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Infectious Diseases: effective case management, laboratory diagnostics, nursing care plan, and documentation process

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***Abstract*---Background:** The global threat of infectious diseases has evolved significantly since the 1918 Spanish flu pandemic, which caused millions of deaths worldwide. The development of an international health infrastructure aimed at preventing and managing infectious disease outbreaks has improved health outcomes. However, the world still faces the challenge of emerging infectious diseases, such as Ebola, Zika, and SARS, alongside rising antimicrobial resistance (AMR), which jeopardizes public health and economic stability. **Aim:** This article explores the case management, laboratory diagnostics, nursing care, and documentation processes in combating

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infectious diseases. It advocates for a multidisciplinary approach to address the growing risks posed by both emerging and re-emerging pathogens and antimicrobial resistance. **Methods:** A comprehensive review of global health infrastructure, case management strategies, diagnostic techniques, nursing protocols, and the documentation process was conducted. The article incorporates data on the economic and social implications of infectious diseases and the management strategies used in various outbreaks. **Results:** The article identifies key areas in infectious disease management, including the role of timely diagnostics, accurate case management, and effective nursing interventions. It highlights how proper documentation and adherence to care protocols contribute to better patient outcomes. Furthermore, it underscores the growing importance of antimicrobial stewardship in preventing the rise of resistant pathogens. **Conclusion:** The global health system must continue to evolve in response to infectious disease threats, integrating advances in diagnostics, case management, and nursing care. A more unified and collaborative global approach to infectious disease threats, combined with robust documentation practices, is essential to prevent future pandemics. Strengthening health systems worldwide is crucial in mitigating the social and economic impacts of infectious diseases.

***Keywords*---**Infectious diseases, case management, laboratory diagnostics, nursing care, antimicrobial resistance, global health, documentation process, pandemic preparedness.

Introduction

In 1918, as the First World War neared its conclusion, a perplexing disease that caused cyanosis and respiratory distress rapidly spread across European trenches and beyond, carried on warships to distant regions. By the time the pandemic, later termed the Spanish flu, subsided in 1920, it had affected over a quarter of the global population and caused an estimated 30 to 100 million deaths [1, 2]. Comparatively, the combined casualties of the two World Wars amount to approximately 77 million [3]. By any metric, the 1918 influenza pandemic stands as one of the most devastating global catastrophes of the 20th century. In the century since the Spanish flu outbreak, no pandemic has matched its mortality scale within such a condensed timeframe. This relative reduction in pandemic severity can be partially attributed to the establishment of a sophisticated global health infrastructure. This system has evolved to mitigate both known and emerging infectious disease threats through formal and informal networks comprising diverse organizations. These entities cater to varied stakeholders, pursue distinct objectives, operate at different geographic levels (local, national, regional, and global), and span public, private, and non-profit sectors.

Despite these advancements, the efficacy of the current global health framework in addressing the growing and dynamic spectrum of infectious disease threats remains uncertain. Recent outbreaks, including Ebola, Zika, dengue, Middle East respiratory syndrome (MERS), severe acute respiratory syndrome (SARS), and influenza, alongside the escalating threat of antimicrobial resistance (AMR), highlight these vulnerabilities. Collectively, such threats jeopardize not only health systems but also broader societal and economic stability. A key limitation is the absence of a unified entity with a comprehensive perspective on potential natural, accidental, or deliberate biological threats and the organizational network tasked with their management. To address these challenges, we advocate for the establishment of a multidisciplinary Global Technical Council on Infectious Disease Threats. This council, operating independently or within an existing institution, would enhance the global health system by: (1) fostering collaboration among relevant organizations; (2) addressing knowledge deficits in areas such as disease surveillance, research and development (R&D), financial mechanisms, logistical frameworks, and socio-economic impacts of infectious diseases; and (3) delivering evidence-based recommendations to mitigate global risks.

