



# *Oral health for an ageing population*

## **Roadmap for healthy ageing**

As governments worldwide are under pressure to integrate new demographic trends into policy-making, especially in health, the Oral Health for an Ageing Population (OHAP) project seeks to establish the fundamental role of oral health professionals in healthy longevity. It also aims to study opportunities for improved oral disease prevention and treatment of elderly patients whilst actively raising awareness of the need to conduct research on oral health in ageing populations.

This roadmap aims to support these long-term goals. It provides key information on the phenomenon of global ageing and its implications for oral healthcare services (OHCS). In addition, the roadmap contains a range of possible strategies and actions different stakeholders can implement to meet the needs of older adults with different levels of dependency, based on an adapted Seattle Care Pathway, also referred to as the *Lucerne Care Pathway*.

This roadmap is meant to be used as a quick reference guide that summarizes possible actions and strategies that can be supported and/or implemented either globally (FDI, World Health Organization (WHO), FDI World Dental Congress, etc.) or nationally/locally (National dental associations (NDAs), governments, individual health professionals).



# 1. Facts and figures

## Oral health and ageing: a neglected field

An oral health survey was conducted in 2017 to understand the type of data FDI NDAs collect on elderly oral health and the different models of elderly dental coverage<sup>1</sup>. Of the 140 Regular member NDAs contacted, 62 responded, i.e. 44% response rate. Only 46% of respondents reported collecting data on elderly oral health. This figure is lower in Africa, where only one NDA reported collecting such data.

Most data are collected either by national agencies or dental programmes at universities and are predominantly collected with the participation of an examiner.

Another section of the survey looked at activities performed to promote oral health among older adults. Of the 55 NDAs who responded to this question, only half reported carrying out activities specifically targeting older populations. Among those that did, the most common activities included training and conferences, as well as campaigns targeting affected populations.

This survey highlights the need to shape oral health promotion activities that address the specific needs of older adults. It also sheds light on a global need to improve data collection and dissemination. Introducing new datasets based on self-reported data might be a suitable pathway to increase the amount and frequency of data collected.

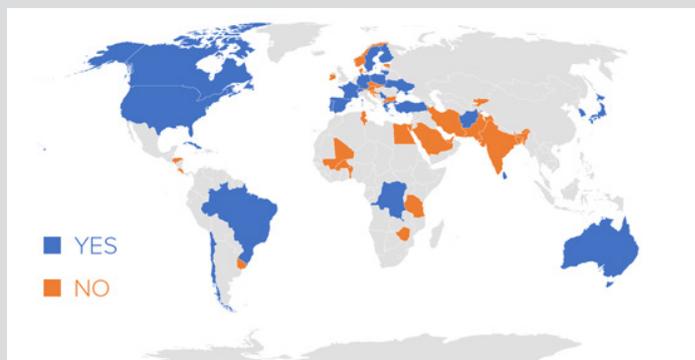
The present roadmap is meant to inform further action to fill these gaps.

## Ageing societies<sup>2</sup>: a global trend

The world's population is ageing: virtually every country in the world is experiencing growth in the number and proportion of older persons in their population. According to data from *World Population Prospects: 2015 Revision*<sup>3</sup>, the number of older adults — those aged 60 years or over — has increased substantially in recent years in most countries and regions, and growth is projected to accelerate in the coming decades. Notably:

- Between 2015 and 2030, the number of people in the world aged over 60 years is projected to grow by 56%, from 901 million to 1.4 billion. By 2050, it will have more than doubled compared to 2015. In other words, in 2015, one in eight people worldwide was aged 60 years or older. By 2030, older adults are projected to account for one in six people globally. By the middle of the 21<sup>st</sup> century, one in every five people will be aged 60 years or over.
- Globally, the number of people aged over 80 years, the 'oldest-old', is growing even faster than the number of older adults overall. According to the latest projections, in 2050 they will have more than tripled in number since 2015, reaching 434 million individuals.
- By 2030, older adults are expected to account for more than 25% of the population in Europe and North America, 20% in Oceania, 17% in Asia, Latin America, and the Caribbean, and 6% in Africa.
- The ageing process is most advanced in high-income countries. Japan is home to the world's oldest population: 33% were aged over 60 years in 2015. Second comes Italy (28.6%), followed by Germany (27.3%) and Bulgaria (27.1%). At the other end of the spectrum, only 2% of the population of the United Arab Emirates was aged over 60 years in 2015. Second comes Qatar (2.3%) and third comes Uganda (3.3%).<sup>4</sup>
- Two-thirds of the world's older adults live in developing countries and their numbers are growing faster there than in developed regions. In many developing countries, population ageing occurs at a much faster pace than it previously did in developed countries. This requires a much faster adaptation of systems which are less mature and where funding is often scarce.

