiphysis, distinguished from Legg-Calvé-Perthes disease (which shows femoral head flattening from avascular necrosis rather than epiphyseal slippage) and from transient synovitis or septic arthritis, which do not produce this radiographic finding.

55. E. Joint pain and swelling developing after a gastrointestinal (or genitourinary) infection, without evidence of active joint infection on aspiration, is classic for reactive arthritis, a post-infectious inflammatory arthritis distinguished from septic arthritis (which would show infection on aspiration) and rheumatic fever (which follows streptococcal, not gastrointestinal, infection).

56. C. Involvement of five or more joints for more than 6 weeks, including small joints of the hands, with morning stiffness and without a systemic fever pattern, is classic for polyarticular juvenile idiopathic arthritis, distinguished from systemic-onset JIA (which includes a quotidian fever and rash) and from more transient processes like reactive arthritis.

57. B. Chronic axial back pain and stiffness combined with enthesitis (heel pain at a tendon insertion site) and HLA-B27 positivity are classic for enthesitis-related arthritis (juvenile spondyloarthritis), distinguished from polyarticular JIA, which does not typically feature this specific enthesitis/axial pattern.

58. A. A slowly enlarging, localized area of thickened, hyperpigmented, hardened skin without systemic symptoms or Raynaud phenomenon is characteristic of localized (linear) scleroderma, or morphea, distinguished from systemic sclerosis by the absence of Raynaud phenomenon and systemic organ involvement.

59. E. Sinus disease, hemoptysis, and glomerulonephritis (hematuria with red cell casts) with positive ANCA together are classic for granulomatosis with polyangiitis, an ANCA-associated small-vessel vasculitis, distinguished from Goodpasture syndrome (anti-GBM antibody-mediated rather than ANCA-associated) and other vasculitides that do not typically involve this specific triad of organs.

60. B. Fever, urticaria, joint pain, and lymphadenopathy occurring roughly one to two weeks after a medication exposure are classic for a serum sickness-like reaction, an immune complex-mediated hypersensitivity distinguished from IgE-mediated anaphylaxis (which occurs acutely, not on a delay) and from DRESS syndrome (which involves more prominent organ involvement and eosinophilia).

- 61. A.** Development of secondary sexual characteristics before the expected age, with advanced bone age, warrants endocrinology referral to evaluate for precocious puberty and determine whether the cause is central (gonadotropin-dependent) or peripheral (gonadotropin-independent), which have different management implications, rather than assuming a normal variant without evaluation.
- 62. C.** Perioral numbness, muscle cramps, a positive Trousseau sign, and low calcium with an inappropriately low or normal PTH (rather than an appropriately elevated compensatory PTH) are classic for hypoparathyroidism, distinguished from vitamin D deficiency or chronic kidney disease-related bone disease, both of which would show an elevated, not low/normal, PTH.
- 63. B.** Fatigue, weight loss, hyperpigmentation, hypotension, hyponatremia, and hyperkalemia together are classic for primary adrenal insufficiency (Addison disease), in which loss of cortisol and aldosterone production causes this specific electrolyte pattern and, via elevated ACTH, hyperpigmentation, distinguishing it from Cushing syndrome (the opposite hormonal state) and other conditions that would not explain this full constellation.
- 64. A.** Bowed legs, widened wrists, delayed fontanelle closure, low vitamin D, low-normal calcium, and elevated alkaline phosphatase in a child with limited sun exposure and an unfortified milk diet are classic for nutritional rickets from vitamin D deficiency, distinguished from other skeletal or metabolic conditions by this specific combination of history and labs.
- 65. A.** Fever, severe tachycardia, agitation, and altered mental status in a patient with known Graves disease who has stopped antithyroid medication describe thyroid storm, a life-threatening endocrine emergency requiring urgent treatment with beta-blockade, antithyroid medication, and supportive care in a monitored setting, distinguished from myxedema coma by the hyperthyroid (rather than hypothyroid) clinical picture.
- 66. C.** Growth failure with low IGF-1, low free T4 with low (not elevated) TSH, and low cortisol with low (not elevated) ACTH, in the setting of a pituitary abnormality on MRI, indicate panhypopituitarism, a global pituitary hormone deficiency distinguished from isolated growth hormone deficiency or primary end-organ failure (which would show elevated, not low, pituitary hormone levels).
- 67. A.** The combination of elevated fasting glucose, elevated triglycerides, low HDL, hypertension, and obesity in an adolescent is consistent with metabolic syndrome, warranting counseling on lifestyle modification and further evaluation for insulin resistance and related complications, rather than being dismissed as normal for this age and body habitus.
- 68. C.** Bone pain, fatigue, elevated calcium, low phosphate, and an elevated (rather than appropriately suppressed) PTH together are classic for primary hyperparathyroidism, distinguished from vitamin D deficiency rickets (which typically shows low or low-normal calcium) and from familial hypocalciuric hypercalcemia (which does not show a PTH elevated out of proportion to the degree of hypercalcemia in this way).

