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Transforming Healthcare Access: Empowering Chinese Patients through Generative AI across City Tiers and Age Groups

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Background

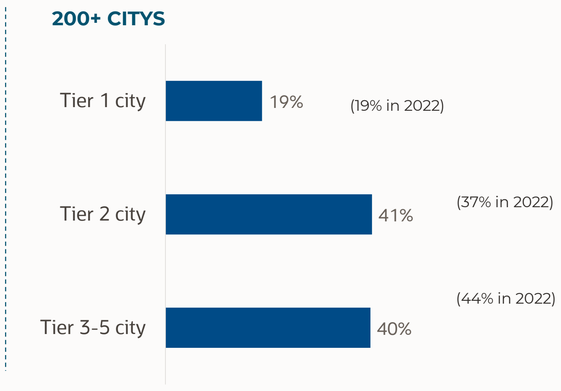
- China's healthcare landscape, characterized by its vast population and diverse demographics, presents unique challenges and opportunities in ensuring equitable access to medical information and services.
- In the era of modern medical technology, artificial intelligence (AI) technologies are expected to overcome the limitations of medical resources distribution with the aim of obtaining accessible high-quality healthcare.

Objective

This abstract highlighted the transformative role of generative AI in revolutionizing patient access to healthcare across different city tiers and age groups in China.

Methods

- This study utilized data from the 2023 update of the DLP survey, a long-term annual tracking survey developed by Cerner Enviza China since 2012. The survey collects response across 200+ cities in China.
- The patient component of the study involved analyzing responses from a diverse sample of 2,000 patients (diagnosed with respiratory conditions, cardiovascular malformations, diabetes, osteoporosis, autoimmune diseases, emotional or mental conditions, infectious diseases, or cancer) representing 200 cities.
- Descriptive statistics (distribution frequencies for categorical variables, means, standard deviations, medians, and ranges) were calculated for variables.



Results

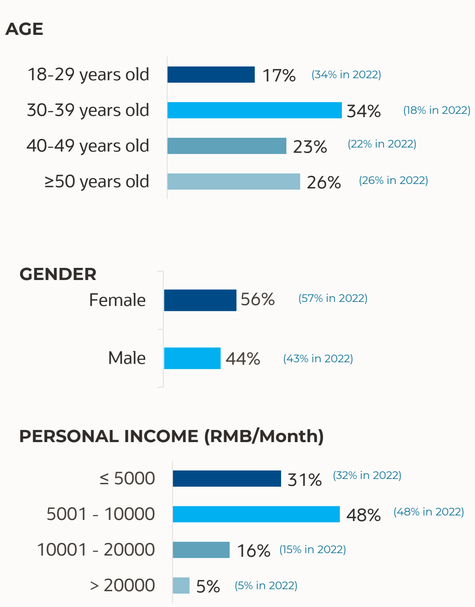
Respondents' characteristics

- A higher proportion of respondents were aged 30-39 years (34%), females (56%) and had a monthly income of 5001-10000 RMB (48%).

Distribution of conditions among the patients

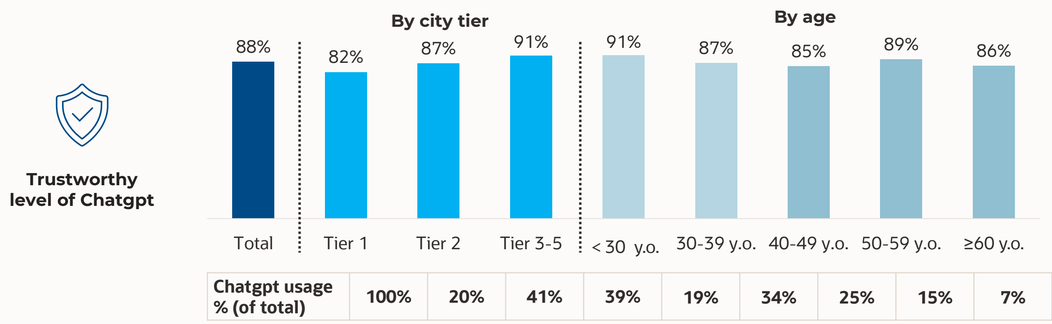
Disease		N	%
RESPIRATORY	Adult asthma 成人哮喘	255	12.8%
	Chronic obstructive pulmonary disease (COPD) 慢性阻塞性肺病	59	3.0%
Cardiovascular multimorbidity (CVM)	Angina 心绞痛	74	3.7%
	Hypertension 高血压	721	36.1%
	Hyperlipidemia 高血脂	444	22.2%
	Other CCVD 其他心脑血管疾病（含ASC、卒中等）	64	3.2%
DIABETES	Diabetes 糖尿病	347	17.4%
CHRONIC / MUSCULOSKELETAL	Osteoporosis 骨质疏松	195	9.8%
	Autoimmune diseases 自身免疫系统疾病	166	8.3%
EMOTIONAL OR MENTAL	Depression 抑郁	176	8.8%
	Anxiety 焦虑	291	14.6%
INFECTIOUS DISEASES	Hepatitis A, Hepatitis B, Hepatitis C 甲肝/乙肝/丙肝	111	5.6%
ONCOLOGY	Lung cancer 肺癌	103	5.25%
	Breast cancer 乳腺癌	53	2.7%
	Gastrointestinal tumors 消化道肿瘤	61	3.1%
	Ovarian cancer 卵巢癌	51	2.6%
	Hematologic tumor 血液肿瘤	55	2.8%
	Other tumors 其他肿瘤（含前列腺癌肝癌等）	26	1.3%

Respondents' profile



Most patient trust Chatgpt quite well, especially from lower city tiers and younger generation.

