Office for Health
Improvement
& Disparities

National Dental Epidemiology Programme

Oral health survey of 5 year old children, 2023 to 2024:

guidance for handling data

Published August 2023

Contents

Introduction

This document provides guidance on data handling for the National Dental Epidemiology Programme 2023 to 2024 oral health survey of 5 year old children. It should be read in conjunction with the national protocol (reference 1) and the administrators' guide for the survey (reference 2).

All appendices referred to in the document are part of the national protocol and can be downloaded from the oral health survey page (reference 3).

Stage 1: collect information

Children's details, agreement to participate and examination status should be entered electronically into Appendix L: examination day sheet 5 year olds 2023 to 2024. 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 sum the totals required to complete the Appendix N: data summary 5 year olds 2023 to 2024 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 Data-collection-5-year-olds-2024.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@dhsc.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 school details

1. Click in the first field, 'Lower tier LA name' is multiple choice using either the mouse or cursor keys select the required option for the school, then either using the 'TAB' key, 'RETURN' key or the mouse move to the next field.

2. Input the 'Examiner' name.

3. Input the 'School name'.

4. The 'School type' is multiple choice, using either the mouse or cursor keys select the required option (0 – Mainstream or 1 – Special support).

5. Input the 'School postcode' in upper case, split into Inward and Outward code. (Take care that you do not confuse the letter 'O' with the number '0', or the letter 'I' with the number '1').

6. The 'Date of examination' should be entered as a date, for example 26/11/2023, 26-11-23.

The above school 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 Identity Number' is a unique identifier to the child and is alpha/numerical made up of the 'Lower tier LA code' and the 'Number of sampled child':

   • The correct lower tier LA code is displayed in brackets next to the lower tier LA name selected earlier. Carefully input this code into the text box 'Lower Tier LA Code', for example E07000127, you can check the protocol Appendix G for confirmation.

- The 'Number of sampled child' should be entered as a 4-digit unique number, for example 0014, this then automatically joins together with the 'Lower Tier LA Code' to create the 'Child Identity Number' and is displayed, for example E070001270014.

8. The 'Date of birth' should be entered as a date, for example 17/05/2018, 17-05-18. 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 do not confuse the letter 'O' with the number '0', or the letter 'I' 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 8.1.12 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 – A5 or 'X – ethnic group not provided'; you cannot select an option from another lower ethnicity box unless you are using locally agreed codes 'F - specific other', 'G - specific other' or 'H - specific other', for example 'A - white', 'F - Eastern European'. The locally defined group codes and descriptions used must be sent to the DEC when the data is submitted.

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 with parental agreement but who were absent on the day of examination, or who refused to be examined themselves, the 'Plaque assessment', 'Enamel caries' and 'Number of pufa conditions' 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.

Caries chart

16. To move around the dental chart, use the cursor keys. When a code is entered it overwrites the '-' value.

17. If code 6,7,8, or C has been entered in surface 'D', then surface data for all that tooth will be automatically completed.

Other details

18. 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 pufa/PUFA data recorded on the collection sheet use code X – not recorded.

19. The 'pufa' 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.

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 school, click 'Duplicate school details'.

To create a new record for a different school, 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 identity number or a specific school name.

3. Make sure 'Look in' is 'Current document'.

4. Click 'Find next'.

2.7 delete a record

Go 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 IT 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 '5-year-olds-2024-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.

Figure 1: screenshot from 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

To check for children out of age range (child should be born between 1 September 2017 and 31 August 2019).

Check 3 Incorrect LA Code

To check for incorrect input of LA code. The correct LA code is displayed in brackets next to the LA name.

Check 4 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 5 Add subgroup

To check if any additional subgroup data has been input correctly for schools.

Check 6 School type and subgroup

To check if school type and subgroup input match correctly for schools.

Check 7 Child duplicates

To check if there are any duplicate records input. Note if there are siblings that attend the same school they should have been entered as 'Multiple births' and then they will not show as duplicates.

Check 8 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 9 Child PCode

To check for any, I or Os input instead of 1 or 0.

Check 10 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. For example, a Child postcode1 input as PU4 would stand out as should be PR4.

Check 11 School PCode

To check for any, I or Os input instead of 1 or 0.

Check 12 School name postcode

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

Check 13 Incisor coding

To check if any missing incisors have been incorrectly coded as code 6 instead of code 8.

Check 14 Missing cde

To check if any missing cde teeth have been incorrectly coded as code 8 instead of code 6.

