Achilles' Heel: Elderly COVID-19 Vaccination Policy in China

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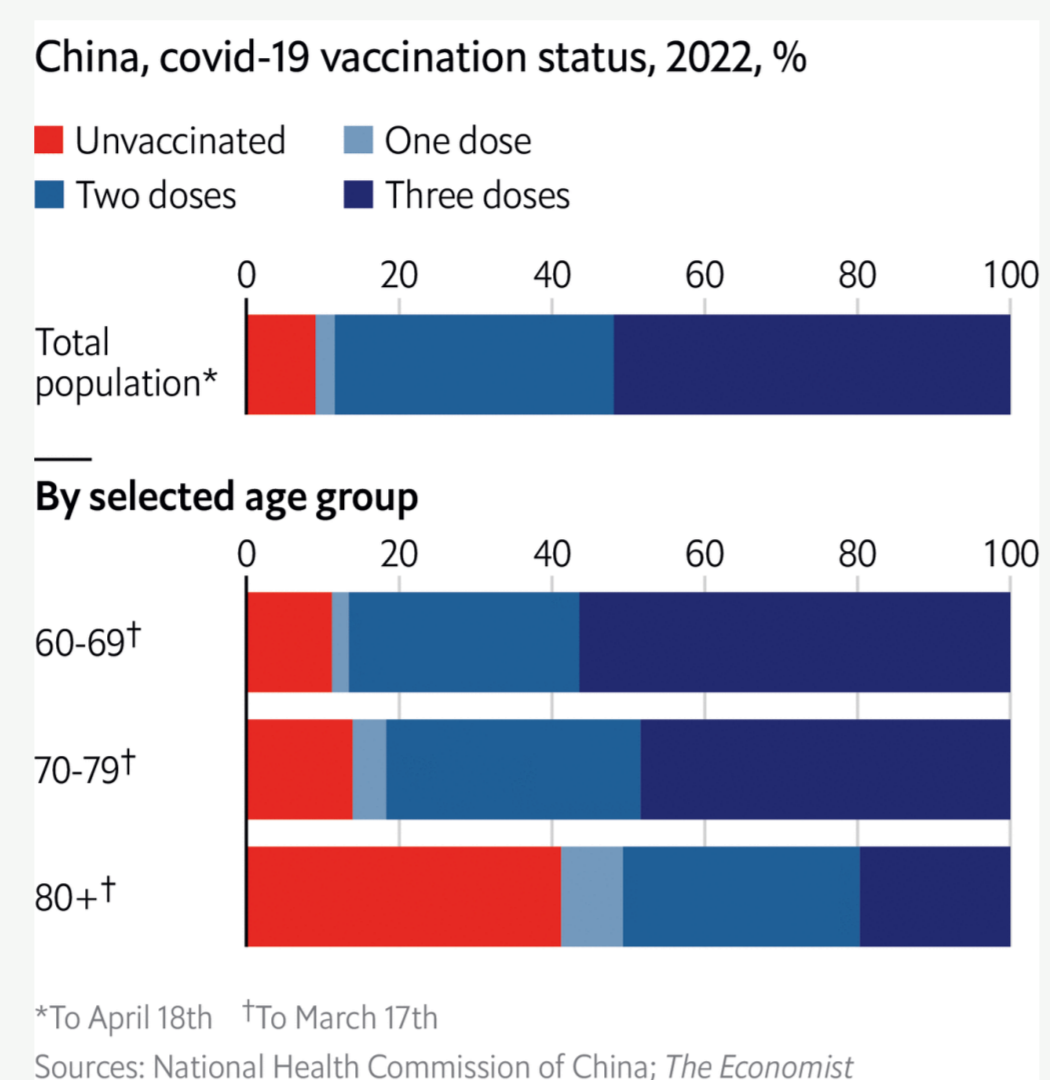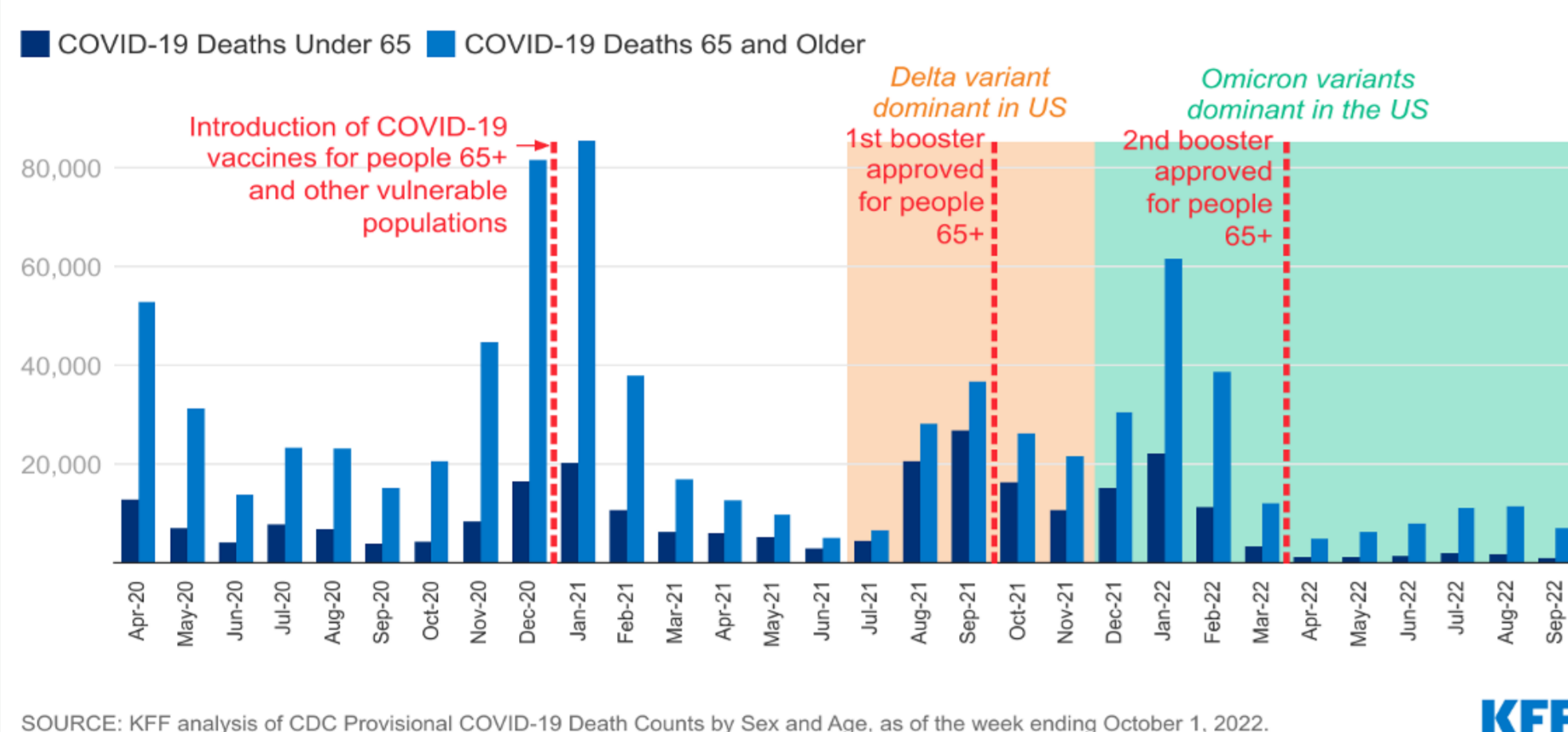Primary Supervisor: Prof Karen A. Grépin