Background

Increased human longevity represents a significant milestone in global progress, with life expectancy rising by 24 years since 1950 [4]. Many individuals now live into their eighth and ninth decades [4], with projections indicating life expectancy exceeding 85 years in some nations and 80 years in many others by the mid-21st century [5]. These improvements largely result from reduced infectious disease mortality, achieved through advancements in sanitation, hygiene, water quality, nutrition, vaccination, antibiotics, medical practices, health systems, and economic development. While infectious disease mortality has declined, these diseases continue to pose significant global threats. Humanity faces challenges from ancient pathogens, such as the plague, as well as newer threats like human immunodeficiency virus (HIV), arising from mutation or zoonotic transmission. Some diseases, like tuberculosis (TB) and malaria, remain endemic and exert steady burdens, whereas others, such as influenza, cause episodic outbreaks, epidemics, or pandemics, severely impacting both developed and developing regions.

A key challenge in combating epidemics lies in the diverse and unpredictable nature of potential causes, including unidentified pathogens. In May 2016, the World Health Organization (WHO) identified priority diseases with epidemic potential requiring urgent R&D attention, a list updated as recently as February 2018 [26, 40]. The Blueprint prioritizes severe emerging diseases that could lead to public health emergencies but lack adequate preventive or therapeutic solutions [41]. The prioritization process, involving expert consultation and decision analysis, considers factors like transmissibility, severity, medical countermeasures, human-animal interfaces, and societal impacts. Additionally, endemic diseases like tuberculosis, malaria, dengue, and HIV pose threats of geographic spread if not effectively controlled. Pandemic influenza remains a critical concern, as reflected in the WHO's Pandemic Influenza Preparedness Framework [42]. Compounding these challenges is the growing threat of AMR. The effectiveness of antibiotics—key to the reduction of infectious disease mortality in the 20th century—is diminishing. The rise of pan-resistant "superbugs" poses a significant global risk if left unaddressed [43]. While the rapid transmission of resistant pathogens may not mirror pandemic-like outbreaks, their proliferation increases global health risks. AMR threats differ from epidemic threats, as they are predominantly bacterial and often nosocomial, whereas epidemic pathogens are usually viral, emerging from zoonotic reservoirs. **Table 1** outlines the WHO's priority list of bacterial pathogens requiring R&D for new antibiotics [44]. This list, based on multi-criteria decision analysis, emphasizes pathogens with the greatest R&D needs considering health burdens and treatment gaps. Notably, TB was excluded from this list to focus solely on bacterial threats.

In addition to the pathogens listed, the growing resistance to medications used to treat tuberculosis (TB), human immunodeficiency virus (HIV), and malaria is of particular concern. Drug-resistant TB, for example, is currently responsible for 240,000 deaths annually, contributing to the broader AMR-related death toll of 700,000, a figure that is likely an underestimate (43, 45). Moreover, the global health community must recognize the substantial risk posed by potential human-induced infectious disease outbreaks, whether due to accidental release from research facilities or intentional biological attacks. Over the past five decades, several distressing (though fortunately contained) incidents of this nature have occurred. In 1993, the Japanese doomsday cult Aum Shinrikyo attempted to cause an epidemic by dispersing anthrax spores from the top of a cooling tower in Tokyo (46). In 1995, the same group launched a chemical attack using a sarin-like agent on the Tokyo subway, resulting in 13 fatalities and numerous injuries (47). A more recent case occurred in 2001 when an unidentified assailant mailed anthrax-laced letters to U.S. senators and news organizations, causing five deaths (48). In 2014, a mishandling of live anthrax at the U.S. Centers for Disease Control and Prevention potentially exposed numerous workers to the pathogen (49). As long as dangerous pathogens, such as anthrax and smallpox, are stored for research purposes, the risk of an accident or deliberate attack remains. Technological advances in gene editing, combined with the lifting of a U.S. moratorium on funding risky research involving the editing of lethal viruses, could further heighten this danger. As early as 2002, scientists demonstrated the ability to chemically synthesize highly infectious agents like poliovirus (50), and more recently, horsepox—a close relative of smallpox—was synthesized (51). The success of this experiment suggests that, with basic scientific knowledge and modest financial resources, malicious actors could potentially create smallpox with relative ease and speed (52).