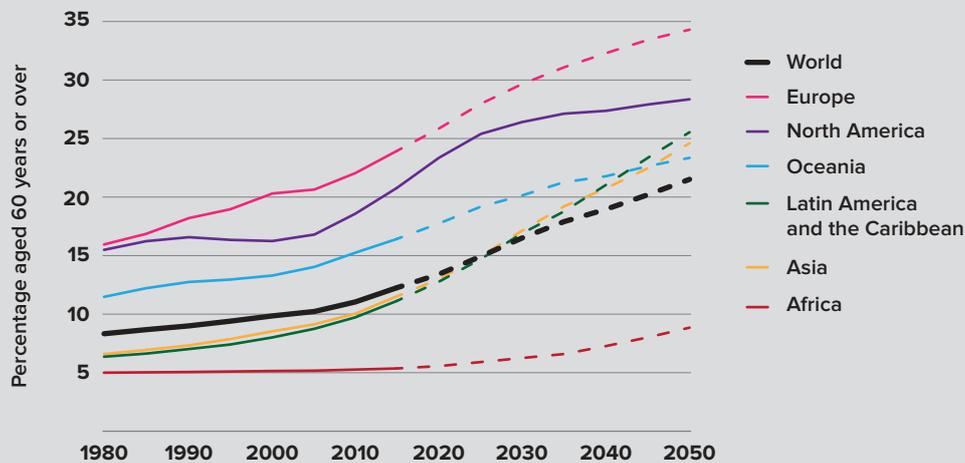
**FIGURE 1** Number of FDI National Dental Associations collecting data on ageing populations



The increasing share of older adults in the population will have implications for nearly all sectors of society, including health and oral health in particular. Looking ahead at the United Nations (UN) 2030 Agenda for Sustainable Development, population ageing is particularly relevant to the goal of ensuring healthy lives and well-being at all ages. Should OHCS wish to contribute to reaching this ambitious goal, they must urgently adapt.

## Ageing populations: an increasing oral disease burden

**FIGURE 2** Percentage of the population aged 60 years or over from the world and regions, 1980-2050



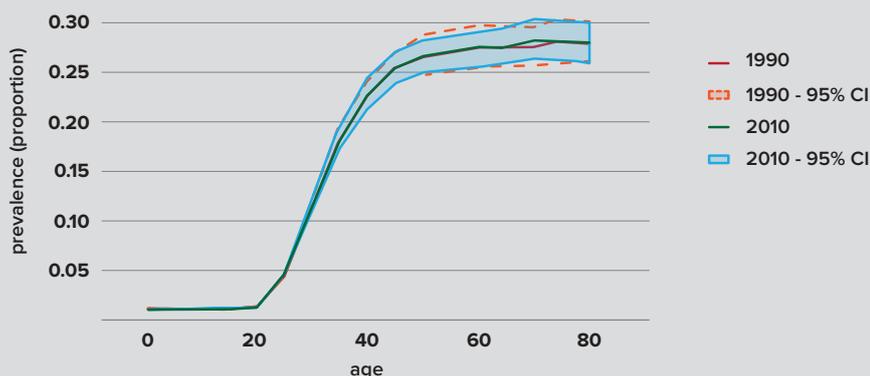
Data source: United Nations 2015. *World Population Prospects: The 2015 Revision*.

The emergence of a “society of longevity” is the result of human progress. On the other hand, the decline of vital functions and health with age is a biological process which cannot be halted. Oral health is by no means different. Older adults therefore often have complicated clinical conditions. Chronic diseases such as diabetes and respiratory diseases, polypharmacy, frailty and dependency for the activities of daily living (ADL) often accompany physiological ageing<sup>5</sup>. Impaired vision, lower tactile thresholds, reduced dexterity, cognitive impairment and dementia often jeopardize daily oral hygiene routines<sup>6</sup>.

According to the 2010 Global Burden of Disease study, older adults accounted for 3.5 million Disability-Adjusted Life Years (DALYs), primarily due to edentulism, followed by severe periodontitis and untreated caries<sup>7,8</sup>. Edentulism impairs chewing ability and often leads to a change in diet and limited food choices<sup>9</sup>. It can also affect social interactions and, more generally, quality of life. It drastically increases with age: its prevalence strongly varies according to geographic location, ranging from 30% of over 65-year-olds in certain regions of Latin America to only 9% in East Asia<sup>10</sup>.

The prevalence of periodontal disease also gradually increases with age, with important geographic differences, ranging from 51% of older adults in East Sub-Saharan Africa to 10% in Oceania<sup>11</sup>. As for untreated caries, they were found to peak at 70 years as root caries emerge<sup>12</sup>.

**FIGURE 3** Prevalence of severe periodontal disease, by age group



**SOURCE** Kassebaum NJ, Bernabe E, Dahiya M, et al. Global burden of severe periodontitis in 1990-2020: a systematic review and meta-regression. *Journal of Dental Research* 2014 93(11): 1045-105



## 2. Older adults: from very fit to severely frail

Frailty is defined as a “state of increased vulnerability to stressors due to age related decline in physiological reserve across neuromuscular, metabolic and immune systems”<sup>13</sup>.

