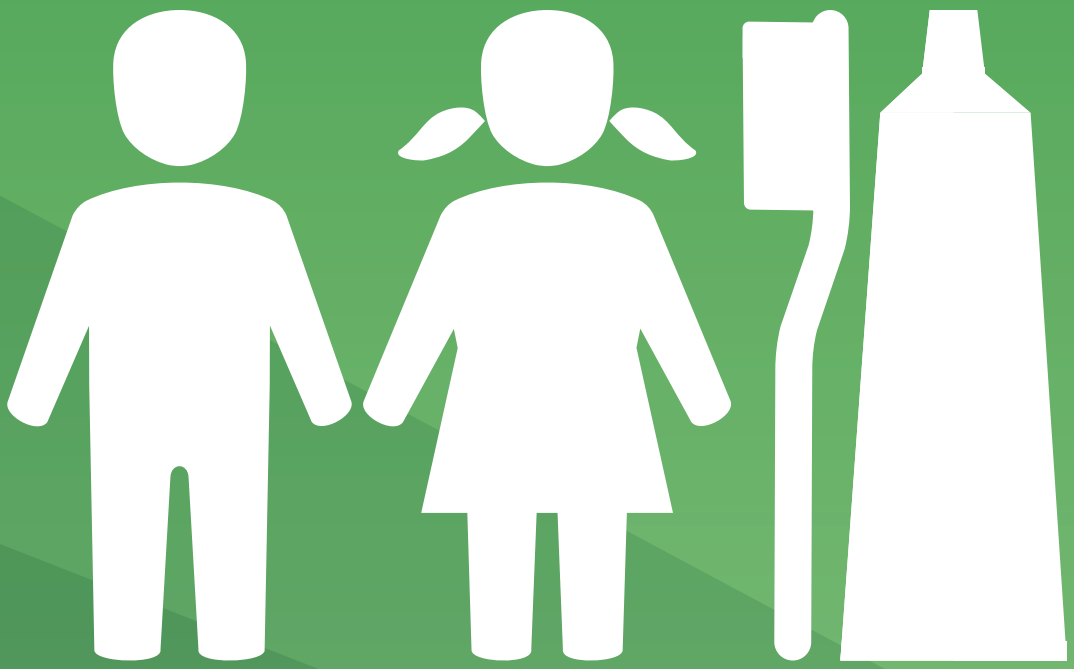
Oral Health Strategy 2021-2026

for Children aged 0-11 years

HEALTH IMPROVEMENT



Isle of Man Government
Reiltys Ellan Vannin

HEALTH IMPROVEMENT
• Public Health Directorate

About the Public Health Directorate, Isle of Man

Public Health Isle of Man exists to protect and improve the health and wellbeing of the residents of the Isle of Man and to reduce health inequalities through strong partnerships with individuals, communities and key public, private and voluntary organisations.

A Division of the Isle of Man Government Cabinet office, we provide government, industry and the public with evidence-based professional, scientific and delivery expertise and support.

- To protect and improve the health and wellbeing of the island's whole population rather than treating the individual.
- Work systematically to alter our environment, improve lifestyles and reduce risk factors across our population
- Prioritise interventions which will achieve change for the greatest number of people at affordable cost
- Champion approaches that support individuals, families and communities in taking responsibility for their own health and wellbeing
- Work with partners across government, private and third sectors to get public health into all policies – supporting people to take responsibility for their own health by ensuring they have the necessary skills and knowledge and live in environments and communities where healthy choices are easy choices.

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VERSION CONTROLS

Version Number	Details	Date
01.00	Document created	October 2019
02.00	Updated	October 2021

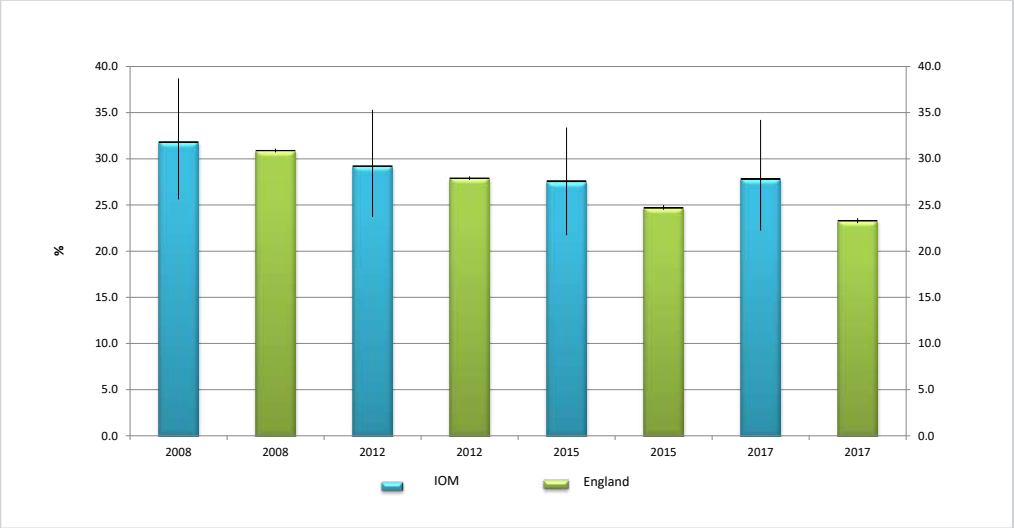
DOCUMENT REVISIONS

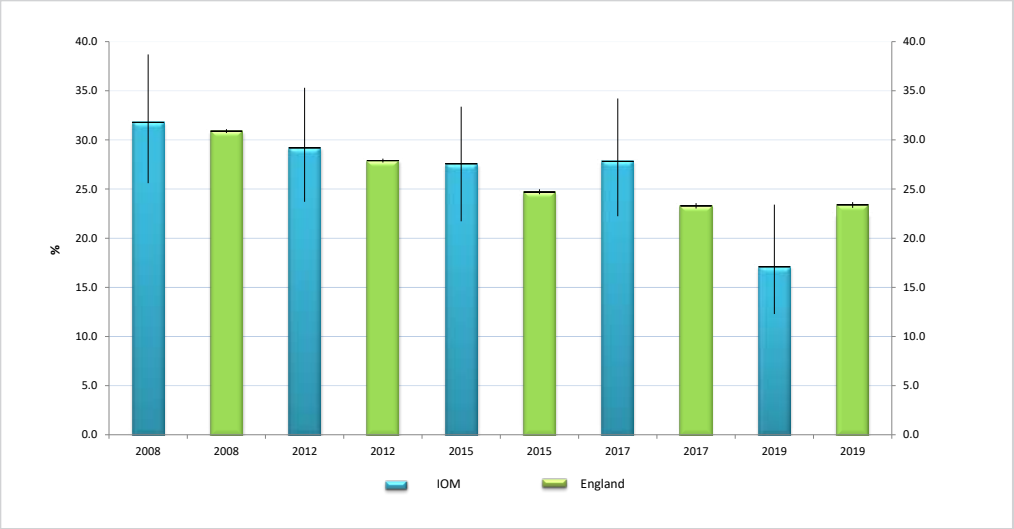
The Oral Health Strategy for Children aged 0-11 years was produced in 2019 using data available at that time from 2017/18.

As a result of the COVID-19 Pandemic the publication of this Strategy was delayed.

As new data has since been made available, we have captured these changes in the table below.