Table 1: WHO priority pathogens list for R&D of new antibiotics

Pathogen	Resistance
PRIORITY 1: CRITICAL	
Acinetobacter baumannii	Carbapenem-resistant
Pseudomonas aeruginosa	Carbapenem-resistant
Enterobacteriaceae	Carbapenem-resistant, 3rd generation cephalosporin-resistant
PRIORITY 2: HIGH	
Enterococcus faecium	Vancomycin-resistant
Staphylococcus aureus	Methicillin-resistant, vancomycin intermediate and resistant
Helicobacter pylori	Clarithromycin-resistant
Campylobacter	Fluoroquinolone-resistant
Salmonella species	Fluoroquinolone-resistant
Neisseria gonorrhoeae	3rd generation cephalosporin-resistant, fluoroquinolone-resistant
PRIORITY 3: MEDIUM	
Streptococcus pneumoniae	Penicillin-non-susceptible
Haemophilus influenzae	Ampicillin-resistant
Shigella species	Fluoroquinolone-resistant

Economic and Social Risks of Infectious Disease Threats:

Infectious disease threats, along with the associated fear and panic, are linked to various economic and social risks. For outbreaks and epidemics, whether naturally occurring or human-induced, the health system bears significant costs related to medical treatment and outbreak management. A substantial outbreak can overwhelm healthcare systems, reducing their capacity to address routine health needs and further straining resources. Beyond the direct healthcare costs, epidemics disrupt productivity as those infected, along with their caregivers, are forced to miss work or perform at reduced capacity. The impact is magnified when critical personnel, such as engineers, scientists, and healthcare professionals, are affected.

The fear of contagion can also lead to social distancing measures, including the closure of schools, businesses, transportation, and public services, which disrupts economic and social activities. Public concern about the spread of even a contained outbreak can result in declines in trade. For instance, the European Union imposed a 10-year ban on British beef exports following the discovery of mad cow disease in the UK, despite the limited (and hypothesized) risk to humans (53, 54). Similarly, tourism and travel to regions affected by outbreaks tend to decrease, as witnessed in Brazil and Southeast Asia during periods of heightened dengue transmission (55–58). In the case of persistent epidemics such as HIV and malaria, foreign direct investment may also be deterred (59, 60). The economic consequences of epidemics are substantial. A recent study estimated that the annual cost of a pandemic influenza outbreak could reach approximately $500 billion (0.6% of global GDP), accounting for both lost income and the higher mortality rates associated with the outbreak (61). The World Bank similarly projected that a flu pandemic causing over 28 million excess deaths could lead to a global GDP reduction of up to 5% (62, 63). Although the projected economic impact of influenza pandemics is largely driven by anticipated high mortality and morbidity rates, even limited health impacts can trigger significant economic repercussions. For example, during the Ebola outbreak in West Africa, Liberia's GDP growth dropped by 8 percentage points from 2013 to 2014, despite a relatively low death rate over the same period (4, 64).

As with infectious disease outbreaks, antimicrobial resistance (AMR) incurs significant health system costs. Resistant infections necessitate more expensive second- and third-line treatments and are often associated with extended hospital stays (65–67). As the prevalence of resistant infections increases, these costs will compound. The most pressing concern regarding AMR is the potential scenario in which a substantial number of infections become untreatable. Even without reaching this extreme, it is conceivable that the risk of mortality or severe morbidity will increase as broad-spectrum antibiotics lose their efficacy. Certain medical procedures, including routine surgeries, may become too risky due to the absence of effective prophylactic antibiotics, exacerbating morbidity. Productivity losses are also inevitable, as AMR-related health impacts will lead to increased morbidity and mortality, removing individuals from the labor force or diminishing their work capacity. In some regions, the spread of disease among livestock could also have significant economic consequences. In extreme cases, AMR may lead to considerable reductions in international trade.

