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England

Protecting and improving the nation's health

National Dental Epidemiology Programme

Oral health survey of 5-year-old children
2021 to 2022: guidance for handling data

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Introduction

This document provides guidance on data handling for the National Dental Epidemiology Programme 2021 to 2022 oral health survey of 5 year old children. It should be read in conjunction with the national protocol and the administrator's guide for the survey.

All appendices referred to in the document are part of the national protocol and can be downloaded from [K-hub](#).

Stage 1 – collect information

Children's details, agreement to participate and examination status should be entered electronically into Appendix L Examination day sheet. This is password protected. Please contact your local dental epidemiology coordinator (DEC) for the password.

Once the survey is complete, if Appendix L has been completed electronically it can be used to collate information into Appendix P Data linkage file in stage 5. Appendix L can also be used to sum the totals required to complete Appendix O Data summary file in stage 5.

The clinical and non-clinical data will be recorded onto data collection sheets. These will then be entered into the data collection tool using Microsoft Access.

Stage 2 – enter data into the data collection tool

Enter data into the Microsoft Access programme using the format provided – make sure it is the version called **5yr 2022 Data Collection.accdb**

The databases are password protected, please contact your local dental epidemiology coordinator for the password.

2.1 Copy the format file

Double click to open the zip file and then save the Access data collection file into the required directory of your computer or network.

Please do not alter the national format fields as this causes great difficulties when trying to collate the data.

If you wish to add other variables, there is one 'spare' text variable at the end of the format which can be used to suit most local needs. If you need more variables please contact the national dental epidemiology team DentalPHIntelligence@phe.gov.uk

2.2 Start a new survey or open an existing survey

1. Open **Microsoft ACCESS**.
2. From the menu bar select **File, Open**.
3. Locate and select the Access Format file you saved from stage 1.
4. Click **Open**.
5. Input the password – obtainable from your local dental epidemiology coordinator.
6. If a warning is displayed when you first open the file click **OK**, Click **Stop All Macros**, click **Enable Content**.
7. The menu will be displayed.
8. Click **Open Data Input Form**.
9. The form will be displayed.

If the caries chart does not fit on the whole screen change your screen resolution to small – Click **Start, Control Panel, Display**, select **smaller-100% (default)**, click **Apply**.

2.3 Input survey data

Before you start to enter data please make sure the caps lock is on (Please note: This will then eliminate the error of lowercase codes or postcodes).

Only input data for children who have parental agreement.

Examination and site details

1. Click in the first field and input the **Lower Tier LA name** of the site (see protocol Appendix J), then either using the **TAB** key, **RETURN** key or the mouse move to the next field.
2. Input the **Examiner name**.
3. Input the **Site name**.

4. The **Site type** is multiple choice, using either the mouse or cursor keys select the required option (0 – Mainstream or 1 – Special support).
5. Input the **Site Postcode** in upper case, split into Inward and Outward code. (take care that you don't confuse the letter 'O' with the number '0', or the letter 'l' with the number '1').
6. The **Date of Examination** should be entered as a date, for example 26/11/2021, 26-11-21.

The above site details can be copied forward to the next record by clicking **Duplicate School Details** (this includes the lower tier LA code entered as part of the child id number in the next step).

Child's details

7. The **Child Id Number** is a unique identifier to the child and is alpha/numerical. It should be entered as the **Lower Tier LA Code**, see protocol appendix H, for example E07000127, followed by a 4 digit unique **Number of sampled child** for example 0014, this then automatically joins together to create the Child ID Number and is displayed, for example E070001270014.
8. The **Date of Birth** should be entered as a date, for example 17/05/2016, 17-05-16. The age is automatically calculated (using date of examination) and is displayed.
9. Input the child's **Home Postcode** in upper case, split into Inward and Outward code. (take care that you don't confuse the letter 'O' with the number '0', or the letter 'l' with the number '1').
10. The **Sex** is multiple choice, using either the mouse or cursor keys select the required option.
11. The **Multiple Birth** is multiple choice, using either the mouse or cursor keys select the required option. This is to record whether a child is a twin, triplet and so on.
12. The **Higher Ethnicity** and **Lower Ethnicity** fields are compulsory fields and are multiple choice, using either the mouse or cursor keys select the required options. The codes are in section 7.5.13 of the protocol. You may have used local codes but these should be matched up so that the codes provided in the format can be used. The lower ethnicity selection should relate to the higher ethnicity selection options, for example if A – White has been selected then the lower ethnicity can only be code A1 – A4 or X – Ethnicity group not provided, you cannot select an option from another lower ethnicity box.

