

# JAK VIDÍM URGENTNÍ MEDICÍNU

*MUDr. Roman Škulec, Ph.D.*

- *Klinika anesteziologie, perioperační a intenzivní medicíny, Masarykova nemocnice v Ústí nad Labem, Univerzita J. E. Purkyně v Ústí nad Labem*
- *Zdravotnická záchranná služba Středočeského kraje*
- *Klinika anesteziologie, resuscitace a intenzivní medicíny, UK v Praze, LFHK, FN Hradec Králové*

# DEFINICE

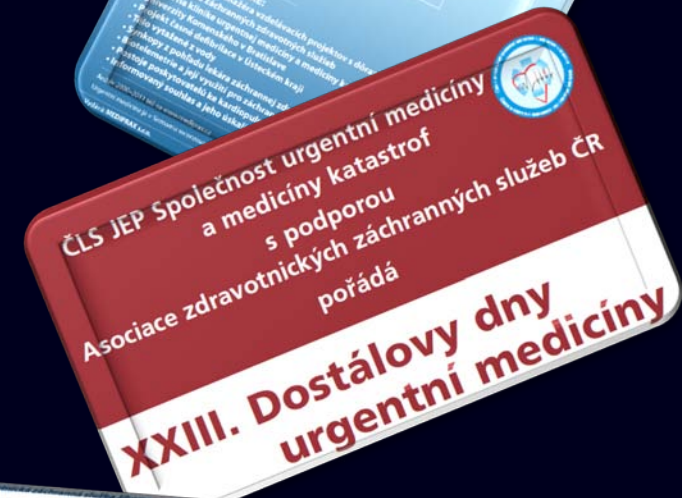
- **UM je lékařským oborem, který se zabývá poskytováním, organizováním a vědeckým zkoumáním neodkladné péče u stavů, které bezprostředně ohrožují život postiženého, mohou vést v důsledku prohlubování chorobných změn k náhlé smrti, způsobí bez rychlého a kvalifikovaného poskytnutí odborné první pomoci trvalé chorobné změny nebo působí náhlé utrpení a náhlou bolest či změny chování a jednání postiženého, jež akutně ohrožují jeho samotného nebo jeho okolí**
- je multidisciplinárním oborem specializovaným na neodkladnou resuscitaci a lékařskou první pomoc, který se věnuje závažným stavům (viz výše) téměř všech klinických oborů,
- zabývá se diagnostikou a léčbou akutních stavů na místě jejich vzniku, před a během transportu a na pracovištích urgentního příjmu
- zabývá se odborným transportem a optimálním směřováním ošetřených pacientů, zajišťuje intenzivní a resuscitační péči u pacientů transportovaných mezi zdravotnickými zařízeními.
- základní charakteristikou oboru je komplexnost přednemocniční neodkladné péče, která zahrnuje pacienty všech věkových skupin a spektrum všech náhlých a život ohrožujících stavů.
- v oblasti medicíny katastrof vychází z praktických zkušeností různých typů hromadných postižení, provádí analýzy rizik sloužící jejich prevenci, navrhuje optimální léčebné, třídící a odsunové postupy pro likvidaci jejich zdravotnických následků

# ***DEFINICE***

- **UM je medicínský obor, který se zabývá prvotním řešením akutních stavů jakékoliv závažnosti, včetně odlišení chronických a akutních stavů a závažných a nezávažných onemocnění, a je praktikován kdekoliv je to potřebné**

# CHARAKTERISTIKA UM V ČESKÉ REPUBLICE

- velký důraz na přednemocniční neodkladnou péči
- urgentní příjmy pouze při fakultních a krajských nemocnicích
- lékařský systém PNP péče
- urgentní medicína a medicína katastrof – základní obor  
(doposud 470 atestovaných)
- záchranář a záchranář specialista (superzáchranář)
- recenzovaný časopis Urgentní medicína
- Dostálovy dny (Ostrava), Brněnské dny UM



# CHARAKTERISTIKA UM V ČESKÉ REPUBLICE

Česká lékařská společnost Jana Evangelisty Purkyně

SPOLEČNOST URGENTNÍ MEDICÍNY a MEDICÍNY KATASTROF



aktualizace 14. 08. 2014

**Novinky na webu:**

[Společné prohlášení odborných společností k situaci v LZS \(příloha\)](#)

[Zápis z 13. schůze výboru](#)

**Nové doporučené postupy k veřejné odborné diskuzi**

[Používání NACA skóre v PNP](#)

[Poskytování informací o obvyklém postupu](#)

[CMP v PNP - aktualizace](#)

Připomínky zašlete na adresu [info\(zavináč\)urgmed.cz](mailto:info(zavináč)urgmed.cz) a v kopii na adresu [ondrej.franek\(zavináč\)zshmp.cz](mailto:ondrej.franek(zavináč)zshmp.cz)

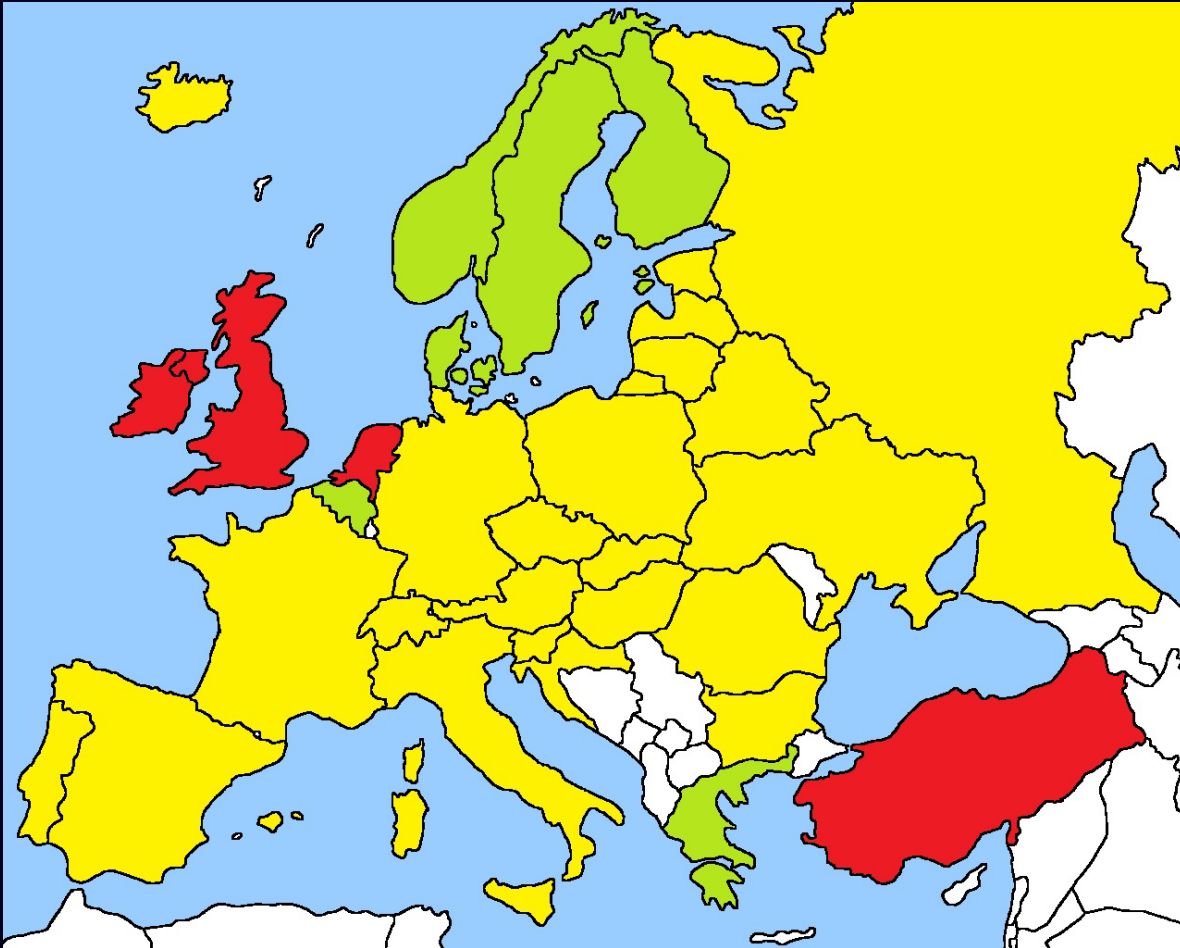
[A European curriculum in Geriatric Emergency Medicine](#)

# ***KONTROVERZE A VELKÁ TÉMATA***

- **paramedický nebo lékařský systém?**
- **specialisté nebo široké spektrum odborností?**
- **výrazné odlišnosti od nemocniční medicíny**
- **spiklenectví uniformy, pathos versus logos aneb hrdinská medicína**
- **ve vleku výzvy a obvyklých klišé**
- **žíla je svatý grál PNP**
- **vzdělávání**
- **věda a výzkum**

# PARAMEDICKÝ NEBO LÉKAŘSKÝ SYSTÉM?

■ paramedický nebo lékařský systém?



- lékařský
- paramedický
- smíšený

# PARAMEDICKÝ NEBO LÉKAŘSKÝ SYSTÉM?

■ srovnávání nemá velký význam

**BMJ Open Outcome following physician supervised prehospital resuscitation: a retrospective study**

Søren Mikkelsen,<sup>1,2</sup> Andreas J Krüger,<sup>3</sup> Stine T Zwisler,<sup>4</sup> Anne C Brøchner<sup>2,4</sup>

**Paramedic versus emergency physician emergency medical service: role of the anaesthesiologist and the European versus the Anglo-American concept**

Arnd Timmermann<sup>a</sup>, Sebastian G. Russo<sup>a</sup> and Markus W. Hollmann<sup>a,b</sup>

ORIGINAL RESEARCH

Open Access

Pre-hospital severe traumatic brain injury – comparison of outcome in paramedic versus physician staffed emergency medical services



Toni Pakkanen<sup>1,2\*</sup>, Ilkka Virkkunen<sup>1</sup>, Antti Kämäräinen<sup>3</sup>, Heini Huhtala<sup>4</sup>, Tom Silfvast<sup>5</sup>, Janne Virta<sup>3</sup>, Tarja Randell<sup>5</sup> and Arvi Yli-Hankala<sup>2,6</sup>



