

# Professional Master's Degree

## Infectious Diseases in the Emergency Department





## Professional Master's Degree Infectious Diseases in the Emergency Department

- » Modality: online
- » Duration: 12 months
- » Certificate: TECH Global University
- » Credits: 60 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtute.com/us/medicine/professional-master-degree/master-infectious-diseases-emergency-department](http://www.techtute.com/us/medicine/professional-master-degree/master-infectious-diseases-emergency-department)

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# 01

# Introduction

Infectious diseases have been, are currently, and will continue to be, one of the basic pillars of medicine. This is not only in terms of individual health, but on the widest scale we can imagine: global public health. Currently, caring for patients with infectious diseases is a challenge for all clinicians involved. It is essential to stay up-to-date with the latest knowledge in the field, in order to guarantee adequate clinical practice in an ever-growing specialty.







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*The Professional Master's Degree in Infectious Diseases in the Emergency Department, offers you the opportunity to update your knowledge comfortably and without sacrificing scientific accuracy, in order to incorporate the latest advances in the approach to infectious diseases into your daily medical practice"*

In addition to the most common infectious pathologies, in recent years new diseases have emerged which have had a great impact on public health. These have proved very complex to control and treat, including infections such as human immunodeficiency virus, the increase in bacterial resistance, infection in the context of patients with iatrogenic immunosuppression, or the exponential increase in imported tropical infectious diseases in our environment.

In the case of infectious pathology, as in most specialties, the work of the clinician in the Emergency Department is sometimes complex and their actions are often a crucial factor in the morbidity and mortality of patients.

Based on this premise, we believe that it is essential to establish educational tools for health professionals who have to deal with infectious diseases outside specialized units and services, and so this will be the main objective of the Professional Master's Degree.

We have tried to elaborate a program that includes the classic aspects in the management of infectious pathology in various apparatus or organs, obviously taking into account the most recent developments that may have occurred up to the moment the program was designed. We have also incorporated innovative aspects which we believe to be essential for correctly managing infectious diseases in the current context of globalization and health.

We will deal with the action being taken by emergency departments against infectious diseases from the point of view of providing the earliest possible diagnosis and treatment, which is often empirical. But it will also include up-to-date information on imported pathology, especially in those cases that require urgent action and/or present a potentially high risk of transmission.

Similarly, an important part of the program will be devoted to the concept of risk prevention, stemming from infectious disease management, both for healthcare workers and the general population, and will study in depth the measures that can be adopted in Emergency Departments to minimize them. We will talk about basic action protocols in situations where there's risk of transmission of a specific infectious disease. These protocols are adapted to each center, are known by the health personnel that work there and can be implemented whenever necessary.

This **Professional Master's Degree in Infectious Diseases in the Emergency Department** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ♦ More than 75 clinical cases presented by experts in Infectious Diseases in the Emergency Department
- ♦ The graphic, schematic, and practical contents with which they are created provide scientific and practical information on the disciplines that are essential for professional practice
- ♦ The latest information on infectious diseases
- ♦ Practical exercises where the self-assessment process can be carried out to improve learning
- ♦ An algorithm-based interactive learning system for decision-making in the clinical situations presented throughout the course
- ♦ Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- ♦ Content that is accessible from any fixed or portable device with an Internet connection



*Seize the moment and gain up-to-date knowledge on the management of coronavirus infections"*



*This Professional Master's Degree is the best investment you can make when choosing an educational program for two reasons: you will obtain a Professional Master's Degree from TECH Global University, and will acquire the best and most up-to-date knowledge in Infectious Diseases in the Emergency Department"*

The teaching staff includes professionals from the field of Infectious Diseases in the Emergency Department who contribute their experience to this program, as well as renowned specialists from leading scientific societies.

The multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide an immersive program designed to learn in real situations.

The design of this program is centered around Problem-Based Learning, in which the medical professional will solve professional practice situations that may arise throughout the program. For this purpose, the professional will be assisted by an innovative interactive video system created by renowned and experienced experts in the field of Infectious Diseases with extensive teaching experience.

*This is the best educational program in Infectious Diseases in the Emergency Department on the market*

*Get to know all the latest information on COVID-19. Don't miss the opportunity and get up-to-date on advances in the treatment of the infections and incorporate them into your daily medical practice*





02

# Objectives

The Professional Master's Degree in Infectious Diseases in the Emergency Department is designed to facilitate the performance of physicians dedicated to the treatment of infectious diseases in all areas, but above all, in the Emergency Department.







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*This program will provide you with a sense of confidence in your medical practice, which will help you grow personally and professionally”*



## General Objectives

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- Provide the theoretical knowledge required to understand the environment in which professional care is given to patients with infectious diseases
- Provide the appropriate treatment in the different cases of infectious diseases
- Gain in-depth understanding of the areas in which professionals must be trained, so that they are able to provide the best practice when treating infectious diseases



*Improve your patient care by taking advantage of the information offered by the Professional Master's Degree in Infectious Diseases in the Emergency Department"*





## Specific Objectives

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### Module 1. Update on Infectious Diseases

- ♦ Define virulence factors and toxins
- ♦ Identify the main human pathogens in our environment
- ♦ Explain the different current scenarios of infection in the Emergency Department
- ♦ Describe the etiopathogenic profiles of bacterial infections
- ♦ Describe the etiopathogenic profiles of viral infections
- ♦ Describe the etiopathogenic profiles of fungal infections
- ♦ Describe the etiopathogenic profiles of microbacterial infections
- ♦ Describe the etiopathogenic profiles of parasitic infections

### Module 2. The Microbiology Laboratory in the Emergency Department

- ♦ Describe the process of collecting specimens
- ♦ Define which specimens are most commonly requested in the Emergency Department
- ♦ Explain the collection of specimens in patients with devices
- ♦ Describe the management of specimens in the laboratory
- ♦ Explain the clinical significance of bacterial resistance
- ♦ Define the techniques available for emergency diagnoses
- ♦ Describe the interpretation of preliminary results
- ♦ Explain the analytical interpretation of the different types of samples
- ♦ Define the procedures in hospitals without on-call microbiologists
- ♦ Explain the diagnostic techniques that can possibly be performed in the emergency department laboratory

### Module 3. Public Health and Infectious Disease in the Emergency Room

- ♦ Describe the action protocols in cases of specific exposure
- ♦ Describe the established isolation protocols
- ♦ Explain the current indications of exclusion or isolation
- ♦ Describe notifiable diseases
- ♦ Explain the procedure for emergency declaration to Public Health
- ♦ Describe the action protocol for epidemiological outbreaks
- ♦ Describe imported pathology as well as pathology with high contagious capacity
- ♦ Describe the seasonal epidemiological parameters in the most common infections in the community
- ♦ Explain epidemic outbreaks and common sources with punctual, continuous, propagative and mixed exposure
- ♦ Define the post-exposure prophylaxis that is initiated in the emergency department
- ♦ Describe the process to follow in the case of Bacterial Meningitis
- ♦ Describe the process to follow in the case of HIV Infection
- ♦ Describe the process to follow in the case of Sexual Assault
- ♦ Describe the process to follow in the case of Rabies

### Module 4. Systemic Febrile Syndrome: Antimicrobials

- ♦ Explain the biomarkers used in the clinical diagnosis of infectious disease
- ♦ Define the use of C-reactive protein and procalcitonin in the diagnosis of infectious diseases
- ♦ Define the practical use of non-specific tests for infectious evidence
- ♦ Explain the initial focus in Acute Fever Syndrome
- ♦ Define the action taken in cases of Bacteremia, Sepsis and Septic Shock
- ♦ Explain how to activate Code Sepsis

- ♦ Define the use of different antimicrobials in Fever Syndrome
- ♦ Describe the characteristics of the different types of antimicrobials
- ♦ Define the implications of antimicrobial resistance when selecting treatment
- ♦ Explain the basic steps in the selection of antimicrobials according to the type of host and other extrinsic or environmental factors
- ♦ Explain the concept of empirical antibiotic therapy
- ♦ Describe how to act in the case of beta-lactam allergy
- ♦ Describe the use of antimicrobials and renal function

### **Module 5. Emergency Diagnostic and Therapeutic Management of Fever in Special Situations**

- ♦ Explain the relationship between fever and the presence of exanthema
- ♦ Explain the relationship between fever and the presence of adenopathies
- ♦ Fever and hematological alterations
- ♦ Explain the association of fever with altered level of consciousness
- ♦ Describe fever management in the elderly patient
- ♦ Describe fever management in the hemodialysis patient
- ♦ Describe fever management in a patient with intravascular devices
- ♦ Describe fever management in a patient with a HIV infection
- ♦ Describe fever management in a patient with iatrogenic immunosuppression
- ♦ Describe fever management in a patient with oncohematological pathology
- ♦ Describe fever management in a patient with febrile neutropenia
- ♦ Describe fever management in the solid organ transplant patient
- ♦ Explain the implications of cytomegalovirus and BK virus infections in transplant recipients
- ♦ Describe fever management in a patient who has recently undergone surgery
- ♦ Describe the current management of infection of surgical wounds
- ♦ Explain the management of other infections in a patient who has recently undergone surgery

- ♦ Describe fever management in a pregnant patient
- ♦ Explain the use of antibiotic therapy in pregnancy

### **Module 6. Infections of Organs and Apparatus (I): ORL, Head and Neck, Ophthalmological**

- ♦ Explain the diagnosis and treatment of pharyngotonsillitis in the Emergency Department
- ♦ Explain the diagnosis and treatment of tracheitis, laryngitis and epiglottitis in the Emergency Department
- ♦ Explain the diagnosis and treatment of otitis externa, media and mastoiditis in the Emergency Department
- ♦ Explain the diagnosis and treatment of sinusitis in the Emergency Department
- ♦ Explain the diagnosis and treatment of a peritonsillar and para-retropharyngeal abscess in the Emergency Department
- ♦ Explain the diagnosis and treatment of dental infections in the Emergency Department
- ♦ Explain the diagnosis and treatment of mucositis and stomatitis in the Emergency Department
- ♦ Explain the diagnosis and treatment of liver and CSF shunt infections in the Emergency Department
- ♦ Explain the diagnosis and treatment of sinusitis in the Emergency Department. Suppurative thyroiditis
- ♦ Explain the diagnosis and treatment of conjunctivitis and keratitis in the Emergency Department
- ♦ Explain the diagnosis and treatment of Uveitis, Endophthalmitis, and Retinitis in the Emergency Department
- ♦ Explain the diagnosis and treatment of periocular infections in the Emergency Department
- ♦ Explain the diagnosis and treatment of eyelid infections in the Emergency Department



