



## Is Dentistry in Crisis? An Online Survey of Iranian Dentists' Attitudes toward La Cascada Declaration

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### ABSTRACT

In August 2017, six international senior dental researchers published a critical declaration called 'La Cascada; Dentistry in Crisis: Time to Change'. This statement outlined major concerns with the current trajectory of the dental profession and proposed recommendations for change. This study piloted an online survey among an exploratory convenience sample of 138 Iranian dentists, ensuring a suitable gender mix and a representative mix of generalists and specialists. The questionnaire included two main questions about the respondents' agreement with the declaration and some of the recommendations. The majority (72.2%) of the 138 participants expressed agreement with the messages of the La Cascada Declaration by selecting 4 or 5 on a 5-point Likert scale. However, there was not a strong consensus among participants regarding all six selected recommendations. In conclusion, it appears that groups of dentists agree that the dental profession is facing a crisis. However, the profession has not yet reached a consensus on solutions.

**Keywords:** Dentistry; Global Health; Expression of Concern

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### INTRODUCTION

*"We are concerned that the dental profession, worldwide, has lost its way."*

This is the gripping opening line of a text called the La Cascada Declaration (CD) [1], penned by six distinguished scientists. It presents a radically critical approach towards the profession of dentistry. This Declaration was published ahead of the Lancet oral health series, which similarly called for radical action regarding global oral health policy and the role of the dental profession in it [2,3]. The first half of the CD identifies the main problems perceived with the dental profession. The authors' major concern, that "the current state of dentistry worldwide is dire," can be broken down into fifteen critical statements, as follows:

- Trends of oral disease: Oral diseases continue to cause pain, infections, tooth loss, and significant distress for a large number of individuals.
- Inequality: Disparities in oral health, both among and within countries, have become a significant concern.

- Impact: Clinical interventions contribute only marginally to the overall enhancement of oral health in populations.
- Shifting from public sector to the private: Worldwide austerity policies have shifted social and welfare spending from the public to the private sector, resulting in a two-tier health service. This system caters to the affluent with higher quality care, while the majority experiences a more limited and often lower-quality health service.
- Financial interests: The provision of dental services is increasingly taken over by corporations and insurance companies, leading to a tendency for the delivery of unnecessary and at times unsuitable treatments.
- Research: As public funding for universities diminishes, there is a growing reliance on industry for research funding, distorting both research priorities and clinical practices.
- Sugar: The consumption of refined carbohydrates and free sugars is promoted and advertised by major food and beverage companies.

- **Education:** The dental profession is over-educated for much of the care needed by the majority of the population, and undereducated to provide basic preventive care and health promotion.
- **Overproduction:** In numerous countries, there is an excess of dentists, a majority of whom exclusively practice in major urban centers.
- **Effectiveness:** Traditional treatment approaches for tooth decay, such as drilling and filling, and gum diseases (e.g., scaling and polishing) often fail to halt or manage their progression alone.
- **Payment:** Dentists are compensated based on the volume of procedures conducted, rather than for promoting overall health.
- **Soft-tissue diseases:** The profession pays inadequate attention to cancers of the mouth and throat and other serious mucosal diseases.
- **Cycle of repair:** Dentists play a significant role in tooth loss due to the recurring cycle of repair mentioned earlier.
- **Specialization:** The concerning proliferation of specialization within the dental profession has inclined to stimulate desires among the public, resulting in excessive and inappropriate treatments, and has turned many dentists into ‘cosmeticians’.
- **Non-holistic:** Oral health care has become distinct from mainstream medical practices. The second part of the CD suggested some solutions to the above-mentioned problems. These, mostly reforms in the oral health system, might be considered radical, feasible, or realistic to different extents. To examine how much dentists might find these suggestions

acceptable, we have conducted this survey among a group of Iranian dentists.

**Description of The Study**

This was a web-based, questionnaire-based survey conducted among a non-probability, exploratory sample of 138 Iranian dentists, of which 69 (50%) were female and 63.8% were general dentists. The proposal received approval from the local Institutional Review Board in 2018 (ethics code: IR.MUMS.DENTISTRY.REC.1399.115). The questionnaire, developed in Farsi, was based on the thematic analysis of the CD and validated through discussion and consensus among an expert panel of six dental specialists. The Farsi translation of the CD and the questionnaire were uploaded to Google Docs and disseminated through dentist-specific channels on various social networks.

The questionnaire contained two main questions:

1. “Altogether, to what extent do you agree with La Cascada Declaration?” In response to this, 72.2% of respondents marked 4 or 5 on a 5-point Likert scale, where 5 represented strong agreement. There was a statistically significant difference in the level of overall agreement with the declaration among respondent groups with different degrees (p-value=.008), with general dentists showing less agreement than specialists and dentists with PhDs. No significant difference was observed between genders.
2. The second part consisted of a series of checkboxes asking if respondents agreed with each of the six randomly sorted solutions proposed by the Declaration (Table 1).