Estimates of the potential economic impact of AMR vary, reflecting the uncertainty surrounding the ultimate health burden. However, existing projections are concerning. The World Bank has predicted that AMR could reduce global GDP by 3.8% by 2050 in the worst-case scenario, with developing countries shouldering a disproportionate burden (68). A 2014 report by the Review on Antimicrobial Resistance, commissioned by David Cameron and chaired by Jim O'Neill, projected a cumulative cost of $100 trillion by mid-century if resistance to pathogens such as TB, malaria, and HIV continues to escalate unchecked (43). Although the likelihood of such extreme outcomes is debated, AMR undoubtedly represents a significant economic threat. Beyond economic implications, infectious disease threats also carry substantial social risks. Outbreaks and epidemics can lead to geopolitical instability, as fear of infection prompts people to flee affected areas, potentially causing international migration crises [as seen during the 1994 plague outbreak in Surat, India (15)]. Epidemics can also exacerbate vulnerabilities in weak governments, especially those with fragile health systems, potentially contributing to state instability.

Challenges:

Managing the risk of infectious disease is fraught with numerous complicating factors. Several ongoing demographic trends suggest an increased potential for pathogen transmission. While populations in many developed nations are stabilizing or even shrinking, rapid population growth persists in regions where infectious disease outbreaks are most likely to occur, particularly in countries with underdeveloped healthcare systems that may struggle to contain epidemics. For instance, the population of Sub-Saharan Africa is growing at an annual rate of 2.65%, more than double the highest rate experienced by high-income countries since the 1950s [4]. In 2007, urban populations surpassed rural populations for the first time in history [69]. Urbanization increases the density of human populations, thereby enhancing the spread of contagious diseases. In rapidly urbanizing areas, housing shortages often lead to the development of slums, where overcrowded living conditions, inadequate sanitation, and limited access to clean water exacerbate the problem. Additionally, as the global population ages, with a growing proportion of older adults in every country [4], the susceptibility of the elderly to infections due to immunosenescence further heightens the potential for widespread disease transmission [70].

Climate change also plays a role in facilitating the spread of pathogens, particularly as the habitats of disease-carrying vectors, such as the Aedes aegypti mosquito—which transmits diseases like dengue, chikungunya, Zika, and yellow fever—expand [71]. Human interactions with animal populations have always presented a risk of pathogen spillovers [72], and changes in these interactions, such as the rise of factory farming and increased human encroachment on natural habitats, could lead to more zoonotic diseases. Furthermore, civil conflict often precipitates or exacerbates disease outbreaks, especially when populations are displaced, public health infrastructure is damaged, or basic care and immunization services are disrupted [73–76]. Globalization compounds these challenges by accelerating the spread of diseases across national borders. The rapid proliferation of international travel and trade makes it increasingly difficult to contain outbreaks in their early stages. Globalization also contributes to the rise of antimicrobial resistance (AMR), as the movement of people facilitates the transmission of resistant strains from regions with low resistance to those with high rates of circulating resistance.

The primary challenge in managing AMR is the widespread use of antimicrobials, which drives the evolution of resistant pathogens. Each antimicrobial dose exerts selective pressure on pathogen populations, promoting the development and proliferation of resistance mechanisms. This issue is further complicated by the urgent need for increased antimicrobial access in low- and middle-income countries (LMICs), where infectious diseases continue to claim lives that could otherwise be saved with readily available treatments in developed countries [77]. As global efforts aim to close this access gap, national and international AMR response plans must balance the need for increased access with measures to prevent overuse and resistance development. Several factors further complicate the management of risks related to biological accidents and attacks. In the case of accidents, a delicate balance exists between facilitating valuable research on dangerous pathogens—such as understanding their spread and developing countermeasures—and imposing safeguards to prevent potential risks. Research on deadly pathogens, including genetic manipulation, could improve preparedness for natural outbreaks or attacks, but concerns remain about human error leading to catastrophic events [78]. Additionally, the relatively low cost and ease of producing certain biological agents raise alarms about the potential for intentional biological attacks, particularly by terrorist organizations [79, 80]. Moreover, biological agents used in attacks, such as anthrax, have long incubation periods, complicating efforts by national governments to identify and apprehend perpetrators or mount an effective response [81].