- ♦ Explain the diagnosis and treatment of lacrimal apparatus in the Emergency Department
- ♦ Explain the diagnosis and treatment of orbital cellulitis in the Emergency Department

### **Module 7. Infections of Organs and Apparatus (II): Skin, Soft and Osteoarticular Parts**

- ♦ Explain the diagnosis and treatment of cellulitis and superficial infections in the Emergency Department
- ♦ Explain the diagnosis and treatment of myositis in the Emergency Department
- ♦ Explain the diagnosis and treatment of fasciitis in the emergency department
- ♦ Explain the diagnosis and treatment of gangrene in the Emergency Department
- ♦ Explain the diagnosis and treatment of diabetic foot in the Emergency Department
- ♦ Explain the diagnosis and treatment of pressure ulcers in the Emergency Department
- ♦ Explain the diagnosis and treatment of septic arthritis in the Emergency Department
- ♦ Explain the diagnosis and treatment of osteomyelitis in the Emergency Department
- ♦ Explain the diagnosis and treatment of spondylodiscitis in the Emergency Department
- ♦ Explain the diagnosis and treatment of infection of joint prostheses and osteosynthesis material in the Emergency Department

### **Module 8. Infections of Organs and Apparatus (III): Lower Airway, Intra-Abdominal**

- ♦ Explain the diagnosis and treatment of acute bronchitis in the Emergency Department
- ♦ Explain the diagnosis and treatment of Acute Chronic Obstructive Pulmonary Disease (COPD) in the Emergency Department
- ♦ Explain the diagnosis and treatment of community-acquired pneumonia (CAP) in the Emergency Department
- ♦ Explain the diagnosis and treatment of Healthcare-associated pneumonia (HAP) in the Emergency Department.)

- ♦ Explain the diagnosis and treatment of empyema in the Emergency Department
- ♦ Explain the diagnosis and treatment of a pulmonary abscess in the Emergency Department
- ♦ Explain the diagnosis and treatment of pulmonary tuberculosis in the Emergency Department
- ♦ Explain the diagnosis and treatment of gastroenteritis in the Emergency Department
- ♦ Explain the diagnosis and treatment of liver and biliary tract infections in the Emergency Department
- ♦ Explain the diagnosis and treatment of cholecystitis and cholangitis in the Emergency Department
- ♦ Explain the diagnosis and treatment of a liver abscess in the Emergency Department
- ♦ Explain the diagnosis and treatment of acute hepatitis in the Emergency Department
- ♦ Explain the diagnosis and treatment of pancreatitis in the Emergency Department
- ♦ Explain the diagnosis and treatment of appendicitis in the Emergency Department
- ♦ Explain the diagnosis and treatment of diverticulitis and perirectal abscess in the Emergency Department
- ♦ Explain the diagnosis and treatment of Typhlitis in the Emergency Department
- ♦ Explain the diagnosis and treatment of Peritonitis in the Emergency Department
- ♦ Explain the diagnosis and treatment of an Intra-peritoneal Abscess in the Emergency Department

### **Module 9. Infections of Organs and Apparatus (IV): Cardiovascular, CNS**

- ♦ Explain the diagnosis and treatment of endocarditis and intravascular infections in the Emergency Department
- ♦ Explain the diagnosis and treatment of septic thrombophlebitis in the Emergency Department

- ♦ Explain the diagnosis and treatment of intravascular devices infections in the Emergency Department
- ♦ Explain the diagnosis and treatment of tunneled and non-tunneled catheter infection in the Emergency Department
- ♦ Explain the diagnosis and treatment of pacemaker infections in the Emergency Department
- ♦ Explain the diagnosis and treatment of other devices infections in the Emergency Department
- ♦ Explain the diagnosis and treatment of pericarditis and myocarditis in the Emergency Department
- ♦ Explain the diagnosis and treatment of mediastinitis in the Emergency Department
- ♦ Explain the diagnosis and treatment of meningitis in the Emergency Department
- ♦ Explain the diagnosis and treatment of encephalitis in the Emergency Department
- ♦ Explain the diagnosis and treatment of myelitis in the Emergency Department
- ♦ Explain the diagnosis and treatment of a cerebral abscess in the Emergency Department
- ♦ Explain the diagnosis and treatment of subdural empyema, epidural abscess and intracranial thrombophlebitis in the Emergency Department
- ♦ Explain the diagnosis and treatment of liver and CSF shunt infections in the Emergency Department

#### **Module 10. Infections of Urinary Tract, Genitals and Sexual Transmission**

- ♦ Explain the diagnosis and treatment of cystitis in the Emergency Department
- ♦ Explain the diagnosis and treatment of asymptomatic bacteriuria in the Emergency Department
- ♦ Explain the diagnosis and treatment of a UTI in patients with bladder catheterization in the Emergency Department



- ♦ Explain the diagnosis and treatment of prostatitis in the Emergency Department
- ♦ Explain the diagnosis and treatment of pyelonephritis in the Emergency Department
- ♦ Explain the diagnosis and treatment of a perinephritic abscess in the Emergency Department
- ♦ Explain the diagnosis and treatment of orchiepididymitis in the Emergency Department
- ♦ Explain the diagnosis and treatment of vulvovaginitis and cervicitis in the Emergency Department
- ♦ Explain the diagnosis and treatment of pelvic infections in the Emergency Department
- ♦ Explain the diagnosis and treatment of intrapartum, postpartum and postabortive infections in the Emergency Department
- ♦ Explain the diagnosis and treatment of inflammatory pelvic disease in the Emergency Department
- ♦ Explain the diagnosis and treatment of urethritis in the Emergency Department
- ♦ Explain the diagnosis and treatment of infections which cause skin and genital mucosa lesions

### **Module 11. Infectious Diseases in the Emergency Department of the Pediatric Patient**

- ♦ Describe the management of fever syndrome and exanthems in a pediatric patient in the Emergency Department
- ♦ Explain the diagnosis and treatment of skin, soft tissue and skeletal system infections in a pediatric patient in the Emergency Department
- ♦ Explain the diagnosis and treatment of ENT and respiratory infections in a pediatric patient in the Emergency Department
- ♦ Explain the diagnosis and treatment of gastrointestinal and genitourinary infections and STIs in a pediatric patient in the Emergency Department

- ♦ Explain the diagnosis and treatment of CNS and CMV infections in a pediatric patient in the Emergency Department
- ♦ Explain the treatment in pediatric infectious diseases

### **Module 12. Imported Infectious Diseases in the Emergency Department**

- ♦ Define the concept of globalization and emerging pathology
- ♦ Define the geography of the tropical infectious diseases
- ♦ Explain the epidemiology of tropical infectious diseases in travelers, immigrants and VFRS
- ♦ Explain the anamnesis of a traveler with fever in the emergency department
- ♦ Explain the possible causes of fever after staying in a tropical or subtropical area
- ♦ Perform syndrome classification of imported infectious pathology
- ♦ Define imported tropical infectious diseases of special interest

### **Module 13. Latest Information on Coronavirus Infections**

- ♦ Know the microbiological characteristics of coronaviruses
- ♦ Know how to assess the morbidity and mortality of coronavirus infections
- ♦ Identify the main risk groups and mechanisms of coronaviruses
- ♦ Be able to perform the necessary tests for diagnosing Coronavirus
- ♦ Know how to apply the necessary preventive measures, as well as the most accurate treatments according to the type of patient



# 03 Skills

After passing the assessments in the Professional Master's Degree in Infectious Diseases in the Emergency Department, the physician will have acquired the professional skills required for quality, up-to-date practice based on the most recent scientific evidence.





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*With this program you will be able to master new diagnostic and therapeutic procedures in Infectious Diseases in the Emergency Department"*