# ***SPECIALISTÉ NEBO ŠIROKÉ SPEKTRUM ODBORNOSTÍ?***

- jednoznačné směřování ke specializaci

# ***VÝRAZNÉ ODLIŠNOSTI OD NEMOCNIČNÍ MEDICÍNY***

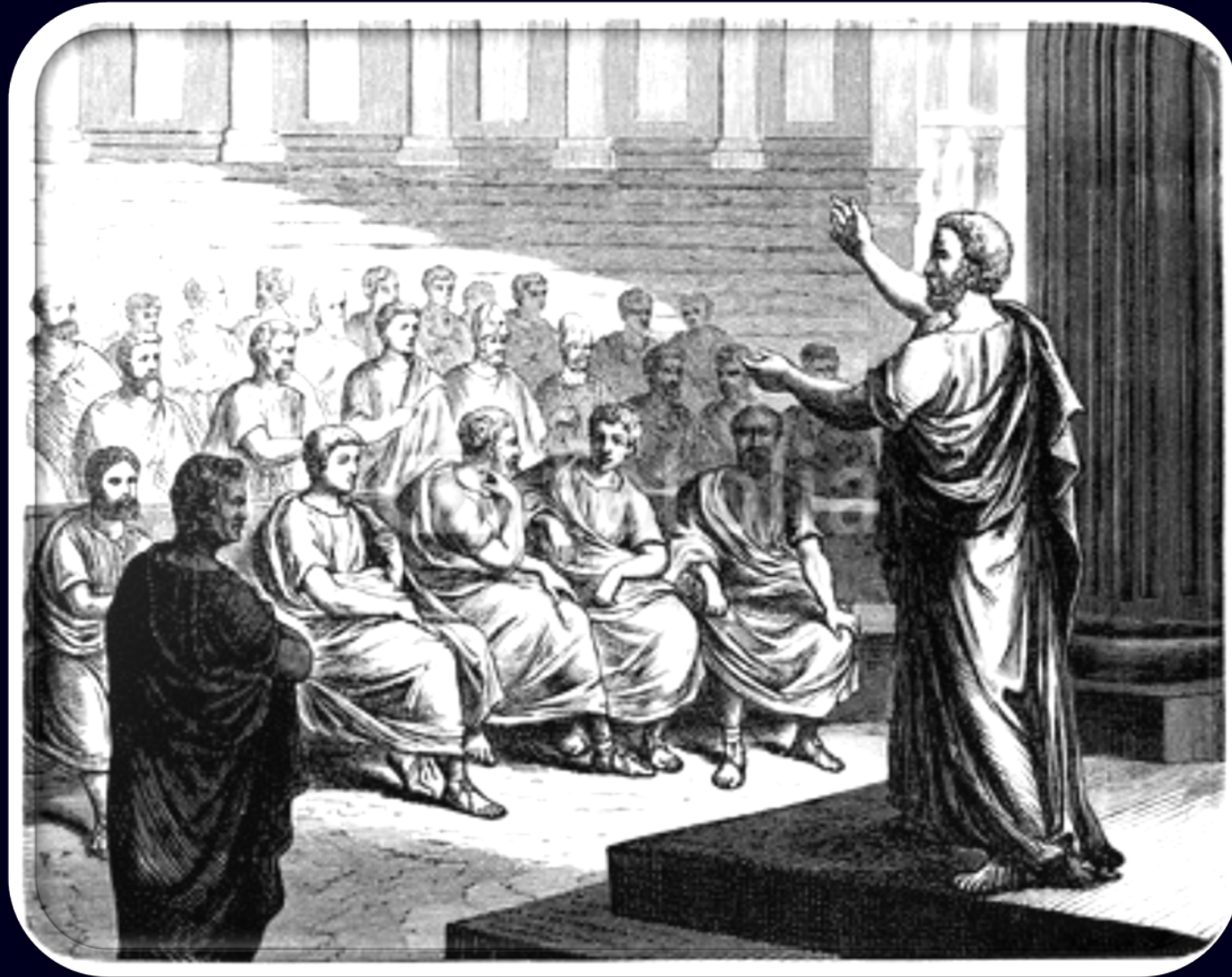
- není možnost volby lékaře
- není možné přivolání pomoci
- zajímá nás co je teď
- omezené množství diagnostických a léčebných prostředků
- nalezení přesné diagnózy obvykle není možné
- symptomatologická a syndromologická diagnostika
- posouzení závažnosti stavu a odstranitelné příčiny
  - je nutná bezprostřední terapie?
  - směřování transportu?

# ***SPIKLENCI UNIFORMY, PATHOS VERSUS LOGOS, HRDINSKÁ MEDICÍNA***

■ ethos

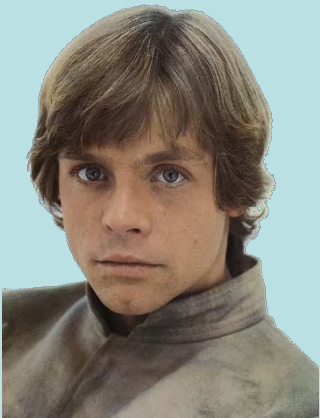
■ pathos

■ logos



# ***SPIKLENCI UNIFORMY, PATHOS VERSUS LOGOS, HRDINSKÁ MEDICÍNA***

**pathos<logos**



■ hovoří se o výjezdech

■ lékaři učí NLZP

■ na výjezdy se těší

■ NLZP pořád chtějí cvičit

■ respektují se a upgradují standardní postupy

■ správný kolorit je nadávat na výjezdy

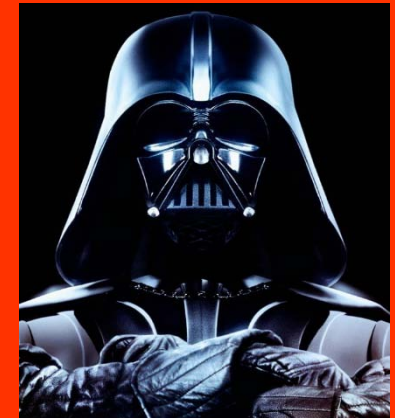
■ lékaři neučí NLZP

■ všichni pořád chtějí cvičit ... ale nikdo nepřijde

■ vše je hrdinství, syndrom 20 let

■ střet kompetencí

**pathos>logos**



# VE VLEKU VÝZVY A OBVYKLÝCH KLIŠÉ

Číslo výzvy <b>266726001</b>	Příjmení [redacted]	Jméno [redacted]	Číslo pojištění [redacted]	Pojišťovna <b>111</b>	IČP <b>22107301</b>		
Lékař <b>Škulec Roman, MUDr. - 2130</b>	NLZP	Řidič <b>Šobr Martin - 2348</b>	Bydliště <b>Příbram, Rybova 30</b>				
Datum a čas výzvy <b>17.11.2016 21:15</b>	Výjezd <b>21:16</b>	Příjezd <b>22:06</b>	Odjezd <b>22:06</b>	Předání <b>22:30</b>	Ukončení <b>22:37</b>	SPZ <b>3SN5469</b>	Km <b>35</b>
Indikace <b>KOLAPS</b>		Místo zásahu <b>Rybova 30, Rožmitál pod Třemšínem, Rožmitál pod Třemšínem, Příbram</b>					

- dušnost u kardiaka ..... není vždy plicní edém
- bezvědomí s křeči ..... není vždy epileptický záchvat
- bezvědomí u diabetika ..... není vždy hypoglykemické koma
- delirium a bezvědomí na technoparty ..... není vždy intoxikace
- bolesti na hrudi popáté za rok ..... nejsou vždy vertebrogenní

**Vždy systematický přístup, vždy nosit základní pomůcky, ABCDE**






# ***CO BY MU ASI TAK MOHLO BÝT...***

- **prevence a vyhledávání syndromu vyhoření**

# ŽÍLA JE SVATÝ GRÁL PNP

■ v ABCDE algoritmu je periferní žilní katetr až v „C“

■ hypoglykemické koma

	VYŠETŘENÍ	INTERVENCE	CÍL
<b>A</b> 	<ul style="list-style-type: none"><li>• zvukové fenomény</li><li>• poloha hlavy</li><li>• cizí tělesa</li><li>• tekutina, sekret</li><li>• otok</li></ul>	<ul style="list-style-type: none"><li>• zprůchodnění</li><li>• odsátí</li><li>• zajištění</li><li>• O<sub>2</sub></li></ul>	Průchodné dýchací cesty
<b>B</b> 	<ul style="list-style-type: none"><li>• pohled - poslech</li><li>• pohmat - poklep</li><li>• dechová frekvence a úsilí</li><li>• symetrie hrudníku</li><li>• podkožní emfyzém</li><li>• pozice trachey</li><li>• náplň krčních žil</li><li>• cyanóza</li></ul> <p>SpO<sub>2</sub> - ETCO<sub>2</sub> - USG - RTG - CT</p>	<ul style="list-style-type: none"><li>• O<sub>2</sub> podle SpO<sub>2</sub></li><li>• terapie pneumotoraxu</li><li>• inhalační terapie</li><li>• ventilace</li></ul>	Dostatečná oxygenace a ventilace
<b>C</b> 	<ul style="list-style-type: none"><li>• tepová frekvence</li><li>• krevní tlak</li><li>• kapilární návrat</li><li>• krvácení</li><li>• barva kůže</li><li>• diuréza</li><li>• odběry krve</li></ul> <p>EKG - USG - CT - RTG</p>	<ul style="list-style-type: none"><li>• i.v. / i.o. vstup</li><li>• kontrola krvácení</li><li>• tekutiny</li><li>• léky</li><li>• transfuzní přípravky</li></ul>	Stabilizace krevního oběhu
<b>D</b> 	<ul style="list-style-type: none"><li>• AVPU / GCS</li><li>• reaktivita a symetrie zornic</li><li>• základní neurologické vyšetření</li><li>• hladina glykémie</li><li>• toxikologické vyšetření</li></ul>	<ul style="list-style-type: none"><li>• glukóza</li><li>• antidota</li></ul>	Zhodnocení neurologického stavu
<b>E</b> 	<ul style="list-style-type: none"><li>• vyšetření od hlavy k patě</li><li>• teplota</li><li>• poranění</li><li>• otoky</li><li>• jizvy</li><li>• známky užívání drog</li><li>• kožní změny</li><li>• známky infekce</li><li>• odběr anamnézy</li></ul>	<ul style="list-style-type: none"><li>• terapie zjištěné příčiny</li><li>• termomanagement</li><li>• ošetření traumat</li><li>• zavedení NGS, PMK</li></ul>	Odhalení dalších příznaků a termomanagement

# VZDĚLÁVÁNÍ

- lékaři – UM je základní obor
- záchranáři a superzáchranáři
- řidiči
  
- převažuje deskriptivní model
- přechod k simulační medicíně s kontinuální kontrolou kvality práce a s pravidelným přezkušováním



# ***KOLIK TOHO MÁME UMĚT?***

S  
A  
E  
M



Academic Emergency Medicine

Official Journal of the Society for Academic Emergency Medicine

## EDUCATIONAL ADVANCE

---

# The 2013 Model of the Clinical Practice of Emergency Medicine

Francis L. Counselman, MD, Chair, Marc A. Borenstein, MD, Carey D. Chisholm, MD, Michael L. Epter, DO, Sorabh Khandelwal, MD, Chadd K. Kraus, DO, MPH, Samuel D. Luber, MD, MPH, Catherine A. Marco, MD, Susan B. Promes, MD, and Gillian Schmitz, MD, for the EM Model Review Task Force, and Julia N. Keehbauch for the American Board of Emergency Medicine