- 69. B.** Subdural hemorrhages of different ages combined with extensive retinal hemorrhages, without an adequate explanatory trauma history, are highly concerning for abusive head trauma, a diagnosis that requires careful evaluation rather than attributing the findings to a benign birth-related process, an isolated bleeding disorder, or an unrelated infectious cause without further workup.
- 70. A.** Repeated missed appointments, significant underweight status, and lack of access to prescribed medication despite documented available resources raise concern for medical neglect, warranting further evaluation including social work involvement to assess and address underlying barriers to care, rather than assuming non-adherence by choice or taking no action.
- 71. D.** A pattern of caregiver-reported symptoms that are never independently witnessed or objectively confirmed, and that resolve when the child is separated from the reporting caregiver, raises concern for medical child abuse (factitious disorder imposed on another), warranting careful, multidisciplinary evaluation rather than assuming an undiagnosed medical condition or simple caregiver anxiety.
- 72. A.** A normal genital exam does not rule out sexual abuse, since many forms of abuse do not cause detectable physical findings; a disclosure by a child warrants referral to a child abuse specialist or multidisciplinary team for a proper forensic interview and further evaluation, rather than being dismissed due to a normal exam or subjected to repeated questioning by multiple providers, which can be traumatizing and compromise the integrity of the disclosure.
- 73. D.** A few target-shaped lesions with a dusky center, without mucosal involvement, occurring after a preceding HSV infection (a classic trigger) describe erythema multiforme minor, distinguished from Stevens-Johnson syndrome, which by definition requires mucosal involvement.
- 74. A.** Fever, a sandpaper-textured rash, strawberry tongue, and circumoral pallor in the setting of a confirmed group A streptococcal infection (positive rapid strep test) are classic for scarlet fever, a streptococcal exotoxin-mediated illness distinguished from Kawasaki disease and other rashes by the direct streptococcal association.
- 75. C.** Fever, oral ulcers, and vesicular lesions specifically involving the palms, soles, and buttocks are the classic distribution of hand-foot-mouth disease, typically caused by coxsackievirus, distinguished from herpangina (posterior oropharynx only) and varicella (diffuse lesions in different stages).
- 76. D.** Fever, lethargy, and a rapidly spreading, non-blanching purpuric rash with irregular borders are classic red-flag findings for meningococcemia with purpura fulminans, a rapidly progressive, life-threatening condition requiring immediate IV antibiotics and aggressive supportive care rather than outpatient management.
- 77. C.** A diffuse maculopapular rash with mild fever following a new medication, in an otherwise well child without mucosal involvement, significant organ involvement, or eosinophilia, is most consistent with a simple morbilliform drug reaction, distinguished from more severe drug hypersensitivity syndromes (DRESS, SJS/TEN) by the absence of their defining additional features.

78. E. Scaly, patchy hair loss with broken-off hairs, scalp swelling, and tender posterior cervical lymphadenopathy are classic for tinea capitis with kerion formation (an inflammatory fungal scalp infection), distinguished from alopecia areata or trichotillomania, which do not typically produce scale, scalp swelling, or lymphadenopathy.

79. E. Sudden focal neurologic deficits (weakness, slurred speech) in a child with sickle cell disease are highly concerning for acute ischemic stroke, a recognized and time-sensitive complication of sickle cell disease requiring emergent neuroimaging and urgent exchange transfusion to reduce the proportion of sickled cells and improve cerebral perfusion, rather than treatment as a routine pain crisis.

80. D. Irritability, periorbital ecchymoses ('raccoon eyes' from metastatic disease), a firm abdominal mass crossing the midline, and elevated urine catecholamine metabolites (VMA/HVA) are classic for neuroblastoma, distinguished from Wilms tumor, which characteristically does not cross the midline and is not associated with elevated catecholamine metabolites.

81. C. A painless, firm abdominal mass that does not cross the midline, with hematuria and hypertension, is classic for Wilms tumor (nephroblastoma), distinguished from neuroblastoma, which more commonly crosses the midline and is associated with elevated catecholamine metabolites rather than this renal-associated presentation.

82. B. Painless lymphadenopathy, night sweats, weight loss, and Reed-Sternberg cells on biopsy are pathognomonic for Hodgkin lymphoma, distinguished from reactive lymphadenitis and infectious causes, which would not show this characteristic pathologic finding.

83. D. Jaundice, splenomegaly, a family history of similar findings, spherocytes on peripheral smear, and abnormal osmotic fragility testing together are classic for hereditary spherocytosis, an inherited red blood cell membrane defect, distinguished from autoimmune hemolytic anemia (which would show a positive direct Coombs test) and other hemoglobinopathies, which show different smear findings.

84. D. Widespread bleeding, petechiae, prolonged PT/PTT, low fibrinogen, elevated D-dimer, and thrombocytopenia in the setting of septic shock together are classic for disseminated intravascular coagulation, a consumptive coagulopathy triggered by severe illness, distinguished from isolated factor deficiencies or platelet disorders by this combined pattern of abnormalities.

85. C. Profuse, repetitive vomiting and lethargy occurring a couple of hours after a specific food exposure, without hives or respiratory symptoms, in a young infant are classic for food protein-induced enterocolitis syndrome (FPIES), a non-IgE-mediated food hypersensitivity distinguished from IgE-mediated anaphylaxis by the absence of hives, respiratory symptoms, and the delayed (rather than immediate) onset relative to typical IgE-mediated reactions.