**Table 1:** The percentage of respondents who agreed to each suggested solution of the La Cascada Declaration

Rank	Suggested solution	Percentage of respondents who agreed to the solution
1	Requiring industries whose products are harmful to health, especially producers of free sugars in foods, drinks, and producers of foods containing refined carbohydrates, to label their products as harmful	105 (76.1%)
2-3	Reducing the number of dental students	93 (67.4%)
2-3	Changing reimbursement method for dentists (Dentists need to be rewarded for maintaining health rather than for carrying out procedures)	93 (67.4%)
4	Closing some of the existing dental schools	84 (60.9%)
5	The growth of specializations within dentistry should be limited	66 (47.8%)
6	Dentistry should become a specialty of medicine	46 (33.3%)

## DISCUSSION

The survey revealed a high level of agreement among an exploratory non-representative sample of Iranian dentists with the overall critical message of the La Cascada Declaration. The majority of respondents either relatively or strongly agreed with the concerns mentioned in the CD. However, the findings demonstrate that there is no clear consensus over the solutions suggested through the CD. For instance, while almost 4 out of 5 respondents agreed with mandatory labeling of sugary products, nearly two-thirds of participants did not agree with redefining dentistry as a specialization of medicine. The varying levels of agreement with the listed solutions might be partially explained by the extent to which the burden of action would be shifted onto the dental profession. Moreover, the solutions that seem to limit the scope of dentistry, either by considering it as a subcategory of medical specialties or by limiting the extent of specialization within the dental profession, were least favorable among the list of suggested strategies.

The top-ranked suggested solution was improved labeling of sugary products, such as sugar-sweetened beverages. This new insight provided by behavioral economists is one of the possible upstream policies to enable consumers to make informed choices and reduce consumption of free sugars [4]. The dental profession could provide a powerful and distinctive voice in tackling overconsumption of free sugar as a major global public health priority. This voice could contribute significantly to the systematic and coherent sugar reduction strategy [5] required to achieve desirable goals, such as the WHO recommendations for reducing free-sugar consumption to less than ten percent of total energy intake [6].

One of the second top solutions concerned changing the currently dominant treatment-incentivizing system, i.e., fee-for-service [7], to methods that would encourage health promotion. While fee-for-service payment is expected to increase the risk of overtreatment and overdiagnosis [8], other payment methods such as capitation and salary impose risks of undertreatment. It has been shown that a capitation system decreases restorative treatment and a focus on prevention might

lead to decreased caries incidence [9]. Value-based purchasing systems, such as pay for performance, are alternative incentivizing methods, but these need considerably more research before they can be recommended [10]. More than 60 percent of the participants agreed with two suggestions relevant to controlling the increasing number of dental students and dental schools. Both the upward trend of dentist-to-population ratios and the number of dental schools are seen in high and middle-income countries such as the USA [11] and Iran [12]. The resulting oversupply of dentists might be harmful not only on the supply side by rising unemployment amongst dentists, but also on public health by the possible risk of overtreatment.

Less than half of our sample were in favor of limiting the growth of specialization in dentistry, concerning the mismatch between the basic oral health needs of populations and the expansion of costly specialized services in dentistry [3,13]. Nevertheless, another half of our sample were not pessimistic about the specialization trend of dentistry worldwide. They seemingly favor the high-tech quality care provided by dental specialists more than a structure which addresses the total health and welfare of populations. However, it is argued that many, if not most, of the oral health needs of societies could be well addressed by primary oral health care, rather than expensive specialized dental services [14].

A majority of participants disagreed with redefining dentistry as a specialty of medicine. It appears that the advocacy for integrating dental education into medical education and recognizing dentistry as a specialty in medicine [15] has not yet been embraced among dentists. A higher level of concern among specialist dentists than the general ones about the current mainstream dentistry might be attributed to their different level of observations or their critical attitude toward the dental profession. The main limitations of this study are the modest sample size and the fact that respondents were self-selected. However, the findings of this limited survey might reflect a growing concern within dental professionals about the current mainstream approach of the dental profession. Our intention was to keep the questionnaire

short to encourage compliance. Such data, however, would be important for any further work.

In conclusion, there are important messages from this limited sample of Iranian dentists: most agree that “dentistry is in crisis. Things must change”. On the other hand, there is disagreement regarding suggested solutions. Clearly, the dental profession needs to engage in profound discussions both within and outside the profession itself to overcome the current critical situation.

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#### CONFLICT OF INTEREST STATEMENT

None declared.

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