

# AHWIN PAPERS

## Lessons For Aging-Related Policy

### Key Lessons

- Dental and oral health play a critical role in healthy longevity, including brain health.
- The 8020 Campaign offers a model for promoting dental health through a simple, positive message: let's keep at least 20 teeth so we can enjoy food and have better health when we're 80 years old.
- A combination of advocacy, public-awareness raising, and research can successfully promote positive behaviors that help people retain more teeth throughout their lifespan.
- A key to success is close cooperation between the national health agency and the dental association, combined with the engagement of local governments, local dental associations, dental professionals, NGOs, and volunteers.
- Targets and initiatives should be tailored to the unique characteristics of each life stage—from childhood to old age.

### The Impact and Future of Japan's 8020 Campaign

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Over the past three decades, Japan has been carrying out a nationwide campaign aimed at helping people retain more teeth into their later years. More specifically, the goal of the campaign is to ensure that people still have 20 of their original adult teeth when they reach the age of 80. Over the course of the campaign, the percentage of people achieving that “8020” goal has grown fivefold, from around 10 percent to around 50 percent. Improved tooth retention does not just affect people's quality of life, but is also linked to better overall physical and mental health, and thus the success of this campaign offers an important model for promoting healthy and active aging.

### Origins of the 8020 Campaign

The 8020 Campaign (*hachi maru ni maru undo*) was launched in 1989 by Japan's Ministry of Health and Welfare (now the Ministry of Health, Labour and Welfare) and the Japan Dental Association. The real starting point of the campaign, however, dates back to 1982, when the Health and Medical Services Act for the Aged was enacted. That law was intended to respond to the rapid increase in Japan's older population, but it failed to include the critical question of dental care.

At the time, there was a deluge of tooth decay, with cases rising dramatically across all age groups, and in response, the

government primarily focused on dental health measures targeting mothers and children. There was little understanding yet of the role that dental health plays in general health, and generally speaking, people accepted tooth loss as a natural part of aging. Indeed, a 1987 survey found that people at the age of 80 in Japan had only about five natural teeth on average.

This was taking place in an international context that was rethinking the concept of health. In 1986, the World Health Organization (WHO) held the first International Conference on Health Promotion in Ottawa, Canada. That meeting led to the Ottawa Charter, which defined health promotion as “the process of enabling people to increase control over their health and its determinants, and thereby improve their health,” and described health as “a resource for everyday life.” That charter became the basis for healthy cities initiatives, comprehensive school health programs, and other global health promotion activities, and it inspired the organizers of the 8020 Campaign as well.

When a group of experts gathered in the town of Atsugi for a Community Dental Health Study Group workshop in 1987, they discussed new data showing that older people who had lost fewer than 10 teeth could still eat most foods. Based on those findings, they proposed setting a target for the number of teeth that people should try to retain as they aged. The objective was to create a society where people could enjoy food throughout their lifetimes by promoting dental health. As a result, the Japanese government adopted the goal of ensuring people still have 20 of their teeth when they reach age 80, and that became the starting point for the 8020 Campaign.

## Key Stakeholders in the 8020 Campaign

In order to carry out the 8020 Campaign, the Ministry of Health and Welfare and the Japan Dental Association engaged with a broad range of individuals, including dental care professionals and government officials.

When the initiative was first launched, it was determined that dental health targets should be established for all stages of the life cycle, and representatives from the ministry joined with outside experts to compile a report that stressed the importance of setting specific targets for each age group and coming up with measures to tackle the issue from various perspectives—from raising awareness of the importance of dental health, to strengthening training systems for dental health professionals, encouraging the placement of dental health professionals in government posts, conducting research on dental health, and so on.

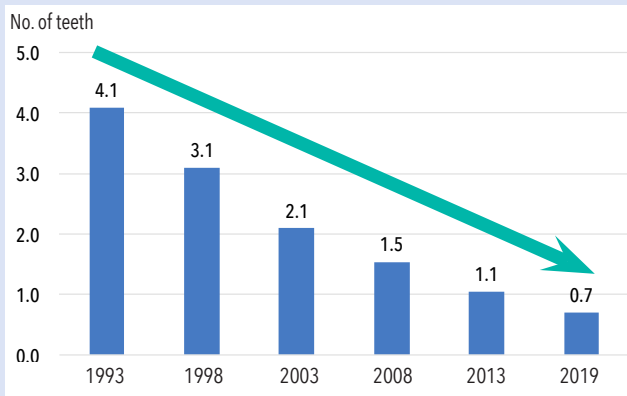
Having experts involved in the process from outside the realm of dentistry was important to ensure that the campaign incorporated various perspectives and appealed to a wider audience. It was imperative to be able to provide evidence and clearly convey to the general public the significance of the 8020 target in order to obtain buy-in for the goal of “creating a society where we can eat with our own teeth throughout our lives.”