Foreword (p.13)	
Previous	In 2017, 27.83% of five-year-olds on the Isle of Man had tooth decay.
Update	In 2019, 17.1% of five-year-olds on the Isle of Man had tooth decay.
Drivers for Change (p.14)	
Previous	27.7% of children aged 5 years have tooth decay. Tooth decay is the main cause of hospital admissions for children aged 5-9 years. Rates of tooth extractions due to decay for children admitted to hospital is higher than England.
Update	17.1% of children aged 5 years have tooth decay. The latest data available (2017) indicates tooth decay was the main cause of hospital admissions for children aged 5-9 years. From 2011/12 to 2017/18, rates of tooth extraction due to decay for children admitted to hospital have been consistently higher than England. (No later data available).
2.6 Supervised Tooth Brushing Programmes (p.19)	
Previous	The latest figures show that in 2017, 27.83% of five-year-olds on the Island have experienced tooth decay.
Update	The latest figures show that in 2019, 17.1% of five-year-olds on the Island had experienced tooth decay.

3.2 Epidemiology (p.24)	
Previous	In 2017 there was a slight increase in the percentage of children with tooth decay (on-Island) compared to 2015. Despite the overall reduction in tooth decay since 2008, the percentage of five-year-old children with decay remains higher than England; although the difference is not statistically significant, it remains higher than 25% (one quarter). 
Update	In 2019 there was a decrease in the percentage of children with tooth decay (on-Island) compared to 2017. For the first time in over ten years, the rate is lower than the England percentage. Compared to the previous survey results (2017), which not only remained higher than the England rate, but saw an increase in the percentage of children with tooth decay on Island, this is a clear improvement. This does not however mean that we can become complacent. We must still strive towards achieving the goals set out in this strategy to give us the best chance of continuing this new pattern and improving our children's oral health further. An upcoming epidemiology survey will be undertaken in 2021/22.

	
3.3 The Care Index (p.25)	
Previous:	The Care Index on the Isle of Man is lower than England; in 2017 the Isle of Man Care Index stood at 4.43% compared with 11.8% in England, meaning children have more untreated decay on-Island than their England counterparts. It has not been determined as to whether this is due to low rates of restorative interventions by dentists, or whether these children are not being seen by dental services. Further investigation is therefore recommended to help identify the reason behind this.
Update	The Care Index on the Isle of Man is higher than England; in 2019 the Isle of Man Care Index stood at 19.8% compared with 10.3% in England, indicating children have less untreated decay on-Island than their England counterparts. This is a contrast to the 2017 data, which found the Isle of Man Care Index to be 4.43% compared to 11.8% in England. The noticeable increase in the Manx data is likely due to the small sample size* rather than a sudden increase in restorative activity. For improved confidence, a trend, at least, would be required. ** In 2019, 175 children were examined from a target of 339 (51%) compared to 212 from a target of 356 (59%) in 2017.*
3.4 Tooth Extractions (p.25)	
Previous	The prevalence of five-year-olds with extracted teeth on-Island is less than those in England. The proportion of children with experience of extraction on the Isle of Man was 1.42% in 2017 compared to 2.4% in England. Rates for hospital admissions for tooth extractions in children aged 10 and under are much higher than rates for England (Figure 6).

Update	There is no data available on the prevalence of five-year-olds with extracted teeth after the 2017 data presented in the strategy. Access to data on tooth extractions due to decay for children admitted to inpatients to hospital (aged 10 years and under) is currently inaccessible and therefore an update cannot be provided.
3.5 General Anaesthetic (p.25)	
Previous	Children listed for dental treatment under general anaesthetic 2018 • 112 children listed for dental treatment under general anaesthetic. • 108 procedures for individual children were carried out (including referrals carried over from 2017). • All 108 children had decay which required care that could not be managed in a dental surgery under local anaesthetic or inhalation sedation and local anaesthetic. • The average waiting time for children listed for treatment in 2018 was 10.3 weeks. • Total number of teeth extracted in 2018 was 714, averaging 6.6 teeth per child listed for treatment. • Total of 94 fillings were placed in 35 patients. • 20 of the 112 children listed were to receive treatment in 2019.
Update	Children listed for dental treatment under general anaesthetic 2020 • 77 children were listed for dental treatment under general anaesthetic. • 68 procedures for individual children were carried out (including referrals carried over from 2019). • All 68 children had decay which required care that could not be managed in the dental surgery under local anaesthetic or inhalation sedation and local anaesthetic. • Total number of teeth extracted in 2020 was 283, averaging 5.8 teeth per child listed for treatment. • Total of 71 fillings were placed in 27 patients. • 28 of the 77 children listed were to receive treatment in 2021.

	2020 was significantly affected by the COVID-19 pandemic. The access to general anaesthetic was limited, and there were no planned general anaesthetic sessions from 6th March 2020 until 7th August 2020. This clearly influenced the waiting times for care, however the service utilised additional sessions to try to reduce waiting times again.

3.6 Fluoride Varnish Applications (p.27)

Previous

Fluoride Varnish Applications

Age group	2016-2017	2017-2018	2018-2019
0 - 2	98	114	90
3 - 5	758	967	1,067
6 - 12	2,471	3,470	4,008

Source: DHSC Primary Care Services

Update

Fluoride Varnish Applications

Age group	2016-2017	2017-2018	2018-2019
0 - 2	98	114	90
3 - 5	758	967	1,067
6 - 12	2,471	3,470	4,008

Source: DHSC Primary Care Services

Age group	2019-2020
3 - 16	5,009

Source: DHSC Primary Care Services

Unique patient count (3-16 year olds with fluoride varnish) 2019-2020: 5009 (with 2,212 (44%) (with 2,212 (44%) having received two or more applications of fluoride varnish within the year (April 19 – March 20).

3.7 Fissure Sealants (p. 27)

Fissure sealants are another preventative intervention, introduced in the 1960s to help prevent dental cavities, mainly in the pits and fissures of the occlusal (biting) surfaces.

Table 2: Number of fissure sealants applied to children on the Isle of Man from 2017-2019

Age group	2017-2018	2018-2019
0 - 2	0	0
3 - 5	7	6
6 - 12	240	328

Source: DHSC Primary Care Services

Update

Table 2: Number of fissure sealants applied to children on the Isle of Man from 2017-2020

Age group	2017-2018	2018-2019	2019-2020
0 - 2	0	0	1
3 - 5	7	6	3
6 - 12	240	328	347

Source: DHSC Primary Care Services

The number of fissure sealant applications shown in the table are per submitted form, rather than individual patients; therefore the numbers shown do not necessarily reflect the number of individual children (unique patients) who had received a fissure sealant application

2019-2020 saw a slight increase in the number of applications in children aged 6-12. Children in the two younger age groups as shown in the able above are much less likely to require fissure sealants, as permanent molars do not usually erupt until around the age of 6/7 years. Therefore, the low statistics among the younger age groups is not a matter of concern.

Note: This document will continue to be updated as more information becomes available.

CONTENTS

FOREWORD

Ray Harmer MHK
Minister for Policy and Reform

I am delighted to introduce the Oral Health Strategy for Children aged 0-11 years 2021-2026. This is a five-year strategy that provides a strategic framework for improving the oral health of our young people.

In 2017, **27.83**% of five-year-olds on the Isle of Man had tooth decay. Tooth decay is one of the most common non-communicable childhood diseases, despite being largely preventable. Tooth decay can have a significant bearing on a child's health and wellbeing, and can impact on the ability to sleep, eat, speak, play and socialise with other children.

