

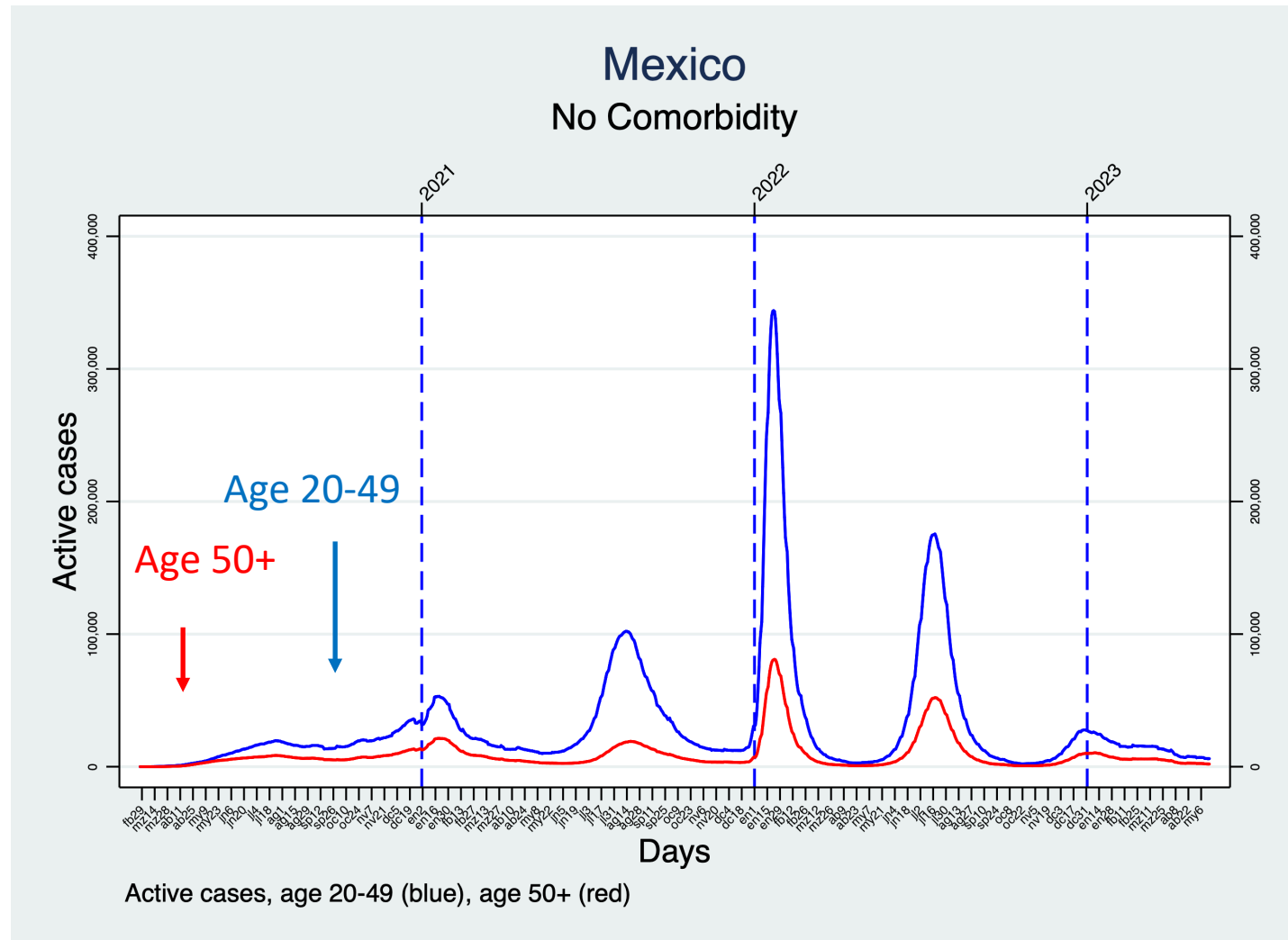
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# Effects of COVID-19 using the MHAS Cohort – Preliminary Analysis

