

# Morioka Japan S Morioka Japan S Sendai World-Class HONSHU System okyo

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The history of Japan's public health insurance system goes back more than a century and Japan has maintained its current world-class system, which is called a "Universal Health Insurance System", for over 50 years of this history. Nevertheless, in recent years, population aging and a declining birthrate have made for a rapidly progressing trend and the nation's financial situation has been worsening. It is therefore becoming increasingly difficult to maintain this valuable system that deserves being kept in place for the future.

Japan, located in Northeast Asia, is an archipelago set between the Sea of Japan to the west and the Pacific Ocean to the east. It shares no contiguous land borders with any other nation, but due to the large number of islands within its territory, it has an extensive maritime boundary. While lapan comprises 6,848 smaller islands, a large majority of its population inhabits the four main islands: Honshu, Kyushu, Hokkaido and Shikoku (in descending order of population). Its four island and the many small archipelagos are divided into 47 prefectures (regions). Due to mountainous terrain, the land available for urban development is limited. The country is a constitutional monarchy with a parliamentary system of government. It is a highly urbanized country and is host to one of the largest metropolises in the world, Tokyo. The country's 127 million population is ageing rapidly and shrinking due to low birth rates, increased life expectancy and its immigration policy. This has led to what some claim is an imminent demographic crisis.

World's third-largest economy, Japan's national gross domestic product (GDP) amounts to approximately 4.937 trillion US\$ (2016), with a GDP per capita of 40,686 US\$ (PPP) and a total health expenditure of around 10% of GDP, ranking 3rd, in health expenditure, among 34 OECD countries. With a corresponding high standard of living, level of development, safety and stability, it has made many noticeable successes in health since its universal health insurance system was founded in 1961. This includes the full

implementation of universal insurance coverage, providing comprehensive coverage to all lapanese citizens, achieving the world's highest life expectancy and the control and even eradication of common infectious diseases. In addition, alcohol consumption and transport accident deaths have decreased substantially over the past 50 years. However, despite the many achievements, in recent decades, the incidence of noncommunicable (NCDs) and degenerative diseases has increased significantly. This increase, along with population ageing, has placed a strain on the national health system. Coupled with over two decades of economic slowdown, Japan must now find policies that balance universal insurance coverage, service quality and financial sustainability. There is an urgent need to scale up effective coverage of preventive and public health interventions to further reduce the disease burden from NCDs. In addition, although the overall life expectancy and healthy life expectancy have been increasing in Japan, there are increasing disparities among prefectures, demonstrating a need for regionspecific health policies.

# The Healthcare System

Japan is called a welfare country and the Ministry of Health, Labour and Welfare (MHLW) is the central leading organization in the Japanese healthcare system, characterized by excellent health outcomes at a relatively low cost. The system emphasizes equity, facilitated by

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universal insurance coverage through social insurance premiums and tax subsidies, with virtually free access to healthcare facilities. The universal health insurance system covers almost all medical procedures, dental care and drugs and is operated by either the national or local government.

The fee schedule is reviewed every two years and inclusions/exclusions of each treatment option within the insurance scheme is reviewed by an expert committee established through the MHLW.

While there are several official lapanese health insurance systems, all citizens must be covered by one of them. There are two major types of insurance schemes in Japan: Employees' Health Insurance and National Health Insurance (NHI). Employees' Health Insurance is provided to employed workers (company employees and public servants) and their dependents, while the NHI is designed for self-employed and unemployed people and is run by municipal governments (i.e., cities, towns and villages). Employees' Health Insurance is further divided into four major categories: Japan Health Insurance Association (JHIA), Society Managed Health Insurance (SMHI), Mutual Aid Association and Seamen's Insurance. Japan does not have a single insurance fund; insurers are divided into approximately 3,000 organizations. Moreover, the premium rate largely differs from one insurance scheme to the next; this fragmentation is a source of inefficiency in the system and inequity in premiums. Although there are several cross-subsidy systems among insurance schemes, mainly for the financially weak NHI, financial sustainability and equity among insurance schemes remain major challenges for the Japanese health financing system, especially when considering the rapidly ageing society.

