

The Evolving COVID-19 Landscape: Role of Post-exposure Prophylaxis

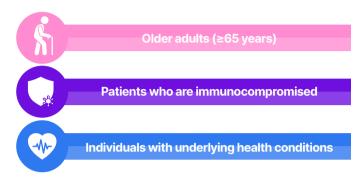


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The Persistent Burden of COVID-19 in Vulnerable Populations

• Hospitalizations due to COVID-19 have declined, but SARS-CoV-2 transmission remains high in high-exposure settings and disproportionately affects the following populations:1-3



• In vulnerable patients, SARS-CoV-2 infection: 4,5



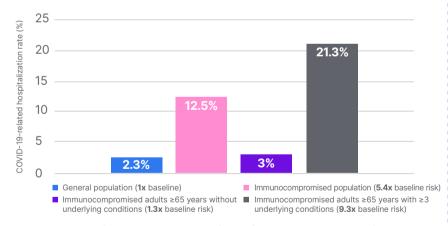
hospitalizations



Disrupts chronic care

Worsens outcomes

• COVID-19-related hospitalization rates are higher in high-risk populations⁶



The Burden of COVID-19 Remains Higher Than That of Other **Respiratory Infections**

The risk of severe outcomes for SARS-CoV-2 infection exceeds that of influenza and RSV, especially for older adults, patients who are immunocompromised, and those with comorbidities^{7,8}

30-day hospitalization and mortality rates in 2022-20238

	30-day hospitalization rate	30-day mortality rate
COVID-19	17.5%	1.0%
Influenza	15.9%	0.7%
RSV	14.4%	0.7%

Unmet Need for Prophylaxis

- Limited effectiveness of vaccines in high-risk populations
 - Although an essential first line of defense, vaccines do not fully protect certain high-risk groups⁹⁻¹¹



Patients who are immunocompromised: ~20% do not develop protective antibodies after ≥3 COVID-19 vaccinations



Individuals with multiple comorbidities: 2x increased risk of severe breakthrough infection despite vaccination



People living in LTCFs: Increased risk of SARS-CoV-2 infection and COVID-19-related mortality

- Waning of protection over time: gradual but relatively rapid waning in vaccine immunity against infection¹²
- Omicron sublineages are more transmissible and harder to contain
 - Infection characteristics of SARS-CoV-2 Omicron¹³⁻¹⁶











High household SAR

 Omicron spreads more effectively within households, even among vaccinated individuals¹⁷

Clinical Rationale for Early Intervention

• Oral antivirals offer meaningful clinical benefit when used early 18,19 • Key benefits of early intervention:



Reduced hospitalization burden

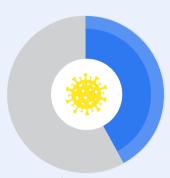


Decreased viral load

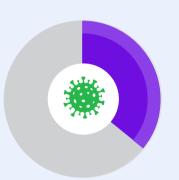


Reduced severe outcomes in LTCF residents

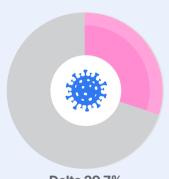
SAR of SARS-CoV-2 variants¹⁷



Omicron 42.7%



Alpha 36.4%



Delta 29.7%

Clinical Considerations for PEP Using Emerging Antivirals

- Early PEP with oral antivirals aims to protect vulnerable populations and reduce COVID-19 transmission in high-risk settings²⁰⁻²²
- Clinical profile of oral antivirals being investigated for PEP

Efficacy metrics²



 Broad activity against multiple

variants Antiviral effect Reduced viral load

Clinical outcomes^{22,23}

• Fewer COVID-19 symptoms in clinical trials Improved early recovery

in clinical trials Lower household transmission



- · Well-tolerated
- No new concerns in published
- Phase III data
- Convenient dosing
- Critical window for early PEP intervention*,1,14,23

Day 0: Exposure

Day 1-3: Viral replication begins









Symptom onset

Established infection

*Based on SARS-CoV-2 Omicron

[†]Optimal timing may vary depending on the antiviral agent

PEP initiation

Early PEP in households and LTCFs could: 19,23



Key takeaways:

- The persistent burden of COVID-19 in vulnerable populations, coupled with the high transmissibility of Omicron sublineages and significant SAR, underscores the critical need for effective PEP strategies^{6,13}
- Emerging oral antivirals offer promising avenues to reduce the burden of hospitalization, viral load, and transmission, providing crucial protection where vaccines may offer limited efficacy²¹⁻²³
- Implementing timely PEP interventions is essential to mitigate the ongoing impact of COVID-19 and protect those at highest risk19-23

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LTCF: long-term care facility; PEP: post-exposure prophylaxis; RSV: respiratory syncytial virus; SAR: secondary attack rate.