# KOLIK TOHO MÁME UMĚT?

## Medical Knowledge, Patient Care, and Procedural Skills

### 1.0 SIGNS, SYMPTOMS, AND PRESENTATIONS

	Critical	Emergent	Lower Acuity
<b>1.1 Abnormal Vital Sign Physiology</b>			
1.1.1 Hypothermia	X	X	X
1.1.2 Fever	X	X	X
1.1.3 Bradycardia	X	X	X
1.1.4 Tachycardia	X	X	
1.1.5 Apnea	X		
1.1.6 Tachypnea	X	X	
1.1.7 Hypoxia	X	X	
1.1.8 Hypotension	X	X	
1.1.9 Hypertension	X	X	X
<b>1.2 Pain</b>			
1.2.1 Pain (unspecified)	X	X	X
1.2.2 Headache (See 12.3)	X	X	X
1.2.3 Eye pain		X	X
1.2.4 Chest pain	X	X	X
1.2.5 Abdominal pain	X	X	X
1.2.6 Pelvic pain	X	X	X
1.2.7 Back pain	X	X	X
<b>1.3 General</b>			
1.3.1 Altered mental status	X	X	X
1.3.2 Anuria		X	
1.3.3 Anxiety			X
1.3.4 Ascites		X	X
1.3.5 Ataxia		X	X
1.3.6 Auditory disturbances			X
1.3.7 Bleeding	X	X	X
1.3.8 Congestion/rhinorrhea			X
1.3.9 Constipation			X
1.3.10 Cough		X	X
1.3.11 Crying/fussiness		X	X
1.3.12 Cyanosis	X		
1.3.13 Dehydration	X	X	
1.3.14 Diarrhea		X	X
1.3.15 Dysmenorrhea		X	X
1.3.16 Dysphagia		X	X
1.3.17 Dysuria		X	X
1.3.18 Edema		X	X
1.3.19 Failure to thrive		X	X
1.3.20 Fatigue/malaise		X	X
1.3.21 Feeding problems			X
1.3.22 Hematemesis	X	X	
1.3.23 Hematuria	X		X
1.3.24 Hemoptysis	X	X	
1.3.25 Hiccup			X
1.3.26 Jaundice		X	
1.3.27 Joint swelling		X	X
1.3.28 Lethargy	X	X	X
1.3.29 Lightheadedness/dizziness		X	X
1.3.30 Limp		X	X
1.3.31 Lymphadenopathy			X
1.3.32 Mechanical and indwelling devices, complications	X	X	X
1.3.33 Nausea/vomiting		X	X
1.3.34 Occupational exposure		X	X
1.3.35 Palpitations	X	X	X
1.3.36 Paralysis	X	X	
1.3.37 Paresthesia/dysesthesia		X	X
1.3.38 Poisoning	X	X	X
1.3.39 Pruritus		X	X
1.3.40 Rash	X	X	X

	Critical	Emergent	Lower Acuity
1.3.41 Rectal bleeding	X	X	X
1.3.42 Shock	X		
1.3.43 Shortness of breath	X	X	
1.3.44 Sore throat		X	X
1.3.45 Stridor	X	X	
1.3.46 Syncope	X	X	X
1.3.47 Tinnitus		X	
1.3.48 Tremor		X	X
1.3.49 Urinary incontinence		X	X
1.3.50 Urinary retention		X	
1.3.51 Vaginal bleeding	X	X	X
1.3.52 Vaginal discharge		X	X
1.3.53 Vertigo		X	X
1.3.54 Visual disturbances	X	X	X
1.3.55 Weakness		X	X
1.3.56 Wheezing	X	X	

### 2.0 ABDOMINAL AND GASTROINTESTINAL DISORDERS

	Critical	Emergent	Lower Acuity
<b>2.1 Abdominal Wall</b>			
2.1.1 Hernias		X	X
<b>2.2 Esophagus</b>			
2.2.1 Infectious disorders			
2.2.1.1 Candida (See 4.4.2.1, 7.5.7)		X	X
2.2.1.2 Viral esophagitis		X	X
2.2.2 Inflammatory disorders			
2.2.2.1 Esophagitis		X	X
2.2.2.2 Gastroesophageal reflux (GERD)			X
2.2.2.3 Toxic effects of caustic (See 17.1.14)			
2.2.2.3.1 Acid	X	X	
2.2.2.3.2 Alkali	X	X	
2.2.3 Motor abnormalities			
2.2.3.1 Spasms			X
2.2.4 Structural disorders			
2.2.4.1 Boerhaave's syndrome	X	X	
2.2.4.2 Diverticula		X	X
2.2.4.3 Foreign body		X	
2.2.4.4 Hernias		X	X
2.2.4.5 Mallory-Weiss syndrome	X	X	
2.2.4.6 Stricture and stenosis		X	X
2.2.4.7 Tracheoesophageal fistula	X	X	
2.2.4.8 Varices	X	X	
2.2.5 Tumors		X	X
<b>2.3 Liver</b>			
2.3.1 Cirrhosis		X	X
2.3.1.1 Alcoholic		X	X
2.3.1.2 Biliary obstructive		X	
2.3.1.3 Drug-induced		X	X
2.3.2 Hepatorenal failure	X	X	
2.3.3 Infectious disorders		X	X
2.3.3.1 Abscess		X	
2.3.3.2 Hepatitis			
2.3.3.2.1 Acute		X	X
2.3.3.2.2 Chronic			X
2.3.4 Tumors		X	X
<b>2.4 Gallbladder and Biliary Tract</b>			
2.4.1 Cholangitis	X	X	
2.4.2 Cholecystitis		X	
2.4.3 Cholelithiasis/choledocholithiasis		X	X
2.4.4 Tumors			X
<b>2.5 Pancreas</b>			
2.5.1 Pancreatitis	X	X	
2.5.2 Tumors		X	X

	Critical	Emergent	Lower Acuity
<b>2.6 Peritoneum</b>			
2.6.1 Spontaneous bacterial peritonitis	X	X	
<b>2.7 Stomach</b>			
2.7.1 Infectious disorders			X
2.7.2 Inflammatory disorders			
2.7.2.1 Gastritis		X	X
2.7.3 Peptic ulcer disease		X	X
2.7.3.1 Hemorrhage	X	X	
2.7.3.2 Perforation	X	X	
2.7.4 Structural disorders			
2.7.4.1 Congenital hypertrophic pyloric stenosis		X	X
2.7.4.2 Foreign body		X	X
2.7.5 Tumors		X	X
<b>2.8 Small Bowel</b>			
2.8.1 Infectious disorders		X	X
2.8.2 Inflammatory disorders			
2.8.2.1 Regional enteritis/Crohn's disease		X	X
2.8.3 Motor abnormalities			
2.8.3.1 Obstruction		X	
2.8.3.2 Paralytic ileus		X	
2.8.4 Structural disorders			
2.8.4.1 Aortoenteric fistula	X		
2.8.4.2 Congenital anomalies		X	X
2.8.4.3 Intestinal malabsorption		X	X
2.8.4.4 Meckel's diverticulum		X	X
2.8.5 Tumors		X	X
2.8.6 Vascular insufficiency	X	X	
<b>2.9 Large Bowel</b>			
2.9.1 Infectious disorders			
2.9.1.1 Antibiotic-associated		X	
2.9.1.2 Bacterial		X	X
2.9.1.3 Parasitic		X	X
2.9.1.4 Viral		X	X
2.9.2 Inflammatory disorders			
2.9.2.1 Appendicitis		X	
2.9.2.2 Necrotizing enterocolitis (NEC)	X	X	
2.9.2.3 Radiation colitis		X	
2.9.2.4 Ulcerative colitis		X	X
2.9.3 Motor abnormalities			
2.9.3.1 Hirschsprung's disease		X	X
2.9.3.2 Irritable bowel		X	X
2.9.3.3 Obstruction		X	
2.9.4 Structural disorders			
2.9.4.1 Congenital anomalies		X	X
2.9.4.2 Diverticula		X	X
2.9.4.3 Intussusception	X	X	
2.9.4.4 Volvulus	X	X	
2.9.5 Tumors		X	X
<b>2.10 Rectum and Anus</b>			
2.10.1 Infectious disorders			
2.10.1.1 Perianal/anal abscess		X	X
2.10.1.2 Perirectal abscess		X	
2.10.1.3 Pilonidal cyst and abscess		X	X
2.10.2 Inflammatory disorders			
2.10.2.1 Proctitis			X
2.10.3 Structural disorders			
2.10.3.1 Anal fissure		X	X
2.10.3.2 Anal fistula		X	X
2.10.3.3 Congenital anomalies		X	X
2.10.3.4 Foreign body		X	X
2.10.3.5 Hemorrhoids		X	X
2.10.3.6 Rectal prolapse		X	
2.10.4 Tumors		X	X

# KOLIK TOHO MÁME UMĚT?

		Critical	Emergent	Lower Acuity
2.11	<b>Spleen</b>			
2.11.1	Asplenism		X	X
2.11.2	Splenomegaly			X
2.11.3	Vascular insufficiency/infarction	X	X	X
<b>3.0 CARDIOVASCULAR DISORDERS</b>				
		Critical	Emergent	Lower Acuity
3.1	<b>Cardiopulmonary Arrest</b>	X		
3.1.1	Sudden unexpected infant death (SUID)	X		
3.1.2	Pulseless electrical activity	X		
3.2	<b>Congenital Abnormalities of the Cardiovascular System</b>	X	X	X
3.3	<b>Disorders of Circulation</b>			
3.3.1	<b>Arterial</b>			
3.3.1.1	Aneurysm	X	X	X
3.3.1.2	Aortic dissection	X		
3.3.1.3	Thromboembolism	X		
3.3.2	<b>Venous</b>			
3.3.2.1	Thromboembolism (See 16.6.2)	X	X	
3.4	<b>Disturbances of Cardiac Rhythm</b>			
3.4.1	<b>Cardiac dysrhythmias</b>	X	X	X
3.4.1.1	Ventricular	X	X	
3.4.1.2	Supraventricular	X	X	X
3.4.2	Conduction disorders	X	X	X
3.5	<b>Diseases of the Myocardium, Acquired</b>			
3.5.1	<b>Cardiac failure</b>	X	X	
3.5.1.1	Cor pulmonale	X	X	
3.5.1.2	High output	X	X	
3.5.1.3	Low output	X	X	
3.5.2	<b>Cardiomyopathy</b>	X	X	X
3.5.2.1	Hypertrophic	X	X	X
3.5.3	Congestive heart failure	X	X	
3.5.4	Coronary syndromes	X	X	
3.5.5	Ischemic heart disease	X	X	
3.5.6	Myocardial infarction	X	X	
3.5.7	Myocarditis	X	X	X
3.5.8	Ventricular aneurysm	X	X	X
3.6	<b>Diseases of the Pericardium</b>			
3.6.1	Pericardial tamponade (See 18.1.2.6)	X	X	
3.6.2	Pericarditis		X	X
3.7	<b>Endocarditis</b>	X	X	
3.8	<b>Hypertension</b>	X	X	X
3.9	<b>Tumors</b>	X	X	
3.10	<b>Valvular Disorders</b>	X	X	X
<b>4.0 CUTANEOUS DISORDERS</b>				
		Critical	Emergent	Lower Acuity
4.1	<b>Cancers of the Skin</b>			
4.1.1	Basal cell			X
4.1.2	Kaposi's sarcoma			X
4.1.3	Melanoma			X
4.1.4	Squamous cell			X
4.2	<b>Ulcerative Lesions</b>			
4.2.1	Decubitus		X	X
4.2.2	Venous stasis			X