The strategy focuses on a preventative approach to oral health care recognising that we need to tackle the wider determinants of health that can impact on oral health.

In order to gain a better understanding of the issues related to the poor oral health on the Island, the Public Health Directorate undertook an oral health needs assessment. The recommendations documented in the report were used to identify the key priorities that have steered the development of this strategy.

Three priority areas for action identified:

1. Governance data and performance
2. Education and prevention
3. Address the wider determinants of oral health.

We have taken a collaborative, evidence-based approach to developing this strategy. The strategy does not consider every issue in fine detail, but aims to provide strategic direction highlighting the challenges ahead. In partnership with key stakeholders a comprehensive action plan will be produced to support the implementation of this strategy.

The Oral Health Strategy 2021-2026 and the Dental Strategy 2020-2025 are interconnected in relation to the enhancement of oral health promotion, early intervention and the eradication of preventable decay in young children.

I would like to thank all those who have played their part in developing this strategy and their commitment to improving the oral health of our young people.

VISION

To improve the oral health of children living in the Isle of Man.

STRATEGIC OUTCOMES

- All children on the Isle of Man have access to a dentist.
- Reduce the prevalence of tooth decay in children at five years of age.
- Reduce the average number of tooth extractions per child due to decay.
- Reduce inequalities in dental decay prevalence.
- Change in food choices (meals and snacks) in schools, clubs and early years settings.

KEY PARTNERS

- Isle of Man Government Departments
- Private businesses/organisations
- Third sector providers
- Community groups/clubs

STRATEGY PURPOSE

To set out the strategic approach to improving the oral health of children 0-11 years.

Isle of Man Oral Health Strategy 2021-2026

for Children aged 0-11 years

DRIVERS FOR CHANGE

On the Isle of Man:

- 27.83% of children aged 5 years have tooth decay.
- Tooth decay is the main cause of hospital admissions for children aged 5-9 years.
- Rates of tooth extractions due to decay for children admitted to hospital is higher than England.
- Lack of healthy food and drink policies in childhood settings.
- Difficulty accessing NHS dental services.

What we know:

- Five year olds who live in areas with water fluoridation schemes are less likely to experience tooth decay.
- Reduction in the consumption of foods and drinks that contain sugar can prevent tooth decay.
- Supervised toothbrushing schemes address inequalities in oral health.

AIM

To drive change in oral health behaviours through awareness, education and preventative interventions.

KEY PRIORITY AREAS FOR ACTION

- Education and Prevention
- Governance, Data and Performance Review
- Addressing the wider determinants of oral health

STRATEGIC OBJECTIVES

- Share appropriate data and information across agencies.
- Ensure oral health is included in all health and wellbeing policies.
- Evaluate the effectiveness of oral health provision against best practice.
- Improve the oral health of children through education and early preventative interventions.
- Explore the option of mandatory policy for early years settings participation in Smile of Mann.
- Reduce inequalities by tackling the wider determinants of oral health.
- Develop a national standard for food and drink offered through schools, and government-run children and young people's clubs.

1. INTRODUCTION

This strategy sets out our approach to improving the oral health of children aged 0-11 years residing on the Isle of Man. The development of this strategy has been steered by the findings and recommendations of the oral health needs assessment report. The strategy focuses on a preventative approach to oral health care recognising that partnership working is a key factor in tackling the wider determinants of health that impact on the oral health of our children.

1.1 What is Oral Health?

Oral health refers to the physical condition and hygiene of an individual's teeth, gums, supporting bone and soft tissues of the mouth, tongue and lips. The World Health Organisation (WHO) defines good oral health as being free from diseases and disorders that affect the oral cavity.[1]

1.2 Why is the Oral Health of Children and Young People Important?

Good oral health is essential to general health and wellbeing. Dental decay is one of the most common non-communicable childhood diseases, despite being largely preventable. Poor oral health can affect an individual's ability to eat, speak, smile and socialise normally due to embarrassment. The impacts are not only limited to the child but also the family and society, including school absence, and the need for parents to take time off work to attend hospital appointments related to dental decay. Good oral hygiene and a healthy diet are the best preventative measures in tackling dental decay.

1.3 Oral Health Needs Assessment

The Oral Health Needs Assessment describes the oral health of children 0-11 years living on the Isle of Man. It identifies the key issues that should be addressed to improve the oral health of our children, highlights what we do well against best practice and steers future policy and strategy development.[2]

1.4 Previous Oral Health Strategy

The previous Oral Health Strategy for the Isle of Man has expired, having been a five year plan from 2011-2016.[3] The strategy provided the strategic direction for oral health services on the Isle of Man and it was designed to:

- Inform all those involved in the delivery of dental services of the strategic priorities outlined by Government
- Encourage partnership between agencies and health care professionals to ensure that oral health is considered, when appropriate, during other health care interventions
- Focus on the implementation of evidence-based interventions that will prevent tooth decay occurring in younger children.

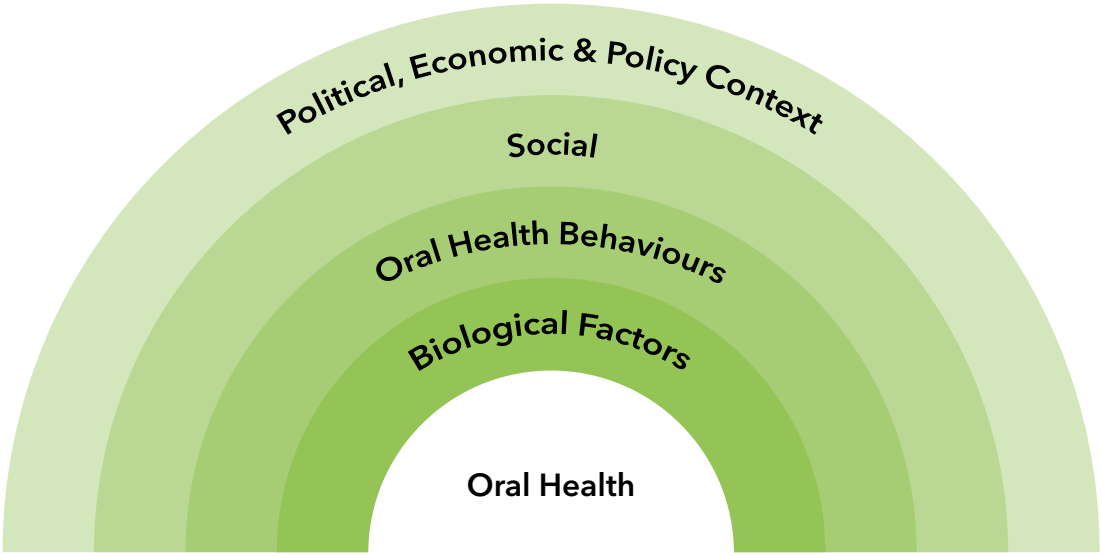
1.5 Risk Factors for Poor Oral Health

Poor oral hygiene, insufficient exposure to fluoride and consumption of a diet high in sugar are the main direct risk factors for an individual's poor oral health. The circumstances in which people live and work can also have a profound effect on health and wellbeing, including oral health.

Poor oral health can be prevented. According to Public Health England (PHE) "Improving child dental health requires a whole systems approach."

