



The impact of Covid - China

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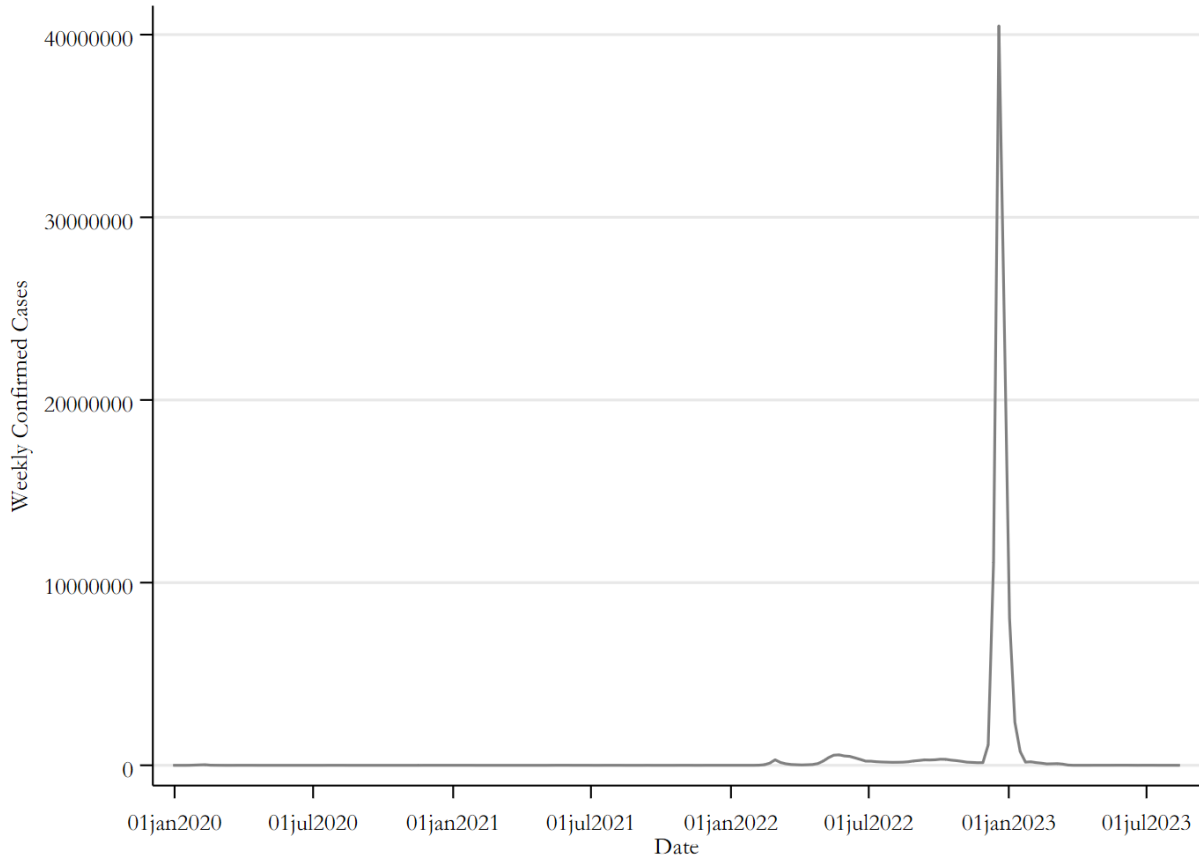
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Covid in China

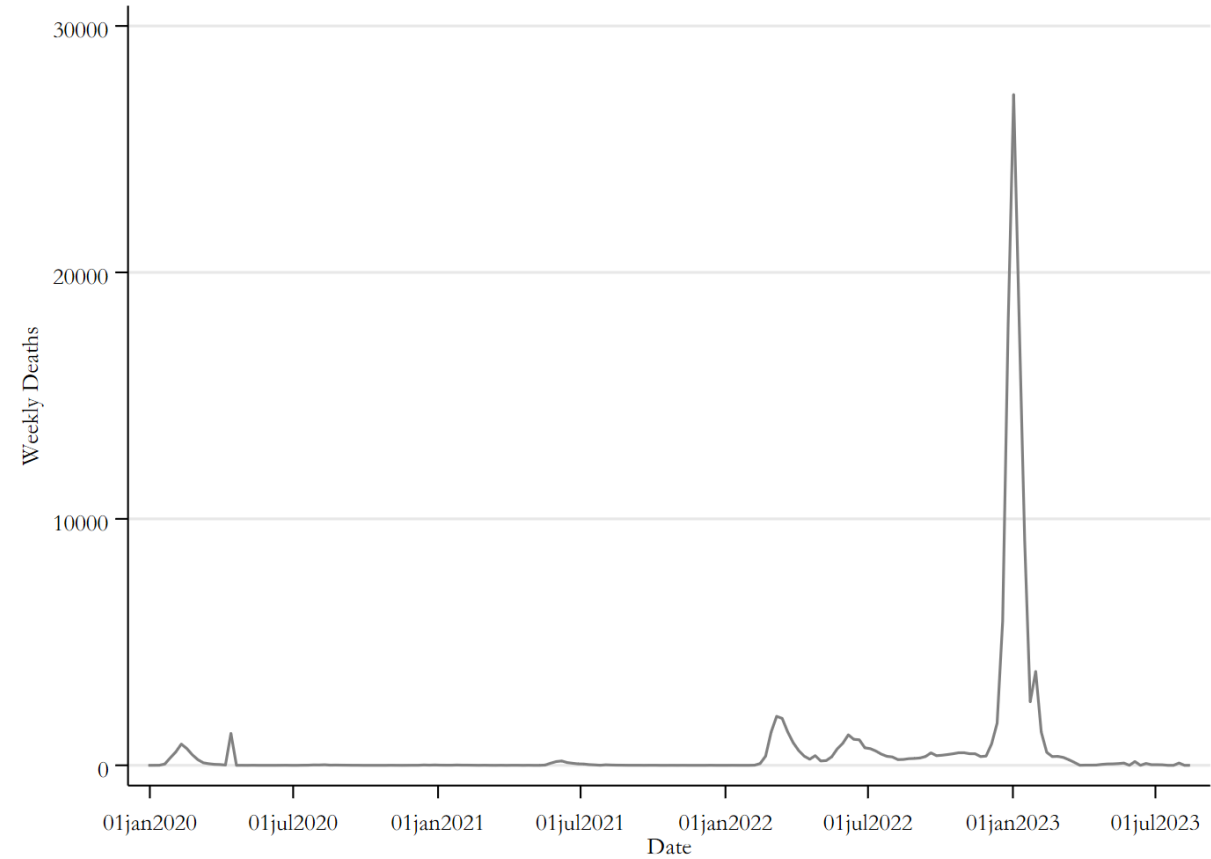
- Early 2020 – Wuhan outbreak was quickly contained
- Mid-2020 to late 2022: Zero covid policy
- Late 2022: end zero-covid

- WHO: In **China**, from **3 January 2020** to **16 August 2023**
 - **99,301,765 confirmed cases**
 - **121,628 deaths**
- <https://covid19.who.int/region/wpro/country/cn>

