Child Dental Health Survey 2013 Symposium

Dental Caries – 2013

Professor Nigel Pitts

Dental Innovation & Translation Centre

King’s College London Dental Institute
Dental caries – 2013 Overview

- Introduction
- National Surveys of Child Dental Health and caries
- Dental caries: the disease process & measurement
- Caries: prevalence & disease presentation in 2013
  - Impact of collecting data on enamel and dentine caries
  - The caries situation in key ages of children in 2013
- Trend data for caries using historical criteria
  - Good News
  - Not such Good News
- Implications for modern caries management
Children’s Dental Health Survey 2013

Report 2: Dental Disease and Damage in Children

England, Wales and Northern Ireland

Published 19 March 2015
Aim of the Symposium

- A Unique opportunity for practitioners, academics and policy makers to gain a greater understanding of the findings of the 2013 Child Dental Health Survey

- Brings together academics from the fields of paediatric dentistry, dental public health and health psychology –
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• A Unique opportunity for practitioners, academics and policy makers to gain a greater understanding of the findings of the 2013 Child Dental Health Survey

• Brings together academics from the fields of paediatric dentistry, dental public health and health psychology – with perspectives also from Primary Dental Care, as well as Cariology research & practice
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• Trend data for caries using historical criteria
  – Good News
  – Not such Good News

• Implications for modern caries management

Child Dental Health Surveys:

1973  England & Wales
1983  United Kingdom
1993  United Kingdom
2003  United Kingdom
2013  Eng, Wales & NI
BASCD Coordinated NHS / Epidemiology Programmes

- Impact of Devolution
- Complementary information to CDHS
- Thanks to all from the BASCD-coordinated Programmes

NHS Dental Epidemiology Programme (NHS DEP) for England

www.cardiff.ac.uk/dentl/research/themes/appliedclinicalresearch/epidemiology/oralhealth/index.html

www.scottishdental.org/index.aspx?o=2153

Dental Caries Experience of 5, 11, 12, and 14-year-old Children in Great Britain
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Report 2: Dental Disease & Damage in Children
Figure 2.1 Illustration of the composition of teeth (!)
Illustration of the composition of teeth: CDH 2013 vs traditional survey method

CDH 2013 Criteria

Traditional Criteria

Enamel

Dentine

Pulp

?
The Evidence Base in Caries Detection and Assessment

Reliable inclusion of clinical visual **enamel** & **dentine** caries detection is **not** new

- Backer Dirks 1951
- Marthaler 1966
- WHO 1979
- Pitts & Fyffe 1988
- Ismail 1992
- Ekstrand, Ricketts & Kidd 98
- Fyffe et al 2000
- Nyvad 2001
- And many, many more

*(see Systematic Reviews NIH CDC and ICW-CCT)*

**ICDAS**

Since 2002
Diagnostic Thresholds used for caries detection

Obvious Decay Experience - up to 1993 (includes decay into pulp & cavitated dentine).

Recording dental decay (caries) experience in Child Dental Health Survey: 2013

Report 2: Figure 2.3 – Page 17

Dentine decay* also includes Codes 4C & 4V for Filled and recurrent decay

adapted from: Pitts N B, Community Dental Health 2004 21:193-198,
Pitts and Harker, Obvious Decay Experience, 2005, CDHS 2003 Report, p7
Diagnostic Thresholds used for caries detection

Report 2: Figure 2.3 – Page 17

Pulpal decay
Code 3 - Decay with pulpal involvement

Cavitated dentine caries
Code 2C -

Visual dentine caries
Code 2V -

Unseen dentine decay

Dentine decay*

Extensive decay

Obvious decay

Sub-clinical decay

adapted from:  Pitts N B, Community Dental Health 2004 21:193-198,
Pitts and Harker, Obvious Decay Experience, 2005, CDHS 2003 Report, p7

Dentine decay* also includes Codes 4C & 4V for Filled and recurrent decay
Recording dental decay (caries) experience in Child Dental Health Survey: 2013

Report 2: Figure 2.3 – Page 17

Diagnostic Thresholds used for caries detection

Obvious Decay Experience - up to 1993
(includes decay into pulp & cavitated dentine)

