



Introduction

The National Dental Inspection Programme (NDIP) is carried out annually under the auspices of the Scottish Dental Epidemiology Co-ordinating Committee on behalf of NHS Boards. Its principal aim is to inform parents/carers of the oral health status of their children. Additionally, appropriately anonymised, aggregated data, are used to advise the Scottish Government, NHS Boards and other organisations concerned with the prevalence of oral disease in children at national and local levels.

Two key child age groups are involved: i) at entry into Local Authority schools in primary one (P1) and ii) in primary seven (P7) before the move to secondary education. The Inspection Programme has two levels: a *Basic Inspection* (intended for all P1 and P7 children) and a *Detailed Inspection* (where a representative sample of either the P1 or the P7 age group is inspected in alternate years). In the school year 2019/20 (noted as 2020 throughout the report), the *Detailed Inspection* programme looked at P1 children.

It should be noted that the inspection programme was affected by the interruption to the school year by the COVID-19 (Coronavirus) outbreak, in particular when the nation entered the period of 'lockdown' on 23 March 2020. This impacted principally the numbers of children seen as part of the basic inspection, while the detailed inspection numbers were much less affected.

This Executive Summary presents the main findings of the *Detailed Inspection* programme of P1 children in 2020. A more in-depth presentation of the results can be found at <https://beta.isdscotland.org/find-publications-and-data/health-services/primary-care/national-dental-inspection-programme/>.

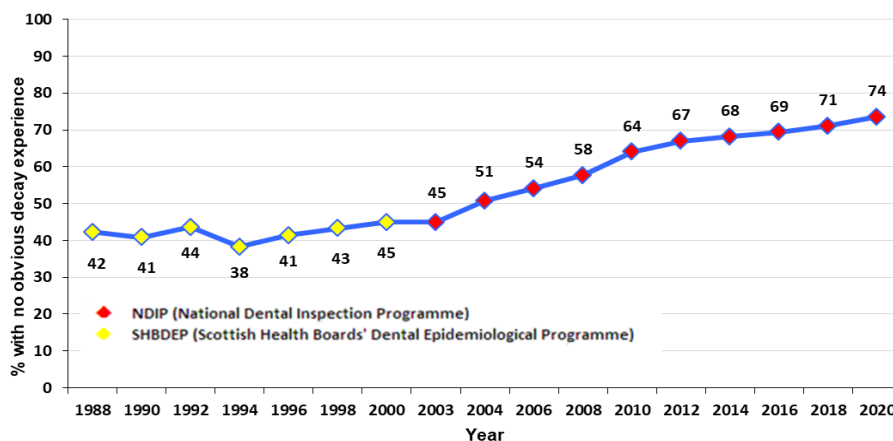
How many P1 children had a Detailed Inspection?

In total, 13,208 children from Local Authority schools across Scotland received a detailed inspection. This represents 22.5% of the P1 children in Scotland. Across the NHS Boards, the percentage of P1 children that were inspected ranged from 10% to 95%. This variation is because some NHS Boards inspect the minimum number that is required to produce a valid result at Board level, while others choose to increase the sample size to aid local planning of dental and oral health services. Additionally, some less populated Boards need to include large proportions to achieve statistically meaningful results.

What percentage of P1 children in Scotland had no obvious decay experience?

Figure 1 shows a sharp improvement from 2003 to 2012, rising from 45% to 67% of P1 children free from obvious decay. Since 2014 a more gradual improvement in the oral health of P1 children in Scotland has been evident, with 74% having no obvious decay experience in 2020.