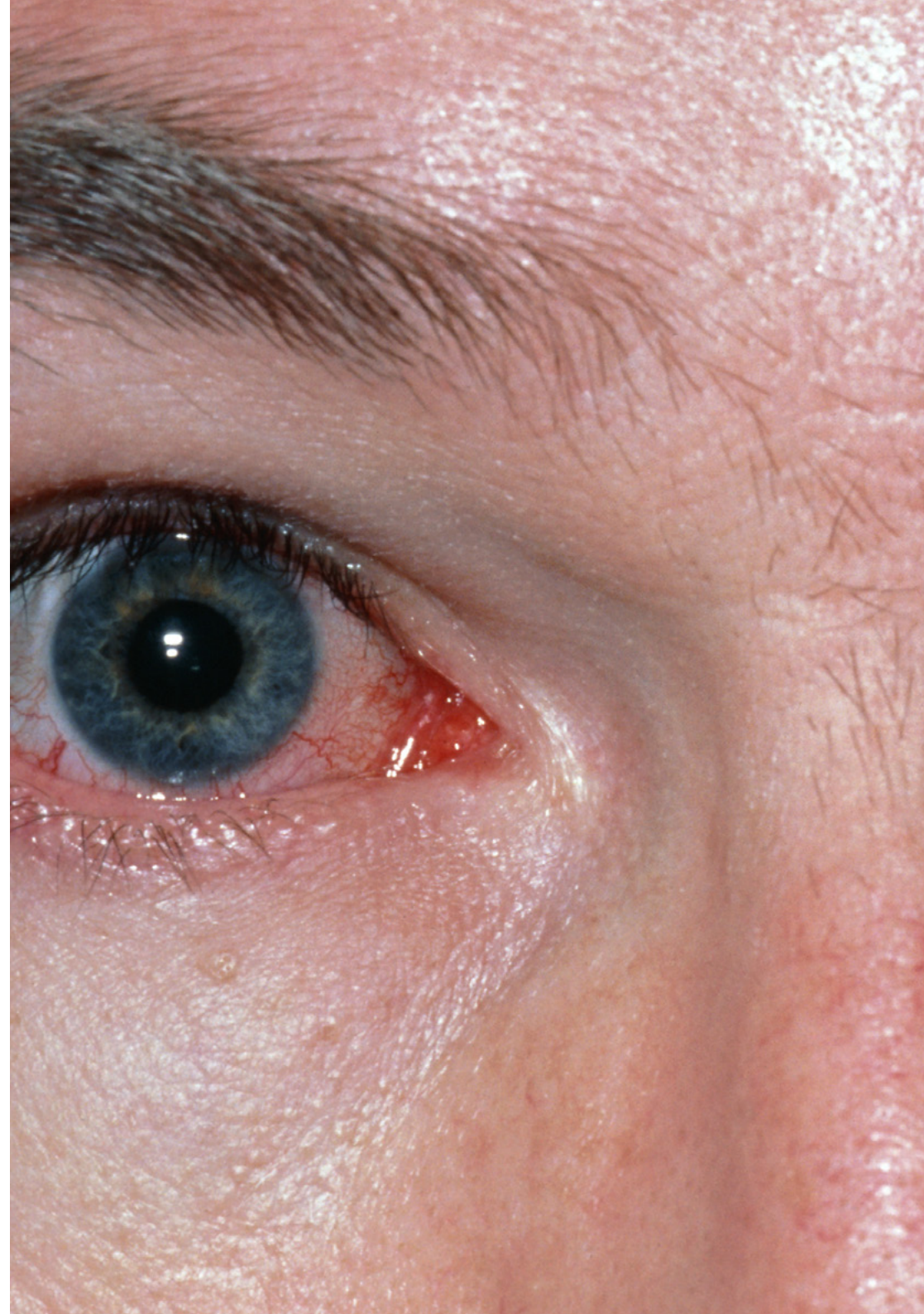
## General Skills

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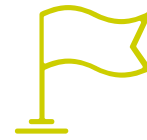
- Know how to apply acquired knowledge and problem-solving skills in new or unfamiliar environments within broader (or multidisciplinary) contexts related to infectious diseases
- Create a personalized care plan for patients with infectious diseases who visit the Emergency Department
- Care for patients, whether adult or pediatric, with different types of infections

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*Don't miss the opportunity and update your knowledge by taking the Professional Master's Degree in Infectious Diseases in the Emergency Department"*







## Specific Skills

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- ♦ Describe in depth the handling of microbiological samples, their processing and the interpretation and clinical application of identification and sensitivity results
- ♦ Explain the scope of application of an antibiotic treatment, its pharmacological and pharmacodynamic characteristics and its indications
- ♦ Assess the severity of the infection
- ♦ Explain the management of severe sepsis and the relevance of the existence of the Code Sepsis
- ♦ Characterize the clinical syndromes of community-acquired, nosocomial-acquired or healthcare-associated infections
- ♦ Gain in-depth knowledge of HIV infection, from its epidemiology and history to its multiple manifestations, its diagnostic and therapeutic management and prevention
- ♦ Characterize clinical syndromes of infection in immunocompromised non-HIV patients, characteristics of chronic HCV infection and emerging, imported and traveler's infectious pathology
- ♦ Define the antibiotic prescription support teams and their practical application
- ♦ Describe the uses of bedside Clinical Ultrasound in the diagnostic support of common infectious pathology
- ♦ Define the concepts of Electronic Clinical Decision Support as applied to infectious pathology
- ♦ Work with patients that have been diagnosed or present symptoms of Coronavirus, complying with all safety measures
- ♦ Perform diagnostic tests to detect possible cases of Coronavirus

04

# Course Management

The program's teaching staff includes leading specialists in Infectious Diseases in the Emergency Department and other related areas, who contribute their years of work experience to this program. Additionally, other recognized specialists participate in its design and preparation, which means that the program is developed in an interdisciplinary manner.





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*Learn the latest advances in procedures  
in Infectious Diseases in the Emergency  
Department from leading professionals”*

## Management



### **Dr. García del Toro, Miguel**

- ♦ PhD in Medicine from the University of Valencia
- ♦ Head of the Infectious Diseases Unit at the General University Hospital Consortium of Valencia
- ♦ 50 national and international publications in journals and books, 33 of them indexed in Pubmed and/or Scopus
- ♦ President Congress of the National Group for the Study of Hepatitis of the Society for Infectious Diseases and Clinical Microbiology 2017
- ♦ More than 200 communications in National and International Congresses in the specialty of Infectious Diseases, HIV and Viral Hepatitis
- ♦ Main Researcher in about twenty Clinical Trials and/or Research Projects

**Dr. García Rodríguez, Magdalena**

- ◆ Degree in Medicine and Surgery
- ◆ Specialist in Internal Medicine
- ◆ Attending Physician in the Infectious Diseases Unit and the Consorcio General Hospital Valencia
- ◆ Head of the International Health and Travel Advice Section
- ◆ Author of several publication and research projects
- ◆ Founding member and advisor of the Chagas Disease Association of the Valencian Community
- ◆ Member of a vaccine study group for the Spanish Society of Infectious Diseases and Clinical Microbiology
- ◆ Member of a Malaria study group for the Spanish Society of Infectious Diseases and Clinical Microbiology

**Dr. Ricart Olmos, María del Carmen**

- ◆ Degree in Medicine and Surgery
- ◆ Specialist in Internal Medicine
- ◆ Attending Physician in the Infectious Diseases Unit and the Consorcio General University Hospital, Valencia
- ◆ Author of several publication and research projects
- ◆ Editor of the Consensus Document on Age and Human Immunodeficiency Virus Infection Expert Group of the Secretariat of the National AIDS Plan (SPNS), Spanish Society of Geriatrics and Gerontology (SEGG)
- ◆ Master's Degree in Infectious Diseases in Intensive Care

05

# Structure and Content

The structure of the contents has been designed by a team of professionals from leading hospitals and universities, who are aware of the relevance of up-to-date education to be able to intervene in the diagnosis, treatment and monitoring of emergency infectious diseases, and who are committed to quality teaching using the latest educational technology.







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*This Professional Master's Degree in Infectious Diseases in the Emergency Department contains the most complete and up-to-date scientific program on the market”*

## Module 1. Update on Infectious Diseases

- 1.1. Principles of Infection
  - 1.1.1. Virulence Factors and Toxins
  - 1.1.2. Defensive Mechanisms of the Host
- 1.2. Main Human Pathogens in our Environment
  - 1.2.1. Current Epidemiology of Infection
  - 1.2.2. Data on a Worldwide Level
  - 1.2.3. Microbial Resistance
- 1.3. Current Scenarios of Infection in the Emergency Department
  - 1.3.1. Elderly Patients
  - 1.3.2. Oncology Patients
  - 1.3.3. Chronic Renal Patients on Dialysis
  - 1.3.4. Transplant Recipient
  - 1.3.5. HIV Infection
  - 1.3.6. Travelers and Immigrants
- 1.4. Etiopathogenic Profiles of Infection
  - 1.4.1. Bacterial Infections
  - 1.4.2. Viral Infections
  - 1.4.3. Fungal Infections
  - 1.4.4. Microbacterial Infections
  - 1.4.5. Parasitic Infections

## Module 2. The Microbiology Laboratory in the Emergency Department

- 2.1. Process of Sample Collection
  - 2.1.1. General Considerations for Taking, Conserving and Transporting the Samples for Microbiological Study
  - 2.1.2. Material for Sample Collection
- 2.2. Management of Samples in the Laboratory
  - 2.2.1. Receiving Samples
  - 2.2.2. Processing
  - 2.2.3. Methods and Techniques Used for Microbiological Diagnosis According to the Main Infectious Syndromes

- 2.3. Techniques Available for Emergency Diagnoses
  - 2.3.1. Bacteria
  - 2.3.2. Virus
  - 2.3.3. Fungi
  - 2.3.4. Mycobacteria
  - 2.3.5. Parasites
- 2.4. Interpretation of Preliminary Results
  - 2.4.1. Interpretation of Microbiological Diagnostic Tests
- 2.5. Procedures in Hospitals Without On-call Microbiologists
  - 2.5.1. Disadvantages of Not Having an On-call Microbiologist
  - 2.5.2. Advantages of Having an On-call Microbiologist
  - 2.5.3. On-call Care without a Microbiologist

## Module 3. Public Health and Infectious Disease in the Emergency Department

- 3.1. Emergency Department Personnel
  - 3.1.1. Initial Assessment
  - 3.1.2. Vaccines
  - 3.1.3. Action Protocols in Cases of Specific Exposure
- 3.2. Established Protocols of Isolation
  - 3.2.1. Types of Transmission and Methods of Isolation
  - 3.2.2. Special Situations
- 3.3. Notifiable Diseases and Urgent Declaration to Public Health
  - 3.3.1. Concept of Notifiable Diseases
  - 3.3.2. Surveillance of Notifiable Diseases
- 3.4. Special Situations
  - 3.4.1. Annual Flu
  - 3.4.2. Epidemiological Outbreaks
  - 3.4.3. Imported Pathology Possibility of Pathology with High Contagious Capacity
- 3.5. Update on Epidemiological Outbreaks
  - 3.5.1. Seasonal Epidemiological Parameters in the Most Common Infections in the Community
  - 3.5.2. Epidemic Outbreak and Types of Source

- 3.6. Post-Exposure Prophylaxis that is Initiated in the Emergency Department
  - 3.6.1. Bacterial Meningitis
  - 3.6.2. HIV Infection
  - 3.6.3. Sexual Assault
  - 3.6.4. Rabies