Introduction

Background

- Covid deaths for older adults rose again in 2022 at a faster rate for older than younger adults
- China's COVID-19 response was further optimized in late 2022, transferring to living with the virus
- With booster uptake lagging, the elderly remain at high risk of morbidity and mortality

Deaths Due to COVID-19 Rose Faster for Older than Younger Adults in the Summer of 2022

- COVID-19 Deaths Under 65
- COVID-19 Deaths 65 and Older

SOURCE: KFF analysis of CDC Provisional COVID-19 Death Counts by Sex and Age. as of the week ending October 1, 2022.

China, covid-19 vaccination status, 2022, %
- Unvaccinated
- One dose
- Two doses
- Three doses

Total population*
By selected age group
60-69†
70-79†
80+†

*To April 18th †To March 17th
Sources: National Health Commission of China; The Economist

Facts in China

- ✓ COVID-19 vaccination is free and accessible
- ✓ Low prevalence of COVID-19 vaccine hesitancy
- ✓ Strong executive power and highly compliant population

Why has China experienced a struggle in vaccinating its elderly ❓

- Complicated underpinnings
- Typical studies focus more on the individual-level determinants
- We want to examine how the macro-level factors (e.g. policy, politics, cultural value, media) explain the poor elderly vaccination issue

Methods

Data collection

- 95 transcripts of press conferences of the Joint Prevention and Control Mechanism (JPCM) of the State Council from Oct 20, 2020, to Feb 27, 2023
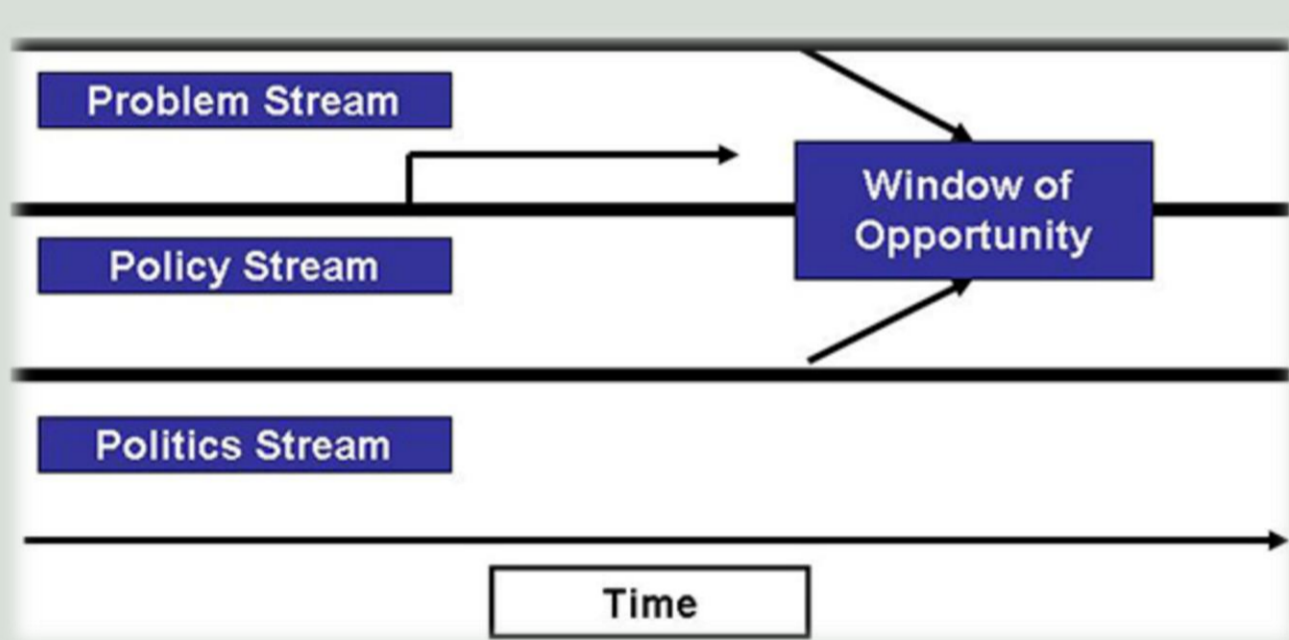- COVID-19 vaccination-related policy documents, media coverage, previous research evidence

Data analysis

- Thematic analysis of the qualitative data via NVivo 12
- Inductive and deductive coding were applied to generate themes