Obvious Decay Experience 2003 & 13
(includes decay into pulp & cavitated & visual dentine)

Clinical Decay Experience 2013
(includes decay into pulp & dentine & enamel)

Pulpal decay
Code 3 - Decay with pulpal involvement

Dentine decay*
Code 2C - Cavitated dentine caries
Code 2V - Visual dentine caries

Enamel decay
Code AC - Enamel change with cavitation
Code AV - Visual change in enamel

Sub-clinical decay

Extensive decay

Initial-stage decay

Obvious decay

adapted from: Pitts N B, Community Dental Health 2004 21:193-198,
Pitts and Harker, Obvious Decay Experience, 2005, CDHS 2003 Report, p7

Dentine decay* also includes Codes 4C & 4V for Filled and recurrent decay
CDHS 2013 and ICDAS coding

With corresponding ICDAS codes

Detection Threshold includes

Obvious Decay
- cavitated dentine caries - up to 1993 criteria

Obvious Decay
- visual dentine caries - 2003 & 2013 criteria

Clinical Decay
- cavitated enamel caries - 2013 criteria only

Clinical Decay
- visual enamel caries - 2013 criteria only

Dentine decay* also includes Codes
4C & 4V for Filled and recurrent decay

Code 3 - Decay with pulpal involvement
ICDAS code 6

Code 2C - Cavitated dentine caries
ICDAS code 5

Code 2V - Visual dentine caries
ICDAS code 4

Code AC - Enamel change with cavitation
ICDAS code 3

Code AV - Visual change in enamel
ICDAS code 1+2

Sub-clinical decay

Initial-stage decay

Obvious decay

Extensive decay
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Code "AV" is the ICCMS™ Epi Code "A" in a CDHS-compatible format.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>O</td>
<td>Present and ‘sound’</td>
</tr>
<tr>
<td>AV</td>
<td>Visual change in enamel</td>
</tr>
<tr>
<td>AC</td>
<td>Visual enamel change with cavitation</td>
</tr>
<tr>
<td>2V</td>
<td>Visual caries (non-cavitated dentine caries)</td>
</tr>
<tr>
<td>2C</td>
<td>Cavitated dentine caries</td>
</tr>
<tr>
<td>3</td>
<td>Decay with pulpal involvement</td>
</tr>
<tr>
<td>4V</td>
<td>Filled and recurrent decay (no visual cavitation)</td>
</tr>
<tr>
<td>4C</td>
<td>Filled and recurrent decay (cavitation present)</td>
</tr>
<tr>
<td>5</td>
<td>Filled with no dentinal decay</td>
</tr>
<tr>
<td>R</td>
<td>Filled, needs replacing (not carious into dentine)</td>
</tr>
<tr>
<td>X</td>
<td>Obviously sealed surfaces</td>
</tr>
<tr>
<td>C</td>
<td>Crown/advanced restorative procedures</td>
</tr>
</tbody>
</table>

Code AV is used where there is a visual change in enamel. The surface has caries present into enamel which is visible to the observer, but which does not appear to extend into dentine.
Training for the latest National Surveys in England, Wales and NI. Code “AC” is the ICCMS™ Epi Code “3” in a CDHS-compatible format.

**Children’s Dental Health Survey (CDHS) 2013**

**Stage 4: Tooth Condition**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>O</td>
<td>Present and ‘sound’</td>
</tr>
<tr>
<td>AV</td>
<td>Visual change in enamel</td>
</tr>
<tr>
<td><strong>AC</strong></td>
<td>Visual enamel change with cavitation</td>
</tr>
<tr>
<td>2V</td>
<td>Visual caries (non-cavitated dentine caries)</td>
</tr>
<tr>
<td>2C</td>
<td>Cavitated dentine caries</td>
</tr>
<tr>
<td>3</td>
<td>Decay with pulpal involvement</td>
</tr>
<tr>
<td>4V</td>
<td>Filled and recurrent decay (no visual cavitation)</td>
</tr>
<tr>
<td>4C</td>
<td>Filled and recurrent decay (cavitation present)</td>
</tr>
<tr>
<td>5</td>
<td>Filled with no dentinal decay</td>
</tr>
<tr>
<td>R</td>
<td>Filled, needs replacing (not carious into dentine)</td>
</tr>
<tr>
<td>X</td>
<td>Obviously sealed surfaces</td>
</tr>
<tr>
<td>C</td>
<td>Crown/advanced restorative procedures</td>
</tr>
</tbody>
</table>