#### Module 4. Systemic Febrile Syndrome: Antimicrobials

- 4.1. Biomarkers in Sepsis
  - 4.1.1. Lactate
  - 4.1.2. Procalcitonin
  - 4.1.3. Proadrenomedullin
  - 4.1.4. Combinations
- 4.2. Initial Focus in Acute Fever Syndrome
  - 4.2.1. Initial Management of the Patient with Fever in the Emergency Department
  - 4.2.2. Treatment
  - 4.2.3. Special Categories
  - 4.2.4. Fever of Unknown Origin
  - 4.2.5. Attitude and Destiny of the Patient
- 4.3. Bacteremia, Sepsis and Septic Shock
  - 4.3.1. Definitions According to Consensus Conferences
  - 4.3.2. How to Identify a Patient with Sepsis
  - 4.3.3. Controversies and Limitations of the New Definitions
  - 4.3.4. Managing Sepsis
- 4.4. Antimicrobials
  - 4.4.1. Concept: What is an Antimicrobial?
  - 4.4.2. Antibacterials
  - 4.4.3. Pregnancy and Breastfeeding
  - 4.4.4. Antifungal

#### Module 5. Emergency Diagnostic and Therapeutic Management of Fever in Special Situations

- 5.1. Fever in the Emergency Department
  - 5.1.1. General Concepts
  - 5.1.2. Action Protocol
  - 5.1.3. Patient Orientation
- 5.2. Fever in an Elderly Patient
  - 5.2.1. General Concepts
  - 5.2.2. Characteristics of the Specific Clinical Framework
  - 5.2.3. Points to Remember
- 5.3. Fever in a Hemodialysis Patient
  - 5.3.1. Infections Related to Vascular Access in Hemodialysis
  - 5.3.2. Other Considerations in the Infectious Pathology of a Patient on Dialysis
- 5.4. Fever in the Patient with Intravascular Catheters
  - 5.4.1. Clinical Manifestations
  - 5.4.2. Etiology
  - 5.4.3. Diagnosis
  - 5.4.4. Treatment
  - 5.4.5. Prevention
- 5.5. Patient with HIV Infection
  - 5.5.1. Pulmonary Syndromes
  - 5.5.2. Neurological syndromes
  - 5.5.3. Other Fever Syndromes
  - 5.5.4. Immune Reconstitution Syndrome
- 5.6. Patient with Iatrogenic Immunosuppression
  - 5.6.1. Etiology
  - 5.6.2. Diagnostic Approach
  - 5.6.3. Treatment
- 5.7. Patient with Onco-hematologic Pathology
  - 5.7.1. Diagnosis and Therapeutic Management of an Onco-hematologic Patient with a Fever

- 5.8. Transplant Recipient of a Solid Organ
  - 5.8.1. Infections in the First Month Post-Transplant
  - 5.8.2. Infections Between the First and Sixth Month Post-Transplant
  - 5.8.3. Infections After the Sixth Month Post-Transplant
  - 5.8.4. Diagnostic Strategy
  - 5.8.5. Empirical Treatment
- 5.9. Patient who has Recently Undergone Surgery
  - 5.9.1. Infection of Surgical Wounds. Current Management
  - 5.9.2. Other Infections in a Patient who has Recently Undergone Surgery
- 5.10. Pregnant Patient
  - 5.10.1. Special Characteristics of a Pregnant Woman
  - 5.10.2. Diagnostic Orientation in the Emergency Department
  - 5.10.3. Treatment and Management in Special Situations
  - 5.10.4. Indications of Admission for Observation and Inpatient Treatment

## Module 6. Infections of Organs and Apparatus (I): ORL, Head and Neck, Ophthalmological

- 6.1. Pharyngotonsillitis
  - 6.1.1. General Concept and Classification
- 6.2. Oral Cavity, Head and Neck Infections
  - 6.2.1. Plaque Gingivitis
  - 6.2.2. GUNA
  - 6.2.3. Oral TB
  - 6.2.4. Oral Syphilis
  - 6.2.5. Oral Mycosis
  - 6.2.6. Viral Infections







- 6.3. Otitis Externa, Media and Mastoiditis
  - 6.3.1. Diffuse Otitis Externa and Circumscribed Otitis Externa (Boils)
  - 6.3.2. Otomycosis
  - 6.3.3. Malignant Otitis Externa
  - 6.3.4. Optic Herpes
  - 6.3.5. Bullous Myringitis
  - 6.3.6. Acute Otitis Media
  - 6.3.7. Mastoiditis
- 6.4. Sinusitis
  - 6.4.1. Pathophysiology
  - 6.4.2. Classification According to Etiology and Severity
  - 6.4.3. Symptoms
  - 6.4.4. Diagnosis
  - 6.4.5. Complementary Tests
  - 6.4.6. Treatment
  - 6.4.7. Complications
- 6.5. Peritonsillar, Parapharyngeal and Retropharyngeal Abscesses
  - 6.5.1. Peritonsillar Abscess
  - 6.5.2. Parapharyngeal Space Infection
  - 6.5.3. Retropharyngeal Space Infection
- 6.6. Odontogenic Infections
  - 6.6.1. Etiological Factors
  - 6.6.2. Etiopathogenesis
  - 6.6.3. Clinical Symptoms
  - 6.6.4. Diagnosis
  - 6.6.5. Treatment
- 6.7. Mucositis and Stomatitis
  - 6.7.1. Trauma Lesions
  - 6.7.2. Lesions Caused by Chemical Agents
  - 6.7.3. Allergic Stomatitis
  - 6.7.4. Oral Drug Ulcers by Unknown Mechanisms
  - 6.7.5. Gingival Alterations Caused by Drugs
  - 6.7.6. Facial Reaction to Aesthetic Fillers

- 6.7.7. Oral Lesions Caused by Cocaine
- 6.7.8. Oral Mucosal Dyschromias due to Exogenous Pigmentation
- 6.7.9. Injuries Caused by Physical Agents
- 6.7.10. Recurrent Aphthous Stomatitis
- 6.7.11. Erythema Multiform
- 6.8. Infection of Salivary Glands
  - 6.8.1. General Aspects. Anamnesis and Examination Complementary Methods
  - 6.8.2. Viral Infection
  - 6.8.3. Bacterial Infections
  - 6.8.4. Sialodochitis or Obstructive Pathology of the Salivary Glands
- 6.9. Acute Laryngitis and Epiglottitis
  - 6.9.1. Acute Laryngitis
  - 6.9.2. Tuberculous Laryngitis
  - 6.9.3. Epiglottitis
- 6.10. Conjunctivitis and Keratitis
  - 6.10.1. Infectious Conjunctivitis
    - 6.10.1.1. Concept and General Considerations
    - 6.10.1.2. Bacterial Conjunctivitis
    - 6.10.1.3. Viral Conjunctivitis
    - 6.10.1.4. Mycotic or Parasitic Conjunctivitis
  - 6.10.2. Infectious Keratitis
    - 6.10.2.1. Concept and General Considerations
    - 6.10.2.2. Bacterial Keratitis
    - 6.10.2.3. Viral Keratitis
    - 6.10.2.4. Mycotic Keratitis
    - 6.10.2.5. Acanthamoeba Keratitis
- 6.11. Uveitis, Endophthalmitis, and Retinitis
  - 6.11.1. Uveitis: Concepts and Classification
  - 6.11.2. Parasitic Uveitis
  - 6.11.3. Viral Uveitis
  - 6.11.4. Fungal Uveitis
  - 6.11.5. Bacterial Uveitis

- 6.12. Periocular Infections
  - 6.12.1. Stye
  - 6.12.2. Chronic Canaliculitis
  - 6.12.3. Acute Dacryocystitis
  - 6.12.4. Preseptal Cellulitis
  - 6.12.5. Postseptal (Orbital) Cellulitis
  - 6.12.6. Acute Dacryoadenitis: Inflammation of the Lacrimal Gland
  - 6.12.7. Viral Infections
  - 6.12.8. Other Periocular Infections

## Module 7. Infections of Organs and Apparatus (II): Skin, Soft and Osteoarticular

- 7.1. Cellulitis and Superficial Infections
  - 7.1.1. Clinical Symptoms
  - 7.1.2. Diagnosis
  - 7.1.3. Treatment
- 7.2. Deep Infections
  - 7.2.1. Necrotizing Fasciitis
  - 7.2.2. Fournier's Gangrene
  - 7.2.3. infectious Myositis
- 7.3. Diabetic Foot
  - 7.3.1. Etiopathogenesis
  - 7.3.2. Clinical Symptoms
  - 7.3.3. Staging Classification of Ulcers of Infected Diabetic Foot
  - 7.3.4. Etiology
  - 7.3.5. Diagnosis Complementary Evaluations
  - 7.3.6. Treatment
- 7.4. Pressure Ulcers
  - 7.4.1. Etiopathogenesis
  - 7.4.2. Risk Factors
  - 7.4.3. Clinical Assessment
  - 7.4.4. Complications
  - 7.4.5. Treatment
  - 7.4.6. Infection of Pressure Lesions

- 7.5. Septic Arthritis
  - 7.5.1. Epidemiology
  - 7.5.2. Pathophysiology
  - 7.5.3. Etiology
  - 7.5.4. Clinical Symptoms
  - 7.5.5. Diagnosis
  - 7.5.6. Differential Diagnosis
  - 7.5.7. Treatment
  - 7.5.8. Prognosis
- 7.6. Osteomyelitis
  - 7.6.1. Classification
  - 7.6.2. Etiology and Clinical Characteristics
  - 7.6.3. Diagnosis
  - 7.6.4. Treatment
- 7.7. Spondylodiscitis
  - 7.7.1. Etiopathogenesis and Microbiology
  - 7.7.2. Clinical Manifestations
  - 7.7.3. Diagnosis
  - 7.7.4. Treatment
  - 7.7.5. Prognosis
- 7.8. Infection of Joint Prostheses and Osteosynthesis Material
  - 7.8.1. Etiopathogenesis
  - 7.8.2. Diagnostic Approximation
  - 7.8.3. Treatment Management

