

CPD Scholar: Medical Hub

Selection of Clinical CEU Articles

No:	Journal Article	Total Pages	Summary	Learning Outcomes	Average read time (min)	CEU's
1	A cohort-based study of host gene expression: tumor suppressor and innate immune/inflammatory pathways associated with the HIV reservoir size	26	The article "Host gene expression and HIV reservoir size" published in PLOS Pathogens investigates the complex interactions between host gene expression and the size of the HIV reservoir, which remains a significant challenge in achieving a functional cure for HIV. It highlights key molecular and immunological pathways that contribute to HIV persistence, including the roles of cytokines like IL-10, microbial translocation, and immune activation. The study also discusses the implications of specific biomarkers and therapeutic targets that influence HIV latency and immune responses during antiretroviral therapy (ART). Understanding these mechanisms is crucial for developing novel therapeutic strategies aimed at reducing the size of the viral reservoir and improving patient outcomes.	Upon completion of this activity, you should have an understanding of: 1. The role of host gene expression in the persistence of HIV reservoirs and how specific biomarkers like IL-10 and microbial translocation contribute to chronic immune activation and viral latency during ART. 2. The significance of immune activation pathways in HIV infection, particularly how certain cytokines (such as IL-10 and TNF-alpha) regulate immune responses and the establishment of viral reservoirs. 3. Potential therapeutic targets for reducing the HIV reservoir size, including how modulation of pathways such as TLR7 agonists and Connexin hemichannels may help to control or eradicate latent HIV.	130	2
2	World Allergy Organization Anaphylaxis Guidance 2020	25	The article titled "World Allergy Organization Journal (2020)" reviews current trends and best practices in the diagnosis and management of anaphylaxis. It delves into the global prevalence, risk factors, and mortality rates of anaphylaxis, particularly in pediatric and adult populations. The study highlights key advancements in treatment protocols, including the use of adrenaline autoinjectors, and evaluates the need for uniform guidelines for managing anaphylactic reactions. The article also emphasizes the role of cofactors in exacerbating anaphylaxis and advocates for widespread education on the timely administration of epinephrine to prevent	Upon completion of this activity, you should have an understanding of: 1. The global trends and risk factors associated with anaphylaxis, and how epidemiology data informs clinical management strategies across different regions. 2. The importance of adrenaline autoinjectors in the management of anaphylaxis, including the barriers to their global availability and how to address these challenges. 3. The role of cofactors in the severity of allergic reactions, and how clinicians can improve patient outcomes through personalized management approaches.	125	2

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			fatalities.			
3	Coronary angiography after out-of-hospital cardiac arrest without ST-segment elevation: a systematic review and meta-analysis of randomised trials	9	The article titled "Coronary Angiography after Out-of-Hospital Cardiac Arrest without ST-Segment Elevation: A Systematic Review and Meta-analysis" examines the efficacy and safety of early versus delayed coronary angiography (CAG) in patients who experience out-of-hospital cardiac arrest (OHCA) but without ST-segment elevation on an electrocardiogram. The meta-analysis, based on seven randomized controlled trials (RCTs), found no significant difference in all-cause mortality, neurological status, renal replacement therapy, or major bleeding events between early and delayed CAG groups. The findings suggest that early CAG may not offer a mortality benefit in this specific patient population, leading the authors to call for further research to refine the timing of CAG in these patients.	Upon completion of this module, practitioners should have a clear understanding of: 1. The Role of Early CAG in OHCA Patients without ST-Segment Elevation: Understanding that early CAG may not reduce mortality or improve neurological outcomes compared to delayed CAG in patients without ST-segment elevation. 2. Clinical Decision Making for CAG Timing: Insights into how and when coronary angiography should be performed in OHCA patients, particularly when ST-segment elevation is absent. 3. Impact of CAG on Safety Outcomes: Recognizing that both early and delayed CAG present similar safety profiles concerning major bleeding events and the need for renal replacement therapy.	45	2
4	Factors influencing postpartum haemorrhage detection and management and the implementation of a new postpartum haemorrhage care bundle (E-MOTIVE) in Kenya, Nigeria, and South Africa	14	The article "Factors Influencing Postpartum Hemorrhage Detection and Management and the Implementation of a New Postpartum Hemorrhage Care Bundle (E-MOTIVE) in Kenya, Nigeria, and South Africa" explores the causes of postpartum hemorrhage (PPH), which remains the leading cause of maternal deaths, especially in sub-Saharan Africa. The study looks at the implementation challenges and enablers for a new care bundle designed to improve the detection and management of PPH. It identified a range of individual, socio-cultural, and systemic factors that hinder or facilitate effective care. This research applies the Theoretical Domains Framework (TDF) and Behavior Change Wheel to identify key influences on PPH care, from lack of training to shortages of drugs and other resources.	Upon completion of this module, practitioners should have a clear understanding of: 1. The primary challenges in PPH detection and management in low-resource settings: Understanding how resource shortages, inadequate training, and socio-cultural factors hinder the implementation of evidence-based practices. 2. The E-MOTIVE bundle for PPH care: Learning the steps of the new PPH care bundle and how it aims to improve rapid detection and management of hemorrhage. 3. Behavioral interventions for improving PPH outcomes: Gaining insights into the necessary educational and systemic interventions that can enhance the uptake of new care practices.	70 23	2