Examination

13. The **Sample Group Code** is multiple choice, using either the mouse or cursor keys select the required option.

14. The **Examination Status** is multiple choice, using either the mouse or cursor keys select the required option.

For children who were absent on the day of examination, or who refused to be examined themselves, the plaque, enamel caries and pufa fields will be automatically set to A – Child absent or R – Child refused so just go on to the next child record.

Oral cleanliness

15. The **Plaque Assessment** field is multiple choice, using either the mouse or cursor keys select the required option. If the child was examined but there is no plaque data recorded on the collection sheet use code X – Not recorded.

Other details

16. The **Enamel Caries** field is multiple choice, using either the mouse or cursor keys select the required option. If the child was examined but there is no enamel caries data recorded on the collection sheet use code X – Not recorded.
17. The **Number of pufa conditions** field is multiple choice, using either the mouse or cursor keys select the required option. If the child was examined but there is no pufa data recorded on the collection sheet use code X – Not recorded.

Caries chart

18. To move around the dental chart use the cursor keys. When a code is entered it overwrites the '-' value.
19. If code 6 or 8 has been entered in surface 'D', then surface data for all that tooth will be automatically completed.

Optional details

20. There is one **Spare** field in this section which can be used for extra data to be recorded.

2.4 Create a new record or save a record

To create a new record for the same site click **Duplicate School Details**.

To create a new record for a different site, click **Add New Blank Record** or click the  button at the bottom of the screen. This automatically saves the record that you have just input.

To save a record click **Save Record**.

2.5 Navigate the records

To move forward a record, click the  button at the bottom of the screen.

To move back a record, click the  button at the bottom of the screen.

To move to the first record, click the  button at the bottom of the screen.

To move to the last record, click the  button at the bottom of the screen.

2.6 Find a record

1. Click **Find Record**.
2. In 'Find What' enter the value of what you are looking for, for example: a specific Child's Id Number or a specific school name.
3. Make sure 'Look In' is **Current Document**.
4. Click **Find Next**.

2.7 Delete a record

Got to the record you wish to delete. Click **Delete Current Record** and click **Yes** to confirm.

2.8 Save the file onto a disk or memory stick to be used as a back-up

This stage should be undertaken if data entry is not completed on a network drive that is backed up every night by your I.T. department.

1. From the menu bar, click **File, Save Database As**.
2. Select the relevant drive (usually as follows) and folder location.
 - c: Hard disk.
 - e: Encrypted Memory stick.
3. Click **Save**.

The file that you are now viewing is the file saved to the backup device. Before continuing either repeat stage 2.8 and save to hard disk C:

(or when using a desktop pc the relevant network drive), or close the file down and re-open from the hard disk drive (or network drive).

2.9 Close the form

Click **Close Form**. This then returns you to the main menu.

Stage 3 – Check data for errors

3.1 Create a duplicate file

Before starting to clean the data, create a duplicate file to ensure you still have an original file in case the file becomes corrupt in any way.

1. From the menu bar, click **File, Save Database As**.
2. Choose a different filename for example **5yr 2022 Data Clean.accdb**
3. Click **Save**.

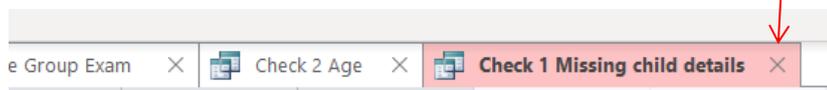
3.2 Check the data for errors

From the main menu Click **Check Data For Errors**.

A series of queries will run and if any errors are found details will be displayed. If some columns are too narrow put the cursor at the very top of the column and drag the right side line to the right to widen the column and the figures should be revealed.

You can print out any errors that are found or note them down in a separate table. To close a query and view the next one click the small **grey cross** in the top right of the query box.

Below is a screenshot from the data collection tool.



3.3 Errors explained

Check 1 Missing child details This check is to see if any records have missing details for the children. Any blanks or 'Not provided' should be double checked with the paperwork to see if it was accidentally missed or obtained at a later date.

Check 2 Age 5yr To check for children out of age range (child should be definitely 5-years-old on day of exam).

