

台灣急診醫學臨床執業模式第二版

(簡稱：急診醫學模式 EM MODEL)

台灣急診醫學臨床執業模式推動前言：

急診醫學身為一個新興的醫學專科，懷抱著提供台灣民眾更好的緊急醫療服務的理想，同時也面臨新興專科必然的挑戰，包括了民眾與其他醫學專科對急診醫學的「尚未」瞭解、更有著急診醫學對自身發展的不斷自我探索精進。發展過程中的許多困惑都來自於對急診醫學核心定義、專業內容、能力本質的不清。走在我們前面的美國急診醫學發展歷史，正訴說著我們現在的故事，站在巨人的肩膀上，能加速我們自身對急診醫學核心本質的掌握，我們也將是崛起的巨人，更堅定的守護國人的健康。

美國從 1975 年起 ACEP 與 SAEM 的前身便開始著力研究急診醫學的核心，並且不斷更新急診核心內容，歷經二十多年的發展，從專家意見的匯集、到全美大規模性的急診執業調查與急診就醫實證資料分析，終於在 2001 年公告了第一版的 Model of the Clinical Practice of Emergency Medicine 「急診醫學臨床執業模式」，簡稱 EM Model 「急診醫學模式」，其中明確的定義出急診病人的特殊性質與需求、急診特定的照護服務目標，據上述兩者而形成的急診看診邏輯、及急診醫學模式的三個構成要素：1.病人急迫性(Acuity)評估、2.醫師任務(Physician task)、3.醫學知識、病人照護及操作型技能(Procedural skills)清單。所以幾乎可以說「急診醫學模式」就好比是急診專科的立「科」憲法，其中即已隱含了急診所需的核心理念，也成為美國急診專科訓練與考試的核心文件。

2012 的年會是我們引進「急診醫學模式」的元年，2013 年學會成立了第一屆「急診專業能力里程推動小組」，由幾位熱心醫學教育和關心急診發展的急診醫師們著手翻譯美國「急診醫學臨床執業模式」，並調整為適合台灣需求的「台灣急診醫學臨床執業模式」，並於 2014 年於急診醫學會網站公告，基於社會生活模式與疾病型態的變遷，加上醫療科技的進步，第三屆「急診專業能力里程推動小組」，針對第一版的「急診醫學臨床執業模式」進行第一次的審視修訂，在 2018 年公告第二版的「急診醫學臨床執業模式」，我們期盼能持續精煉急診核心本質、提升急診價值，讓急診醫學能隨著時代與民眾的需求的改變而不斷精進，同時讓社會與病人理解並享受更好的急診服務。

台灣急診醫學會第一屆急診專業能力里程推動小組 (TEMM)

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台灣急診醫學會第二屆急診專業能力里程推動小組 (TEMM)

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陳思州醫師、楊志偉醫師、解晉一醫師、詹佳孟醫師、詹宗諭醫師、劉中賢醫師、
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台灣急診醫學會第三屆急診專業能力里程推動小組 (TEMM)

理事長：方震中醫師

召集人：蕭政廷醫師

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邱俊文醫師、侯勝文醫師、徐德福醫師、張玉喆醫師、張孟維醫師、許金旺醫師、
許智偉醫師、陳世英醫師、陳思州醫師、黃文成醫師、楊子孟醫師、楊志偉醫師、
解晉一醫師、詹宗諭醫師、劉中賢醫師、劉冠廷醫師、劉彥宏醫師、蔡光超醫師、
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概論

EM Model 有三個構成要素：1)病人急迫性的評估；2)關於提供適當緊急醫療照護所必須執行工作內容的描述（醫師任務）；和 3)醫學知識、病人照護及操作型技能的清單。結合這三個構成要素而能描述急診醫學的臨床執業模式，並且能與其他專科的臨床執業模式進行區分。這個 EM Model 呈現了一個通過專科認證的急診醫師，臨床執業模式所需的必要基本資訊與技能。

病人來急診通常以症狀和癥候來表現，而不是一個已確知的疾病。因此，急診醫師照護病人的方式，是由辨識病人臨床表現中指向特定診斷或臆斷的形態作開始。「形態辨識」(Pattern Recognition) 是急診醫學臨床執業的特點和基礎，引導著整個診察病人過程中，所進行的診斷性檢查檢驗與治療性處置。

急診醫學模式 (EM Model) 是設計來作為急診專科的核心文件，它提供了未來發展醫學院和住院醫師課程、專科醫師認證考試、專業繼續教育目標、研究議題、住院醫師訓練計劃審查要求與其他專科功能運作必要文件的基礎。ACGME 六大核心能力與急診醫學模式的結合，形成了一個評估醫師表現和課程設計的架構，可以進一步提升和改善勝任急診醫師的教育和培訓。

說明

急診醫學模式是急診醫學臨床執業三個面向的描述。這三個面向是「病人急迫性」、「醫師任務」和「醫學知識、病人照護及操作型技能的清單」。當提供病人照護時這三個面向會相互關連且同時被醫師整合與運用。急診醫師最初的診察方式取決於病人表現的急迫性。當評估病人時，醫師要完成一系列的任務來收集資訊。透過這個過程，醫師能夠從醫學知識、病人照護和操作型技能的清單中找出病人問題最可能的原因。經由這三個要素的持續運用，醫師能達到最有可能的診斷並為病人開始進行接續的治療計劃，因此 EM Model 的三個面向彼此相關，且同時應用於急診醫學的執業當中。

病人急迫性

在病人的診察過程中，醫師參考的架構基本上與病人狀況實際、明顯或潛在的急迫性相關。建立急迫性衡量基準，對於界定診療行動的背景情境、診察病人的優先順序和能成功處置病人的工作順序是必要的。在急診醫學模式中病人的急迫性包括危急、緊急和輕症(表一)。

表一：病人急迫性的定義

Critical 危急	Emergent 緊急	Lower Acuity 輕症
病人呈現一個危及生命的疾病或傷害的症狀，如果不立即開始採取處置措施以防止進一步的氣道、呼吸、血流動力學和或神經系統的不穩定，則會有很高的機率造成死亡。	病人呈現的疾病或受傷的症狀，如果不趕快開始治療，很可能導致病情惡化或併發症。	病人呈現的疾病或受傷的症狀，不太可能會造成病情快速惡化或產生併發症。