The government regulates and controls nearly all aspects of the health system, at three levels: national, prefectural (regional) and municipal (cities, towns and villages), where service delivery and implementation are mainly handled by prefectural and municipal governments. Several professional organizations such as the Japanese Medical Association, the Japanese Dental Association and the Japanese Nursing Association are also actively involved in health policy processes. The way in which the MHLW interacts



Almost all practicing doctors and dentists are registered in the public national health insurance scheme as insured doctors and provide treatment according to a fee-for-service system.



with these professional organizations, including the private sector, care providers and patients, is however notably complex. Across the 47 prefectures, there are a total of 1,718 municipalities. There are three types of municipalities in Japan: cities, towns and villages. The Central and local (prefectural/municipal) governments are responsible by law for ensuring a system that efficiently provides quality healthcare services. The Central Government sets the nationally uniform fee schedule for insurance reimbursement and subsidizes and supervises local governments, insurers and healthcare providers. It also establishes and enforces detailed regulations for insurers and healthcare providers at the prefecture levels. Japan's 47 prefectures implement those regulations and develop regional healthcare delivery with their own budgets and funds allocated by the national government.

Almost all practicing doctors and dentists are registered in the public national health insurance scheme as insured doctors and provide treatment according to a fee-for-service system. In general, after receiving treatment by an insured doctor or dentist, patients make partial payments (co-payments) of the total cost to the clinic or hospital. The nationally uniform fee schedule (i.e., amount of reimbursement, including the patients' co-payment) covers most healthcare procedures and products, including drugs. The health insurance pays 70–90% of the cost while the

remainder is paid by the insured as co-payment. The co-payment rate as of March 2017 is as follows: pre-elementary school = 20%; elementary school up to age 69 years = 30%; age 70-75 years = 20% and age 75 years or above = 10%. Thus, the cost of insurance treatment provided is the same, throughout the nation, fixed by the fee schedule. There is no price difference between private and public institutions. There are certain exemptions. Low income earners do not necessarily have to pay the cost directly to the clinic. In addition, elderly persons, as specified above, may pay directly but at a reduced rate (10–20% of the cost) according to their income. Moreover, the lapanese health insurance system has a reimbursement scheme for patients who receive costly treatment services such as cardiac surgery, where the patient's payment over a certain amount is refunded later. Under this health insurance system, Japanese people can receive high-quality healthcare services at a relatively low cost, both in public and private institutions.

In 2017, there were a total of 479 health centers throughout Japan. These health centers take the role of the central administrative management office for the regional public health services. There were also 8,442 hospitals and 101,529 clinics, predominantly privately owned. Compared with other OECD countries, inpatient care in Japan is characterized by longer average hospital stays, with a

larger number of inpatient beds per capita. Japanese hospitals are in general well equipped with high-technology devices such as computed tomography (CT) and magnetic resonance imaging (MRI) scanners. There is no restriction on hospitals that prohibits the purchase of medical equipment and hospitals are free to open any specialty department without authorization from the Central Government. Two out of every three hospitals, including psychiatric hospitals, have whole-body CT scanners.

Healthcare in Japan is predominantly financed by publicly sourced funding. In 2015, 85% of health spending came from public sources, well above the average of 76% in OECD countries. Direct out-of-pocket (OOP) payments contributed only 11.7% of total health financing. The health insurance coverage rate was nearly 100% while the share of household consumption spent on OOP payments was only 2.2%, 0.6% less than the OECD average of 2.8%. Despite the relatively low OOP payments, the key challenges in Japan are population ageing, rapid increases in chronic illness, escalating medical expenditure, contracting fiscal space and pressures on the healthcare workforce. Reforms of the financing system and greater efficiencies in health systems will be necessary to sustain good health at low cost with equity in the future.