Theoretical framework

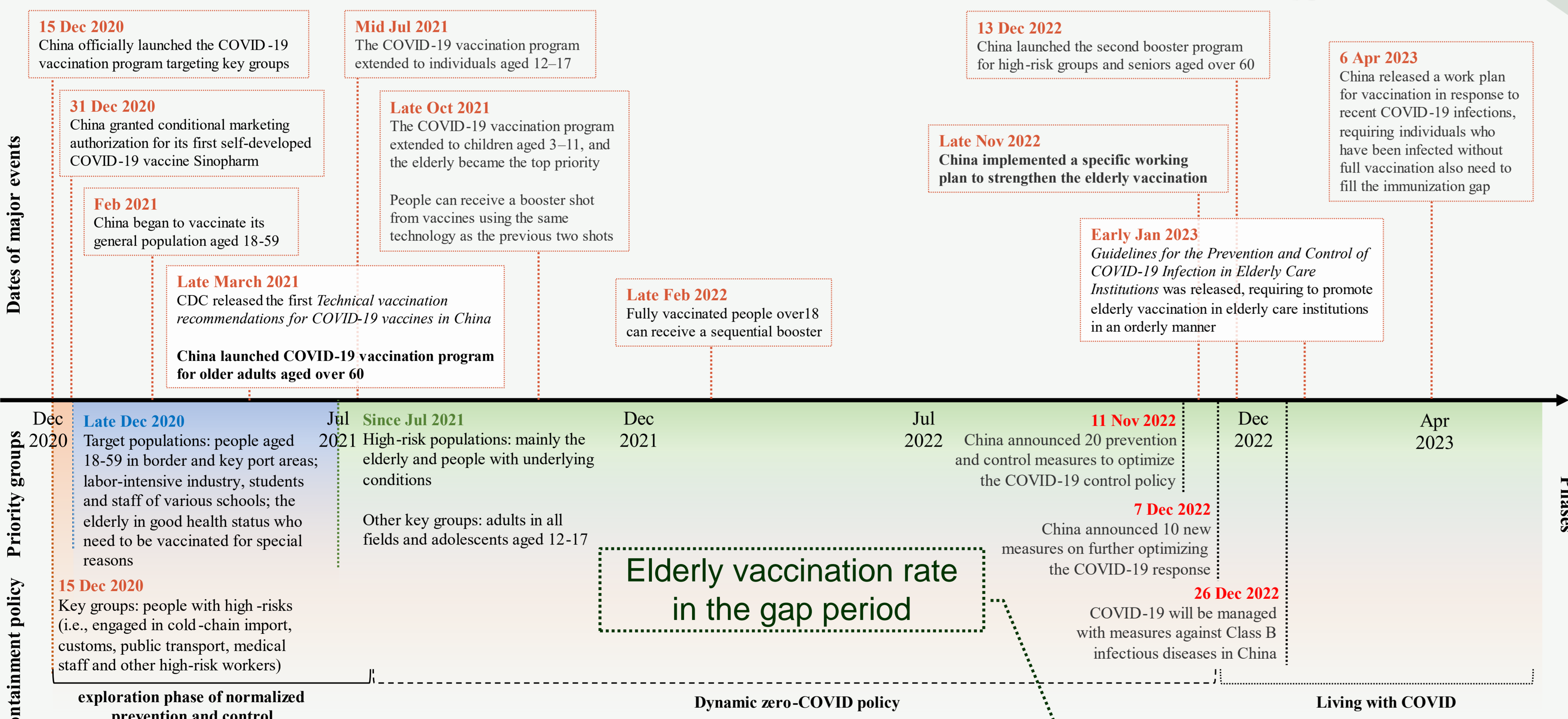- John Kingdon's Multiple Streams Framework

Problem Stream / Policy Stream / Politics Stream → Window of Opportunity → Time

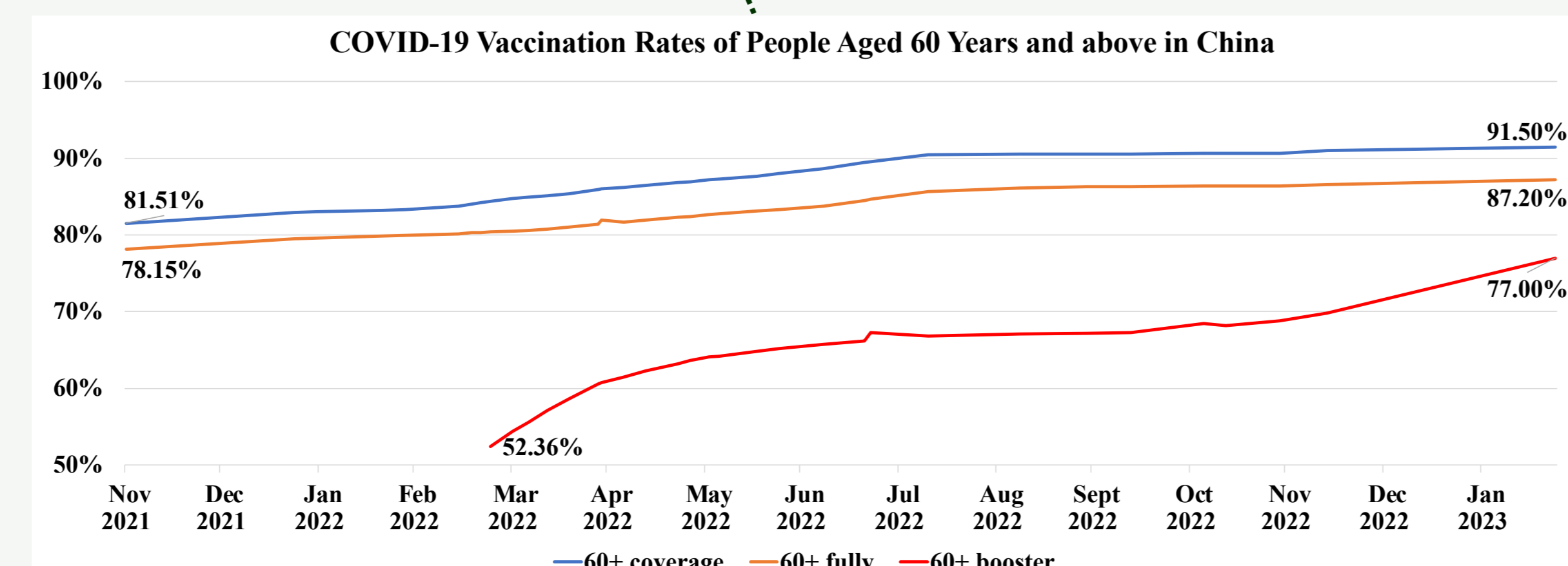| Themes	Codes	Descriptions
Vaccination strategy	Vaccination policy	Policy interpretations and implementations of COVID-19 vaccination policies, such as booster vaccination, sequential vaccination
	Vaccination promotion	Discourse related to vaccination promotion
Vaccination practice	Procedures and notes	Procedures and important notes of vaccination, such as precautions for the elderly, convenience channel for the elderly, observation time, etc.
	Local experiences	Experience sharing of cities/rural areas/nursing homes with good performance
	Problems	Problems occurred through the implementation process of vaccination program
Vaccine safety	Clinical evidence	Data evidence mentioned to support the general vaccination strategy
	AEFIs and Contraindications	Statements and descriptions of Adverse Event Following Immunization(AEFI) and contraindications