WHO statistics of infections and deaths

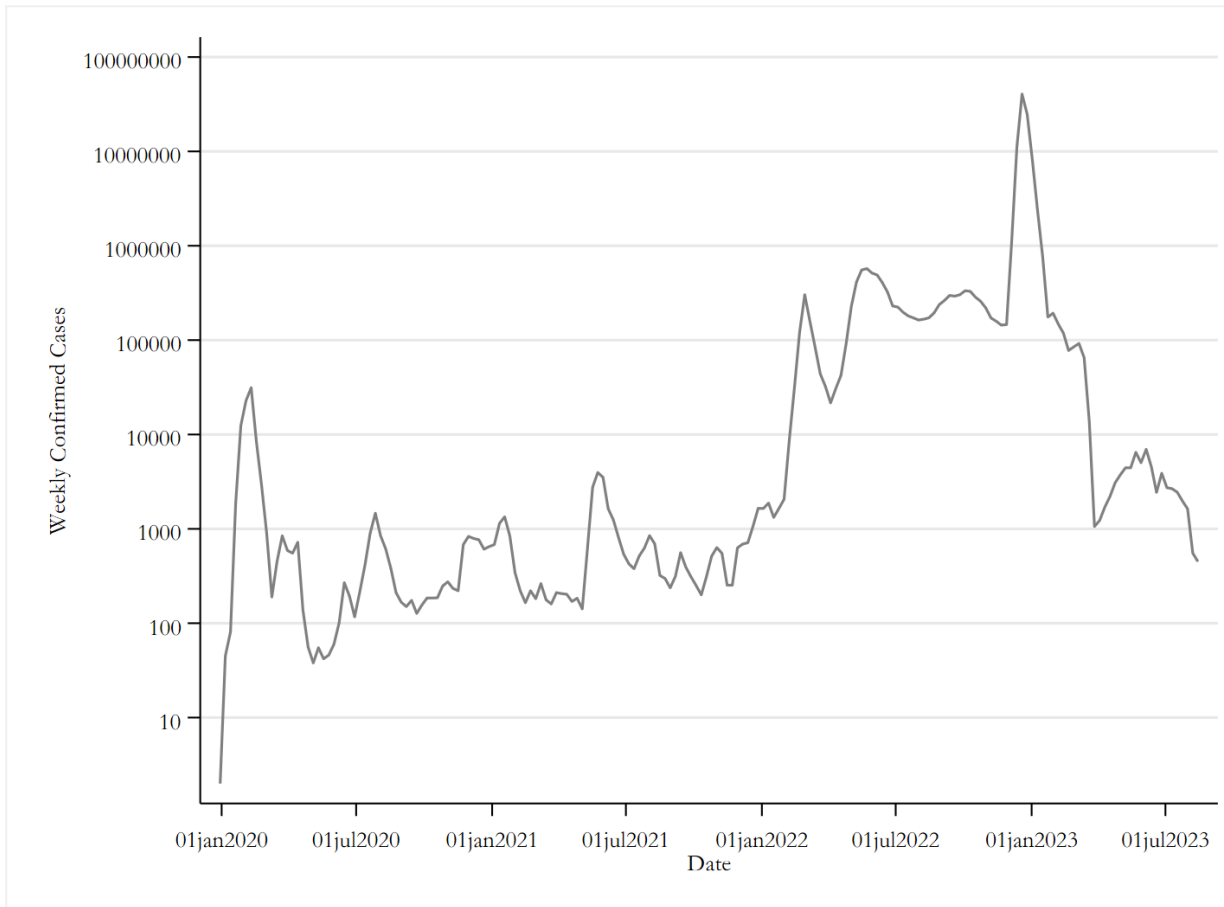


Weekly confirmed cases

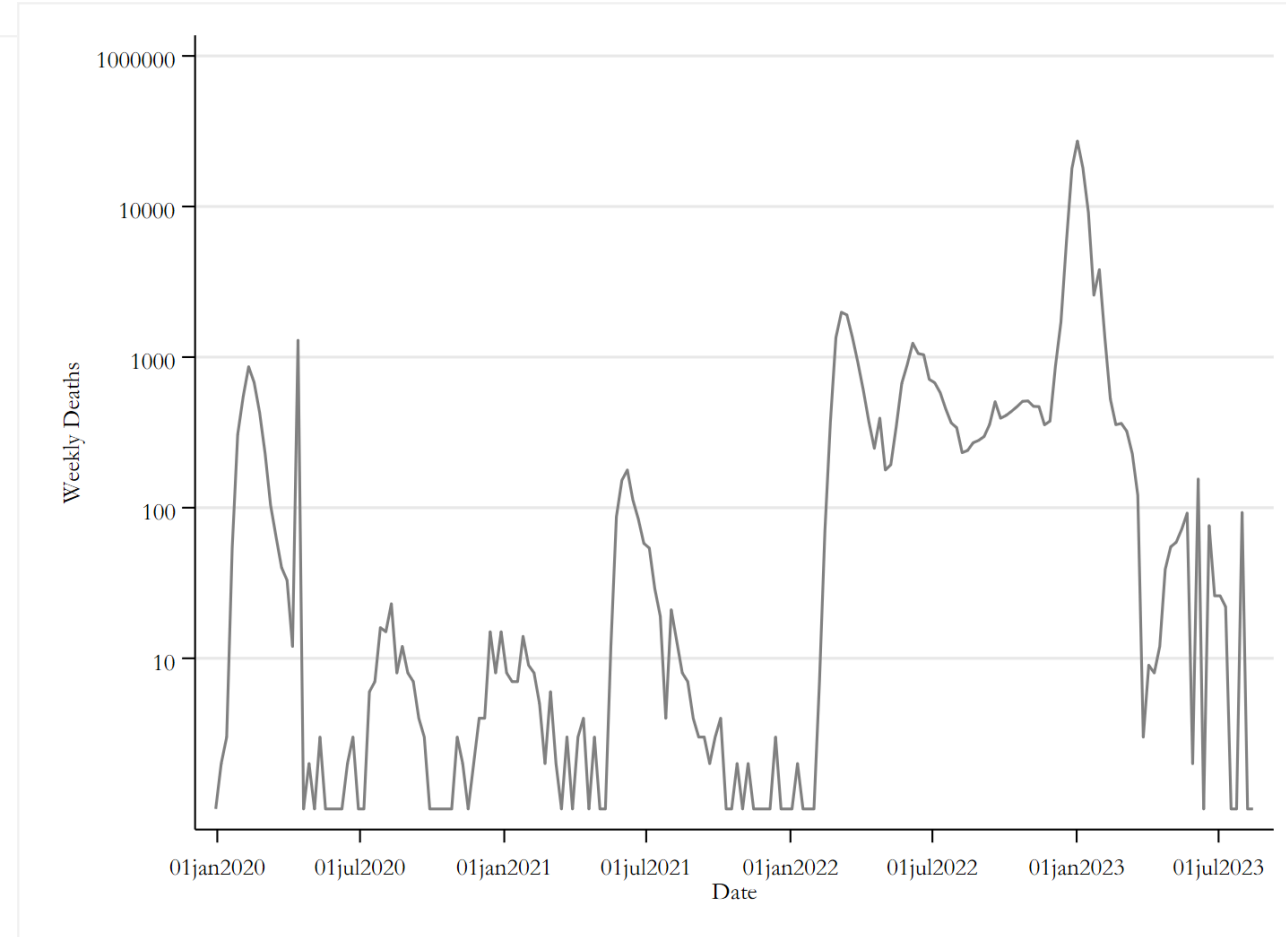


Weekly deaths

Confirmed cases and deaths on nonlinear scales



Weekly confirmed cases



Weekly deaths

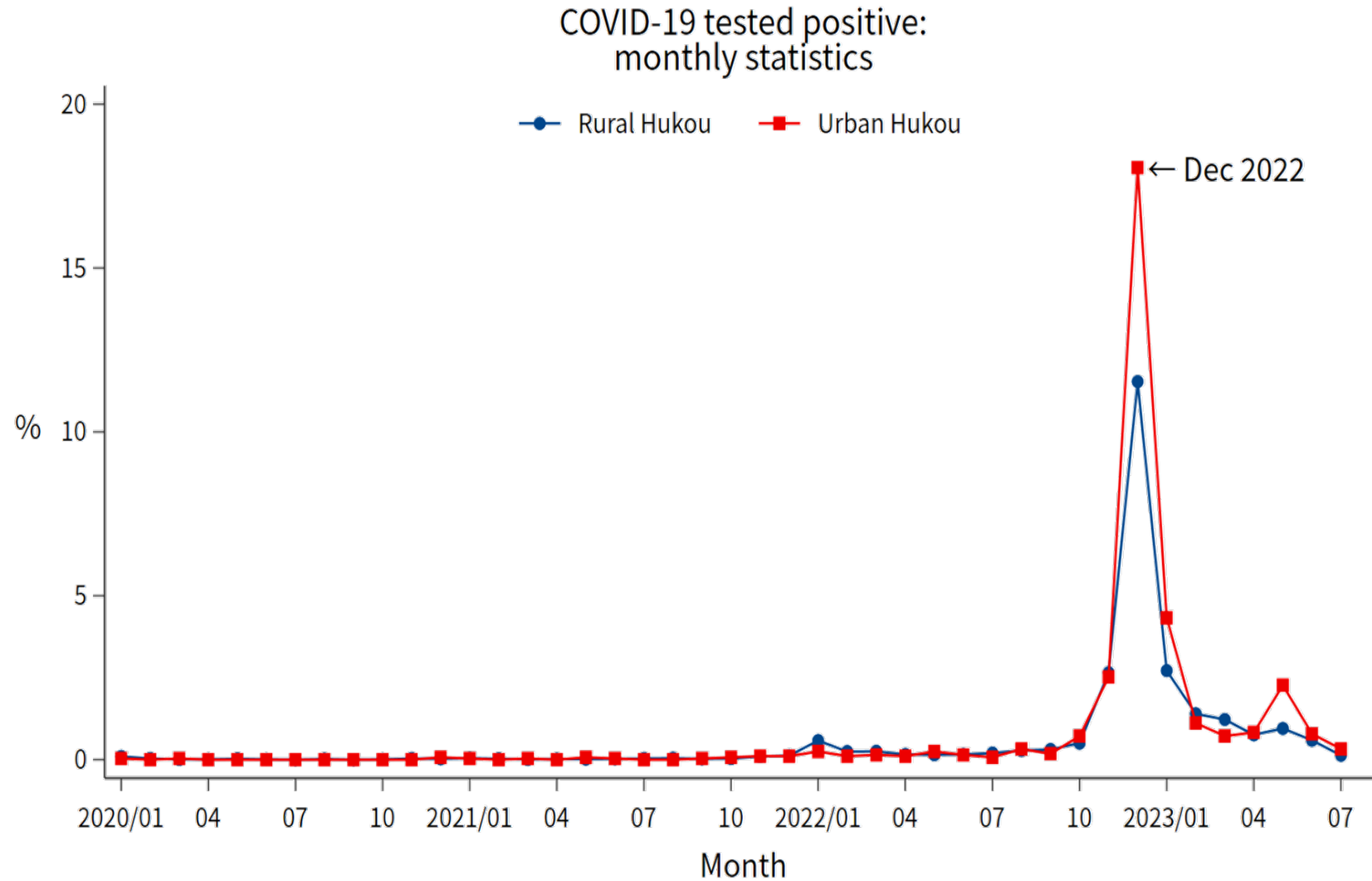
Questions

- What can CHARLS tell about China's Covid experience
 - Infection or death
 - Quarantine
- The impacts of Covid
 - Before December 2022: quarantine measures stemming from the Zero-Covid policy