The article "Management of Severe Trauma worldwide: Implementation of Trauma systems in emerging countries—China, Russia and South Africa South Africa South Africa outnites. China, Russia and South Africa outnites. China, Russia and South Africa outnites. China, Russia and South Africa outnites. China, Russia, and South Africa outnites. China, Russia, and South Africa outnites. China, Russia, and South Africa outnites outnites, focusing on their pre-hospital and inhospital care, trauma centers, trauma registry. The study provides a comparative analysis of how trauma care systems in China, Russia, and South Africa are being developed or enhanced to respond to the rising number of injuries, particularly due to road accidents and natural disasters. Each country faces unique challenges, such as geographic vastness and inequality in access to medical resources, and the study suggests improvements, such as the development of aeromedical services in the study suggests improvements, such as the development of aeromedical services in remote regions, the creation of national trauma registries, and enhanced training for healthcare providers. 50 6 Advances in malaria pharmacology and the online guide to MALARIA PHARMACOLOGY: IUPHAR review 38 17 This article discusses advancements in malaria pharmacology and due online guide to MALARIA PHARMACOLOGY: IUPHAR review 38 18 The article provides an extensive review of the current clinical trials and drug development of new treatments. It dives into several classes of anti-malarial agents and their mechanisms of action, exploring preclinical studies on novel inhibitors and their potential application in treating malaria. The article provides an extensive review of the current clinical trials and drug development of the current divides and their malaria dagents at targeting both the blood and liver stages of malaria parasites. 18 Pharmacokinetic and Pharmacokynamic Considerations: The challenges faced by each country in managing trauma care in these countries. 19 Pharmacokine			<u></u>	PD Scholar - Medical Hub (Journal A	rticle List – Clinical CEU S)		
improvements, such as the development of aeromedical services and better coordination between public and private healthcare sectors. This article discusses advancements in malaria pharmacology and the online guide to MALARIA PHARMACOLOGY: IUPHAR review 38 This article discusses advancements in malaria pharmacology and outlines the significant steps toward the development of new treatments. It dives into several classes of anti-malarial agents and their mechanisms of action, exploring preclinical studies on novel inhibitors and their potential application in treating malaria. The article provides an extensive review of the current clinical trials and drug development efforts aimed at combating drug-resistant malaria strains. The article provides and drug development of novel anti-malarial agents targeting both the blood and liver stages of malaria parasites. The article, issued by the American Thoracic Society, provides updated clinical Thoracic Society, provides updated clinical Thoracic Society, provides updated clinical Torus: The development of novel anti-malarial agents targeting both the blood and liver stages of malaria parasites. The article, issued by the American Thoracic Society, provides updated clinical	\ \{\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	trauma worldwide: implementation of trauma systems in emerging countries: China, Russia and		The article "Management of Severe Trauma Worldwide: Implementation of Trauma Systems in Emerging Countries—China, Russia, and South Africa" examines the trauma systems of these three countries, focusing on their pre-hospital and inhospital care, trauma centers, trauma registry, and governance. The study provides a comparative analysis of how trauma care systems in China, Russia, and South Africa are being developed or enhanced to respond to the rising number of injuries, particularly due to road accidents and natural disasters. Each country faces unique challenges, such as geographic vastness and inequality in access to	Upon completion of this activity, you should have an understanding of: 1. The key components of trauma care systems in China, Russia, and South Africa, including pre-hospital and inhospital care, trauma centers, and the use of trauma registries. 2. The specific challenges faced by each country in managing trauma care, such as geographic limitations, the absence of national trauma registries, and disparities in healthcare access. 3. The proposed strategies for improving trauma care in these countries, such as the introduction of aeromedical services in		2
current clinical trials and drug development efforts aimed at combating drug-resistant malaria strains. malaria strains. malaria agents targeting both the blood and liver stages of malaria parasites. malaria strains. Pharmacokinetic and Pharmacodynamic Considerations: The challenges faced in the clinical development of new drugs, including their efficacy in field trials and laboratory settings. The article, issued by the American Thoracic Society, provides updated clinical an understanding of: Upon completion of this activity, you should have an understanding of:	•	pharmacology and the online guide to MALARIA PHARMACOLOGY: IUPHAR	31	medical resources, and the study suggests improvements, such as the development of aeromedical services and better coordination between public and private healthcare sectors. This article discusses advancements in malaria pharmacology and outlines the significant steps toward the development of new treatments. It dives into several classes of anti-malarial agents and their mechanisms of action, exploring preclinical studies on novel inhibitors and their potential application in treating malaria. The	trauma registries, and enhanced training for healthcare providers. Upon completion of this activity, learners should have an understanding of: 1. Mechanisms of Malaria Drug Resistance: The biological and molecular pathways that lead to drug resistance in Plasmodium falciparum and other malariacausing parasites. 2. Current Advances in Anti-Malarial	50	2
Thoracic Society, provides updated clinical an understanding of:				current clinical trials and drug development efforts aimed at combating drug-resistant malaria strains.	malarial agents targeting both the blood and liver stages of malaria parasites. 3. Pharmacokinetic and Pharmacodynamic Considerations: The challenges faced in the clinical development of new drugs, including their efficacy in field trials and laboratory settings.	155	
practice guidelines for the management of 1. The use of conticusterolds in ARDS.			13			65	2 G CENTER O

	Respiratory Distress Syndrome: An Official American Thoracic Society Clinical Practice Guideline		Adult Respiratory Distress Syndrome (ARDS). The guidelines incorporate new evidence on various treatments, including the use of corticosteroids, venovenous extracorporeal membrane oxygenation (VV-ECMO), neuromuscular blocking agents, and positive end-expiratory pressure (PEEP). These recommendations are based on a multidisciplinary panel's review of the latest evidence using the GRADE framework. Key points include: 1. Corticosteroids: Suggested for ARDS patients due to their moderate certainty of reducing mortality and shortening hospital stays. 2. VV-ECMO: Recommended in specific cases of severe ARDS, particularly when other treatments are not effective, though with low certainty due to its invasive nature. 3. Neuromuscular Blockade: Recommended in the early stages of severe ARDS to possibly reduce mortality, though evidence certainty is low. 4. PEEP: Higher PEEP without lung recruitment maneuvers is recommended for moderate to severe ARDS cases, while prolonged lung recruitment maneuvers are not recommended due to potential harm		You will understand when corticosteroids are recommended for ARDS treatment, their benefits in reducing mortality, and potential risks associated with their use. VV-ECMO in Severe ARDS: You will learn the criteria for selecting patients for VV-ECMO treatment in severe ARDS, including the invasive nature and resource-intensity of this approach. Application of Neuromuscular Blocking Agents and PEEP: You will understand the recommendations for using neuromuscular blocking agents in early severe ARDS, the reasoning behind higher PEEP strategies, and why lung recruitment maneuvers should be avoided in certain patients.		
8	Tight Blood-Glucose Control without Early Parenteral Nutrition in the ICU	11	This article investigates the effects of tight blood-glucose control versus liberal glucose control in critically ill patients who are not receiving early parenteral nutrition. The study randomly assigned patients into two groups: one receiving tight glucose control, targeting blood-glucose levels between 80 to 110 mg per deciliter, and the other	an und	completion of this activity, you should have erstanding of: The effects of tight versus liberal glucose control in ICU patients: Learners will understand the impact of different glucose control strategies on patient outcomes, particularly regarding ICU stay duration and mortality.	55	2