		Critical	Emergent	Lower Acuity
4.3	<b>Dermatitis</b>			
4.3.1	Atopic			X
4.3.2	Contact			X
4.3.3	Eczema			X
4.3.4	Psoriasis			X
4.3.5	Seborrhea			X
4.4	<b>Infections</b>			
4.4.1	<b>Bacterial</b>			
4.4.1.1	Abscess		X	X
4.4.1.2	Cellulitis		X	X
4.4.1.3	Erysipelas		X	
4.4.1.4	Impetigo			X
4.4.1.5	Necrotizing infection	X	X	
4.4.2	<b>Fungal</b>			
4.4.2.1	Candida (See 2.2.1.1, 7.5.7)			X
4.4.2.2	Dermatophytes			X
4.4.3	<b>Ectoparasites</b>			X
4.4.4	<b>Viral</b>			
4.4.4.1	Aphthous ulcers			X
4.4.4.2	Childhood exanthems (See 10.6.8, 10.6.9)			X
4.4.4.3	Herpes simplex (See 10.6.4, 13.1.3.1)			X
4.4.4.4	Herpes zoster (See 10.6.5)		X	X
4.4.4.5	Human papillomavirus (HPV) (See 13.1.3.2)			X
4.4.4.6	Molluscum contagiosum			X
4.5	<b>Maculopapular Lesions</b>			
4.5.1	Erythema multiforme		X	X
4.5.2	Erythema nodosum			X
4.5.3	Henoch-Schönlein purpura (HSP)		X	
4.5.4	Pityriasis rosea			X
4.5.5	Purpura		X	X
4.5.6	Urticaria		X	X
4.6	<b>Papular/Nodular Lesions</b>			
4.6.1	Hemangioma/lymphangioma			X
4.6.2	Lipoma			X
4.6.3	Sebaceous cyst			X
4.7	<b>Vesicular/Bullous Lesions</b>			
4.7.1	Pemphigus		X	
4.7.2	Staphylococcal scalded skin syndrome	X	X	
4.7.3	Stevens-Johnson syndrome	X	X	
4.7.4	Toxic epidermal necrolysis	X	X	
4.7.5	Bullous pemphigoid		X	X
<b>5.0 ENDOCRINE, METABOLIC, AND NUTRITIONAL DISORDERS</b>				
		Critical	Emergent	Lower Acuity
5.1	<b>Acid-Base Disturbances</b>			
5.1.1	<b>Metabolic or respiratory</b>			
5.1.1.1	Acidosis	X	X	
5.1.1.2	Alkalosis	X	X	
5.1.2	Mixed acid-base balance disorder	X	X	
5.2	<b>Adrenal Disease</b>			
5.2.1	Corticoadrenal insufficiency	X	X	
5.2.2	Cushing's syndrome		X	X
5.3	<b>Fluid and Electrolyte Disturbances</b>			
5.3.1	Calcium metabolism	X	X	X
5.3.2	Fluid overload/volume depletion	X	X	
5.3.3	Potassium metabolism	X	X	X
5.3.4	Sodium metabolism	X	X	X
5.3.5	Magnesium metabolism		X	X
5.3.6	Phosphorus metabolism		X	X

		Critical	Emergent	Lower Acuity
5.4	<b>Glucose Metabolism</b>			
5.4.1	<b>Diabetes mellitus</b>			
5.4.1.1	Type I	X	X	X
5.4.1.2	Type II		X	X
5.4.1.3	<b>Complications in glucose metabolism</b>			
5.4.1.3.1	Diabetic ketoacidosis (DKA)	X	X	
5.4.1.3.2	Hyperglycemia		X	X
5.4.1.3.3	Hyperosmolar hyperglycemic state	X	X	
5.4.1.3.4	Hypoglycemia	X	X	
5.5	<b>Nutritional Disorders</b>			
5.5.1	Vitamin deficiencies			X
5.5.2	Wernicke-Korsakoff syndrome		X	
5.5.3	Malabsorption		X	X
5.6	<b>Parathyroid Disease</b>		X	X
5.7	<b>Pituitary Disorders</b>		X	X
5.7.1	Panhypopituitarism		X	
5.8	<b>Thyroid Disorders</b>			
5.8.1	Hyperthyroidism	X	X	X
5.8.2	Hypothyroidism	X	X	X
5.8.3	Thyroiditis		X	X
5.9	<b>Tumors of Endocrine Glands</b>			
5.9.1	<b>Adrenal</b>			
5.9.1.1	Pheochromocytoma	X	X	X
5.9.2	<b>Pituitary</b>			
5.9.3	<b>Thyroid</b>			
<b>6.0 ENVIRONMENTAL DISORDERS</b>				
		Critical	Emergent	Lower Acuity
6.1	<b>Bites and Envenomation (See 18.1.3.2)</b>			
6.1.1	<b>Arthropods</b>		X	X
6.1.1.1	Insects			X
6.1.1.2	Arachnida		X	X
6.1.2	<b>Mammals</b>		X	X
6.1.3	<b>Marine organisms (See 17.1.28)</b>	X	X	X
6.1.4	<b>Reptiles</b>	X	X	X
6.2	<b>Dysbarism</b>			
6.2.1	Air embolism	X	X	
6.2.2	Barotrauma	X	X	X
6.2.3	Decompression syndrome	X	X	
6.3	<b>Electrical Injury (See 18.1.3.3.1)</b>	X	X	X
6.3.1	Lightning	X	X	
6.4	<b>High-altitude illness</b>			
6.4.1	Acute mountain sickness		X	X
6.4.2	Barotrauma of ascent		X	X
6.4.3	High-altitude cerebral edema	X	X	
6.4.4	High-altitude pulmonary edema	X	X	
6.5	<b>Submersion Incidents</b>			
6.5.1	Cold water immersion	X	X	
6.5.2	Near drowning	X	X	
6.6	<b>Temperature-related illness</b>			
6.6.1	<b>Heat</b>			
6.6.1.1	Heat exhaustion		X	X
6.6.1.2	Heat stroke	X		
6.6.2	<b>Cold</b>			
6.6.2.1	Frostbite		X	X
6.6.2.2	Hypothermia	X	X	
6.7	<b>Radiation Emergencies</b>	X	X	X

# KOLIK TOHO MÁME UMĚT?

7.0 HEAD, EAR, EYE, NOSE, THROAT DISORDERS				
		Critical	Emergent	Lower Acuity
7.1	<b>Ear</b>			
7.1.1	Foreign body		X	X
7.1.1.1	Impacted cerumen			X
7.1.2	Labyrinthitis			X
7.1.3	Mastoiditis		X	
7.1.4	Ménière's disease			X
7.1.5	Otitis externa			X
7.1.5.1	Infective		X	
7.1.5.1.1	Malignant		X	
7.1.6	Otitis media		X	X
7.1.7	Perforated tympanic membrane (See 18.1.11.2)		X	
7.1.8	Perichondritis		X	X
7.2	<b>Eye</b>			
7.2.1	External eye			
7.2.1.1	Blepharitis			X
7.2.1.2	Burn confined to eye (See 18.1.10.2)		X	
7.2.1.3	Conjunctivitis			X
7.2.1.4	Corneal abrasions (See 18.1.10.1)		X	X
7.2.1.5	Dacryocystitis		X	X
7.2.1.6	Disorders of lacrimal system		X	X
7.2.1.7	Foreign body		X	X
7.2.1.8	Inflammation of the eyelids			X
7.2.1.8.1	Chalazion			X
7.2.1.8.2	Hordeolum			X
7.2.1.9	Keratitis		X	X
7.2.2	Anterior pole			
7.2.2.1	Glaucoma		X	X
7.2.2.2	Hyphema (See 18.1.10.5)		X	X
7.2.2.3	Iritis (See 18.1.10.9)		X	X
7.2.2.4	Hypopyon		X	
7.2.3	Posterior pole			
7.2.3.1	Choroiditis/chorioretinitis		X	
7.2.3.2	Optic neuritis		X	
7.2.3.3	Papilledema	X	X	
7.2.3.4	Retinal detachments and defects (See 18.1.10.8)		X	
7.2.3.5	Retinal vascular occlusion		X	
7.2.4	Orbit			
7.2.4.1	Cellulitis			
7.2.4.1.1	Preseptal		X	
7.2.4.1.2	Postseptal		X	
7.2.4.2	Purulent endophthalmitis		X	
7.3	<b>Cerebral Venous Sinus Thrombosis</b>	X	X	
7.3.1	Cavernous sinus thrombosis	X	X	
7.4	<b>Nose</b>			
7.4.1	Epistaxis	X	X	X
7.4.2	Foreign body		X	X
7.4.3	Rhinitis		X	X
7.4.4	Sinusitis			X
7.5	<b>Oropharynx/Throat</b>			
7.5.1	Dentalgia			X
7.5.2	Diseases of the oral soft tissue			
7.5.2.1	Ludwig's angina	X	X	
7.5.2.2	Stomatitis			X
7.5.3	Diseases of the salivary glands			
7.5.3.1	Sialolithiasis		X	X
7.5.3.2	Suppurative parotitis		X	
7.5.4	Foreign body	X	X	
7.5.5	Gingival and periodontal disorders			
7.5.5.1	Gingivostomatitis			X