To tackle oral health disease on the Isle of Man we must work collaboratively across the public, private and third sector organisations to tackle the wider determinants of health that impact on the oral health of our children and young people as shown in **Figure 1** on the next page.

Figure 1: Underlying causes of oral health[4]



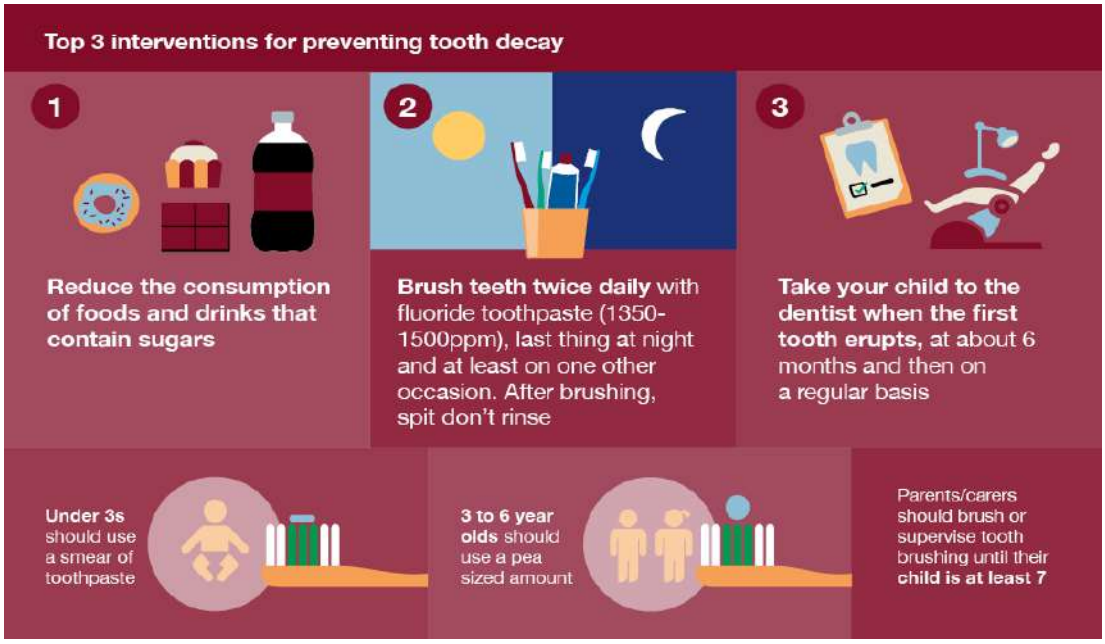
Source: Adapted from Department of Health, Choosing Better Oral Health - An Oral Health Plan for England

2. PREVENTATIVE INTERVENTIONS

2.1 Preventing Tooth Decay

The infographic below shows the top three interventions for preventing tooth decay in young children.

Figure 2: Top 3 interventions for preventing tooth decay[5]



Source: Public Health England

2.2 Breast Feeding

Breastfeeding provides the best nutrition for babies, and breastfeeding for up to 12 months is associated with a decreased risk of tooth decay.

2.3 Fluoride Varnishing

Research shows that fluoride varnish is highly effective at reducing tooth decay if it is applied twice a year. Scientific studies have shown that fluoride varnish gives added protection to teeth against decay when used in addition to brushing teeth regularly with fluoride toothpaste.

2.4 Fissure Sealants

Fissure sealants are plastic coatings that are painted on to the grooves of the back teeth. The sealant forms a protective layer that keeps food and bacteria from getting stuck in the tiny grooves in the teeth and causing decay.[6]

2.5 Water Fluoridation

Fluoride is naturally occurring and likely to be found in drinking water and many foods in varying amounts. It is also added to toothpaste. The amount of naturally occurring fluoride in the water varies depending on the area.

According to Public Health England (PHE) "Less severe tooth decay has been observed in populations whose drinking water contains greater concentrations of fluoride than in populations with low drinking water fluoride concentrations. For this reason, water fluoridation schemes adjust the levels in water supplies in some parts of England in an effort to reduce dental decay."

In England:

- Five-year-olds in areas with water fluoridation schemes were much less likely to experience tooth decay, and less likely to experience more severe decay than in areas without schemes.
- The chances of having a tooth/teeth removed in hospital because of decay were also much lower in areas with water fluoridation schemes.
- Children from both affluent and deprived areas benefited from fluoridation; however, children from relatively deprived areas benefited the most.

From a public health perspective the greatest reductions in the odds of having tooth decay experienced were observed in children in the most deprived areas, fluoridation narrowed differences in dental health between more and less deprived children.[7]

The water supply on the Isle of Man is not fluoridated.

2.6 Supervised Tooth Brushing Programmes

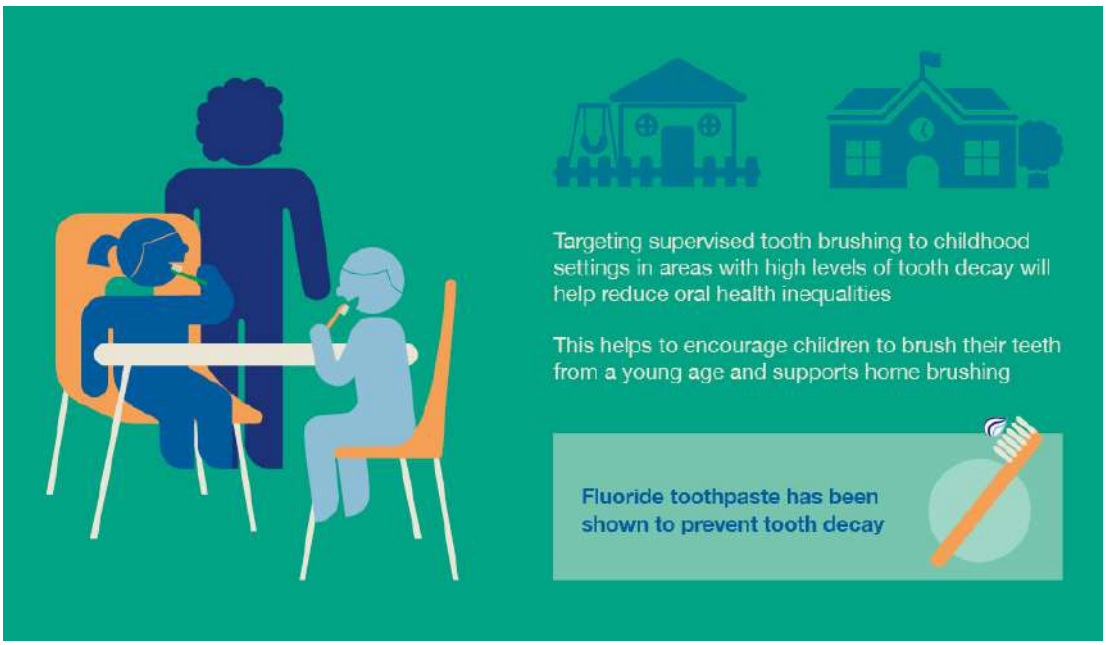
Public Health England states "targeting childhood settings such as nursery and schools can provide a suitable supportive environment for children to take part in a supervised tooth brushing programme, teaching them to brush their teeth from a young age and encouraging support for home brushing."

'Smile of Mann' is a local supervised tooth brushing programme available to all nurseries on the Isle of Man. The purpose of the programme is to help towards improving the oral health of our young children. The latest figures show that in 2017, 27.83% of five-year-olds on the Island have experienced tooth decay.