To deal with the rapidly increasing ag-

Trends in Healthcare Expenditure in Japan, 1995-2014

Expenditure	2000	2014
Total health expenditure (% GDP)	8	10
Public expenditure on health (% of THE)	81	84
Private expenditure on health (% of THE)	19	16
Government expenditure on health (% of GTE)	15	20
OOP payments (% of PHE)	81	85
OOP payments (% of THE)	16	14

Notes: GDP: gross domestic product; THE: total healthcare expenditure; GTE: government total expenditure; PHE: private health expenditure; OOP: out-of-pocket Source: World Health Organization, 2017

ing population, in April 2000 Japan introduced the "long-term care insurance system" to deliver health and welfare services for the elderly (65 years or over), so that they can live independently as long as possible. The long-term care insurance covers 90% of the service-related costs, while the remaining 10% of costs are paid by the user. The services provided under this scheme include home visit nursing, day-care or short-stay medical service, etc. In-home healthcare guidance, doctors, nurses, dentists, dental hygienists or other medical professionals visit the homes of users who have difficulty in making a hospital visit. The long-term care insurance system has now come to have an important role as a system designed to assure an affordable and comfortable life for elderly people and their family members.

Furthermore, in 2000, a National Health Promotion Campaign for the 21st century, "Healthy Japan 21", was proposed to prevent lifestyle-related diseases (non-communicable diseases such as cancers, cardiovascular diseases, diabetes and chronic obstructive pulmonary disease). "Healthy Japan 21" set up national goals for improving lifestyles, reducing risk factors

and decreasing diseases. Oral health was one of the NCDs conditions identified and specific goals were set to prevent tooth loss. In the second "Health Japan 21" specific goals are indicated and include: (1) nutrition and dietary habits; (2) physical activity and exercise; (3) rest; (4) alcohol use; (5) tobacco use and (6) oral health. Among the goal related to oral health for 2022 are the increase in proportion of persons aged 60-69 years with good mastication function to 80%; increase in the proportion of 40-year-old persons with no missing teeth to 75%; decrease in the proportion of persons in their 40s with progressive periodontitis to 25%; increase in the number of prefectures where 12-yearold children have fewer than I DMFT and increase in the proportion of persons who received a dental check-up during the past year to 65%.

# Oral Health

Dental care in Japan dates back to the late 1980s. In 1989, the Ministry of Health and Welfare started to advocate for the "8020" (eighty-twenty) campaign, which attempts to improve dental health among those aged 80 years older by maintaining the presence of at least 20 natural teeth.

Because major reasons for the natural loss of teeth are periodontal disease and cavities, attention has been paid to these diseases, including annual check-ups for elementary and junior high school students. People can use the dental healthcare services provided by the health insurance system and dentists are paid using a fee-for-service system, although some restrictions apply to the materials that can be used. Consequently, dental services under the national health insurance system are available for most restorative, prosthetic and oral surgery treatment. They include services such as fillings, endodontic treatment, crowns, bridges, dentures and extractions. Higher cost items (e.g. gold crowns and bridges, metal plate dentures, implants and orthodontic treatment for cosmetic purposes) are excluded. Preventive services are also excluded as the current health insurance system only covers treatments for existing diseases. In such cases, dental fees are negotiated between the dentist and patient, with the patient paying the entire sum out-of-pocket directly to the practitioner. Delivery of dental treatment services to bed-ridden



# Therefore, all people can receive dental treatment at a relatively low cost, with the same fees applying throughout the nation.

# Workforce Data (2016)

	Total Number	Female
Physicians	319,480	67,493 (21.1%)
Dentists	104,533	24,344 (23.3%)
Pharmacists	301,323	184,497 (61.2%)

Source: Ministry of Health, Labour and Welfare Survey of Physicians, Dentists and Pharmacists in 2016. Available online:http://www.mhlw.go.jp/english/database/db-hss/dl/spdp\_2016.pdf

people at home or in aged care centers by dentists are also covered in this public health insurance scheme. Therefore, all people can receive dental treatment at a relatively low cost, with the same fees applying throughout the nation. These services are mainly conducted by private dental practitioners under contracts with local governments.

