Attachment 1: Overview of scenarios with learning areas and expected actions

A course handout containing a description of the scenarios can be requested from the corresponding author.

Scenario	Learning areas	Expected measures
1. Chest pain/ ACS	• Differential diagnosis of chest pain • Risk stratification and decision-making in general practice (scores, ECG, troponin, ultrasound) • Interpretation of 12-lead ECGs, STEMI/OMI, high-risk ECGs • Guideline-based management of ACS, medication, preparedness for resuscitation, monitoring • Management of typical complications (cardiogenic shock, arrhythmias) • Appropriate patient transport and destination	• Standardized initial management according to an established algorithm, including medical history and physical examination • Continuous hemodynamic monitoring • 12-lead ECG • Consideration of differential diagnoses and risk stratification; use of a clinical decision rule (e.g., Marburg Heart Score or equivalent); laboratory testing and/or ultrasound, if indicated • Individualized antiplatelet and/or anticoagulant therapy • Consideration of the patient's current medication • Analgesia and/or sedation, if indicated • Transfer by physician-staffed emergency medical service to a hospital with a cardiac catheterization laboratory
2. Shortness of breath / COPD / pulmonary oedema / pulmonary embolism	• Differential diagnosis of shortness of breath • Risk stratification and decision-making in general practice (clinical scores, ECG, POCT laboratory tests, ultrasound) • Interpretation of a 12-lead ECG • Diagnosis-specific, guideline-based pharmacological treatment • Recognition of non-indicated treatments • Identification and treatment of common underlying causes (e.g. hypertensive emergency)	• Standardized initial assessment and management according to an algorithm, including medical history and physical examination • 12-lead ECG • Consideration of differential diagnoses and risk stratification; use of appropriate clinical scores, laboratory testing and ultrasound, as indicated • Appropriate patient positioning • Targeted oxygen therapy • Nebulized therapy and treatment escalation
3. Anaphylaxis	• Recognition and classification of anaphylaxis • Stage-appropriate treatment • Adrenaline administration according to guidelines • Inhalation therapy • Differential diagnosis and management of shock	• Recognition of a critically ill patient and calling for help • Standardized initial assessment and management according to an algorithm, including medical history and physical examination • Recognition and appropriate management of A, B, and C problems • Recognition, identification, and treatment of anaphylactic shock

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		• Ensure that exposure to the allergen is stopped (e.g. change the infusion system)
4. Hypertensive emergency	• Differential diagnosis of hypertension, red flags • Consideration and identification of triggering factors and prevention of potentially serious but preventable disease course • Differentiated approach to blood pressure management (acute vs. long-term treatment) • Management of acute blood pressure elevation in the primary care setting, including consideration of non-indicated / inappropriate therapies • Decision-making regarding outpatient versus inpatient follow-up care	• Standardized initial assessment and management according to an algorithm, including medical history and physical examination • Bilateral blood pressure measurement • neurological examination • 12-lead ECG • Guideline-based drug therapy • Consideration of long-term medication, pre-existing conditions, adherence and the patient's social circumstances • Informed decision on whether to provide further care on an outpatient or inpatient basis
5. Adult resuscitation	• ERC resuscitation algorithm (BLS with AED), including consideration of reversible causes (4Hs, HITS)	• Recognition of cardiac arrest and calling for help • Guideline-based resuscitation, including defibrillator use • Airway management and ventilation (suctioning, effective bag-mask ventilation, SGA) • Consideration of reversible causes and treatment if necessary • Effective team communication and consideration of the primary care setting (e.g., waiting patients and family members)
6. Pediatric resuscitation	• ERC resuscitation algorithm: BLS with AED, including consideration of reversible causes (4Hs, HITS) and key considerations in pediatric resuscitation	• Recognition of cardiac arrest and calling for help • Guideline-based resuscitation, including defibrillator use • Airway management and ventilation (suctioning, effective bag-mask ventilation, SGA) • Consideration of reversible causes and treatment if necessary • Effective team communication and consideration of the primary care setting (e.g., waiting patients and family members)
7. Stroke / ICB	• Structured neurological examination (beFAST, sNIHSS) • Differential diagnosis of neurological deficits, including stroke mimics	• Focused medical history and appropriate examination (beFAST, sNIHSS) • Bilateral blood pressure measurement • Blood glucose measurement and treatment if necessary • Guideline-based blood pressure management

