

1 Introduction

1 Why we need to develop Vision of Dental Care now?

1) Changing times and main challenges

We live in a time of great change.

Japan saw a surge in dental caries beginning approximately in 1955, leading some to refer this period the “Dental Caries Flood.” But subsequent caries-prevention initiatives by the concerted efforts of family dentists and others in the dental society, coupled with improved school dental health programs, greatly reduced the number of dental caries in 12-year-olds, which fell from 4.09 to 0.70 over the past 25-year period specifically from 1993 to 2019 alone (Chart 1).

Another driver of better dental health has been the 8020 (Hachimaru Niimaru) Campaign undertaken over 30 years by the Japan Dental Association in cooperation with the members of dental associations nationwide, governments, and citizens with the goal of helping people keep at least 20 of their teeth at age 80 so that they can enjoy eating throughout their lives. Fewer than 10% of 80-year-olds had at least 20 teeth when the 8020 Campaign was launched, but by 2016 the proportion had increased to 1 in 2 people (Chart 2).

Thanks to the efforts of the dental society as a whole, Japanese dental care saw great achievements in promoting dental and oral health, in terms of both treatment and prevention.

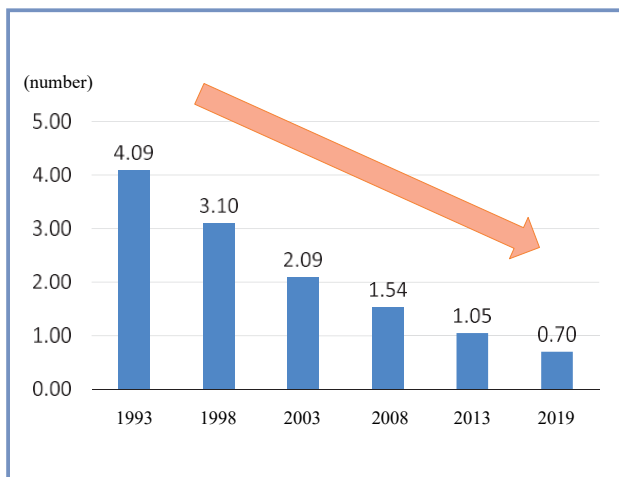


Chart 1 Changes of average per capita number of permanent tooth caries in 12-year-olds

Source: Japan Dental Association Research Institute with data from School Health Statistics Survey (by Ministry of Education, Culture, Sports, Science and Technology)

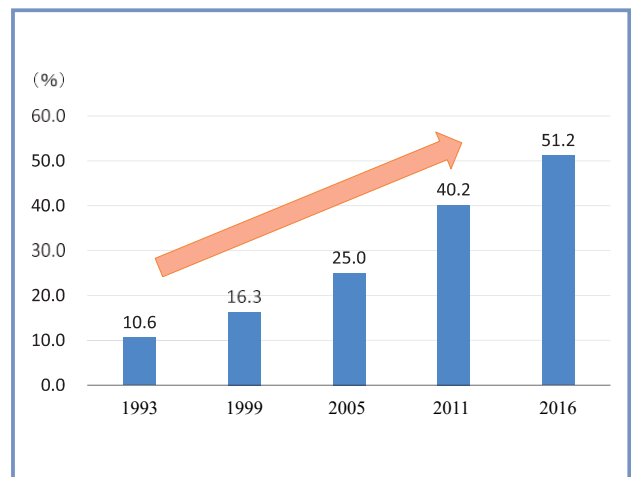


Chart 2 Changes of 80-year-olds with at least 20 teeth

Japan Dental Association Research Institute with data from National Survey of Dental Disease (by Ministry of Health, Labour and Welfare)

On the other hand, the environment surrounding dental care has changed remarkably with advances in dental technology and changes in the disease profile of the population due to ageing and financial pressure on the medical insurance system attributable to rapid ageing of the population and decline in births. Obviously, the people’s needs to the dental care has greatly evolved with these changes. Looking forward 20 years from now

reveals big new challenges including a significant increase in the elderly population as well as a declining population and an associated decrease in workers and supporters.