The definitions of the different levels of dependency used in this roadmap are referred to as the **Lucerne Care Pathway**. They are derived from the Seattle Care Pathway for securing oral health in older patients<sup>14</sup> and rely on eight pillars that represent different fields of action.

LEVEL OF DEPENDENCY	DEFINITION
<b>No dependency</b> Canadian Study of Health and Ageing (CSHA) level 1 & 2 <sup>15</sup>	Robust people who exercise regularly and are the most fit group for their age (4 in Pretty <i>et al.</i> )
<b>Pre-dependency</b> CSHA level 3	People with chronic systemic conditions that could impact oral health but, at the point of presentation, are not currently impacting oral health. A comorbidity whose symptoms are well controlled (4 in Pretty <i>et al.</i> ).
<b>Low dependency</b> CSHA level 4	People with identified chronic conditions that are affecting oral health but who currently receive or do not require help to access dental services or maintain oral health. These patients are not entirely dependent, but their disease symptoms are affecting them (4 in Pretty <i>et al.</i> ).
<b>Medium dependency</b> CSHA level 5	People with an identified chronic systemic condition that currently impacts their oral health and who receive or do not require help to access dental services or maintain oral health. This category includes patients who demand to be seen at home or who do not have transport to a dental clinic.
<b>High dependency</b> CSHA level 6 & 7	People who have complex medical problems preventing them from moving to receive dental care at a dental clinic. They differ from patients categorized in medium dependency because they cannot be moved and must be seen at home.

The model of frailty/vulnerability as defined is applicable at various levels: government, policy, population and individual<sup>16</sup>. It can be used to deliver a life-course approach to oral health and to shape targeted service delivery strategies which avoid under- and over-treatment<sup>17</sup>.

### References

Access references and further reading for this document by visiting the project page: [www.fdiworlddental.org/ohap](http://www.fdiworlddental.org/ohap)



### Find out more

Quickly access the project page by scanning the following QR code using your mobile phone camera



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Avenue Louis-Casari 51 • 1216 Geneva • Switzerland  
T +41 22 560 81 50 • [info@fdiworlddental.org](mailto:info@fdiworlddental.org) •  
[www.fdiworlddental.org](http://www.fdiworlddental.org)

**MANAGING  
EDITOR  
WRITER  
DESIGN**

Virginie Horn Borter  
Tania Severin  
Gilberto D Lontro

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## 3. Global situation analysis

### What are the main challenges that must be overcome to meet the oral health needs of ageing populations?

Oral healthcare systems (OHCS) aim to maintain oral health and function through three main pillars: oral health promotion, prevention, and disease control/management<sup>18</sup>. The priority they are given within national agendas affects the services provided, the population served, funding, research priorities, and data acquisition<sup>19</sup>. Demographic changes mean that OHCS must adapt to meet the needs of their increasingly ageing population. In that respect, many OHCS are lagging behind. The following section identifies some of the main challenges OHCS around the world must overcome to adapt to this new paradigm. Depending on their general health and oral health priorities, individual countries might already have been able to overcome some of the challenges mentioned below. Experiences from various countries and settings have shown that solutions do exist. A few successful examples are listed on our dedicated website.

#### Policy and advocacy

- Need to reinforce oral health policies that focus on the specific needs of the elderly
- Gaps in access to adequate dental care and oral health services at all stages of life
- Insufficient trained personnel, facilities, funding, and education
- Lack of prevention-oriented third party payment systems
- Restrictive regulations which, depending on the national setting, might not allow oral health professionals to provide relevant health-related services such as smoking-cessation support, or, conversely, might not allow the provision of relevant oral health promotion or prevention services by an expanded healthcare workforce (including dental hygienists, dental assistants, nurses, etc.)
- Lack of financial incentives for providing oral health information (as opposed to only treatment)
- Inadequate or inexistent reimbursement modalities for the provision of oral health evaluation, education, or preventive care in non-dental settings

#### Provision of care

- Insufficient numbers of adequately trained personnel
- Lack of confidence among oral health professionals, who receive little exposure to specific knowledge
- Lack of guidelines and recommendations to inform geriatric oral care such as how to avoid both under-treatment and over-treatment, how to promote minimally invasive treatments, etc.
- Lack of interest from patients
- Limited access to care because of lack of transportation and inability of older adults to travel to a dental office
- Limited access because of inadequate dental care coverage (unaffordability)
- Restricted access to dental care in long-term care settings
- Poor interoperability of electronic health records among medical and dental care providers

#### Education and training

- Limited specific knowledge about older adults with complex medical conditions and functional limitations
- Insufficient numbers of oral health professionals with geriatric training
- Need to reinforce oral health education in medical and nursing curricula
- Insufficient training of healthcare workers in daily oral care, particularly in homecare and long-term care settings