86. B. Recurrent deep-seated bacterial and fungal infections, including liver abscesses, with an abnormal neutrophil respiratory burst test, are classic for chronic granulomatous disease, a phagocyte disorder in

which neutrophils cannot generate an effective oxidative burst to kill certain organisms, distinguished from SCID (a combined T/B-cell defect) and antibody deficiencies like CVID.

87. E. Recurrent, familial, non-urticarial episodic swelling that does not respond to antihistamines or epinephrine is classic for hereditary angioedema, caused by C1 esterase inhibitor deficiency, distinguished from IgE-mediated angioedema by the lack of urticaria, lack of an identifiable allergic trigger, and lack of response to typical allergy treatments.

88. C. Patients with selective IgA deficiency who have developed anti-IgA antibodies are at risk for severe anaphylactic reactions to blood products containing IgA; using washed or IgA-deficient blood products when feasible reduces this risk, making this an important consideration prior to transfusion rather than assuming standard transfusion carries no special risk.

89. C. Button battery ingestion carries risk of rapid, severe esophageal injury from electrical current and pressure necrosis if lodged in the esophagus; urgent radiograph to localize the battery and emergent endoscopic removal if esophageal are required regardless of current symptoms, since significant injury can occur within hours.

90. D. Management of a venomous snake bite involves limb immobilization, supportive care, and antivenom administration based on the severity of envenomation, while outdated measures like tourniquets, incision/suction, and ice application are avoided because they can worsen tissue injury without improving outcomes.

91. A. A markedly elevated core temperature with altered mental status and hot, dry skin during exertion in a hot environment describe heat stroke, a life-threatening emergency requiring aggressive rapid cooling (such as cold water immersion) alongside supportive care, since delayed cooling significantly worsens outcomes.

92. B. High-voltage electrical injury can cause deep tissue damage, cardiac arrhythmia, and rhabdomyolysis that are disproportionate to visible surface findings, so cardiac monitoring and evaluation for deep tissue injury, compartment syndrome, and rhabdomyolysis are essential even when the patient currently appears well.

93. D. Current concussion management guidelines recommend a gradual, stepwise return-to-play progression, with advancement to the next stage only after remaining symptom-free, and medical clearance at appropriate points, rather than an immediate return once brief symptom relief occurs or a fixed universal timeline.

94. E. A significantly elevated blood lead level with symptoms warrants chelation therapy, combined with environmental investigation and remediation to identify and eliminate the ongoing lead source, since continued exposure will undermine treatment and risks further neurodevelopmental harm.

95. D. Excessive salivation, lacrimation, urination, diarrhea, GI upset, and miosis (the SLUDGE/cholinergic toxidrome) after pesticide exposure are classic for organophosphate poisoning,

treated with atropine (to counter muscarinic effects) and pralidoxime (to reactivate acetylcholinesterase), rather than antidotes for other toxidromes like naloxone or flumazenil.

96. E. Frostbite is managed with gradual rewarming in warm (not hot) water along with analgesia, since rewarming is painful, and rubbing or dry-heat methods can worsen tissue damage; refreezing after rewarming significantly worsens outcomes and must be avoided.

97. C. Sulfonylurea ingestion in a young child can cause delayed and recurrent hypoglycemia lasting many hours, so admission for treatment and prolonged glucose monitoring is warranted even after an initial glucose value normalizes, rather than early discharge based on a single normal reading.

98. B. A widened QRS complex with altered mental status after tricyclic antidepressant overdose reflects sodium channel blockade; IV sodium bicarbonate is the primary treatment to narrow the QRS and reduce life-threatening cardiotoxicity, distinguished from treatments for other toxidromes (naloxone for opioids, calcium for other specific toxicities).

99. C. For a well-appearing, fully immunized toddler with fever without a source, current practice emphasizes clinical judgment over routine invasive testing (such as reflexive lumbar puncture or chest radiography) for the great majority of patients, since the risk of occult serious bacterial infection is substantially lower in this population than in young infants.

100. D. For febrile infants in the roughly 61-90 day range who are well-appearing with reassuring labs, current risk-stratification approaches support consideration of close outpatient follow-up without antibiotics for those meeting validated low-risk criteria, rather than mandating invasive testing and antibiotics for all infants in this range or foregoing evaluation entirely.

101. D. Prolonged fever without a clear source in a child with recent travel to a malaria-endemic region warrants specific testing for malaria (such as blood smears) in addition to a broader fever-of-unknown-origin evaluation, since malaria can be rapidly progressive and is easily missed without a travel-history-driven index of suspicion.

102. A. Severe hyperkalemia with ECG changes (peaked T waves) requires immediate IV calcium gluconate to stabilize the cardiac membrane and reduce arrhythmia risk, followed by measures to shift potassium intracellularly and eliminate it from the body, rather than addressing the underlying cause alone first or observing without intervention.

103. A. A low pH with a markedly elevated PCO₂ and normal (uncompensated) bicarbonate in the setting of opioid-induced hypoventilation reflects an acute primary respiratory acidosis, distinguished from a primary metabolic process by the primary abnormality being in PCO₂ rather than bicarbonate.