When these social changes and evolving needs are considered, an array of challenges for dentistry emerges. The Vision of Dental Care Towards 2040 Review Committee and others vigorously discussed these challenges. These discussions emerged the key issues of adapting as society ageing, increasing the quality and enhancing the functionality of dental care, and addressing new technologies. Based on the discussion so far, we would like to share the priority issues to be addressed in particular in the future and make a concerted effort by the dental society, led by the Japan Dental Association. This Vision will serve as guidance for these efforts.

2) Responses to date

In recent years, the dental community has actively responded to these changes in the environment surrounding dentistry. This must first be recognized. The dental society has come together over more than 15 years to repeatedly debate how dental care should evolve considering Japan's super-ageing society. We have collected and analyzed the results of many surveys and other data, and based on them, we have disseminated with evidence that "oral health is closely related to systemic health" and that "the enhancement of dental care and promotion of oral health care contribute significantly to the financial aspects of healthcare and the extension of healthy life expectancy." The advocacy by the dental society have fostered an understanding of the importance of dental care and oral health care among the public. Moreover, the new shape of dental care sought by the dental community is gradually reflected in national policy. Specifically, the importance of dental care and oral health management has been listed with increasing information in the Basic Policies for Economic and Fiscal Management and Reform, as a key policy for budgeting by the national government, and the function of Dental and Oral Health Promotion Office in the Ministry of Health, Labour and Welfare has been strengthened and steady effects are being seen.

* In contrast to "oral rehabilitation and functional care," in which the dental profession is primarily involved, we defined "oral health care" as a broad concept encompassing "oral hygiene care" and "oral care," which other professions also have their roles (Chart 3).

3) Future responses and determinations

In the future, it will be necessary to respond to the expectations placed on the dental society, declare the new responsibilities that dentistry should assume, and develop them into concrete actions in the community. From this perspective, the Japan Dental Association worked to reconcile previous discussions and actions and identify upcoming challenges including the challenge of a decreasing population, ultimately creating this new Vision of Dental Care toward 2040.

Our aims in authoring *Vision of Dental Care Toward 2040: Dentistry in the Reiwa Era* were to present the expected shape of society in 2040, specify new roles and responsibilities of dentistry in that entire society, and make actions to enrich future dental care and oral health care specifically, generally, and comprehensively.

In building this vision, we assembled a review committee that included external advisors to have multilateral discussions. Advisors from outside the dental society presented opinions on what will be desired dental care in Japan's super-ageing society. We have discussed the nature of medical collaboration within the community from a multifaceted perspective, asking for opinions from a variety of medical-related professions, etc.