2023 Meeting of the HRS Around the World Studies  
Dublin, Ireland, August 22-23, 2023

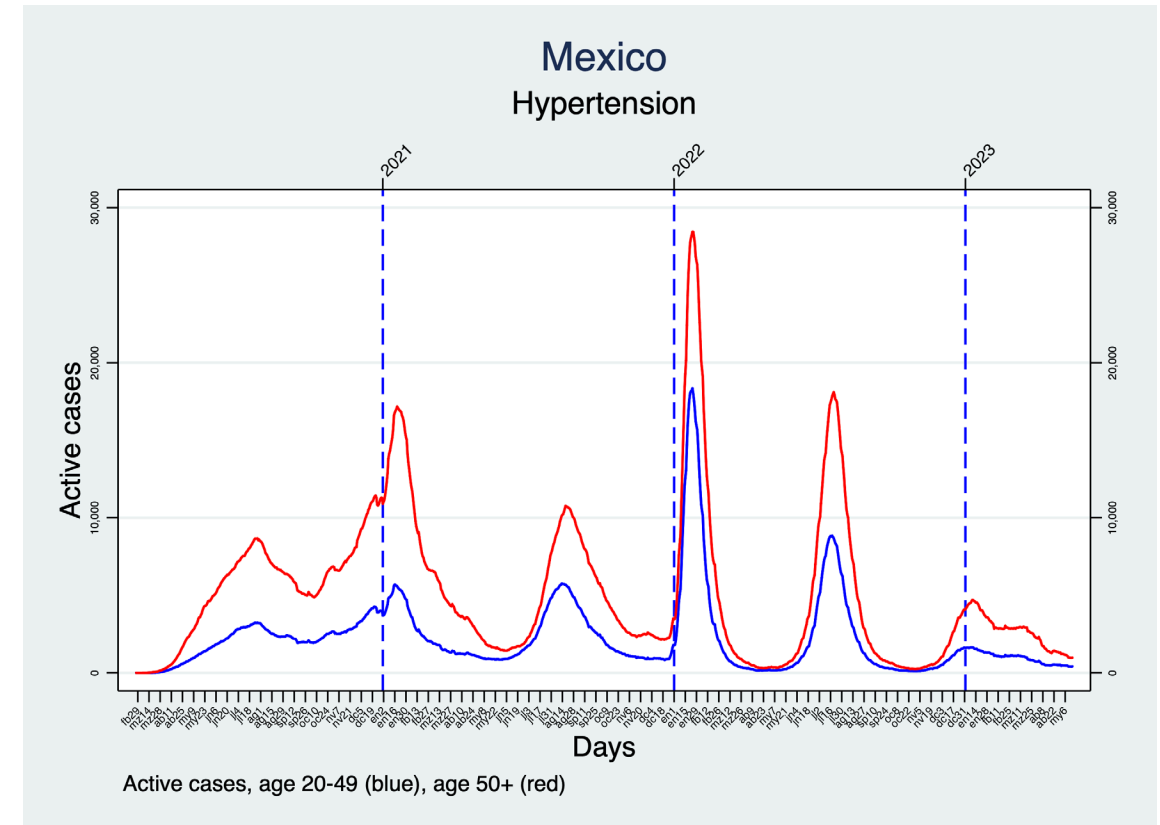
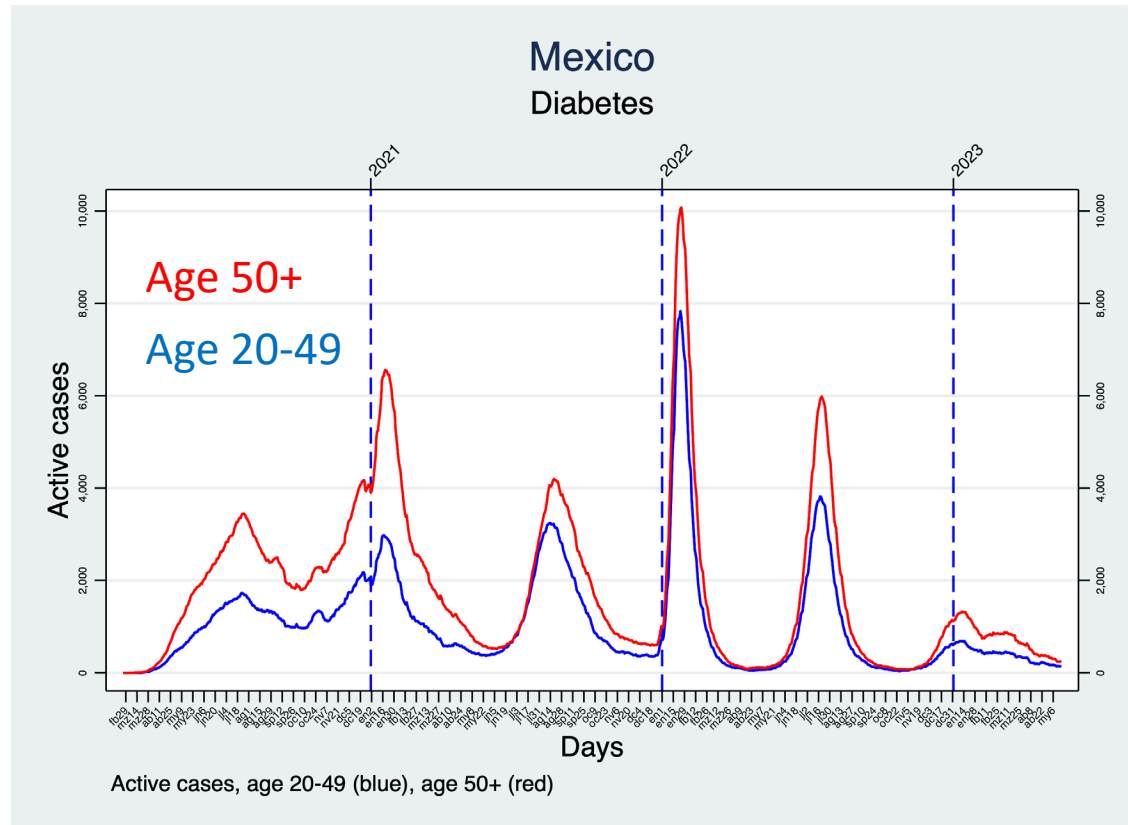
# National COVID-19 Trend 2020-2023 - Mexico