In 1996, however, a Ministry of Health and Welfare study group found that, while good progress was being made in implementing the 8020 Campaign, community-level initiatives were still inadequate. As a result, national and local governments began offering support to prefectural governments, the Japan Dental Association, and others to begin a wide range of local programs and to launch community dental health centers.

Local citizen volunteers have also played a vital role in promoting the 8020 Campaign, for example creating posters for local health fairs to explain the importance of dental and oral health, or leading oral health exercises at old person’s associations. Academia was also engaged, as the Ministry of Health and Welfare began offering scientific research grants in 1996 for research on oral and general health, which were open to researchers in other fields as well. Such research would provide key evidence to bolster the linkage between oral health and healthy aging.

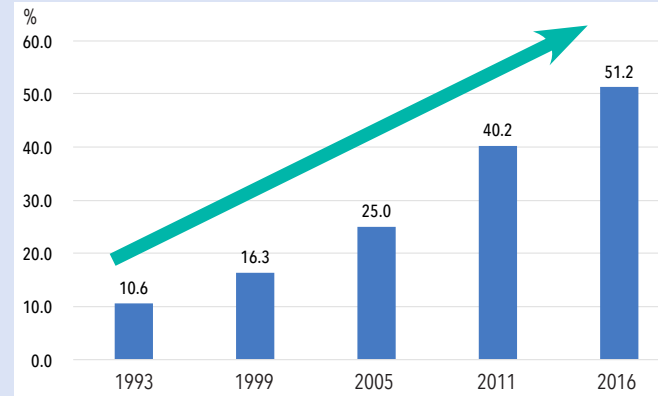
## Impact and Importance of the 8020 Campaign

**Figure 1. Trends in average number of permanent teeth with cavities among 12-year-olds in Japan**



Source: Compiled by the Japan Dental Association Research Institute based on the MEXT School Health Statistics Survey.

**Figure 2. Ratio of those achieving 8020**



Source: Compiled by the Japan Dental Association Research Institute based on the Ministry of Health, Labour and Welfare's Survey of Dental Diseases

In October 2020, the Japan Dental Association published a report, A Dental Vision for 2040—The State of Dental Care in the Reiwa Era (2040-nen wo misueta shika bijon—Reiwa ni okeru shika iryo no sugata), which found that the average number of carious permanent teeth per capita among 12-year-olds had decreased by roughly 75 percent since 1993, while the number of people achieving “8020” in a 2016 survey had risen from roughly 10 percent in 1993 to more than 50 percent. These results can be attributed in large part to the 8020 Campaign.

In addition to the campaign’s success in shifting attitudes and awareness regarding dental health and its contributions to human-resource development in the field, the research funding component of the campaign has also contributed to a greater understanding of how oral disease and other related issues more broadly affect a person’s overall health. These fields had been treated separately for the most part in the past, but large-scale funding from the health ministry and other sources has spurred integrated research that examines oral health data in combination with overall health data.

One such study that drew attention in particular showed a connection between the status of a person’s teeth and dementia. That study focused on 4,425 people aged 65 and older who had not yet developed dementia at the start of the study and tracked them for four years. It found that, compared to those who had 20 or more of their own teeth, those who had few of their own teeth remaining and relied on dentures were at a 1.85 times higher risk of developing dementia. In Japan, dementia is the number one reason that people require long-term care, and it is thus a disease that draws a great deal of interest. Given that there are few therapeutic options available, early efforts to lower one’s risk are critical. In addition, linkages were found between the number of teeth one retained and such indices as fractures/falls, the need for long-term care, medical expenditures, and even lifespan.

There have been various reports on the relationship between periodontal disease and other negative health conditions. For example, there appears to be a direct link between periodontal disease and diabetes. Diabetes appears to heighten the risk of periodontal disease, while at the same time, periodontal disease