		Critical	Emergent	Lower Acuity
7.5.6	Larynx/trachea			
7.5.6.1	Epiglottitis (See 16.1.1.2)	X	X	
7.5.6.2	Laryngitis			X
7.5.6.3	Tracheitis			X
7.5.7	Oral candidiasis (See 2.2.1.1, 4.4.2.1)			X
7.5.8	Dental abscess		X	X
7.5.9	Peritonsillar abscess		X	
7.5.10	Pharyngitis/tonsillitis			X
7.5.11	Retropharyngeal abscess	X	X	
7.5.12	Temporomandibular joint disorders			X
7.6	<b>Tumors</b>		X	X
8.0	<b>HEMATOLOGIC DISORDERS</b>			
8.1	<b>Blood Transfusion</b>			
8.1.1	Complications	X	X	
8.2	<b>Hemostatic Disorders</b>			
8.2.1	Coagulation defects	X	X	X
8.2.1.1	Acquired	X	X	X
8.2.1.2	Hemophilias	X	X	X
8.2.2	Disseminated intravascular coagulation	X		
8.2.3	Platelet disorders	X	X	X
8.2.3.1	Thrombocytopenia		X	X
8.3	<b>Lymphomas</b>		X	X
8.4	<b>Pancytopenia</b>	X	X	
8.5	<b>Red Blood Cell Disorders</b>			
8.5.1	Anemias			
8.5.1.1	Aplastic	X	X	
8.5.1.2	Hemoglobinopathies		X	X
8.5.1.2.1	Sickle cell disease		X	X
8.5.1.3	Hemolytic		X	
8.5.1.4	Hypochromic		X	
8.5.1.4.1	Iron deficiency		X	X
8.5.1.5	Megaloblastic		X	X
8.5.2	Polycythemia		X	X
8.5.3	Methemoglobinemia (See 17.1.29)	X	X	
8.6	<b>White Blood Cell Disorders</b>			
8.6.1	Leukemia		X	X
8.6.2	Multiple myeloma		X	X
8.6.3	Leukopenia		X	X
9.0	<b>IMMUNE SYSTEM DISORDERS</b>			
9.1	<b>Collagen Vascular Disease</b>			
9.1.1	Raynaud's disease			X
9.1.2	Reiter's syndrome		X	X
9.1.3	Rheumatoid arthritis (See 11.3.1.3)		X	X
9.1.4	Scleroderma		X	X
9.1.5	Systemic lupus erythematosus		X	X
9.1.6	Vasculitis		X	X
9.2	<b>Hypersensitivity</b>			
9.2.1	Allergic reaction		X	X
9.2.2	Anaphylaxis	X	X	
9.2.3	Angioedema	X	X	
9.2.4	Drug allergies	X	X	X
9.3	<b>Transplant-related Problems</b>	X	X	X
9.3.1	Immunosuppression		X	X
9.3.2	Rejection	X	X	
9.4	<b>Immune Complex Disorders</b>			
9.4.1	Kawasaki syndrome		X	X

		Critical	Emergent	Lower Acuity
9.4.2	Rheumatic fever		X	X
9.4.3	Sarcoidosis		X	X
9.4.4	Poststreptococcal glomerulonephritis (See 15.3.1)		X	
10.0	<b>SYSTEMIC INFECTIOUS DISORDERS</b>			
10.1	<b>Bacterial</b>			
10.1.1	Bacterial food poisoning		X	X
10.1.1.1	Botulism	X	X	
10.1.2	Chlamydia		X	X
10.1.3	Gonococcus		X	X
10.1.4	Meningococcus	X	X	
10.1.5	Mycobacterium			
10.1.5.1	Atypical mycobacteria			X
10.1.5.2	Tuberculosis		X	X
10.1.6	Other bacterial diseases	X	X	
10.1.6.1	Gas gangrene (See 11.6.3)	X	X	
10.1.7	Sepsis/bacteremia	X	X	
10.1.7.1	Shock	X	X	
10.1.7.2	Systemic inflammatory response syndrome (SIRS)	X	X	
10.1.7.3	Toxic shock syndrome	X	X	
10.1.8	Spirochetes			
10.1.8.1	Syphilis		X	X
10.1.9	Tetanus	X	X	
10.2	<b>Biologic Warfare Agents</b>	X	X	
10.3	<b>Fungal Infections</b>		X	X
10.4	<b>Protozoan/Parasites</b>			
10.4.1	Malaria		X	
10.4.2	Toxoplasmosis		X	X
10.5	<b>Tick-borne</b>			
10.5.1	Ehrlichiosis		X	
10.5.2	Lyme disease		X	
10.5.3	Rocky Mountain spotted fever		X	
10.6	<b>Viral</b>			
10.6.1	Infectious mononucleosis		X	X
10.6.2	Influenza/parainfluenza		X	X
10.6.3	Hantavirus	X	X	
10.6.4	Herpes simplex (See 4.4.4.3, 13.1.3.1)		X	X
10.6.5	Herpes zoster/varicella (See 4.4.4.4)		X	X
10.6.6	HIV/AIDS	X	X	X
10.6.7	Rabies	X		
10.6.8	Roseola (See 4.4.4.2)			X
10.6.9	Rubella (See 4.4.4.2)			X
10.7	<b>Emerging Infections, Pandemics, and Drug Resistance</b>	X	X	
11.0	<b>MUSCULOSKELETAL DISORDERS (NONTRAUMATIC)</b>			
11.1	<b>Bony Abnormalities</b>			
11.1.1	Aseptic/avascular necrosis		X	X
11.1.2	Osteomyelitis		X	
11.1.3	Tumors		X	X
11.2	<b>Disorders of the Spine</b>			
11.2.1	Disc disorders		X	X
11.2.2	Inflammatory spondylopathies		X	X
11.2.3	Low back pain			
11.2.3.1	Cauda equina syndrome (See 18.1.15.1)	X	X	
11.2.3.2	Sacroiliitis			X
11.2.3.3	Sprains/strains			X

# KOLIK TOHO MÁME UMĚT?

	Critical	Emergent	Lower Acuity
<b>11.3 Joint Abnormalities</b>			
11.3.1 Arthritis			
11.3.1.1 Septic		X	
11.3.1.2 Crystal arthropathies		X	X
11.3.1.3 Rheumatoid (See 9.1.3)			X
11.3.1.4 Juvenile			X
11.3.1.5 Osteoarthritis			X
11.3.2 Congenital dislocation of the hip		X	X
11.3.3 Slipped capital femoral epiphysis		X	
<b>11.4 Muscle Abnormalities</b>			
11.4.1 Myositis			X
11.4.2 Rhabdomyolysis	X	X	
<b>11.5 Overuse Syndromes</b>			
11.5.1 Bursitis			X
11.5.2 Muscle strains			X
11.5.3 Peripheral nerve syndrome			X
11.5.3.1 Carpal tunnel syndrome			X
11.5.4 Tendonitis			X
<b>11.6 Soft Tissue Infections</b>			
11.6.1 Fasciitis		X	
11.6.2 Felon		X	
11.6.3 Gangrene (See 10.1.6.1)	X	X	
11.6.4 Paronychia		X	X
11.6.5 Synovitis/tenosynovitis		X	X
<b>12.0 NERVOUS SYSTEM DISORDERS</b>			
	Critical	Emergent	Lower Acuity
<b>12.1 Cranial Nerve Disorders</b>			
12.1.1 Idiopathic facial nerve paralysis (Bell's palsy)		X	
12.1.2 Trigeminal neuralgia			X
<b>12.2 Demyelinating Disorders</b>	X	X	
12.2.1 Multiple sclerosis		X	X
<b>12.3 Headache (See 1.2.2)</b>	X	X	X
12.3.1 Tension			X
12.3.2 Vascular		X	X
12.3.3 Cluster		X	X
<b>12.4 Hydrocephalus</b>		X	X
12.4.1 Normal pressure		X	X
12.4.2 VP shunt		X	
<b>12.5 Infections/Inflammatory Disorders</b>			
12.5.1 Encephalitis	X	X	
12.5.2 Intracranial and intraspinal abscess	X	X	
12.5.3 Meningitis			
12.5.3.1 Bacterial	X	X	
12.5.3.2 Viral		X	X
12.5.4 Myelitis		X	
12.5.5 Neuritis			X
<b>12.6 Movement Disorders</b>		X	X
12.6.1 Dystonic reaction		X	X
12.6.2 Chorea/choreiform		X	X
12.6.3 Tardive dyskinesia			X
<b>12.7 Neuromuscular Disorders</b>			
12.7.1 Guillain-Barré syndrome	X	X	
12.7.2 Myasthenia gravis	X	X	X
12.7.3 Peripheral neuropathy		X	
<b>12.8 Other Conditions of the Brain</b>			
12.8.1 Dementia (See 14.5.3)			X

	Critical	Emergent	Lower Acuity
12.8.2 Parkinson's disease			X
12.8.3 Pseudotumor cerebri		X	X
<b>12.9 Seizure Disorders</b>	X	X	X
12.9.1 Febrile		X	X
12.9.2 Neonatal		X	
12.9.3 Status epilepticus	X		
12.9.3.1 Nonconvulsive	X		
<b>12.10 Spinal Cord Compression</b>	X	X	
<b>12.11 Stroke</b>			
12.11.1 Hemorrhagic			
12.11.1.1 Intracerebral	X	X	
12.11.1.2 Subarachnoid	X	X	
12.11.2 Ischemic			
12.11.2.1 Embolic	X	X	
12.11.2.2 Thrombotic	X	X	
<b>12.12 Transient Cerebral Ischemia</b>		X	X
<b>12.13 Tumors</b>		X	X
<b>13.0 OBSTETRICS AND GYNECOLOGY</b>			
	Critical	Emergent	Lower Acuity
<b>13.1 Female Genital Tract</b>			
13.1.1 Cervix			
13.1.1.1 Cervicitis and endocervicitis		X	X
13.1.1.2 Tumors			X
13.1.2 Infectious disorders			
13.1.2.1 Pelvic inflammatory disease		X	
13.1.2.1.1 Fitz-Hugh-Curtis syndrome		X	
13.1.2.1.2 Tuboovarian abscess		X	
13.1.2.2 Urethritis			X
13.1.3 Lesions			
13.1.3.1 Herpes simplex (See 4.4.4.3, 10.6.4)		X	
13.1.3.2 Human papillomavirus (HPV) (See 4.4.4.5)			X
13.1.4 Ovary			
13.1.4.1 Cyst			X
13.1.4.2 Torsion		X	
13.1.4.3 Tumors		X	X
13.1.5 Uterus			
13.1.5.1 Dysfunctional bleeding		X	X
13.1.5.2 Endometriosis			X
13.1.5.3 Prolapse			X
13.1.5.4 Tumors		X	X
13.1.5.4.1 Gestational trophoblastic disease		X	
13.1.5.4.2 Leiomyoma			X
13.1.6 Vagina and vulva			
13.1.6.1 Bartholin's cyst		X	X
13.1.6.2 Foreign body		X	X
13.1.6.3 Vaginitis/vulvovaginitis			X
<b>13.2 Normal Pregnancy</b>			X
<b>13.3 Complications of Pregnancy</b>			
13.3.1 Abortion		X	
13.3.2 Ectopic pregnancy	X	X	
13.3.3 Hemolysis, elevated liver enzymes, low platelets (HELLP) syndrome	X	X	
13.3.4 Hemorrhage, antepartum			
13.3.4.1 Abruptio placentae (See 18.2.1)	X	X	
13.3.4.2 Placenta previa	X	X	
13.3.5 Hyperemesis gravidarum		X	X
13.3.6 Gestational hypertension		X	X
13.3.6.1 Eclampsia	X	X	