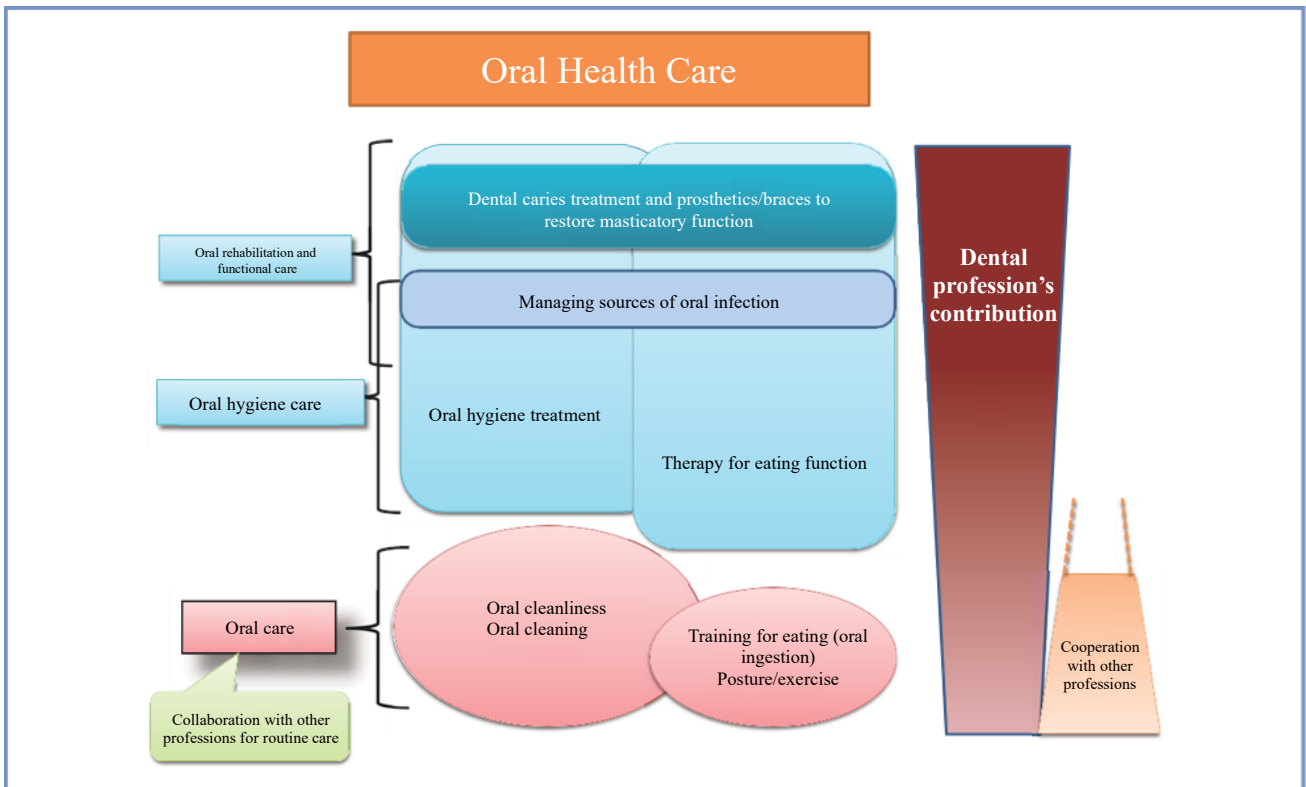


Chart 3 Oral health care

Source: Kaoru Sakurai: Progress by the Oral Care Review Committee and Future Prospects. Journal of Japan Dental Association. 69(4). 286-287. 2016. Masahito Sumitomo: A New Concept of 'Oral Care' as proposed by Japanese Association for Dental Science. The Nippon Dental Review. 877, 10-11. 2015.

The committee concluded that in a society of longevity, people should not only aim to live longer, but also to fulfill the basic functions of daily life, such as eating, speaking, and laughing, until the end of life, and that dental care and oral health care must be improved to realize a society of health and longevity with smiles. Based on this high philosophy and social mission, the Vision embodies the challenges and responses.

The Japan Dental Association is committed to advocate for government policies for the people and work with the people to spark action at a regional level in line with this new vision for dentistry.

2 Particular focus challenges

Challenges to be addressed and actions to be taken are discussed in detail in the following chapters. The challenges that should be considered focus issues are summarized in this section. This is an important matter that should guide the future activities of the dental society, as well as an important matter that should be understood by and proceed together with the public.

1) Enhancement of dental care and securing adequate financial resources.....

Looking at the size of Japan’s healthcare expenditures, it can be seen that they are still relatively lower than in western countries, given the ageing of the population, although they are increasing in all major countries as the population ages. The proportion of these expenditures directed toward dental care, moreover, is declining substantially. These low levels mean that the profession may not be sufficiently providing dental care services at the level expected by the public (Chart 4 and Chart 5).

Although a look at Japan’s overall social security system reveals that expenditures have grown with the ageing population, enhancements to accommodate ageing, and an increasing level of healthcare, overall financial resources remain insufficient, and the situation continues to be described as a “welfare state in which benefits are paid in advance.” While the financial structure of medical care consists of taxes, insurance premiums, and patient co-payments, the consumption tax, one of the main financial resources, has just been raised to 10% in 2019, and needs are expected to grow even more in the future. Financial resources must be secured for all areas to meet the expectations of the public.