## Module 8. Infections of Organs and Apparatus (III): Lower Airway, Intra-Abdominal

- 8.1. Acute Bronchitis
  - 8.1.1. Definition
  - 8.1.2. Clinical Manifestations
  - 8.1.3. Diagnosis
  - 8.1.4. Treatment
- 8.2. Acute Exacerbations of Chronic Obstructive Pulmonary Disease (AECOPD)
  - 8.2.1. Definition
  - 8.2.2. Diagnosis
  - 8.2.3. Treatment
  - 8.2.4. Attitude to Clinical Failure
  - 8.2.5. Key Concepts
- 8.3. Community-Acquired Pneumonia (CAP)
  - 8.3.1. Concept
  - 8.3.2. Pathophysiology
  - 8.3.3. Epidemiology
  - 8.3.4. Etiology
  - 8.3.5. Clinical Manifestations
  - 8.3.6. Diagnostic Attitude
  - 8.3.7. Antibiotic Treatment
- 8.4. Healthcare-Associated Pneumonia (HAP)
  - 8.4.1. Concept
  - 8.4.2. Healthcare-Associated Pneumonia Versus Community-Acquired Pneumonia due to Resistant Pathogens (CAP-PR)
  - 8.4.3. Etiology
  - 8.4.4. Microbiological Diagnosis
  - 8.4.5. Empirical Treatment
  - 8.4.6. Prognosis

- 8.5. Pneumonic Pleural Effusion and Empyema
  - 8.5.1. Clinical Symptoms
  - 8.5.2. Staging
  - 8.5.3. Imaging Tests
  - 8.5.4. Laboratory Studies: Pleural Fluid Analysis
  - 8.5.5. Pathophysiology Staging
  - 8.5.6. Bacteriology
  - 8.5.7. Prognosis
  - 8.5.8. Treatment
- 8.6. Pulmonary Abscess
  - 8.6.1. Definition
  - 8.6.2. Etiology
  - 8.6.3. Pathophysiology
  - 8.6.4. Clinical Manifestations
  - 8.6.5. Diagnosis
  - 8.6.6. Treatment
- 8.7. Pulmonary Tuberculosis
  - 8.7.1. Etiology
  - 8.7.2. Clinical Manifestations
  - 8.7.3. Diagnosis
  - 8.7.4. Treatment
- 8.8. Gastroenteritis
  - 8.8.1. Etiology
  - 8.8.2. Clinical Manifestations and Physical Examination
  - 8.8.3. Laboratory Data and Imaging Tests
  - 8.8.4. Diagnosis
  - 8.8.5. Treatment
- 8.9. Liver and Biliary Tract Infections
  - 8.9.1. Bacterial Infections that Affect the Liver
  - 8.9.2. Viral Infections Which that the Liver
  - 8.9.3. Parasitic Infections that Affect the Liver
  - 8.9.4. Fungal Infections that Affect the Liver
- 8.10. Cholecystitis and Cholangitis
  - 8.10.1. Acute Cholecystitis
  - 8.10.2. Acute Cholangitis
- 8.11. Liver Abscesses
  - 8.11.1. Concept and General Characteristics
  - 8.11.2. Classification and Etiopathogenesis
  - 8.11.3. Pyogenic Hepatic Abscesses
  - 8.11.4. Amoebic Liver Abscesses
- 8.12. Acute Hepatitis
  - 8.12.1. Definition
  - 8.12.2. Etiology
  - 8.12.3. Clinical Manifestations and Physical Examination
  - 8.12.4. Laboratory Data
  - 8.12.5. Diagnosis
  - 8.12.6. Severe Acute Hepatitis
  - 8.12.7. Severe Acute Liver Failure
  - 8.12.8. Treatment
- 8.13. Pancreatitis
  - 8.13.1. Etiology
  - 8.13.2. Diagnosis
  - 8.13.3. Classification
  - 8.13.4. Severity Prediction and Prognostic
  - 8.13.5. Treatment
  - 8.13.6. Infectious Complications
- 8.14. Appendicitis
  - 8.14.1. Epidemiology
  - 8.14.2. Etiopathogenesis
  - 8.14.3. Microbiology
  - 8.14.4. Diagnosis
  - 8.14.5. Differential Diagnosis
  - 8.14.6. Treatment
  - 8.14.7. Preoperative Antibiotic Prophylaxis
  - 8.14.8. Postoperative Antibiotic Treatment
  - 8.14.9. Post-Surgery Complications



- 8.15. Diverticulitis and Perirectal Abscess
  - 8.15.1. Definition of Diverticulitis
  - 8.15.2. Pathogenesis
  - 8.15.3. Risk Factors
  - 8.15.4. Diverticulitis Diagnosis
  - 8.15.5. Diverticulitis Classification
  - 8.15.6. Treatment for Diverticulitis
  - 8.15.7. Perirectal Abscess
- 8.16. Typhlitis
  - 8.16.1. Epidemiology
  - 8.16.2. Etiology
  - 8.16.3. Pathogenesis
  - 8.16.4. Clinical Manifestations
  - 8.16.5. Diagnosis
  - 8.16.6. Differential Diagnosis
  - 8.16.7. Treatment
- 8.17. Peritonitis
  - 8.17.1. Classification
  - 8.17.2. Pathogenesis
  - 8.17.3. Diagnosis
  - 8.17.4. Infection Severity Assessment
  - 8.17.5. Treatment
- 8.18. Spontaneous Bacterial Peritonitis
  - 8.18.1. Concept
  - 8.18.2. Epidemiology
  - 8.18.3. Pathogenesis
  - 8.18.4. Clinical Manifestations
  - 8.18.5. Diagnosis
  - 8.18.6. Prognosis
  - 8.18.7. Treatment
  - 8.18.8. Prophylaxis

- 8.19. Secondary Peritonitis
  - 8.19.1. Definition and Classification
  - 8.19.2. Microbiology
  - 8.19.3. Evaluation of Severity
  - 8.19.4. General Principles for the Management
- 8.20. Intraperitoneal Abscess
  - 8.20.1. Definition
  - 8.20.2. Epidemiology
  - 8.20.3. Etiology and Pathophysiology
  - 8.20.4. Diagnosis
  - 8.20.5. Treatment

## Module 9. Infections of Organs and Apparatus (IV): Cardiovascular, CNS

- 9.1. Infectious Endocarditis
  - 9.1.1. Epidemiology
  - 9.1.2. Etiology
  - 9.1.3. Clinical Symptoms
  - 9.1.4. Diagnosis
  - 9.1.5. Treatment
  - 9.1.6. Prevention
- 9.2. Infection of Intravascular Devices
  - 9.2.1. Infections Associated with Intravascular Catheter
  - 9.2.2. Infections Related to Implantable Electronic Cardiovascular Implantable Cardiovascular Devices
- 9.3. Acute Pericarditis
  - 9.3.1. Definition
  - 9.3.2. Incessant and Chronic Pericarditis
  - 9.3.3. Recurrent Pericarditis
  - 9.3.4. Myopericarditis
- 9.4. Mediastinitis
  - 9.4.1. Acute Mediastinitis
  - 9.4.2. Sclerosing Mediastinitis

- 9.5. Meningitis
  - 9.5.1. Epidemiology and Etiopathogenesis
  - 9.5.2. Diagnosis of Meningitis: Clinical and Laboratory
  - 9.5.3. Antimicrobial Treatment
- 9.6. Encephalitis
  - 9.6.1. Epidemiology and Etiopathogenesis
  - 9.6.2. Diagnosis of Encephalitis: Clinical and Complementary Evaluations
  - 9.6.3. Antimicrobial Treatment
- 9.7. Myelitis
  - 9.7.1. Epidemiology and Etiopathogenesis
  - 9.7.2. Clinical Symptoms
  - 9.7.3. Diagnosis
  - 9.7.4. Treatment
- 9.8. Cerebral Abscess
  - 9.8.1. Etiopathogenesis
  - 9.8.2. Clinical Manifestations and Diagnosis
  - 9.8.3. Treatment
- 9.9. Subdural Empyema, Epidural Abscess and Intracranial Thrombophlebitis
  - 9.9.1. Subdural Empyema: Etiopathogenesis, Clinical Manifestations, Diagnosis and Treatment
  - 9.9.2. Epidural Abscess: Etiopathogenesis, Clinical Manifestations, Diagnosis and Treatment
  - 9.9.3. Septic Thrombophlebitis: Etiopathogenesis, Clinical Manifestations, Diagnosis and Treatment
- 9.10. CSF Shunt Infections
  - 9.10.1. Etiopathogenesis
  - 9.10.2. Clinical Manifestations
  - 9.10.3. Diagnosis
  - 9.10.4. Treatment

## Module 10. Infections of Urinary Tract, Genitals and Sexual Transmission

- 10.1. Cystitis
  - 10.1.1. Symptoms
  - 10.1.2. Etiology
  - 10.1.3. Diagnosis
  - 10.1.4. Differential Diagnosis
  - 10.1.5. Treatment
- 10.2. Asymptomatic Bacteriuria
  - 10.2.1. Epidemiology
  - 10.2.2. Pathophysiology
  - 10.2.3. Assessment and Treatment
- 10.3. UTI in Patients with Bladder Catheterization
  - 10.3.1. Etiology
  - 10.3.2. Clinical Manifestations
  - 10.3.3. Diagnosis
  - 10.3.4. Prevention
  - 10.3.5. Treatment
- 10.4. Prostatitis
  - 10.4.1. Etiopathogenesis
  - 10.4.2. Diagnosis
  - 10.4.3. Clinical Symptoms
  - 10.4.4. Treatment
  - 10.4.5. Complications
  - 10.4.6. Chronic Nonbacterial or Chronic Idiopathic Prostatitis or Chronic Pelvic Pain Syndrome
- 10.5. Pyelonephritis
  - 10.5.1. Etiology
  - 10.5.2. Clinical Manifestations
  - 10.5.3. Complementary Tests
  - 10.5.4. Treatment
  - 10.5.5. Admission Criteria