 - After December 2022: infections from Omicron

Data: CHARLS 2020 and 2021-23

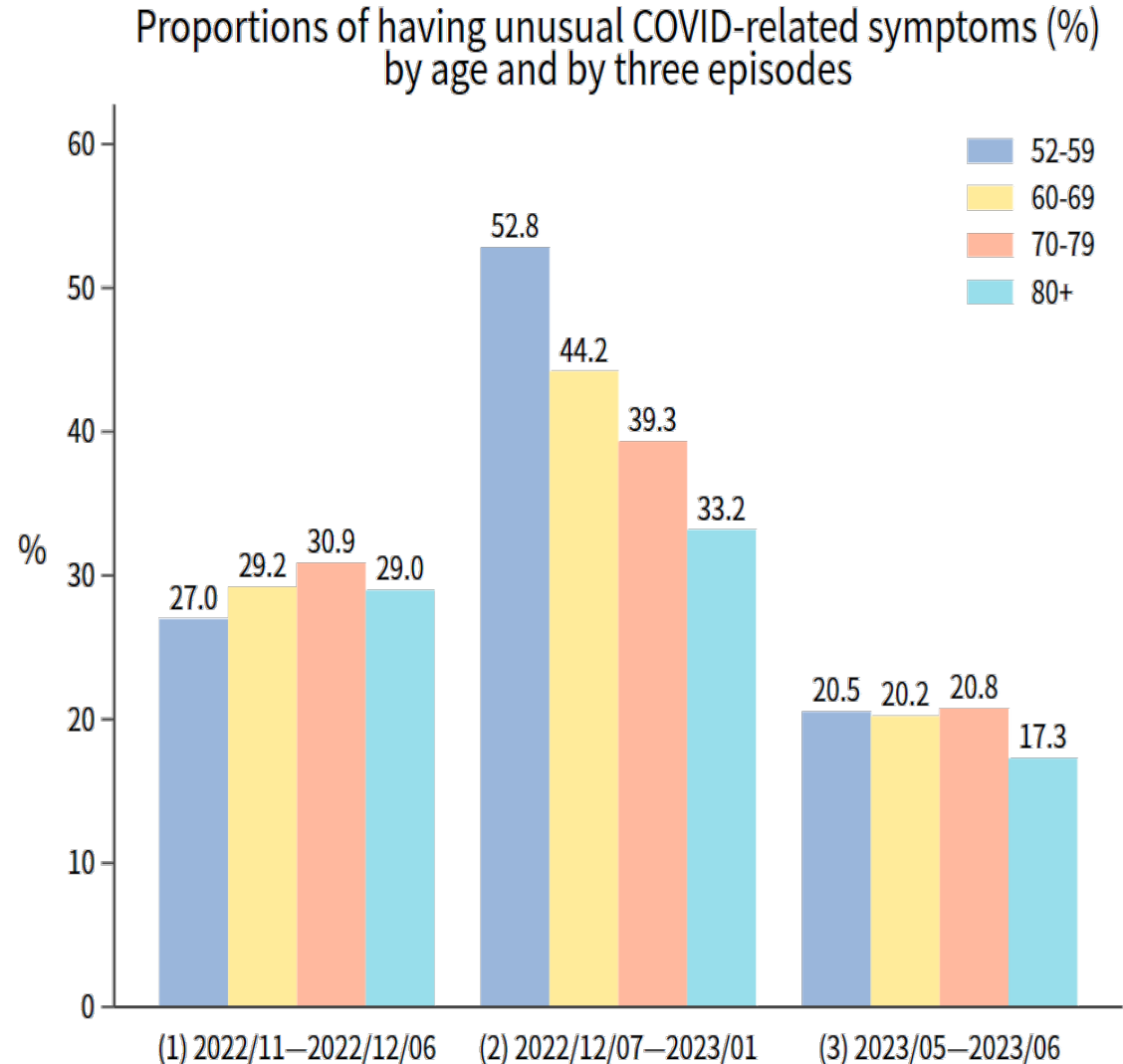
- The 2020 wave
 - Individual level: infection; death; quarantine
 - Community level: quarantine
- The 2021-23 wave
 - 2021: vaccine status (N=13,021)
 - 2022: updated vaccine status (N=14,765); individual quarantine
 - 2023: updated vaccine status (N=15,126); community/individual quarantine; infection (tested or symptoms); death
- All interviews were in July-August

