

Healthy Ageing 101 Presents:

# The New RSV Vaccines: What Older Adults and their Care Providers Need to Know

Tuesday November 28, 2023

**Dr. Samir Sinha** MD, DPhil, FRCPC, FCAHS, AGSF

Peter and Shelagh Godsoe Chair in Geriatrics

Director of Geriatrics, Sinai Health and University Health Network



Healthy Ageing  
and Geriatrics



# What is Respiratory Syncytial Virus (RSV)?

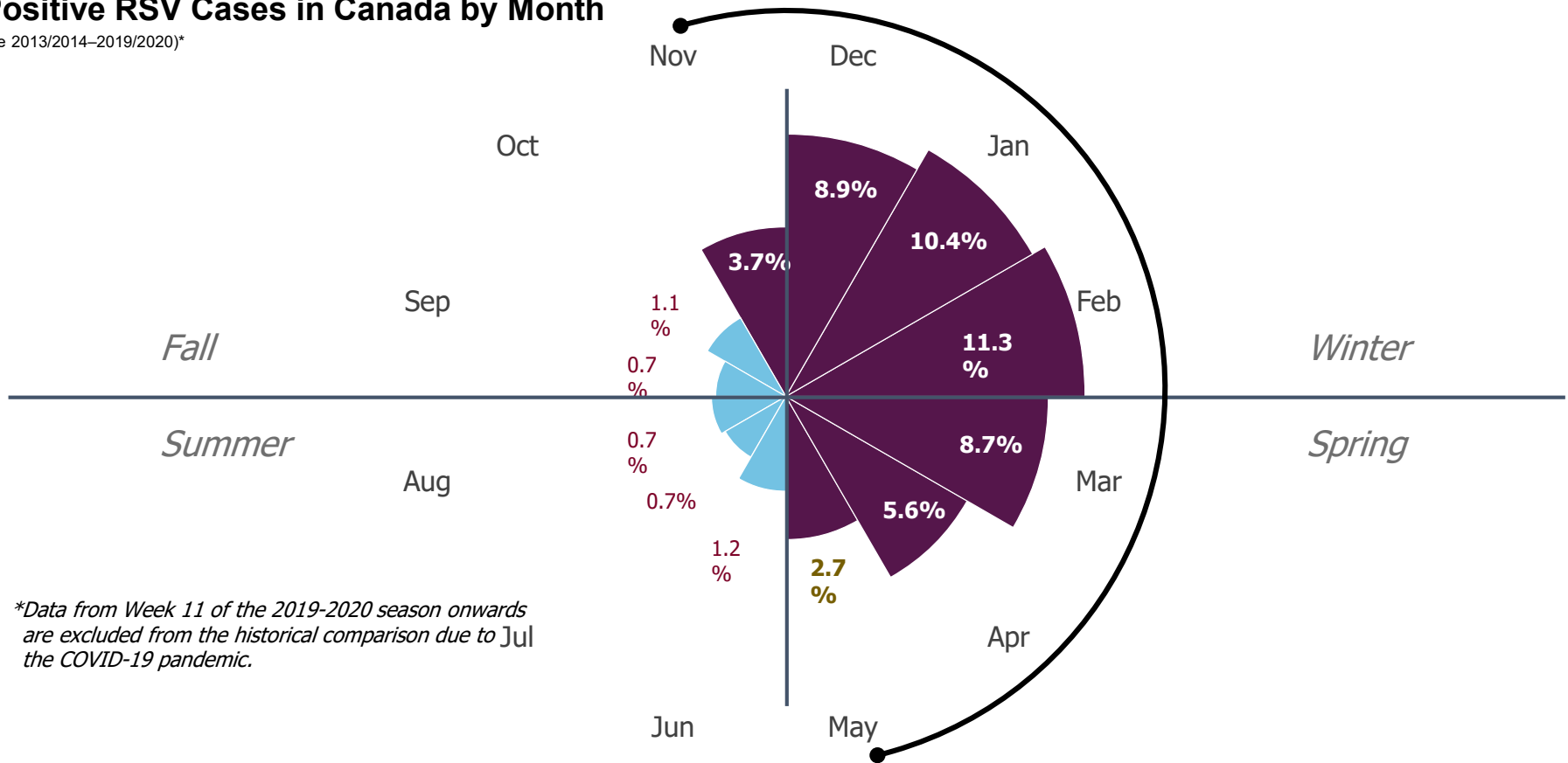
---

- An RNA virus that infects the airways and lungs
- Similar paths of transmission as other common respiratory viruses (e.g. flu, COVID-19)
- It's a largely seasonal virus with most cases occurring during the fall and winter
- Often causes mild illness with cold-like symptoms, but can lead to severe outcomes too often in older adults.

# RSV is a Seasonal Virus

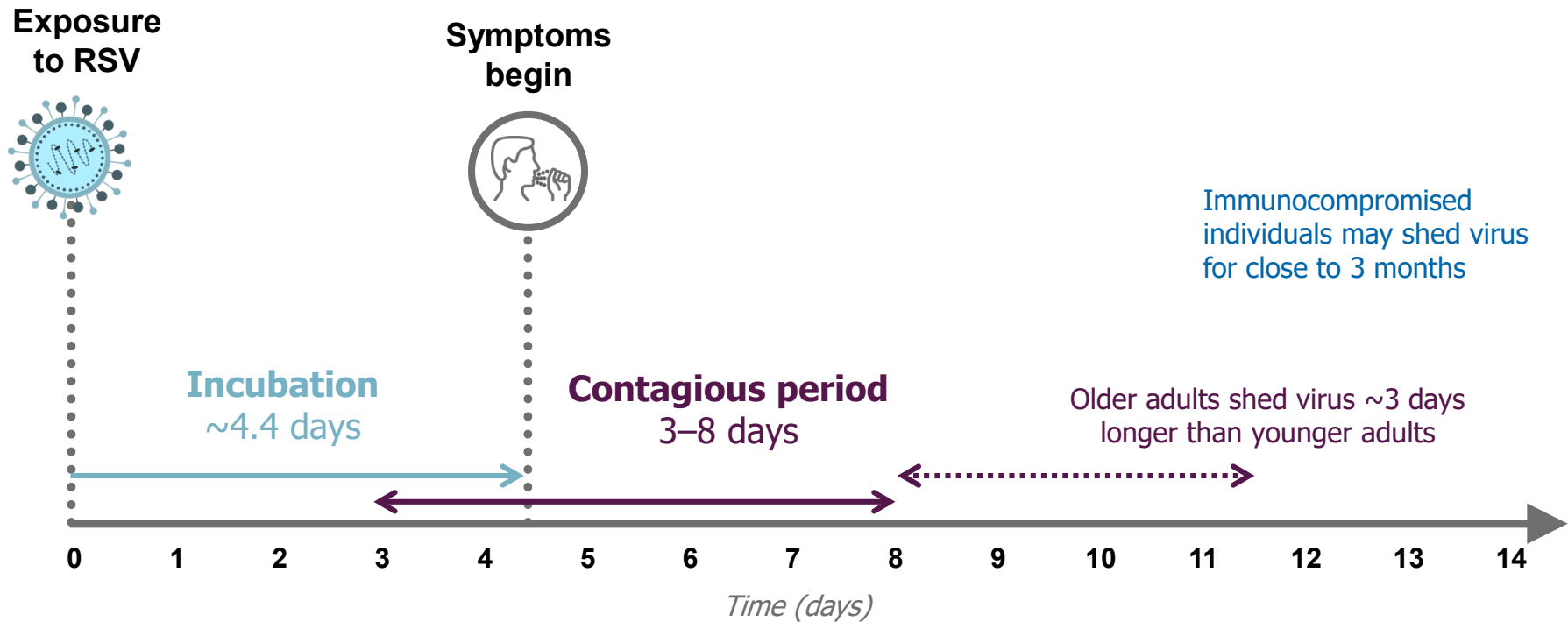
## % Positive RSV Cases in Canada by Month

(average 2013/2014–2019/2020)\*



\*Data from Week 11 of the 2019-2020 season onwards are excluded from the historical comparison due to Jul the COVID-19 pandemic.