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			receiving liberal glucose control, initiating insulin only when blood-glucose levels exceeded 215 mg per deciliter. The primary outcomes measured were the length of ICU stay and mortality at 90 days. The study concluded that tight glucose control did not significantly impact the duration of ICU care or mortality rates but was associated with fewer instances of severe acute kidney injury and cholestatic liver dysfunction.	2. Complications related to glucose management in critically ill patients: Learners will comprehend how tight glucose control may reduce the prevalence of acute kidney injury and liver dysfunction in ICU patients. 3. The role of computer algorithms in managing blood glucose levels: Learners will explore how the use of the LOGIC-Insulin algorithm helps avoid iatrogenic hypoglycemia, providing a safer approach to blood glucose management in ICU settings.
9	Clinical decision support for ExtraCorporeal Membrane Oxygenation: Will we fly by wire?	14	This article explores the development and potential future of clinical decision support systems for ECMO, focusing on prognostic models that improve the management and allocation of ECMO in critically ill patients. It discusses various prognostic models, including the concept of a "Digital Twin," which simulates a patient's clinical condition and provides predictive assessments based on real-time data. The article also delves into the future of ECMO care, suggesting that in the near future, adjustments in ECMO therapy could be guided by real-time digital models and automated systems, similar to the "fly by wire" systems used in aviation.	Upon completion of this activity, you should have an understanding of: 1. Prognostic Models in ECMO Allocation and Management: Learners will understand how epidemiological and computational models can help clinicians make decisions on ECMO use, improve patient outcomes, and optimize resources. 2. Digital Twin and Its Clinical Application: Learners will explore the concept of a Digital Twin and how it can be used to simulate patient outcomes under different therapeutic scenarios, potentially enhancing ECMO therapy and ICU workflows. 3. Future of ECMO and Automated Clinical Support: Learners will gain insight into the potential future of ECMO management, where clinical decisions may be automated and optimized through advanced computational models and real-time data analysis.
10	An Official American Thoracic Society/European Society of Intensive Care Medicine/Society of Critical Care Medicine Clinical Lice Guideline:	11	The article provides updated evidence- based clinical guidelines on the use of mechanical ventilation in adult patients with Acute Respiratory Distress Syndrome (ARDS). The recommendations include	Upon completion of this activity, you should have an understanding of: 1. The Use of Lower Tidal Volumes and Inspiratory Pressures in ARDS Patients: Learners will understand the importance of
	The lastice Guideline:		using lower tidal volumes (4-8 ml/kg) and	limiting tidal volumes and inspiratory 55

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	Mechanical Ventilation in Adult Patients with Acute Respiratory Distress Syndrome		inspiratory pressures under 30 cm H2O for all ARDS patients. For patients with severe ARDS, prone positioning for more than 12 hours per day is recommended. Additionally, routine use of high-frequency oscillatory ventilation is discouraged. Conditional recommendations are made for using higher positive end-expiratory pressure (PEEP) and recruitment maneuvers in moderate to severe ARDS cases. The guidelines highlight the need for further evidence on the use of extracorporeal membrane oxygenation (ECMO) in severe ARDS cases.	pressures to reduce lung injury and improve outcomes in ARDS management. 2. The Application of Prone Positioning in Severe ARDS: Learners will recognize the benefits of prone positioning in improving oxygenation and reducing mortality in severe ARDS cases, and when it should be applied. 3. The Role of ECMO and Other Interventions in Severe ARDS: Learners will gain insights into when and how to use ECMO, PEEP, and recruitment maneuvers in severe ARDS cases based on conditional recommendations and current evidence gaps.		
11	Developments in procedural sedation for adults	7	The article provides a comprehensive review of developments in procedural sedation for adults. Key areas include the adoption of capnography as a standard monitoring tool, the use of short-acting agents like remimazolam and oliceridine, and the potential benefits and drawbacks of sedation agents such as dexmedetomidine and propofol. The article emphasizes the need for appropriate training for non-anaesthetists administering sedation and reviews recent drugs, including remifentanil and methoxyflurane, for sedation in various medical procedures. The inclusion of capnography in monitoring systems is shown to improve patient safety by preventing hypoxaemia during sedation.	Upon completion of this activity, you should have an understanding of: 1. The Importance of Capnography in Sedation Monitoring: Learners will understand how capnography helps reduce airway complications and improve overall patient safety during procedural sedation. 2. New Sedation Agents and Their Clinical Applications: Learners will be familiar with the latest drugs like remimazolam and oliceridine, including their benefits in reducing recovery time and adverse effects compared to traditional agents like propofol. 3. Challenges and Best Practices in Administering Sedation: Learners will understand the competencies required to safely administer sedation, particularly for non-anaesthetists, and the importance of appropriate sedation depth monitoring and training.	35	2
12	2024 European Society of Hypertension clinical practice guidelines for the management of arterial hypertension	15	The article provides the 2024 European Society of Hypertension (ESH) clinical practice guidelines for managing arterial hypertension. These guidelines focus on accurate blood pressure measurement, diagnosis, and risk assessment using office-based, ambulatory, and home-based	Upon completion of this activity, you should have an understanding of: 1. Accurate Blood Pressure Measurement Techniques: Learners will understand the importance of using different blood pressure monitoring systems (office, ambulatory, and home) for accurate	4	2
			monitoring systems. Key aspects include	diagnosis and management of	75	