104. B. Disproportionate burning pain, allodynia, and skin color/temperature changes in a limb persisting well beyond expected healing from a minor injury, without another identifiable cause, are characteristic of complex regional pain syndrome, a chronic pain condition distinguished from ongoing structural injury, infection, or acute vascular events by its distinctive pain and autonomic features.

105. D. Agitation, hyperthermia, tremor, and hyperreflexia with clonus after adding a serotonergic medication are classic for serotonin syndrome, distinguished from neuroleptic malignant syndrome (associated with antipsychotics and characterized by rigidity rather than hyperreflexia/clonus) and from malignant hyperthermia (triggered by specific anesthetic agents).

106. A. Rapid-onset high fever, severe muscle rigidity, and tachycardia shortly after exposure to a volatile anesthetic agent are classic for malignant hyperthermia, a pharmacogenetic emergency treated urgently with dantrolene and immediate discontinuation of the triggering agent.

107. C. Hyperkalemia, hyperphosphatemia, hypocalcemia, hyperuricemia, and rising creatinine shortly after starting chemotherapy for a malignancy with high cell turnover are classic for tumor lysis syndrome, caused by rapid breakdown of tumor cells releasing intracellular contents, requiring prompt recognition and management.

108. D. A child meeting criteria for a systemic inflammatory response with a suspected infectious source should prompt prompt recognition and early treatment (fluids, cultures, timely antibiotics) given the risk of rapid progression to sepsis, rather than delaying intervention pending culture finalization or managing as a routine outpatient issue.

109. A. A significant heart rate increase (typically greater than 30 beats per minute in adolescents) within 10 minutes of standing, without a significant drop in blood pressure, along with symptoms of lightheadedness and palpitations, meets diagnostic criteria for postural orthostatic tachycardia syndrome (POTS), distinguished from orthostatic hypotension by the absence of a significant blood pressure drop.

110. C. A markedly elevated ammonia level with worsening mental status in a child with a known urea cycle disorder is a metabolic emergency requiring urgent reduction of ammonia — including dietary protein restriction, glucose to reduce catabolism, and consideration of ammonia-scavenging medications or dialysis for severe cases — given the risk of irreversible neurologic injury with delay.

111. A. Identification of concerning substance use in a hospitalized adolescent warrants structured screening and brief intervention (such as SBIRT), with referral for further evaluation and treatment as indicated, rather than dismissing the finding or bypassing direct, developmentally appropriate discussion with the adolescent.

112. A. Once a thorough medical evaluation reasonably excludes an acute cardiac or pulmonary cause for episodic chest tightness, palpitations, and a sense of impending doom, a panic attack or anxiety-related etiology should be considered, with appropriate mental health support, rather than pursuing indefinite repeat medical workup or dismissing the symptoms without follow-up.

113. B. Sustained immobility, mutism, waxy flexibility, and abnormal posturing over hours are classic features of catatonia, a distinct psychomotor syndrome that can occur in the context of underlying psychiatric or medical illness and requires specific recognition and treatment, distinguished from brief dissociative episodes or absence seizures by its sustained motor findings.

114. E. Decisions about continuing, holding, or adjusting a home stimulant medication during an unrelated acute hospitalization should be individualized based on the clinical context, with communication between the medical team, family, and outpatient prescriber, rather than a blanket policy of automatic discontinuation or ignoring the home regimen.

115. C. Recurrent severe cyclic vomiting in a heavy chronic cannabis user that characteristically improves with hot showers is classic for cannabinoid hyperemesis syndrome, distinguished from other causes of cyclic vomiting by this specific relieving factor and the history of heavy cannabis use.

116. E. Abrupt discontinuation of chronic benzodiazepine use can precipitate withdrawal, including seizures; management involves a careful taper or substitution strategy with close monitoring, rather than assuming spontaneous resolution or resuming the home dose without a structured, monitored plan.

117. E. For a child with a trauma history experiencing hypervigilance and avoidance during hospitalization, a trauma-informed approach — offering preparation, choice, and predictability around procedures whenever feasible — helps minimize re-traumatization while still allowing necessary medical care to proceed.

118. B. While boarding in a medical unit awaiting a psychiatric bed, ongoing appropriate safety monitoring, environmental safety measures, and continued engagement with mental health support remain essential, since the underlying psychiatric acuity and associated risk do not resolve simply because placement is delayed.

119. D. Sadness specifically triggered by reminders of a recent loss, with otherwise preserved functioning in school and activities, is consistent with a normal grief response rather than major depressive disorder; the appropriate approach is supportive attentiveness, remaining alert for signs of more persistent, pervasive impairment that would warrant further evaluation, rather than immediately pathologizing or medicating a typical grief reaction.

120. C. Recurrent somatic symptoms specifically tied to school mornings that resolve once the child is allowed to stay home, with an unremarkable medical workup, suggest an anxiety-related contribution to school avoidance; evaluating for school-related stressors and involving appropriate support is more effective than continued exhaustive medical workup or assuming intentional fabrication.

