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The Hidden Costs of Physician Attrition in Iran's Healthcare System

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Abstract

Physician attrition poses a growing threat to Iran's healthcare system, reducing workforce capacity and straining equity in service delivery. A retrospective cohort study of 430 medical graduates over ten years showed that only 20% remained in practice as general practitioners, while 9.3% migrated abroad, 8% left the profession, and over half pursued specialization. By 2018, nearly 33,000 physicians had ceased practicing nationwide, with shortages most pronounced in rural and underserved areas. The economic toll is substantial: training each GP costs $50,000–$100,000, while their annual contribution averages $20,000–$30,000. When physicians exit within five years, the combined direct and indirect losses reach $200,000–$300,000. These findings highlight urgent policy needs. Strengthening physician retention through dynamic workforce monitoring, targeted incentive programs, and long-term distribution strategies is essential to safeguard equitable access and ensure the sustainability of Iran's healthcare system.

Main text

In Iran, a silent crisis is unfolding within the healthcare system, one that could have far-reaching consequences for public health and access to care. The absence of a comprehensive and up-to-date database to track physicians means that policymakers operate in the dark, making decisions that could lead to inefficiencies, wasted resources, and increasing healthcare inequalities (1, 2).

A Disturbing Discovery

Our study revealed that out of the 86,300 registered general practitioners (GPs) in the Iranian Medical Council's database, approximately 33,000 physicians had ceased practicing medicine as of 2018 (1). These individuals, once integral to the healthcare system, have effectively vanished from the official radar, leaving a significant gap in care. The challenge is further compounded by a maldistribution of physicians, particularly in underserved rural areas where healthcare access is already limited.

Tracking the Medical Workforce

To shed light on this issue, we conducted a retrospective cohort study following 430 medical graduates over a decade. The findings were startling: only 20% remained in practice as GPs, while 9.3% had migrated abroad, 8% were not practicing, and 54% were pursuing specializations (3, 4). This trend underscores a critical question: where are all the physicians going?

The study revealed fluctuations in career paths beginning in the first year after graduation. Many graduates transitioned to non-healthcare jobs, faced unemployment, or chose to specialize in other medical fields. By the third year, half of these graduates had left general medicine altogether, with only a tenuous 24% remaining in practice long-term.

The Economic Fallout

The departure of physicians has significant economic implications. Direct costs associated with training a single general practitioner can range from **$50,000 to $100,000**. This includes tuition, equipment, and faculty salaries—an investment that is squandered when physicians leave the field (5, 6). Additionally, the costs of recruiting and training replacements add further financial strain on an already burdened healthcare system.

Indirectly, each GP generates an average annual revenue of **$20,000 to $30,000**. The loss of these professionals not only diminishes system productivity but also exacerbates healthcare inequalities, particularly in underserved communities (5, 7). The social costs are equally alarming, as reduced access to care can lead to increased mortality rates and diminished quality of life.

A Stark Estimate

If a physician exits the system after five years, the total costs—both direct and indirect—can soar to between **$200,000 and $300,000**. This staggering figure encapsulates the educational investments lost, the revenue forgone, and the replacement costs incurred.

A Call to Action

This study sheds light on the dynamics of Iran's healthcare workforce, revealing trends that could be indicative of broader global issues. Unfortunately, the complexities of healthcare human resource planning are often overlooked. Policymakers must address the root causes of physician attrition to avoid further damaging the healthcare system.

To combat these challenges, several strategies are essential:

- **Dynamic Databases**: Establishing a comprehensive database to monitor physician career paths and reasons for attrition is critical (8).
- **Incentive Programs**: Implementing both financial and non-financial incentives to retain physicians, especially in remote areas, can help stabilize the workforce (9).
- **Long-Term Strategies**: Developing sustainable plans to improve the distribution of healthcare workers is vital for ensuring equitable access to care (10).

By understanding and addressing these dynamic factors, policymakers can create more effective strategies that ensure a robust healthcare system capable of meeting the needs of all Iranians. The time for action is now—before the healthcare crisis deepens further.

Declarations

- Ethics approval and consent to participate

  The ethical committee at Kurdistan University of Medical Sciences reviewed and approved the study's methodology and ethical considerations, assigning it the approval number IR.MUK.REC.1402.225.

- Consent for publication

  NA

- Availability of data and materials

  The data that support the findings of this study are available from the corresponding author (Azad Shokri) upon reasonable request.

- Competing interests

  The authors declare that they have no conflicts interests.

- Funding

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- Authors' contributions

  NA

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