醫師任務

醫師任務包括急診醫學執業的各式活動和動態性工作(表二)。急診醫師在處理病人時要同時考慮很多因素，這些可能會改變病人處置的方向。例如同樣的主訴，當考慮病人是兒童或老人時處理的方式可能會有明顯的改變，這就是調節因素。醫師任務適用於所有年齡的病人。雖然沒有照護兒童或老年病人的獨立章節，但每一個任務應考慮到兒童和老年人的觀點。當一併考慮時這些任務與急診專科醫師的六大核心能力相關。

表二：醫師任務的定義

到院前照護	積極參與到院前照護；提供直接的病人照護或線上、離線的醫療指導，或與院前醫療服務提供者進行互動；從到院前照護中吸收相關資訊應用到該病人的評估與處置。
穩定緊急病況	進行初步評估，並採取適當的措施來穩定和治療病人。
做焦點式病史與身體診察	有效的判讀和評估病人的症狀及病史；從病人的病史中確認相關的風險因素；提供焦點式評估；判讀病人的外觀、生命徵象和狀況；辨識出相關的身體診察發現；具備實施診察的技巧。
調節因素	辨識年齡、性別、種族、溝通障礙、社會經濟地位、潛在疾病和其他可能影響病人處理的因素。
法律議題	理解和運用與急診執業有關法律概念。
診斷性檢查及檢驗	選擇並執行最適當的診斷性檢查及檢驗並判讀結果，如心電圖、急診超音波、影像檢查與實驗室檢驗。
診斷	形成鑑別診斷和根據病史、身體診察、處置和檢查檢驗結果確立最可能的診斷。
治療性處置	執行操作型技能和非藥物性治療以及相關諮商。
藥物治療	考量預期效果、財務、可能的副作用與交互作用、病人偏好、機構政策和臨床指引等，選擇與開立適當的藥物，當藥物治療發生副作用時，即時察覺並給予有效處置。
觀察與再評估	反覆評估病人治療的效果，包括處理併發症和潛在的錯誤。監測、觀察、處置和維持一或多個不同就診階段病人的病情穩定。
會診	與醫師和其他專業人士合作，以幫助病人得到最佳的處置。
照護轉移	安排病人住院、出院（包括後續追蹤計劃）、觀察或適當轉診與照護轉移，跟病人、家屬和相關的醫療團隊成員有效地溝通這些安排。
預防與衛教	應用流行病學資訊於有風險的病人；進行病人衛教；選擇適當的疾病和傷害預防技巧。
病歷記錄	以簡潔的方式溝通病人照護資訊，以促進照護品質和選擇適當診斷碼。
多重病人照護	為了提供病人最佳的服務，在急診判定輕重緩急並依序評估和處理多重病人，包括處理被中斷的任務與任務的轉換。
團隊管理	協調、教育或指導醫療團隊的成員；適度運用醫院資源；熟悉災難處理。
大量傷患與災難處置	理解和運用災難和大量傷患的處置原則，包括準備、檢傷、減災、應變和復原。
以病人為中心的溝通技巧	有效聆聽病人及家屬；展現同理心並與病人及家屬建立融洽關係。
預後	預測疾病與外傷狀況的可能結果

醫師任務與病人急迫性矩陣

這個矩陣由兩個主要的面向組成：醫師任務與病人急迫性（表三）。這個矩陣描述了所有可能的醫病互動，它取決於病人急迫性和診察病人過程中可能執行的任務。病人急迫性是要能判定輕重緩急與決定任務優先順序，以成功處理病人的基本要素。這個矩陣呈現急診醫師依據病人急迫性來調整任務以達到適當的病人照護。

表三：醫師任務與病人急迫性矩陣

醫師任務	病人急迫性		
	危急	緊急	輕症
到院前照護 穩定緊急病況 做焦點式病史與身體診察 調節因素 法律議題 診斷性檢查及檢驗 診斷 治療性處置 藥物治療 觀察與再評估 會診 照護轉移 預防與衛教 病歷記錄 多重病人照護 團隊管理 大量傷患與災難處置 以病人為中心的溝通技巧 預後			

以下是一個簡要的例子，病人的急迫性和醫師的任務如何應用於有同樣主訴胸痛的患者：

- 一個 55 歲的男性有高血壓、糖尿病病史，正捂著他的胸口，主訴壓迫性胸痛、冒冷汗和收縮壓 60 毫米汞柱。
 急迫性：危急
 代表意義：需要立即介入處理和穩定生命功能，沒有立即處置很可能會死亡。
- 一個 74 歲的女性有心絞痛病史，主訴三到五分鐘典型心絞痛的胸部悶痛。她生命徵象穩定且硝化甘油可緩解胸痛。
 急迫性：緊急
 代表意義：必須趕快開始監測、打上點滴、評估和治療。如果不及時治療可能會造成病情惡化及併發症。
- 一個 12 歲的女性，非創傷性的尖銳胸痛持續數天，身體的運動會加劇疼痛。
 急迫性：輕症

代表意義：病人的症狀應適當的處理。然而，發展為較重大的併發症是不太可能的。

醫學知識、病人照護和操作型技能的清單

這部分的內容是由急診核心能力里程推動小組基於：1)發生的頻率；2)病人臨床表現的危急特性；和 3)急診執業的其它要素這三個因素來決定。同時考慮台灣醫療制度與現況並以美國 EM model 為基礎翻譯並修訂而成。內容包含急診醫學臨床執業重要的診斷及治療處置，以及其他急診執業所需的要素及核心能力。依照 ACGME 六大核心能力之架構來編排。目的是要代表急診病人常見與嚴重的情況，以及提供安全、有效的病人照護必備之核心知識與技能，而非急診各種情況之全面性清單。

表四：醫學知識，病人照護和操作型技能

1. **SIGNS, SYMPTOMS, AND PRESENTATIONS**

	Critical	Emergent	Lower Acuity
1.1 Abnormal Vital Signs			
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 Bradypnea/Apnea	X	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
1.2 Pain			
1.2.1 Pain (unspecified)	X	X	X
1.2.2 Headache	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
1.2.8 Chronic pain			X
1.2.9 Extremity pain	X	X	X
1.3 General			
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
1.3.16 Dysphagia		X	X
1.3.17 Dysuria			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
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
1.3.50	Urinary retention		X	
1.3.51	Vaginal bleeding	X	X	X
1.3.52	Vaginal discharge			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	
1.3.57	Toxidromes	X	X	X
1.3.58	Sudden unexpected infant death (SUID)	X		