	Critical	Emergent	Lower Acuity
13.3.6.2 Preeclampsia			X
13.3.7 Infections			X
13.3.8 Rh immunization			X
13.3.9 First trimester bleeding	X		X
13.3.10 Gestational diabetes			X
<b>13.4 High-risk Pregnancy</b>	X	X	
13.4.1 Assisted reproductive therapies	X	X	X
<b>13.5 Normal Labor and Delivery</b>		X	X
<b>13.6 Complications of Labor</b>			
13.6.1 Fetal distress	X		
13.6.2 Premature labor (See 18.2.3)		X	
13.6.3 Premature rupture of membranes		X	
13.6.4 Rupture of uterus (See 18.2.4)	X		
<b>13.7 Complications of Delivery</b>			
13.7.1 Malposition of fetus	X	X	
13.7.2 Nuchal cord	X		
13.7.3 Prolapse of cord	X		
<b>13.8 Postpartum Complications</b>			
13.8.1 Endometritis		X	
13.8.2 Hemorrhage	X	X	
13.8.3 Mastitis		X	X
13.8.4 Pituitary infarction	X	X	
<b>13.9 Contraception</b>		X	X
<b>14.0 PSYCHOBEHAVIORAL DISORDERS</b>			
	Critical	Emergent	Lower Acuity
<b>14.1 Addictive Behavior</b>			
14.1.1 Alcohol dependence			X
14.1.2 Drug dependence			X
14.1.3 Eating disorders		X	X
14.1.4 Substance abuse			X
14.1.5 Tobacco dependence			X
<b>14.2 Mood Disorders and Thought Disorders</b>			
14.2.1 Acute psychosis	X	X	
14.2.2 Bipolar disorder		X	X
14.2.3 Depression		X	X
14.2.3.1 Suicidal risk	X	X	
14.2.4 Grief reaction			X
14.2.5 Schizophrenia		X	X
<b>14.3 Factitious Disorders</b>			
14.3.1 Drug-diversion behavior			X
14.3.2 Munchausen syndrome/Munchausen by proxy	X	X	
<b>14.4 Neurotic Disorders</b>			
14.4.1 Anxiety/panic			X
14.4.2 Obsessive compulsive			X
14.4.3 Phobic			X
14.4.4 Posttraumatic stress			X
<b>14.5 Organic Psychoses</b>			
14.5.1 Chronic organic psychotic conditions			X
14.5.1.1 Alcoholic psychoses		X	X
14.5.1.2 Drug psychoses		X	X
14.5.2 Delirium		X	
14.5.3 Dementia (See 12.8.1)			X
14.5.4 Intoxication and/or withdrawal			
14.5.4.1 Alcohol (See 17.1.2)	X	X	X
14.5.4.2 Hallucinogens (See 17.1.17)		X	X
14.5.4.3 Opioids (See 17.1.1.3)	X	X	X
14.5.4.4 Sedatives/hypnotics/anxiolytics (See 17.1.35)	X	X	X

# KOLIK TOHO MÁME UMĚT?

		Critical	Emergent	Lower Acuity
	14.5.4.5 Sympathomimetics and cocaine (See 17.1.36, 17.1.15)	X	X	X
	14.5.4.6 Anticholinergic (See 17.1.4)	X	X	X
14.6	<b>Patterns of Violence/Abuse/Neglect</b>			
14.6.1	Interpersonal violence			
14.6.1.1	Child, intimate partner, elder		X	
14.6.2	Homicidal risk	X	X	
14.6.3	Sexual assault		X	
14.6.4	Staff/patient safety		X	
14.7	<b>Personality Disorders</b>			X
14.8	<b>Psychosomatic Disorders</b>			
14.8.1	Hypochondriasis			X
14.8.2	Hysteria/conversion			X
	<b>15.0 RENAL AND UROGENITAL DISORDERS</b>			
		Critical	Emergent	Lower Acuity
15.1	<b>Acute and Chronic Renal Failure</b>	X	X	X
15.2	<b>Complications of Renal Dialysis</b>	X	X	
15.3	<b>Glomerular Disorders</b>			
15.3.1	Glomerulonephritis (See 9.4.4)		X	X
15.3.2	Nephrotic syndrome		X	X
15.4	<b>Infection</b>			
15.4.1	Cystitis			X
15.4.2	Pyelonephritis		X	
15.5	<b>Male Genital Tract</b>			
15.5.1	Genital lesions			X
15.5.2	Hemias		X	X
15.5.3	Inflammation/infection			
15.5.3.1	Balanitis/balanoposthitis		X	X
15.5.3.2	Epididymitis/orchitis		X	X
15.5.3.3	Gangrene of the scrotum (Fournier's gangrene)	X	X	
15.5.3.4	Prostatitis		X	X
15.5.3.5	Urethritis			X
15.5.4	<b>Structural</b>			
15.5.4.1	Paraphimosis/phimosis		X	
15.5.4.2	Priapism		X	
15.5.4.3	Prostatic hypertrophy (BPH)			X
15.5.4.4	Torsion		X	
15.5.5	Testicular masses			X
15.5.6	<b>Tumors</b>			
15.5.6.1	Prostate			X
15.5.6.2	Testis			X
15.6	<b>Nephritis</b>		X	X
15.6.1	Hemolytic uremic syndrome		X	
15.7	<b>Structural Disorders</b>			
15.7.1	Calculus of urinary tract		X	X
15.7.2	Obstructive uropathy		X	
15.7.3	Polycystic kidney disease			X
15.8	<b>Tumors</b>			X
	<b>16.0 THORACIC-RESPIRATORY DISORDERS</b>			
		Critical	Emergent	Lower Acuity
16.1	<b>Acute Upper Airway Disorders</b>			
16.1.1	<b>Infections</b>			
16.1.1.1	Croup		X	
16.1.1.2	Epiglottitis (See 7.5.6.1)	X	X	
16.1.2	Obstruction	X		

		Critical	Emergent	Lower Acuity
	16.1.3 Tracheostomy/complications	X	X	
16.2	<b>Disorders of Pleura, Mediastinum, and Chest Wall</b>			
16.2.1	Costochondritis			X
16.2.2	Mediastinitis	X	X	
16.2.3	Pleural effusion		X	X
16.2.4	Pleuritis			X
16.2.5	Pneumomediastinum		X	
16.2.6	Pneumothorax (See 18.1.2.7)			
16.2.6.1	Simple		X	
16.2.6.2	Tension	X		
16.2.6.3	Open	X		
16.2.7	Empyema		X	X
16.3	<b>Noncardiogenic Pulmonary Edema</b>	X	X	
16.4	<b>Obstructive/Restrictive Lung Disease</b>			
16.4.1	Asthma/reactive airway disease	X	X	
16.4.2	Bronchitis and bronchiolitis		X	X
16.4.3	Bronchopulmonary dysplasia		X	X
16.4.4	Chronic obstructive pulmonary disease	X	X	X
16.4.5	Cystic fibrosis	X	X	X
16.4.6	Environmental/industrial exposure	X	X	X
16.4.7	Foreign body	X	X	
16.5	<b>Physical and Chemical Irritants/Insults</b>			
16.5.1	Pneumoconiosis		X	X
16.5.2	Toxic effects of gases, fumes, vapors (See 18.1.3.3.2)	X	X	X
16.6	<b>Pulmonary Embolism/Infarct</b>			
16.6.1	Septic emboli	X	X	
16.6.2	Venous thromboembolism (See 3.3.2.1)	X	X	
16.6.3	Fat emboli	X	X	
16.7	<b>Pulmonary Infections</b>			
16.7.1	Lung abscess		X	
16.7.2	<b>Pneumonia</b>			
16.7.2.1	Aspiration	X	X	
16.7.2.2	Community-acquired	X	X	X
16.7.2.3	Health care-associated	X	X	X
16.7.3	Pulmonary tuberculosis		X	
16.7.4	Respiratory syncytial virus (RSV)	X	X	X
16.7.5	Pertussis	X	X	X
16.8	<b>Tumors</b>			
16.8.1	Breast			X
16.8.2	Pulmonary		X	X
16.9	<b>Pulmonary Hypertension</b>	X	X	X
	<b>17.0 TOXICOLOGIC DISORDERS</b>			
		Critical	Emergent	Lower Acuity
17.1	<b>Drug and Chemical Classes</b>			
17.1.1	<b>Analgesics</b>			
17.1.1.1	Acetaminophen		X	
17.1.1.2	Nonsteroidal anti-inflammatory (NSAIDs)		X	
17.1.1.3	Opiates and related narcotics (See 14.5.4.3)		X	X
17.1.1.4	Salicylates	X	X	
17.1.2	<b>Alcohol (See 14.5.4.1)</b>			
17.1.2.1	Ethanol	X	X	X
17.1.2.2	Glycol	X	X	
17.1.2.3	Isopropyl	X	X	X
17.1.2.4	Methanol	X	X	
17.1.3	Anesthetics	X	X	
17.1.4	Anticholinergics/cholinergics (See 14.5.4.6)	X	X	
17.1.5	Anticoagulants/antithrombotics	X	X	

		Critical	Emergent	Lower Acuity
	17.1.6 Anticonvulsants	X	X	
	17.1.7 Antidepressants	X	X	
	17.1.8 Antiparkinsonism drugs		X	
	17.1.9 Antihistamines and antiemetics		X	
	17.1.10 Antipsychotics	X	X	
	17.1.11 Bronchodilators		X	
	17.1.12 Carbon monoxide	X	X	
	17.1.13 <b>Cardiovascular drugs</b>			
	17.1.13.1 Antiarrhythmics	X	X	
	17.1.13.1.1 Digitalis	X	X	
	17.1.13.2 Antihypertensives	X	X	
	17.1.13.3 Beta blockers	X	X	
	17.1.13.4 Calcium channel blockers	X	X	
17.1.14	<b>Caustic agents (See 2.2.2.3)</b>			
	17.1.14.1 Acid	X	X	
	17.1.14.2 Alkali	X	X	
17.1.15	Cocaine (See 14.5.4.5)	X	X	X
17.1.16	Cyanides, hydrogen sulfide	X	X	
17.1.17	Hallucinogens (See 14.5.4.2)		X	X
17.1.18	Hazardous materials	X	X	
17.1.19	Heavy metals	X	X	
17.1.20	Herbicides, insecticides, and rodenticides	X	X	
17.1.21	Household/industrial chemicals	X	X	X
17.1.22	Hormones/steroids	X	X	X
17.1.23	Hydrocarbons	X	X	
17.1.24	Hypoglycemics/insulin	X	X	
17.1.25	Inhaled toxins	X	X	
17.1.26	Iron	X	X	
17.1.27	Isoniazid	X	X	
17.1.28	Marine toxins (See 6.1.3)	X	X	X
17.1.29	Methemoglobinemia (See 8.5.3)	X	X	
17.1.30	Mushrooms/poisonous plants	X	X	
17.1.31	Neuroleptics	X	X	
17.1.32	Nonprescription drugs		X	X
17.1.33	Organophosphates	X	X	
17.1.34	Recreational drugs	X	X	X
17.1.35	Sedatives/hypnotics (See 14.5.4.4)	X	X	
17.1.36	Stimulants/sympathomimetics (See 14.5.4.5)	X	X	
17.1.37	Strychnine	X	X	
17.1.38	Lithium	X	X	X
17.1.39	Nutritional supplements		X	X
17.1.40	Chemical warfare agents	X	X	X
17.1.41	Antibiotics		X	X
17.1.42	Antiretrovirals		X	X
	<b>18.0 TRAUMATIC DISORDERS</b>			
		Critical	Emergent	Lower Acuity
18.1	<b>Trauma</b>			
18.1.1	<b>Abdominal trauma</b>			
18.1.1.1	Diaphragm	X	X	
18.1.1.2	Hollow viscus	X	X	
18.1.1.3	Penetrating	X	X	
18.1.1.4	Retroperitoneum	X	X	
18.1.1.5	Solid organ	X	X	
18.1.1.6	Vascular	X	X	
18.1.2	<b>Chest trauma</b>			
18.1.2.1	<b>Aortic dissection/disruption</b>	X		
18.1.2.2	<b>Confusion</b>			
18.1.2.2.1	Cardiac	X	X	X
18.1.2.2.2	Pulmonary	X	X	
18.1.2.3	<b>Fracture</b>			
18.1.2.3.1	Clavicle		X	X
18.1.2.3.2	Ribs/ribs chest	X	X	X
18.1.2.3.3	Stemum		X	X
18.1.2.4	Hemothorax	X	X	
18.1.2.5	Penetrating chest trauma	X	X	
18.1.2.6	Pericardial tamponade (See 3.6.1)	X		
18.1.2.7	<b>Pneumothorax (See 16.2.6)</b>			
18.1.2.7.1	Simple		X	