#### Interprofessional education and practice

- Insufficiently developed interprofessional education and practice models
- Need to develop innovative expanded workforce models, including healthcare providers from primary care, nutrition, physical and occupational therapy, and social work in the delivery of oral health education and hygiene
- Need to strengthen collaboration between dental professionals and other health professionals

#### Monitoring and surveillance

- Lack of standardized, comparable data on global oral health
- Lack of a global monitoring system
- Lack of oral healthcare policies, programmes, and services based on robust data

#### Science and research

- Lack of research dedicated specifically to older adults
- Lack of evidence-based guidelines and recommendations

#### Communication and information

- Little awareness of the role of oral health in healthy ageing, of the importance of retaining teeth and maintaining oral function, and of the contribution good oral health can make to transforming life years into healthy life years
- Lack of awareness among the wider population that good oral health has a beneficial effect on a range of systemic conditions and can therefore contribute to reducing total healthcare costs
- No grassroots support, absence of patient organizations

## 4. Taking action

Adapting oral healthcare systems to meet the needs of elderly populations will require a coalition of different stakeholders. The present roadmap therefore identifies various groups who can contribute to improving oral healthcare systems within their area of expertise and action, namely:

- A. **Policymakers and governments**
- B. **FDI World Dental Federation**
- C. **National dental associations**
- D. **Dentists and dental teams**
- E. **Health professionals** (physicians, nurses, nurse assistants, etc.)
- F. **Public health professionals**
- G. **Research and academia**
- H. **Media** (press, television, social media)
- I. **Patients and their families**

In addition, eight different pillars, or fields of action, have been defined. Action taken in any of these fields by any stakeholder group will contribute to shaping oral healthcare systems which meet the needs of older adults.



Specific actions and roles of each stakeholder group are described, for each group, in a matrix format. This format allows each stakeholder group to quickly identify how they can concretely contribute to maintaining and improving the oral health of older adults, whilst also presenting them with the “bigger picture” that shows how each stakeholder group’s role complements the others.

## 5. Conclusion

Oral healthcare systems must be reshaped to allow elderly individuals to lead their lives with purpose and dignity. Essential considerations include the integration of oral health into overall health; a life-course approach which accounts for common risk factors; a community-based approach; an integrative dimension which rallies all stakeholders; an adequate sharing of tasks and responsibilities among stakeholders; financial and physical accessibility to care and an enabling environment. To achieve such a system, a four-step approach to adapting oral health systems can be applied, as recommended by Fukai *et al*<sup>20</sup>. This step-by-step approach builds on the roles and actions of each group of stakeholders as defined above to allow a gradual adaptation of oral healthcare systems to meet the needs of elderly populations and improve their oral health and oral health-related quality of life.



# A

## AS A Policymaker or government official YOU CAN...



### Oral health for an ageing population

#### General health condition

**Robust**

**Frail** (difficulties  
with instrumental  
activities of daily living)

**Dependent**

(difficulties with basic activities of daily living, i.e. eating, moving from bed to chair, toothbrushing) homebound alone/homebound with family/nursing home

#### Level of dependency

Adapted from *Seattle Care Pathway*

None

Pre

Low

Medium

High

1

INTEGRATE ORAL CARE  
INTO GENERAL CARE

1. Work towards the greater integration of oral healthcare and general healthcare systems with the goal of reducing overall healthcare costs.
2. Support an “oral health in all policies” approach in governmental discussions, particularly regarding nutrition, tobacco, and sugar policies.

2

PROMOTE ORAL HEALTH  
THROUGHOUT  
THE LIFE-COURSE

1. Support the implementation of oral health policies that consider the social determinants of oral health throughout the life-course and aim to reduce oral health gaps and inequalities.
2. Recognize and promote the fundamental, leading role of dentists in promoting and providing oral care to achieve optimal lifelong oral health.

3

SHAPE EVIDENCE-BASED  
ORAL HEALTH POLICIES

1. Be aware of the benefits of implementing life-course and common risk factor approaches.
2. Insist on implementing evidence-based oral health policies that are informed by reliable monitoring and surveillance data.
3. Engage with professional associations (national dental associations) to roll-out a data collection system.
4. Advocate to integrate of oral health related questions, selected in collaboration with national dental associations, into national health surveys.
5. Advocate for the development and adoption of innovative information systems.
6. Set up a robust monitoring system, and engage with your national dental association to obtain recent and relevant data and evidence from clinical/epidemiological studies.

4

REMOVE FINANCIAL  
BARRIERS

1. Work towards the inclusion of regular dental check-ups in oral health coverage/reimbursement schemes.
2. Introduce targeted subsidies/financial aid for those who cannot afford the treatment needed to preserve their oral health and oral health related quality of life.
3. Seek to include affordable and cost-effective treatments into oral health coverage/reimbursement schemes, considering in particular minimally invasive treatment options.