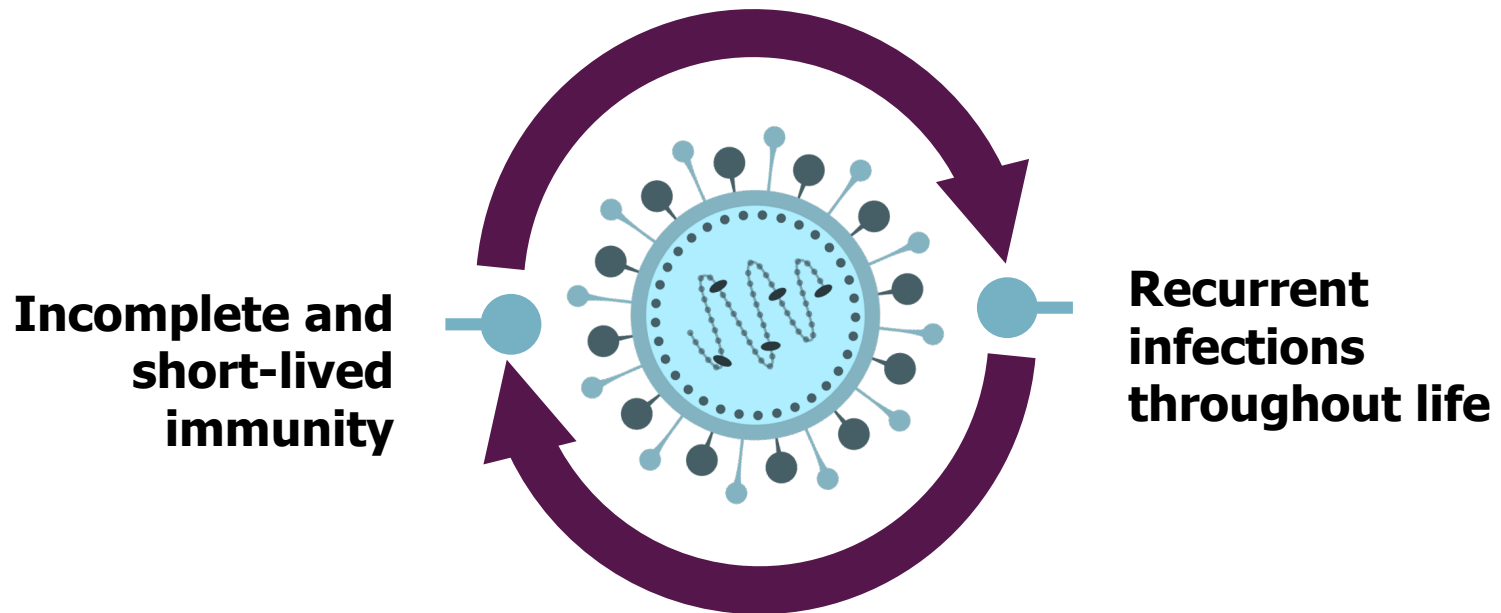
# RSV is Highly Contagious and Can Spread Rapidly Through Households



# A Few Potentially Distinguishing Features Should Raise Suspicion for RSV

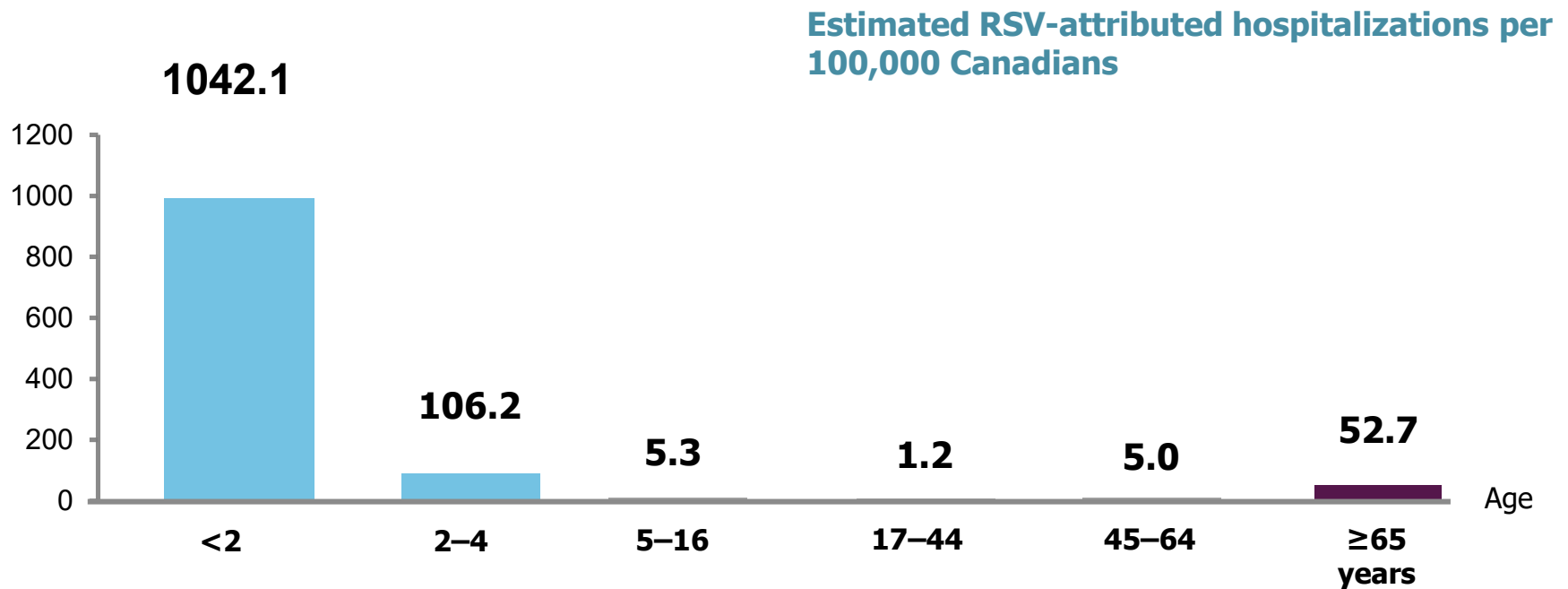
	RSV	Influenza	COVID-19
Symptom onset	Gradual	Sudden	Gradual
Features that should raise suspicion	Nasal congestion, <b>productive cough,</b> and <b>wheezing</b>  Association with underlying chronic lung disease	Fever and myalgias	