2. ABDOMINAL AND GASTROINTESTINAL DISORDERS

		Critical	Emergent	Lower Acuity
2.1	Abdominal Wall			
2.1.1	Hernias		X	X
2.2	Esophagus			
2.2.1	Infectious disorders			
2.2.1.1	Candida		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			
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
2.3	Liver			
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
2.3.1.4	Viral		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			
2.3.4	Tumors		X	X
2.3.5	Hepatic encephalopathy	X	X	
2.4	Gall Bladder and Biliary Tract			
2.4.1	Cholangitis	X	X	
2.4.2	Cholecystitis		X	
2.4.3	Cholelithiasis/Choledocholithiasis		X	X
2.4.4	Tumors		X	X
2.5	Pancreas			
2.5.1	Pancreatitis	X	X	
2.5.2	Tumors		X	X

2.6 Peritoneum				
2.6.1	Spontaneous bacterial peritonitis	X	X	
2.6.2	Abdominal compartment syndrome		X	X
2.7 Stomach				
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	
2.7.4.2	Foreign body		X	X
2.7.5	Tumors		X	X
2.7.6	Gastroparesis		X	X
2.8 Small Bowel				
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	
2.9 Large Bowel				
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
2.9.2.5	Neutropenic enterocolitis	X	X	
2.9.3	Motor abnormalities			
2.9.3.1	Hirschsprung's disease		X	X
2.9.3.2	Irritable bowel			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
2.10 Rectum and Anus					
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
	2.10.3.2	Anal fistula		X	X
	2.10.3.3	Congenital anomalies			X
	2.10.3.4	Foreign body		X	X
	2.10.3.5	Hemorrhoids			X
	2.10.3.6	Rectal prolapse		X	
2.10.4		Tumors		X	X
2.11 Spleen					
2.11.1		Asplenism		X	X
2.11.2		Splenomegaly			X
2.11.3		Infarction	X	X	X
2.12 Post-surgical Complications					
2.12.1		Bariatric surgery	X	X	X
2.12.2		Ostomy		X	X

3. CARDIOVASCULAR DISORDERS

	Critical	Emergent	Lower Acuity
3.1 Cardiopulmonary Arrest	X		
3.2 Congenital Abnormalities of the Cardiovascular System	X	X	X
3.3 Disorders of Circulation			
3.3.1 Arterial			
3.3.1.1 Aneurysm	X	X	X
3.3.1.2 Aortic dissection	X		
3.3.1.2.1 Aortic	X	X	X
3.3.1.2.2 Non-aortic	X	X	X
3.3.1.3 Thromboembolism	X	X	
3.3.2 Venous			
3.3.2.1 Thromboembolism	X	X	
3.4 Disturbances of Cardiac Rhythm			
3.4.1 Cardiac dysrhythmias	X	X	X
3.4.1.1 Ventricular	X	X	
3.4.1.2 Supraventricular	X	X	X
3.4.1.3 Pulseless electrical activity	X	X	X
3.4.2 Conduction disorders	X	X	X
3.5 Diseases of the Myocardium, Acquired			
3.5.1 Cardiac failure	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 Cardiomyopathy	X	X	X
3.5.2.1 Hypertrophic	X	X	X
3.5.2.2 Dilated	X	X	X
3.5.2.3 Stress-induced	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 Diseases of the Pericardium			
3.6.1 Pericardial tamponade	X	X	
3.6.2 Pericarditis		X	X
3.7 Endocarditis	X	X	
3.8 Hypertension	X	X	X
3.9 Tumors	X	X	
3.10 Valvular Disorders	X	X	X
3.11 Cardiovascular Devices			
3.11.1 Pacemaker/Automatic implantable cardioverter-defibrillator(AICD)	X	X	X
3.11.2 Left ventricular assist device(LVAD)	X	X	X

4. CUTANEOUS DISORDERS

	Critical	Emergent	Lower Acuity
4.1 Cancers of the Skin			
4.1.1 Kaposi's sarcoma			X
4.2 Ulcerative Lesions		X	X
4.2.1 Decubitus		X	X
4.2.2 Venous stasis			X
4.2.3 Diabetic foot ulcers		X	X
4.3 Dermatitis			
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 Infections			
4.4.1 Bacterial			
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 Fungal			
4.4.2.1 Candida(See 2.2.1.1, 7.4.7)			X
4.4.2.2 Dermatophytes			X
4.4.3 Ectoparasites			
4.4.3.1 Scabies			X
4.4.4 Viral			
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 Herpetic infections (See 10.6.5, 13.1.3.1)			X
4.4.4.4 Human papillomavirus (HPV)(See 13.1.3.2)			X
4.5 Maculopapular Lesions			
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
4.5.7 Drug eruptions		X	X
4.6 Papular/Nodular Lesions			
4.6.1 Hemangioma/Lymphangioma			X
4.6.2 Lipoma			X
4.6.3 Sebaceous cyst			X

4.7 Vesicular/Bullous Lesions

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

5. ENDOCRINE, METABOLIC, AND NUTRITIONAL DISORDERS

	Critical	Emergent	Lower Acuity
5.1 Acid-base Disturbances			
5.1.1 Metabolic or respiratory			
5.1.1.1 Acidosis	X	X	
5.1.1.2 Alkalosis	X	X	X
5.1.2 Mixed acid-base balance disorder	X	X	
5.2 Adrenal Disease			
5.2.1 Corticoadrenal insufficiency	X	X	
5.2.2 Cushing's syndrome		X	X
5.3 Fluid and Electrolyte Disturbances			
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
5.4 Glucose Metabolism			
5.4.1 Diabetes mellitus			
5.4.1.1 Type I	X	X	X
5.4.1.2 Type II		X	X
5.4.1.3 Complications in glucose metabolism			
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	
5.4.1.3.5 Systemic		X	X
5.5 Nutritional Disorders			
5.5.1 Vitamin deficiencies			X
5.5.2 Wernicke-Korsakoff syndrome		X	
5.5.3 Malabsorption		X	X
5.5.4 Malnutrition		X	X
5.6 Parathyroid Disease		X	X
5.7 Pituitary Disorders		X	X
5.7.1 Panhypopituitarism		X	
5.8 Thyroid Disorders			
5.8.1 Hyperthyroidism	X	X	X
5.8.2 Hypothyroidism	X	X	X
5.8.3 Thyroiditis		X	X
5.9 Tumors of Endocrine Glands			
5.9.1 Adrenal		X	X
5.9.2 Pheochromocytoma	X	X	
5.9.3 Pituitary		X	X
5.9.4 Thyroid		X	X

