INTEGRATION OF ARTIFICIAL INTELLIGENCE IN REAL-WORLD CLINICAL PRACTICE AND EVIDENCE GENERATION: 2025 LANDSCAPE OF PHYSICIAN ADOPTION IN CHINA

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Background

As healthcare systems increasingly rely on digital health technologies to improve access, efficiency, and value, understanding how artificial intelligence (AI) is being applied in routine clinical practice has become increasingly important.

In China, physicians' digital engagement has expanded rapidly over the past decade, and AI is moving beyond experimentation into day-to-day clinical workflows.

The 2025 Digital Life Physician (DLP) study provides a timely opportunity to assess where AI is now being used most actively by physicians, particularly in patient management and real-world evidence generation.

Objective

To characterize the primary AI usage scenarios among Chinese physicians in 2025, with a specific focus on the shift toward AI-driven patient management and real-world data (RWD) utilization in daily clinical practice.

Methods

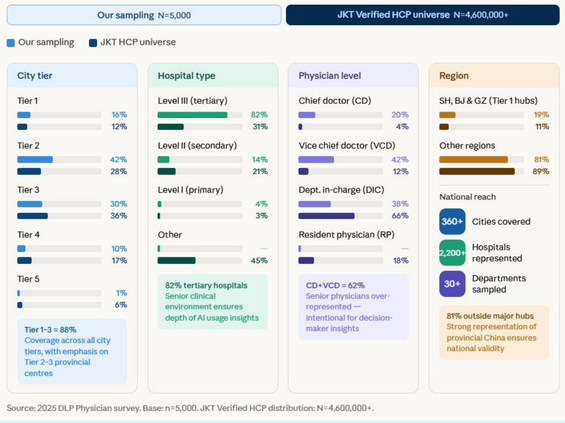
This cross-sectional analysis used data from the 2025 longitudinal Digital Life Physician (DLP) survey, a long-term annual research tracking physicians' digital behavior in China (Total sample 5,000 in 2025). The study population included 4,246 physicians across China who reported active use of AI tools.

Respondents were asked to prioritize their top two usage domains from four major AI application categories: Patient Management, RWD, Research, and Medical Imaging. Detailed functional usage within each domain was captured and analyzed descriptively to assess adoption patterns and depth of workflow integration

FIGURE 1

DLP 2025 sample distribution — broad geographic, institutional, and seniority coverage aligned with JKT verified HCP universe

Our sampling (n=5,000) vs. JKT verified HCP distribution (N=4,600,000+) | 2025 DLP survey



Source: 2025 DLP Physician survey. Base: n=5,000. JKT Verified HCP distribution: N=4,600,000+.

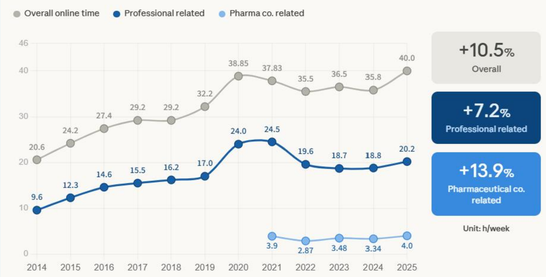
Results

In 2025, physicians' total weekly online time reached 40.0 hours — a 10.5% year-on-year increase — with professional-related time rebounding to 20.2 hours (+7.2%) and pharma co.-related time rising to 4.0 hours (+13.9%), collectively reflecting AI interaction as the key driver of renewed growth across all three dimensions of physician digital engagement

FIGURE 2

In 2025, physicians' internet time as overall, on professional related and on pharmaceutical co. related time has a clear raising trend thanks to AI interaction

Weekly online time (h/week) | 2014–2025



Unit: h/week

Base: 2025 DLP Physician - 4500 | 2024 DLP Physician - Total 4700 | 2023 DLP Physicians - Total 6000 | 2022 DLP Physicians - Total 6000 | 2021 DLP Physician – Total 6325 | 2020 DLP Physician – Total 5559 | 2019 DLP Physician - Total 10047 | 2018 DLP Physician - Total 10710 | 2017 DLP Physician - Total 10325 | 2016 DLP Web - Total 4750 | 2015 DLP - Total 4704 | 2014 DLP - Total 4763

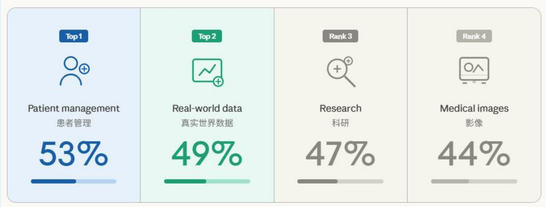
Source: A1a overall internet time; A2a professional-related time; A8_1a pharma co.-related time.

Among AI-using physicians, Patient Management (53%) and RWD utilization (49%) were the top two AI application scenarios, ahead of Research (47%) and Medical Imaging (44%).

FIGURE 3

Patient management and real-world data are the top 2 scenarios used with AI, followed by research and medical images

% of AI-using physicians selecting each domain as a top 2 usage scenario | 2025 DLP (Base: AI users n=4,246)



Base: 2025 DLP Physician — Those physicians who have ever used AI tools or service (n=4,246) | Source: G3【G1a≠99】有关AI+医疗，请选择2个您最常用AI+医疗的应用场景?

AI engagement spanned the full patient interaction continuum in 2025, with coverage exceeding 70% across all five stages — led jointly by self-exploration and diagnosis at 84%, confirming that AI has moved well beyond back-office use into direct clinical workflows.