# Reinfection with RSV is Common

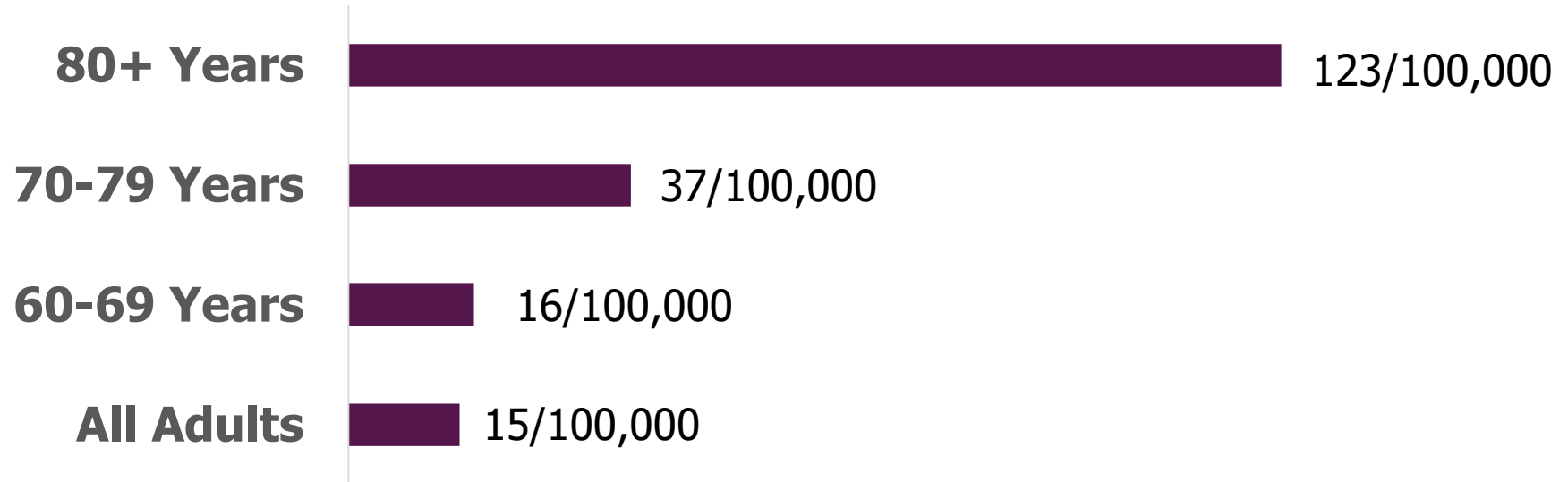


Certain populations, such as those with multiple comorbidities and those who are immunocompromised, are more at risk of reinfection. - *US Centers for Disease Control*

# RSV Infections are Commonly Seen as a Children's Issue...



# RSV Hospitalizations Increase Dramatically with Age

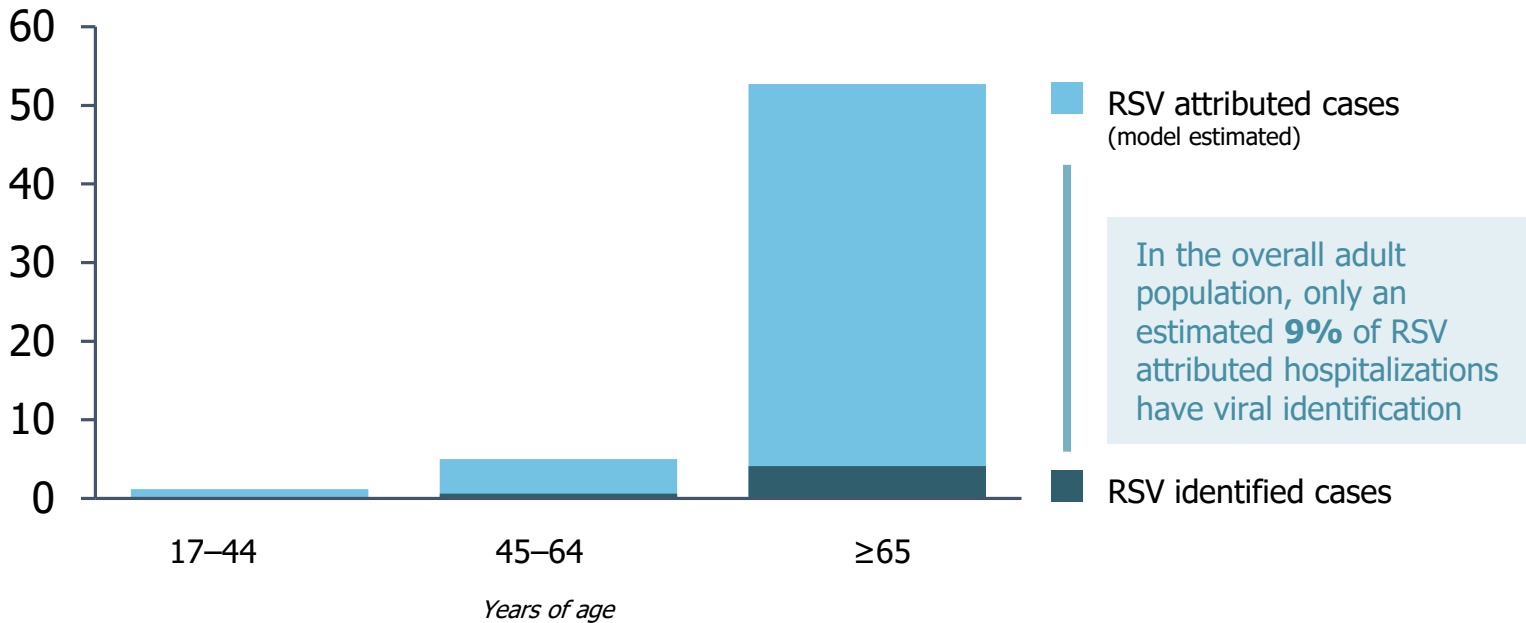




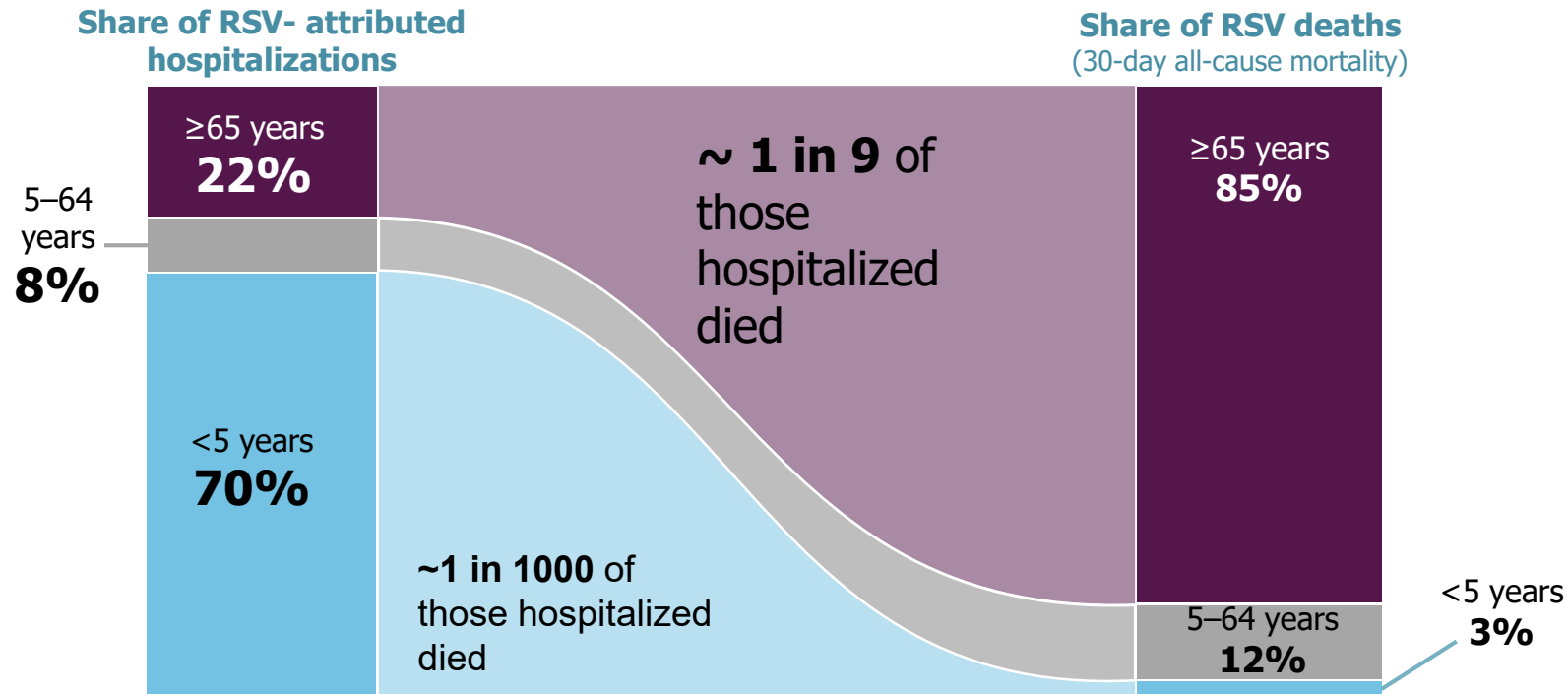
# Hospitalization Rates do not Show the Full Picture