6. ENVIRONMENTAL DISORDERS

	Critical	Emergent	Lower Acuity
6.1 Bites and Envenomation			
6.1.1 Arthropods		X	X
6.1.2 Mammals		X	X
6.1.3 Marine organisms	X	X	X
6.1.4 Snakes	X	X	X
6.2 Dysbarism			
6.2.1 Air embolism	X	X	
6.2.2 Barotrauma	X	X	X
6.2.3 Decompression syndrome	X	X	
6.3 Electrical Injury	X	X	X
6.3.1 Lightning	X	X	
6.4 High-altitude Illness			
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 Submersion Incidents			
6.5.1 Cold water immersion	X	X	
6.5.2 Near drowning	X	X	
6.6 Temperature-related Illness			
6.6.1 Heat			
6.6.1.1 Heat exhaustion		X	X
6.6.1.2 Heat stroke	X		
6.6.2 Cold			
6.6.2.1 Frostbite	X	X	
6.6.2.2 Hypothermia	X	X	
6.7 Radiation Emergencies	X	X	X

7. HEAD, EAR, EYE, NOSE, THROAT DISORDERS

		Critical	Emergent	Lower Acuity
7.1 Ear				
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			X
7.1.8	Perichondritis		X	X
7.2 Eye				
7.2.1	External eye			
	7.2.1.1 Burn confined to eye		X	
	7.2.1.2 Conjunctivitis			X
	7.2.1.3 Corneal abrasions		X	X
	7.2.1.4 Disorders of lacrimal system			X
	7.2.1.5 Foreign body		X	X
	7.2.1.6 Disorders of the eyelids			X
	7.2.1.7 Keratitis	X	X	
7.2.2	Anterior pole			
	7.2.2.1 Glaucoma		X	X
	7.2.2.2 Hyphema	X	X	
	7.2.2.3 Iritis	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		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 Septal/Orbital		X	
	7.2.4.2 Endophthalmitis		X	
7.3 Nose				
7.3.1	Epistaxis	X	X	X
7.3.2	Foreign body		X	X
7.3.3	Rhinitis			X
7.3.4	Sinusitis			X
7.4 Oropharynx/Throat				
7.4.1	Dentalgia			X

7.4.2	Diseases of the oral soft tissue			
	7.4.2.1 Ludwig's angina	X	X	
	7.4.2.2 Stomatitis			X
7.4.3	Diseases of the salivary glands			
	7.4.3.1 Sialolithiasis		X	X
	7.4.3.2 Suppurative parotitis		X	
7.4.4	Foreign body	X	X	
7.4.5	Gingival and periodontal disorders			X
7.4.6	Larynx/Trachea			
	7.4.6.1 Epiglottitis	X	X	
	7.4.6.2 Laryngitis			X
	7.4.6.3 Tracheitis		X	X
	7.4.6.4 Tracheostomy complications	X	X	X
7.4.7	Oral candidiasis			X
7.4.8	Dental abscess		X	X
7.4.9	Peritonsillar abscess		X	
7.4.10	Pharyngitis/Tonsillitis			X
7.4.11	Retropharyngeal abscess	X	X	
7.4.12	Temporomandibular joint disorders			X
7.5	Tumors	X	X	X

8. HEMATOLOGIC DISORDERS

		Critical	Emergent	Lower Acuity
8.1	Blood Transfusion			
8.1.1	Complications	X	X	
8.2	Hemostatic Disorders			
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
8.2.3.2	Idiopathic thrombocytopenic purpura	X	X	X
8.2.3.3	Thrombotic thrombocytopenic purpura	X	X	
8.3	Lymphomas		X	X
8.4	Pancytopenia	X	X	
8.5	Red Blood Cell Disorders			
8.5.1	Anemias			
8.5.1.1	Aplastic	X	X	
8.5.1.2	Hemoglobinopathies		X	X
8.5.1.3	Hemolytic		X	
8.5.1.4	Hypochromic			
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	X	X	
8.6	White Blood Cell Disorders			
8.6.1	Leukemia		X	X
8.6.2	Multiple myeloma		X	X
8.6.3	Leukopenia		X	X
8.7	Oncologic Emergencies	X	X	X
8.7.1	Superior Vena Cava syndrome	X	X	X
8.7.2	Tumor lysis syndrome	X	X	X
8.7.3	Febrile neutropenia and infection	X	X	
8.7.4	Hyperviscosity syndrome		X	X

9. IMMUNE SYSTEM DISORDERS

		Critical	Emergent	Lower Acuity
9.1 Collagen Vascular Disease				
9.1.1	Raynaud's disease			X
9.1.2	Reactive arthritis (See 11.3.1.6)	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 Hypersensitivity				
9.2.1	Allergic reaction		X	X
9.2.2	Anaphylaxis	X		
9.2.3	Angioedema	X	X	
9.2.4	Drug allergies	X	X	X
9.3 Transplant-related Problems		X	X	X
9.3.1	Immunosuppression		X	X
9.3.2	Rejection	X	X	
9.4 Immune Complex Disorders			X	
9.4.1	Mucocutaneous lymph node syndrome (Kawasaki syndrome)		X	X
9.4.2	Rheumatic fever		X	X
9.4.3	Sarcoidosis		X	X
9.4.4	Post-streptococcal glomerulonephritis (See15.3.1)		X	
9.5 Medication-induced Immunosuppression		X	X	
9.5.1	Chemotherapeutic agents	X	X	
9.5.2	Steroids	X	X	
9.5.3	Targeted immune modulators	X	X	