The 'Smile of Mann' programme is an example of what we are doing well. The programme is based on the supervised tooth brushing element of Scotland's Childsmile[8] programme and the recommendations from the National Institute for Health and Care Excellence (NICE) and PHE. The programme is funded from the Soft Drinks Industry Levy (SDIL).

Supervised tooth brushing programmes will help reduce oral health inequalities as indicated in figure 3 below.

Figure 3: Supervised tooth brushing[5]



Source: Public Health England

Key Findings: Oral Health Needs Assessment for Children aged 0-11 on the Isle of Man

Poor diet a key concern for dentists surveyed

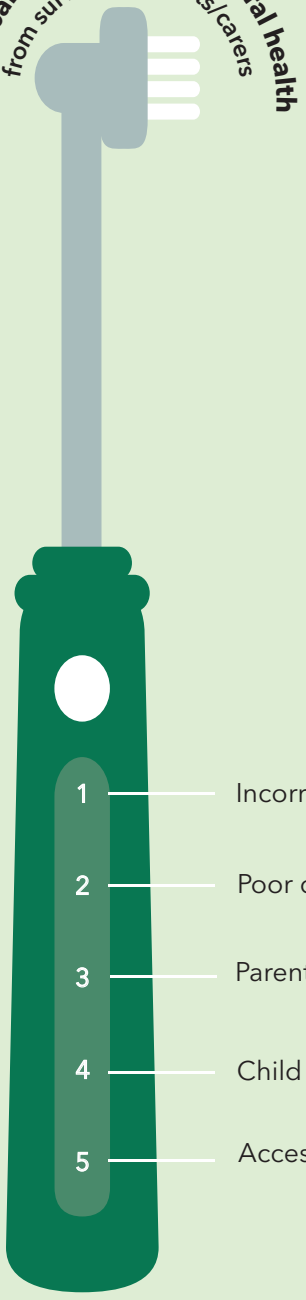
In 2017

27.83%
of 5-year-olds had tooth decay

In 2018, **108** procedures for individual children were carried out under general anaesthetic. The total number of teeth extracted was **714**

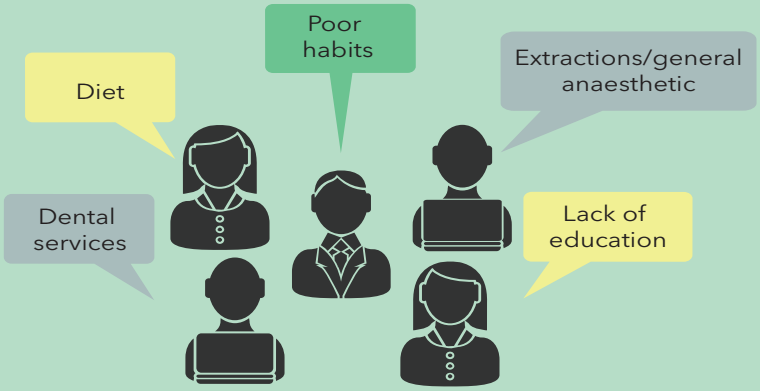
Averaging at **6.6** teeth extracted per child in 2018

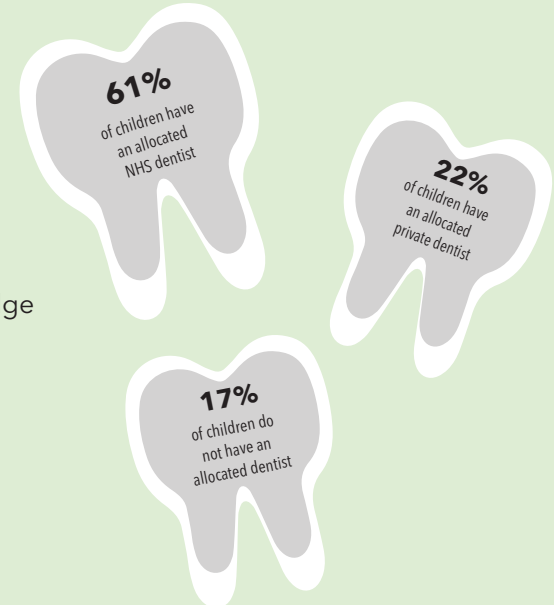
Top 5 barriers/risks to good oral health from survey of parents/carers



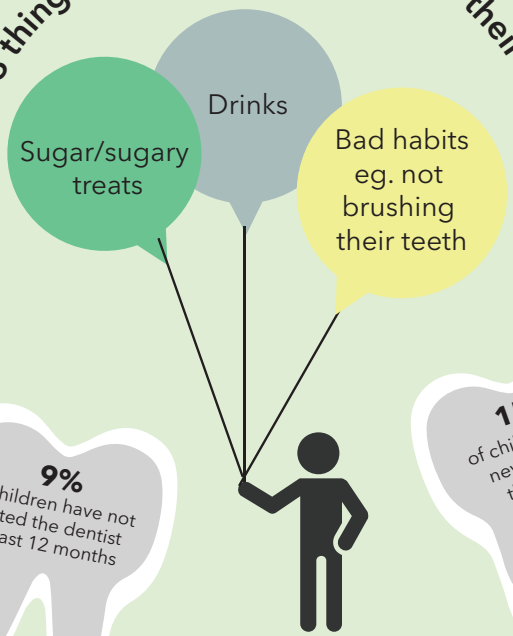
1. Incorrect toothbrushing habits
2. Poor diet
3. Parent/Carer lack of oral health knowledge
4. Child reluctance to brush teeth
5. Access to dental professionals/services

Main concerns regarding children's oral health by professionals working with children





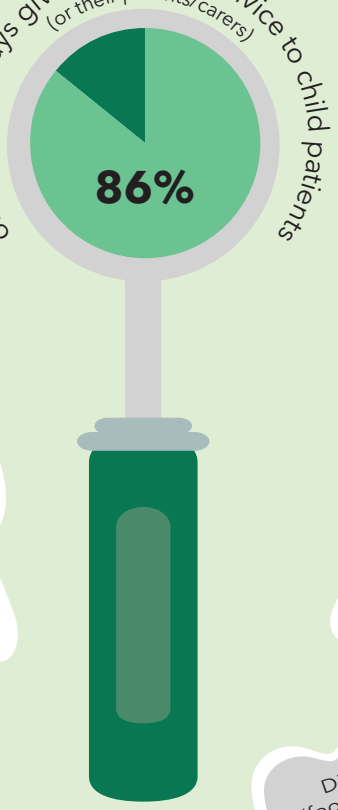
Top 3 things children think are bad for their teeth:



9% of children have not visited the dentist in last 12 months

15% of children have never visited the dentist

% of dentists always give oral health advice to child patients (or their parents/carers)



4 key areas of focus arose from the needs assessment:

- Education and awareness
- Access to dentists/dental services
- Diet (food and drink)
- Dental procedures

In 2017-18 tooth decay was the top cause of hospital admission for 5-9 year olds

The Isle of Man has statistically higher rates of tooth extractions due to decay for children <10 admitted as inpatients to hospital than England

Oral Health Facts

- PHE found that five-year-olds in areas with water fluoridation schemes were much less likely to experience decay than in areas without schemes.
- Tooth decay is the most common oral disease affecting children and young people, despite being largely preventable.
- Children with poor oral health are more likely to have problems at school, or miss school, and are less likely to complete homework.