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	• Blood pressure management in stroke patients • Time management, means of transport • Selection of appropriate receiving hospital (indication for thrombolysis, large vessel occlusion)	• Guideline-based oxygen therapy • medical history (pre-existing conditions, long-term medication, contraindications to lysis, contact details of relatives) • Effective time management
8. Seizure/ status epilepticus	• Differential diagnosis of a seizure, including differentiation from syncope and psychogenic seizures • Identification and, where appropriate, treatment of underlying causes (known epilepsy, alcohol abuse, intoxication, hypoglycemia…) • Guideline-based pharmacological treatment of persistent or recurrent seizures • Routes of benzodiazepine administration (oral, buccal, intramuscular) • Transport requirements, appropriate means of transport and destination	• Standardized initial assessment and management according to an algorithm, including blood glucose measurement • Assessment for tongue biting, urinary incontinence, and associated injuries • Protecting the patient from injury • Considering the history provided by witnesses • Appropriate oxygen administration • Guideline-based pharmacologic treatment • Ensuring a clear airway (positioning, suction readiness) • Appropriate transport decision-making
9. Pediatric respiratory distress	• Initial assessment of a critically ill child using the pediatric assessment triangle • Differential diagnosis of respiratory distress in children (e.g., croup, epiglottitis, foreign-body airway obstruction, asthma, obstructive bronchitis) • Knowledge of age-specific normal vital signs, including the significance of respiratory rate • Administration of nebulized medications • Appropriate interaction with children and their parents during emergencies • Transport requirements, appropriate means of transport and destination	• Initial assessment: critical vs. non-critical • Appropriate diagnosis and treatment using a minimally invasive, observation-based approach when appropriate (e.g. no intravenous access, only targeted examinations) • Consideration of differential diagnoses and identification of an airway (A) or breathing (B) problem • Guideline-based treatment, including nebulized medications and corticosteroids, as indicated • Appropriate interaction and communication with child and parents • Appropriate transport decision-making

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10. Fever/Sepsis	• Recognition of sepsis criteria: qSOFA, NEWS • Focused evaluation to identify the source of infection in patients with suspected sepsis • Differentiation between sepsis and septic shock • Differential diagnosis of shock • Cause-specific management of shock • Time-critical management and selection of the appropriate mode of transport • Selection of an appropriate receiving hospital • appropriate management strategy for multimorbid patients • Management in the context of advance directives and consideration of limitations of life-sustaining treatment	• Adhering to hygiene measures, personal protection • Standardized initial assessment and management according to an algorithm, including medical history, physical examination, and measurement of body temperature • Recognition of signs of sepsis and septic shock • Guideline-based oxygen and fluid therapy • Appropriate communication with patients and family members • Development of an appropriate treatment strategy • Appropriate means of transport and destination hospital, possibly outpatient management (if applicable)
11. Dizziness/ Vertigo	• Differential diagnosis of dizziness and vertigo, including differentiation between central and peripheral causes and recognition of red flags • Specific neurologic examination techniques for patients presenting with acute dizziness or vertigo • Canalith repositioning maneuvers for benign paroxysmal positional vertigo (BPPV)	• Standardized initial management according to the algorithm, including medical history and physical examination • HINTS • Differentiation between central and peripheral vertigo with further classification • Determine treatment strategy • Appropriate disposition: primary care follow-up, outpatient specialist referral, or hospital admission
12. Opioid intoxication in multimorbid patients	• Differential diagnosis of unconsciousness • Management of airway (A) and breathing (B) problems in the nursing home setting • Toxidromes • Treatment options for opioid intoxication • Appropriate means of transport and destination hospital	• Standardized initial assessment according to an algorithm, including medical history and physical examination • Recognition of airway (A) and breathing (B) problems and providing appropriate immediate treatment • GCS, blood glucose and pupils as part of the disability (D) assessment • Complete examination of the entire skin in cases of suspected intoxication • Take regular medication into account • Administration of naloxone, where indicated