

# Geographic Disparities in Access to Nationally Negotiated Anticancer Medicines in China

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## INTRODUCTION

- The national negotiation of medicine prices for medical insurance has significantly enhanced patient access to innovative medications through price reductions. This study aims to provide practical policy recommendations to balance the equitable access to innovative medicines and strengthen the strategic purchasing of medical insurance funds by offering quantitative data.

## METHODS

- This study utilizes national procurement data for all public medical institutions across 31 provinces in China. The focus is on 54 anticancer medicines negotiated into the medical insurance catalog in 2021. The study period spans from September 2019 to December 2022. We analyze the distribution, usage, and changes of these nationally negotiated anticancer medicines across provinces.

## RESULTS

Table 1 Availability of nationally negotiated anticancer medicines by geographical region, 2019–2022

	2019 (%)	2020 (%)	2021 (%)	2022 (%)	Absolute growth (%)	Compound annual growth rate (%)
Total	35.20	48.82	65.10	84.30	49.10	33.79
Eastern	42.13	56.57	72.49	95.48	53.35	31.42
Northern	38.24	53.77	72.65	94.81	56.57	35.43
Northeastern	37.81	52.21	67.54	89.09	51.28	33.14
Central	40.28	53.29	72.58	86.99	46.71	29.44
Northwestern	26.11	40.90	56.94	78.64	52.53	44.12
Southwestern	28.06	39.41	54.48	69.04	40.98	34.98
Southern	33.33	43.52	56.69	68.06	34.73	26.90
	(P<0.001)	(P<0.001)	(P=0.016)	(P<0.001)	(P<0.001)	(P<0.001)

## AVAILABILITY

- The average annual availability of nationally negotiated anticancer medicines rose from 35.2% in 2019 to 84.3% in 2022. In 2019, only Beijing, Shanghai, and Guangdong reported availability above 50.0%; by 2022, the provincial median availability reached 91.82%. (table 1, figure 1)

## INEQUALITY

- From 2019 to 2022, Lorenz curves converged toward the line of equality, indicating reduced inequality across HDI regions. Consistent with this, the CI declined from 0.07 in 2019 to 0.02 in 2022, reflecting a sustained narrowing of socioeconomic disparities. (figure 2)