Infections - tested



Data: CHARLS 2023

Infections – any unusual symptoms



Data: CHARLS 2023

- (Unusual) symptoms list:
 - Fever
 - Cough
 - Sore throat
 - Shortness of breath or difficulty breathing
 - Easily fatigued or drowsy
 - Nasal congestion
 - Muscle or joint pain
 - Headache
 - Loss of smell or taste

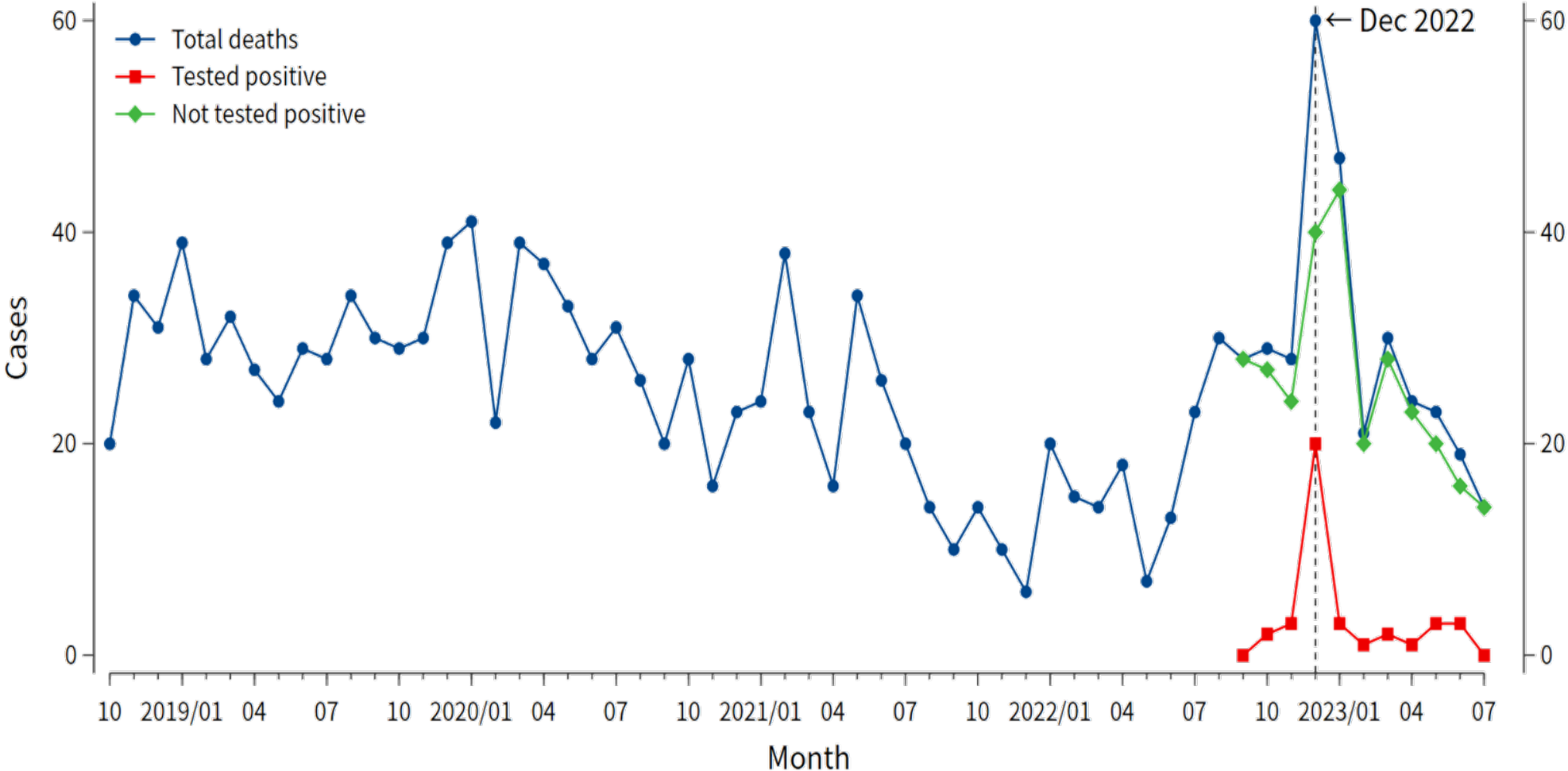
Long Covid as of July-August 2023

- Do you still experience any of the following symptoms of COVID-19?

Symptoms	%
Fatigue, weakness	17.5
Cough	11.3
Shortness of breath or difficulty breathing	7.9
Loss of taste or smell	6.6
Headache	11.7
Body aches or joint pain	23.7
Chest pain or tightness	11.9
Diarrhea or nausea	7.2
Depression or anxiety	9.8
Others	3.5
At least one of the above symptoms	39.5