## Confirmed Cases by Age Groups



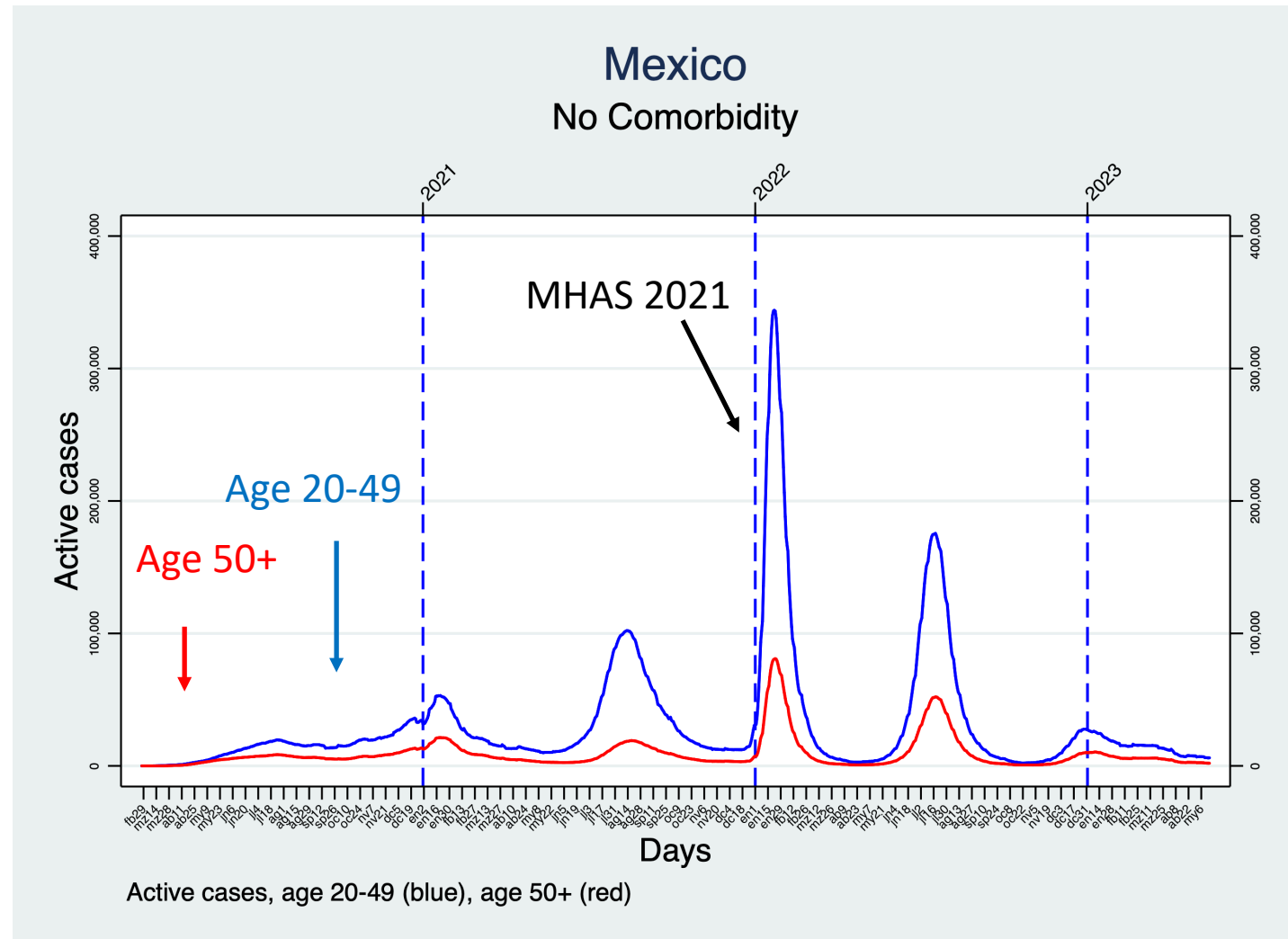
Source: Mexican Ministry of Health – Bi-Weekly Time Series of COVID-19, Feb 2020 – May 2023