			the introduction of lifestyle interventions, pharmacological treatments, and the strategic management of hypertension, especially in high-risk populations. The guidelines emphasize a personalized approach to treatment based on cardiovascular risk factors and hypertension-mediated organ damage (HMOD). The article includes a MASTERplan to simplify implementation in clinical practice.	hypertension. 2. Lifestyle and Pharmacological Interventions in Hypertension: Learners will be able to identify the role of lifestyle modifications, such as dietary changes and exercise, as well as the proper use of antihypertensive medications based on individual patient needs. 3. Risk Stratification and Management of Hypertension: Learners will grasp how to assess cardiovascular risk and manage hypertension through a stepwise approach, considering factors like age, sex, comorbidities, and organ damage
13	Human Papillomavirus Prevalence in Oral and Oropharyngeal Rinse and Gargle Specimens of Dental Patients and of an HIV- Positive Cohort from Pretoria, South Africa	10	This research article examines the prevalence of human papillomavirus (HPV) in oral and oropharyngeal rinse and gargle specimens from dental patients and HIV-positive individuals in Pretoria, South Africa. The study involved 221 participants, with data collected on demographic factors, sexual behavior, smoking, and alcohol use. The research found that HPV DNA was detectable in 3.6% of participants, with no significant correlation between HPV presence and behavioral or demographic data. The study highlighted the low prevalence of HPV in these populations and the absence of significant differences between HIV-positive individuals and general dental patients. The results align with global data on oral/oropharyngeal HPV prevalence.	Upon completion of this activity, you should have an understanding of: 1. The relationship between oral/oropharyngeal HPV infection and highrisk behaviors such as smoking, alcohol use, and oral sex. 2. The methods used to detect HPV in rinse and gargle specimens and the significance of HPV subtypes in oral health. 3. The implications of low HPV prevalence in different population groups and the lack of correlation with HIV status.
14	Knowledge about type 2 diabetes: its impact for future management	13	This article assesses the level of diabetes knowledge among individuals with Type 2 diabetes and identifies major knowledge gaps that contribute to poor disease management. The study involved 1,200 individuals, nearly 40% of whom were insulin-treated, and examined key areas such as diet, physical activity, glycemic	Upon completion of this activity, you should have an understanding of: 1. The Importance of Knowledge in Diabetes Management: Learners will understand how improved knowledge of Type 2 diabetes can prevent complications and enhance self-management. 2. Identifying Major Knowledge Gaps in

			control, and medication. The results revealed significant knowledge deficits, especially in recognizing signs of ketoacidosis, dietary choices, and proper blood glucose monitoring methods. The authors stress the importance of educational interventions to enhance diabetes management, thereby preventing complications and improving quality of life.	Diabetes Care: Learners will be able to recognize specific gaps in diabetes knowledge, such as glycemic control, diet, and symptom recognition, that hinder effective disease management. 3. The Role of Educational Interventions in Preventing Complications: Learners will explore how targeted educational programs can improve patients' understanding of their condition and foster better self-care practices		
15	Overview of recent advancements in asthma management	10	The article focuses on recent advancements in asthma management, particularly the move toward personalized medicine through the use of biologic agents. Asthma is presented as a complex, heterogeneous disease with various phenotypes and endotypes. The management of asthma involves addressing modifiable risk factors, optimizing inhaled pharmacotherapy, and considering biologic treatments for severe cases. The article emphasizes patient education, engagement, and the need for personalized management strategies based on specific asthma subtypes.	Upon completion of this activity, you should have an understanding of: 1. The Role of Personalized Medicine in Asthma Management: Learners will understand how biologic treatments are targeted toward specific asthma phenotypes and endotypes, improving patient outcomes. 2. Phenotypic and Endotypic Classification in Asthma: Learners will be able to identify different asthma phenotypes (e.g., allergic, eosinophilic) and endotypes (e.g., T2-high, T2-low), which guide the selection of appropriate therapies. 3. The Importance of Biologic Agents in Severe Asthma: Learners will explore the impact of biologic agents on reducing exacerbation rates and improving the quality of life in patients with severe asthma.	50	2
16	Update in Chronic Obstructive Pulmonary Disease 2020	9	This article explores the relationship between environmental factors and health, focusing on how different exposures contribute to health disparities. The research highlights the significance of socio-economic status and environmental conditions on individual and population health outcomes. It emphasizes that interventions must consider these	Upon completion of this activity, you should have an understanding of: 1. The Impact of Environmental Exposures on Health: Learners will understand how different environmental factors, such as air pollution and access to green spaces, influence health outcomes, particularly in disadvantaged communities. 2. Socio-economic Disparities in	45	2

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	environmental factors to address health inequalities effectively. The article reviews various environmental exposures, including air pollution, noise, and green spaces, and their impact on health.	Environmental Health: Learners will gain insights into how socio-economic factors interact with environmental exposures to exacerbate health disparities, emphasizing the need for equitable policy interventions. 3. Strategies for Addressing Environmental Health Inequalities: Learners will explore strategies for mitigating the adverse effects of environmental exposures, including public health policies and urban planning aimed at reducing health disparities.	
AGA Clinical Practice Guideline on the Pharmacological Management of Irritable Bowel Syndrome With Diarrhea	The article is an updated guideline from the American Gastroenterological Association (AGA) focusing on the pharmacological management of Irritable Bowel Syndrome with predominant diarrhea (IBS-D). It outlines various pharmacological agents like eluxadoline, rifaximin, alosetron, and others reviewing their efficacy, dosage, and potential adverse effects. The guidelines are intended for clinicians and provide evidence-based recommendations using the GRADE framework		2
The screening and management of sleep disturbances in people living with HIV: Delphi consensus	This article provides a comprehensive consensus statement on managing sleep disturbances in people living with HIV (PLWH). Using the Delphi method, experts reached an agreement on the screening, diagnosis, and management of sleep-related issues in this population. The article addresses the high prevalence of sleep disturbances in PLWH, the impact of antiretroviral therapy (ART), and the importance of early identification and intervention. Key recommendations include the use of standardized screening tools, tailored treatment plans incorporating both pharmacological and non-pharmacological interventions, and the importance of	Upon completion of this activity, you should have an understanding of: 1. The prevalence and impact of sleep disturbances in people living with HIV, and the role of ART in contributing to these disorders. 2. How to use standardized screening tools for the identification of sleep issues in PLWH and the steps for a comprehensive diagnosis. 3. The recommended pharmacological and non-pharmacological interventions for treating sleep disturbances, emphasizing an interdisciplinary approach in the management of PLWH.	2
	interdisciplinary care.	70	30.00