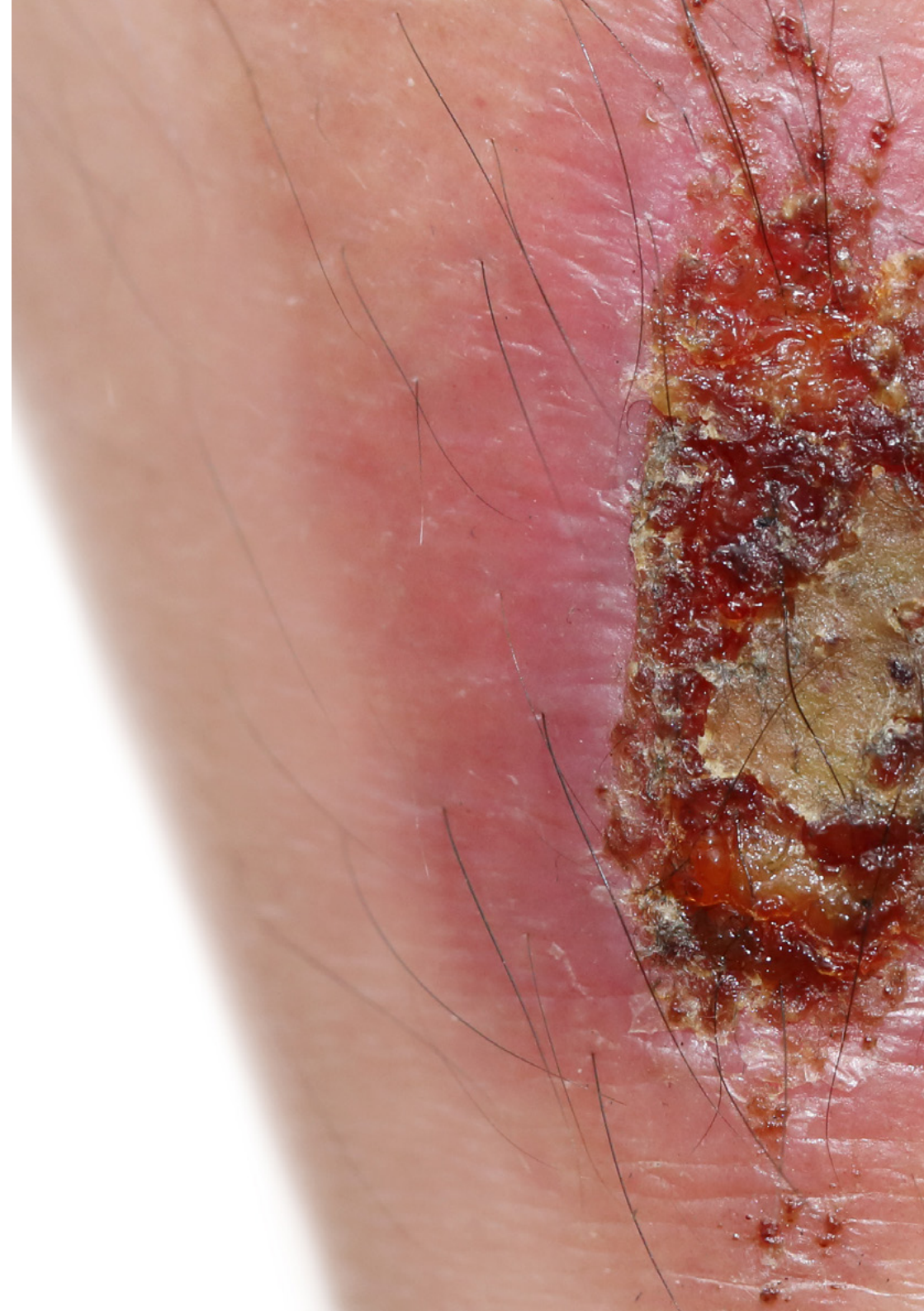
- 10.6. Perinephritic Abscess
  - 10.6.1. Pathophysiology
  - 10.6.2. Clinical Symptoms
  - 10.6.3. Etiology
  - 10.6.4. Diagnosis
  - 10.6.5. Assessment and Treatment
- 10.7. Infections which Cause Skin and Genital Mucosal Lesions
  - 10.7.1. Bacterial Infections
  - 10.7.2. Fungal Infections
  - 10.7.3. Viral Infections

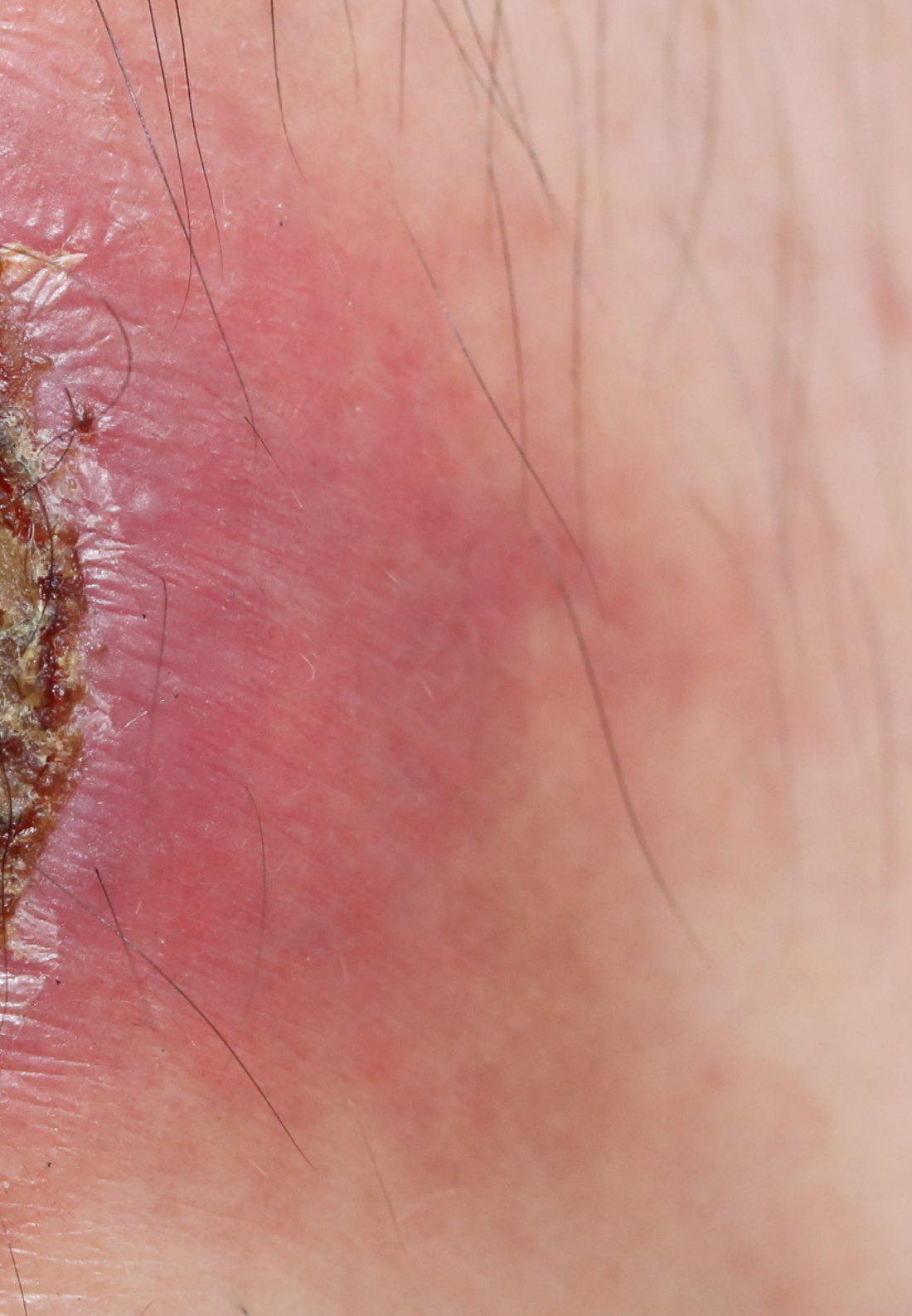
## Module 11. Infectious Diseases in the Emergency Department of the Pediatric Patient

- 11.1. Fever Without Focus
  - 11.1.1. Child With a Fever Without Focus and Poor Appearance
  - 11.1.2. Fever Without Focus and Good General Appearance
  - 11.1.3. Children from 3-36 Months Old With a Fever Without Focus and Good General Appearance
  - 11.1.4. Breastfeeding Infant less than 3 Months Old With a Fever Without Focus and Good General Appearance
- 11.2. Sepsis and Septic Shock
  - 11.2.1. Concept
  - 11.2.2. Current Definition of Shock and Septic Shock
  - 11.2.3. Etiology and Epidemiology
  - 11.2.4. Pathophysiology
  - 11.2.5. Risk Factors
  - 11.2.6. Differential Diagnosis
  - 11.2.7. Clinical Symptoms
  - 11.2.8. Complementary Tests
  - 11.2.9. Treatment
- 11.3. Fever in a Traveling Child
  - 11.3.1. Medical History
  - 11.3.2. Physical Examination
  - 11.3.3. Complementary Tests
  - 11.3.4. Treatment
  - 11.3.5. Malaria
  - 11.3.6. Dengue
- 11.4. Exanthem
  - 11.4.1. Etiology
  - 11.4.2. Diagnosis
  - 11.4.3. Differential Diagnosis
- 11.5. Skin and Soft Tissue Infections
  - 11.5.1. Etiopathogenesis
  - 11.5.2. Diagnosis
  - 11.5.3. Main Clinical Framework
  - 11.5.4. Treatment
  - 11.5.5. Community-Acquired Methicillin-Resistant S. Aureus
- 11.6. Cervical Adenitis
  - 11.6.1. Etiology
  - 11.6.2. Clinical Evaluation
  - 11.6.3. Diagnosis and Treatment
  - 11.6.4. Differential Diagnosis
- 11.7. Osteoarticular Infections. Acute Osteomyelitis and Septic Arthritis
  - 11.7.1. Epidemiology
  - 11.7.2. Etiopathogenesis
  - 11.7.3. Clinical Symptoms
  - 11.7.4. Diagnosis
  - 11.7.5. Differential Diagnosis
  - 11.7.6. Treatment