- 88% of patients exhibited high levels of trust in the information provided by generative AI



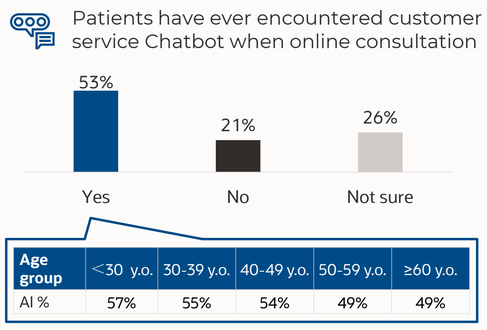
Chatgpt usage % (of total)	100%	20%	41%	39%	19%	34%	25%	15%	7%

Base: 2023 Digital Life Patient – those who used Chatgpt to obtain pharmaceutical related service or content 843 | Tier 1 167 | Tier 2 344 | Tier 3-5 332 | Age <30 163 | Age 30-39 287 | Age 40-49 210 | Age 50-59 128 | Age ≥60 55

Source: Q78c. 【针对Q78a勾选码1的被访者询问】针对您使用智能对话模型查询到的这些医学相关服务和内容，您认为可信度如何？(5-非常可信/可靠,4-有些可信/可靠,3-不确定,2-不太可信/可靠,1-完全不可信/不可靠)

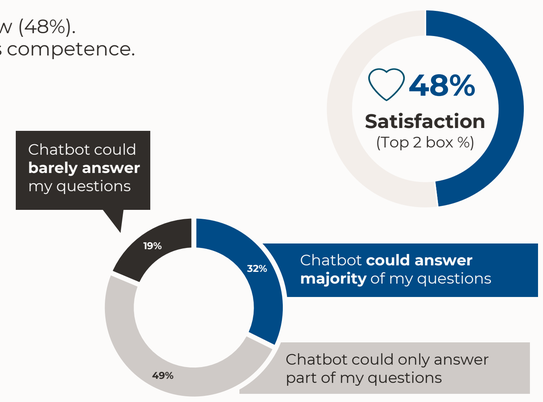
Over half of the patients (53%) had interacted with Chatbots during their online consultations, yet only 48% report being satisfied with the service

- However, patient satisfaction remained relatively low (48%).
- More than half were not satisfied with the Chatbot's competence.



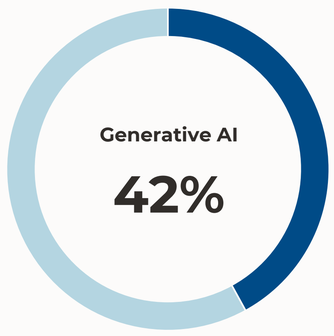
Age group	<30 y.o.	30-39 y.o.	40-49 y.o.	50-59 y.o.	≥60 y.o.
AI %	57%	55%	54%	49%	49%

Base: 2023 Digital Life Patient - Patient who use online consultation 1361



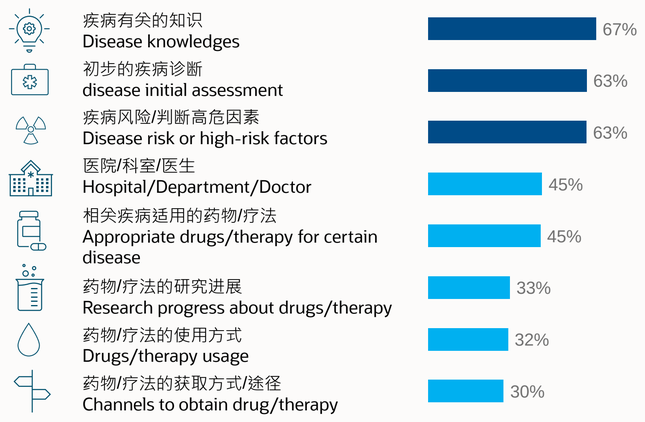
Forty-two percent of patients have leveraged generative AI to access medical information and services.

- Focusing on disease knowledge, disease initial assessment and evaluating disease risk or high-risk factors



of patients have ever used Generative AI to obtain medical related service or content

Base: 2023 Digital Life Patient - Total 2000



Source: Q78a 请问您是否使用过智能对话模型（chatgpt，如：文心一言、通义千问、悟道等）来获取医学相关服务和内容？
Q78b 使用智能对话模型是为了获取哪些方面的医学相关服务和内容？

Furthermore, 38% of patients prefer to switch to human customer service when they encounter issues with Chatbots

38%
patients changed to real people service from Chatbot

Base: 2023 Digital Life Patient – Patient who use online consultation 1361

47% of the patients lack experience with Chatbots, resulting in relatively lower expectations for their utility.

Conclusion

- These findings highlighted the potential and challenges associated with incorporating generative AI and Chatbots in healthcare interactions among Chinese patients.
- Addressing the Chatbots competence and enhancing patient satisfaction would be crucial in improving the overall patient experience and maximizing the benefits of AI-driven solutions in healthcare.

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