# COVID-19 Number of Confirmed Cases with Co-Morbidities: Diabetes, Hypertension



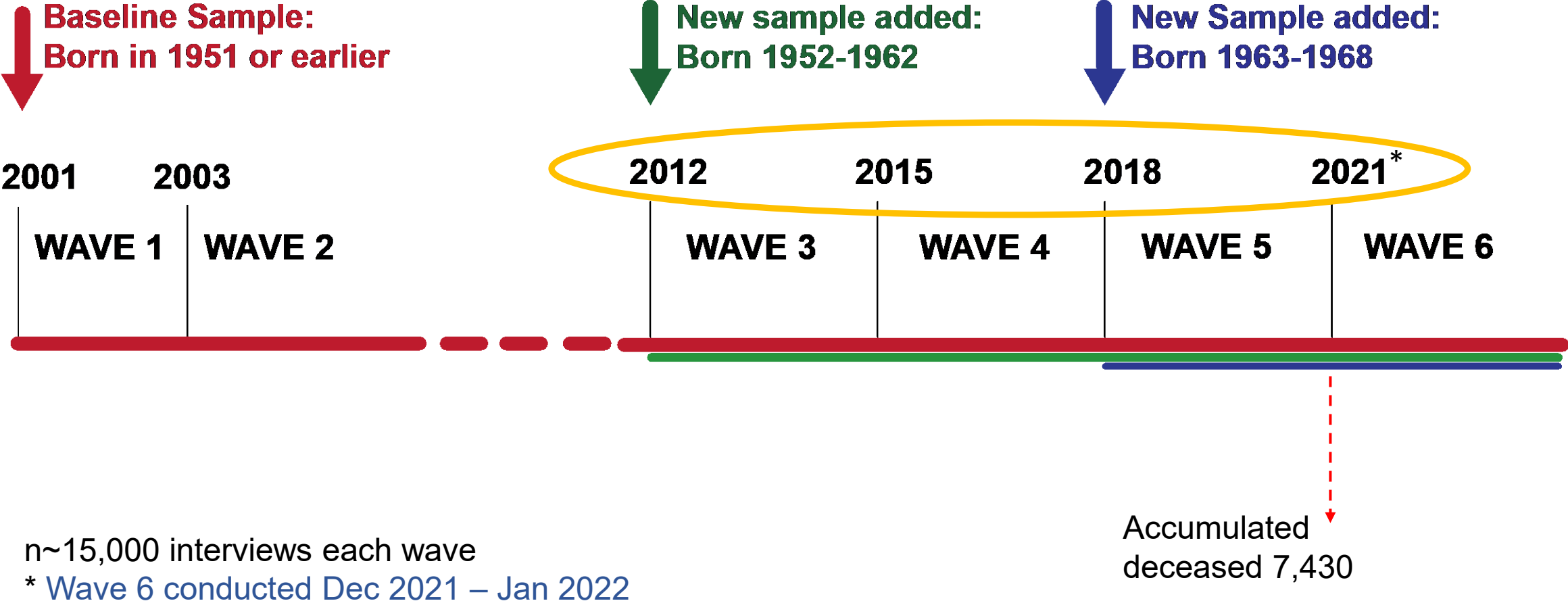
Source: Mexican Ministry of Health – Bi-Weekly Time Series of COVID-19, Feb 2020 – May 2023