Check 15 Ethnicity

To check for miscoding, refer to protocol 8.1.12. Lower ethnicity groupings must be selected from the relevant section relating to the higher ethnicity: 'A – white' (lower A1-A5 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), 'X - ethnic group not provided' (lower X).

If using local lower ethnicity codes 'F - specific other', 'G - specific other', 'H - specific other' then the relevant higher ethnic group must also be used, for example 'A - white', 'F - Eastern European'.

Check 16 Examined incorrect plaque enamel caries pufa

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

Check 17 Absents refused plaque enamel caries pufa

To check for absent or refused children with information input for plaque and/or enamel caries and/or pufa 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 year group, 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 Identity Number

1. Click 'Find record'.

2. In 'Find what' enter the 'Child identity 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 year group 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 (DECs)

5.1 export data to Excel

1. Make sure you are in the correct 'cleaned' Access data collection file.

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********_5_year_olds_2024.xlsx' (where asterisk is the LA code, refer to protocol appendix G).

5. Make sure there is a tick in the 'Autostart' box

6. Click 'OK' and the data should open up within Excel.

7. From the menu bar at the top click 'File' and then click 'Info'.

8. Click 'Protect workbook' and then click 'Encrypt with password'.

9. Within the 'Password:' box type the same password you used to enter the data into the Access data collection tool (beginning with N), make sure the CAPS lock is on.

10. Click 'OK'.

11. Within the 'Re-enter password:' box re-type the same password and then click 'OK'.

12. Click 'Save'.

13. Click the cross in the top right corner of the spreadsheet to close and exit Excel.

14. Click 'Exit' on the main menu of the data collection tool to quit Access.

5.2 complete Appendix N summary file

Open the Excel Appendix N Data summary file (Figures 2 and 3). If possible, use your completed Appendix Ls as guidance to sum the totals, use 1 line for each lower tier local authority (LA) (not 1 line for each examiner) and enter the information required for each.

MAINSTREAM SCHOOL SURVEY

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
E10000007	Derbyshire	E07000032	Amber Valley	A N Other	12/10/2022	03/04/2023
E10000007	Derbyshire	E07000033	Bolsover	A N Other X Y Other	06/11/2022	02/03/2023
E10000007	Derbyshire	E07000034	Chesterfield	A N Other	25/10/2022	03/05/2023
E10000007	Derbyshire	E07000035	Derbyshire Dales	X Y Other Y Z Other	15/11/2022	19/12/2022

Figure 2: example of appendix N part 1

- Upper tier LA Code - Refer to protocol Appendix G

- Upper tier LA Name

- Lower tier LA Code - Refer to protocol Appendix G

- Lower tier LA Name

- Name(s) of examiner(s) - 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

State mainstream schools (with 5 year old children) listed by local authority				Number of children with :		Number of children WITH parental agreement to participate :		
Total number of schools	Total number of 5 year old children 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
54	2784	20	354	287	67	267	16	4
18	1500	18	308	260	48	240	17	3
25	2023	22	327	300	27	264	36	0
40	2542	21	350	285	65	258	23	4

Figure 3: example of appendix N part 1

- Total number of schools - The total number of mainstream schools providing education to 5 year old children

- Total number of 5 year old children attending - The total number of 5 year old children attending all mainstream schools

- Number of schools visited - The total number of schools that were actually visited

- Number of children for whom agreement to participate was sought (sample size) - The total number of 5 year old children for whom agreement to participate was initially sought (number of forms sent out)

- Agreement to participate provided - The total number of 5 year old children with agreement to participate forms signed and returned

- Form not returned - The total number of 5 year old children for whom agreement to participate was sought but either did not return a signed form or for whom a negative response was received

- Examined - The total number of 5 year old children with agreement to participate who were examined

- Child absent - The total number of 5 year old children with agreement to participate who were absent on the day of the survey

- Child refused - The total number of 5 year old children with agreement to participate who refused to be examined on the day of the survey

The appendix N part 1 information must be accurate to enable the calculation of participation rates for the survey at both national and local levels. For additional surveys complete appendix N part 2 and for special school surveys complete appendix N part 3.

This file should be saved as 'AppN_E********_5_year_olds_2024.xlsx' where '********' is the relevant local authority code, refer to protocol Appendix G List of LA codes and names.

5.3 email files to DECs

Files must be emailed from an nhs.net email address to your local DEC's nhs.net email address or uploaded to a Microsoft Teams site set up by your local DEC (stage 5.4).