Figure 1: Trends in the % of P1 children in Scotland with no obvious decay experience; 1988-2020





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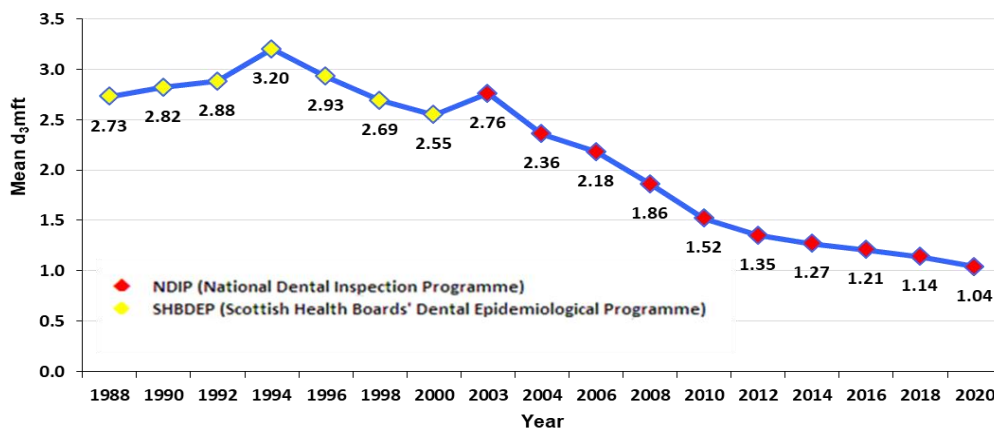
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What levels of obvious decay experience were seen in P1 children?

The mean number of teeth that were decayed, missing or filled (d₃mft) continues to decline. There was a sharp decline from 2003 to 2012, from 2.76 to 1.35. More recently, the decline has been less steep and in 2020, the mean number of teeth affected by obvious decay experience fell to 1.04.

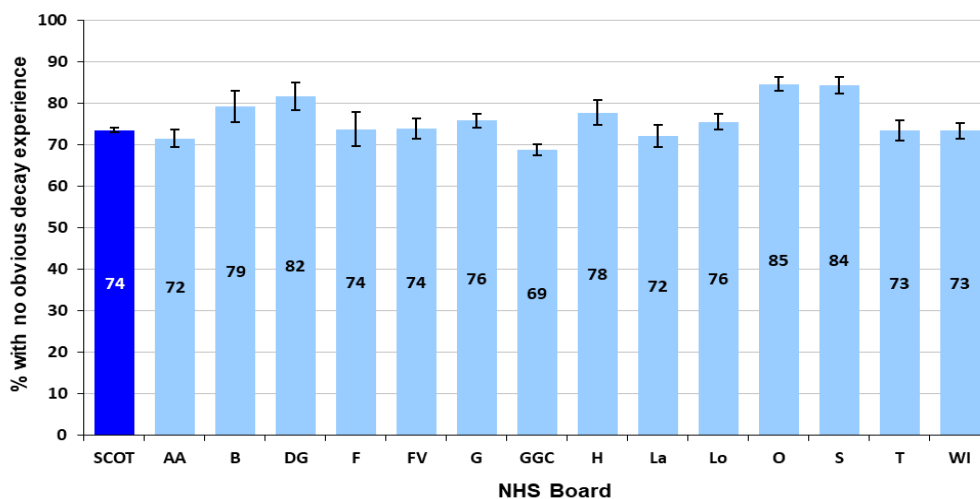
Figure 2: Mean number of obvious decayed, missing and filled primary teeth (d₃mft) in the P1 children in Scotland; 1988-2020



What is the picture of oral health of P1 children across Scotland?

The percentage of P1 children with no obvious decay experience now ranges from 69% to 85% with 95% confidence intervals across all NHS Boards in Scotland in 2020.