Economic and political challenges also hinder the implementation of necessary measures for preparing for and responding to infectious disease threats. The low probability of any single pathogen sparking an epidemic, even though the cumulative risk is high, makes it difficult to prioritize resources and build political will for prevention and preparedness. Similarly, the slow-burning nature of AMR makes its immediate consequences less apparent to policymakers and the public, although its unchecked growth could lead to a crisis of exponential proportions. A political challenge lies in the lack of reliable mechanisms to incentivize international collaboration in developing new biomedical countermeasures. Manufacturers from high-income countries may depend on LMICs for biological samples needed for research, yet LMICs may hesitate to share these resources without assurances of equitable benefit sharing, such as access to vaccines and treatments. This issue led Indonesia to withhold influenza samples from the World Health Organization (WHO) in 2007 [82]. The Nagoya Protocol, which came into force in 2010, aims to ensure equitable benefit-sharing from genetic resources, but concerns about its complex requirements and penalties for non-compliance have raised fears of stifling essential research [83]. Balancing the need for rapid access to resources with ensuring fair distribution of benefits remains a significant challenge.

Another economic issue pertains to the financing of global public goods like vaccines to combat epidemics. While these vaccines hold high social value, their private value to manufacturers is often low [84]. Pharmaceutical companies are generally unwilling to invest in research and development (R&D) for products unless substantial returns are anticipated. Furthermore, public investment has been inconsistent, often waning after the immediate threat of an outbreak subsides. For example, U.S. government funding for outbreak preparedness has decreased by 50% since the peak of the 2014 Ebola outbreak [85]. This cycle of urgent attention followed by neglect hinders long-term investments in epidemic preparedness. There are also significant scientific and economic barriers to addressing AMR. Scientifically, bacteria have developed numerous evasion mechanisms, making it increasingly difficult to discover new therapeutic targets. Economically, there is a misalignment between public interests, which seek to minimize the use of new antibiotics to preserve their efficacy while ensuring their availability at low cost for those in need, and the interests of pharmaceutical companies, which seek to maximize profits by developing widely used products.

This discrepancy has contributed to the lack of novel antibiotic classes in over three decades [86].

Diagnosis Protocols of Infectious Diseases:

Diagnosis protocols for infectious diseases are essential for ensuring accurate identification and effective management of potential outbreaks. The first step in the diagnosis process involves a comprehensive patient assessment, which includes reviewing medical history, current symptoms, travel history, and potential exposure to infected individuals or environments. This is followed by physical examination to detect clinical signs of infection, such as fever, rashes, or respiratory distress. Laboratory diagnostics play a crucial role in confirming the diagnosis and identifying the causative pathogen. This may involve the collection of samples from blood, urine, respiratory fluids, or other body fluids, which are then tested using various techniques, such as PCR (Polymerase Chain Reaction), ELISA (Enzyme-Linked Immunosorbent Assay), or culture methods. For suspected viral infections, rapid antigen tests or PCR-based assays are frequently used for their speed and accuracy. For bacterial infections, cultures and sensitivity tests help to identify the specific microorganism and determine the appropriate antibiotics. In cases of emerging or unusual pathogens, serological tests may be required to detect antibodies or antigens. Diagnosis protocols must also include epidemiological investigations to trace the source of the infection and identify possible outbreaks, utilizing data from public health authorities and laboratory surveillance systems. Early and accurate diagnosis is critical in preventing the spread of infectious diseases, particularly in the context of pandemics and emerging diseases. Diagnostic accuracy must be continually improved by integrating new technologies and methodologies, including next-generation sequencing and real-time surveillance systems, to stay ahead of evolving threats.