- 11.8. Pharyngotonsillitis and Its Complications
  - 11.8.1. Concept
  - 11.8.2. Epidemiology and Etiology
  - 11.8.3. Clinical Symptoms
  - 11.8.4. Diagnosis
  - 11.8.5. Treatment
- 11.9. Otitis Media and External Sinusitis
  - 11.9.1. Concept of Otitis Media and External
    - 11.9.1.1. Epidemiology and Etiology
    - 11.9.1.2. Clinical Symptoms
    - 11.9.1.3. Complications
    - 11.9.1.4. Diagnosis
    - 11.9.1.5. Treatment
  - 11.9.2. Concept of Acute Sinusitis
    - 11.9.2.1. Epidemiology and Etiology
    - 11.9.2.2. Clinical Symptoms
    - 11.9.2.3. Diagnosis
    - 11.9.2.4. Treatment
- 11.10. Acute Mumps
  - 11.10.1. Epidemic Mumps
  - 11.10.2. Vaccines
  - 11.10.3. Prevention of Epidemic Outbreaks
- 11.11. Laryngitis and Epiglottitis
  - 11.11.1. Concept
  - 11.11.2. Epidemiology and Etiology
  - 11.11.3. Clinical Symptoms
  - 11.11.4. Diagnosis
  - 11.11.5. Treatment
  - 11.11.6. Admission Criteria





11.12. Pertussis Syndrome

- 11.12.1. Concept
- 11.12.2. Epidemiology and Etiology
- 11.12.3. Clinical Symptoms
- 11.12.4. Complications
- 11.12.5. Diagnosis
- 11.12.6. Treatment
- 11.12.7. Prevention

11.13. Bronchiolitis and Recurrent Wheezing Episodes

- 11.13.1. Acute Bronchiolitis
- 11.13.2. Recurrent Wheezing

11.14. Pneumonia and Complications

- 11.14.1. Epidemiology
- 11.14.2. Etiology
- 11.14.3. Clinical Characteristics
- 11.14.4. Diagnosis
- 11.14.5. Treatment
- 11.14.6. Prevention
- 11.14.7. Complications

11.15. TB

- 11.15.1. Manifestations
- 11.15.2. Diagnosis
- 11.15.3. Treatment

11.16. Acute Gastroenteritis

- 11.16.1. Etiopathogenesis
- 11.16.2. Clinical Symptoms
- 11.16.3. Diagnosis
- 11.16.4. Treatment

11.17. Viral Hepatitis

- 11.17.1. Assessment and Initial Management of Hepatitis in the Emergency Department
- 11.17.2. Classic Viral Hepatitis



- 11.18. Appendicitis (Need for Antibiotic or Not) and Perirectal Abscesses
  - 11.18.1. Acute Appendicitis
  - 11.18.2. Perirectal Abscess
- 11.19. Urinary Infection
  - 11.19.1. Definition
  - 11.19.2. Etiopathogenesis
  - 11.19.3. Clinical Symptoms. When to Suspect a Urinary Tract Infection in the Pediatric Age Group
  - 11.19.4. Diagnosis
  - 11.19.5. Management
- 11.20. CNS Infections in Pediatrics: Acute Meningitis
  - 11.20.1. Etiology
  - 11.20.2. Clinical Symptoms
  - 11.20.3. Diagnosis
  - 11.20.4. Treatment
  - 11.20.5. Chemoprophylaxis
  - 11.20.6. Complications and Prognosis
- 11.21. Endocarditis, Myocarditis and Pericarditis
  - 11.21.1. Infectious Endocarditis
  - 11.21.2. Myocarditis
  - 11.21.3. Pericarditis
- 11.22. Treatment in Pediatric Infectious Diseases
  - 11.22.1. Bacterial Infections in the Pediatric Emergency Department: Diagnosis and Antibiotic Treatment of Choice, Depending on the Resistance of the Pathogens Responsible for the Disease
  - 11.22.2. Delayed Antibiotic Prescribing Strategy
  - 11.22.3. When is the Association of Amoxicillin with Clavulanic Acid and Macrolides Indicated in Pediatrics?
  - 11.22.4. Do I Also Have to be Careful with Topical Antibiotherapy to Avoid Bacterial Resistance?

## Module 12. Imported Infectious Diseases in the Emergency Department

- 12.1. Introduction to Imported Pathology
  - 12.1.1. Imported Pathologies of Special Interest
    - 12.1.1.1. Chagas Disease
    - 12.1.1.2. Dengue
    - 12.1.1.3. Chikungunya
    - 12.1.1.4. Malaria
- 12.2. Globalization and Emerging Pathology
  - 12.2.1. Emerging and Re-emerging Diseases
  - 12.2.2. Main Causes of Emergency in Infectious Diseases
  - 12.2.3. Transmission
  - 12.2.4. Zoonosis
  - 12.2.5. Future Previsions
- 12.3. Geography of Tropical Infectious Diseases
  - 12.3.1. Subspecialties of Medical Geography
  - 12.3.2. Relevance and Relationship to Tropical Diseases
  - 12.3.3. Main Infectious Diseases According to Area
- 12.4. Epidemiology of Tropical Infectious Diseases in Travelers, Immigrants and VFRs
  - 12.4.1. Importance
  - 12.4.2. Epidemiological Characteristics of Immigrants
  - 12.4.3. Epidemiological Characteristics of People Traveling to the Tropics
  - 12.4.4. Epidemiological Characteristics of VFRs
- 12.5. Anamnesis of a Traveler with Fever in the Emergency Department
  - 12.5.1. Initial Approximation of a Traveler with Fever
  - 12.5.2. Differential Diagnosis
  - 12.5.3. Treatment of a Traveler with Fever
- 12.6. Fever After Staying in a Tropical and/or Subtropical Area
  - 12.6.1. Importance of Good Anamnesis
  - 12.6.2. Investigation of Possible Vectors
  - 12.6.3. Fever of Parasitic Origin
  - 12.6.4. Fever of Viral Origin
  - 12.6.5. Fever of Bacterial Origin
  - 12.6.6. Other Causes of Fever

- 12.7. Imported Infectious Pathology. Syndrome Classification
  - 12.7.1. Fever and Cutaneous Lesion
  - 12.7.2. Fever and Altered Level of Consciousness
  - 12.7.3. Fever and Liver Problems
  - 12.7.4. Fever and Respiratory Semiology
  - 12.7.5. Fever and Digestive Semiology
- 12.8. Imported Tropical Infectious Diseases of Special Interest
  - 12.8.1. Malaria
  - 12.8.2. Arbovirus: Dengue, Zika, Chikungunya
  - 12.8.3. MERS Coronavirus (MERS CoV)
  - 12.8.4. Schistosomiasis
  - 12.8.5. Invasive Enteritis (Salmonella, Shigella, E.coli, Campylobacter)
  - 12.8.6. Hemorrhagic Fevers (Ebola, Lassa, Marburg, Yellow Fever, Crimean-Congo)

### Module 13. Latest Information on Coronavirus Infections

- 13.1. Discovery and Evolution of Coronaviruses
  - 13.1.1. Discovery of Coronaviruses
  - 13.1.2. Global Trends in Coronavirus Infections
- 13.2. Main Microbiological characteristics and Members of the Coronavirus Family
  - 13.2.1. General Microbiological Characteristics of Coronaviruses
  - 13.2.2. Viral Genome
  - 13.2.3. Principal Virulence Factors
- 13.3. Epidemiological Changes in Coronavirus Infections from Discovery to the Present
  - 13.3.1. Morbidity and Mortality of Coronavirus Infections from their Emergence to the Present
- 13.4. The Immune System and Coronavirus Infections
  - 13.4.1. Immunological Mechanisms Involved in the Immune Response to Coronaviruses
  - 13.4.2. Cytokine Storm in Coronavirus Infections and Immunopathology
  - 13.4.3. Modulation of the Immune System in Coronavirus Infections
- 13.5. Pathogenesis and Pathophysiology of Coronavirus Infections
  - 13.5.1. Pathophysiological and Pathogenic Alterations in Coronavirus Infections
  - 13.5.2. Clinical Implications of the Main Pathophysiological Alterations
- 13.6. Risk Groups and Transmission Mechanisms of Coronaviruses
  - 13.6.1. Main Sociodemographic and Epidemiological Characteristics of Risk Groups Affected by Coronavirus
  - 13.6.2. Coronavirus Mechanisms of Transmission
- 13.7. Natural History of Coronavirus Infections
  - 13.7.1. Stages of Coronavirus Infection
- 13.8. Latest Information on Microbiological Diagnosis of Coronavirus Infections
  - 13.8.1. Sample Collection and Shipment
  - 13.8.2. PCR and Sequencing
  - 13.8.3. Serology Testing
  - 13.8.4. Virus Isolation
- 13.9. Current Biosafety Measures in Microbiology Laboratories for Coronavirus Sample Handling
  - 13.9.1. Biosafety Measures for Coronavirus Sample Handling
- 13.10. Up-to-Date Management of Coronavirus Infections
  - 13.10.1. Prevention Measures
  - 13.10.2. Symptomatic Treatment
  - 13.10.3. Antiviral and Antimicrobial Treatment in Coronavirus Infections
  - 13.10.4. Treatment of Severe Clinical Forms
- 13.11. Future Challenges in the Prevention, Diagnosis, and Treatment of Coronavirus
  - 13.11.1. Global Challenges for the Development of Prevention, Diagnostic, and Treatment Strategies for Coronavirus Infections



*This Professional Master's Degree in Infectious Diseases in the Emergency Department contains the most complete and up to date scientific program on the market"*



06

# Methodology

This academic program offers students a different way of learning. Our methodology uses a cyclical learning approach: **Relearning**.