121. A. First-line management of behavioral escalation in a hospitalized child emphasizes verbal de-escalation techniques and environmental modification, reserving more restrictive measures like physical restraint or sedation for situations where safety genuinely cannot be maintained through less restrictive means.

122. D. New agitation, mood lability, and insomnia in a child on high-dose systemic corticosteroids are a recognized medication effect (corticosteroid-induced psychiatric/mood symptoms), which should be considered before attributing the presentation to a primary new psychiatric disorder or an unrelated cause.

123. A. Persistent bradycardia below 60 bpm despite 30 seconds of effective positive pressure ventilation is the trigger to begin chest compressions coordinated with ventilation in neonatal resuscitation, with epinephrine considered next if bradycardia persists despite effective compressions and ventilation, rather than continuing ventilation alone or jumping to epinephrine before compressions.

124. E. Persistent mild indirect hyperbilirubinemia beyond the first couple of weeks in a well-growing, well-feeding breastfed infant, below the treatment threshold, is characteristic of breast milk jaundice, a benign process related to substances in breast milk affecting bilirubin metabolism, distinguished from breastfeeding jaundice (related to inadequate intake, which would show poor weight gain) and pathologic causes like biliary atresia or hemolytic disease.

125. C. Microcephaly, intracranial calcifications, sensorineural hearing loss, and petechiae at birth are classic for congenital CMV infection, the most common congenital viral infection, distinguished from congenital rubella (cataracts, cardiac defects) and toxoplasmosis (chorioretinitis with different calcification patterns) by this specific combination of findings.

126. E. Subtle, repetitive motor findings such as lip-smacking and cycling limb movements in a newborn with a history of perinatal distress can represent subtle neonatal seizures, which often lack the overt convulsive features seen in older children and require EEG evaluation for confirmation, distinguishing them from benign jitteriness or normal reflex activity.

127. D. Moderate hypoxic-ischemic encephalopathy identified within the first hours of life in a term infant with a history of perinatal asphyxia is an indication for therapeutic hypothermia initiated within the appropriate treatment window, since this intervention has been shown to reduce the risk of death and long-term neurologic disability.

128. D. A large-for-gestational-age newborn with plethora and a significantly elevated hematocrit describes neonatal polycythemia; management includes close monitoring for symptoms and complications (hypoglycemia, respiratory distress, hyperviscosity effects) with consideration of partial exchange transfusion if the infant becomes symptomatic, rather than assuming this is entirely benign or proceeding to full exchange transfusion regardless of symptoms.

129. E. Delayed meconium passage and abdominal distension with a transition zone in the left colon on contrast enema, but normal ganglion cells on biopsy, describe meconium plug syndrome (small left colon syndrome), distinguished from Hirschsprung disease by the presence (not absence) of ganglion cells on biopsy.

130. B. Hepatosplenomegaly, a rash involving the palms and soles, and periostitis on long bone radiographs in a newborn with a positive maternal serologic test are classic for congenital syphilis, distinguished from other congenital infections by this specific combination of mucocutaneous and skeletal findings.

131. B. Cleft palate impairs an infant's ability to generate the negative pressure needed for effective breastfeeding; involving a feeding specialist and using specialized feeding equipment supports adequate nutrition while awaiting surgical repair, rather than insisting on unmodified breastfeeding or resorting immediately to more invasive feeding methods.

132. A. Bowel protruding through an abdominal wall defect lateral to an intact umbilical cord, without a covering membrane, is classic for gastroschisis, distinguished from omphalocele, which involves the umbilical cord itself and is typically covered by a membranous sac.

133. E. Hypoxemia disproportionate to chest radiograph findings, with elevated pulmonary artery pressures and right-to-left shunting across fetal circulatory pathways in the absence of a structural cardiac defect, describe persistent pulmonary hypertension of the newborn (PPHN), distinguished from structural cyanotic heart lesions by the absence of a structural defect on echocardiogram.

134. C. Severe isolated thrombocytopenia in an otherwise well newborn with a normal maternal platelet count is characteristic of neonatal alloimmune thrombocytopenia, caused by maternal antibodies against fetal platelet antigens, distinguished from maternal ITP (which requires a low maternal platelet count) by the normal maternal count in this scenario.

135. D. Vomiting, lethargy, jaundice, and hepatomegaly triggered by the introduction of lactose-containing feeds, with a positive newborn screen and reducing substances in the urine, are classic for galactosemia, an inborn error of galactose metabolism requiring prompt dietary lactose/galactose elimination.

136. B. Significant discordance in amniotic fluid volume between monochorionic twins (oligohydramnios in one, polyhydramnios in the other) is classic for twin-twin transfusion syndrome, caused by abnormal blood flow through shared placental vascular connections, a complication specific to monochorionic (not dichorionic) twin pregnancies.

137. C. Purulent eye discharge and eyelid swelling in a neonate (ophthalmia neonatorum) requires evaluation for and treatment of likely bacterial causes, particularly *Neisseria gonorrhoeae* and *Chlamydia trachomatis*, given the risk of serious complications such as corneal damage or systemic infection if these specific pathogens are untreated.

138. A. A newborn who fails initial hearing screening, especially with additional risk factors (prolonged NICU stay, family history), requires timely audiologic follow-up for diagnostic testing, since early identification and intervention for hearing loss is critical for optimal speech and language development.