Check 3 LA Name Group Exam To check for incorrect input of LA Name, sample subgroup or examination status and to provide a count of each. The counts can be used to check all relevant data has been entered and data input tallies with the paperwork appendices.

Check 4 Add subgroup To check if any additional subgroup data has been input correctly for sites.

Check 4a School type and subgroup To check if school type and subgroup input match correctly for sites.

Check 5 Child duplicates To check if there are any duplicate records input. Note if there are siblings that attend the same site they should have been entered as Multiple Births and then they will not show as duplicates.

Check 6 Repeat Training To check if there are any repeat and/or training examinations that need deleting before submitting or if they should have been entered as a different examination status.

Check 7 Child PCode To check for any I or Os input instead of 1 or 0.

Check 7a Child PCode All These are not necessarily errors, this is a list grouped by all child postcodes. Scroll down through the list manually looking for any anomalies in the data input as your local knowledge is used for this check.

Check 8 School PCode To check for any I or Os input instead of 1 or 0.

Check 9 School name postcode These are not necessarily errors, this is a grouped list to check for any mismatch of site names (various permutations of spellings and punctuation), postcode anomalies or incorrect date of examinations input.

Check 10 Incisor coding To check coding of incisors (all incisors should be coded 8 not 6).

Check 11 Missing cde To check coding of missing cde (if they are coded 8 are you sure they should be coded 8 and not 6, refer to protocol 7.6.8).

Check 12 Ethnicity To check for miscoding, refer to protocol 7.5.13, lower ethnicity groupings must be selected from the relevant section relating to the higher ethnicity : A – White (lower A1-A4 or X), B-Mixed (lower B1 to B4 or X), C-Asian (lower C1 to C5 or X), D-Black (lower D1-D3 or X), E-Other (lower E1-E2 or X), F-Other (lower X), G-Other (lower X), H-Other (lower X), X-Ethnic group not provided (lower X).

Check 13 Examined incorrect plaque pufa To check for examined children with blank, absent or refused plaque and/or pufa and/or enamel caries information input.

Check 14 Absents refused plaque pufa To check for absent or refused children with information input for plaque and/or pufa and/or enamel caries other than the relevant absent or refused option.

You should now have a list of ID numbers or record numbers that need to be investigated because of errors – unless all data was inputted 100% perfectly. Some records will need checking and correcting, others may need deleting if the child was truly the wrong age, and not just appearing to be so because of a recording error. Recording onto paper charts can help with the process needed to clarify errors.

Stage 4 – amend incorrect records

Click **Open Data Input Form**.

4.1 Find a record using record number

1. At the bottom of the screen where it says Record 1 of ?
2. Input the record number to amend, press **Return**.

3. The record to amend will be displayed, check it is the correct one.
4. Amend the errors.
5. Click **Save Record**.

4.2 Find a record using Child ID Number

1. Click **Find Record**.
2. In 'Find What' enter the Child Id Number.
3. Make sure 'Look In' is **Current Document**.
4. Click **Find Next**.
5. The record to amend will be displayed, check it is the correct one.
6. Amend the errors.
7. Click Save Record.

4.3 Delete a record (leave deletions until the end)

To be used to remove genuinely out of age range children or duplicate records.

1. Find the record you wish to delete, double check it is the correct one.
2. Click **Delete Current Record**, Click **Yes** to confirm.

4.4 Close the form

1. Click **Close Form**.
2. The menu is then displayed.

When you have checked and cleaned the data file you are ready to export the data.

Stage 5 – send files to dental epidemiology coordinators

5.1 Export data to Excel

1. Make sure you are in the correct 'cleaned' database.

2. From the main menu Click **Export Data to Excel File**.
3. Locate the folder where you wish to save the file.
4. In 'File Name' change 'Data.xlsx' to **E*****_5yr22.xlsx** (where asterisk is the LA code, refer to protocol appendix H).
5. Click **OK**.
6. Click **Exit** to quit Access.

5.2 Complete Appendix O summary file

Open the Excel Appendix O Data summary file. If possible use your completed Appendix Ls as guidance to sum the totals, use 1 line for each lower-tier local authority (LA) and enter the information required for each.