# MHAS Wave 6 was completed prior to OMICRON surge



Source: Mexican Ministry of Health – Bi-Weekly Time Series of COVID-19, Feb 2020 – May 2023

# Timeline of Longitudinal Waves



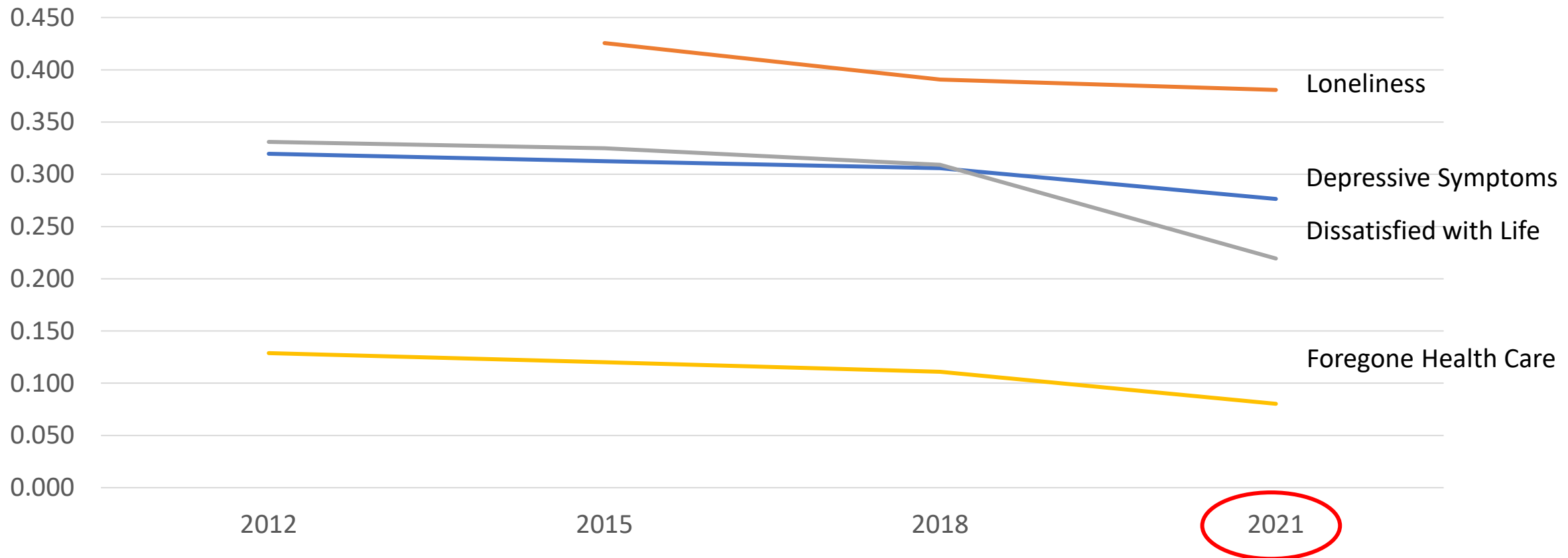
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# Analysis of mental health outcomes among Survivors