**Code AC**

Code AC is recorded for visual enamel change with cavitation. The surface has caries present into enamel with localised enamel breakdown but no dentine visible.
2013 results for Dental Caries

• This survey has provided updated estimates of the prevalence and distribution of dental caries for 5, 8, 12 and 15 year old children in England, Wales and Northern Ireland in 2013.

• In the decade since the last survey in this series, there has been further evolution in the way in which dental caries is both detected and managed by individual dentists and in the way dental services are oriented towards more preventive approaches to care.

• Recognising these changes, this report provides results for dental decay across four thresholds of caries detection –
  – “Obvious” Decay *with* (and *without*) visual dentine caries
  – “Clinical” Decay *with* (and *without*) visual enamel caries

• For the first time a more comprehensive assessment of the continuum of caries across the population including estimates of both restorative and preventive care needs, while, at the same time, allowing retrospective comparisons to be made for older children, using the parts of the criteria which are compatible with those used decades ago.
### Summary of impact of decay thresholds on mean number of decayed teeth (dt) results – primary teeth, 5 year olds

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Enamel change with cavitation</th>
<th>Visual caries (non cavitated dentine)</th>
<th>Cavitated dentine caries</th>
</tr>
</thead>
<tbody>
<tr>
<td>AV</td>
<td>Visual change in enamel</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AC</td>
<td>Enamel change with cavitation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2V</td>
<td>Visual caries (non cavitated dentine)</td>
<td></td>
<td>0.6&lt;sup&gt;1&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>2C</td>
<td>Cavitated dentine caries</td>
<td></td>
<td>0.8&lt;sup&gt;2&lt;/sup&gt;</td>
<td>0.9&lt;sup&gt;3&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.7&lt;sup&gt;4&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

<sup>1</sup> Obvious decay excluding visual dentine caries includes 2C as decay  
<sup>2</sup> Obvious decay including visual dentine caries includes 2C or 2V as decay  
<sup>3</sup> Clinical decay excluding visual enamel caries includes 2C or 2V or AC as decay  
<sup>4</sup> Clinical decay including visual enamel caries includes 2C or 2V or AC or AV as decay
### Summary of impact of decay thresholds on mean number of Decayed Teeth (DT) results – Permanent Teeth, 12 year olds

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Symbol</th>
</tr>
</thead>
<tbody>
<tr>
<td>AV</td>
<td>Visual change in enamel</td>
<td></td>
</tr>
<tr>
<td>AC</td>
<td>Enamel change with cavitation</td>
<td></td>
</tr>
<tr>
<td>2V</td>
<td>Visual caries (non cavitated dentine)</td>
<td></td>
</tr>
<tr>
<td>2C</td>
<td>Cavitated dentine caries</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Decay Type</th>
<th>Code(s)</th>
<th>Description</th>
<th>Symbol</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Obvious decay <em>excluding</em> visual dentine caries</td>
<td>2C</td>
<td>Includes 2C as decay</td>
<td>0.2</td>
</tr>
<tr>
<td>2. Obvious decay <em>including</em> visual dentine caries</td>
<td>2C or 2V</td>
<td>Include 2C or 2V as decay</td>
<td>0.4</td>
</tr>
<tr>
<td>3. Clinical decay <em>excluding</em> visual enamel caries</td>
<td>2C or 2V or AC</td>
<td>Include 2C or 2V or AC as decay</td>
<td>0.5</td>
</tr>
<tr>
<td>4. Clinical decay <em>including</em> visual enamel caries</td>
<td>2C or 2V or AC or AV</td>
<td>Include 2C or 2V or AC or AV as decay</td>
<td>1.6</td>
</tr>
</tbody>
</table>