Files to be emailed or uploaded to the DEC:

•   the Excel exported cleaned password protected data file created in stage 5.1, labelled 'E********_5_year_olds_2024.xlsx'

•   the Excel completed summary sheet Appendix N, labelled 'AppN_E********_5_year_olds_2024.xlsx'

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

5.4 upload files to Microsoft Teams

If requested to do so by your local DEC rather than email:

1. Within Microsoft Teams, in the top right of the screen, click on your current team organisation and in the drop-down menu click on 'Department of Health and Social Care', this will then display any GOV-OHID teams that you are a guest of.
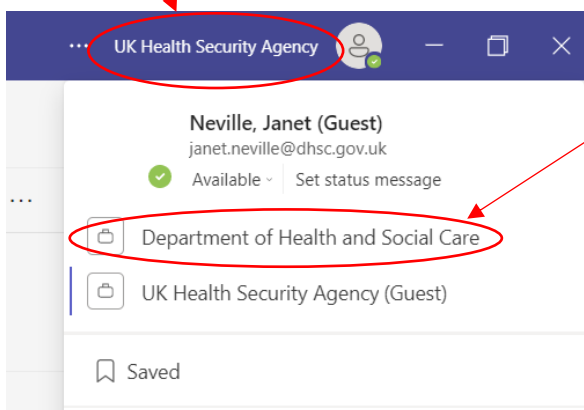

Figure 4: screenshot of Microsoft Teams

2. Select the relevant team required to upload survey files to.

3. Select the relevant channel for your local authority.
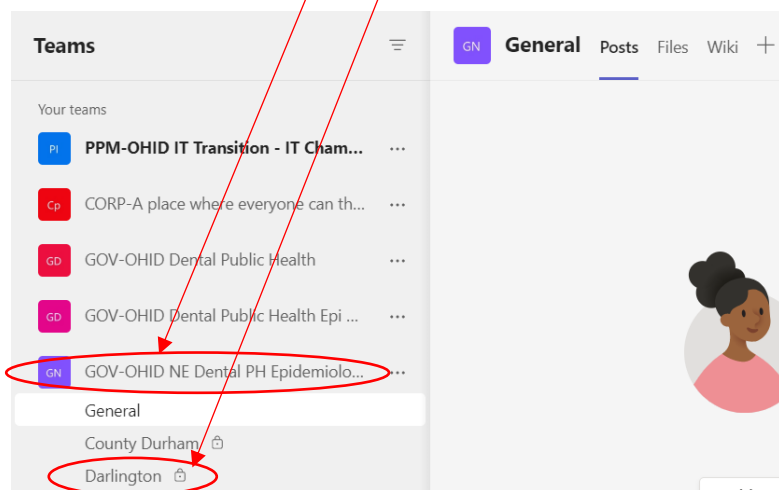
Figure 5: screenshot of Microsoft Teams

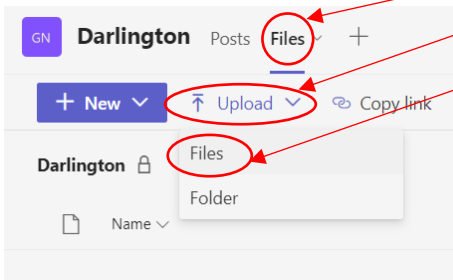4. From the menu at the top click 'Files', 'Upload', and 'Files'.

Figure 6: screenshot of Microsoft Teams

5. Within the browser window locate and select the file to upload.

6. Click 'Open'

7. The file should then be displayed within the channel.

8. Repeat steps 4 to 7 to upload all required files listed in stage 5.4.

DECs can follow stage 5.4 to upload LA survey files to the relevant LA folder within their 'DEC data upload' channel within the national team site.

References

1. Office for Health Improvement and Disparities (2023): National Dental Epidemiology Programme. Oral health survey of 5 year old children, 2023 to 2024: national protocol. Available from: https://www.gov.uk/government/publications/oral-health-survey-of-5-year-old-children-2023-to-2024-toolkit

2. Office for Health Improvement and Disparities (2022): National Dental Epidemiology Programme. Administrators' guide to child cohort surveys. Available from: https://www.gov.uk/government/publications/oral-health-survey-guidance

3. Office for Health Improvement and Disparities (2023): National Dental Epidemiology Programme. Oral health survey of 5 year old children, 2023 to 2024: survey toolkit. Available from: https://www.gov.uk/government/publications/oral-health-survey-of-5-year-old-children-2023-to-2024-toolkit