In order to bring the current state of dental care in Japan, which is not at an adequate level even at present, up to a level that can meet the needs of the public, it is necessary to strive to improve dental care and secure adequate financial resources, with further gaining public understanding. The Japan Dental Association is committed to actively participate in discussions to further enhancing and strengthening of social security

2) Enhancement of dental care services for patients and support to improve patient QOL……

As mentioned above, the dental profession accomplished much during the “Dental Caries Flood” period when it confronted this public challenge with its full might. However, the current low level of dental care costs is due to the subsequent decline in dental caries and the failure to secure the necessary financial resources to “ensure treatment time and treatment systems for detailed patient care” and “shift to dental care that is attuned to the life and lifestyle of each patient,” and to achieve a reputation for high quality dental care.

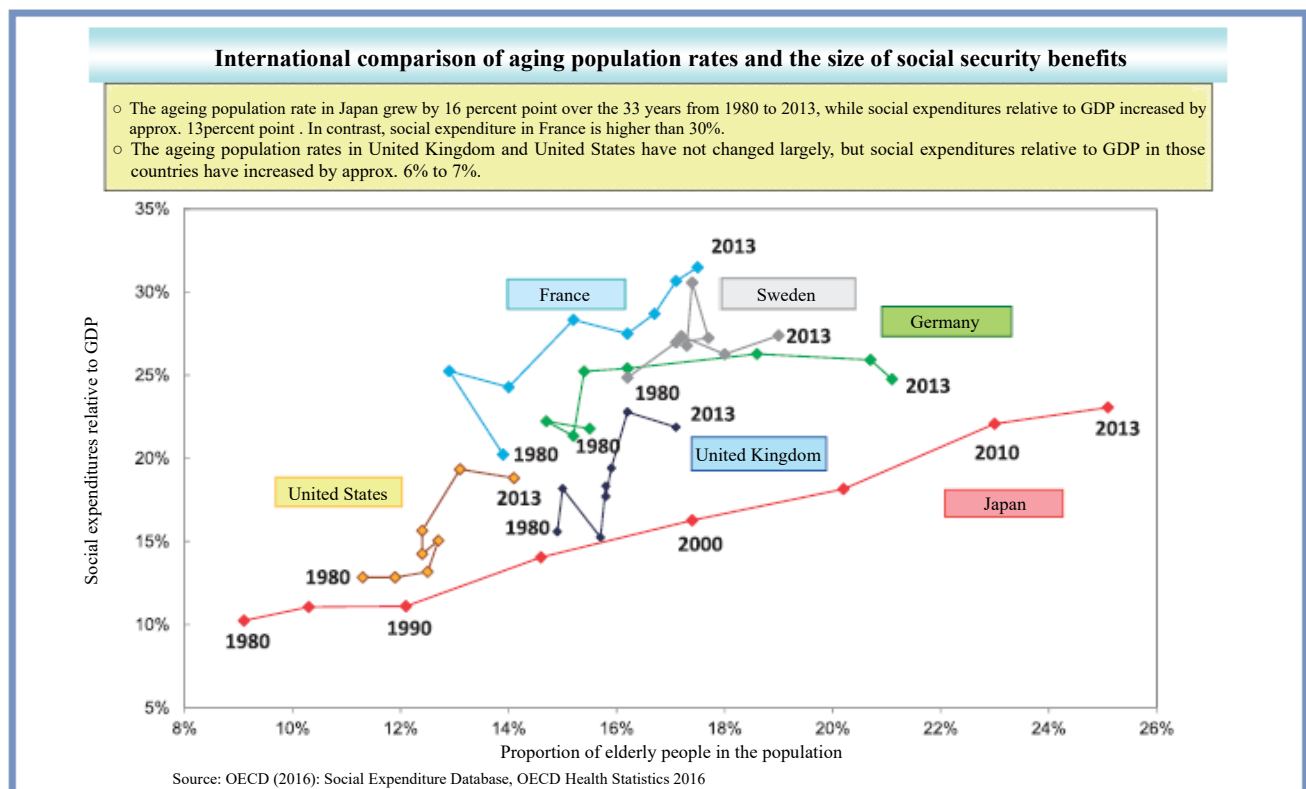


Chart 4 International comparison of ageing population rates and the size of social security benefits