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19	Practical outpatient management of worsening chronic heart failure	12	This article provides a comprehensive review of practical outpatient management of worsening chronic heart failure (WHF). It explores the limitations of traditional hospital-based management of WHF and discusses the shift toward outpatient intravenous (IV) diuretic treatment strategies that have been developed, particularly in American healthcare centers. The article outlines the pathophysiological background of diuretic therapy, identifies suitable patient profiles for outpatient treatment, and offers practical guidelines for clinicians to implement this approach in different healthcare settings, such as day hospitals or home hospitalization.	Upon completion of this activity, you should have an understanding of: 1. The pathophysiological mechanisms behind heart failure and how diuretics relieve congestion. 2. How to identify and manage patients with worsening heart failure in an outpatient setting. 3. Practical guidelines for administering IV diuretic treatments in outpatient care.	60	2
20	Extracorporeal Membrane Oxygenation (ECMO) for Pulmonary and/or Cardiopulmonary Support—a Brief Review and Our Experience	10	This article discusses the use of ECMO, a life-saving modality for patients with severe cardiac, pulmonary, or cardiorespiratory failure that is refractory to conventional treatment. ECMO can provide either partial or full support depending on the condition of the patient. It is used in both adult and pediatric populations, particularly in patients who have not responded to other interventions. The article explores ECMO's history, landmark trials, its indications for use, and the complications that can arise during ECMO therapy. Furthermore, the paper provides insights into the authors' clinical experience with ECMO at a large-volume center in India.	Upon completion of this activity, you should have an understanding of: 1. The Use of ECMO in Cardiac and Pulmonary Support: Learners will understand the role of ECMO in providing temporary mechanical support to patients with severe cardiac and pulmonary failure, particularly those unresponsive to conventional treatment methods. 2. The Clinical Indications and Techniques for VV and VA ECMO: Learners will explore when and how ECMO should be utilized, including a distinction between veno-arterial (VA) and veno-venous (VV) ECMO, and their respective indications for respiratory versus cardiac support. 3. The Complications and Monitoring of ECMO Therapy: Learners will gain knowledge of the potential complications that may arise during ECMO, such as bleeding, infection, and neurological issues, and the importance of monitoring and troubleshooting in ECMO management.	50	LIMING CENTER OF

27 The article provides a comprehensive review of clinical Trais in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS) and Future Perspectives Syndrome (ME/CFS), it focuses on identifying effective treatments for this debilitating illness. Current guidelines emphasizes symptom management as there is no known cure. The review covers pharmacological interventions, dietary supplements, immunological, metabolic, gastrointestinal, and neurological treatments, while discussing the heterogeneity of ME/CFS presentation and the comorbidities involved. 135				PD Scholar - Medical Hub (Journal A	<u> </u>		
Sedatives, and Antiseizure Medications Frequently Used in Critically III Neonates: A Narrative Review Naturative Review And Inscribing to Pharmacological Approac	21	Treatment: An Overview of Clinical Trials in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS)	27	review of clinical trials and research concerning Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS). It focuses on identifying effective treatments for this debilitating illness. Current guidelines emphasize symptom management as there is no known cure. The review covers pharmacological interventions, dietary supplements, immunological, metabolic, gastrointestinal, and neurological treatments, while discussing the heterogeneity of ME/CFS presentation and	 an understanding of: The complexity and heterogeneity of ME/CFS, including the difficulties in diagnosing and treating the disease. The current treatment options for ME/CFS and the importance of clinical trials in identifying future therapeutic interventions. The role of various bodily systems—immune, gastrointestinal, and neurological—in the pathology of ME/CFS 	135	2
Osteoarthritis Care: What Do We Know About What About What Patients Want from Osteoarthritis Treatment?" explores patient- centered care in osteoarthritis (OA) Osteoarthritis Care: What Do We Know About What Patients Want from Osteoarthritis Treatment?" explores patient- centered care in osteoarthritis (OA) an understanding of: 1. The significance of patient-centered care and shared decision-making in osteoarthritis treatment.	22	Sedatives, and Antiseizure Medications Frequently Used in Critically III Neonates: A	45	review of antibiotics, analgesic sedatives, and antiseizure medications used in critically ill neonates. It highlights the challenges of neonatal pharmacotherapy, particularly the variability in medication use across different neonatal intensive care units (NICUs). The article reviews the pharmacokinetics, safety profiles, recommended dosages, and evidence-based guidelines for antimicrobials, analgesics, and antiseizure medications. Special focus is given to the potential adverse effects of early antibiotic use on the neonatal microbiome and its long-term impacts on immune function, neurodevelopment, and other outcomes. The article also emphasizes the need for more rigorous clinical trials and better pharmacological strategies tailored to	have an understanding of: 1. Pharmacological Approaches in Neonates: Understanding the pharmacokinetics, safety, and recommended dosages of antibiotics, analgesics, and antiseizure medications used in critically ill neonates. 2. Impact of Early Antibiotic Use: Recognizing the potential long-term impacts of early antibiotic use on the neonatal microbiome and the risk of immune-related diseases and neurodevelopmental issues. 3. Evidence-Based Guidelines for Neonatal Care: Gaining insights into the latest evidence-based guidelines and clinical recommendations for managing		2
centered care in osteoarthritis (OA) osteoarthritis treatment.	23	Osteoarthritis Care: What Do We Know About What	12	Osteoarthritis Care: What Do We Know About What Patients Want from	an understanding of: 1. The significance of patient-centered care		2
		Destathritis Treatment?				60	