- Four outcome variables in 2021:
  - depression
  - loneliness
  - life dis-satisfaction
  - forgone health care (including mental health care)
- COVID impact variables: ‘Infection’ and ‘Major event’
  - Self-reported confirmed infection from ~March 2020 to survey (~end of 2021).
  - Major event (1+ among: lost child, lost spouse, cared for sick person, financial setback)

# Overall age 50+: flat or declining trends in the four outcome variables

Unadjusted Percent reporting Select Health Outcomes. Cross-sections  
2012 to 2021



# Descriptive statistics of main variables in 2021

## Population 50 years and older in 2012 surviving to 2021

	Percentage
<i>COVID-19 Confirmed infected</i>	13.1
<i>Major events related to COVID</i>	
Children died because COVID	0.8
Spouse died in 2020 or 2021	4.3
Had to care for a sick family member because of COVID	2.0
Affected financial situation because of COVID	6.7
<i>At least one of these 4 major events</i>	12.4
Depressive symptoms (Yes)	29.5
Loneliness (Yes)	40.3
Foregone healthcare	6.7
Life satisfaction (Dissatisfied)	21.6
(Weighted Statistics)	
Sample size	8,776

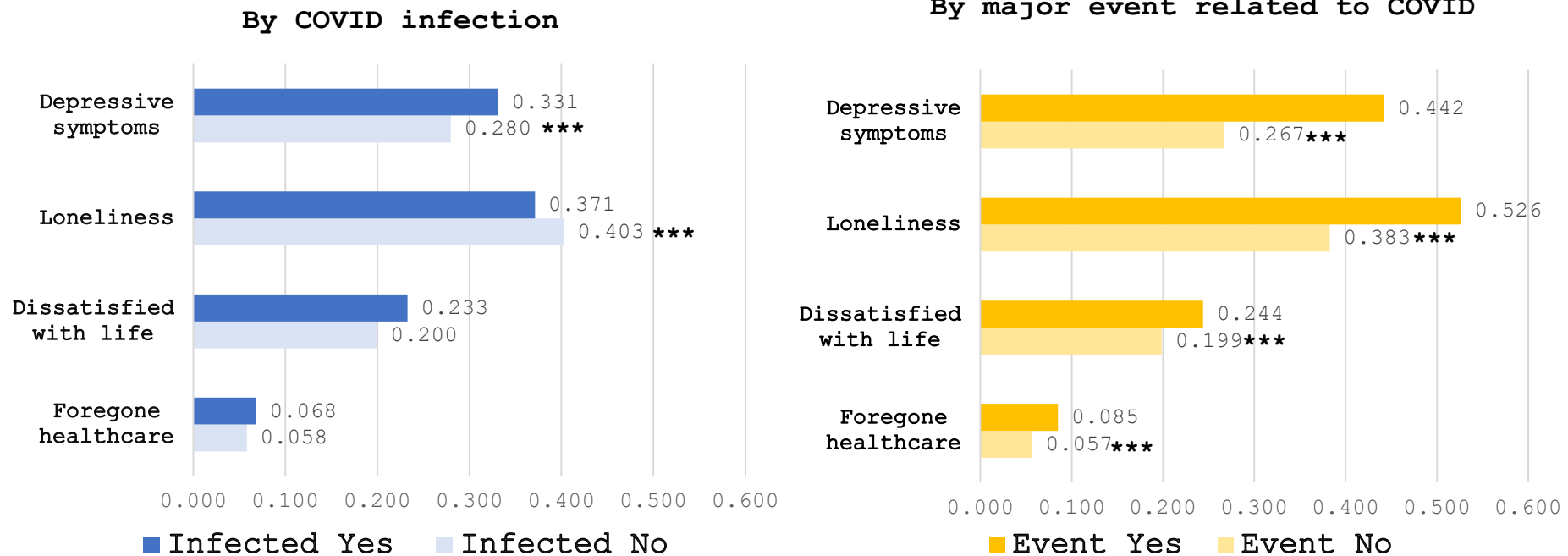


# Few had both 'Infection' and 'Major Event'

COVID-19 Variable	Frequency	Weighted Percentage
Neither infected or major event	6,998	77.8
Only infected	796	9.9
Only major event	744	9.1
Both - infected and major event	232	3.2
<b>Total</b>	<b>8,770</b>	<b>100</b>

# 'Infection' not as significant as 'Major Event' on Four Outcomes

Estimated Probabilities of Four Outcomes by COVID infection and major event related to COVID



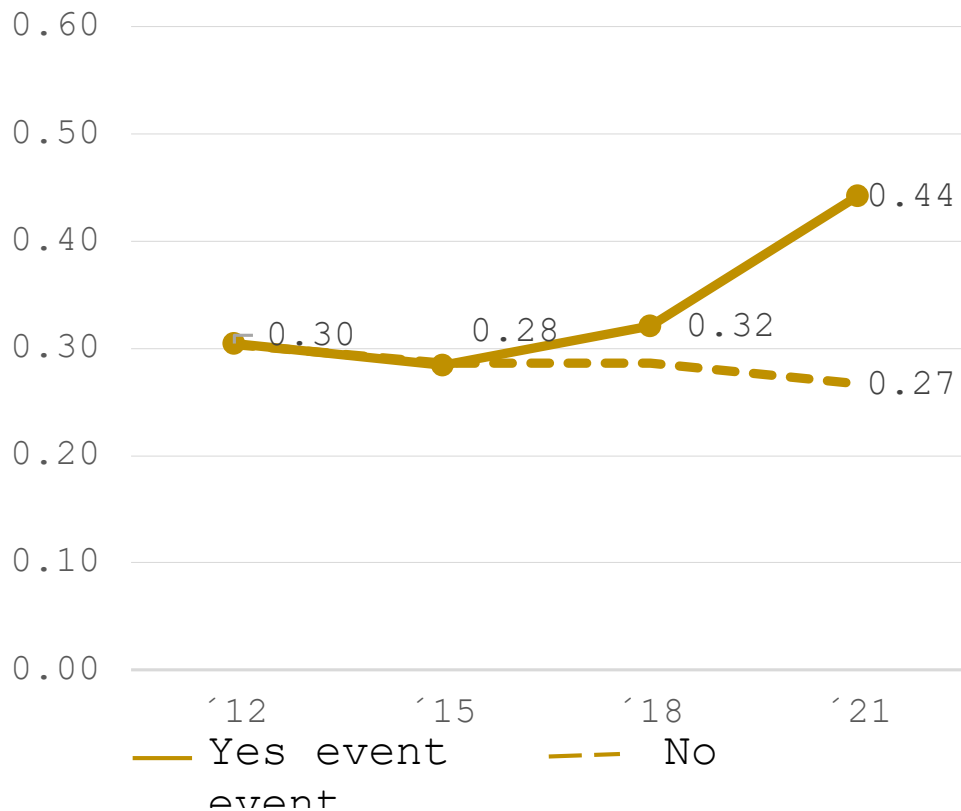
**Source:** Calculations by the authors using data from the Mexican Health and Aging Study, 2021.

**Notes:** 1) Estimated probabilities using logistic regression controlled for sex, age, education and urban/rural residence, hypertension, diabetes, cancer, and stroke.