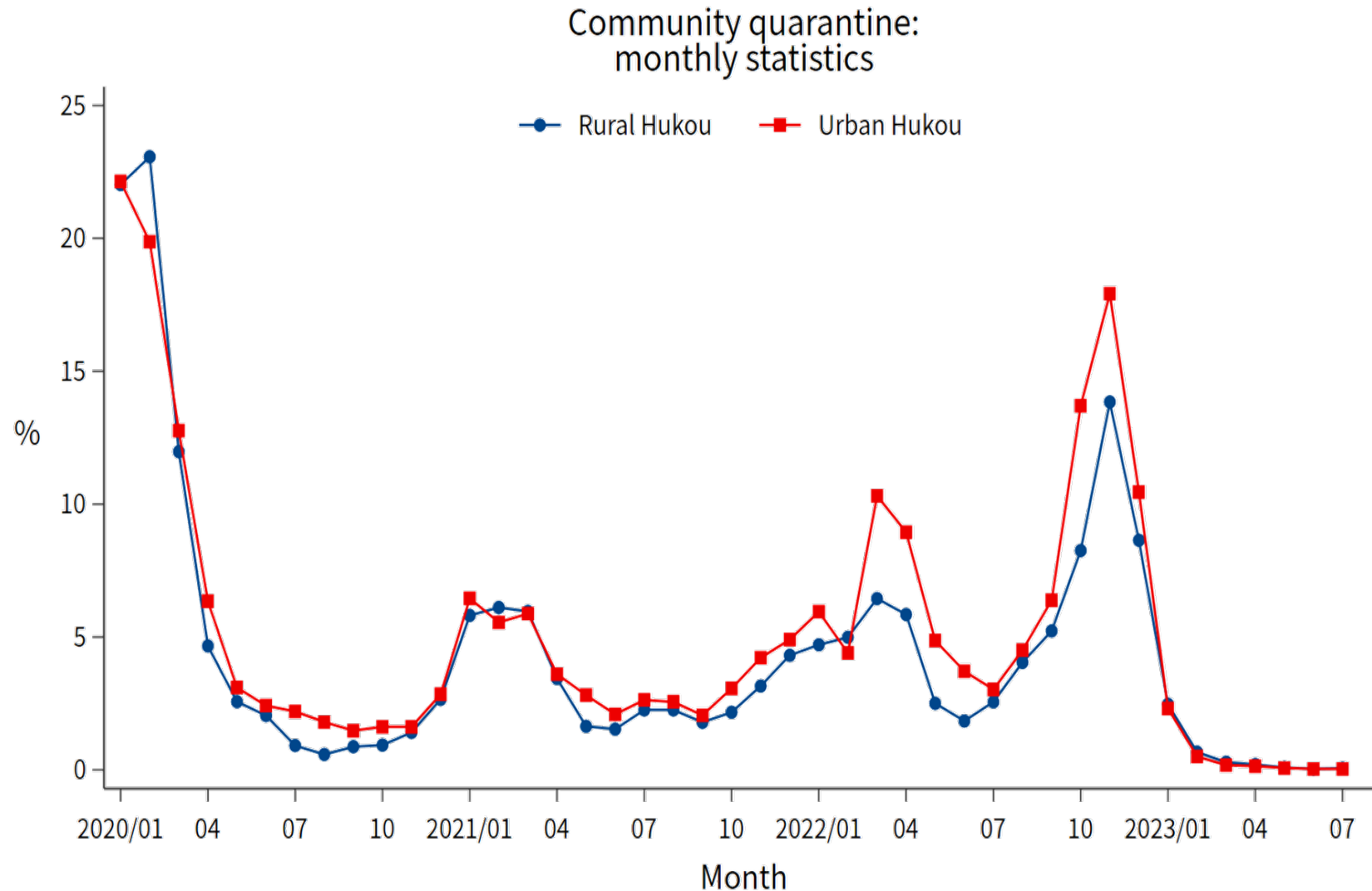
Deaths

Death cases by whether COVID-19 tested positive within a month



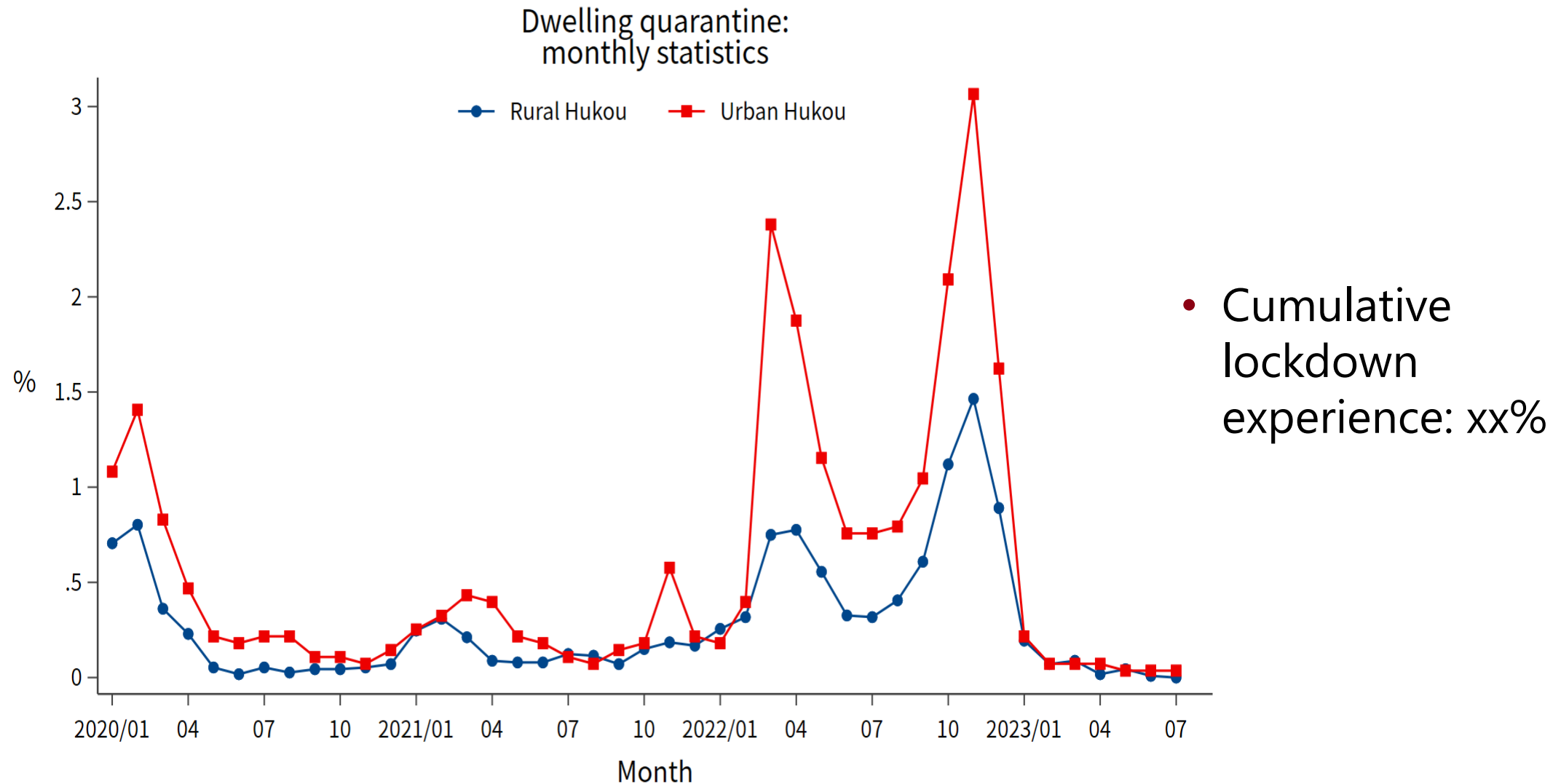
Data: CHARLS 2020/21/22/23

Quarantine – community lockdown