Cited: “Roundtable meeting to promote how to get medical care well (November 12, 2018)” by Ministry of Health, Labour and Welfare

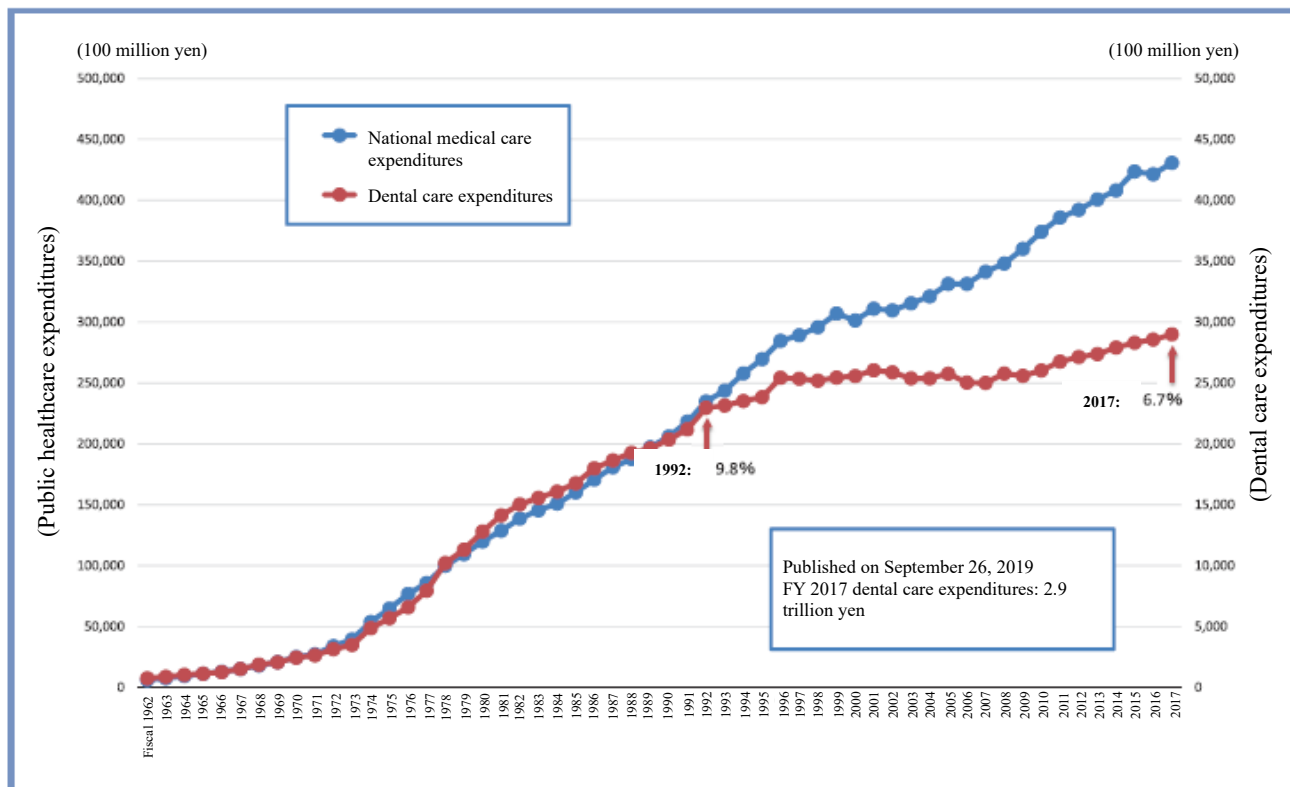


Chart 5 National medical care expenditures and dental care expenditures

Source: Japan Dental Association Research Institute based on National Medical Care Expenditure, Ministry of Health, Labour and Welfare