5

REMOVE PHYSICAL  
BARRIERS

1. Implement public services such as transportation services.

1. Implement policies that increase the availability of mobile oral health care services and that support the development of teledentistry care models.
2. Initiate policies which foster the availability of dental services on-site for patients/elderly.

6

PROVIDE APPROPRIATE  
ORAL HEALTHCARE

1. Be aware that providers will face an increased need and demand for oral health services from dentate older adults and will seek to implement policies (education and training, remuneration systems, etc.) that will produce sufficient numbers of adequately trained oral healthcare workers.
2. Support the inclusion of geriatric oral health into dental curricula.
3. Support interprofessional training to improve non-dental health professionals’ awareness of oral health in general, and geriatric oral health in particular.
4. Support an expanded scope of practice for oral health professionals, such as smoking cessation, and for other healthcare professionals, such as application of fluoride.

7

MOBILIZE ALL  
STAKEHOLDERS ALONG  
THE CARE PATHWAY

1. Implement policies that account for increased coordination needs surrounding dependent older patients and that integrate this additional workload in healthcare systems financial schemes.

8

FOSTER COMMUNITY-  
BASED PROGRAMMES

1. Support the implementation of community-based oral health promotion and disease prevention programmes in various settings that range from daycare centres to nursing homes.



**General health condition**

**Robust**

**Frail** (difficulties with instrumental activities of daily living)

**Dependent**

(difficulties with basic activities of daily living, i.e. eating, moving from bed to chair, toothbrushing) homebound alone/homebound with family/nursing home

**Level of dependency**

*Adapted from Seattle Care Pathway*

None

Pre

Low

Medium

High

**1** INTEGRATE ORAL CARE INTO GENERAL CARE

1. Promote an “oral health in all policies” approach, particularly regarding nutrition, tobacco and sugar policies, towards both our members (downstream) and global health organizations (WHO, WHPA, NCD Alliance, etc.) (upstream).

**2** PROMOTE ORAL HEALTH THROUGHOUT THE LIFE-COURSE

1. Promote the fundamental, leading role of dentists in promoting and providing oral care to achieve optimal lifelong oral health.

**3** SHAPE EVIDENCE-BASED ORAL HEALTH POLICIES

1. Develop and disseminate a set of core oral health indicators that match the specific needs of older adults.
2. Develop a global repository where data can be collected, compiled, and shared, and make it available to all our members.

**4** REMOVE FINANCIAL BARRIERS

1. Advocate universal oral health coverage.

**5** REMOVE PHYSICAL BARRIERS

**6** PROVIDE APPROPRIATE ORAL HEALTHCARE

1. Function as a facilitator to develop and disseminate guidelines and recommendations pertaining to geriatric oral health promotion, prevention, and care.

**7** MOBILIZE ALL STAKEHOLDERS ALONG THE CARE PATHWAY

1. Set up a global coalition of stakeholders to foster communication and information sharing.
2. Create a global, online platform to share resources, guidelines, recommendations, best practices, etc.

**8** FOSTER COMMUNITY-BASED PROGRAMMES

1. Set up a platform to share best practice community-based programmes around the world.
2. Work with partners to implement global community-based programmes targeting elderly populations.





**General health condition**

<b>Robust</b>	<b>Frail</b> (difficulties with instrumental activities of daily living)	<b>Dependent</b> (difficulties with basic activities of daily living, i.e. eating, moving from bed to chair, toothbrushing) homebound alone/homebound with family/nursing home
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**Level of dependency**  
Adapted from Seattle Care Pathway

<b>None</b>	<b>Pre</b>	<b>Low</b>	<b>Medium</b>	<b>High</b>
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**1** INTEGRATE ORAL CARE INTO GENERAL CARE

1. Initiate a dialogue to bring together oral health and general health professionals with the goal of reinforcing collaborations, to reduce overall healthcare costs.
2. Support an “oral health in all policies” approach, particularly regarding nutrition, tobacco, and sugar policies.

**2** PROMOTE ORAL HEALTH THROUGHOUT THE LIFE-COURSE

1. Promote the fundamental leading role of dentists in promoting and providing oral care to achieve optimal lifelong oral health.

**3** SHAPE EVIDENCE-BASED ORAL HEALTH POLICIES

1. Set up a surveillance network of dentists who collect core oral health indicators.
2. Encourage all dentists to use core oral health indicators to inform both global/national repositories and their own clinical practice.

**4** REMOVE FINANCIAL BARRIERS

1. Advocate to include oral healthcare coverage into general health coverage. In particular:
  - advocate the inclusion of regular dental check-ups into oral health coverage/reimbursement schemes;
  - advocate to include affordable and cost-effective treatments into oral health coverage/reimbursement schemes, considering (in particular) minimally invasive treatment options;
  - support the implementation of targeted subsidies/financial aid for those who cannot afford to pay for the treatment that is needed to preserve their oral health and their oral health related quality of life.

**5** REMOVE PHYSICAL BARRIERS

1. Encourage the implementation of mobile oral health care services
2. Drive the development of teledentistry care models.