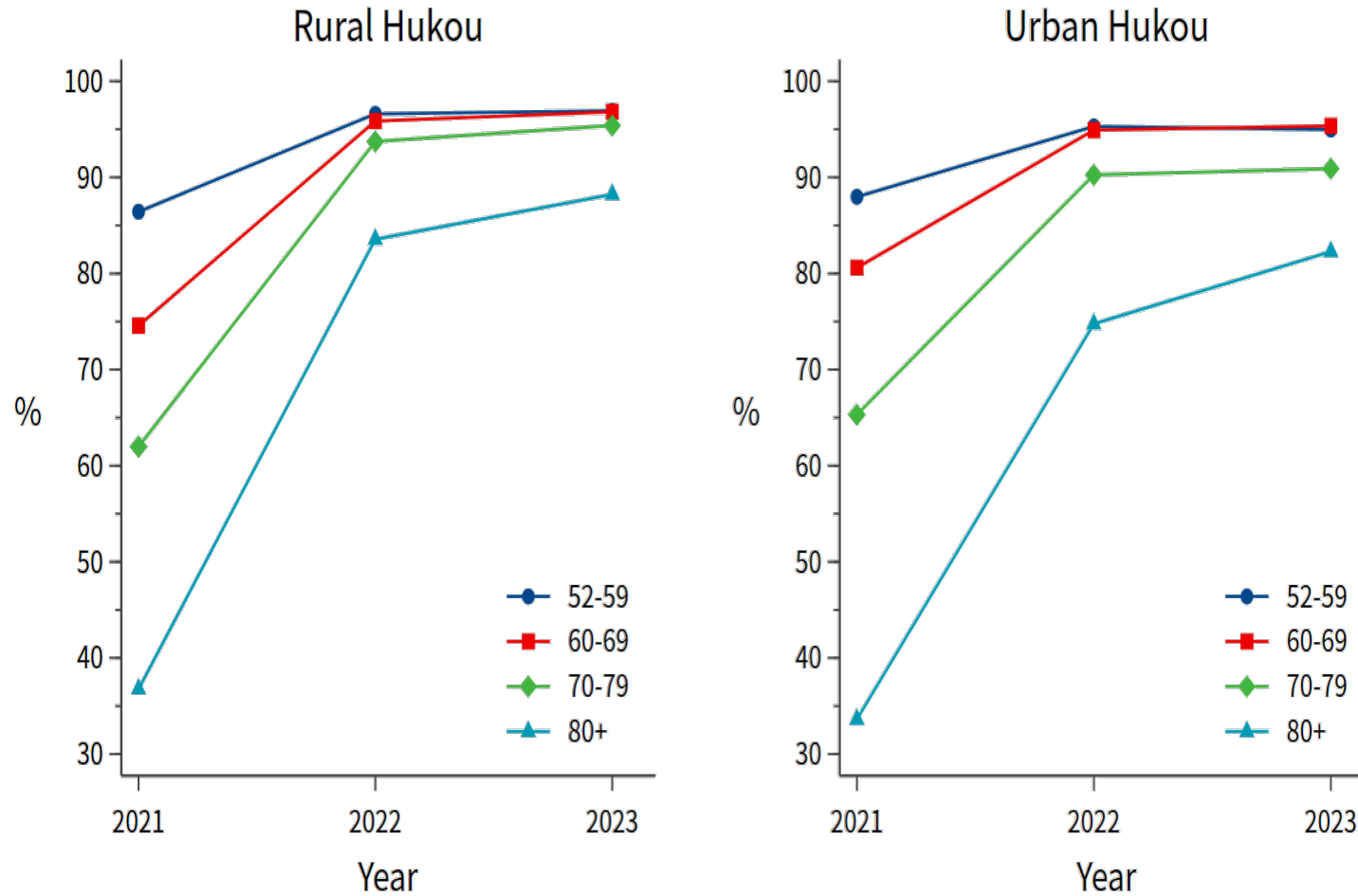
- Cumulative lockdown experience: xx%

Quarantine– dwelling lockdown

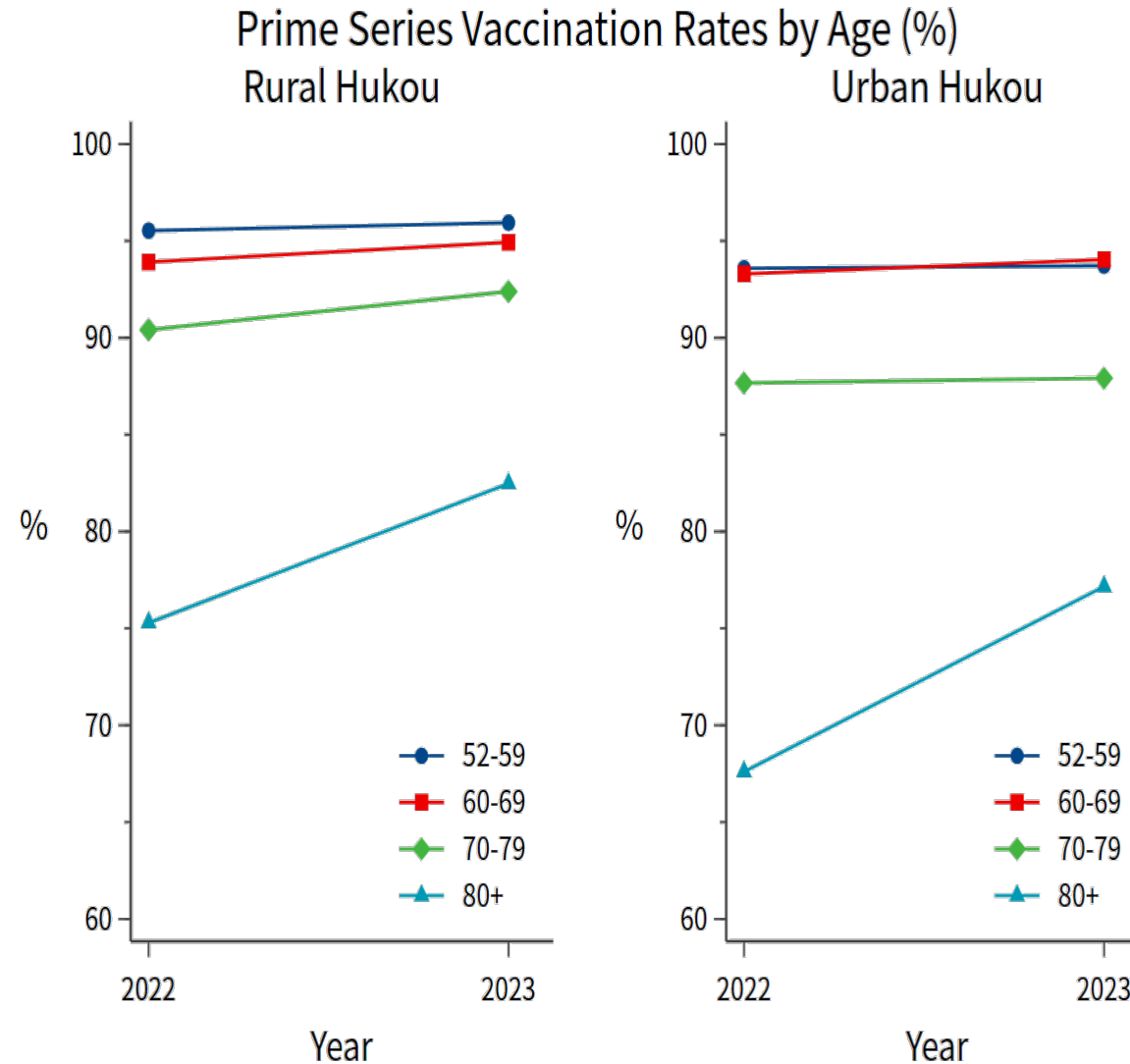


Vaccine status – first dose

First Dose Vaccination Rates by Age (%)