## RSV hospitalizations and estimated respiratory hospitalizations attributable to RSV

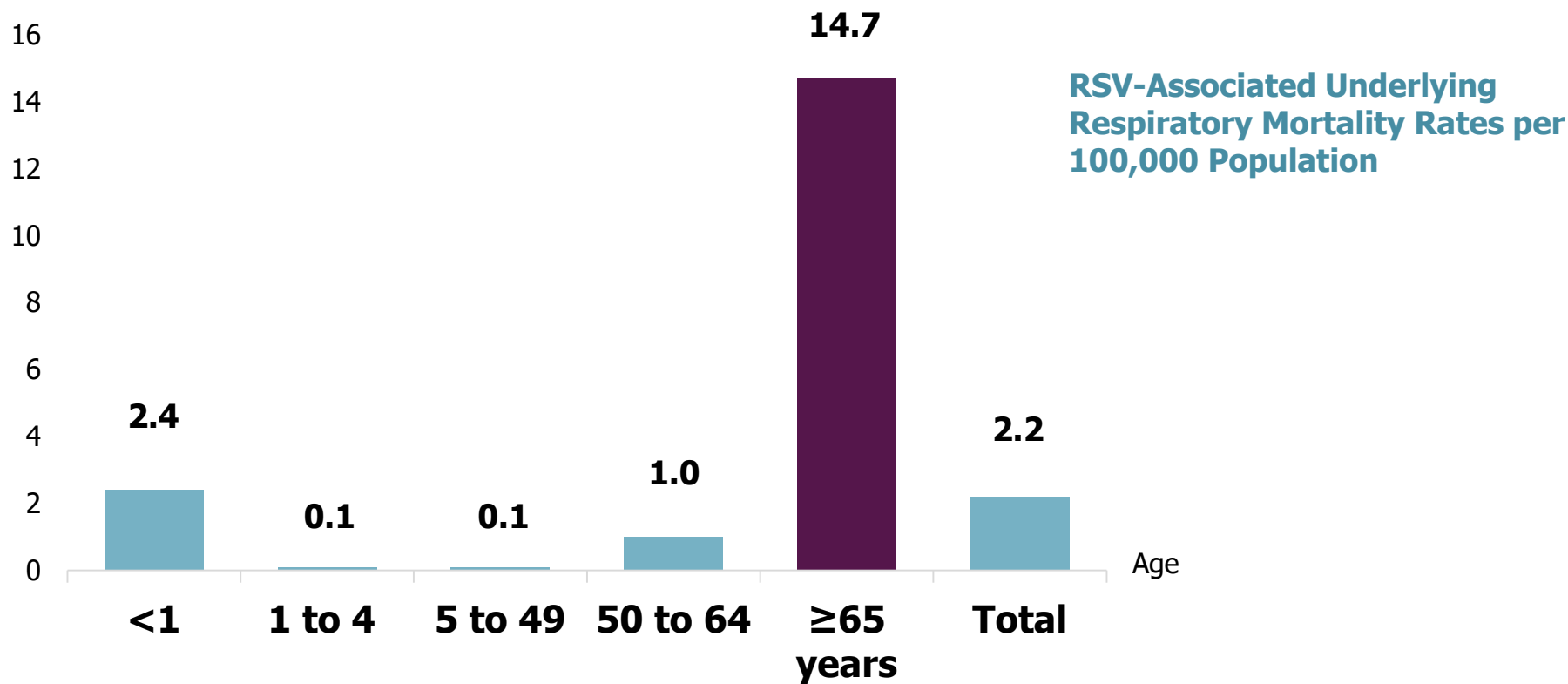
Average annual rates per 100,000 Canadians



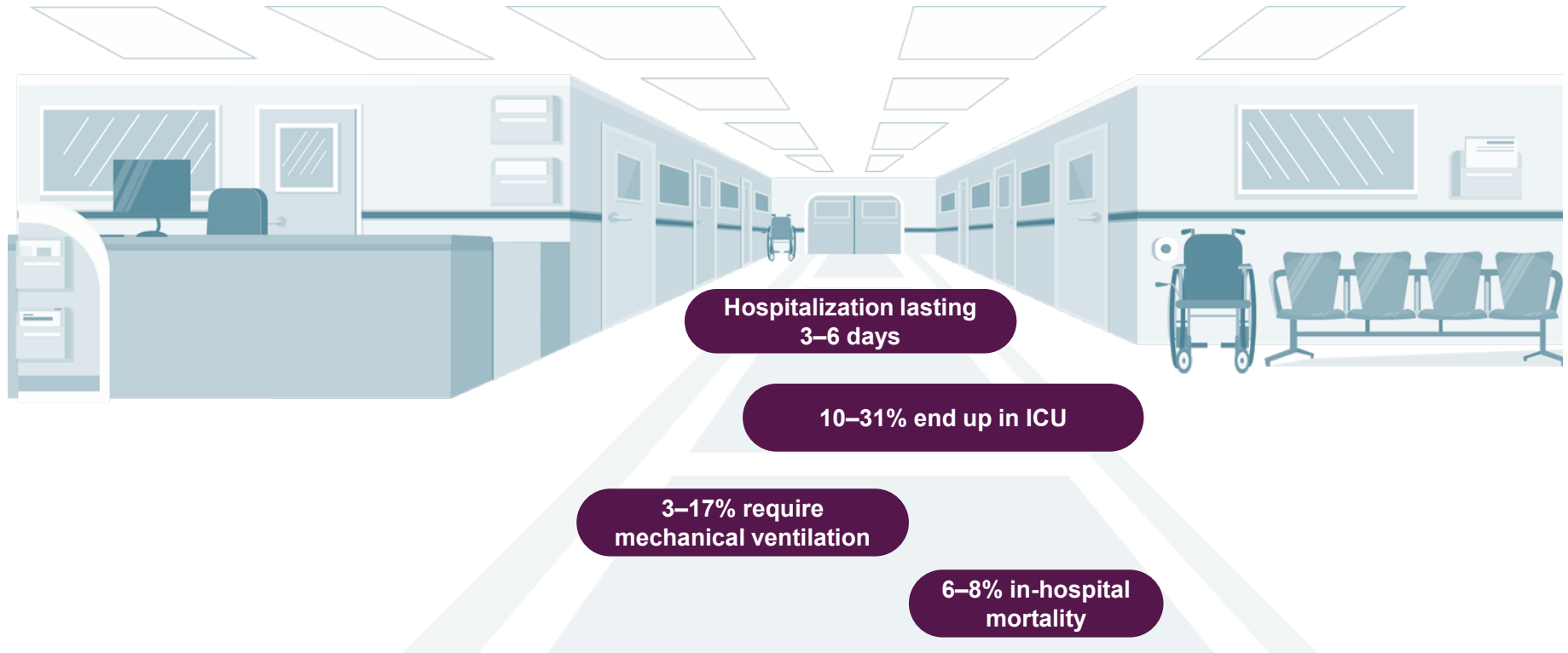
# Older Adults Make Up a Disproportionate Number of RSV-Attributed Deaths