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			treatment, emphasizing the importance of understanding patient preferences. The review highlights the growing focus on patient preferences in OA treatments, the role of shared decision-making, and the balance between reducing pain and avoiding side effects. The authors also address the mismatch between frequently used treatments and those recommended in guidelines, suggesting that individual preferences can improve treatment adherence.	 The role of patient preferences in determining treatment choices, especially when balancing the benefits and risks of different therapies. How patient treatment preferences, particularly the desire to minimize side effects, influence the effectiveness and adherence to osteoarthritis treatments. 		
practice on the drugs seda	rt-approved best recommendations use of sedative and intentional tion in specialist ve care (SedPall)	14	This article outlines a stepwise approach to developing best practice recommendations for the use of sedative drugs in specialist palliative care. It focuses on relieving intolerable suffering in patients, covering ethical, clinical, and legal challenges. The recommendations were developed through a Delphi study and a consensus conference, ensuring high expert approval. They cover various themes, including indications for sedation, decision-making, medication, monitoring, and support for patients and their families.	Upon completion of this activity, learners should have an understanding of: 1. Ethical and Clinical Considerations in Sedation: Learners will understand the ethical and clinical principles involved in administering sedation, including the importance of patient autonomy and dignity. 2. Decision-Making Process in Sedation: Learners will grasp the stepwise approach to deciding when sedation is appropriate, from assessing refractory symptoms to obtaining informed consent and involving families. 3. Best Practices for Administering and Monitoring Sedation: Learners will explore the best practice recommendations for administering sedative drugs, ensuring ongoing monitoring, and collaborating with a multidisciplinary team to support both the patient and their family.	70	2
Treatme Patients	et of Mental Health ent on Outcomes in s With Heart Failure emic Heart Disease	9	This study explores the impact of mental health treatment, specifically addressing anxiety and depression, on patients with heart disease, particularly those with ischemic heart disease and heart failure. It demonstrates that mental health interventions, such as psychotherapy and	Upon completion of this activity, you should have an understanding of: 1. The significant role mental health treatment plays in reducing hospital readmissions and mortality in patients with cardiovascular disease. 2. The importance of integrating mental		2
			antidepressant medications, significantly	health assessments and treatment in the	45	

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	reduce the likelihood of hospital readmissions, emergency department visits, and overall mortality. The findings advocate for screening and treating mental health conditions in patients with cardiovascular diseases to improve both heart disease outcomes and quality of life.	care of patients with heart failure and ischemic heart disease. 3. How untreated anxiety and depression exacerbate cardiovascular conditions and the beneficial outcomes of collaborative care involving both mental health and cardiovascular health professionals	
6 Emergency care interventions for paediatric severe acute respiratory infections in low- and middle- income countries: A systematic review and narrative synthesis	This article systematically reviews emergency care interventions for pediatric severe acute respiratory infections (SARIs) in low- and middle-income countries (LMICs). It examines the effectiveness of various interventions like respiratory support, antibiotics, chest physiotherapy, and nebulized treatments. The article concludes that respiratory support interventions, particularly oxygen delivery, have the strongest evidence for improving clinical outcomes, while other interventions show mixed results or require further research. The article also highlights the need for further research on CPAP in diverse settings.	Upon completion of this activity, you should have an understanding of: 1. The types of emergency care interventions most effective for pediatric SARIs in LMICs. 2. The benefits and limitations of respiratory support systems like oxygen delivery and CPAP for children with severe pneumonia. 3. The limited effectiveness of adjuvant treatments, such as vitamins and nebulized saline, in improving clinical outcomes in bronchiolitis and pneumonia.	75
7 Management of Acute Life- Threatening Asthma Exacerbations in the Intensive Care Unit	The article titled "Management of Acute Life-Threatening Asthma Exacerbations in the Intensive Care Unit" explores different therapeutic strategies to manage severe asthma exacerbations in critically ill patients. It emphasizes various pharmacological and non-pharmacological treatments, such as bronchodilators, corticosteroids, non-invasive ventilation, and advanced interventions like extracorporeal membrane oxygenation (ECMO). The review also highlights the importance of individualized care, and while standard guidelines exist, the article calls for additional research to enhance the understanding of ICU-specific asthma	Upon completion of this activity, you should have an understanding of: 1. The various pharmacological and non-pharmacological treatments available for managing acute life-threatening asthma exacerbations in the ICU, including bronchodilators, corticosteroids, and non-invasive ventilation. 2. The potential role of advanced interventions such as ECMO for asthma patients who do not respond to conventional treatments. 3. The significance of a structured approach to managing severe asthma in the ICU, including identifying patients at high risk for complications and implementing timely interventions.	2 uing Cr.
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	CPD Scholar - Medical Hub (Journal Article List – Clinical CEU's)					
28	Performance of triage systems in emergency care: a systematic review and meta-analysis	9	The article provides a comprehensive systematic review and meta-analysis on the performance of different emergency care triage systems, specifically focusing on the Canadian Triage and Acuity Scale (CTAS), Emergency Severity Index (ESI), and Manchester Triage System (MTS). It evaluates these systems' abilities to classify high- and low-urgency patients effectively, based on criteria such as mortality, ICU admission, and discharge rates. The findings suggest that although these triage systems perform moderately well, their accuracy is highly variable, with factors like patient volume and casemix affecting outcomes. The article highlights the need for further research to improve triage systems and better understand the determinants that impact their performance.	Upon completion of this activity, you should have an understanding of: 1. The key differences in the performance of commonly used triage systems in emergency care. 2. How patient volume and casemix may influence the effectiveness of triage systems in prioritizing patients. 3. The importance of accurately identifying high-urgency patients to prevent delays in diagnosis and treatment in emergency departments.	45	2
29	Abdominal Pain in the Emergency Department: How to Select the Correct Imaging for Diagnosis	11	The article discusses the use of imaging for diagnosing abdominal pain in emergency department settings. It covers different imaging modalities such as radiographs, computed tomography (CT), ultrasound, and magnetic resonance imaging (MRI), focusing on their diagnostic utility, appropriateness, and risks. Special populations like pediatric, pregnant, geriatric, and immunocompromised patients are highlighted, along with guidance on the use of contrast agents.	Upon completion of this activity, you should have an understanding of: 1. The appropriate imaging modalities for diagnosing abdominal pain in different patient populations. 2. The risks associated with the use of computed tomography (CT) and other imaging technologies, especially in vulnerable populations like children and pregnant women. 3. The decision-making process in selecting imaging modalities based on the suspected diagnosis and clinical presentation.	<u>45</u>	2
30	Naloxone Use in Novel Potent Opioid and Fentanyl Overdoses in Emergency Department Patients	10	This study examines the clinical outcomes and naloxone use in patients admitted to the emergency department with opioid overdoses involving novel potent opioids (NPOs) such as brorphine, isotonitazene, and metonitazene, compared with fentanyl overdoses. The findings show that NPO overdoses require higher naloxone doses and are associated with severe outcomes	 Upon completion of this activity, you should have an understanding of: The clinical challenges in treating opioid overdoses involving novel potent opioids compared to fentanyl. The significance of naloxone in reversing overdoses from these powerful synthetic opioids. The public health implications of the 	50	2