# **Dental Workforce**

Three regulatory professional dental licenses are issued in Japan: dentists, dental hygienists and dental technicians. There is no licensing system for dental chairside assistants.

In 2016, the total number of dentists was 104,533. The dentist ratio per

100,000 people is 82.4 practitioners and as in many nations, the distribution is unequal. The highest dentist to population ratio is in Tokyo (118.2) and the lowest is Fukui Prefecture (54.7); more than twice the regional difference of dentist distribution is observed. Compared with the OECD average, Japan has a larger number of dentists. There are over 68,730 dental facilities (mainly private dental clinics) in total throughout Japan.

More than 97% of the dentists engage in providing dental treatment at private or public dental institutions. The number of public dentists who engage in full-time

administration work is only 348 (0.3%). Therefore, in Japan, most of the public dental activities are conducted by private dentists on a part-time basis.

For example, a local government municipality contracts with a private dental practitioner to carry out the role of a school dentist. Local government pays the contracting dentist as a school dentist and the dentist is responsible for the performance of school oral health activities, usually in a part-time capacity. This public and private mixed dental performance is one of the unique characteristics of the Japanese oral healthcare system.

After a 6-year course at dental school, all students must take a national board dental

# Numbers of dentists in Japan (2016)

	Number	%
Dental practice Private office (employer) Private office (employed) Hospital Education institute	101,551 (59,482) (29,684) (3,077) (9,308)	<b>97.1%</b> (56.9%) (28.4%) (2.9%) (8.9%)
Research institute Administration/public service Others Total	1,195 348 1,430 104,533	1.2% 0.3% 1.4% 100.0%

# **Number of Dental Schools**

11 National 1 Local Governmental 17 Private Universities Total enrolment (2017) – 2,720

# In Japan national programs for pre-school children are conducted by local government free.

examination. The MHLW manages this national board examination and regulates the issuing of dental licenses. The pass rate of the national board examination is relatively low, around 65–70%. In 2018, 3,159 dental students took the examination and 2,039 passed (64.5%). Without passing this examination, a dental graduate cannot get a dental license. At least one year's worth of clinical postgraduate training has been mandatory since 2006.

Most hygienists' institutions are 3-year-period vocational schools. Eleven schools however provide a 4-year-period university bachelor's degree programs in the universities. Hygienists also need a national license and the proportion of dental hygienists who pass the national examination is high and around 95%. Every year around 6,500 new dental hygienists are produced.

Most of the schools provide 2-year-period education. Three universities have 4-year-period bachelor's degree programs for dental technicians. After graduation, a pass in the national board examination is necessary to get a license to practice as a dental technician.

## **Oral Prevention**

**Pre-school children** - In Japan national programs for pre-school children are conducted by local government free of charge. They include physical, medical and dental examinations of all children. Private practitioners (i.e., doctors and dentists) contribute to the conduct of these examinations in turns at the community health centers. This means they

# Workforce Data (2016)

Active Dental Hygienists	123,831
Working in private dental clinics	112,221 (90%)
Working in hospitals	6,259 (5%)
Working in Public Sector (i.e. prefectures, municipalities, health centers)	2,754 (2.2%)
Teaching staff in Education Institutes	873 (0.7%)
Dental hygienists' education institutes	166

# Number of Dental Technicians (2016)

Active Dental Technicians	34,640
Working in dental laboratory offices	24,972 (72.1%)
Working in hospitals or dental clinics	9,166 (26.5%)
Dental Technicians' schools	54

become part-time "public doctors/dentists". Medical or dental treatment is not provided at the health centers and only preventive services are available. Oral health education is also offered to mothers and children by dental hygienists.

Schoolchildren - Every public primary, junior and senior high school has an appointed school dentist. The roles of school dentists include the conduct of an oral health examination at least once a year on each child at school and contributing to implementing the school's oral health education. According to the standard procedures and guidelines, school dentists check the oral health status of all the students for conditions such as dental caries, malocclusion, gingival status, dental plaque and temporomandibular disorders. School dentists do not provide dental treatment in the school but if oral health problems are detected, the school dentist recommends that they should seek dental treatment under the public health insurance scheme. Schoolchildren can receive comprehensive dental care at any public or private dental offices.