10. SYSTEMIC INFECTIOUS DISORDERS

	Critical	Emergent	Lower Acuity
10.1 Bacterial			
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	
10.1.4.1 Meningococemia	X	X	
10.1.5 Mycobacterium			
10.1.5.1 Tuberculosis		X	X
10.1.5.2 Atypical mycobacteria		X	X
10.1.6 Other bacterial diseases	X	X	
10.1.6.1 Gas gangrene	X	X	
10.1.6.2 Necrotizing fasciitis	X	X	
10.1.7 Sepsis/Bacteremia	X	X	
10.1.7.1 Shock	X		
10.1.7.2 Toxic shock syndrome	X	X	
10.1.8 Spirochetes			
10.1.8.1 Syphilis		X	X
10.1.8.2 Leptospirosis	X	X	
10.1.9 Tetanus	X	X	
10.2 Biological Warfare Agents	X	X	
10.3 Fungal Infections		X	X
10.3.1 Invasive mucormycosis	X	X	
10.4 Protozoan/Parasites			
10.4.1 Malaria		X	
10.4.2 Toxoplasmosis		X	X
10.5 Tick-Borne			
10.5.1 Scrub typhus		X	X
10.5.2 Other rickettsial infection		X	X
10.6 Viral		X	X
10.6.1 Infectious mononucleosis		X	X
10.6.2 Influenza/Parainfluenza		X	X
10.6.3 Arbovirus	X	X	X
10.6.3.1 Dengue fever/DHF	X	X	X
10.6.3.2 Zika virus		X	X
10.6.4 Hantavirus	X	X	
10.6.5 Herpes zoster/Varicella		X	X
10.6.6 HIV/AIDS	X	X	X
10.6.6.1 Primary HIV infection		X	X
10.6.6.2 Opportunistic infection	X	X	
10.6.7 Rabies	X		
10.6.8 Roseola			X
10.6.9 Rubella			X
10.6.10 Dengue fever		X	X

10.6.11 Corona virus /SARS		X	X
10.7Emerging Infections/ Pandemics	X	X	X
10.8Drug Resistance	X	X	X

11. MUSCULISKELETAL DISORDERS (NONTRAUMATIC)

	Critical	Emergent	Lower Acuity
11.1 Bony Abnormalities			
11.1.1 Aseptic necrosis of hip		X	X
11.1.2 Osteomyelitis		X	
11.1.3 Tumors		X	X
11.1.4 Atypical fractures		X	X
11.1.4.1 Osteoporotic		X	X
11.1.4.2 Tumor-related		X	X
11.1.4.3 Congenital disorder		X	X
11.2 Disorders of the Spine			
11.2.1 Disc disorders		X	X
11.2.2 Inflammatory spondylopathies		X	X
11.2.3 Radiculopathy(See 12.7.3)		X	X
11.2.4 Spinal stenosis		X	X
11.2.5 Cervical pain	X	X	X
11.2.6 Thoracic pain	X	X	X
11.2.7 Lumbosacral pain			
11.2.7.1 Cauda equina syndrome	X	X	
11.2.7.2 Sacroiliitis			X
11.2.7.3 11.2.7.3 Sciatica		X	X
11.3 Joint Abnormalities			
11.3.1 Arthritis			
11.3.1.1 Septic	X		
11.3.1.2 Crystal arthropathies		X	X
11.3.1.3 Rheumatoid			X
11.3.1.4 Juvenile		X	
11.3.1.5 Osteoarthritis			X
11.3.1.6 Reactive arthritis (See 9.1.2)		X	X
11.3.2 Congenital dislocation of the hip		X	X
11.3.3 Slipped capital femoral epiphysis		X	
11.3.4 Synovitis		X	X
11.4 Muscle Abnormalities			
11.4.1 Myalgia/Myositis			X
11.4.2 Rhabdomyolysis	X	X	
11.5 Overuse Syndromes			
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 Tendinopathy			X
11.5.5 Stress reaction fracture		X	X
11.6 Soft Tissue Infections			
11.6.1 Fasciitis		X	
11.6.2 Felon		X	
11.6.3 Gangrene	X	X	

11.6.4 Paronychia	X	X
11.6.5 Tenosynovitis	X	X

12. NERVOUS SYSTEM DISORDERS

	Critical	Emergent	Lower Acuity
12.1 Cranial Nerve Disorders			X
12.1.1 Idiopathic facial nerve paralysis (Bell's palsy)			X
12.1.2 Trigeminal neuralgia			X
12.2 Demyelinating Disorders	X	X	
12.2.1 Multiple sclerosis		X	X
12.3 Headache (See 1.2.2)	X	X	X
12.3.1 Tension			X
12.3.2 Vascular		X	X
12.3.3 Cluster		X	X
12.4 Hydrocephalus		X	X
12.4.1 Normal pressure		X	X
12.4.2 VP shunt		X	
12.5 Infections/Inflammatory Disorders			
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	
12.5.3.3 Fungal			
12.5.3.4 Cryptococcal meningitis	X	X	
12.5.4 Myelitis		X	
12.5.5 Neuralgia/Neuritis			X
12.6 Movement Disorders		X	X
12.6.1 Dystonic reaction		X	X
12.7 Neuromuscular Disorders			
12.7.1 Guillain-Barré syndrome	X	X	
12.7.2 Myasthenia gravis	X	X	X
12.7.3 Peripheral neuropathy		X	
12.8 Other Conditions of the Brain			
12.8.1 Dementia (See 14.5.2)			X
12.8.2 Parkinson's disease		X	X
12.8.3 Idiopathic intracranial hypertension	X	X	
12.8.4 Cerebral venous sinus thrombosis	X	X	X
12.8.5 Posterior reversible encephalopathy syndrome (PRES)	X	X	
12.9 Seizure Disorders			
12.9.1 Epileptiform	X	X	X
12.9.1.1 Neonatal	X	X	
12.9.1.2 Febrile	X	X	X
12.9.1.3 Status epilepticus	X		
12.9.1.4 Nonconvulsive	X	X	
12.9.1.5 Drug-induced	X	X	
12.9.2 Nonepileptiform			X
12.10 Spinal Cord Compression	X	X	

12.11 Stroke (Cerebral Vascular Events)

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

12.12 Transient Cerebral Ischemia

X X

12.13 Tumors

X X

12.14 Delirium

X

12.14.1 Excited delirium syndrome

X X

13. OBSTETRICS AND GYNECOLOGY

	Critical	Emergent	Lower Acuity
13.1 Female Genital Tract			
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	
13.1.3 Lesions			
13.1.3.1 Herpes simplex			X
13.1.3.2 Human papillomavirus (HPV)			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 Abnormal 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 abscess		X	
13.1.6.2 Foreign body		X	X
13.1.6.3 Vaginitis/Vulvovaginitis			X
13.2 Normal Pregnancy			X
13.3 Complications of Pregnancy			
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 Abruption placentae	X	X	
13.3.4.2 Placenta previa	X	X	
13.3.5 Hyperemesis gravidarum		X	X
13.3.6 Pregnancy-induced hypertension		X	X
13.3.6.1 Eclampsia	X	X	
13.3.6.2 Preeclampsia		X	
13.3.7 Infections		X	
13.3.8 Rh isoimmunization		X	
13.3.9 First trimester bleeding	X	X	X