139. C. When spasticity remains inadequately controlled despite maximum tolerated oral baclofen, appropriate next steps include considering additional or alternative therapies such as an intrathecal baclofen pump or botulinum toxin injections, in conjunction with specialists managing spasticity, rather than discontinuing treatment or escalating a single oral agent beyond safe limits.

140. E. Fever, irritability, and shunt-site erythema/tenderness in a child with a ventriculoperitoneal shunt raise concern for shunt infection, which requires prompt evaluation (potentially including CSF sampling) and treatment, given the risk of progression to ventriculitis if untreated, even when imaging does not show clear signs of mechanical malfunction.

141. E. A high-pressure ventilator alarm should prompt a systematic assessment of the patient and circuit for reversible causes (such as secretions, tube position, or kinking) before broader troubleshooting or equipment replacement, since most high-pressure alarms reflect an addressable issue rather than device failure.

142. D. New feeding intolerance in a child on long-standing enteral nutrition should prompt evaluation for reversible contributing factors (tube position, feeding rate, formula type, constipation) before making broader changes to the feeding plan, rather than assuming an unrelated cause or making abrupt changes without assessment.

143. C. Reducing hospital-acquired pressure injury risk in an immobile child with medical complexity requires regular structured risk assessment and scheduled repositioning per an established prevention protocol, rather than relying on discomfort-triggered repositioning alone or a single device (such as donut cushions) as a sufficient measure.

144. D. A structured medication review (deprescribing assessment) in collaboration with the family and relevant subspecialists helps identify medications that may no longer have a clear indication, reducing polypharmacy risk, rather than continuing all medications indefinitely without review or making unilateral changes without appropriate input.

145. A. Acknowledging a caregiver's reported exhaustion and connecting the family with respite care resources and other support services reflects attention to caregiver wellbeing, an important component of caring for children with medical complexity, rather than dismissing the concern as unaddressable or focusing solely on the child's medical needs.

146. E. Effective transition from pediatric to adult care for a young adult with a complex chronic condition requires a structured, gradual process that prepares the patient, family, and receiving adult providers, with attention to timing and care coordination, rather than an abrupt transfer or leaving planning entirely to the family.

147. D. Children with progressive neuromuscular disease are at significantly increased risk for scoliosis, so regular surveillance for spinal curvature is an important component of ongoing monitoring in this population, rather than being deferred or omitted.

148. C. Recurrent aspiration pneumonia despite conservative measures (thickened feeds, positioning) in a child with severe neurologic impairment warrants multidisciplinary evaluation — including a feeding/swallow study, consideration of enteral feeding options, and discussion of goals of care — to

guide further management, rather than assuming aspiration is unavoidable or making unilateral, irreversible decisions without this evaluation and family discussion.

149. A. Before vaccinating a child with an underlying immunocompromising condition, it is essential to consider whether specific vaccines — particularly live vaccines — are contraindicated or require modification based on the degree and type of immunocompromise, rather than applying the standard schedule uniformly or withholding all vaccines indefinitely.

150. E. A current emergency information form or care summary — outlining diagnoses, medications, baseline status, and key considerations — provides urgent care providers with essential information quickly, which is particularly valuable for a child with medical complexity whose history may not be readily available or easily relayed verbally during an emergency.

151. A. Informed consent for a PICC line requires discussing the indication, risks (including infection and thrombosis), benefits, and expected duration in terms the family can understand, rather than focusing on a single narrow detail like cost or brand.

152. E. Safe chest tube placement requires selecting an appropriate intercostal space and using anatomic landmarks, ideally supplemented with ultrasound guidance when available, to avoid injury to nearby structures such as the diaphragm and intercostal vessels, rather than a fixed, one-size-fits-all approach.

153. D. Minimizing complications from arterial blood gas sampling in a critically ill infant involves selecting a site with adequate collateral circulation and applying firm pressure afterward to reduce hematoma or vascular injury risk, rather than ignoring vessel size, collateral flow, or post-procedure care.

154. E. Confirming nasogastric tube placement with an evidence-based method (such as radiographic confirmation or pH testing per institutional protocol) before use is essential, since feeding through a malpositioned tube (eg, into the airway) can cause serious harm, and less reliable methods like auscultation alone are insufficient.

155. E. Before laceration repair, assessing wound depth, contamination, involvement of underlying structures (tendons, nerves), and time since injury is essential, since these factors determine whether primary closure is appropriate or whether additional evaluation, delayed closure, or specialist involvement is needed.

156. C. Informed consent for an elective procedure like newborn circumcision requires discussing the indications, risks (such as bleeding and infection), benefits, and alternatives, allowing the family to make a fully informed decision, rather than focusing narrowly on cost or healing time alone.

157. E. Respecting a family's cultural practices around sensitive topics like end-of-life care involves an open conversation to understand their specific preferences and accommodating them where feasible, rather than assuming, ignoring, or dismissing those preferences in favor of standard unit routines.

158. C. Effective discharge teaching for a family with limited health literacy uses plain language, teach-back techniques (having the family explain back what they learned), and appropriately tailored materials to confirm true understanding, rather than relying on technical language, written materials alone, or assumed comprehension based on nonverbal cues.

