



A Decade of Challenges from Standardized Residency Training: Urgent Reform Needed in China's Clinical Medical Undergraduate Internship Education

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Dear Editor-in-Chief

2025 witnesses the tenth anniversary of the integrated reform merging China's standardized residency training (SRT) with clinical medicine professional master's graduate education. This system, designed with the innovative "Four Certificates in One", has significantly advanced medical education. Over the past decade, more than 600,000 medical students have transitioned to clinical practice through this integration, improving the homogeneity of the medical workforce (1). However, a growing conflict has emerged between the SRT system and undergraduate clinical internship education, with significant redundancy in training content (e.g., basic physical exams, medical documentation, aseptic procedures). This inefficiency not only wastes time and resources but also highlights a systemic issue: the unclear positioning of undergraduate internships. Without timely reform,

this inefficiency could hinder the sustainable development of China's medical workforce.

China's physician training cycle (5 years of undergraduate study + 3 years of SRT/professional master's program + 2-4 years of specialty training) is considerably longer than international models, such as in the Japan and U.S., where the cycle is shorter by 2-3 years (2). This extended period adds to the economic and professional burnout faced by young doctors. Among Chinese physicians under 30, 45% are considering changing careers due to the long training period and delayed returns (3). The inefficiency between SRT and undergraduate internships contributes significantly to talent loss. Additionally, undergraduate internships are typically concentrated in top-tier hospitals, but around 60% of graduates enter primary healthcare institutions directly. These institutions report that new doctors struggle with managing common diseases



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such as hypertension and diabetes and need to re-adapt to primary care settings (4). Meanwhile, the specialization focus of SRT exacerbates the disconnect between education and actual demand in primary care.

To better align SRT with the needs of primary hospitals, urgent reform of undergraduate internship education is needed. The internship should be reduced from one year to 6 months, retaining core rotations in internal medicine, surgery, and emergency care, while eliminating redundant departments. Japan's 6-year medical program (including 2 years of clinical internship) demonstrates how early clinical exposure and strong fundamentals can be achieved, supported by simulation-based teaching and assessment (5). Key measures should include: Simulation teaching should account for at least 30% of training to improve skill efficiency using virtual simulations and standardized patients. Nationwide Objective Structured Clinical Examination (OSCE) assessments should ensure that only those who pass continue their clinical education. Moreover, undergraduate internships should shift from a broad rotation model to one focused on competency standards. The U.S. 4-year MD program, including 1 year of clinical internship, links to residency training and is guided by strict assessments (6, 7). A similar competency certification mechanism, where skills assessed through OSCE are credited during SRT, could reduce the overall training period by at least six months and drive improvements in internship education quality.

To enhance efficiency and quality, breaking the cycle of inefficiency between undergraduate internships and SRT is essential for transforming medical education in China and advancing the healthcare system.

Conflict of interest

The authors declare no conflict of interest.

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