13.4 High-risk Pregnancy	X	X	
13.4.1 Assisted reproductive therapies	X	X	X
13.4.2 Pre-existing medical problems	X	X	X
13.5 Normal Labor and Delivery		X	X
13.6 Complications of Labor			
13.6.1 Fetal distress	X		
13.6.2 Premature labor		X	
13.6.3 Premature rupture of membranes		X	
13.6.4 Rupture of uterus	X		
13.7 Complications of Delivery			
13.7.1 Malposition of fetus	X	X	
13.7.2 Nuchal cord	X		
13.7.3 Prolapse of cord	X		
13.8 Postpartum Complications			
13.8.1 Endometritis		X	
13.8.2 Hemorrhage	X	X	
13.8.3 Mastitis		X	X
13.8.4 Pituitary infarction	X	X	

14. PSYCHOBEHAVIORAL DISORDERS

	Critical	Emergent	Lower Acuity
14.1 Substance Use Disorders			
14.1.1 Alcohol use disorder	X	X	X
14.1.2 Illicit drug use	X	X	X
14.1.3 Prescription drug use	X	X	X
14.1.4 Withdrawal syndrome	X	X	X
14.2 Mood Disorders and Thought Disorders			
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
14.3 Factitious Disorders			
14.4 Neurotic Disorders			
14.4.1 Anxiety/Panic			X
14.4.2 Obsessive compulsive			X
14.4.3 Phobic			X
14.4.4 Post-traumatic stress			X
14.5 Organic Psychoses			
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 Dementia		X	
14.6 Patterns of Violence/Abuse/Neglect			
14.6.1 Interpersonal violence			
14.6.1.1 Child	X	X	X
14.6.1.2 Intimate partner	X	X	X
14.6.1.3 Elder	X	X	X
14.6.2 Homicidal Risk	X	X	
14.6.3 Sexual assault		X	
14.6.4 Staff/Patient safety		X	
14.6.5 Human trafficking		X	X
14.7 Personality Disorders			X
14.8 Psychosomatic Disorders			
14.8.1 Hypochondriasis			X
14.8.2 Hysteria/Conversion			X
14.9 Feeding and Eating Disorders	X	X	X

15. RENAL AND UROGENITAL DISORDERS

	Critical	Emergent	Lower Acuity
15.1 Acute and Chronic Renal Failure	X	X	X
15.2 Complications of Renal Dialysis	X	X	
15.3 Glomerular Disorders			
15.3.1 Glomerulonephritis		X	X
15.3.2 Nephrotic syndrome		X	X
15.4 Infection			
15.4.1 Cystitis			X
15.4.2 Pyelonephritis		X	
15.4.3 Asymptomatic bacteriuria			X
15.5 Male Genital Tract			
15.5.1 Genital lesions			X
15.5.2 Hernias		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 Structural			
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 of testis		X	
15.5.5 Testicular masses			X
15.5.6 Tumors			
15.5.6.1 Prostate			X
15.5.6.2 Testis			X
15.6 Nephritis		X	X
15.6.1 Hemolytic uremic syndrome		X	
15.7 Structural Disorders			
15.7.1 Calculus of urinary tract		X	X
15.7.2 Obstructive uropathy		X	
15.7.3 Polycystic kidney disease			X
15.8 Tumors			X

16. THORACIC-RESPIRATORY DISORDERS

	Critical	Emergent	Lower Acuity
16.1 Acute Upper Airway Disorders			
16.1.1 Infections			
16.1.1.1 Croup		X	
16.1.1.2 Epiglottitis	X	X	
16.1.2 Obstruction/Foreign body	X		
16.2 Disorders of Pleura, Mediastinum, and Chest Wall			
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			
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 Acute Respiratory Distress Syndrome	X	X	
16.4 Obstructive/Restrictive Lung Disease			
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 Physical and Chemical Irritants/Insults			
16.5.1 Pneumoconiosis		X	X
16.5.2 Toxic effects of gases, fumes, vapors	X	X	X
16.6 Pulmonary Embolism/Infarct			
16.6.1 Septic emboli	X	X	
16.6.2 Venous thromboembolism	X	X	
16.6.3 Fat emboli	X	X	
16.7 Pulmonary Infections			
16.7.1 Lung abscess		X	
16.7.2 Pneumonia			
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 Tumors			
16.8.1 Breast			X
16.8.2 Pulmonary		X	X

16.9 Pulmonary Hypertension

X

X

X

17. TOXICOLOGIC DISORDERS

	Critical	Emergent	Lower Acuity
17.1 Drug and Chemical Classes			
17.1.1 Alcohol			
17.1.1.1 Ethanol	X	X	X
17.1.1.2 Ethylene Glycol	X	X	
17.1.1.3 Isopropyl	X	X	X
17.1.1.4 Methanol	X	X	
17.1.2 Analgesics			
17.1.2.1 Acetaminophen		X	
17.1.2.2 Nonsteroidal anti-inflammatories (NSAIDS)		X	X
17.1.2.3 Opiates and related narcotics	X	X	
17.1.2.4 Salicylates	X	X	
17.1.3 Anticholinergics	X	X	
17.1.3.1 Anti-histamines		X	
17.1.4 Anticoagulants/Antithrombotics	X	X	
17.1.4.1 Direct thrombin inhibitors	X		
17.1.4.2 Factor Xa inhibitors	X		
17.1.4.3 Heparins		X	
17.1.4.4 Vitamin K antagonists	X		
17.1.5 Anticonvulsants	X	X	
17.1.6 Antidepressants	X	X	
17.1.6.1 Bupropion		X	
17.1.6.2 Selective serotonin reuptake inhibitors		X	X
17.1.6.3 Tricyclic antidepressants	X	X	X
17.1.7 Antiemetics		X	
17.1.8 Antimicrobials		X	X
17.1.8.1 Antibiotics		X	X
17.1.8.1.1 Isoniazid	X	X	
17.1.8.2 Antimalarials	X	X	X
17.1.8.3 Antiretrovirals	X	X	X
17.1.9 Antipsychotics	X	X	
17.1.10 Carbon monoxide	X	X	
17.1.11 Cardiovascular drugs			
17.1.11.1 Antiarrhythmics	X	X	
17.1.11.1.1 Digitalis	X	X	
17.1.11.2 Antihypertensives	X	X	
17.1.11.3 Beta blockers	X	X	
17.1.11.4 Calcium channel blockers	X	X	
17.1.12 Cholinergics	X	X	
17.1.12.1 Nerve agents	X	X	
17.1.12.2 Organophosphates	X	X	
17.1.13 Cyanides, hydrogen sulfide	X	X	
17.1.14 Heavy metals	X	X	