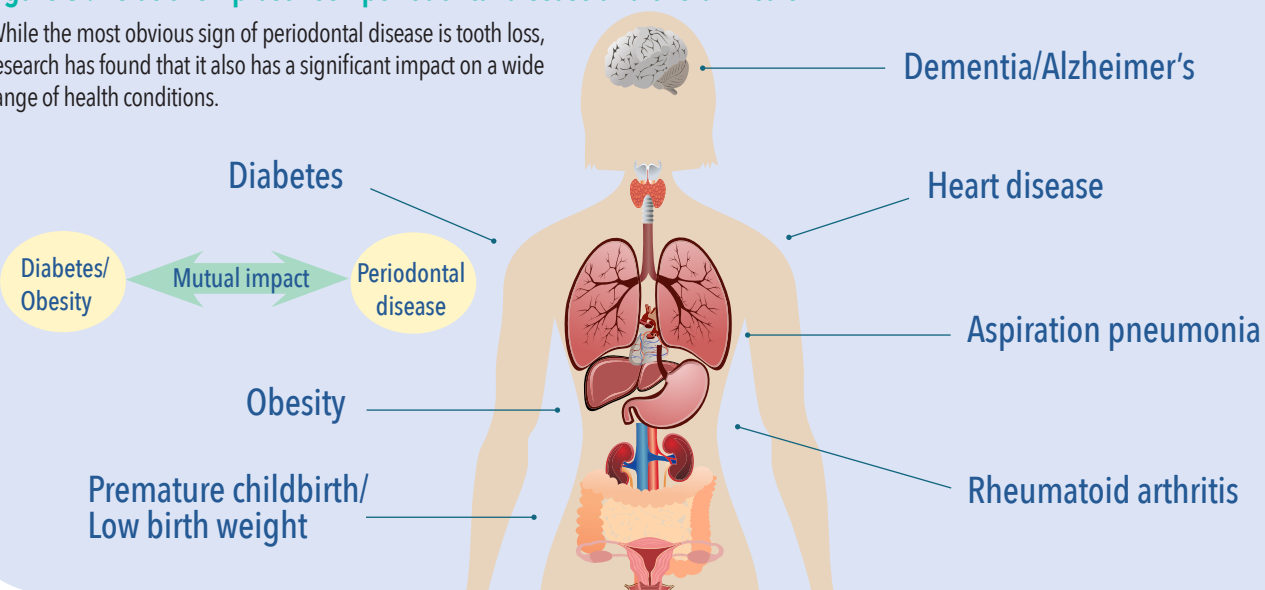
is thought to increase the severity of diabetes. Various products of periodontal disease such as the disease-causing bacteria and their toxins and inflammatory cytokines produced in the periodontal tissue where disease has developed can affect the whole body via the bloodstream, and it has been suggested that this has an impact on everything from dementia to stroke, myocardial infarction, obesity, low birthweights among infants, and rheumatism (see fig. 3). These findings reinforce the importance of the 8020 Campaign and its success to date in increasing tooth retention rates.

they arise) and dental health care (preventative measures such as cleanings, screenings, and education) is an important factor here, and affordable access to both has been important to the campaign's success.

Second, a whole-of-life approach that stresses healthy habits from childhood through old age is also important in reaching the 8020 goal. Initiatives need to target the unique characteristics of each life stage—maternal and child health initiatives support the normal development of tooth and mouth functions from fetal to early childhood, dental health programs at school help

**Figure 3 . Relationship between periodontal disease and overall health**

While the most obvious sign of periodontal disease is tooth loss, research has found that it also has a significant impact on a wide range of health conditions.



### Lessons from the 8020 Campaign

Looking at the evolution of the 8020 Campaign, there were a number of factors that have played a role in its success over the years.

First, as noted above, one of the initial drivers of this campaign was the failure of the 1982 Health and Medical Services Act for the Aged to address dental health. Although it was not until 1995—several years after the launch of the 8020 Campaign—the Japanese government eventually expanded the law to cover screenings for periodontal disease. The complementary role of dental treatment (treating problems as

prevent permanent tooth swelling and gingivitis, and efforts targeting adults prevent periodontal disease. In the prevention of tooth decay and dental health for older persons, it is important to prevent periodontal disease, tooth loss, and deterioration of oral functions.

Third, this campaign offers a positive goal in contrast to many of the citizens' campaigns in Japan over the years. Unlike the anti-smoking campaign or efforts to address metabolic syndrome, which admonish people to “quit doing xyz” or “you must do xyz,” the 8020 Campaign has a more encouraging message, “let’s keep our own teeth.” And although it took a while to popularize the “hachi maru ni maru” (8-0-2-0) phrase, once it caught on, it was easy for people to remember.

Fourth, the potential for various actors to participate, including NPOs, local governments, and individual volunteers, is also an important factor in whether such a campaign can succeed. As noted above, this was encouraged when national and local governments launched a budget subsidy program, the Program to Promote the 8020 Campaign, which empowered the prefectural governments, the Japan Dental Association, and other relevant professional organizations to create local programs. Human-resource development projects were launched by local governments, such as seminars for dental professionals and local residents, and community-based oral health centers were established, among other activities. A number of projects were developed to directly engage public citizens, including a program to give awards to people who achieved “8020,” and a public awareness campaign on preventing cavities and periodontal disease.