*Obvious decay excluding visual dentine caries includes 2C as decay*

*Obvious decay including visual dentine caries includes 2C or 2V as decay*

*Clinical decay excluding visual enamel caries includes 2C or 2V or AC as decay*

*Clinical decay including visual enamel caries includes 2C or 2V or AC or AV as decay*
Table 2.15 Summary of prevalence and severity of decay experience in the primary dentition of 5 and 8 year olds - \((dft)^*\)

<table>
<thead>
<tr>
<th>Measure of decay experience in primary teeth, children 5, 8 years</th>
<th>5 years</th>
<th>8 years</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Obvious decay experience excluding visual dentine caries</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage of children with condition in population</td>
<td>26%</td>
<td>41%</td>
</tr>
<tr>
<td>Mean number of teeth affected</td>
<td>0.7</td>
<td>1.1</td>
</tr>
<tr>
<td>Mean number of teeth affected, for those with any such decay</td>
<td>2.8</td>
<td>2.7</td>
</tr>
<tr>
<td><strong>Obvious decay experience</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage of children with condition</td>
<td>31%</td>
<td>46%</td>
</tr>
<tr>
<td>Mean number of teeth affected</td>
<td>0.9</td>
<td>1.4</td>
</tr>
<tr>
<td>Mean number of teeth affected, for those with any such decay</td>
<td>3.0</td>
<td>3.0</td>
</tr>
<tr>
<td><strong>Clinical decay experience excluding visual enamel caries</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage of children with condition</td>
<td>35%</td>
<td>48%</td>
</tr>
<tr>
<td>Mean number of teeth affected</td>
<td>1.1</td>
<td>1.5</td>
</tr>
<tr>
<td>Mean number of teeth affected, for those with any such decay</td>
<td>3.0</td>
<td>3.0</td>
</tr>
<tr>
<td><strong>Clinical decay experience</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage of children with condition</td>
<td>49%</td>
<td>59%</td>
</tr>
<tr>
<td>Mean number of teeth affected</td>
<td>1.8</td>
<td>2.0</td>
</tr>
<tr>
<td>Mean number of teeth affected, for those with any such decay</td>
<td>3.6</td>
<td>3.4</td>
</tr>
</tbody>
</table>
Figure 2.10 Percentage of 5 year old children with decay experience in primary teeth at different thresholds of decay, 2013 - (dft)*
Table 2.30 Summary of prevalence and severity of decay experience in the permanent dentition of 8, 12 and 15 year olds

<table>
<thead>
<tr>
<th>Measure of decay experience in permanent teeth, children aged 8, 12, 15</th>
<th>8 years</th>
<th>12 years</th>
<th>15 years</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Obvious decay experience excluding visual dentine caries</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage of children with condition</td>
<td>11%</td>
<td>28%</td>
<td>42%</td>
</tr>
<tr>
<td>Mean number of teeth affected</td>
<td>0.2</td>
<td>0.6</td>
<td>1.2</td>
</tr>
<tr>
<td>Mean number of teeth affected, for those with any such decay</td>
<td>1.9</td>
<td>2.2</td>
<td>2.9</td>
</tr>
<tr>
<td><strong>Obvious decay experience</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage of children with condition</td>
<td>13%</td>
<td>34%</td>
<td>46%</td>
</tr>
<tr>
<td>Mean number of teeth affected</td>
<td>0.3</td>
<td>0.8</td>
<td>1.4</td>
</tr>
<tr>
<td>Mean number of teeth affected, for those with any such decay</td>
<td>2.0</td>
<td>2.5</td>
<td>3.1</td>
</tr>
<tr>
<td><strong>Clinical decay experience excluding visual enamel caries</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage of children with condition</td>
<td>16%</td>
<td>36%</td>
<td>48%</td>
</tr>
<tr>
<td>Mean number of teeth affected</td>
<td>0.3</td>
<td>0.9</td>
<td>1.6</td>
</tr>
<tr>
<td>Mean number of teeth affected, for those with any such decay</td>
<td>1.9</td>
<td>2.5</td>
<td>3.3</td>
</tr>
<tr>
<td><strong>Clinical decay experience</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage of children with condition</td>
<td>34%</td>
<td>57%</td>
<td>63%</td>
</tr>
<tr>
<td>Mean number of teeth affected</td>
<td>0.8</td>
<td>2.0</td>
<td>2.9</td>
</tr>
<tr>
<td>Mean number of teeth affected, for those with any such decay</td>
<td>2.2</td>
<td>3.5</td>
<td>4.5</td>
</tr>
</tbody>
</table>
Figure 2.15 Percentage of 12 year olds with decay experience in permanent teeth at different thresholds of decay, by country, 2013
Figure 2.7 Percentage of 5 year olds with obvious decay experience in primary teeth, by country, sex and free school meal eligibility status, 2013
Figure 2.13 Percentage of 15 year olds with obvious decay experience in permanent teeth, by country, sex and free school meal eligibility status, 2013.
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Figure 2.4 Percentage of children with obvious decay experience in permanent teeth, by age, England Wales and Northern Ireland 2003-2013
Figure 2.5 Percentage of children with any decay into dentine excluding visual dentine caries in permanent teeth
Figure 2.5 Percentage of children with any decay into dentine excluding visual dentine caries in permanent teeth 