17.1.15	Herbicides, insecticides, and rodenticides	X	X	X
17.1.15.1	Paraquat	X	X	
17.1.16	Household/Industrial chemicals	X	X	X
17.1.16.1	Hydrocarbons	X	X	
17.1.16.2	Inhaled irritants	X	X	
17.1.16.3	Inhaled irritants	X	X	
17.1.17	Hypoglycemics/Insulin	X	X	
17.1.18	Lithium	X	X	X
17.1.19	Local anesthetics	X	X	
17.1.20	Marine toxins		X	X
17.1.21	Methemoglobinemia	X	X	
17.1.22	Mushrooms/Poisonous plants	X	X	
17.1.23	Nutritional supplements		X	X
17.1.23.1	Iron	X	X	X
17.1.23.2	Performance enhancing and weight-loss drugs	X	X	X
17.1.24	Recreational drugs	X	X	X
17.1.24.1	Cannabis			X
17.1.24.1.1	Cannabinoid hyperemesis syndrome /cyclic vomiting			X
17.1.24.2	Synthetic cannabinoids	X	X	X
17.1.24.3	Hallucinogens	X	X	X
17.1.24.4	GHB	X	X	X
17.1.25	Sedatives/Hypnotics	X	X	
17.1.26	Stimulants/Sympathomimetics	X	X	
17.1.26.1	Amphetamines/ Methylenedioxymethamphetamine	X	X	
17.1.26.2	Cocaine	X	X	X
17.1.26.3	Bath Salts	X	X	X

18. TRAUMATIC DISORDERS

	Critical	Emergent	Lower Acuity
18.1 Trauma			
18.1.1 Abdominal trauma			
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 Chest trauma			
18.1.2.1 Aortic dissection/Disruption	X		
18.1.2.2 Contusion			
18.1.2.2.1 Cardiac	X	X	X
18.1.2.2.2 Pulmonary	X	X	
18.1.2.3 Fracture			
18.1.2.3.1 Clavicle		X	X
18.1.2.3.2 Ribs/Flail chest	X	X	X
18.1.2.3.3 Sternum		X	X
18.1.2.4 Hemothorax	X	X	
18.1.2.5 Penetrating chest trauma	X	X	
18.1.2.6 Pericardial tamponade	X		
18.1.2.7 Pneumothorax			
18.1.2.7.1 Simple		X	
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		X	X
18.1.3.3 Burns			
18.1.3.3.1 Electrical	X	X	X
18.1.3.3.2 Chemical	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
18.1.3.6 Nail Injury			X
18.1.4 Facial fractures			X
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
18.1.4.5.1 Septal hematoma		X	
18.1.4.6 Zygomaticomaxillary complex			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	X
18.1.6	Head trauma			
18.1.6.1	Intracranial injury	X	X	
18.1.6.1.1	Concussion		X	
18.1.6.1.2	Intracranial hemorrhage	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	Lower 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	X	X	
18.1.9.4	Strangulation	X	X	X
18.1.10	Ophthalmologic trauma			
18.1.10.1	Corneal abrasions/Lacerations		X	X
18.1.10.2	Corneal burns			
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		X	
18.1.10.5	Hyphema		X	
18.1.10.6	Lacrimal duct injuries		X	
18.1.10.7	Penetrating globe injuries		X	
18.1.10.8	Retinal detachments		X	
18.1.10.9	Traumatic iritis		X	X
18.1.10.10	Retrobulbar hematoma		X	
18.1.11	Otologic trauma			
18.1.11.1	Hematoma		X	X
18.1.11.2	Perforated tympanic membrane			X
18.1.12	Pediatric fractures			
18.1.12.1	Epiphyseal		X	X
18.1.12.2	Greenstick		X	
18.1.12.3	Torus			X
18.1.12.4	Apophyseal avulsion			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	
18.1.14.3	High-pressure injection		X	
18.1.14.4	Injuries to joints		X	X
18.1.14.4.1	Knee		X	X
18.1.14.4.2	Penetrating		X	
18.1.14.5	Penetrating soft-tissue		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	
18.1.14.9	Vascular injuries	X	X	
18.1.15	Spinal cord and nervous system trauma			
18.1.15.1	Cauda equina syndrome	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	X	X	
18.2.2	Resuscitative hysterotomy	X		
18.2.3	Premature labor		X	
18.2.4	Rupture of uterus	X		
18.3	Multi-system Trauma	X	X	
18.3.1	Blast injury	X	X	
18.3.2	Falls	X	X	X
18.3.3	Motor vehicle collision	X	X	X
18.3.4	Assault	X	X	X

19. PROCEDURES AND SKILLS INTEGRAL TO THE PRACTICE OF EMERGENCY MEDICINE

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 Non-invasive 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 Post-resuscitative care
 - 19.2.4.1 Therapeutic hypothermia
- 19.2.5 Blood, fluid, and component therapy
- 19.2.6 Arterial catheter insertion
- 19.2.7 Central venous access
- 19.2.8 Intraosseous line placement
- 19.2.9 Defibrillation

19.3 Anesthesia and Acute Pain Management

- 19.3.1 Local anesthesia
- 19.3.2 Regional nerve block
- 19.3.3 Procedural sedation
- 19.3.4 Analgesia

19.4 Diagnostic and Therapeutic Procedures

- 19.4.1 Abdominal and Gastrointestinal
 - 19.4.1.1 Gastric lavage
 - 19.4.1.2 Gastrostomy tube replacement
 - 19.4.1.3 Nasogastric tube
 - 19.4.1.4 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 Thoracentesis
- 19.4.2.6 Thoracostomy
- 19.4.3 Cutaneous
 - 19.4.3.1 Escharotomy
 - 19.4.3.2 Incision and drainage
 - 19.4.3.3 Trephination, nails
 - 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 laryngoscopy
 - 19.4.4.3 Slit lamp examination
 - 19.4.4.4 Fundoscopy
 - 19.4.4.5 Otoscopy
 - 19.4.4.6 Tonometry
- 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 Fracture/dislocation immobilization techniques
 - 19.4.6.3 Fracture/dislocation reduction techniques
 - 19.4.6.4 Spine immobilization techniques
- 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
- 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