	CPD Scholar - Medical Hub (Journal Article List - Clinical CEU's)					
			like cardiac arrest, especially with metonitazene. The study highlights the rising presence of NPOs in the illicit opioid supply and their higher potency compared to fentanyl, posing a growing public health threat.	increasing presence of novel potent opioids in the illicit drug market		
31	Drug-resistant bacteria in the critically ill: patterns and mechanisms of resistance and potential remedies	8	This review article discusses the patterns and mechanisms of antimicrobial resistance in critically ill patients, particularly within the intensive care unit (ICU). It highlights the significant threat posed by multidrugresistant (MDR) organisms, such as the ESKAPE pathogens, including Enterococcus faecium, Staphylococcus aureus, Klebsiella pneumoniae, Acinetobacter baumannii, Pseudomonas aeruginosa, and Enterobacter species. The article outlines key factors contributing to antibiotic resistance, including overuse and improper use of antibiotics. The authors emphasize the need for effective antimicrobial stewardship, novel therapeutic strategies, and preventive measures like infection control and surveillance to address the growing challenge of antibiotic resistance.	Upon completion of this activity, you should have an understanding of: 1. The mechanisms by which multidrugresistant organisms develop resistance, including genetic mutations and horizontal gene transfer. 2. The importance of antimicrobial stewardship programs in managing and preventing antibiotic resistance in the ICU setting. 3. Emerging therapeutic approaches and preventive strategies for controlling infections caused by multidrug-resistant bacteria in critically ill patients.	40	2
32	Perioperative Management	39	This article presents an in-depth analysis of	Upon completion of this activity, you should have		2
	of Antithrombotic Therapy		various therapeutic interventions and clinical approaches to managing chronic digestive diseases. It covers pharmacological treatments, emerging therapies, and patient-centric care strategies. The document also highlights diagnostic tools, emphasizing the need for personalized treatments to improve patient outcomes. Furthermore, the article discusses the role of gut microbiota in disease progression and how therapeutic modulation of microbiota can be a promising treatment option for some	an understanding of: 1. Therapeutic Strategies for Chronic Digestive Diseases: Learners will understand the current and emerging pharmacological treatments and how they can be tailored to individual patient profiles to improve outcomes. 2. The Role of Gut Microbiota in Disease Progression: Learners will comprehend the influence of gut microbiota on digestive health and how modulating this environment can offer therapeutic benefits. 3. Diagnostic Tools for Personalized Care:		MINING CENTER
			gastrointestinal disorders.	Learners will gain insight into the	195	1 3/8
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33 The barriers and facilitators for the implementation of clinical practice guidelines in healthcare: an umbrella review of qualitative and quantitative literature 34 Extracorporeal Membrane Oxygenation for Respiratory Failure: A Narrative Review of patients with severe respiratory failure. A Narrative Review of the respiratory distress syndrome (ARDS) and other life-threatening respiratory failure. EMO has become a crucial life-saving intervention in cases of acute respiratory failure. EMO has become a crucial life-saving intervention in cases of acute respiratory failure. A RDS or refractory hypoxemia, a RDS		CPD Scholar - Medical Hub (Journal Article List – Clinical CEU's)					
associated with the implementation of clinical practice guidelines in healthcare: an umbrella review of qualitative and quantitative literature and a quantitative, literature and a quantit					diagnostic tools and methodologies that support personalized treatment plans in managing chronic digestive diseases.		
34 Extracorporeal Membrane Oxygenation for Respiratory Failure: A Narrative Review 15 The article "Extracorporeal Membrane Oxygenation (ECMO) for Respiratory Failure: A Narrative Review" provides an indepth analysis of the role of ECMO in treating patients with severe respiratory failure. ECMO has become a crucial lifesaving intervention in cases of acute respiratory distress syndrome (ARDS) and other life-threatening respiratory conditions, particularly when conventional therapies like mechanical ventilation are insufficient. The review explores the physiological 15 The article "Extracorporeal Membrane Oxygenation (ECMO) for Respiratory Failure: A Narrative Review" provides an indepth analysis of the role of ECMO in treating patients with severe respiratory including veno-venous (VV) and verous configurations of ECMO, including veno-venous (VV) and vero	33	for the implementation of clinical practice guidelines in healthcare: an umbrella review of qualitative and	13	associated with the implementation of clinical practice guidelines (CPGs) in healthcare settings. It compiles evidence from 37 studies and categorizes 193 barriers and 140 facilitators, linking them to the Theoretical Domains Framework (TDF) and the Behavior Change Wheel (BCW). The findings highlight both intrinsic and extrinsic factors, such as the impracticality of CPGs, resource limitations, lack of awareness, and strong leadership. The review suggests that to improve adherence to CPGs, implementation strategies should be context-specific and aligned with	 The common barriers that healthcare professionals face in implementing clinical practice guidelines (CPGs), including resource limitations, complexity, and training gaps. The facilitators that can aid in successful CPG implementation, such as leadership support, education, and interdisciplinary collaboration. The application of the Theoretical Domains Framework (TDF) and Behavior Change Wheel (BCW) to design and adjust strategies for improving CPG adherence in various healthcare settings. 		2
ECMO support (such as veno-venous and veno-arterial), patient selection criteria, ventilatory management strategies, and complications. The authors also discuss the considered. 3. The management strategies for particular on ECMO, including ventilatory management, troubleshooting	34	Oxygenation for Respiratory	15	Oxygenation (ECMO) for Respiratory Failure: A Narrative Review" provides an indepth analysis of the role of ECMO in treating patients with severe respiratory failure. ECMO has become a crucial lifesaving intervention in cases of acute respiratory distress syndrome (ARDS) and other life-threatening respiratory conditions, particularly when conventional therapies like mechanical ventilation are insufficient. The review explores the physiological mechanisms of ECMO, the configurations of ECMO support (such as veno-venous and veno-arterial), patient selection criteria, ventilatory management strategies, and complications. The authors also discuss the future directions of ECMO therapy in critical care, emphasizing the need for continued	 The physiological principles and various configurations of ECMO, including veno-venous (VV) and veno-arterial (VA) ECMO, and how they are applied in patients with different types of respiratory failure. The indications and contraindications for ECMO therapy, including the selection of patients based on their condition, such as ARDS or refractory hypoxemia, and when ECMO should or should not be considered. The management strategies for patients on ECMO, including ventilatory management, troubleshooting complications, and weaning protocols to 	65	2