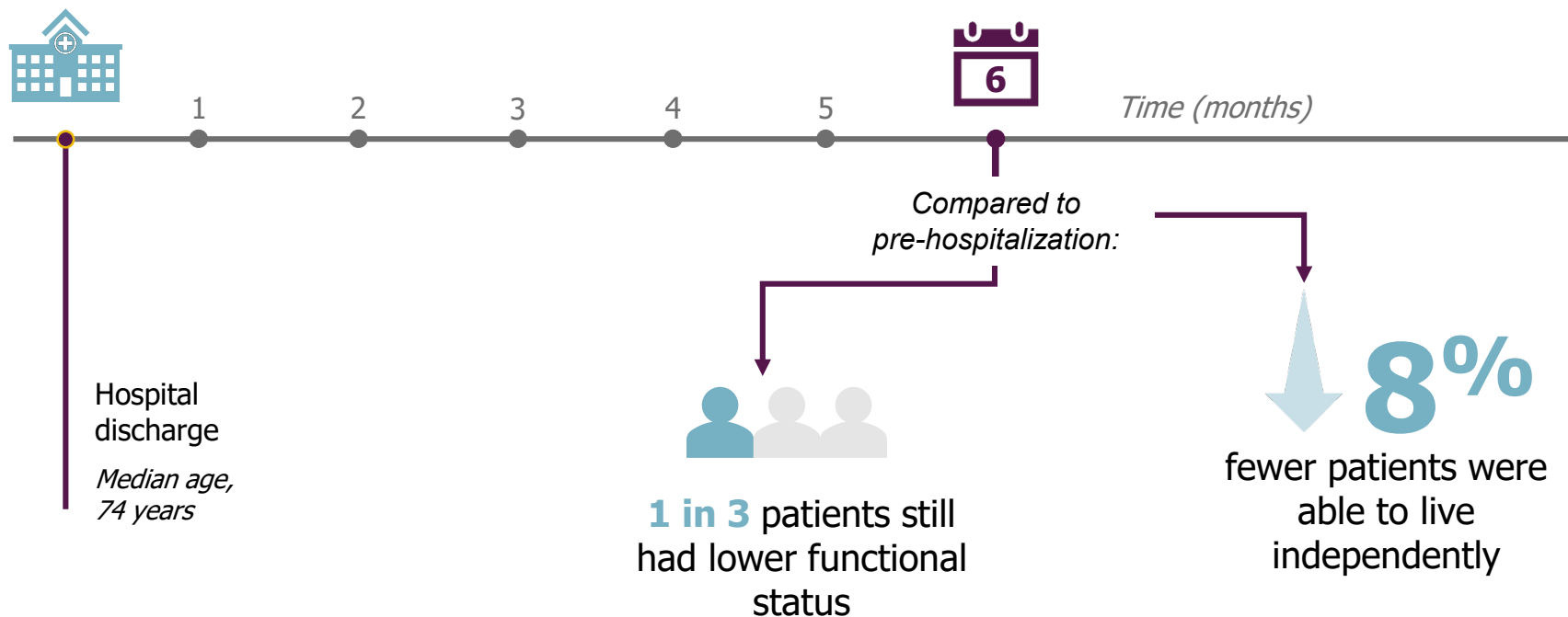
# Older Adults have the Highest Mortality Rate



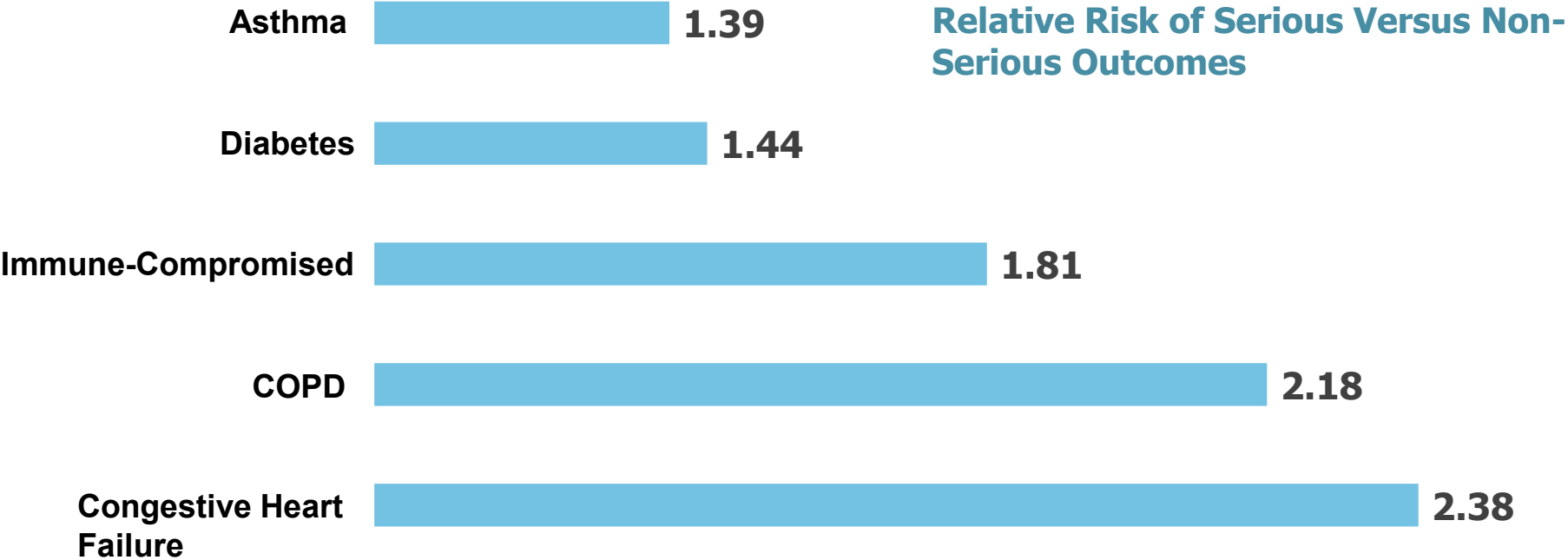
# Older Adults Hospitalized with RSV Experience More Complications



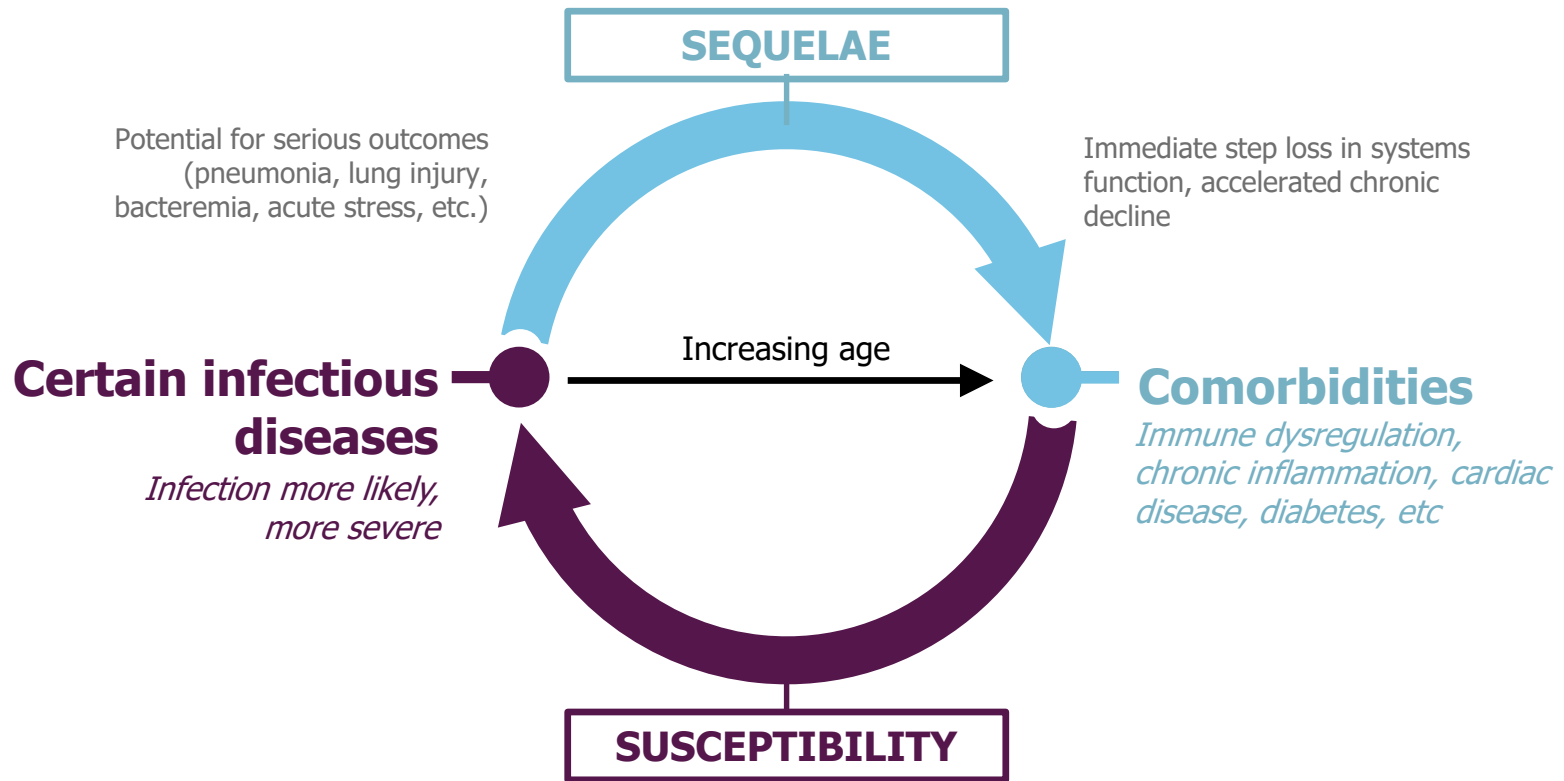
# Functional Loss is Common After a Hospital Stay



