


# mRNA Vaccine Effectiveness (VE): 1st Dose

**Population:** Community-based, 70+ year olds | **Research method:** Test-negative design\* | **Study period:** April - May 2021  
During peak Alpha and Gamma variant wave in BC

### Summary

During the peak of Spring 2021 pandemic wave:



**2 out of 3**  
SARS-CoV-2 infections prevented

### Sample population

STUDY

**~15,000** participants

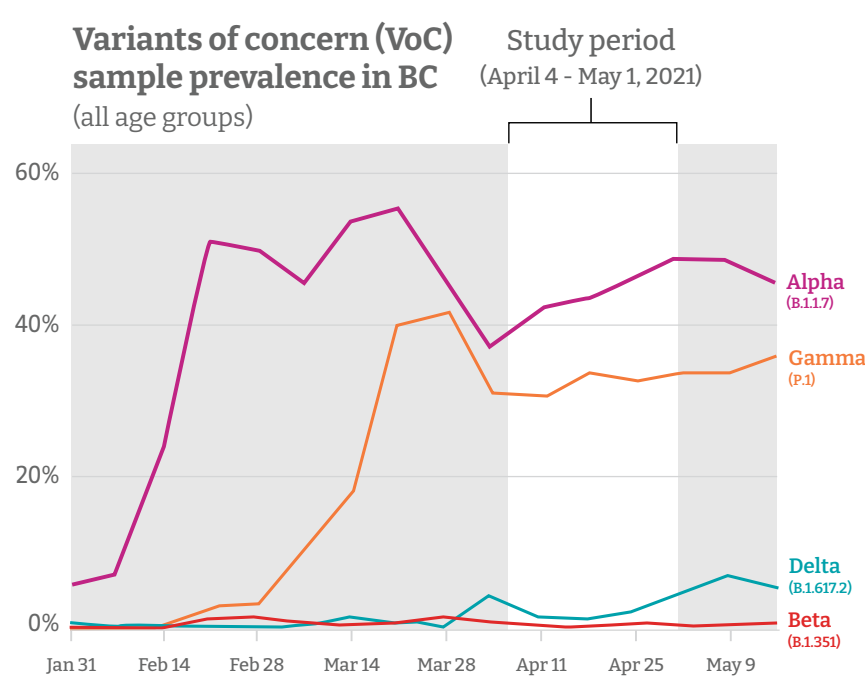
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**60%**  
70-79 yr olds

**40%**  
80+ yr olds

### Time period

**Variants of concern (VoC) sample prevalence in BC** (all age groups)



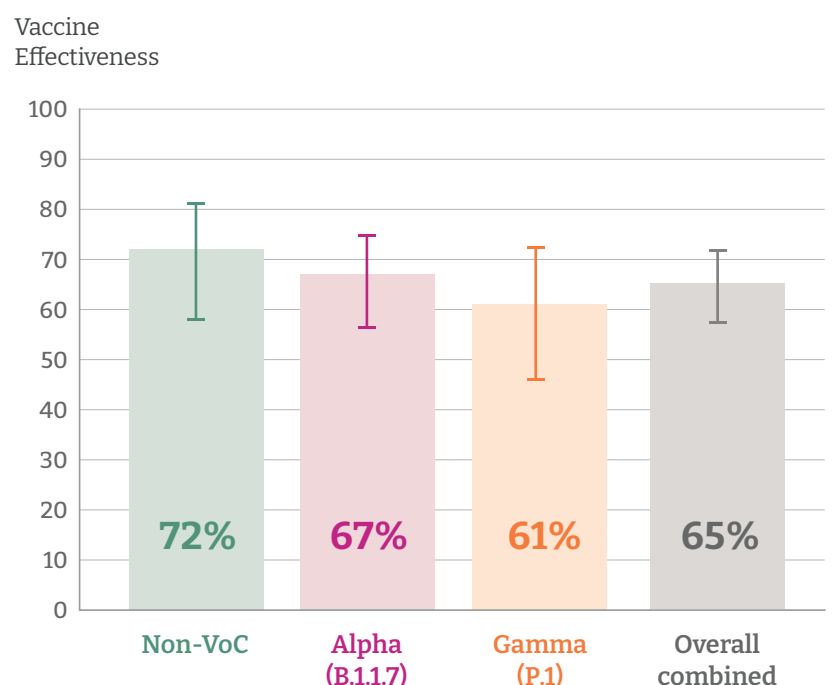
Study period (April 4 - May 1, 2021)

Source: BCCDC Weekly Update of VoC, Figure 2

### Results | mRNA 1st dose VE

70+ yr old community-based population in BC

\*VE adjusted for age, sex, epi week and provincial health region with 95% Confidence Intervals



### Policy implications

These BC estimates are the first globally to show that a single dose of mRNA vaccine protects against the Gamma variant. Substantial 1st dose protection in older adults reinforces the option to defer the 2nd dose where vaccine supply is scarce and broader 1st dose coverage is needed.