# KOLIK TOHO MÁME UMĚT?

			Critical	Emergent	Lower Acuity
	18.1.2.7.2	Tension	X		
	18.1.2.7.3	Open	X		
18.1.3	Cutaneous Injuries				
	18.1.3.1	Avulsions		X	X
	18.1.3.2	Bite wounds (See 6.1)		X	X
	18.1.3.3	Burns			
	18.1.3.3.1	Electrical (See 6.3)	X	X	X
	18.1.3.3.2	Chemical (See 16.5.2)	X	X	X
	18.1.3.3.3	Thermal	X	X	X
	18.1.3.4	Lacerations		X	X
	18.1.3.5	Puncture wounds		X	X
18.1.4	Facial fractures				
	18.1.4.1	Dental		X	X
	18.1.4.2	Le Fort	X	X	X
	18.1.4.3	Mandibular		X	X
	18.1.4.4	Orbital		X	X
	18.1.4.5	Nasal		X	X
	18.1.4.5.1	Septal hematoma		X	
	18.1.4.6	Zygomatic arch			X
18.1.5	Genitourinary trauma				
	18.1.5.1	Bladder		X	
	18.1.5.2	External genitalia		X	
	18.1.5.3	Renal		X	X
	18.1.5.4	Ureteral		X	
	18.1.5.5	Urethral		X	X
18.1.6	Head trauma				
	18.1.6.1	Intracranial injury	X	X	
	18.1.6.2	Scalp lacerations/avulsions		X	X
	18.1.6.3	Skull fractures		X	X
18.1.7	Injuries of the spine				
	18.1.7.1	Dislocations/subluxations	X	X	
	18.1.7.2	Fractures	X	X	X
	18.1.7.3	Sprains/strains			X
18.1.8	Extremity bony trauma				
	18.1.8.1	Dislocations/subluxations		X	
	18.1.8.2	Fractures (open and closed)		X	X
18.1.9	Neck trauma				
	18.1.9.1	Laryngotracheal injuries	X	X	
	18.1.9.2	Penetrating neck trauma	X	X	
	18.1.9.3	Vascular injuries			
	18.1.9.3.1	Carotid artery	X	X	
	18.1.9.3.2	Jugular vein	X	X	
	18.1.9.4	Strangulation	X	X	X
18.1.10	Ophthalmologic trauma				
	18.1.10.1	Corneal abrasions/lacerations (See 7.2.1.4)		X	X
	18.1.10.2	Corneal burns (See 7.2.1.2)			
	18.1.10.2.1	Acid		X	
	18.1.10.2.2	Alkali		X	
	18.1.10.2.3	Ultraviolet		X	X
	18.1.10.3	Eyelid lacerations		X	
	18.1.10.4	Foreign body (See 19.4.4.8)		X	
	18.1.10.5	Hyphema (See 7.2.2.2)		X	
	18.1.10.6	Lacrimal duct injuries		X	
	18.1.10.7	Penetrating globe injuries		X	
	18.1.10.8	Retinal detachments (See 7.2.3.4)		X	
	18.1.10.9	Traumatic iritis (See 7.2.2.3)		X	X
	18.1.10.10	Retrobulbar hematoma		X	
18.1.11	Otolologic trauma				
	18.1.11.1	Hematoma		X	X
	18.1.11.2	Perforated tympanic membrane (See 7.1.7)		X	
18.1.12	Pediatric fractures				
	18.1.12.1	Epiphyseal		X	X
	18.1.12.1.1	Salter-Harris classification	X	X	
	18.1.12.2	Greenstick		X	
	18.1.12.3	Torus		X	X
18.1.13	Pelvic fracture		X	X	
18.1.14	Soft-tissue extremity injuries				
	18.1.14.1	Amputations/Replantation		X	
	18.1.14.2	Compartment syndromes		X	

			Critical	Emergent	Lower Acuity
	18.1.14.3	High-pressure injection		X	
	18.1.14.4	Injuries to joints		X	X
	18.1.14.5	Penetrating trauma		X	X
	18.1.14.6	Periarticular			X
	18.1.14.7	Sprains/Strains			X
	18.1.14.8	Tendon Injuries			
	18.1.14.8.1	Lacerations/Transections		X	
	18.1.14.8.2	Ruptures		X	
	18.1.14.8.2.1	Achilles tendon		X	
	18.1.14.8.2.2	Patellar tendon		X	
	18.1.14.9	Vascular injuries		X	
18.1.15	Spinal cord and nervous system trauma				
	18.1.15.1	Cauda equina syndrome (See 12.2.3.1)	X	X	
	18.1.15.2	Injury to nerve roots		X	X
	18.1.15.3	Peripheral nerve injury		X	X
	18.1.15.4	Spinal cord injury	X	X	
	18.1.15.4.1	Spinal cord injury without radiologic abnormality (SCIWORA)		X	
18.2	Trauma in Pregnancy				
	18.2.1	Abruptio placentae (See 13.3.4.1)	X	X	
	18.2.2	Perimortem C-section (See 19.4.8.2)	X		
	18.2.3	Premature labor (See 13.6.2)		X	
	18.2.4	Rupture of uterus (See 13.6.4)	X		
18.3	Multisystem Trauma		X	X	
	18.3.1	Blast injury	X	X	
<b>19.0 PROCEDURES AND SKILLS INTEGRAL TO THE PRACTICE OF EMERGENCY MEDICINE</b>					
19.1	Airway Techniques				
	19.1.1	Intubation			
	19.1.2	Airway adjuncts			
	19.1.3	Surgical airway			
	19.1.4	Mechanical ventilation			
	19.1.5	Noninvasive ventilatory management			
	19.1.6	Ventilatory monitoring			
19.2	Resuscitation				
	19.2.1	Cardiopulmonary resuscitation			
	19.2.2	Neonatal resuscitation			
	19.2.3	Pediatric resuscitation			
	19.2.4	Postresuscitative care			
	19.2.5	Blood, fluid, and component therapy			
	19.2.6	Arterial catheter insertion			
	19.2.7	Central venous access			
	19.2.8	Intraosseous infusion			
	19.2.9	Defibrillation			
	19.2.10	Thoracotomy			
19.3	Anesthesia and Acute Pain Management				
	19.3.1	Local anesthesia			
	19.3.2	Regional nerve block			
	19.3.3	Procedural sedation and analgesia			
19.4	Diagnostic and Therapeutic Procedures				
	19.4.1	Abdominal and gastrointestinal			
	19.4.1.1	Anoscopy			
	19.4.1.2	Excision of thrombosed hemorrhoid			
	19.4.1.3	Gastric lavage			
	19.4.1.4	Gastrostomy tube replacement			
	19.4.1.5	Nasogastric tube			
	19.4.1.6	Paracentesis			
	19.4.2	Cardiovascular and thoracic			
	19.4.2.1	Cardiac pacing			
	19.4.2.2	Cardioversion			
	19.4.2.3	ECG interpretation			