Adults - According to the "Industrial Safety and Health Act", employers must provide annual medical check-ups for all the employees in any company which has more than 50 workers. On the other hand, the Act does not include a duty for dental check-ups for employees as such, the number of companies providing good oral health promotion programs is very small. According to the "Health Promotion Law", local governments (municipalities) are to provide free or low-cost "periodontal disease examination programs" for their adult population by way of contracts with private dental practitioners. However, the rate of participation for the eligible persons in these programs is very low, about 10-15%. Therefore, in Japan, the oral health program for the adult population is based on an individual's personal responsibility for care, self-



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# Prevalence of Dental Caries in Deciduous Teeth

	Year 1957	Year 2016
5-year-old	94.5%	39.0%
3-year-old	81.8%	8.6%

# Decayed, Missing and Filled Permanent Teeth (DMFT) of 12-year-olds (National School Oral Health Survey data)

Year	
1985	4.6 DMFT
2016	0.8 DMFT

support and self-motivation. Many dental facilities and a public insurance system contribute to easy access for dental treatment for adults, but the proportion of regular (check-up or preventive) visits to dental clinics is not high.

Elderly - Over the past several decades, Ja-

The concept of the "8020" campaign, a community and clinic-based initiative, started in 1989 to ensure that all Japanese people were able to enjoy a healthy diet and a good social life by preventing tooth loss that leads to masticatory dysfunction

pan has become increasingly concerned at the pace of population aging and the challenges this brings to dealing with changing social systems. Dentistry is no exception. The concept of the "8020" campaign, a community and clinic-based initiative, started in 1989 to ensure that all Japanese people were able to enjoy a healthy diet and a good social life by preventing tooth loss that leads to masticatory dysfunction. The "8020" campaign has contributed to a dramatic improvement in the oral health of older people in Japan. This was followed by an accumulation

of evidence, culminating in oral health being integrated into health policy in the form of the "Act on the Promotion of Dental and Oral Health" in 2011, for the purpose of oral disease prevention and general health improvement. Latest findings show that the proportion of the elderly aged 80 years and above who have at least 20 teeth has increased from 40.2% in 2011 to 51.2% in 2016.

# **Oral Health Status**

Japan has developed a system for providing high-quality and appropriate oral healthcare efficiently. Therefore, the oral health status of the Japanese population has improved markedly. Dental caries in children decreased remarkably. In adults and older populations, untreated decayed teeth decreased and people are keeping more natural teeth than ever before. Many factors are thought to contribute to these changes. Public oral health services are provided according to the life stage of their populations and these services are mainly conducted by private dental practitioners under contracts with local governments. The number of dental facilities increased and the health insurance system helps by providing easy access to receiving dental treatment at reasonable price. Fluoride usage has increased, and sugar consumption has decreased. People's awareness and behavior toward oral health have also improved. The eleventh national survey on oral health was conducted by the MHLW in 2016. Surveys are now conducted every five years and according to data the changing patterns of oral health status of Japanese population can be well described below.

In 1957, most carious teeth were untreated and 5-year-olds had on average 8.7 decayed teeth. As time went on, children could access and receive dental treatment and the number of filled teeth increased. Also, the number of healthy teeth increased remarkably in all ages.

For the 65-74-year age group, the increase

# Mean Number of Natural Teeth Present for Adults

	Year 1957	Year 2016
35–44 years age group	25.1	28.2
65–75 years age group	10.1	20.8

in the number of natural teeth was more remarkable than younger adults; that is twice the number of natural teeth present over this time period. This implies that recent Japanese populations, especially elderly people, are keeping more natural teeth than the past. On the other hand, the proportion of edentulous persons decreased each year in all age groups.