**6** PROVIDE APPROPRIATE ORAL HEALTHCARE

1. Suggest OHCS adaptations to meet the increasing need and demand for oral health services for dentate older adults (education & training, remuneration systems...).
2. Support the inclusion of geriatric oral health into dental curricula.
3. Foster the implementation of new treatment approaches, such as minimally invasive interventions, which can have a particularly beneficial effect on older adults in terms of quality of life and cost-effectiveness.
4. Advocate for an expanded scope of practice for oral health professionals (eg: smoking cessation) and for other healthcare professionals (eg: application of fluoride).
5. Support interprofessional training to improve non-dental health professionals’ awareness of oral health in general, and of geriatric oral health in particular.

**7** MOBILIZE ALL STAKEHOLDERS ALONG THE CARE PATHWAY

1. Set up a national coalition of stakeholders to foster communication and information-sharing.
2. Create a national Internet-based platform to share resources, guidelines, recommendations, best-practices etc.

**8** FOSTER COMMUNITY-BASED PROGRAMMES

1. Support the implementation of community-based oral health promotion and disease prevention programmes in various settings that range from day-care centres to nursing homes.
2. Collect and share best-practice examples from your local communities.

# D

AS A  
**Dentist or member  
of a dental team**  
YOU CAN...



*Oral health for an  
ageing population*

**General health  
condition**

**Robust**

**Frail** (difficulties  
with instrumental  
activities of daily living)

**Dependent**

(difficulties with basic activities of daily living, i.e. eating, moving from bed to chair, toothbrushing) homebound alone/homebound with family/nursing home

**Level of dependency**

*Adapted from Seattle Care Pathway*

**None**

**Pre**

**Low**

**Medium**

**High**

**1** INTEGRATE ORAL CARE INTO GENERAL CARE

1. Support the inclusion of oral health into general health.
2. Seek communication and collaboration with medical colleagues when faced with patients who have other diseases.

**2** PROMOTE ORAL HEALTH THROUGHOUT THE LIFE-COURSE

3. Contribute to general health promotion by discussing major shared risk factors with your patients (unhealthy diet, sugar consumption, tobacco use, dehydration...)
4. Support an "oral health in all policies" approach when discussing with colleagues, policymakers, etc.

3. Support an "oral health in all policies" approach when discussing with colleagues, policymakers, etc.

**3** SHAPE EVIDENCE-BASED ORAL HEALTH POLICIES

1. Inform patients about the importance of undergoing regular dental check-ups.
2. Foster daily oral hygiene routines in your older patients by providing them with regular information.

1. Inform the carers of your patients (lay and professional) about the importance of undergoing regular dental check-ups.
2. Foster the oral hygiene of your patients by providing their carers (lay or professional) with regular information.

**4** REMOVE FINANCIAL BARRIERS

1. Be open to participating in surveillance and monitoring activities, for example by contributing to standardized surveys and epidemiological surveillance activities to support public health policies for healthy ageing.

1. Advocate to include regular dental check-ups into healthcare coverage.
2. Advocate to introduce subsidies/financial aid for those who cannot afford to pay for the treatment needed to preserve their oral health and oral health related quality of life.

**5** REMOVE PHYSICAL BARRIERS

1. Ensure that your dental practice is accessible to persons with reduced mobility, or ensure that you are able to recommend such a practice.

2. Support the introduction of transportation services to and from your dental office.

2. Be willing to collaborate in a way that facilitates access to care for people who can no longer attend your dental office, either by going onsite or by recommending such a service.

3. Support the introduction of mobile oral health services.

**6** PROVIDE APPROPRIATE ORAL HEALTHCARE

1. Ensure that you have sufficient knowledge of the characteristics and specificities of older adults, i.e. polypharmacy, biological ageing process, successful ageing.

1. Ensure that you have sufficient knowledge on the characteristics and specificities of older adults.

2. Refer to existing guidelines/toolkits as a tool for continuing development and to determine prevention and treatment options.
3. Implement new treatment approaches, such as minimally invasive interventions, which can have a particularly beneficial effect on older adults in terms of quality of life and cost-effectiveness.
4. Develop and share homecare prevention strategies which emphasize the need for pain and infection management.
5. Use the knowledge you have of your own role and those of other professions to address the needs of your patients.

6. Participate in the development of teledentistry and mobile oral healthcare services.

**7** MOBILIZE ALL STAKEHOLDERS ALONG THE CARE PATHWAY

1. Seek regular communication with older patients, their family members and carers, as well as with medical colleagues or nursing personnel to raise awareness of the importance of good oral hygiene/good oral health and provide support and advice in your area of expertise.

1. Seek regular communication with all stakeholders involved in the care of older patients to raise awareness of the importance of good oral hygiene/good oral health and provide support and advice in your area of expertise.