Nursing Care Plan

A nursing care plan for infectious disease management focuses on addressing both the immediate health needs of the patient and preventing the spread of infection to others. The first priority is to establish a safe and clean environment for the patient, ensuring that infection control measures such as isolation protocols are strictly followed. Nurses must monitor vital signs, including temperature, heart rate, respiratory rate, and blood pressure, as these can indicate the progression of the infection or the development of complications such as sepsis or organ failure. Symptom management, such as administering antipyretics for fever or analgesics for pain, is essential to improve patient comfort and prevent further complications. Nurses should also administer appropriate treatments, such as antibiotics for bacterial infections or antiviral medications for viral infections, as prescribed by the healthcare provider. Patient education is a critical component of the nursing care plan, particularly regarding the importance of adherence to prescribed medications, hydration, and rest. Additionally, nurses should educate the patient and their family on infection prevention practices, such as hand hygiene, the proper use of masks, and quarantine measures, to reduce the risk of spreading the infection. Special attention should be given to high-risk populations, such as the elderly, immunocompromised patients, and those with chronic conditions, as they may require tailored interventions. Regular reassessment of the care plan is necessary to adapt to changes in the patient's condition and to ensure that appropriate interventions are in place to support recovery and prevent complications.

Documentation Process

The documentation process in the management of infectious diseases is vital for maintaining accurate patient records, ensuring continuity of care, and facilitating effective communication among healthcare providers. The documentation should begin with a thorough initial assessment that includes patient demographics, medical history, presenting symptoms, and any relevant epidemiological data, such as travel history or exposure to known sources of infection. This information provides essential context for the subsequent diagnosis and treatment. Each clinical interaction should be documented in detail, including vital signs, interventions, patient responses to treatments, and any changes in condition. For example, the administration of medications, changes in infection markers, and results of diagnostic tests should be clearly recorded. Nurses should also document any education provided to the patient and their family, particularly regarding infection control measures, self-care, and follow-up appointments. Accurate documentation of infection control practices, including isolation procedures and adherence to hygiene protocols, is crucial in preventing cross-contamination in healthcare settings. Additionally, the documentation process should include clear communication of the patient's progress toward recovery or the development of complications. This allows healthcare providers to make timely adjustments to the care plan and to ensure the appropriate response to any changes in the patient's condition. Documentation must also adhere to legal and ethical standards, with a focus on patient confidentiality and privacy, ensuring that all records are securely stored and accessible only to authorized personnel. Effective documentation supports the overall goal of improving patient outcomes and ensuring the efficient management of infectious disease cases.

Conclusion

Infectious diseases have been a persistent threat to human health, and while advancements in diagnostics, treatments, and preventive measures have reduced mortality rates, significant challenges remain. The emergence of new infectious threats, along with the rise of antimicrobial resistance (AMR), underscores the need for a comprehensive and coordinated approach to managing these diseases. Effective case management is critical in ensuring timely diagnosis, appropriate treatment, and minimizing complications, while laboratory diagnostics play a pivotal role in identifying pathogens and guiding therapeutic decisions. Nursing care in infectious disease management is indispensable, as nurses are often the primary healthcare providers who administer care, educate patients, and monitor outcomes. A robust nursing care plan, supported by clear documentation processes, ensures that care is delivered consistently and safely. Documentation, both electronic and paper-based, plays a crucial role in maintaining accurate records of patient progress, facilitating communication among healthcare providers, and enhancing research on disease trends and outcomes. The growing global threat of antimicrobial resistance poses a grave risk to public health, as it compromises the effectiveness of antibiotics and other antimicrobial agents. This resistance threatens to reverse the significant progress made in controlling infections, leading to longer hospital stays, higher treatment costs, and increased mortality. In response, efforts must be made to develop new antibiotics, improve stewardship programs, and reduce unnecessary antibiotic use. Moreover, the economic and social consequences of infectious disease outbreaks are far-reaching, impacting healthcare systems, economies, and societies at large. The financial burden of managing outbreaks can overwhelm healthcare infrastructures, particularly in low-resource settings. Socially, the fear and stigma associated with infectious diseases can lead to widespread panic, migration crises, and the disruption of daily life. Addressing the complexities of infectious disease management requires a multifaceted approach that includes international collaboration, investment in research and development, and strengthening healthcare systems, especially in regions vulnerable to emerging infections. A global network of public health organizations, governmental bodies, and private sector partnerships must work together to enhance preparedness, surveillance, and response to future outbreaks. Ultimately, the lessons learned from past pandemics, along with continued advancements in diagnostic and therapeutic interventions, will play a crucial role in safeguarding public health and mitigating the economic and social impacts of infectious diseases.