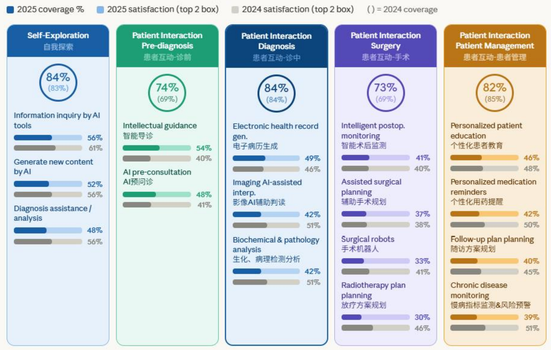
Pre-diagnosis adoption showed the strongest year-on-year growth (+5 percentage points to 74%), with satisfaction scores for intelligent guidance and AI pre-consultation also improving, suggesting that physicians are gaining confidence in AI-assisted triage and patient intake functions.

Patient management maintained broad coverage at 82%, with chronic disease monitoring, personalized education, and follow-up planning emerging as the most utilized functions — indicating that AI is increasingly embedded in longitudinal care pathways rather than limited to single-encounter decision support.

FIGURE 4

AI engagement is highest in pre-diagnosis and surgery — with pre-diagnosis satisfaction improving year-on-year

% physicians using AI per stage (coverage) and satisfaction top-2-box scores | 2025 DLP (Base: n=4,500; 2024: n=4,700)



In each stage: top bar = 2025 coverage %; bottom bar = satisfaction top-2-box score. ( ) = 2024 value.

Base: 2025 DLP Physician – Total 4,500 | 2024 DLP Physician – Total 4,700 | Source: G1a, G1b.

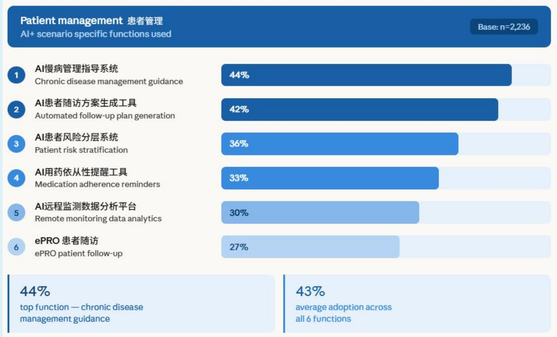
Within the patient management domain, AI chronic disease guidance (44%) and automated follow-up plan generation (42%) were the most widely adopted functions — reflecting physicians' prioritization of longitudinal care efficiency over point-of-care interventions.

Across all six patient management functions, average adoption reached 43%, with risk stratification (36%) and medication adherence reminders (33%) also showing meaningful uptake, indicating that AI is being applied across the full spectrum of patient management workflows rather than concentrated in a single use case

FIGURE 5

AI+ patient management — chronic disease guidance and follow-up plan generation lead function adoption

% of physicians who used AI + patient management selecting each function | 2025 DLP



Base: 2025 DLP Physician — Physicians who have ever used AI + patient management (n=2,236)

Source: G3.1a.【G3选到相应场景的人出示】请问目前您在AI+应用场景当中，使用过哪些AI功能？（可多选）

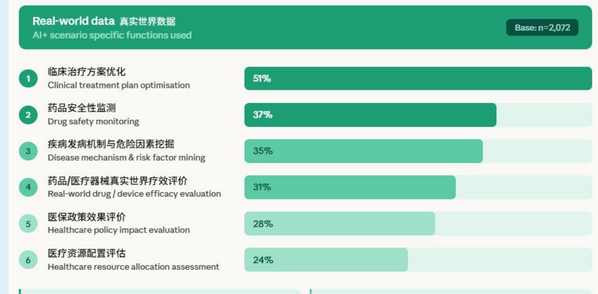
Within the real-world data domain, clinical treatment plan optimisation was the dominant function at 51% — more than double the lowest-ranked function — highlighting that physicians are primarily leveraging RWD-driven AI to directly improve point-of-care clinical decisions rather than for administrative or policy evaluation purposes.

Drug safety monitoring (37%) and disease mechanism mining (35%) ranked second and third respectively, together suggesting that AI-powered pharmacovigilance and disease intelligence are emerging as high-value RWD applications with direct implications for evidence generation and post-market surveillance.

FIGURE 6

AI+ real-world data — clinical treatment plan optimisation leads, with drug safety monitoring a strong second

% of physicians who used AI + RWD selecting each function | 2025 DLP



Base: 2025 DLP Physician — Physicians who have ever used AI + RWD (n=2,072)

Source: G3.1a.【G3选到相应场景的人出示】请问目前您在AI+应用场景当中，使用过哪些AI功能？（可多选）

Conclusions

Chinese physicians are actively transitioning AI from experimental use to practical integration in clinical workflows and evidence generation.

In patient management, chronic disease guidance (44%) and follow-up plan generation (42%) led adoption, confirming physicians' focus on longitudinal care efficiency across the full patient management spectrum.

In the RWD domain, clinical treatment plan optimisation dominated at 51%, while drug safety monitoring (37%) and disease mechanism mining (35%) signal emerging value in pharmacovigilance and evidence generation.

Together, these findings indicate that China's digital health ecosystem is maturing rapidly, with AI adoption increasingly oriented toward bridging the gap between clinical evidence and point-of-care decision-making.

Reference

1. Li A, Wang D, Zhou Y. Integration of Artificial Intelligence in Real-World Clinical Practice and Evidence Generation: 2025 Landscape of Physician Adoption in China.
2. 2025 Digital Life Physician supporting deck

Acknowledgement

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