3 ORAL HEALTH NEEDS ASSESSMENT

3.1 What you told us - Qualitative information

A snapshot of the feedback from parents/carers and other professionals working with children:

"Education; parents need to know recommended best practice even before baby is born"	*"Access to sweets and sugary treats everywhere"*	*"Difficulty in accessing NHS dentists"*	*"Children brushing their own teeth at a very young age"*
"A treat culture; parents want/feel they have to treat children frequently, often with food. This seems to be the norm in society now"	*"Inconvenient appointment times – often during school and working hours"*	*"Culture of 'baby teeth' don't matter"*	*"Educate parents! Children will follow"*
"Cost of private dentist too high, cannot access NHS care"	*"Children can have toothache a long time before they access a dentist"*	*"No consistent messages, health professionals not aware of what is available or who to signpost parents to"*	*"Embarrassment of not being able to help due to lack of NHS dentists"*

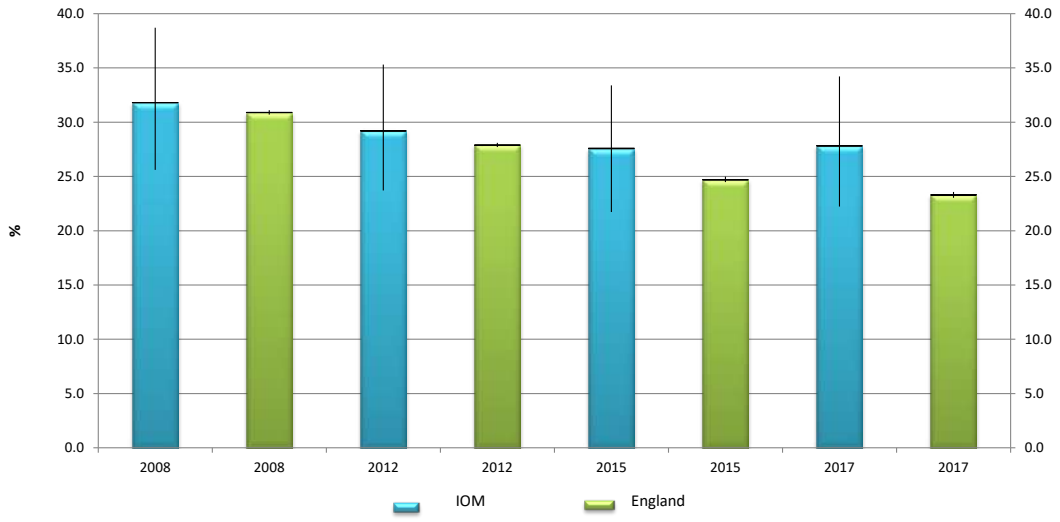
3.2 Epidemiology

The Department of Health and Social Care (DHSC) participates regularly in the PHE national epidemiological survey of five-year-old children. Data produced from this survey provides information which feeds into the Public Health Outcomes Framework (PHOF) indicator 'proportion of children aged five who are free from obvious tooth decay'.

Figure 5 presents the percentage of five-year-old children on the Isle of Man with tooth decay, compared to the overall England percentage. In 2017 there was a slight increase in the percentage of children with tooth decay (on-Island) compared to 2015.

Despite the overall reduction in tooth decay since 2008, the percentage of five-year-old children with decay remains higher than England; although the difference is not statistically significant, it remains higher than 25% (one quarter).

Figure 5: Percentage of children with decay from 2008-2017 in the Isle of Man and England



Source: Public Health England, National Dental Epidemiology Programme: oral health survey of five-year-old children

3.2.1 Comparison to the Channel Islands

Neither Jersey nor Guernsey participates in the PHE national epidemiological survey of five-year-old children. Guernsey carried out a similar survey in 2011 and 2016 using the standard examination protocol of the PHE Dental Public Health Epidemiology Programme to ensure the local results would be consistent with data collected from the NHS trusts in England.

Results

Guernsey

2011: 19% of reception children had at least one decayed, missing or filled tooth.
2016: 14% of reception children had at least one decayed, missing or filled tooth.

Isle of Man

2012: 29.2% of 5-year-old children had tooth decay.
2017: 27.8% of 5-year-old children had tooth decay.

The results indicate that the tooth decay rates of five-year-old children on the Isle of Man are higher than the decay rates for Guernsey. However, the data provided should be considered as an indication and not a direct comparison due to the different years the surveys were undertaken.

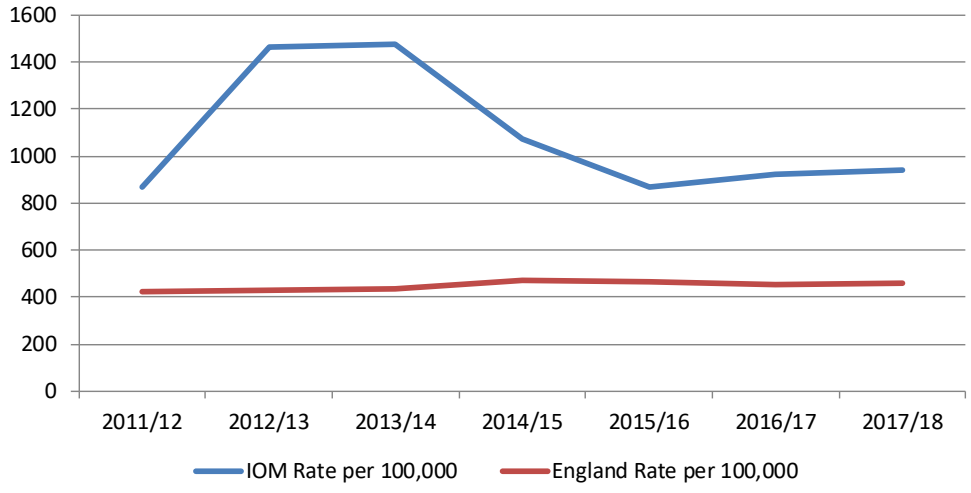
3.3 The Care Index

The Care Index on the Isle of Man is lower than England; in 2017 the Isle of Man Care Index stood at 4.43% compared with 11.8% in England, meaning children have more untreated decay on-Island than their England counterparts. It has not been determined as to whether this is due to low rates of restorative interventions by dentists, or whether these children are not being seen by dental services. Further investigation is therefore recommended to help identify the reason behind this.

3.4 Tooth Extractions

The prevalence of five-year-olds with extracted teeth on-Island is less than those in England. The proportion of children with experience of extraction on the Isle of Man was 1.42% in 2017 compared to 2.4% in England. Rates for hospital admissions for tooth extractions in children aged 10 and under are much higher than rates for England (Figure 6).

Figure 6: Tooth extractions due to decay for children admitted as inpatients to hospital, aged 10 years and under: Isle of Man and England rates comparison per 100,000: 2011/12 – 2017/18



Source: Nobles Hospital, Isle of Man NHS / Health Outcomes Framework Indicator 3.7ii

The lack of overlap between the confidence intervals of the Isle of Man and English rates shows that the Isle of Man has a statistically higher rate of tooth extractions due to decay for children admitted as inpatients to hospital than England. This is the main cause of hospital admission for children aged 5-9 years. The higher rate of tooth extractions on-Island is an area that requires deeper analysis to explore why the rates are so high.