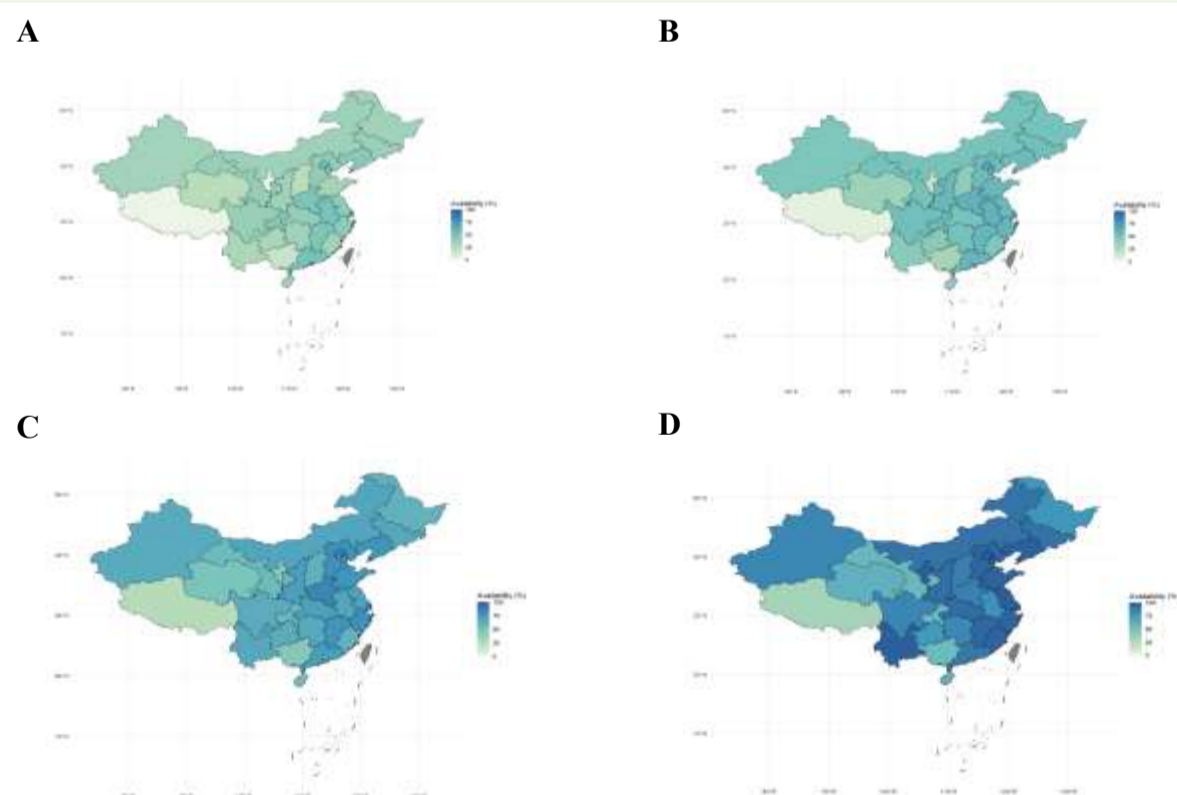


Figure 1 Availability of nationally negotiated anticancer medicines in 31 provinces, 2019–2022 (A-D).

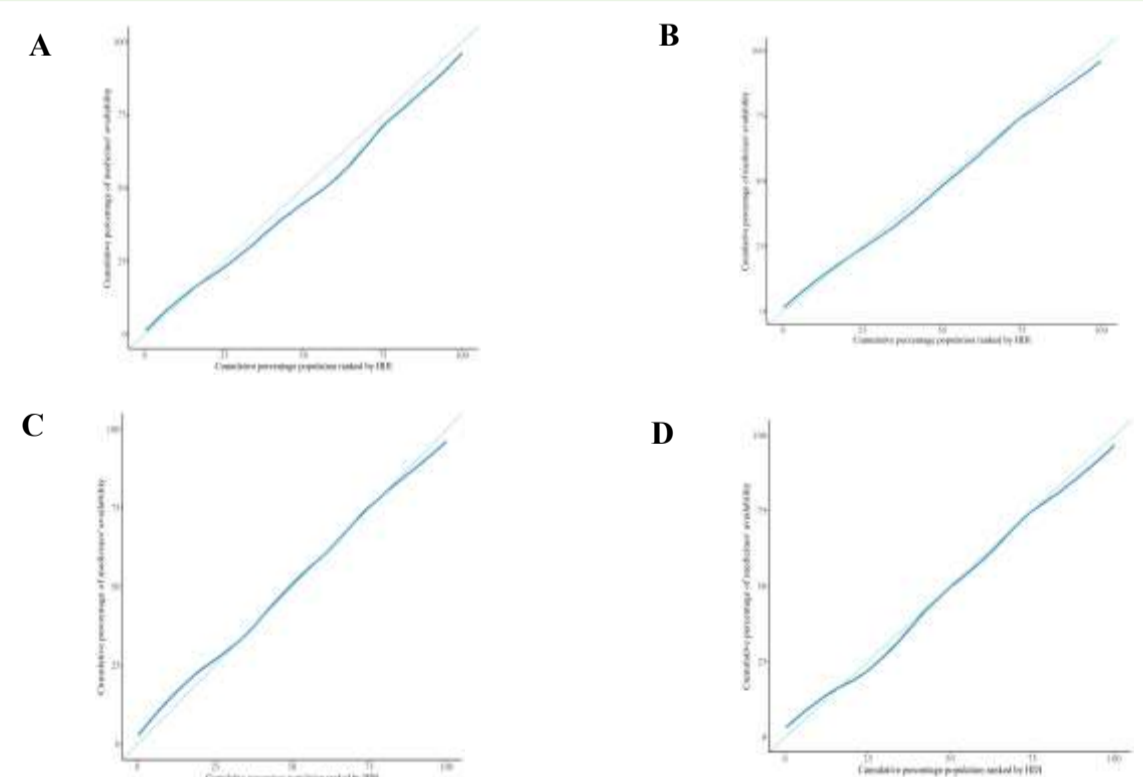


Figure 2 HDI-related inequalities of drug availability, , 2019–2022 (A-D).

## CONCLUSIONS

- With the systematic annual implementation of the NDPN policy in China, substantial progress has been achieved in improving the accessibility of nationally negotiated anticancer medicines.
- Regions with higher HDI, particularly those in eastern and northern China, demonstrated greater availability. Although considerable socioeconomic and geographical-related disparities in drug availability persist, the extent of inequality has shown a consistent downward trend over time.