

Review

Dental Market characteristics and dental workforce needs

From an economic standpoint, the health service market operates as a platform where buyers and sellers engage in transactions facilitated by market mechanisms, potentially resulting in the exchange of healthcare services (Folland et al., 1993). In this context, demand primarily emanates from patients, while supply is largely provided by healthcare practitioners.

A seminal work on the demand for health services, authored by Grossman (1972), posits that individuals seek health improvement or maintenance, rather than healthcare services per se. Thus, it can be argued that healthcare does not conform strictly to the conventional definition of a “good” – an entity or service with tangible value traded at a non-negative price in the market. Instead, the demand for healthcare is rooted in the pursuit of enhanced health outcomes.

In enhancing consumer utility, both health improvement and maintenance hold inherent value (Feldstein, 1999). This perspective underscores the nuanced nature of healthcare economics, wherein the exchange of services is intricately tied to broader health objectives rather than solely driven by the exchange of goods.

In the literature, the issue of whether healthcare providers, particularly doctors, serve as perfect agents for their patients or engage in demand inducement has been a focal point. Demand inducement refers to the encouragement of patients to consume services that may not necessarily yield health benefits. Such practices result in an inefficient allocation of healthcare resources when services offer little or no health gains to patients.

Sintonen (2000) outlined distinctive characteristics specific to dental care that differentiate it from

1. Dental diseases: Dental care addresses a narrower spectrum of conditions compared to general health services.
2. Predictability of occurrence and diagnosis: Dental diseases often exhibit more predictable patterns and are easier to diagnose.
3. Complexity and invasiveness: Dental conditions tend to be less complex and invasive.
4. Diagnostic tools: Many dental diseases can be diagnosed using simple tools like X-rays, facilitating quicker assessments.
5. Treatment options: Dental care often provides multiple treatment options for a single issue, offering flexibility for patients.
6. Recurrence of treatments: Patients frequently undergo recurring dental treatments, enabling assessment based on past experiences.
7. Preventive procedures: Dental preventive measures are straightforward and easily integrated into daily routines.

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8. Effectiveness of preventive measures: Dental preventive measures are highly effective in controlling disease progression.
9. non-communicable nature: Most dental diseases are not contagious.
10. Severity of consequences: Untreated dental conditions typically have less severe consequences compared to general health conditions.
11. Life-threatening risks: Dental diseases generally do not pose immediate life-threatening risks.
- 12 Treatment urgency: Dental conditions often do not require immediate intervention, allowing patient flexibility in selecting providers and treatment timing.

The impact of dental disease on quality of life is less profound compared to general diseases, leading to less intuitive consideration of quality-of-life dimensions in dental care. Consequently, market mechanisms are expected to function more efficiently in dental care compared to general healthcare (McDermott, 2003). Thus, market characteristics must be carefully considered when determining dental manpower requirements, particularly in the private sector.

Determining the appropriate number of dental surgeons for a country often hinges on assessing the population-to-dental-surgeon ratio. For instance, one might argue that a country like Sri Lanka, with a population of approximately 22 million, should aim for a similar number of dental surgeons as countries such as Niger and Australia, both boasting populations close to 25 million.

However, such a simplistic comparison overlooks critical factors such as the size of the economy and the extent of land. These variables significantly influence the healthcare needs of each country and, consequently, the requisite number of dental surgeons. For instance, while population size provides a basic framework for estimating demand, the economic prosperity and geographic dispersion of a nation can greatly impact the distribution and accessibility of healthcare services, including dental care.

Therefore, a nuanced approach is essential, one that considers not only population size but also economic capacity and geographic factors, to accurately determine the optimal number of dental surgeons needed to meet the diverse healthcare needs of a given country.

Country	Population	GDP (USD)	Per capita GDP (USD)	Square Area (sq. km)	Total number of Dental Surgeons*
Sri Lanka	22 million	84 billion	3,815	65,610	2,050
Niger	25 million	15 billion	594	1.26 million	18
Australia	25 million	1.54 trillion	59,934	7.6 million	14,620

**WHO Oral Health Country Profile - Australia and Sri Lanka data for 2022 and Niger for 2016*

As elucidated above, the determination of the appropriate number of dental surgeons to be trained necessitates a comprehensive consideration of various factors, including the nature of dental care as predominantly outpatient and non-life-threatening, alongside the influence of economic growth on the private sector dental care market, which exhibits a high price elasticity of demand.

Hence, the decision-making process should be guided by principles of economic efficiency, encompassing technical, cost-effective, and allocative perspectives, as well as an assessment of employment opportunities within the dental profession within the context of the country's socioeconomic landscape.

It is widely acknowledged that the optimal number of dental surgeons to train is contingent upon multiple determinants, including population size and distribution, economic dimensions such as the size of the economy and fiscal capacity, healthcare system structure and financing mechanisms, market characteristics, and the geographical expanse of the nation (De Silva, 2023).

The phenomenon of oversupply of dental surgeons observed in certain countries has led to adverse outcomes such as unemployment and underemployment, thereby diminishing living standards and professional recognition. This circumstance can exacerbate supplier-induced demand within the private sector. To mitigate these challenges, it is imperative for dental professional bodies and regulatory authorities to conduct thorough assessments of market dynamics. Subsequently, strategies must be devised to regulate the establishment of new dental colleges and implement policies aimed at aligning workforce supply with demand. Such measures are essential to foster a sustainable and flourishing dental profession while upholding standards of quality patient care.

References

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