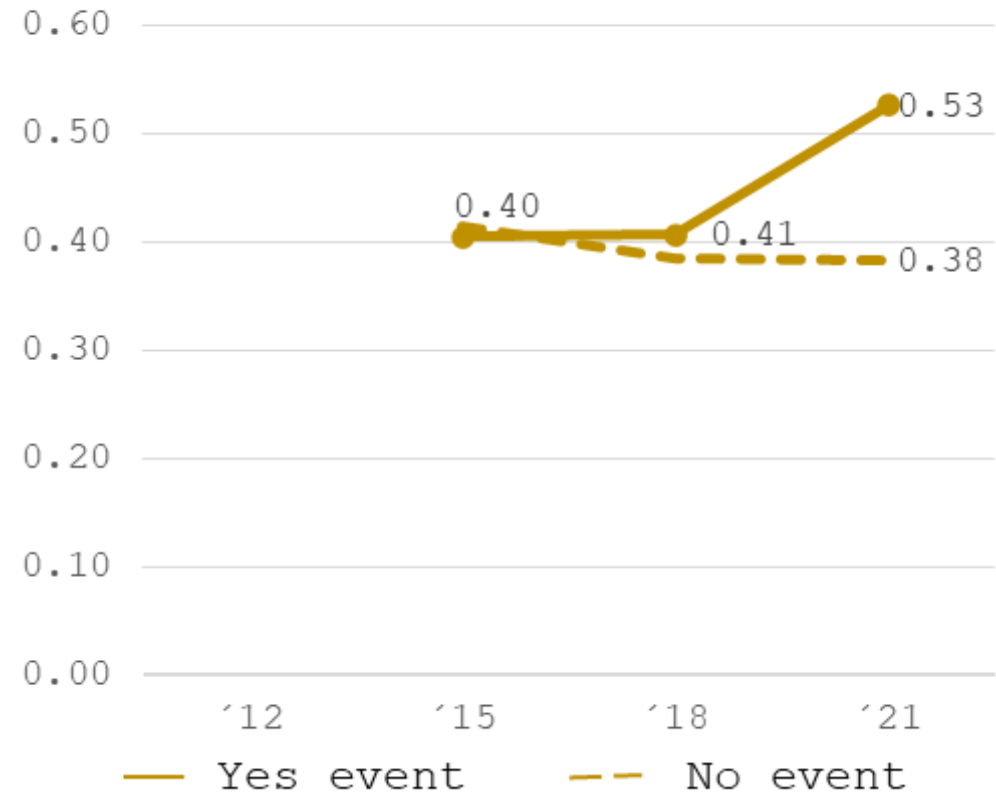
2) \*\*\* P-value for difference < 0.05.

# Adjusted probability of depression and loneliness higher for those with major COVID events

## Depressive symptoms



## Loneliness



# Inter-Wave mortality: increase in number of deaths in the MHAS panel between 2018 and 2021

- 2012 to 2015, there were 1,209 reported deaths.  
Of these, 700 (59%) were deaths due to health reasons.
- 2015 to 2018, there were 1,135 deaths.  
Of these, 647 (59%) were due to health reasons.
- 2018 to 2021, there were 1,799 deaths, about 50% more deaths (\*).  
Of these, 1,315 (73%) were due to health reasons.

(\* )The inter-wave period is slightly longer between 2018 and 2021 by about 2 months

# More excess in absolute numbers among ages 70+

## More in relative numbers among ages 50-59

Age	2012-2015		2015-2018		2018-2021	
	N	%	N	%	N	%
<50	5	0.41	3	0.26	7	0.39
50-59	58	4.81	68	5.99	162	9.01
60-69	242	20.07	201	17.71	295	16.4
70+	901	74.71	859	75.68	1,292	71.82
Missing			4	0.35	43	2.39
TOTAL	1206	100	1135	99.99	1799	100.01

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# Conclusion: preliminary analysis COVID years

- Survivors experienced COVID-19 'infection' and other major events 'affected' them
- Analysis of 'infected' and 'affected' outcomes reveals different impact across SES groups of survivors
- Future analysis will take into account survival selection, pre-post impact of the shocks, and longer-term impact to identify most 'resilient' and most 'vulnerable' groups.
- Deaths in the panel also differentially affected: shall we refresh the sample accordingly?

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# Thank you!

## Acknowledgements:

COVID-19 work based on *preliminary analysis* by Cesar Gonzalez-Gonzalez, Karina Orozco-Rocha, Deborah S. DeGraff, Rafael Samper-Ternent, Rebeca Wong. 2023. Under review.

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