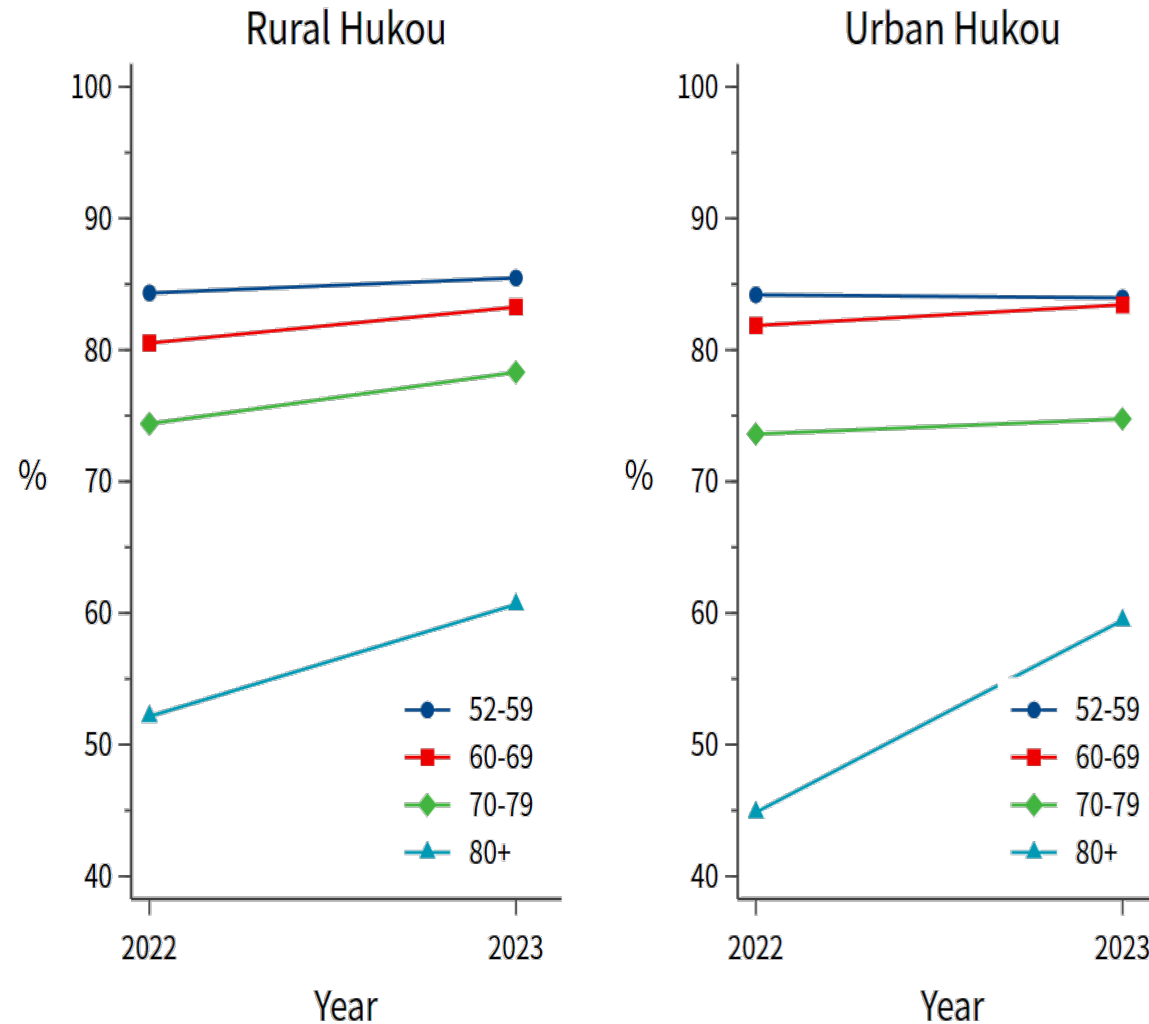
Vaccine status – prime series



Data: CHARLS 2022/23

Vaccine status – booster

Booster Dose Vaccination Rates by Age (%)



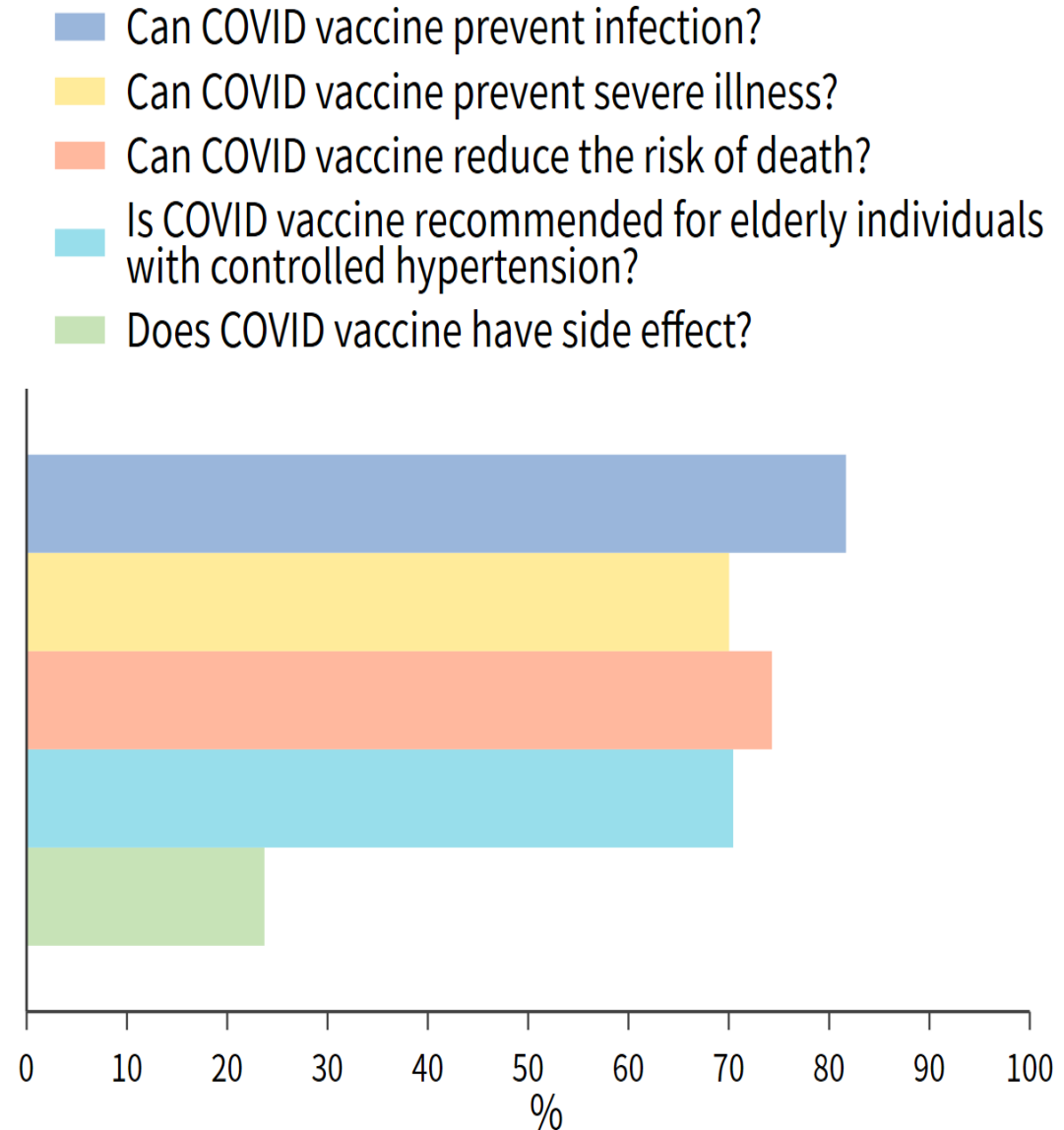
Analysis based on 2021 and 2022 data

- Women, older adults, unmarried or widowed, urban, functionally dependent individuals, and those with chronic diseases were less likely to receive COVID-19 vaccinations.
- Low vaccination rates among older and people with health issues are partly due to vaccine clinics refusing to vaccinate older people with potentially life-threatening conditions

Wang, Gewei., [Yao Yao](#), [Yafeng Wang](#), [Jinquan Gong](#), [Qinqin Meng](#), [Hui Wang](#), [Wenjin Wang](#), [Xinxin Chen](#) & [Yaohui Zhao](#). Determinants of COVID-19 vaccination status and hesitancy among older adults in China. Nat Med (2023). <https://doi.org/10.1038/s41591-023-02241-7>