159. E. A core principle of family-centered rounds is that the family (and patient, as appropriate) are active participants in the discussion, with communication adapted to support their understanding and meaningful involvement in decision-making, rather than being passive observers or excluded from the process.

160. C. Before discharging a family who must independently manage a new self-management task (such as insulin administration), structured education with demonstrated competency is essential for safety, rather than relying on written materials alone, verbal confidence, or deferring all teaching to the outpatient setting.

161. A. A safe ED-to-inpatient handoff uses a structured exchange covering the working diagnosis, pertinent findings, treatments already given, and outstanding issues, with the opportunity for the receiving team to ask clarifying questions, rather than relying on a minimal note or chart review alone.

162. D. Safe interfacility transfer of a severely burned patient requires clear communication with the receiving burn center, appropriate stabilization (including fluid resuscitation and pain control) before transport, and a transport team suited to the severity of the burn, rather than delaying stabilization-appropriate transfer or using any available transport regardless of acuity.

163. E. A safe transition to a skilled nursing or rehabilitation facility requires direct communication with the receiving facility, including a comprehensive summary of the hospitalization, current care needs, and pending issues, prior to or at the time of transfer, rather than relying on a delayed discharge summary or assuming the receiving facility will independently gather this information.

164. B. A safe ICU-to-floor transfer requires a structured handoff between teams covering the clinical course, current status, and specific parameters or concerns to monitor going forward, since clinical improvement does not eliminate the need for clear communication of ongoing care needs.

165. E. A fishbone (cause-and-effect) diagram is specifically designed to visually organize multiple categories of potential contributing causes to a problem, distinguishing it from tools that track performance over time (run charts, SPC charts) or that anticipate prospective failure points (FMEA).

166. D. Failure mode and effects analysis (FMEA) is a proactive tool used before implementing a new process to anticipate potential failure points and their consequences, distinguishing it from root cause analysis, which is performed retrospectively after an event has already occurred.

167. B. A balancing measure tracks a related but distinct outcome (such as undertreated infection rates when reducing antibiotic use) to detect unintended negative consequences of a change, ensuring that

improvement in the primary measure does not come at an unacceptable cost to another important outcome.

168. A. Effective hand hygiene improvement initiatives combine multiple complementary strategies — education, visual reminders, direct observation with feedback, and leadership engagement — rather than relying on any single intervention alone, which is generally less effective at achieving sustained behavior change.

169. D. Implementing a new standardized tool effectively involves piloting it on a smaller scale, gathering feedback and data, and refining the approach through iterative cycles before broader rollout, consistent with standard quality improvement methodology, rather than immediate hospital-wide implementation without testing.

170. E. A Just Culture approach distinguishes between human error, at-risk behavior, and reckless behavior, responding to each appropriately (rather than uniformly punitive responses) while actively encouraging open reporting of safety concerns to identify opportunities for systems improvement.

171. D. Antibiotic stewardship programs aim to optimize antibiotic selection, dosing, and duration to improve patient outcomes while reducing unnecessary antibiotic use and the development of antimicrobial resistance, rather than eliminating antibiotic use entirely or focusing solely on cost.

172. A. A patient safety culture survey assesses staff perceptions of the safety climate within an organization, helping identify areas where systems and culture supporting safe care could be strengthened, rather than serving to assign individual blame or replace incident reporting systems.

173. A. High-value care supports reserving continuous cardiac monitoring for patients with a specific clinical indication, avoiding routine use in low-risk patients without a clear indication, since unnecessary monitoring can contribute to alarm fatigue and does not improve outcomes in this population.

174. B. Specificity is defined as the proportion of patients without disease who correctly test negative (the true negative rate), distinct from sensitivity (true positive rate among those with disease) and from predictive values, which depend on disease prevalence.

175. A. Number needed to treat (NNT) represents the number of patients who would need to receive a given treatment for one additional patient to experience the beneficial outcome, compared with not receiving the treatment, a useful measure for communicating the practical magnitude of a therapy's benefit.

176. E. When considering a low-value test with minimal expected benefit for a specific patient, a high-value, patient-centered approach involves shared decision-making — discussing expected benefits, risks, and alternatives with the family to reach a decision together, rather than ordering the test reflexively or deciding unilaterally without discussion.