**8** FOSTER COMMUNITY-BASED PROGRAMMES

1. Support or perform preventive actions (oral health promotion actions, screenings) in community settings.

1. Support or perform preventive actions (oral health promotion actions, screenings) in community settings, including nursing homes.



**General health condition**

**Robust**

**Frail** (difficulties with instrumental activities of daily living)

**Dependent**

(difficulties with basic activities of daily living, i.e. eating, moving from bed to chair, toothbrushing) homebound alone/homebound with family/nursing home

**Level of dependency**

Adapted from *Seattle Care Pathway*

None

Pre

Low

Medium

High

1

INTEGRATE ORAL CARE INTO GENERAL CARE

1. Support the integration of oral health into general health.

2

PROMOTE ORAL HEALTH THROUGHOUT THE LIFE-COURSE

1. Inform patients about the importance of regularly attending the dentist.  
2. Regularly remind your patients about the importance of performing their daily oral hygiene routines.

1. Inform the carers of your patients (lay and professional) about the importance of regularly attending the dentist.  
2. Regularly remind the carers of your patients about the importance of daily oral hygiene routines.

3

SHAPE EVIDENCE-BASED ORAL HEALTH POLICIES

4

REMOVE FINANCIAL BARRIERS

1. Support the inclusion of oral prevention and screening services into health coverage/reimbursement schemes.

5

REMOVE PHYSICAL BARRIERS

1. Provide your patients with information and instruction on how to reduce their risk for caries and periodontal disease.  
2. Assist your patients in their daily oral hygiene routine.  
3. When possible, avoid medications that decrease salivary flow.  
4. Adopt the 'HEENOT' principle (Head, Eyes, Ears, Nose, Oral cavity and Throat) when assessing a patient.

1. Provide the carers of your patients with information and instruction on how to reduce their risk for caries and periodontal disease.  
2. Conduct daily oral hygiene care with your patients (to reduce the risk and incidence of aspiration pneumonia).  
3. Provide nutritional advice.  
4. When possible, avoid medications that decrease salivary flow.  
5. Adopt the 'HEENOT' principle (Head, Eyes, Ears, Nose, Oral cavity and Throat) when assessing a patient.

6

PROVIDE APPROPRIATE ORAL HEALTHCARE

1. Seek regular communication with older patients, their family members and carers, as well as with oral health professionals and workers, to raise awareness of the importance of good oral hygiene/good oral health and provide support and advice in your area of expertise.

1. Seek regular communication with all stakeholders involved in the care of your older patients in order to raise awareness of the importance of good oral hygiene/good oral health and to provide support and advice in your area of expertise.

7

MOBILIZE ALL STAKEHOLDERS ALONG THE CARE PATHWAY

8

FOSTER COMMUNITY-BASED PROGRAMMES

1. Participate in preventive actions (oral health promotion actions, screenings) in community settings.

1. Participate in preventive actions (oral health promotion actions, screenings) in community settings, including nursing homes.



**General health condition**

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*Adapted from Seattle Care Pathway*

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**1**

**INTEGRATE ORAL CARE INTO GENERAL CARE**

1. Advocate the inclusion of oral health into general health.
2. Support an “oral health in all policies” approach, particularly regarding nutrition, tobacco, and sugar policies.

**2**

**PROMOTE ORAL HEALTH THROUGHOUT THE LIFE-COURSE**

1. Advocate oral health policies which consider the social determinants of oral health throughout the life-course and aim to reduce oral health gaps and inequalities.
2. Promote the fundamental leading role of dentists in promoting and providing oral care to achieve optimal lifelong oral health.

**3**

**SHAPE EVIDENCE-BASED ORAL HEALTH POLICIES**

1. Advocate the introduction of a surveillance network of dentists who collect core oral health indicators.
2. Encourage all dentists to use core oral health indicators to inform both global/national repositories and their own clinical practice.

**4**

**REMOVE FINANCIAL BARRIERS**

1. Advocate to include regular dental check-ups into oral health coverage/reimbursement schemes.
2. Advocate to include affordable and cost-effective treatments into oral health coverage/reimbursement schemes, considering minimally invasive treatment options in particular.
3. Support the implementation of targeted subsidies/financial aid for those who cannot afford to pay for the treatment that is needed to preserve their oral health and their oral health related quality of life.

**5**

**REMOVE PHYSICAL BARRIERS**

1. Foster the implementation of public services, such as transportation services.

1. Foster policies that increase the availability of mobile oral healthcare services and support the development of teledentistry care models.
2. Advocate the availability of dental services on-site for elderly patients.

**6**

**PROVIDE APPROPRIATE ORAL HEALTHCARE**

1. Advocate OHCS adaptations to meet the increasing need and demand for oral health services for dentate older adults (education and training, remuneration systems, etc.).
2. Support the inclusion of geriatric oral health into dental curricula.
3. Support interprofessional training to improve non-dental health professionals’ awareness of oral health in general and of geriatric oral health in particular.
4. Advocate an expanded scope of practice for oral health professionals, such as smoking cessation, and for other healthcare professionals, such as application of fluoride.
5. Support research efforts to evaluate the benefits of new workforce models (expanded scope of practice).

