

Summary of Influenza and Rationale for Selecting It

Influenza is a contagious viral infection affecting the respiratory system, with significant morbidity and mortality, especially in vulnerable populations like children, pregnant individuals, and older adults. Annual outbreaks present major public health challenges, and timely management is critical to reducing complications and transmission. The rationale for selecting influenza lies in its high prevalence, impact across diverse populations, and the availability of clinical practice guidelines (CPG) that emphasize evidence-based approaches to management, particularly pharmacological interventions.

Prescribing Recommendations from the CPG

The CPG recommends antiviral treatments, such as **oseltamivir**, **zanamivir**, or **baloxavir marboxil**, based on patient age, comorbidities, and disease severity. Key prescribing recommendations include:

- **Children:** Oseltamivir is recommended for infants as young as two weeks, considering adjusted doses to account for immature renal clearance.
- **Pregnant Individuals:** Oseltamivir remains the preferred option due to extensive safety data. Pharmacokinetic changes, such as increased plasma volume and altered renal clearance during pregnancy, necessitate careful dosing.
- **Older Adults:** Antiviral use is recommended early in infection. Reduced renal function with aging impacts oseltamivir dosing, highlighting the need for renal dose adjustments.

Application of CPG to Future Practice

As a future clinician, these guidelines offer a structured framework for early identification and treatment of influenza. Applying these recommendations can help reduce complications like pneumonia, hospitalization, or death. Tailoring antiviral therapy based on population-specific pharmacokinetic changes will enhance patient outcomes while minimizing adverse effects. Integration of vaccination guidance will complement treatment strategies and prevent outbreaks.

Strengths and Weaknesses of the CPG

Strengths:

- The CPG provides population-specific recommendations, particularly for at-risk groups such as children, pregnant individuals, and older adults.
- Evidence-based grading supports clinical decisions by weighing risks and benefits of treatment options.

Weaknesses:

- Limited guidance for patients with complex comorbidities or rare adverse events.
- Challenges with equitable access to antivirals, particularly in underserved areas, are not directly addressed.