3.5 General Anaesthetic

General anaesthetic is often given to children undergoing multiple tooth extractions to reduce pain and anxiety. The table below provides details on the number of children who required and received treatment under general anaesthetic in 2018.

CHILDREN LISTED FOR DENTAL TREATMENT UNDER GENERAL ANAESTHETIC 2018

- 112 children listed for dental treatment under general anaesthetic.
- 108 procedures for individual children were carried out (including referrals carried over from 2017).
- All 108 children had decay which required care that could not be managed in a dental surgery under local anaesthetic or inhalation sedation and local anaesthetic.
- The average waiting time for children listed for treatment in 2018 was 10.3 weeks.
- Total number of teeth extracted in 2018 was 714, averaging 6.6 teeth per child listed for treatment.
- Total of 94 fillings were placed in 35 patients.
- 20 of the 112 children listed were to receive treatment in 2019.

Source: DHSC Primary Care Services

The Isle of Man Community Dental Service has a comprehensive care dental under general anaesthesia. Consequently, children on the Island can receive all required dental treatment (including fillings, extractions and full radiographic examination) in one visit. Access to dental x-rays during the general anaesthetic ensures the dental team can treat decay that may have otherwise been missed by a clinical examination alone. This reduces the risk of repeat general anaesthetic visits. This is unique to the Island, as comparable services in the UK who normally only off extractions on general anaesthetic lists for children.

3.6 Fluoride Varnish Applications

The table below confirms the number of fluoride applications by age group from 2016 to 2019.

Table 1: Number of fluoride varnish applications applied to children on the Isle of Man from 2016-2019 by NHS dentists, broken down by age group

Age group	2016-2017	2017-2018	2018-2019
0 - 2	98	114	90
3 - 5	758	967	1,067
6 - 12	2,471	3,470	4,008

Source: DHSC Primary Care Services

Note: the number of fluoride varnish applications shown in table 1 is per submitted form, rather than individual patients; therefore the numbers shown do not necessarily reflect the number of children who have received a fluoride varnish application.

3.7 Fissure Sealants

Fissure sealants are another preventative intervention, introduced in the 1960s to help prevent dental cavities, mainly in the pits and fissures of the occlusal (biting) surfaces.

Table 2: Number of fissure sealants applied to children on the Isle of Man from 2017-2019

Age group	2017-2018	2018-2019
0 - 2	0	0
3 - 5	7	6
6 - 12	240	328

Source: DHSC Primary Care Services

The number of fissure sealants applied to children aged 6-12 years increased by 37% from 2017-18 to 2018-19. Children in the two younger age groups as shown in the table above are much less likely to require fissure sealants, as permanent molars do not usually erupt until around the age of 6/7 years. Therefore, the low statistics among the younger age groups is not a matter of concern.

4. ISSUES AND GAPS

The needs assessment report clearly identifies the following unmet needs and service gaps:

- Lack of education and awareness surrounding children's oral health
- Difficulties accessing NHS dentists and dental services
- High rates of tooth extractions due to decay
- Lack of healthy food and drink policies in childhood settings

5. WHAT ARE WE DOING WELL?

- Smile of Mann – supervised toothbrushing programme
- Free dental packs to all parents/carers as part of the child's three month health review (NICE recommendation)
- Participation in the Public Health England (PHE) National Epidemiological Survey
- The West Midlands Quality Review Service[9] (WMQRS) reported that the DHSC Community Dental Service, Special Care Dentistry Team:
  "Worked well together and communicated well about children needing dental anaesthesia. The team was clear about which interventions were offered. Innovations were also being pursued, including conservation techniques being undertaken at the same time as general anaesthesia or sedation."

6. EVIDENCE-BASED INTERVENTIONS FOR IMPROVING ORAL HEALTH IN CHILDREN

This section outlines interventions that have evidenced effectiveness in achieving the key objectives of preventing poor oral health and reducing health inequalities in children.

IMPROVE DIET AND REDUCE THE CONSUMPTION OF SUGARY FOODS AND DRINKS

- Healthy food and drink polices in childhood settings.

IMPROVE ORAL HEALTH HYGIENE

- Oral health training for the wider professional workforce.
- Integration of oral health into targeted home visits by health visitors.
- Supervised tooth-brushing in targeted childhood settings.

INCREASE THE AVAILABILITY OF FLUORIDE

- Targeted provision of toothbrushes and toothpaste.
- Targeted community-based fluoride varnishing programmes.
- Fluoridation of public water supplies.

ADDRESS INEQUALITIES IN ORAL HEALTH

- Targeted provision of toothbrushes and toothpaste.
- Targeted community-based fluoride varnishing programmes.
- Supervised tooth-brushing in targeted childhood settings.
- Integration of oral health into targeted home visits by health visitors.
- Fluoridation of public water supplies.

INCREASE ACCESS TO DENTAL SERVICES

- Ensure current information is available to the public on how to access dental care for children and young people.

Source: Evidence-based interventions for improving oral health in children (NICE 2014)[10]

7. VISION, AIM AND STRATEGIC OUTCOMES

VISION

To improve the oral health of children living on the Isle of Man.

AIM

To drive change in oral health behaviours through awareness, education and preventative interventions.

STRATEGIC OUTCOMES

- All children on the Isle of Man have access to a dentist.
- Reduce the prevalence of tooth decay in children at five years of age.
- Reduce the average number of tooth extractions per child due to decay.
- Reduce inequalities in dental decay prevalence.
- Change in food choices (meals/snacks) at home, in schools, clubs and early years settings.

8. KEY PRIORITY AREAS FOR ACTION

Priority areas for action have been identified from the recommendations highlighted in the needs assessment report and the evidence-based interventions (NICE 2014). The priority areas for action are separated into the following themes:

8.1 Priority 1: Governance, Data and Performance

Strategic objective

- Share appropriate data and information across appropriate agencies
- Ensure oral health is included in all health and wellbeing policies
- Evaluate the effectiveness of oral health provision against best practice.

Key priorities for action

WE WILL:

a) Improve data sharing between the Manx Care and the Department of Education, Sport and Culture (DESC).

b) Continue to fund and participate in the PHE National Epidemiological Survey of five-year-old children.

c) Expand the Isle of Man Public Health Outcomes Framework (PHOF) oral health data set.

d) Undertake a deep dive analysis of the reasons why the rates of tooth extractions due to decay for children admitted to hospital are higher than the England average.

e) Ensure all health and wellbeing policies include oral health.

f) Undertake an audit to benchmark policies and interventions against 'NICE Oral health: Public Health Guideline [PH55]'.

g) Continue to fund the 'Smile of Mann' toothbrushing programme from the SDIL.

h) Include oral health promotion in service specifications for all early years provision.

8.2 Priority 2: Education and Prevention

Strategic objectives

- Improve the oral health of children through education and early preventative interventions.
- Explore the option of a mandatory policy for early years settings participation in Smile of Mann

Key priorities for action

WE WILL:

a) Increase the number of nursery and pre-school settings taking part in the 'Smile of Mann' tooth brushing programme.

b) Expand the 'Smile of Mann' tooth brushing programme to include reception and year 1 primary school children.

c) Consider the introduction of a community-based fluoride varnishing programme in pre-school and school settings.

d) Raise awareness of the importance of oral health, as part of a 'whole-school' approach in all primary schools.

e) Implement evidence-based approaches to improve parent/carer awareness on all aspects of oral health and wellbeing.

f) Ensure that information and guidance is available to parents/carers on the process of accessing NHS dental care.

g) Increase access to NHS primary care dental services for prevention and early intervention.

h) Commission training for Manx Care staff, and other professionals working with children and young people who are at high risk of poor oral health.

i) Develop effective and efficient oral health pathway for 0-11 year olds.