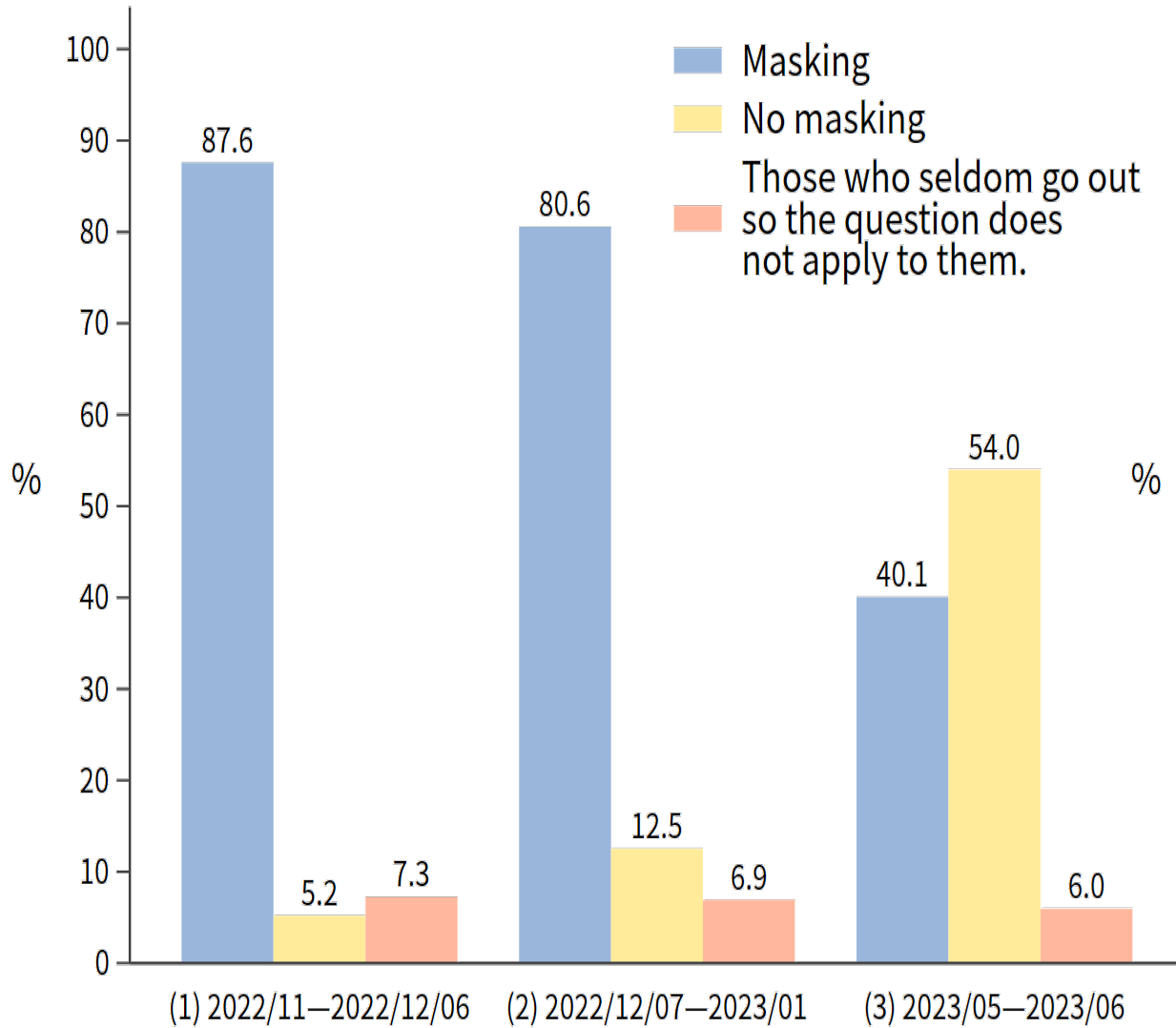
Attitude toward vaccine efficacy and health behavior

Attitude to vaccination (% of saying yes)



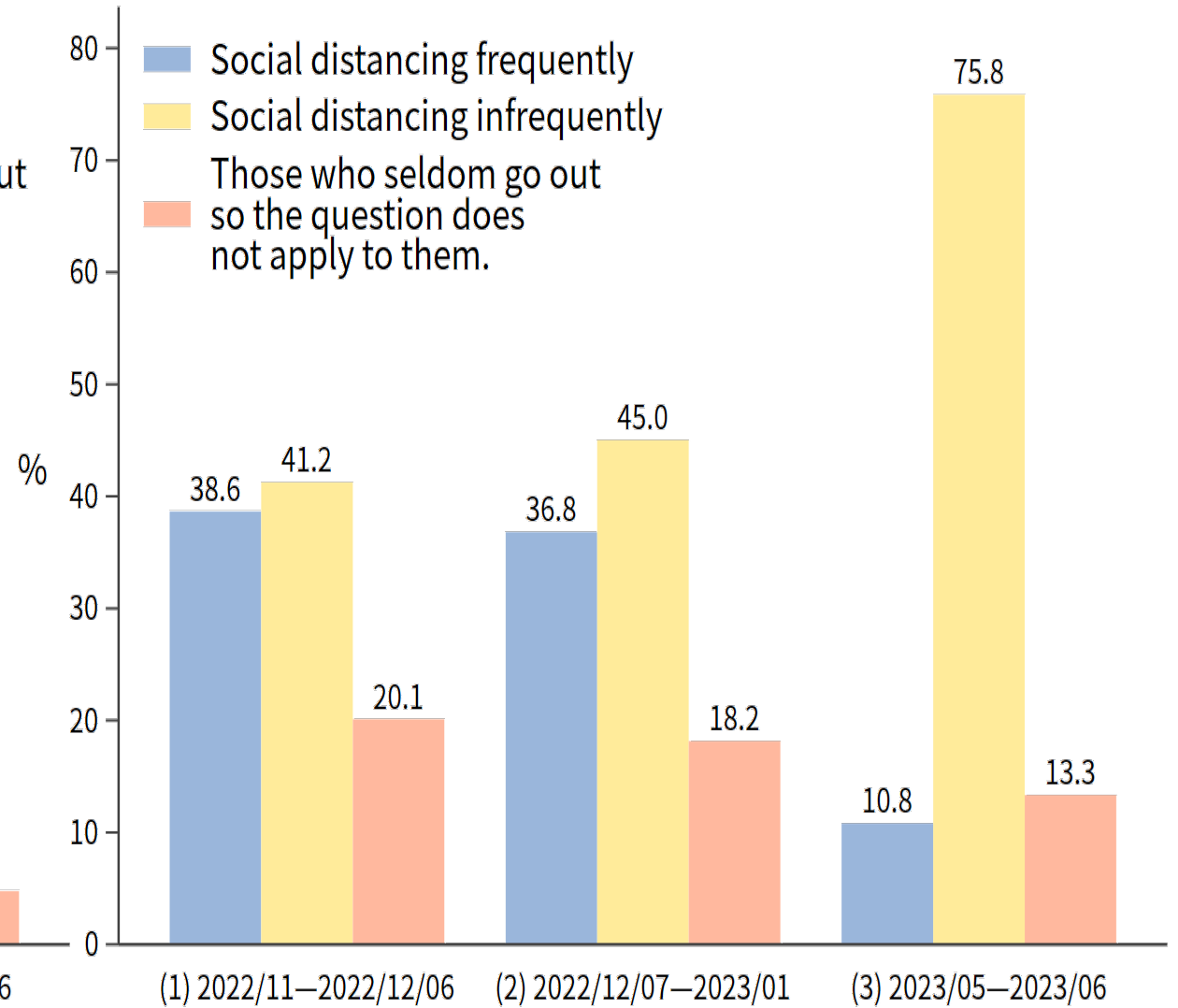
Data: CHARLS 2023

Proportions of masking (%)
by three episodes



Data: CHARLS 2023

Proportions of social distancing (%)
by three episodes



Data: CHARLS 2023

Attitude toward vaccine efficacy and health behavior

- Do trust and behavior affect vaccine and infection? Need to control for baseline health outcomes to minimize selection.
- Regression notes: Other control variables include sex, marital status, Hukou, and an intercept. Significance levels are indicated by *** $p < .01$, ** $p < .05$, * $p < .1$. Standard errors are clustered at the household level. The sample size is 13,250.

<i>Linear probability regression</i>	<i>Binary dependent variable</i>
	Unvaccinated
Age 70-79 (ref. 52-59)	0.020***
Age 80+ (ref. 52-59)	0.072***
Vaccine attitude: infection prevention	-0.048***
Vaccine attitude: severe illness prevention	-0.002
Vaccine attitude: death risk reduction	-0.002
Vaccine attitude: hypertension compatible	-0.037***
Any chronic condition	0.014***
R-squared adjusted	0.033

Outcomes to study the impact of covid

- Two questions (fear and anxiety) are in all years 2020-2023
- Other health outcomes:
 - To study the effect of quarantine: use 2018 or 2020 wave as baseline
 - To study the effect of infection: use 2020 wave as baseline

Thank you!