Problem is recognized with sufficient attention
Politics are amenable to change
Policy solution is feasible

✓ **Policy window** will open when the convergence of the three streams occur

1 Problem stream

❖ Priority setting

- Priority was given to key industry personnel and young people with high risks instead of the elderly

  "*large-scale vaccination for the elderly population aged 60 and above would only be conducted **after obtaining sufficient safety and efficacy data in clinical trials**"*

  (He Qinghua, first-level inspector of the NCDC, Mar 2021)

- A deontological approach to protect seniors with a good intention

  "*Adults over 18 are the main target groups for vaccination, as they are much more mobilized and can establish an **effective protective barrier for the elderly** and children at home*"

  (Wu Liangyou, deputy director of the NCDC, Apr 2021)

❖ Problem recognition

- The core of the zero-Covid policy is "*rapid elimination of outbreaks when cases are detected*"
- resources were thus poured into infection control, little was invested in getting people vaccinated at first

2 Political stream

- ❖ Ideologically-driven complacency towards vaccination
  - "Side effect" of satisfactory containment outcomes of the previous outbreaks
  - Use economic nudges instead of political coercive measures

- ❖ Discrepancy between central government intention and local implementations
  - Central government: "*informed, agreed, voluntary*" while setting rigid goals
  - Local authorities: simplistic and one-size-fits-all approaches to reach KPI

3 Policy stream

- ❖ Variation of information and over-emphasis on the risk for people with comorbidities
  - Early emphasis on the insufficient clinical data left bad first impression
    Clinical trials of vaccines did not obtain sufficient data on the safety and efficacy for the elderly
    (deputy director of the NHC, Mar 2021)
  - Broad and ambiguous statements of contraindications hampered the elderly

Guideline version	Eligible conditions (n)	Conditions could defer (n)	Ineligible conditions (n)	Other conditions (n)
1st: Apr 2021	29	5	5	14
2nd: May 2021	31	6	6	15
3rd: Sep 2021	33	8	9	15
4th: Jul 2022	33	8	9	14

- ❖ Inconsistency of vaccination policy content and not well-standardized vaccination practice
  - COVID-19 booster vaccination was started in Oct 2021:
    "*Better use the vaccines produced by the **initial** vaccine manufacturers or at least choose the vaccines of **the same technologies**"*
  - Sequential immunization was introduced in Feb 2022:
    "*Encourage **mixing different technologies** of vaccines to boost people's immune systems and reinforce herd immunity against the disease*"

- ❖ High reliance on digital management systems
  - Digital technologies largely overlooked the elderly

- ❖ Swift messaging shift in vaccination promotion on social media since Mar 2022

The Step-by-step Approach

Step 1-1: Key groups
Dec 2020 - Mar 2021
People with high-risks: cold-chain import, customs, public transport, medical staff, etc.