Figure 3: Percentage of P1 children in Scotland with no obvious decay experience in 2020; by NHS Board



NHS BOARD ABBREVIATIONS

AA AYRSHIRE & ARRAN	B BORDERS	DG DUMFRIES & GALLOWAY	F FIFE	FV FORTH VALLEY	G GRAMPIAN	GGC GREATER GLASGOW & CLYDE
H HIGHLAND	LA LANARKSHIRE	O ORKNEY	Lo LOTHIAN	S SHETLAND	T TAYSIDE	WI WESTERN ISLES



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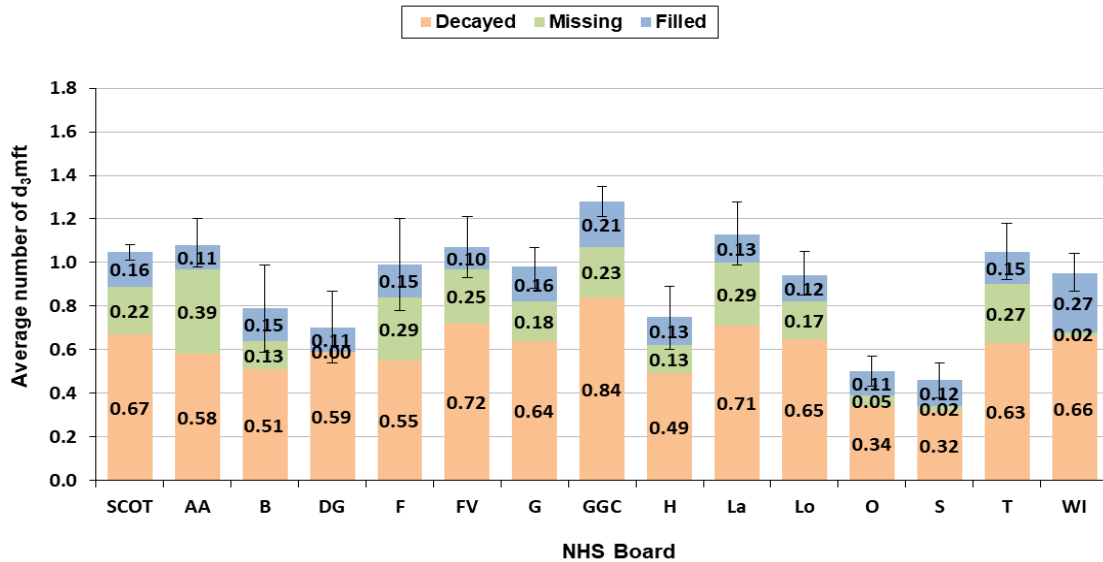


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The mean number of teeth with obvious decay experience ranged from 0.46 to 1.28 across NHS Boards. The contribution of the components of the index to the overall d_3mft value can be seen in Figure 4.

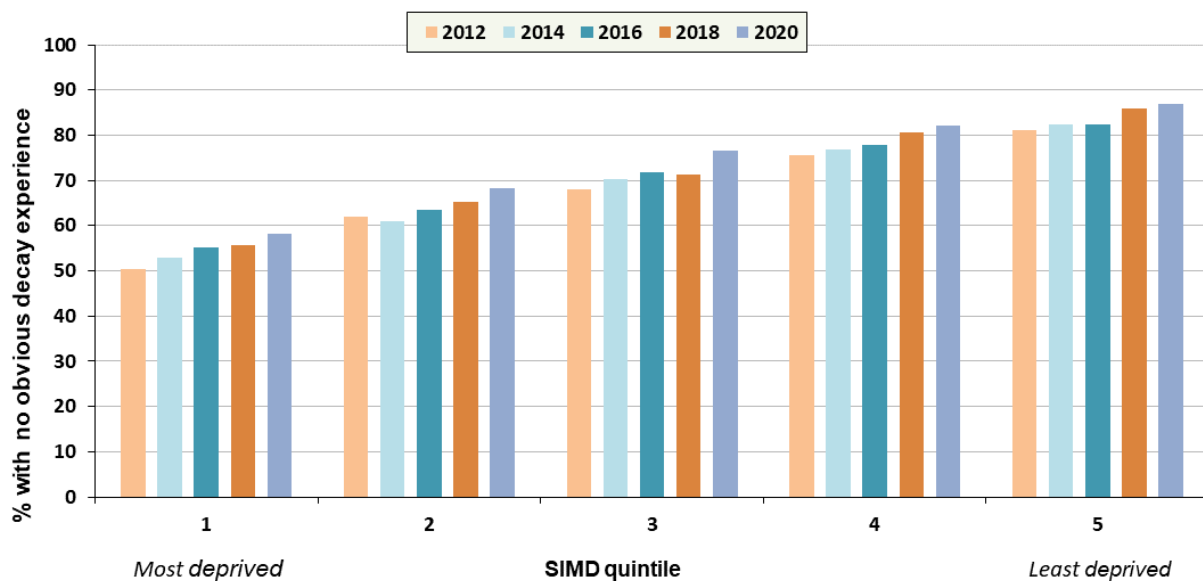
Figure 4 Mean number of obvious decayed, missing and filled primary teeth (d_3mft) of P1 children in 2020 in Scotland and by NHS Board