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العدوى والأمراض: إدارة الحالات الفعالة، التشخيصات المختبرية، خطة رعاية التمريض، وعملية التوثيق

المُلَخَّص:

الخلفية :لقد تطورت التهديدات العالمية الناجمة عن الأمراض المعدية بشكل كبير منذ جائحة الأنفلونزا الإسبانية عام 1918، والتي تسببت في وفاة الملايين حول العالم. لقد أدى تطوير بنية صحية عالمية تهدف إلى الوقاية من تفشي الأمراض المعدية وإدارتها إلى تحسين نتائج الصحة. ومع ذلك، لا يزال العالم يواجه تحديات الأمراض المعدية الجديدة، مثل الإيبولا وزيكا وسارس، إلى جانب زيادة مقاومة المضادات الحيوية(AMR) ، التي تهدد الصحة العامة والاستقرار الاقتصادي.

الهدف :يستعرض هذا المقال إدارة الحالات، التشخيصات المختبرية، رعاية التمريض، وعمليات التوثيق في مكافحة الأمراض المعدية. يدعو إلى اتباع نهج متعدد التخصصات لمعالجة المخاطر المتزايدة التي يشكلها كل من الكائنات الحية الجديدة والمعدلة والمقاومة للمضادات الحيوية.

الطرق :تم إجراء مراجعة شاملة للبنية الصحية العالمية، استراتيجيات إدارة الحالات، تقنيات التشخيص، البروتوكولات التمريضية، وعمليات التوثيق. ويستند المقال إلى بيانات حول التأثيرات الاقتصادية والاجتماعية للأمراض المعدية والاستراتيجيات التي تم استخدامها في مختلف التفشي.

النتائج :يحدد المقال المناطق الرئيسية في إدارة الأمراض المعدية، بما في ذلك دور التشخيصات في الوقت المناسب، وإدارة الحالات بدقة، والتدخلات الفعالة للتمريض. يسلط الضوء على كيف تسهم عمليات التوثيق الصحيحة والامتثال للبروتوكولات العلاجية في تحسين النتائج الصحية. علاوة على ذلك، يؤكد على أهمية الاستراتيجية الصحيحة في استخدام المضادات الحيوية للحد من ظهور الكائنات المقاومة.

الخاتمة :يجب أن يستمر النظام الصحي العالمي في التطور استجابةً للتهديدات الناتجة عن الأمراض المعدية، مدمجاً التقدم في التشخيص، إدارة الحالات، ورعاية التمريض. يعتبر النهج العالمي الموحد والمتعاون في مواجهة تهديدات الأمراض المعدية، جنباً إلى جنب مع الممارسات القوية في التوثيق، أمراً أساسياً لمنع الجائحات المستقبلية. تقوية الأنظمة الصحية في جميع أنحاء العالم أمر حيوي لتقليل الآثار الاجتماعية والاقتصادية للأمراض المعدية.

الكلمات المفتاحية :الأمراض المعدية، إدارة الحالات، التشخيصات المختبرية، رعاية التمريض، مقاومة المضادات الحيوية، الصحة العالمية، عملية التوثيق، استعدادات الجائحات.