MAINSTREAM PRIMARY SCHOOL SURVEY							State mainstream primary schools listed by local authority				Number of children with:		Number of children WITH parental agreement to participate:		
Upper-tier LA Code	Upper-tier LA Name	Lower-tier LA Code	Lower-tier LA Name	Name(s) of examiner(s)	Start date of examinations dd/mm/yyyy	End date of examinations dd/mm/yyyy	Total number of schools	Total number of 5-year-olds attending	Number of schools visited	Number of children for whom agreement to participate was sought (sample size)	Agreement to participate provided	Form not returned	Examined	Child absent	Child refused
E10000007	Derbyshire	E07000032	Amber Valley	A.N.Other	12/10/2016	03/04/2017	54	2784	20	354	287	67	267	16	4
E10000007	Derbyshire	E07000033	Bolsover	A.N.Other X Y Other	06/11/2016	02/03/2017	18	1500	18	308	260	48	240	17	3
E10000007	Derbyshire	E07000034	Chesterfield	A.N.Other	25/10/2016	03/05/2017	25	2023	22	327	300	27	264	36	0
E10000007	Derbyshire	E07000035	Derbyshire Dales	X Y Other Y Z Other	15/11/2016	19/12/2016	40	2542	21	350	285	65	258	23	4

Upper-tier LA Code Refer to protocol Appendix H.

Upper-tier LA Name.

Lower-tier LA Code Refer to protocol Appendix H.

Lower-tier LA Name.

Name of examiner If there is more than one examiner for the survey enter all the names in the same cell so there is only 1 row for each lower-tier LA.

Start date of examination The first day children were examined.

End date of examination The last day children were examined.

Total number of schools The total number of schools that were eligible to be visited.

Total number of 5-year-olds attending The total number of 5-years-old who attend all eligible schools.

Number of schools visited The total number of sites that were actually visited.

Number of children for whom agreement to participate was sought The total number of agreement to participate forms sent out to 5-year-old children.

Agreement to participate provided The total number of agreement to participate forms received.

Form not returned The total number of agreement to participate forms that were not returned.

Examined For those children with parental agreement, the total number of children who were examined.

Child absent For those children with parental agreement, the total number of children who were absent on the day of examination.

Child refused For those children with parental agreement, the total number of children who themselves refused on the day of examination.

It is important that the appendix O information is accurate and complete as it is used to calculate the response rates published in the report.

5.3 Complete Appendix P data linkage file

The information in this file will be used to attempt to link the 5-year-old survey data back to the 3-year-old survey data, it only needs to be completed if the local authority undertook a 3-year-old survey. For all examined children only, the information in the separate Appendix Ls must be collated together into 1 final protocol Appendix P data linkage file. This file is password protected, please contact your local dental epidemiology coordinator (DEC) for the password. If Appendix L has been completed electronically then the relevant data can be copied and pasted into Appendix P.

Name of local authority:

Examined children ONLY		Child ID Number											Date of Birth	Home postcode			
Child's first name	Child's surname (family name)	LA Code									Number of sampled child		dd/mm/yyyy	Part 1	Part 2		
Melissa	Jones	E	0	6	0	0	0	0	0	9	0	0	0	7	16/04/2017	FY4	3DF
Harvey	Smith	E	0	6	0	0	0	0	0	9	0	0	1	2	16.04.2017	FY5	6RT

correct
format and
valid date

incorrect
format or
invalid date

This file should be saved as **AppP_E*****_5yr22.xlsx** where ***** is the relevant local authority code, refer to protocol Appendix H List of LA codes and names.

5.4 Email files to DECs

Files must be emailed from an nhs.net email address to the DECs' nhs.net email address.

Files to be emailed to the DEC:

- the Excel exported cleaned data file created in stage 5.1, labelled **E*****_5yr22.xlsx**
- the Excel completed summary sheet Appendix O, labelled **AppO_E*****_5yr22.xlsx**
- the Excel completed data linkage sheet Appendix P with details for examined children only. This should be password protected and labelled **AppP_E*****_5yr22.xlsx**

Where ***** is the corresponding LA code, refer to protocol Appendix H.

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Public Health England
Wellington House
133-155 Waterloo Road
London SE1 8UG
Tel: 020 7654 8000

www.gov.uk/phe
Twitter: [@PHE_uk](https://twitter.com/PHE_uk)
www.facebook.com/PublicHealthEngland

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Prepared by: [National Dental Public Health Team](#)
For queries relating to this document, please contact: DentalPHIntelligence@phe.gov.uk

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Published: September 2021
PHE gateway number: GOV-9463



PHE supports the UN Sustainable
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