8.3 Priority 3: Address the Wider Determinants of Oral Health

Strategic objectives

- Reduce inequalities by tackling the wider determinants of oral health.
- Develop a national standard for food and drink offered to children through schools, and government-run children and young people's clubs.

Key priorities for action

WE WILL:

a) Engage with stakeholders to revisit and review fluoridation of the water supply on the Isle of Man.

b) Work in partnership with DESC and other stakeholders to establish a standardised food and drink policy for schools and childhood settings in line with the Children's Weight Management strategy.

c) Engage with the leads of non-government children's clubs/ organisations to raise awareness of, and encourage health food and drink options.

d) Ensure access to routine and urgent dental care for children at high risk of poor oral health.

e) Integrate oral health into targeted home visits by health visitors and social workers.

9. COLLABORATIVE WORKING

The key to the successful delivery of this strategy is an effective collaborative approach at strategic and operational levels. Working together to build capacity and an integrated approach will ensure that we provide high quality provision based on the evidence of need and the delivery of effective evidence-based oral health interventions.

10. GOVERNANCE

Robust reporting structures will provide accountability, performance management, monitoring and evaluation systems. For example the 'Oral Health Strategy' will be scrutinised and monitored by the strategic Oral Health Strategic Partnership Group, who will report to the Social Policy and Children's Committee (SPCC).

11. STRATEGIC KEY PERFORMANCE INDICATORS

Measuring outcomes is the only way we can be sure that the strategic aims and objectives of this strategy are being achieved. The Public Health Outcomes Framework (PHOF) sets out a vision for public health, these desired outcomes and indicators will help us understand how well the population's health is being improved and protected.

To measure and monitor the oral health of children on the Isle of Man the following PHOF indicators will be used:

- The proportion of children aged five who are free from obvious tooth decay.
- Admissions of children aged 10 and under to hospital for tooth extractions due to decay.

12. PERFORMANCE MANAGEMENT FRAMEWORK

A performance management framework will be developed to ensure that achieving the strategic outcomes can be demonstrated. The framework will detail specific high-level indicators of progress.

The comprehensive performance management framework will encompass:

- Data collection
- Outcome focused performance indicators to measure the overall success of the strategy
- Measure high-level indicators (PHOF)
- Audit and evaluation programme will evaluate the effectiveness of interventions.

Performance management of the strategy will be led by the Oral Health Strategic Partnership Group.

13. CONCLUSION

This strategy has set out our expectations for the next five years, which can only be achieved through a collaborative partnership-based approach. For the most sustainable gains in oral health we should address the wider social determinants of health such as the impact of social inequalities, diets high in sugar and insufficient exposure to fluoride.

The needs assessment highlighted some major issues that this strategy will address, for example:

- Statistically higher rates of tooth extractions due to decay for children admitted to hospital than England
- 27.83% of five-year-olds on the Isle of Man have tooth decay (2017).

Tooth decay is predominantly an avoidable disease. Through appropriate evidence-based education, prevention and early intervention programmes supported by robust policies, we will start to see levels of tooth decay reduce in our children and young people.

Oral health interventions should not be carried out in isolation. The interventions should be integrated into other public health programmes such as the implementation of the Cabinet Office Children's Weight Management Strategy[11] tackling issues such as obesity, improving diet, breastfeeding and weaning. This along with better oral health contributes to an overall improvement in our population's health and wellbeing and ensures the needs of children's oral health are met and continue to be addressed in the future.

GLOSSARY OF TERMS

The Care Index:	The percentage of teeth with decay that have been treated with a filling. It gives an indication of the level of restorative activity undertaken by dentists in the area. However, scores need to be interpreted in the context of other factors such as deprivation, disease prevalence and the availability and ease of access to dental services.
Epidemiology:	The method used to find the causes of health outcomes and diseases in populations.
Needs Assessment:	A process to determine and address priorities, needs or gaps between current conditions and desired conditions.
Soft Drinks Industry Levy:	'Sugar tax' on soft drinks to reduce sugar in soft drinks and tackle childhood obesity. Drinks with more than 8g of sugar per 100ml face a tax rate equivalent to 24p per litre, whilst those containing 5-8g of sugar per 100ml face a slightly lower rate of tax, of 18p per litre.
Stakeholder:	An individual/organisation with an interest in or who will be affected by a project and/or its results.

ACRONYMS

DESC	Department of Education, Sport and Culture
DHSC	Department of Health and Social Care
JSNA	Joint Strategic Needs Assessment
NICE	National Institute for Health and Care Excellence
PHE	Public Health England
PHOF	Public Health Outcomes Framework
SDIL	Soft Drinks Industry Levy
WHO	World Health Organisation

REFERENCES

1. *World Health Organisation (WHO). Oral health.*
   Available from: https://www.who.int/oral_health/en/
   [Accessed 18 November 2020].
2. *Bennett E. Oral Health Needs Assessment for Children Aged 0-11 on the Isle of Man. Public Health Directorate. Report number: OH20 8118 0919, 2019*
3. *Isle of Man Government. Valuing our oral health – an oral health strategy for the Isle of Man. Department of Health. 2011.*
   Available from: https://www.gov.im/media/77415/oralhealthstrategy2011-2016.pdf
   [Accessed 18 November 2020].
4. *National Health Service. Choosing better oral health: an oral health plan for England.*
   Available from: https://webarchive.nationalarchives.gov.uk/20060309120000/http://www.dh.gov.uk/PublicationsAndStatistics/Publications/PublicationsPolicyAndGuidance/PublicationsPolicyAndGuidanceArticle/fs/en54f9.html
   [Accessed 18 November 2020].
5. *Public Health England. Health matters: child dental health.*
   Available from: https://www.gov.uk/government/publications/health-matters-child-dental-health/health-matters-child-dental-health
   [Accessed 18 November 2020].
6. *Childsmile. Fissure Sealants.*
   Available from: http://www.child-smile.org.uk/parents-and-carers/fissure-sealant.aspx
   [Accessed 18 November 2020].
7. *Public Health England. Water Fluoridation: Health monitoring report for England 2018.*
   Available from: https://www.gov.uk/government/publications/water-fluoridation-health-monitoring-report-for-england-2018
   [Accessed 18 November 2020].
8. *Childsmile. Professionals.*
   Available from: http://www.child-smile.org.uk/professionals/index.aspx
   [Accessed 18 November 2020].
9. *West Midlands Quality Review Service. Women's and Children's Services: Isle of Man Health Services. 2016.*
10. *National Institute for Health and Care Excellence (NICE), Oral health: local authorities and partners: Public Health guideline [PH55]. 2014.*
    Available from: https://www.nice.org.uk/guidance/ph55/chapter/1-Recommendations
    [Accessed 18 November 2020].
11. *Poyzer M. Children's Weight Management Strategy (Draft). Public Health Directorate. 2019*
    Available from: https://consult.gov.im/health-and-social-care/childrens-weight-management-strategy/supporting_documents/Childrens%20Weight%20Management%20Strategy%20draft%20final.pdf
    [Accessed 18 November 2020].

The information in this leaflet can be provided in large format or in audio format on request

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