# Patients with Certain Health Conditions Are at High Risk of Serious Outcomes

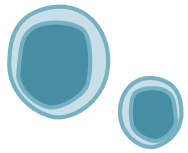


# Risk of Severe RSV Disease Increases with Age and Medical Conditions



# Why Are Older Adults at Greater Risk to RSV?

---



**Age-related declines in immunity**



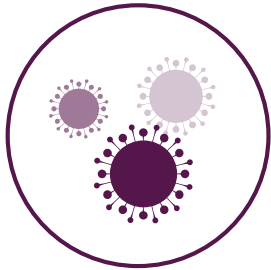
**Ageing lung tissue**



**An increased number of chronic conditions**



# There may be even more cases due to...



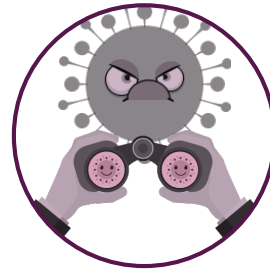
## **Misdiagnosis**

“Influenza-like illness”



## **Under-recognition**

Lack of routine screening and laboratory diagnosis



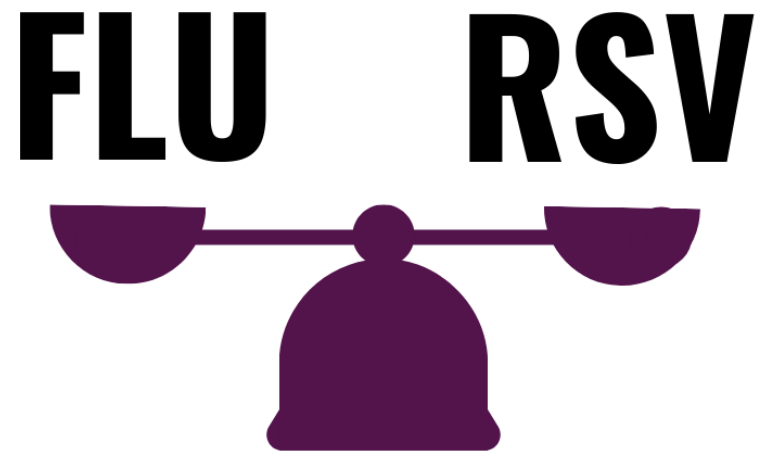
## **Perception that adult RSV is mild and manageable**



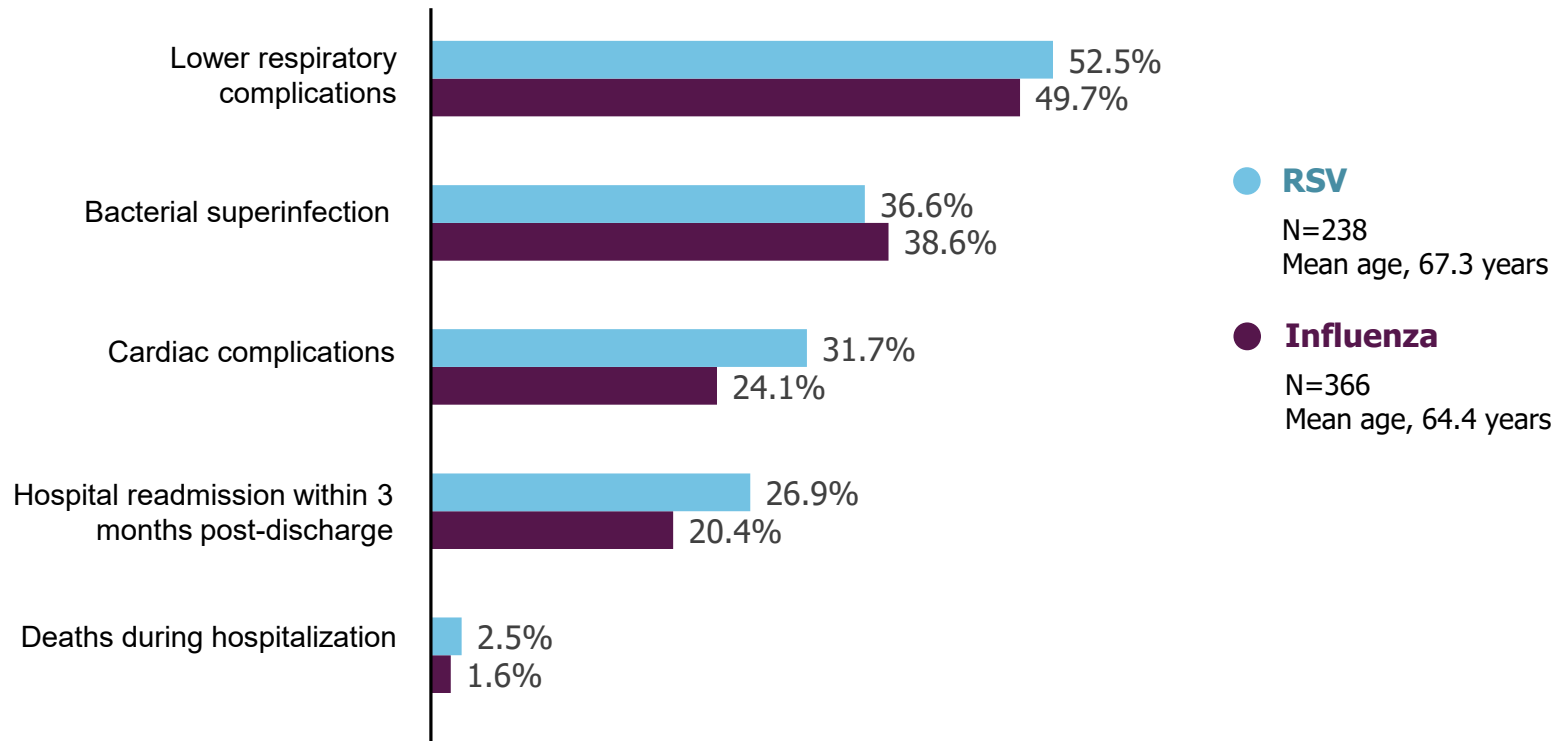
## **Apathy towards diagnosis in the absence of effective treatment**