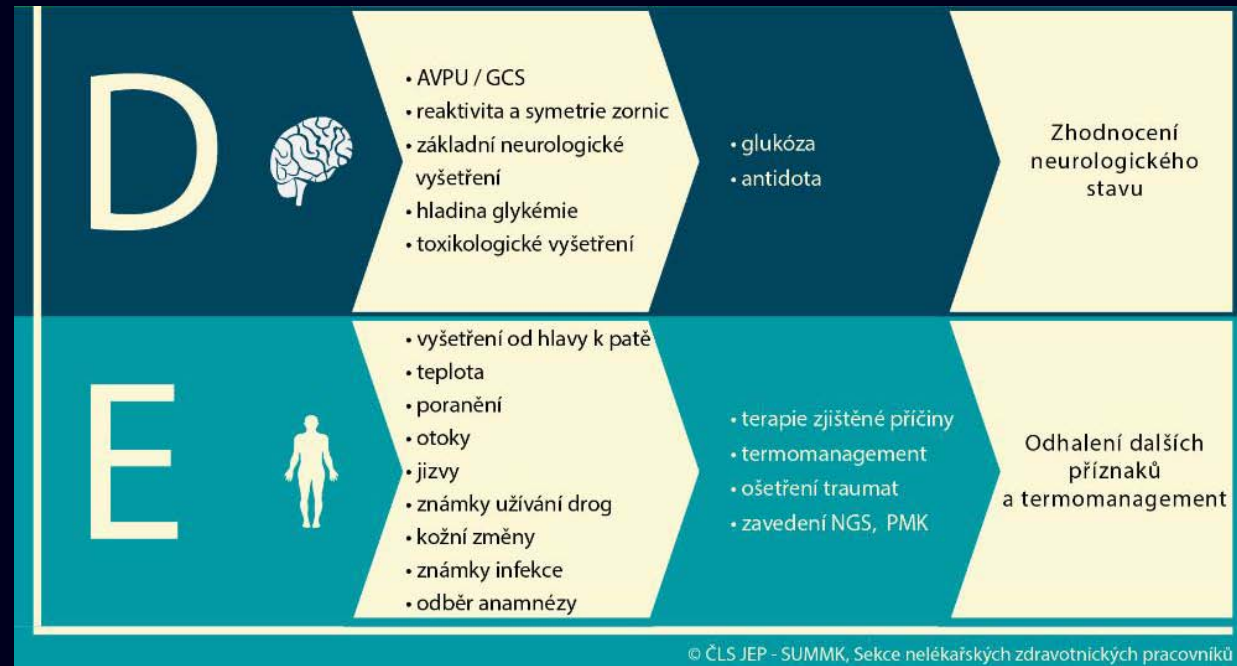
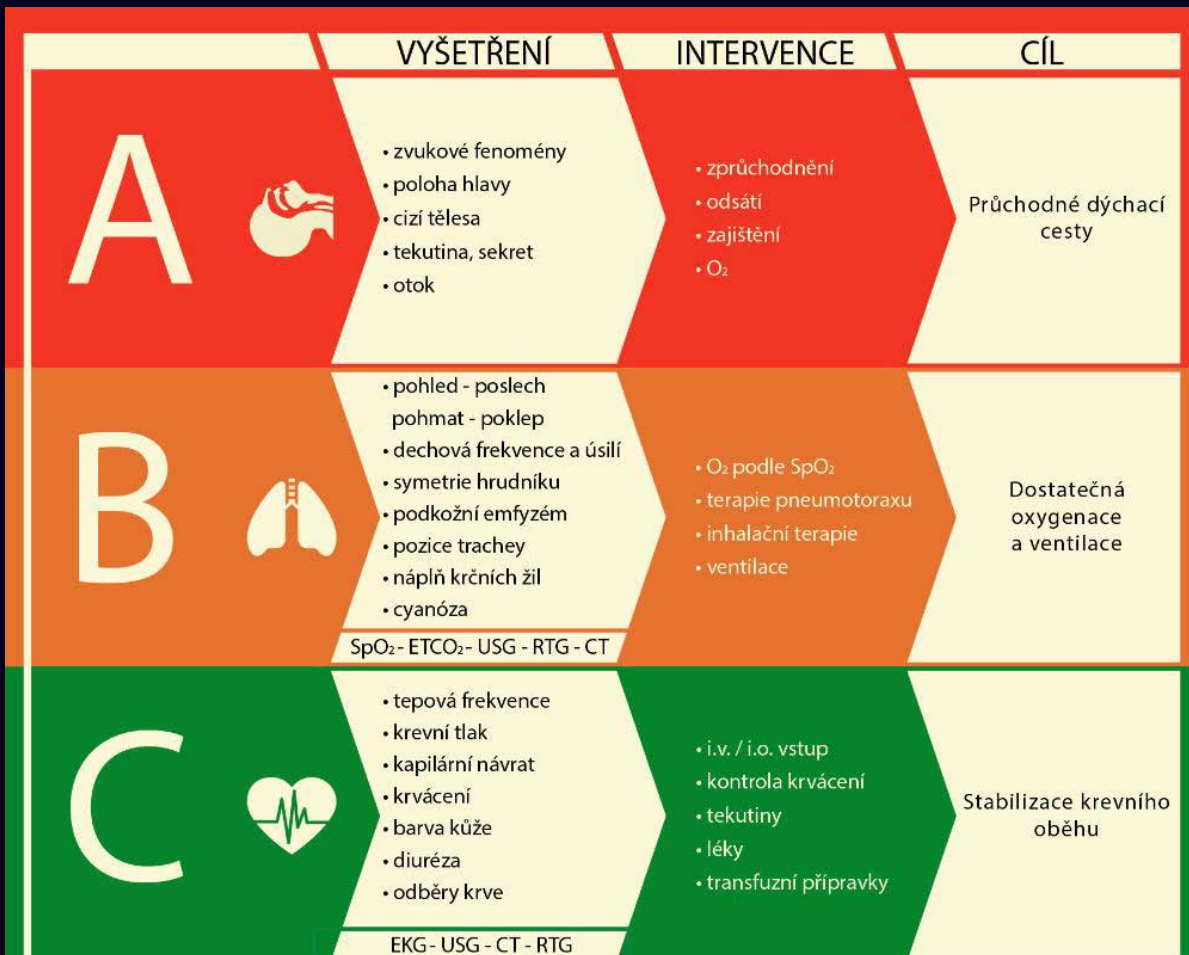
	19.4.2.4	Pericardiocentesis			
	19.4.2.5	Thoracostomy			
	19.4.2.6	Thoracostomy			X
19.4.3	Cutaneous				
	19.4.3.1	Escharotomy			X
	19.4.3.2	Incision and drainage			X
	19.4.3.3	Trephination, nails			X
	19.4.3.4	Wound closure techniques			
	19.4.3.5	Wound management			
19.4.4	Head, ear, eye, nose, and throat				
	19.4.4.1	Control of epistaxis			
	19.4.4.2	Drainage of peritonsillar abscess			
	19.4.4.3	Laryngoscopy			
	19.4.4.4	Lateral canthotomy			
	19.4.4.5	Slit-lamp examination			X
	19.4.4.6	Tonometry			X
	19.4.4.7	Tooth stabilization			
	19.4.4.8	Corneal foreign body removal (See 18.1.10.4)			
	19.4.4.9	Drainage of hematoma			
19.4.5	Systemic infectious				
	19.4.5.1	Personal protection (equipment and techniques)			
	19.4.5.2	Universal precautions and exposure management			
19.4.6	Musculoskeletal				
	19.4.6.1	Arthrocentesis			
	19.4.6.2	Compartment pressure measurement			
	19.4.6.3	Fracture/dislocation immobilization techniques			
	19.4.6.4	Fracture/dislocation reduction techniques			
	19.4.6.5	Spine immobilization techniques			
	19.4.6.6	Fasciotomy			
19.4.7	Nervous system				
	19.4.7.1	Lumbar puncture			
19.4.8	Obstetrics and gynecology				
	19.4.8.1	Delivery of newborn			
	19.4.8.2	Perimortem C-section (See 18.2.2)			
	19.4.8.3	Sexual assault examination			
19.4.9	Psychobehavioral				
	19.4.9.1	Psychiatric screening examination			
	19.4.9.2	Violent patient management/restraint			
19.4.10	Renal and urogenital				
	19.4.10.1	Bladder catheterization			
	19.4.10.1.1	Urethral catheter			
	19.4.10.1.2	Suprapubic catheter			
	19.4.10.2	Cystourethrogram			
	19.4.10.3	Testicular detorsion			
19.4.11	Toxicologic				
	19.4.11.1	Decontamination			
19.5	Other Diagnostic and Therapeutic Procedures				
	19.5.1	Foreign body removal			
	19.5.2	Collection and handling of forensic material			
	19.5.3	Ultrasound			
	19.5.3.1	Diagnostic			
	19.5.3.2	Procedural			
<b>20.0 OTHER CORE COMPETENCIES OF THE PRACTICE OF EMERGENCY MEDICINE</b>					
20.1	Interpersonal and Communication Skills				
	20.1.1	Interpersonal skills			
	20.1.1.1	Interdepartmental and medical staff relations			
	20.1.1.2	Intradepartmental relations, teamwork, and collaboration skills			
	20.1.1.3	Patient and family experience of care			
	20.1.2	Communication skills			
	20.1.2.1	Complaint management and service recovery			
	20.1.2.2	Conflict management			
	20.1.2.3	Crisis resource management			
	20.1.2.4	Delivering bad news			
	20.1.2.5	Multicultural approach to the ED patient			
	20.1.2.6	Negotiation skills			

# KOLIK TOHO MÁME UMĚT?

- 20.2 **Practice-based Learning and Improvement**
  - 20.2.1 Performance Improvement and Lifelong learning
    - 20.2.1.1 Evidence-based medicine
    - 20.2.1.2 Interpretation of medical literature
    - 20.2.1.3 Knowledge translation
    - 20.2.1.4 Patient safety and medical errors
    - 20.2.1.5 Performance evaluation and feedback
    - 20.2.1.6 Research
  - 20.2.2 Practice guidelines
  - 20.2.3 Education
    - 20.2.3.1 Patient and family
    - 20.2.3.2 Provider
  - 20.2.4 Principles of quality improvement
- 20.3 **Professionalism**
  - 20.3.1 Advocacy
    - 20.3.1.1 Patient
    - 20.3.1.2 Professional
  - 20.3.2 Ethical principles
    - 20.3.2.1 Conflicts of interest
    - 20.3.2.2 Diversity awareness
    - 20.3.2.3 Electronic communications/social media
    - 20.3.2.4 Medical ethics
  - 20.3.3 Leadership and management principles
  - 20.3.4 Well-being
    - 20.3.4.1 Fatigue and impairment
    - 20.3.4.2 Time management/organizational skills
    - 20.3.4.3 Work/life balance
    - 20.3.4.4 Work dysphoria (burnout)
- 20.4 **Systems-based Practice**
  - 20.4.1 Clinical Informatics
    - 20.4.1.1 Computerized order entry
    - 20.4.1.2 Clinical decision support
    - 20.4.1.3 Electronic health record
    - 20.4.1.4 Health information integration
  - 20.4.2 ED administration
    - 20.4.2.1 Contracts and practice models
    - 20.4.2.2 Patient flow and throughput
      - 20.4.2.2.1 Patient triage and classification
      - 20.4.2.2.2 Hospital crowding and diversion
      - 20.4.2.2.3 Observation and rapid treatment units
    - 20.4.2.3 Financial principles
      - 20.4.2.3.1 Billing and coding
      - 20.4.2.3.2 Cost-effective care and resource utilization
      - 20.4.2.3.3 Reimbursement issues
    - 20.4.2.4 Human resource management
      - 20.4.2.4.1 Allied health professionals
      - 20.4.2.4.2 Recruitment, credentialing, and orientation
  - 20.4.3 ED operations
    - 20.4.3.1 Policies and procedures
    - 20.4.3.2 ED data acquisition and operational metrics
    - 20.4.3.3 Safety, security, and violence in the ED
  - 20.4.4 Health care coordination
    - 20.4.4.1 End-of-life and palliative care/advance directives
    - 20.4.4.2 Placement options
    - 20.4.4.3 Outpatient services
  - 20.4.5 Regulatory/legal
    - 20.4.5.1 Accreditation
    - 20.4.5.2 Compliance and reporting requirements
    - 20.4.5.3 Confidentiality and HIPAA
    - 20.4.5.4 Consent, capacity, and refusal of care
    - 20.4.5.5 Emergency Medical Treatment and Active Labor Act (EMTALA)
    - 20.4.5.6 External quality metrics
  - 20.4.6 Risk management
    - 20.4.6.1 Liability and litigation
    - 20.4.6.2 Professional liability insurance
    - 20.4.6.3 Risk mitigation
  - 20.4.7 Evolving trends in health care delivery
    - 20.4.7.1 Public policy
  - 20.4.8 Regionalization of emergency care



# KOLIK TOHO MÁME UMĚT?





# ZÁVĚRY

*„Naši pacienti si nás nezvolili. My jsme si zvolili je. Mohli jsme si zvolit jinou profesi, ale neudělali jsme to. Přijali jsme zodpovědnost za péči o nemocné v nejhorších podmínkách: když je tma a prší, když je chladno a jsme unavení, když nemůžeme ani tušit, co nás čeká.*

*Musíme tuto zodpovědnost přijmout nebo jít jinam.*

*Musíme vždy poskytnout nemocným tu nejlepší péči. Ne s nekontrolovaným vybavením. Ne s nedoplněnými prostředky. Ne s neúplnou koncentrací. Ne s včerejšími znalostmi!“*

**Professor Sir Keith Porter**

**Chairman, Faculty of Pre-hospital Care, Royal College of Surgeons of Edinburgh and Intercollegiate Board**

# ZÁVĚRY

■ **urgentní medicína a medicína katastrof je krásný obor!**

**...jen se každý, kdo ho provozuje musí rozhodnout, že chce aby byl krásný.**

***Děkuji za pozornost***

**skulec@email.cz**