Medical fee revision financial resources acquired by reducing drug prices over the almost two decades from 1984 to 1998 was not allocated to dentistry. Dentistry received unfavorable adjustment over the decade from 1984 to 1994 of just 1.6%, which was less than half the adjustment allocated to medicine which was 3.4%, indicating that evaluation appropriate to the skill and value of dental care was not ensured. Therefore, we will continue to aim for dental care that actively contributes to the improvement of QOL by enhancing dental care services and attending to the lives and livelihoods of patients, while gaining the understanding and acceptance of the public. As the review committee concluded, it will be important to preserve the basic daily functions of eating, talking, and laughing to the end of life in our long-lived society. We will fulfill our responsibilities to achieve this goal. To this end, as described in the following chapters, we are committed to comprehensively working to raise the quality of dental care (by increasing the time allocated to care and number of professionals involved, and enhancing infection-prevention measures), facilitate innovation (by implementing new technologies, getting insurance-coverage for these technologies, and enhancing the functionality of dental clinics), and provide eating support to allow patients to live happy lives to the end of their days (by helping patients to maintain or improve oral function, addressing the issue of oral frailty, and providing dental service at home).

3) Improvement of the efficiency of total costs related to social security

Although the growth of elderly population will slow looking ahead to the next 20 years, the younger population will decline, which means fewer people to fund and support the social security system. This shift will require not only better care but also more efficient care to be considered in discussions about how to keep social security sustainable. The dental society must help increase the efficiency of care. To this end, we have

recently been working on surveys of the effectiveness of dental care, analyzing the results to collect evidence. The survey results revealed that enhancing dental care and oral health care would not only improve the quality of dental care but decrease the overall need for medical care, thereby greatly benefiting the population and national finances.

One of the findings was that providing proper oral rehabilitation and functional care for hospitalized patients statistically significantly reduced the hospital stay across all departments, with a reduction exceeding 10% (Chart 6). Proper oral rehabilitation and functional care appears to have provided this effect by reducing the burden of pathogens on mucosal immunity, thereby promoting wound healing and reducing complications. Further investigation of this point is warranted. But regardless of the mechanism involved, this finding shows the importance of oral rehabilitation and functional care in patients not only when an area near the mouth is involved but also when patients undergo highly invasive treatment. It shows the large effect that dental care has on the systemic health condition of patients. Our data also show that oral function management reduced the duration of antibiotic use. Thus, thorough dental care and oral rehabilitation and functional care in hospitals will bring significant benefits to both patients and medical insurance finances through “reduction of total healthcare needs.”

It also demonstrated the relationship between the number of teeth and medical care costs is also clear. Chart shows a comprehensive analysis of 2.3 million medical and dental insurance claims contained in the National Database of Medical Insurance Claims and Specific Health Checkups of Japan (NDB), which revealed that people of all ages and genders who had at least 20 teeth had lower medical expenses than their counterparts who had 19 or fewer teeth. Since it began over three decades ago in 1989, the 8020 Campaign (Chart 2) has produced outcomes in excess of the targets outlined in Health Japan 21 and it is obvious that the campaign has also provided financial benefits to Japan’s medical insurance finances.

Thus, the enhancement of dental care, including oral rehabilitation and functional care, will lead to significant benefits for patients and the public, and will also contribute to the finances of medical insurance and, by extension, the national government. Therefore, it is important to continue to promote the necessary support in the national healthcare policy toward 2040 so that all citizens, including inpatients, home patients, and institutional residents, can smoothly receive high-quality dental care services.