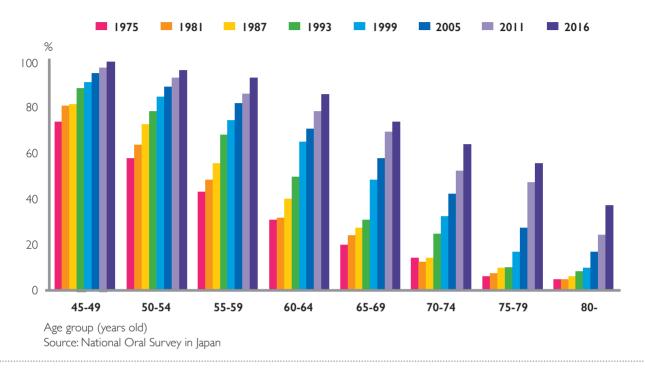
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# % of Elderly with No Natural Teeth

	Year 1957	Year 2016
65-74-year-old age group	35.5%	4.1%
75 years and over	57.2%	14.3%

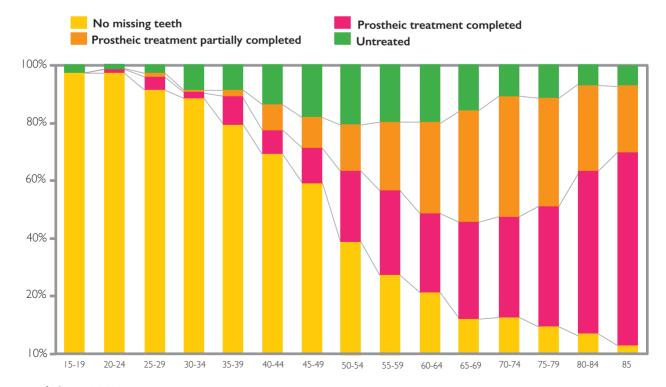
The graph below shows the changing pattern of the proportion of persons with 20 or more teeth. In all age groups, the proportion of those retaining 20 or more natural teeth had increased, with a substantial increase observed, especially in older age groups. This might be attributed to the national "8020" campaign which was initiated in 1989, and people's awareness for oral health which has been improving and changing oral health behaviors.

# PROPORTIONS OF PERSONS WITH 20 OR MORE TEETH BY AGE GROUP



According to the graph below, in total, the proportion of Japanese without missing teeth (not needing prosthetic treatment) was 34.0%, and those who completed prosthetic treatment was 28.3%. In Japan, the public insurance covers most prosthetic treatments, such as dentures and bridges. Therefore, people can receive the prosthetic treatment they require also at a reasonable price.

# PROPORTIONS OF PERSONS WITH 20 OR MORE TEETH BY AGE GROUP

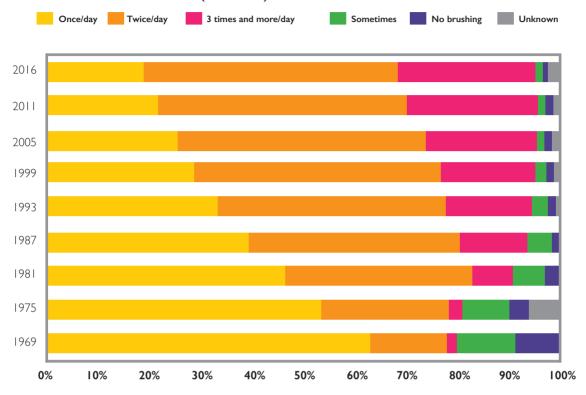


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Many factors are thought to be involved in the caries reduction of both deciduous teeth and permanent teeth in Japanese children. They include increased usage of different fluoride strategies, improvement of tooth brushing behavior, reduced sugar consumption as well as improved awareness of oral health through the public oral health check-up system for preschool and school children.