This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.



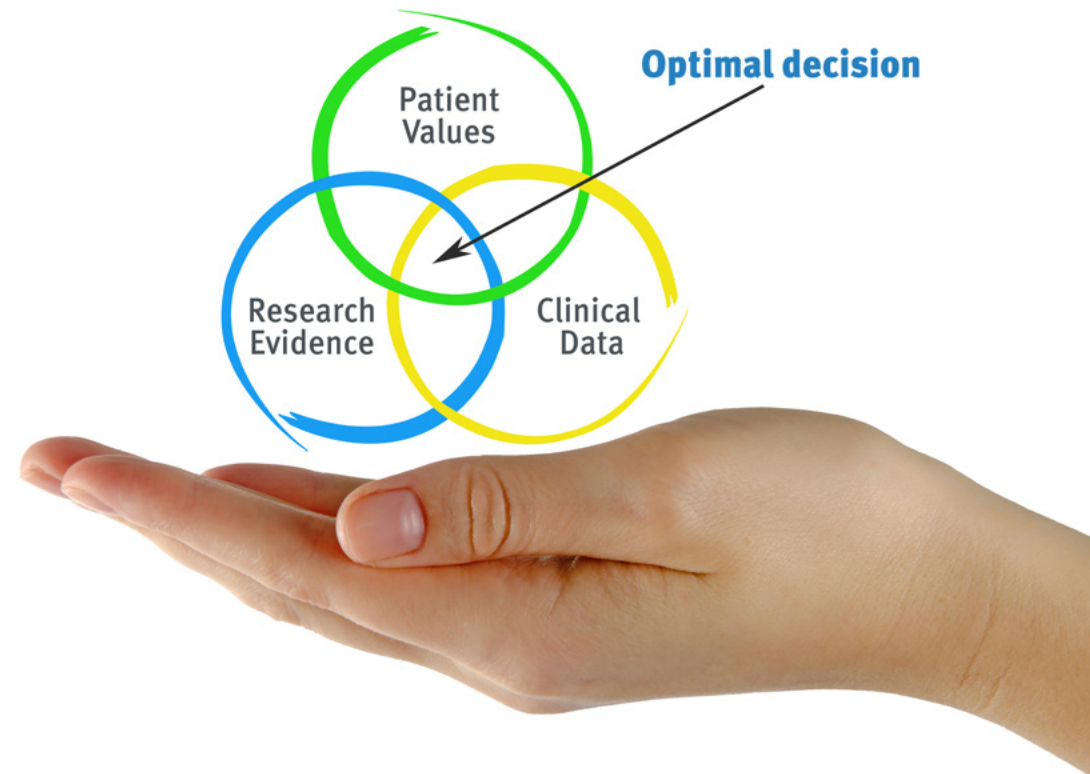
“

*Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"*

## At TECH we use the Case Method

What should a professional do in a given situation? Throughout the program, students will face multiple simulated clinical cases, based on real patients, in which they will have to do research, establish hypotheses, and ultimately resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method. Specialists learn better, faster, and more sustainably over time.

*With TECH you will experience a way of learning that is shaking the foundations of traditional universities around the world*



According to Dr. Gervas, the clinical case is the annotated presentation of a patient, or group of patients, which becomes a "case", an example or model that illustrates some peculiar clinical component, either because of its teaching power or because of its uniqueness or rarity. It is essential that the case is based on current professional life, trying to recreate the real conditions in the physician's professional practice.



“

*Did you know that this method was developed in 1912, at Harvard, for law students? The case method consisted of presenting students with real-life, complex situations for them to make decisions and justify their decisions on how to solve them. In 1924, Harvard adopted it as a standard teaching method”*

The effectiveness of the method is justified by four fundamental achievements:

1. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that evaluate real situations and the application of knowledge.
2. Learning is solidly translated into practical skills that allow the student to better integrate into the real world.
3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life.
4. Students like to feel that the effort they put into their studies is worthwhile. This then translates into a greater interest in learning and more time dedicated to working on the course.





## Relearning Methodology

At TECH we enhance the case method with the best 100% online teaching methodology available: Relearning.

This university is the first in the world to combine the study of clinical cases with a 100% online learning system based on repetition, combining a minimum of 8 different elements in each lesson, a real revolution with respect to the mere study and analysis of cases.

*Professionals will learn through real cases and by resolving complex situations in simulated learning environments. These simulations are developed using state-of-the-art software to facilitate immersive learning*



At the forefront of world teaching, the Relearning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best online university (Columbia University).

With this methodology, more than 250,000 physicians have been trained with unprecedented success in all clinical specialties regardless of surgical load. Our pedagogical methodology is developed in a highly competitive environment, with a university student body with a strong socioeconomic profile and an average age of 43.5 years old.

*Relearning will allow you to learn with less effort and better performance, involving you more in your specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to success*

In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and relearn). Therefore, we combine each of these elements concentrically.

The overall score obtained by TECH's learning system is 8.01, according to the highest international standards.



This program offers the best educational material, prepared with professionals in mind:



#### Study Material

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is highly specific and precise.

These contents are then applied to the audiovisual format, to create the TECH online working method. All this, with the latest techniques that offer high quality pieces in each and every one of the materials that are made available to the student.



#### Surgical Techniques and Procedures on Video

TECH introduces students to the latest techniques, the latest educational advances and to the forefront of current medical techniques. All of this in direct contact with students and explained in detail so as to aid their assimilation and understanding. And best of all, you can watch the videos as many times as you like.



#### Interactive Summaries

The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



#### Additional Reading

Recent articles, consensus documents and international guidelines, among others. In TECH's virtual library, students will have access to everything they need to complete their course.





#### Expert-Led Case Studies and Case Analysis

Effective learning ought to be contextual. Therefore, TECH presents real cases in which the expert will guide students, focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.



#### Testing & Retesting

We periodically evaluate and re-evaluate students' knowledge throughout the program, through assessment and self-assessment activities and exercises, so that they can see how they are achieving their goals.



#### Classes

There is scientific evidence on the usefulness of learning by observing experts. The system known as Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.



#### Quick Action Guides

TECH offers the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help students progress in their learning.





07

# Certificate

The Professional Master's Degree in Infectious Diseases in the Emergency Department guarantees you, in addition to the most rigorous and up-to-date education, access to a Professional Master's Degree issued by TECH Global University.



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*Successfully complete this program and receive your university qualification without travel or laborious paperwork”*

This private qualification will allow you to obtain a **Professional Master's Degree diploma in Infectious Diseases in the Emergency Department** endorsed by **TECH Global University**, the world's largest online university.

**TECH Global University** is an official European University publicly recognized by the Government of Andorra ([official bulletin](#)). Andorra is part of the European Higher Education Area (EHEA) since 2003. The EHEA is an initiative promoted by the European Union that aims to organize the international training framework and harmonize the higher education systems of the member countries of this space. The project promotes common values, the implementation of collaborative tools and strengthening its quality assurance mechanisms to enhance collaboration and mobility among students, researchers and academics.

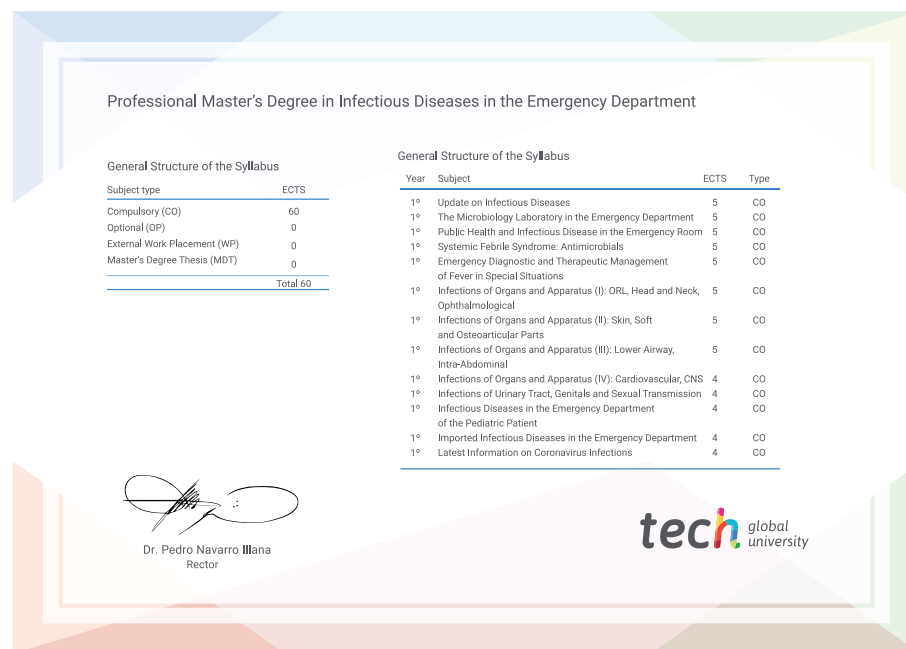
This **TECH Global University** private qualification is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Professional Master's Degree in Infectious Diseases in the Emergency Department**

Modality: **online**

Duration: **12 months**

Accreditation: **60 ECTS**



\*Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, TECH Global University will make the necessary arrangements to obtain it, at an additional cost.



health future  
confidence people  
education information tutors  
guarantee accreditation teaching  
institutions technology learning  
community commitment  
personalized service innovation  
knowledge present quality  
online training  
development language  
virtual classroom



## Professional Master's Degree

Infectious Diseases in the  
Emergency Department

- » Modality: online
- » Duration: 12 months
- » Certificate: TECH Global University
- » Credits: 60 ECTS
- » Schedule: at your own pace
- » Exams: online



# Professional Master's Degree

Infectious Diseases in the  
Emergency Department

