

A TIME TRADE-OFF (TTO) STUDY TO ESTIMATE RESPIRATORY SYNCYTIAL VIRUS (RSV) RELATED UTILITY VALUES FOR OLDER ADULTS IN THE UNITED STATES (US)

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#PCR63

INTRODUCTION

Respiratory syncytial virus (RSV) is a common cause of acute respiratory illness across all ages, including older adults. [1]

Each year, RSV infection occurs in 3-7% of healthy older adults and 4-10% of adults at increased risk of severe RSV. [2]

The objective of this study was to estimate RSV-specific health utilities for adults aged ≥ 60 years

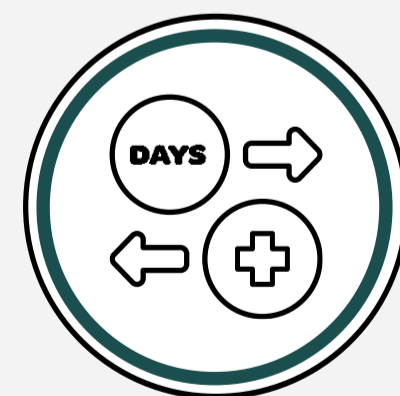
METHODS



Cross-sectional survey of US adults conducted between May and June 2022 to collect data on the valuation of RSV health states.



Online survey included vignettes describing 3 RSV health states for a hypothetical 70-year-old: upper respiratory tract illness (URTI), lower respiratory tract illness (LRTI) and severe LRTI.



Time trade-off (TTO): Participants were asked to trade some portion of time from the end of their lives to avoid the health state described in each vignette.

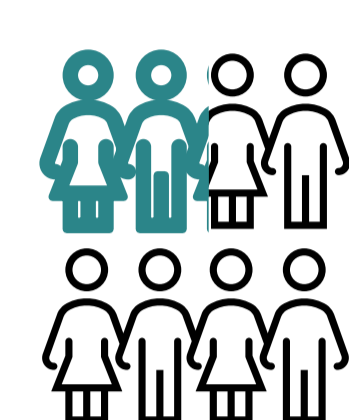


TTO values were summarized descriptively for the 3 health states, with quality-adjusted life year (QALY) losses calculated by dividing the discounted median TTO values by 365 days.

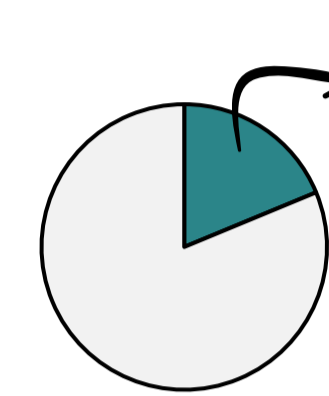


The vignettes were reviewed by 2 pulmonologists and 3 adults ≥ 60 years old who had experienced a recent RSV episode.

RESULTS



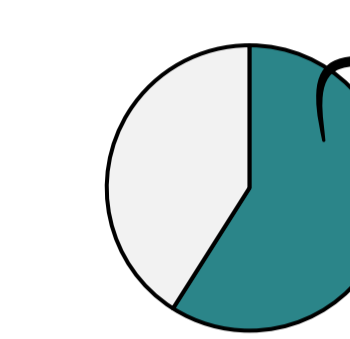
400 participants fulfilled study inclusion criteria and evaluated the vignettes (out of 1,473 respondents).



75/400 participants excluded from analysis because of inconsistencies in responses and/or providing the same non-zero values for all vignettes.



Mean age of 45.3 years, with 21.2% of the sample aged ≥ 60 years (n=69/325)



58.8% of sample was female (n=191/325).



5% trimmed distributions to exclude small proportion of very high TTO values.[3]

NUMBER OF DAYS TRADED TO AVOID RSV HEALTH STATES

	Severe LRTI (n=292)	LRTI (n=292)	URTI (n=292)
Undiscounted			
Mean	103.67	43.42	31.02
(BCa 95% CI)	(83.81 - 130.70)	(35.68 - 54.38)	(24.01 - 39.69)
(BPct 95% CI)	(81.93 - 127.84)	(34.89 - 53.55)	(23.27 - 38.69)
Median	14.00	10.00	8.00
(BPct 95% CI)	(14.00 - 21.00)	(10.00 - 14.00)	(8.00 - 8.00)
10th / 90th Percentile	2/360	1/140	0/100
Min / Max	0/1350	0/365	0/365
Discounted (3%)			
Mean	64.90	27.07	19.29
(BCa 95% CI)	(52.31 - 81.27)	(22.26 - 33.88)	(15.06 - 24.63)
(BPct 95% CI)	(51.35 - 80.26)	(21.82 - 33.30)	(14.47 - 24.09)
Median	9.09	6.49	4.87
(BPct 95% CI)	(9.09 - 12.98)	(6.09 - 8.53)	(4.87 - 5.19)
10th / 90th Percentile	1/219	1/85	0/61
Min / Max	0/822	0/234	0/237

CI were estimated using 1,000 bootstrap sampling replications, with replacement, under the percentile method and, for the mean, also under the bias-corrected and accelerated method.[4] Abbreviations: BCa, bias-corrected and accelerated; BPct, bootstrap percentile; CI, confidence interval; LRTI, lower respiratory tract infection; Max, maximum; Min, minimum; RSV, respiratory syncytial virus; TTO, time trade-off; URTI, upper respiratory tract infection

UTILITY LOSS (QALYs)

Severe LRTI: 0.025 QALYs | LRTI: 0.018 QALYs | URTI: 0.013 QALYs

LIMITATIONS

- Study participants may not be representative of all US adults (e.g., online survey excluded individuals without internet access).
- A 5% data trimming approach was used to exclude outlier TTO values from the analysis. While this considerably reduced the impact of the skewed TTO distribution on reported mean values, findings from the study focus on the more conservative median values.

CONCLUSIONS

- ✓ This study provides new information on the valuation of RSV-related health states by severity, indicating that adults are willing to trade several days at the end of their life to avoid an RSV episode at an age of 70.
- ✓ Results can be used as inputs in economic evaluations of RSV vaccines, to accurately capture RSV-related QALY losses that could be avoided as a result of older adult vaccination.