# REPORTED TOOTH BRUSHING HABIT (1969-2016). I YEAR OF AGE AND OVER



Source: National Oral Survey in Japan

In Japan there is no systemic fluoride use and only topical fluorides are available. In 1969, only 6% of children received topical fluoride application. Recent data shows that this increased to about 60% and indicated a 10-times increase in exposure. The market share of fluoride toothpaste has also increased dramatically from 12% (1985) to 91% in 2015. According to the National Oral Health Survey, tooth brushing behavior also improved for the whole population. Sugar consumption per person per year decreased from on average 27.5 kg per person in 1970 to 16.1 kg in 2015, a difference of 11.4 kg. These factors, as well as the sufficient numbers in the dental workforce and the universal coverage of the public health insurance system have contributed to the improved oral health of all Japanese people.

Although national oral health data shows that the oral health of the Japanese population has improved over the last several decades. Future challenges and perspectives for Japanese dentistry include: tackling the regional differences

# Sugar consumption per person per year decreased from on average 27.5 kg per person in 1970 to 16.1 kg in 2015, a difference of 11.4 kg

in oral health, decreasing the cost of health expenditure, establishment of sustainable emergency oral healthcare services in times of disaster and the development of a new teledental system for remote or rural areas with limited or no access to dental professionals. In such situations, oral self-care and prevention of dental diseases are the most important strategies. By giving adequate advice using recent advanced technologies, dentists can help

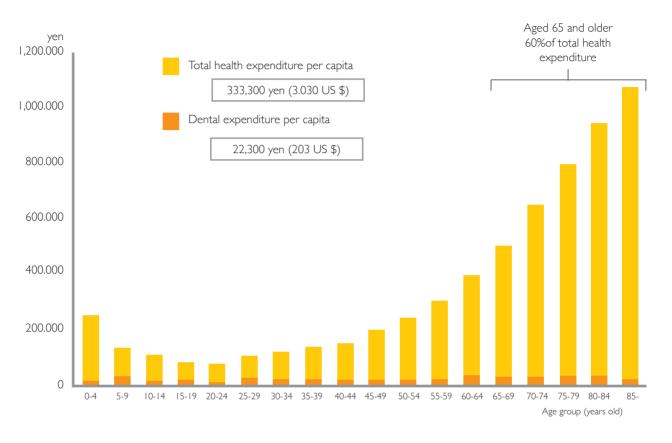
these isolated population groups.

According to the Survey on Economic Conditions in Health Care in 2015, the proportion of dental expenses provided by the public health insurance scheme is about 85.8% of total dental health expenditure. The proportion of medical expenses borne by private fees was only 1.2% in 2015. So, this figure can explain the general outline of Japanese health expenditure between the medical and dental components of the insurance scheme. Personal contributions for dental services are far higher than for medical care.

Total health expenditure per capita is 333,300 yen (3030 US\$) and dental expenditure per capita is 22,300 yen (203 US\$). Dental expenditure occupies 6.7% of total expenditure in general. It is amazing that those aged 65 years and older use 60% of the total health expenditure. Effective oral health promotion programs targeting younger generations can therefore be expected to contribute to the escalation of medical health expenditure for the elderly population.

source: Infodent | 1 2019 Infodent s.r.l. pressoffice@infodent.com

# TOTAL HEALTH EXPENDITURE AND DENTAL EXPENDITURE PER CAPITA BY AGE GROUP, JAPAN, 2015 (110 YEN= IUSD)



Source: Ministry of Health, Labour and Welfare National Health Expenditures in Fiscal Year 2015 (accessed on 6 June 2018) https://www.mhlw.go.jp/toukei/saikin/hw/k-iryohi/15/index.html. [Ref list].

# **USEFUL CONTACTS**

• Japan Dental Association (JDA)

Over 65,000 dentists in Japan are members of the JDA 4-1-20, Kudankita, Chiyoda-ku, Tokyo 102-0073, Japan Phone: +81 3 3262 9212

www.jda.or.jp/en/introduction.html

• Japanese Association for Dental Science (JADS)

(Academic organization organized within the Japan Dental Association organized within the Japan Dental Associa

www.jads.jp/about/outlineenglish.html

• Japan Dental Trade Association

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