A clear pattern is evident:

• The general trend for the prevalence of decay into dentine (excluding visual dentine caries) has been downwards over the period between 1983 and 2013;

• the rate of decline in the percentage of children affected, however, has slowed between 2003 and 2013, and there was no statistically significant difference between 2003 and 2013 on this measure; and

• the difference in prevalence between 12 and 15 year olds was much reduced by 2003, and this difference has remained consistent between 2003 and 2013.
Figure 2.6 Percentage of children with any obvious decay experience excluding visual dentine caries in permanent teeth
Figure 2.6 Percentage of children with any obvious decay experience *excluding visual dentine caries* in permanent teeth

It is clear from the chart that:

• The trend for any obvious decay experience (*excluding* visual dentine caries) has been downwards over the period between 1983 and 2013;

• The gap in the prevalence between 12 and 15 year olds evident from 1983 onwards still remains in 2013; and

• The rate of reduction in the prevalence of this threshold of decay experience has continued to slow in the last decade compared to that achieved in the preceding twenty years.
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• Implications for modern caries management
Implications for modern caries management

- We now have **BOTH** the traditional type of data on restorative treatment need **AND**, in addition, for the first time we now also have on a National population basis, an understanding of the total burden of caries.
- This includes lesions currently confined to enamel which are amenable to preventive care – a **measure of preventive “treatment need”**.
- The initial-stage lesions **may or may not progress to more advanced stages of severity**, and are a marker of “risk” of progression of a disease which is already initiated in many children.
- The dramatic **overall improvement** in dental caries levels seen in earlier decades **has been maintained for 12 and 15 year old children**, although the further improvement has been at a slower rate than previously.
- Changes in consent for younger children mean that **we cannot yet reliably assess trends over time for the younger age groups**.
- What is very clear **across all age groups** is that the distribution of the disease is very uneven......
Implications for modern caries management

- In 2013 and beyond, it is inadvisable to look solely at the mean values for decay or decay experience across the entire population of children, as the burden of disease for those that have disease is more extensive than average population estimates suggest.
- Relationships between decay and free school meal eligibility demonstrate clearly the inequalities in the caries burden faced by children.
- The results also show a quite heterogeneous picture across England, Wales and Northern Ireland in terms of disease prevalence, the relative make-up of the caries burden across the detection thresholds and the use of preventive care strategies including fissure sealants.
- The consequences of high disease burden are examined further in Report 4, whilst the children who have better overall oral health are also considered in more detail in Report 3.
- You will hear more on these Reports later.....
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Acknowledgements & Disclaimer

Thanks are due to:

All my colleagues within the CDH2013 Consortium

and (without whom no survey)

– The examining teams
– The parents and their children for participating
– The Schools and Education Authorities
– The supporting “Health Departments”

Note:

This work was undertaken by the CDHS consortium for

UNIVERSITY OF BIRMINGHAM  CARDIFF UNIVERSITY  KING’S COLLEGE LONDON  Newcastle University  UCL

Children’s Dental Health in the UK 2013
Appendix

Summary data collated by reference to Report 2:

Figure 2.3
Page 17
The percentage of children with decay in 2013, by the four thresholds assessed