Step 1-2: Target groups
Dec 2020 - Jun 2021
People aged 18-59 in border and key port areas; labor-intensive industry, students and staff of various schools; the elderly in special situations

Step 2: High-risks groups
Since Jul 2021
Mainly the elderly and people with underlying conditions

Step 3-1: Other key groups
Since Jul 2021
Adults in all fields and adolescents aged 12-17

Step 3-2: Other key groups
Since Oct 2021
Children aged 3-11 and the elderly became the top priority

Strengthen Step 1: Older adults
Since Nov 2022
Implemented specific working plan to accelerate the vaccination of the elderly

Strengthen Step 2: High-risks groups & older adults
Since Dec 2022
The second booster program was launched

Wordcloud of JPCM press conferences
Subjects / Contents
工作 接种 疫情 情况 / 工作 接种 疫情 健康

Findings

Timeline of the major COVID-19 vaccination policies in China

Dates of major events

15 Dec 2020
China officially launched the COVID-19 vaccination program targeting key groups

31 Dec 2020
China granted conditional marketing authorization for its first self-developed COVID-19 vaccine Sinopharm

Feb 2021
China began to vaccinate its general population aged 18-59

Late March 2021
CDC released the first Technical recommendations for COVID-19 vaccines in China
China launched COVID-19 vaccination program for older adults aged over 60

Mid Jul 2021
The COVID-19 vaccination program extended to individuals aged 12–17

Late Oct 2021
The COVID-19 vaccination program extended to children aged 3–11, and the elderly became the top priority
People can receive a booster shot from vaccines using the same technology as the previous two shots

Late Feb 2022
Fully vaccinated people over18 can receive a sequential booster

13 Dec 2022
China launched the second booster program for high-risk groups and seniors aged over 60

Late Nov 2022
China implemented a specific working plan to strengthen the elderly vaccination

Early Jan 2023
Guidelines for the Prevention and Control of COVID-19 Infection in Elderly Care Institutions was released, requiring to promote elderly vaccination in elderly care institutions in an orderly manner

6 Apr 2023
China released a work plan for vaccination in response to recent COVID-19 infections, requiring individuals who have been infected without full vaccination also need to fill the immunization gap

Priority groups

Late Dec 2020
Target populations: people aged 18-59 in border and key port areas; labor-intensive industry, students and staff of various schools; the elderly in good health status who need to be vaccinated for special reasons

Since Jul 2021
High-risk populations: mainly the elderly and people with underlying conditions
Other key groups: adults in all fields and adolescents aged 12-17

11 Nov 2022
China announced 20 prevention and control measures to optimize the COVID-19 control policy

Containment policy

15 Dec 2020
Key groups: people with high -risks (i.e., engaged in cold-chain import, customs, public transport, medical staff and other high-risk workers)

7 Dec 2022
China announced 10 new measures on further optimizing the COVID-19 response

26 Dec 2022
COVID-19 will be managed with measures against Class B infectious diseases in China

exploration phase of normalized prevention and control — Dynamic zero-COVID policy — Living with COVID

Elderly vaccination rate in the gap period

Dec 2020 / Jul 2021 / Dec 2021 / Jul 2022 / Dec 2022 / Apr 2023

Phases

Policy review

- Policies that relate specifically to the elderly are **few**
- Trend of vaccination rates among the elderly remains **stable**

COVID-19 Vaccination Rates of People Aged 60 Years and above in China

81.51% ... 78.15% ... 52.36% ... 91.50% ... 87.20% ... 77.00%

Nov 2021 – Jan 2023
— 60+ coverage — 60+ fully — 60+ booster

Discussion

- ❖ The analysis implies that China has missed the best policy window to encourage the vaccination of the elderly due to poor convergence of the problem, policy and political streams.

❖ Problem stream
- **Attention allocation** and **decision timing** are critical in the multiple decision-making processes
- **Problem recognition** and **priority assessment** should allow flexible adjustment according to changes in the in the actual situation

❖ Political stream
- Be aware of **tension** and **flexibility** in policy interpretation and implementation between central and local authorities

❖ Policy stream
- Policy should be clearly disseminated to the public through **consistent messaging** to avoid distrust
- **Average benefits** of digital systems for a population can impose individual inconveniences on **vulnerable groups**
- Authoritarian governments are more likely to institute strict **censorship of major media** to control the information flow outreach to the public
- **Message framing** and shifting should be gently and gradually

Key References

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