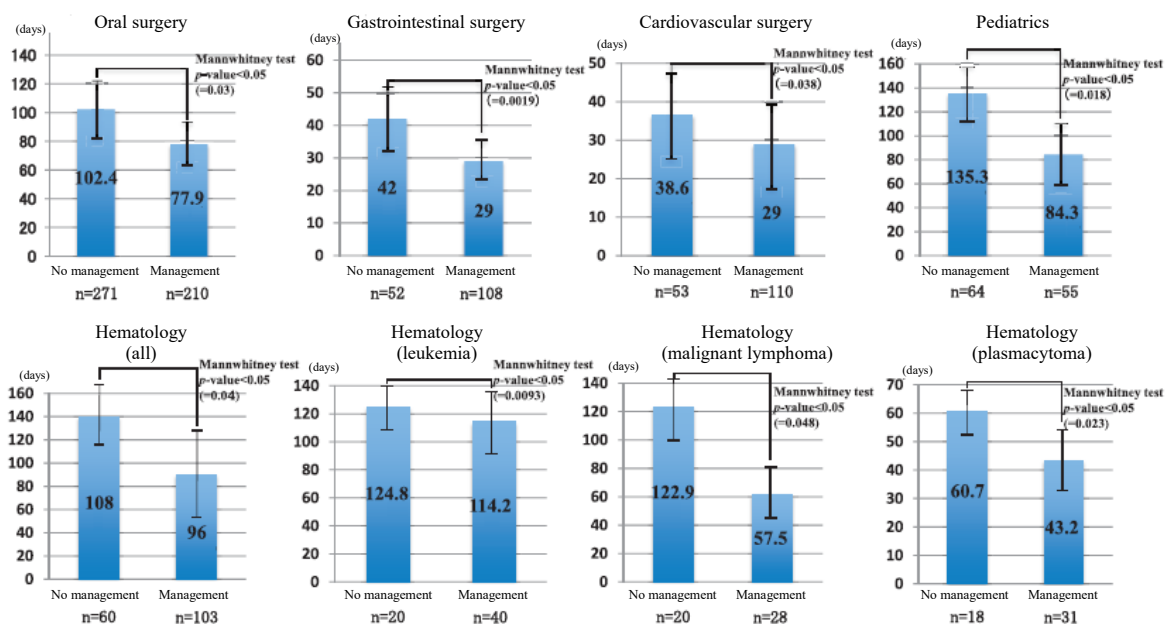
4) Dental care under the premise of COVID-19 pandemic

Since the first new coronavirus infection in the country was identified in January 2020, and to this day, the problem is not limited to one infectious disease, but continues to raise many questions and demand many changes for the future of the entire world. In particular, this issue has become a problem that has raised people to question their conventional values and ethics, as there are aspects of the issue that affect each other in the response, such as the “crisis of life due to disease” and the “crisis of the nation’s economy.”

It has also clearly raised a proposition that should be the starting point of social security “How to protect the health and lives of the people in times of emergency” in response to the healthcare policy that Japan has been pursuing in recent years from the perspectives of fiscal recovery and economy.

In this context, recognizing that at this point the response to this new “viral infection” will be a long-term one, the national government is trying to present a “new normal” for a situation where the spread of infection is always a possibility. We would like to show Vision of Dental Care Toward 2040 to be a figure befitting this new normal.

From data of an interventional study by Chiba University Hospital



- The reduction in length of stay was found to be statistically significant in all departments, with an effect of almost 10% or more.
- This shows the importance of proper oral rehabilitation and functional care not only when an area near the oral cavity is involved but also when patients undergo highly invasive treatment. Proper care appears to have prevented disruption of the oral bacterial colony upon treatment with large systemic impact, as described later.

Chart 6 Reduction effect to the length of hospital stay by oral rehabilitation and functional care

Source: Data submitted by Committee Member Tanzawa: Ministry of Health, Labour, and Welfare's 259th Session of Central Social Insurance Medical Council (November 22, 2013)

Cited from Committee Member Hori: Ministry of Health, Labour and Welfare's 84th Session of Medical Insurance Subcommittee of Social Insurance Council (November 27, 2014)