**7**

**MOBILIZE ALL STAKEHOLDERS ALONG THE CARE PATHWAY**

1. Advocate policies that account for increased coordination needs of dependent older patients and that integrate this additional workload into healthcare system financial schemes.

**8**

**FOSTER COMMUNITY-BASED PROGRAMMES**

1. Foster the implementation of community-based oral health promotion and disease prevention programmes in various settings that range from daycare centres to nursing homes.



**General health  
condition**

**Robust**

**Frail** (difficulties  
with instrumental  
activities of daily living)

**Dependent**

(difficulties with basic activities of daily living, i.e. eating, moving from bed to chair, toothbrushing) homebound alone/homebound with family/nursing home

**Level of dependency**

*Adapted from Seattle Care Pathway*

**None**

**Pre**

**Low**

**Medium**

**High**

**1**

**INTEGRATE ORAL CARE  
INTO GENERAL CARE**

1. Adopt an interprofessional approach to oral healthcare, linking it to general health.
2. Conduct research on the link between oral health, noncommunicable diseases, and frailty.

**2**

**PROMOTE ORAL HEALTH  
THROUGHOUT  
THE LIFE-COURSE**

1. Conduct research on the social determinants of oral health to contribute to a better understanding of health gaps.

**3**

**SHAPE EVIDENCE-BASED  
ORAL HEALTH POLICIES**

1. Contribute to adapting patient-centred outcome measures (PROMs), such as the newly developed FDI/ICHOM core set of measures, to cover the specificities of older adults.
2. Contribute to the development of targeted functional indicators (masticatory performance, plaque, and denture plaque)
3. Contribute to developing the body of evidence on the relationship between healthy dentition maintenance and functional, psychosocial, and structural benefits.
4. Conduct research on the outcomes of oral health intervention programmes and workforce models to guide policy development.
5. Assess the impact of workforce redesign on clinical outcomes.

**4**

**REMOVE FINANCIAL  
BARRIERS**

1. Conduct research to evaluate the cost-effectiveness of reimbursing oral prevention and oral care services.

**5**

**REMOVE PHYSICAL  
BARRIERS**

1. Conduct research on the efficiency and cost-effectiveness of alternative care models, such as teledentistry.

**6**

**PROVIDE APPROPRIATE  
ORAL HEALTHCARE**

1. Seek to include geriatric care into dental curricula.
2. Promote the use of minimally invasive interventions to avoid overtreatment.
3. Initiate a move from a 'HEENT' to a 'HEENOT' paradigm (Head, Eyes, Ears, Nose, Oral cavity and Throat) in the basic training of all health professions.

**7**

**MOBILIZE ALL  
STAKEHOLDERS ALONG  
THE CARE PATHWAY**

1. Reinforce interprofessional training for oral health professionals.
2. Provide interprofessional training and education to improve general healthcare professionals' knowledge of oral health.
3. Extend interprofessional education and activities to graduate and post-graduate programmes.
4. Educate oral health and general health practitioners on the added-value of interprofessional oral health activities in their daily practice.
5. Evaluate the efficiency and cost-effectiveness of interventions provided by health professionals.

**8**

**FOSTER COMMUNITY-  
BASED PROGRAMMES**

1. Evaluate community-based oral health promotion and prevention programmes.

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AS A  
**Journalist**  
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## Oral health for an ageing population

### General health condition

**Robust**

**Frail** (difficulties with instrumental activities of daily living)

**Dependent**

(difficulties with basic activities of daily living, i.e. eating, moving from bed to chair, toothbrushing) homebound alone/homebound with family/nursing home

### Level of dependency

Adapted from Seattle Care Pathway

None

Pre

Low

Medium

High

- 1** INTEGRATE ORAL CARE INTO GENERAL CARE

1. Raise awareness of the links between oral health and general health.
- 2** PROMOTE ORAL HEALTH THROUGHOUT THE LIFE-COURSE

1. Promote the value of oral health at all stages of life.  
2. Disseminate information on good oral health behaviours (daily self-care, use of fluoride, regular dental check-ups, avoiding tobacco and alcohol use, healthy diet, etc.).
- 3** SHAPE EVIDENCE-BASED ORAL HEALTH POLICIES
- 4** REMOVE FINANCIAL BARRIERS
- 5** REMOVE PHYSICAL BARRIERS
- 6** PROVIDE APPROPRIATE ORAL HEALTHCARE
- 7** MOBILIZE ALL STAKEHOLDERS ALONG THE CARE PATHWAY
- 8** FOSTER COMMUNITY-BASED PROGRAMMES

1. Report on successful community-based programmes, for example by visiting elderly care homes which deliver such programmes or by following trained personnel who deliver such programmes in various settings.



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