Fifth, perhaps the most fundamental element in the campaign’s success was the cooperation between the national organization of dental professionals and the national agency that handles oral health (Japan’s Ministry of Health, Labour and Welfare). It is critical that these two groups function together rather than independently, which requires dental professionals who have an understanding of the government and government officials who understand dentistry—people who can serve as a bridge between those two worlds and build cooperation. For example, in local governments where licensed dentists and dental hygienists have been assigned to administrative posts, there have been various effective dental health projects implemented in cooperation with the local dental associations.

As noted above, Japan’s experience in carrying out the 8020 Campaign has shown the importance of policy working as a complement to dentistry and oral health professionals, and of focusing on the relationship between oral health and overall health, particularly in light of the demographic changes occurring in the country. Accordingly, the replicability of this campaign in other countries will depend on the

state of dentistry in the country, such as the public expenditure ratio for dental care costs through universal health coverage, the per capita number of dental health professionals (dentists, dental health technicians, dental hygienists), the level of dentistry available, and so on. At the same time, the ability to carry out this type of campaign is also dependent on a wide range of factors that impact oral health conditions, including the efforts of the national government agencies, the dental exam system for people from childhood to old age, the legal system (e.g., whether a basic law on dentistry exists), and so on.

## Future Challenges

The 8020 Campaign has been underway for more than 30 years, during which time the number of people who still have 20 or more teeth at the age of 80 has continued to increase. That unflagging progress makes the campaign an exceptional success among Japan’s various health promotion initiatives. At the same time, as the number of older people with 20 or more teeth has risen, it has become a challenge to ensure good dental hygiene as people’s overall condition and mental functions begin to decline, and there has been an increase in risks such as aspiration pneumonia. Therefore, as the population continues to age in the future, further consideration and efforts will be required to address the issues facing people who require long-term care or who are dealing with dementia.

The campaign in Japan has evolved over time in response to the shifting environment and needs and to the new knowledge that is emerging in the field. As the social structure of Japan changed and the aging of Japan’s population progressed, the 8020 Campaign was on the cutting edge in terms of understanding the implications of these changes and of the extended lifespan of the people. Japan has the highest rate of aging of any country in the world, and as the low birth rate in the country leads to a shrinking population, the question of who will bear the burden



of social security has become a growing issue. In 2000, Japan introduced its long-term care insurance system. Compared to the 1960s, when Japan first created its elderly welfare system, the percentage of the population who were over 65 years of age had grown dramatically, and various trends—the limitations of family caregiving, the substantial increase in social security expenditures, and the entry of the private sector into the caregiving business—led to a “socialization of caregiving” that replaced the existing public measures and systems. In caregiving settings, it was pointed out to the 8020 Campaign that the condition of the teeth was more important than the number. Based on that, the Campaign began to focus not only on the number of teeth but on their functionality. It is important that teeth do not just remain in the mouth but that they are functional and allow the person to chew properly. Accordingly, along with the 8020 Campaign’s focus on tooth retention, there must be a continued focus on dental and oral function as well.

To celebrate the 30th anniversary of the 8020 Campaign, the Japan Dental Association, in cooperation with many other relevant organizations, held a commemorative ceremony and symposium on the theme of “Beyond the Smiles—The Future of the 8020 Campaign in an Era of the 100-Year Life.” Looking to the future, the Japan Dental Association and the 8020 Promotion Foundation are adding a new initiative for dental and oral health in Japan, which is focusing on “oral frailty.” Figure 4 shows why this is an important approach.

**Figure 4 . Baseline oral frailty status predicting new onsets of physical frailty, sarcopenia, disability, and mortality**

A study of 2,000 older people over 45 months found that those with oral frailty ran a 2.41 times higher risk of becoming physically frail and a 2.35 times higher risk of requiring long-term care.

Outcomes	Hazard ratio for the oral frail (95% confidence interval)
Physical frailty	2.41 (1.27-4.55)
Sarcopenia	2.13 (1.05-4.58)
Disability (requiring long-term care)	2.35 (1.18-4.67)
Mortality	2.09 (1.00-4.35)

Source: Tomoki Tanaka, Kyo Takahashi, Hirohiko Hirano et al., *The Journals of Gerontology: Series A*, vol. 73, no. 12 (December 2018): 1661–67, <https://doi.org/10.1093/geronol/glx225>.

The experience of successfully carrying out the 8020 Campaign can be effectively leveraged to facilitate this new initiative to address oral frailty. In particular, the 8020 Campaign offers an important lesson in terms of focusing not just on functional deterioration among older people but taking a whole-of-life approach, in this case looking at ways to acquire oral function starting from infancy. It is therefore hoped that this campaign can promote awareness of this critical health issue at as early a stage as possible.