---

**Older adults with RSV infections experience a similar risk of mortality compared to those with influenza infections.**




# The Burdens Among Hospitalized Adults are Similar Between RSV and Influenza

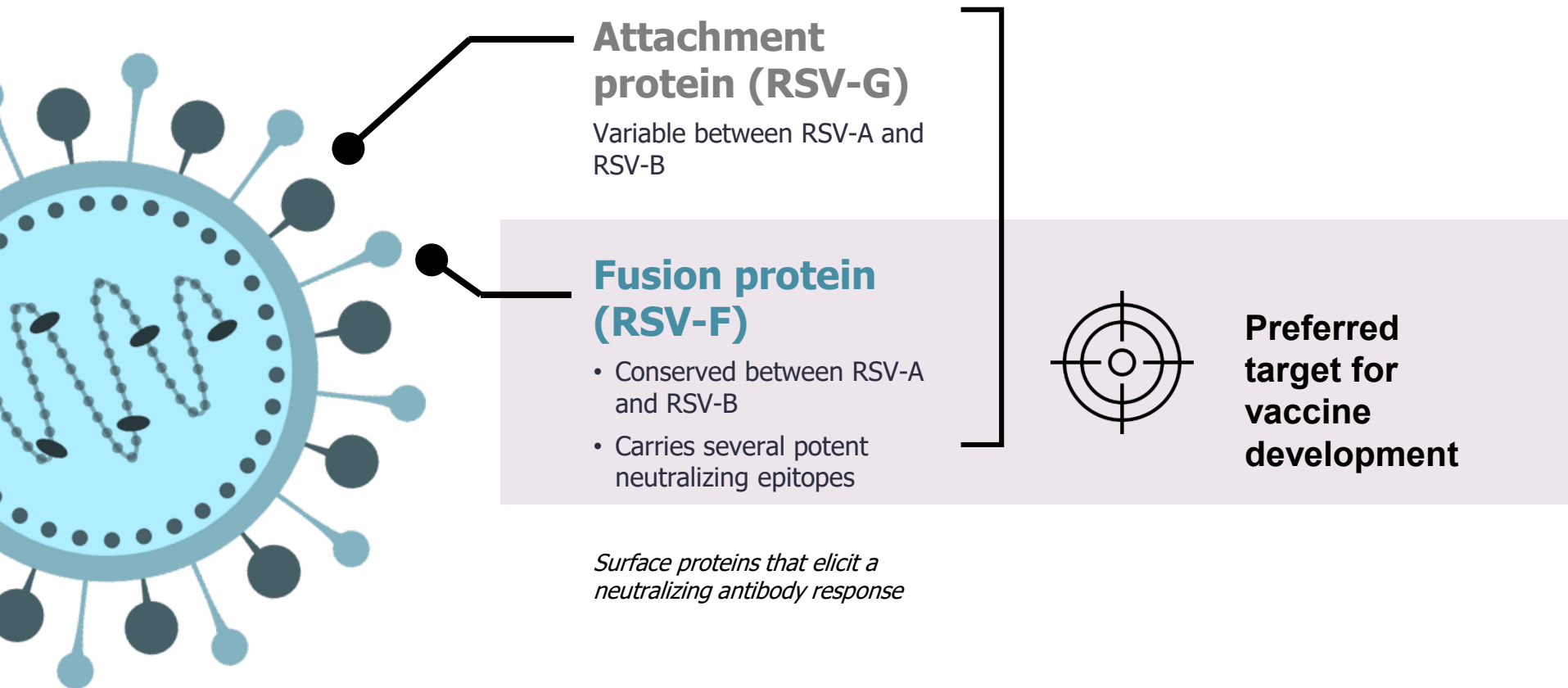




**There is now a  
vaccine available in  
Canada that helps prevent  
RSV infections in older  
adults.**



# Developing an RSV Vaccine



# The Development of 3 Unique RSV Vaccines

## PROTEIN SUBUNIT BASED VACCINES

### RSV PreF3 protein (+ adjuvant)

GSK (*AREXVY*)

Recombinant PreF subunit antigen + AS01 adjuvant (same adjuvant as in Shingrix)



PreF

### RSV PreF protein

Pfizer (*ABRYSV0*)

Bivalent prefusion RSV-F antigen without adjuvant



## NUCLEIC ACID-BASED VACCINE

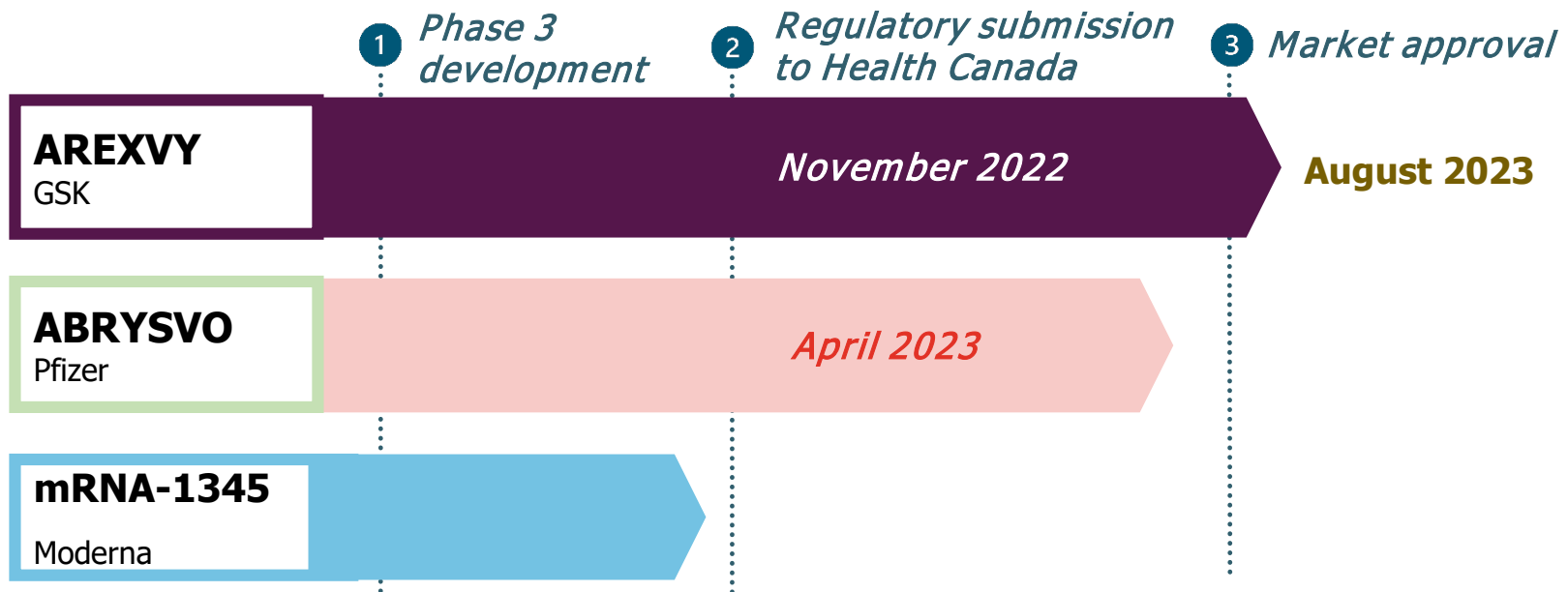
### mRNA-1345

Moderna

mRNA encoding stabilized RSV pre-F, packaged in the same lipid nanoparticle formulation as SARS-CoV-2 vaccine SpikeVax



# How New RSV Vaccines are Becoming Available in Canada



**All three vaccines** have shown **significant vaccine efficacy** against the following indicators, with at least:

**66%**

**Against  
RSV-  
LRTD**

**62%**


**Against RSV-  
LRTD Among  
Those With  
High-Risk  
Conditions**

**82%**

**Against  
Severe  
RSV-LRTD**








**“Adults aged  $\geq 60$  years may receive a single dose of RSV vaccine, using shared clinical decision-making.”**

US CDC ACIP recommendation  
June 21, 2023



# RSV Vaccines Can be Given at the Same Time with Other Vaccines (Co-Administration)



Seasonal influenza vaccines

Phase 3 co-administration trials suggests that AREXVY can be co-administered with all types of commonly used influenza vaccines