	CPD Scholar - Medical Hub (Journal Article List – Clinical CEU's)					
35	Enhancing sepsis biomarker development: key considerations from public and private perspectives	15	This article reviews the progress and challenges associated with the development and clinical implementation of sepsis biomarkers. Sepsis is a life-threatening condition where rapid and accurate diagnosis is critical for patient outcomes. The article discusses the obstacles in translating biomarker discoveries into clinical practice, including the lack of consensus on diagnostic performance, limited education on biomarker utility, and challenges in regulatory approval. The article also highlights the potential of artificial intelligence (AI) in biomarker discovery and development, emphasizing the need for a multidisciplinary approach for furthering biomarker research.	Upon completion of this activity, learners should have an understanding of: 1. The challenges involved in the development and clinical implementation of sepsis biomarkers. 2. The role of interdisciplinary collaboration and AI in enhancing biomarker research and its application in sepsis management. 3. The differences in biomarker needs across various phases of sepsis treatment (Emergency Department, early ICU phase, prolonged ICU phase).	75	2
36	A decline in tuberculosis diagnosis, treatment initiation and success during the COVID-19 pandemic, using routine health data in Cape Town, South Africa	8	This article examines the decline of a specific medical treatment protocol and its implications on clinical outcomes. It discusses various factors that have led to the decline, including advancements in technology, changes in clinical guidelines, and emerging research that challenges the efficacy of older treatment protocols. The article emphasizes the importance of evidence-based practice and the role of continued research in improving patient care. Additionally, it reflects on how clinical education can adapt to these changes to ensure that healthcare professionals are upto-date with current best practices.	Upon completion of this activity, learners should have an understanding of: 1. The reasons behind the decline of certain medical treatment protocols in clinical practice. 2. The importance of staying updated with new research and technology in clinical practice. 3. How changes in medical guidelines impact patient care and outcomes.	40	2
37	Enhancing Chronic Disease Management: Personalized Medicine Insights from Rural and Urban General Practitioner Practices	14	This article explores the differences in managing chronic diseases like diabetes and hypertension in rural and urban general practitioner (GP) practices. Data was collected over four years from 2018 to the first quarter of 2021, focusing on the epidemiology, risk factors, and healthcare utilization in rural and urban settings. The study highlights significant disparities in	Upon completion of this activity, learners should have an understanding of: 1. The geographic and demographic disparities in chronic disease management between rural and urban patients. 2. The impact of the COVID-19 pandemic on chronic disease treatment and the increased use of remote healthcare services.	70	2

	CPD Scholar - Medical Hub (Journal A	Article Elst — Official OLO 3	
	patient demographics, healthcare access, and disease management strategies between these two groups. It also analyzes the impact of the COVID-19 pandemic, showing an increase in remote visits and changes in diagnosis patterns. The findings emphasize the need for personalized approaches in chronic disease management, taking geographic and demographic factors into account.	The importance of personalized medicine approaches in optimizing chronic disease outcomes based on patient-specific factors like age, location, and healthcare access.	
Caring for patients wit mental disorders in primary care: a qualitati study on French GPs' views, atittudes and nee	general practitioners' (GPs) views and challenges in caring for patients with mental disorders. Interviews with 22 GPs revealed	patients with severe mental disorders and how this affects care outcomes. 2. The importance of improved	25
Digital Health Intervention to Enhance Prevention in Primary Care: Scoping Review		Upon completion of this activity, learners should have an understanding of: 1. How digital health interventions can support different levels of prevention (primary to quaternary) in primary care settings. 2. The role of digital technologies, such as EHRs and mobile health apps, in improving patient outcomes and care coordination. 3. The gaps and limitations in current DHI evaluations, particularly in addressing health disparities and implementation challenges.	135 STANING CENTRE
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gaps remain in evaluating their impact on health disparities. The study found statistically significant improvements in patient outcomes, particularly in chronic disease management and care delivery. 29				PD Scholar - Medical Hub (Journal A	itticle List – Cillical CEO's)
Diabetes—2022 Abridged for Primary Care Providers Care for Diabetes 2022", provides comprehensive guidelines for managing diabetes care across various clinical settings, including diagnosis, treatment, and prevention of diabetes-related complications. It emphasizes patient-centered care, focusing on improving cardiovascular and kidney outcomes through appropriate pharmacological and lifestyle interventions. The standards are based on the latest clinical trials and recommendations, addressing various risk factors and comorbidities that often accompany diabetes, such as cardiovascular disease (CVD). Special considerations are given to hypertension management, lipid control, and the role of SGLT2 inhibitors and GLP-1 receptor agonists in improving clinical outcomes for diabetic patients. The document also covers care strategies for older adults, pediatric populations, and pregnant women with diabetes.				health disparities. The study found statistically significant improvements in patient outcomes, particularly in chronic	
1 1 1 1 1 1 1 1 1	40	Diabetes—2022 Abridged for	29	Care for Diabetes 2022", provides comprehensive guidelines for managing diabetes care across various clinical settings, including diagnosis, treatment, and prevention of diabetes-related complications. It emphasizes patient-centered care, focusing on improving cardiovascular and kidney outcomes through appropriate pharmacological and lifestyle interventions. The standards are based on the latest clinical trials and recommendations, addressing various risk factors and comorbidities that often accompany diabetes, such as cardiovascular disease (CVD) and chronic kidney disease (CKD). Special considerations are given to hypertension management, lipid control, and the role of SGLT2 inhibitors and GLP-1 receptor agonists in improving clinical outcomes for diabetic patients. The document also covers care strategies for older adults, pediatric populations, and pregnant women with	 Understand the pharmacological treatment strategies for hyperglycemia in adults with Type 2 diabetes and how they can be tailored to the individual based on comorbidities and risk factors. Be familiar with the recommendations for managing hypertension and lipid control in diabetic patients to reduce cardiovascular risk and improve long-term outcomes. Grasp the importance of individualized care plans for diabetic patients across different life stages, including older adults, children, and pregnant women, as well as considerations for special populations like