- 177. A.** Negative predictive value refers to, among patients who test negative, the proportion who truly do not have the disease; like positive predictive value, it depends on disease prevalence, distinguishing it from sensitivity and specificity, which are fixed properties of the test itself.
- 178. E.** Initiatives aimed at reducing low-value care (such as a 'Choosing Wisely'-type initiative) seek to identify and reduce specific tests or treatments with evidence of limited benefit, while preserving clinically appropriate, beneficial care — not eliminating all testing or shifting decision-making away from clinicians and patients.
- 179. D.** When caregivers recall past exposures after already knowing their child's diagnosis, their recollection can be influenced by that knowledge, a phenomenon known as recall bias, which is a key limitation of retrospective study designs relying on caregiver-reported exposure history.
- 180. E.** A high-value approach to NPO status limits fasting to situations with a confirmed, scheduled procedural indication, avoiding unnecessary prolonged fasting 'just in case,' since extended, unindicated NPO status can cause patient discomfort, nutritional concerns, and other downstream harms without a corresponding benefit.
- 181. E.** The tendency for studies with positive results to be more likely published than those with negative or null results is known as publication bias, which can distort the overall body of literature on a given therapy if not accounted for (eg, through systematic review methods that search for unpublished data).
- 182. D.** Absolute risk reduction is the numerical difference between the baseline risk and the treatment-group risk (2% minus 1% equals 1% in this example), distinguished from relative risk reduction (the 50% figure), which describes the proportional change relative to the baseline risk rather than the absolute magnitude.
- 183. A.** Effective team leadership during a crisis involves clearly delegating specific roles based on team members' skills while maintaining open communication and situational awareness, rather than attempting to perform every task alone or leaving role assignment entirely unstructured, both of which risk delayed or uncoordinated care.
- 184. B.** Effective change management in the face of staff resistance involves exploring the specific sources of concern, providing supporting data, and involving staff in refining the implementation approach, which increases buy-in and improves the likelihood of successful, sustained adoption compared with mandating compliance or abandoning the change.
- 185. A.** Systematic variation in pain interpretation and treatment across patients with similar presentations but different backgrounds should raise concern for implicit bias affecting clinical decision-making, warranting efforts toward standardized, objective assessment practices rather than assuming the variation reflects appropriate individualized care or true differences in pain tolerance.

186. E. When a specific access barrier (such as transportation) is identified as a contributor to missed follow-up care in a particular community, an appropriate advocacy-oriented response involves exploring practical solutions (transportation assistance, telehealth options) and advocating for systemic improvements, rather than assuming the pattern reflects a lack of concern or taking no action.

187. B. When an adolescent's wishes differ from her parents', it is important to assess her developmental capacity to understand and participate in the decision and to engage her directly in a discussion that respects her growing autonomy, while also considering the legal framework specific to the situation and jurisdiction, rather than automatically deferring entirely to either party or excluding the adolescent from the conversation.

188. E. Appropriate management of a potential conflict of interest, such as a relationship with an industry sponsor of a study, requires transparent disclosure to relevant parties — including the IRB, collaborators, and study participants — rather than concealment or disclosure only when directly asked.

189. D. Fair allocation of a scarce critical resource during a shortage should be guided by a transparent, pre-established ethical framework applied consistently across patients (such as one grounded in fairness and maximizing benefit), rather than allocation based on ability to pay, persistence of request, arrival order alone, or inconsistent individual clinician judgment.

190. A. Confidentiality in medicine has recognized limits, including situations involving a credible risk of serious harm to an identifiable third party, where applicable legal and ethical obligations may require disclosure; this differs from assuming confidentiality is absolute in every circumstance.

191. A. Formative assessment is designed to provide ongoing feedback that guides learning and improvement during the course of training, while summative assessment evaluates overall achievement or competency at the end of a defined period, and both serve distinct, complementary roles in medical education.

192. B. Effectively teaching critical appraisal skills involves guiding learners through a structured evaluation of a study's methodology, results, and applicability using a real article as a working example, actively engaging learners in the appraisal process rather than simply providing conclusions or assigning reading without guided discussion.

193. E. Simulation-based training allows learners to practice managing rare, high-stakes emergencies in a realistic but safe environment without risk to actual patients, making it particularly well suited for skills that cannot be reliably taught by waiting for infrequent real clinical encounters.

194. E. Curriculum design should begin with establishing clear learning objectives that define what learners should know or be able to do upon completion, since these objectives then guide the selection of content, teaching methods, and assessment strategies, rather than beginning with logistical details like dates, venue, or instructor assignment.

- 195. D.** A study with a small sample size that fails to detect a statistically significant difference may simply be underpowered to detect a true effect, raising concern for a Type II error (a false negative), rather than definitively proving the treatments are equally effective.
- 196. C.** A case-control study, which compares individuals with a condition (cases) to those without it (controls) and looks backward at prior exposures, is well suited for studying rare conditions, distinguishing it from prospective cohort studies (which follow exposure forward in time) and cross-sectional studies (which assess exposure and outcome at a single time point).
- 197. B.** Using measurement tools with a known systematic difference (one instrument consistently reading higher than another) to assess the same variable across subgroups introduces measurement bias, which can distort study results independent of any true difference between the groups being compared.
- 198. A.** Blinding (masking) participants and/or investigators to group assignment reduces the risk that knowledge of the assignment will consciously or unconsciously influence reported outcomes or their assessment, helping to preserve the validity of a randomized controlled trial's results.
- 199. E.** A likelihood ratio combines a test's sensitivity and specificity to describe how much a given test result should shift the pretest probability of disease, allowing calculation of a post-test probability, distinguishing it from sensitivity, specificity, or predictive values used in isolation.
- 200. A.** Substantial unattributed overlap between a submitted manuscript and previously published work raises serious concern for plagiarism, a research integrity violation that should be addressed through appropriate editorial and institutional channels for review, rather than being silently corrected, ignored, or considered acceptable if only 'ideas' were reused without proper attribution.