COVID-19 vaccines



Pneumococcal vaccines



Td/Tdap vaccines

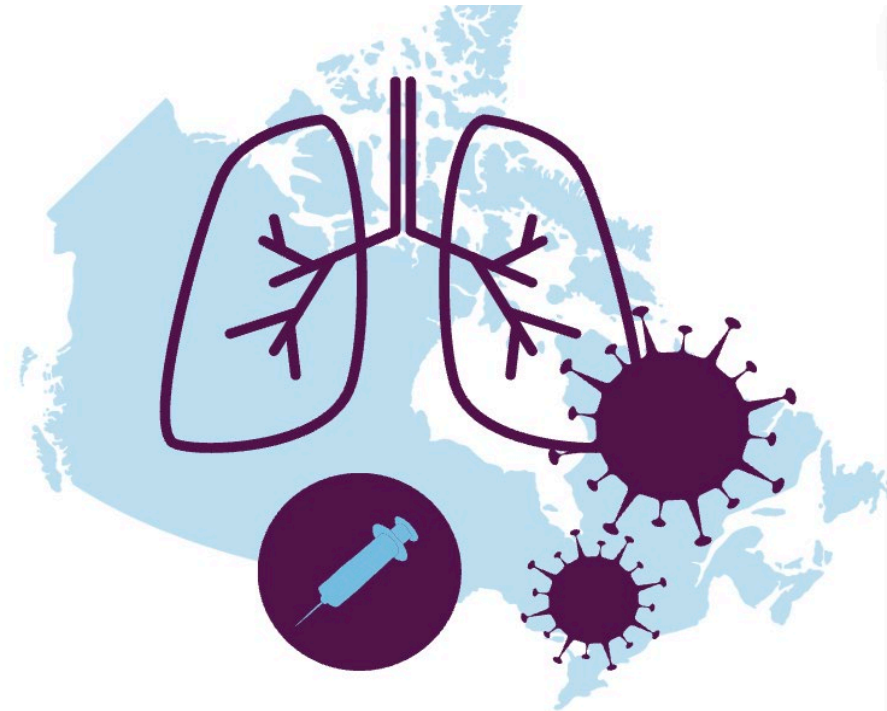


Shingles vaccines

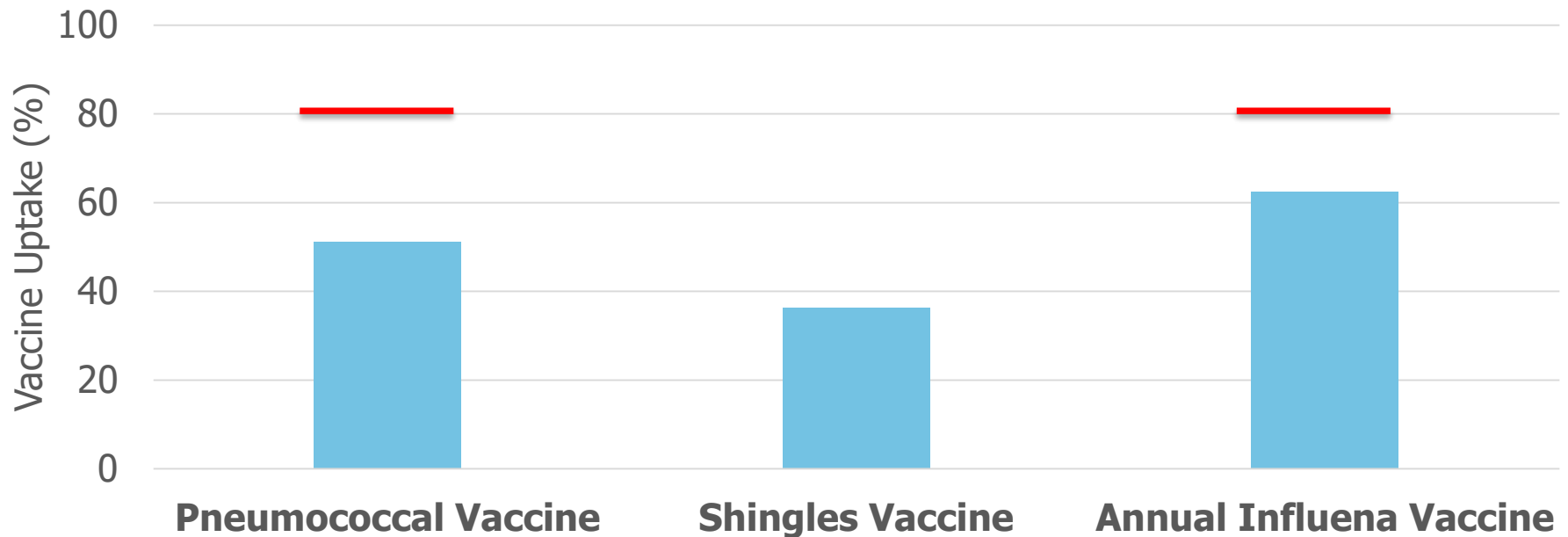
The ACIP advises that co-administration of the RSV vaccine with other adult vaccines is acceptable, with the consideration of various factors

# Current RSV Vaccine Costs and Coverage

- A single dose of AREXVY costs up to \$300
- Some private plans may cover the cost of RSV vaccines
- Only Ontario currently covers the vaccine for older adults living in LTC and some retirement homes



# Shingles, Pneumococcal, & Influenza Vaccination Rates among Canadians 65+



\* The red line indicates the national vaccination coverage goals.

\*\* National data only covers Canada's provinces and not its territories.

# Addressing the Significant Impact of RSV Infections among Older Canadians. It's Time for Action.

Addressing the Significant Impact of RSV Infections among Older Canadians. It's Time for Action.



October 2023

**NIA** NATIONAL INSTITUTE ON AGEING

**NIA** NATIONAL INSTITUTE ON AGEING

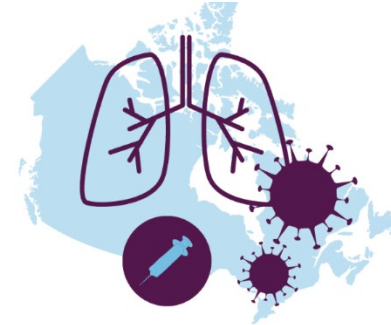


Healthy Ageing and Geriatrics



# The NIA's 9 RSV Recommendations

1. **Promote General Preventive Practices**
2. **Improve the Surveillance of RSV Infections and Mortality Across Canada and Understanding of its Impact on Canadian Healthcare Systems**
3. **Continue to Work on the Development of RSV Vaccines**
4. **Promote a Life-Course Vaccination Schedule that Includes Older Adults**
5. **Provide RSV Vaccinations Free of Cost to Populations for which RSV Vaccination is Cost-Effective**
6. **Promote Following National Advisory Committee on Immunization (NACI) Statements for RSV Vaccination**
7. **Provide Clinician Education and Support for Pharmacists, Primary Care and Other Health Care Providers to Deliver RSV Vaccinations**
8. **Harmonize Vaccination Administration Across and Within Canada's Provinces/Territories**
9. **Establish Accurate Reporting and Monitoring of RSV Vaccination Rates**



# Questions? (submit through Q&A)

---



# Stay Connected With Us



<https://sinaigeriatrics.ca/healtheducation/>

**Website:**

<https://sinaigeriatrics.ca>

**Twitter:**

@SinaiGeriatrics

@DrSamirSinha

**LinkedIn:**

Healthy Ageing and Geriatrics Program (Sinai Health and University Health Network)