19.4.11 Toxicologic

19.4.11.1 Decontamination

19.5 Ultrasound

19.5.1 Diagnostic ultrasound

19.5.2 Procedural ultrasound

19.6 Other Diagnostic and Therapeutic Procedures

19.6.1 Foreign body removal

20. OTHER CORE COMPETENCIES OF THE PRACTICE OF EMERGENCY MEDICINE

20.1 Interpersonal and Communication Skills 人際與溝通技巧

20.1.1 Interpersonal Skills 人際技巧

20.1.1.1 Inter-departmental and medical staff relations

跨部門和醫療同仁的關係

20.1.1.2 Intra-departmental relations, teamwork, and collaboration skills

部門內的關係、團隊合作和合作技能

20.1.1.3 Patient and family experience of care 病人及家屬的照護經驗

20.1.2 Communication Skills 溝通技巧

20.1.2.1 Complaint management and service recovery 抱怨處理和服務補救

20.1.2.2 Conflict management 衝突管理

20.1.2.3 Crisis resource management 危機資源管理

20.1.2.4 Delivering bad news 告知壞消息

20.1.2.5 Negotiation skills 談判技巧

20.1.2.6 Shared decision making 醫病共享決策

20.2 Practice-based Learning and Improvement 從工作中學習與成長

20.2.1 Performance improvement and lifelong learning 能力的提昇和終身學習

20.2.1.1 Evidence-based medicine 實證醫學

20.2.1.2 Interpretation of medical literature 醫學文獻判讀

20.2.1.3 Knowledge translation 知識轉譯

20.2.1.4 Patient safety and medical errors 病人安全與醫療失誤

20.2.1.5 Performance evaluation and feedback 能力的評估與回饋

20.2.1.6 Research 研究

20.2.2 Practice guidelines 臨床指引

20.2.3 Education 教育

20.2.3.1 Patient and family 病人及家屬

20.2.3.2 Provider 醫療工作人員

20.2.4 Principles of quality improvement 品質改善原則

20.3 Professionalism 專業素養

20.3.1 Advocacy 倡導

20.3.1.1 Patient 病人

20.3.1.2 Professional 專業人員

20.3.1.3 Healthcare disparities 健康差距

20.3.2 Ethical Principles 倫理原則

20.3.2.1 Conflicts of interest 利益衝突

20.3.2.2 Diversity awareness 多元意識

20.3.2.3 Electronic communications/Social media 電子通訊/社交媒體

20.3.2.4 Medical ethics 醫學倫理

- 20.3.2.5 Stewardship of resources 資源管理
- 20.3.3 Leadership and Management Principles 領導和管理原則
- 20.3.4 Well-being 幸福
 - 20.3.4.1 Fatigue and impairment 疲勞及損傷
 - 20.3.4.2 Time management/Organizational skills 時間管理/組織能力
 - 20.3.4.3 Work/Life balance 工作/生活平衡
 - 20.3.4.4 Work dysphoria (burn-out) 工作厭煩(耗竭)
- 20.4 Systems-based Practice 體制下的臨床工作**
 - 20.4.1 Clinical Informatics 臨床資訊系統
 - 20.4.1.1 Computerized physician order entry 電腦化醫囑
 - 20.4.1.2 Clinical decision support 臨床決策支援
 - 20.4.1.3 Electronic health record 電子病歷
 - 20.4.1.4 Health information integration 醫療資訊整合
 - 20.4.2 ED Administration 急診行政管理
 - 20.4.2.1 Contracts and practice models 契約與執業模式
 - 20.4.2.2 Patient flow and throughput 病人流和進出量
 - 20.4.2.2.1 Patient triage and classification 病人檢傷與分級
 - 20.4.2.2.2 Hospital crowding and diversion 醫院壅塞與分流
 - 20.4.2.2.3 Observation and rapid treatment units
觀察與快速治療單位
 - 20.4.2.3 Financial Principles 財務原則
 - 20.4.2.3.1 Billing and coding 計價和編碼
 - 20.4.2.3.2 Cost-effective care and resource utilization
合乎成本效益的服務和資源利用
 - 20.4.2.3.3 Reimbursement issues 給付問題
 - 20.4.2.4 Human Resource Management 人力資源管理
 - 20.4.2.4.1 Allied health professionals 專業醫事人員
 - 20.4.2.4.2 Recruitment, credentialing, and orientation
招聘、資格審查和職前訓練
 - 20.4.3 ED Operations 急診運作
 - 20.4.3.1 Policies and procedures 作業規範與步驟
 - 20.4.3.2 ED data acquisition and operational metrics
急診資料搜集與營運指標
 - 20.4.3.3 Safety, security, and violence in the ED 急診安全、保全與暴力
 - 20.4.3.4 Patient satisfaction 病人滿意
 - 20.4.4 Health Care Coordination 健康照護整合
 - 20.4.4.1 End-of-life and palliative care 臨終與緩和療護
 - 20.4.4.1.1 Advance directives 預立醫療指示 (預立醫囑)

- 20.4.4.1.2 Coordination with hospice 與安寧療護合作
- 20.4.4.1.3 Organ donation 器官捐贈
- 20.4.4.2 Placement options 安置選項
 - 20.4.4.2.1 Activities of daily living/functional assessment
日常生活活動/功能評估
- 20.4.4.3 Outpatient services 門診服務
- 20.4.5 Regulatory/Legal 規定/法律
 - 20.4.5.1 Accreditation 醫院評鑑及緊急醫療能力分級評定
 - 20.4.5.2 Compliance and reporting requirements 合乎法規與報告要求
 - 20.4.5.3 Confidentiality 病人保密與隱私
 - 20.4.5.4 Consent, capacity, and refusal of care 知情同意,決定能力和拒絕治療
 - 20.4.5.5 Emergency Medical Services Act 緊急醫療救護法
 - 20.4.5.6 External quality metrics 外部品質指標
 - 20.4.5.7 Good Samaritan emergency care 義勇救人緊急避難免責法規
- 20.4.6 Risk Management 風險管理
 - 20.4.6.1 Liability and litigation 法律責任和訴訟
 - 20.4.6.2 Professional liability insurance 醫療責任保險
 - 20.4.6.3 Risk mitigation 降低風險
 - 20.4.6.4 Error disclosure 承認過失
 - 20.4.6.5 Root cause analysis 根本原因分析
- 20.4.7 Evolving Trends in Health Care Delivery 健康照護的發展趨勢
 - 20.4.7.1 Public policy 公共政策
- 20.4.8 Regionalization of Emergency Care 區域化的緊急醫療照護