**Age 5 years primary teeth**

- **Initial-stage decay**
  - **Code AC - Enamel change with cavitation**
    - ICDAS code 3
    - Enamel decay
  - **Code AV - Visual change in enamel**
    - ICDAS code 1+2

- **Obvious decay**
  - **Code 2C - Cavitated dentine caries**
    - ICDAS code 5
    - Dentine decay*
  - **Code 2V - Visual dentine caries**
    - ICDAS code 4

- **Extensive decay**
  - **Code 3 - Decay with pulpal involvement**
    - ICDAS code 6

**Detection Threshold includes**

- **22% Obvious Decay**
  - Cavitated dentine caries - up to 1993 criteria

- **28% Obvious Decay**
  - Visual dentine caries - 2003 & 2013 criteria

- **32% Clinical Decay**
  - Cavitated enamel caries - 2013 criteria

- **48% Clinical Decay**
  - Visual enamel caries - 2013 criteria

*Dentine decay* also includes Codes 4C & 4V for Filled and recurrent decay.
The percentage of children with decay in 2013, by the four thresholds assessed

Age 8 years primary teeth

With corresponding ICDAS codes

Detected threshold includes

- **31% Obvious Decay**
  - *cavitated* dentine caries
  - - up to 1993 criteria

- **39% Obvious Decay**
  - *visual* dentine caries
  - - 2003 & 2013 criteria

- **41% Clinical Decay**
  - *cavitated* enamel caries
  - - 2013 criteria

- **54% Clinical Decay**
  - *visual* enamel caries
  - - 2013 criteria

**Dentine decay** also includes Codes 4C & 4V for Filled and recurrent decay
The percentage of children with Decay in 2013, by the four thresholds assessed

**Age 12 years permanent teeth**

- **Dentine decay**
  - Initial-stage decay
    - Code AC - Enamel change with cavitation
      - ICDAS code 3
    - Code AV - Visual change in enamel
      - ICDAS code 1+2
  - Extensive decay
    - Code 3 - Decay with pulpal involvement
      - ICDAS code 6
  - Obvious decay
    - Code 2C - Cavitated dentine caries
      - ICDAS code 5
    - Code 2V - Visual dentine caries
      - ICDAS code 4

**Detection Threshold** includes:

- **10% Obvious Decay**
  - Cavitated dentine caries
    - up to 1993 criteria

- **19% Obvious Decay**
  - Visual dentine caries
    - 2003 & 2013 criteria

- **22% Clinical Decay**
  - Cavitated enamel caries
    - 2013 criteria

- **49% Clinical Decay**
  - Visual enamel caries
    - 2013 criteria

_Dentine decay_* also includes Codes 4C & 4V for Filled and recurrent decay
The percentage of children with Decay in 2013, by the four thresholds assessed

**Age 15 years permanent teeth**

- **Initial-stage decay**
  - **Code AC - Enamel change with cavitation**
    - ICDAS code 3
    - Enamel decay
  - **Code AV - Visual change in enamel**
    - ICDAS code 1+2

- **Obvious decay**
  - **Code 2C - Cavitated dentine caries**
    - ICDAS code 5
    - Dentine decay*
  - **Code 2V - Visual dentine caries**
    - ICDAS code 4

- **Extensive decay**
  - **Code 3 - Decay with pulpal involvement**
    - ICDAS code 6

**Detection Threshold includes**

- **11% Obvious Decay**
  - *cavitated* dentine caries - up to 1993 criteria
- **21% Obvious Decay**
  - *visual* dentine caries - 2003 & 2013 criteria
- **25% Clinical Decay**
  - *cavitated* enamel caries - 2013 criteria
- **52% Clinical Decay**
  - *visual* enamel caries - 2013 criteria

*Dentine decay* also includes Codes 4C & 4V for Filled and recurrent decay

Detection Threshold includes

**11% Obvious Decay**
- *cavitated* dentine caries - up to 1993 criteria

**21% Obvious Decay**
- *visual* dentine caries - 2003 & 2013 criteria

**25% Clinical Decay**
- *cavitated* enamel caries - 2013 criteria

**52% Clinical Decay**
- *visual* enamel caries - 2013 criteria