Is there a link between area-based socio-economic deprivation and poor oral health in P1 children?

Across Scotland, socio-economic inequalities in the oral health of P1 children remain, with percentages with no obvious decay experience ranging from 58% for children in the Scottish Index of Multiple Deprivation most deprived quintile (SIMD 1), to 87% for those in the least deprived quintile (SIMD 5). The percentage point difference in values between SIMD 1 and SIMD 5 has remained at around 30 percentage points over the past five reports for P1.

Figure 5: Change in the percentage of P1 children in Scotland with no obvious decay experience; by SIMD quintile





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Summary of findings by NHS Board

The following table summarises the findings of the 2020 survey of P1 children for each NHS Board in Scotland. Although the mean d_3mft for all P1 children in Scotland is now only 1.04, for those children with decay experience, the average number of decayed, missing and filled teeth is 3.94.

Table 1: Obvious decay experience in primary teeth of P1 children for each NHS Board and Scotland in 2020

NHS Board	% with no obvious decay experience in primary teeth	Mean number of:				
		decayed, missing and filled teeth (d_3mft)	decayed teeth (d_3t)	missing teeth (mt)	filled teeth (ft)	decayed, missing and filled teeth for those with obvious decay experience ($d_3mft > 0$)
SCOTLAND	73.5	1.04	0.67	0.22	0.16	3.94
AA	71.5	1.09	0.58	0.39	0.11	3.82
B	79.3	0.79	0.51	0.13	0.15	3.87
DG	81.7	0.70	0.59	0.00	0.11	3.80
F	73.7	0.99	0.55	0.29	0.15	3.77
FV	73.9	1.07	0.72	0.25	0.10	4.05
G	75.8	0.98	0.64	0.18	0.16	3.95
GGC	68.7	1.28	0.84	0.23	0.21	4.11
H	77.7	0.74	0.49	0.13	0.13	3.39
La	72.0	1.14	0.71	0.29	0.13	4.04
Lo	75.5	0.95	0.65	0.17	0.12	3.91
O	84.6	0.50	0.34	0.05	0.11	3.23
S	84.4	0.46	0.32	0.02	0.12	2.94
T	73.4	1.05	0.63	0.27	0.15	3.98
WI	73.4	0.96	0.66	0.02	0.27	3.60

Conclusions

The findings of the *Detailed Inspection* of P1 children in the school year 2019/20 show some improvements in oral health in terms of both an increase in the percentage with no obvious decay experience and a decrease in mean number of decayed, filled or missing teeth. However, clear health inequalities persist, and reducing dental health inequality must remain a priority.

Acknowledgements

The Scottish Dental Epidemiology Co-ordinating Committee is grateful to the many people and organisations throughout Scotland involved in the 2019/20 programme. This includes participating children, parents/carers and schools, Local Authorities, NHS Boards and the dental teams conducting the inspections, and Public Health Scotland and the Community Oral Health Section of Glasgow University Dental School for the analysis of the data.