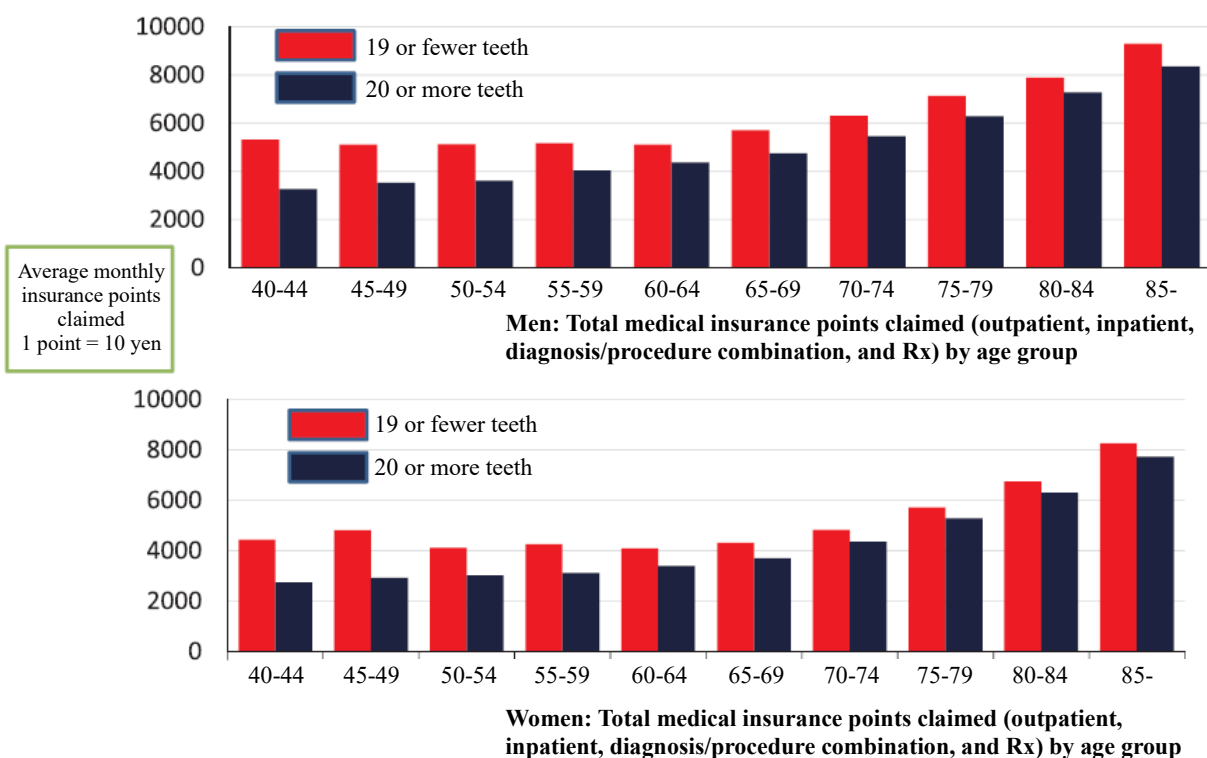


Chart 7 Relationship between number of teeth and medical expenditure from NDB Data

Created by Japan Dental Association Research Institute from third-party provided NDB data

The immediate focus of the pandemic response is infection prevention measures. With regard to infection prevention in the clinical setting, it is noteworthy that, at least to date, there have been no reported cases of infection spread through dental care or clusters of outbreaks. Once again, it is necessary to verify the effectiveness and cost of infection prevention measures in dental care settings on a daily basis, as well as the measures taken in addition to the standard preventive measures this time, and further strengthen them in preparation for future outbreaks. It is also necessary to discuss how the dental treatment system should be organized, including the open hours, frequency, and coordination of appointments, etc., taken to prevent the dental clinic is not dense.

Regarding infection prevention in daily life, we will further organize and disseminate evidence of the effectiveness of oral health care in viral infections. It is also important to position the oral health care in daily life as one of the family dentist functions.

In addition, it is strongly urged to improve the near-collapse of the supply of personal protective equipment at this time, and to secure and strengthen the production, distribution, and stockpiling systems. In the event of a similar spread of infection in the future, it is also important to clarify what kind of guidance and management should be provided at home, instead of face-to-face treatment, and to develop and clarify a system for providing emergency dental care for virus-infected patients, as well as to train of human resources for this purpose.

We will deepen discussions on the above, including evaluation in terms of reimbursement, and will continue to aim for “dental care that is close to the lives of the people throughout life course,” which we have always aimed for.