


# Pathways of Care Longitudinal Study: Outcomes of Children and Young People in Out-of-Home Care

## Looping and Conditional Branching of the Survey Variables







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Technical Report No.10

Looping and Conditional Branching of the  
Survey Variables

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#### Pathways of Care Longitudinal Study Clearinghouse

All study publications including research reports, technical reports and evidence to action notes can be found on the study webpage [www.facs.nsw.gov.au/resources/research/pathways-of-care](http://www.facs.nsw.gov.au/resources/research/pathways-of-care)

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# Preface

The Pathways of Care Longitudinal Study (POCLS) is funded and managed by the New South Wales Department of Communities and Justice (DCJ). It is the first large-scale prospective longitudinal study of children and young people in out-of-home care (OOHC) in Australia. Information on safety, permanency and wellbeing is being collected from various sources. The child developmental domains of interest are physical health, socio-emotional wellbeing and cognitive/learning ability.

The overall aim of this study is to collect detailed information about the life course development of children who enter OOHC for the first time and the factors that influence their development. The POCLS objectives are to:

- describe the characteristics, child protection history, development and wellbeing of children and young people at the time they enter OOHC for the first time
- describe the services, interventions and pathways for children and young people in OOHC, post restoration, post adoption and on leaving care at 18 years
- describe children's and young people's experiences while growing up in OOHC, post restoration, post adoption and on leaving care at 18 years

understand the factors that influence the outcomes for children and young people who grow up in OOHC, are restored home, are adopted or leave care at 18 years

- inform policy and practice to strengthen the OOHC service system in NSW to improve the outcomes for children and young people in OOHC.

The POCLS is the first study to link data on children's child protection backgrounds, OOHC placements, health, education and offending held by multiple government agencies; and match it to first-hand accounts from children, caregivers, caseworkers and teachers. The POCLS database will allow researchers to track children's trajectories and experiences from birth.

The population cohort is a census of all children and young people who entered OOHC for the first time in NSW over the 18 month period between May 2010 and October 2011 (n=4,126). A subset of those children and young people who went on to receive final Children's Court care and protection orders by April 2013 (2,828) were eligible to participate in the interview component of the study. For more information about the study please visit the study webpage

[www.facs.nsw.gov.au/resources/research/pathways-of-care](http://www.facs.nsw.gov.au/resources/research/pathways-of-care)

The POCLS acknowledges and honours Aboriginal people as our First Peoples of NSW and is committed to working with the DCJ Aboriginal Outcomes team to ensure that Aboriginal children, young people, families and communities are supported and

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empowered to improve their life outcomes. The POCLS data asset will be used to improve how services and supports are designed and delivered in partnership with Aboriginal people and communities.

DCJ recognises the importance of Indigenous Data Sovereignty (IDS) and Indigenous Data Governance (IDG) in the design, collection, analysis, dissemination and management of all data related to Aboriginal Australians. The POCLS is subject to ethics approval, including from the Aboriginal Health & Medical Research Council of NSW. The DCJ is currently in the process of scoping the development of IDS and IDG principles that will apply to future Aboriginal data creation, development, stewardship, analysis, dissemination and infrastructure. The POCLS will continue to collaborate with Aboriginal Peoples and will apply the DCJ research governance principles once developed.



# 1. Introduction

The Pathways of Care Longitudinal Study (POCLS) Child and Young Person, Caregiver, Teacher and Caseworker survey questionnaires include questionnaire items (questions) that, depending on the response to the question, require the interviewer to 'loop' back to a previous question, repeat ('loop') the current question, or 'skip' a question.

'Looping' is typically required where: (i) a question has multiple potential responses and further information is needed on each of the responses; or (ii) where the response to a question needs to be checked against an earlier question.

An example of the former is found in the Child and Young Person questionnaire, where the question "What are three things you like doing?" allows the respondent to provide up to three responses. Where the respondent provides activities of interest, the follow-up question asks, "... how often do you get to do these activities?". Each of the activities requires a frequency response. Hence at data collection the "... how often do you get to do these activities?" needs to be repeated ('looped' through) up to three times.

An example of the latter use of 'looping' is found in the Caregiver questionnaire, where the respondent is asked "What were the main services and supports you received...". A follow-up question asks, "What services or supports did you really need for yourself but didn't get...". The interviewer/Computer Assisted Person Interview (CAPI) system is required to 'loop' back to the earlier question and exclude from the response any services that were reported as being received.

'Skip' patterns, also called conditional branching, branch logic and skip-logic, force the respondent to take a customised path through the survey which will vary based on their response to the questions.

The consequence of 'looped' questions is that the dataset may contain multiple response variables per question (one for each of the "three things you like doing", for example) and each of these may align with multiple other variables (the corresponding "how often do you get to do these activities" variable, for example). Where possible, related variables in the POCLS Data Asset have a common route-label, allowing them to be aligned. However, the only accurate way to ensure the appropriate variables are identified and aligned is to refer to the relevant questionnaire and data dictionary.

Similarly, the consequence of skip-patterns is that for a particular respondent a particular question response may be missing (blank) in the dataset (as it is not relevant to that respondent), thus affecting frequency counts and having direct influence on selecting the denominator for calculation of proportions. Again, the best way to ensure



the appropriate use of variables is to refer to the relevant questionnaire and data dictionary.

A detailed example of looping and skip-pattern variables and how the data derived from them can be presented and interpreted is given below.

## 2. Example

The Caregiver questionnaire for Wave 1 asks the respondent “Does [Study Child] have any of the conditions on this card that have lasted or are expected to last 6 months or more and have been diagnosed by a health professional?” (question name GHD11). A list of 20 possible conditions are provided: hearing; eyesight; teeth/oral hygiene; food or digestive allergies; respiratory allergies such as hay fever; other allergies; asthma; bronchitis; heart condition or disease; epilepsy; diabetes; foetal alcohol spectrum disorder; cerebral palsy; kidney condition or disease; blood disorder; developmental delay – physical (please specify); language or cognitive problems (including developmental delay) (please specify); behavioural or social problems (eg ADHD or Autism) (please specify); emotional or nervous difficulties e.g. anxiety (please specify); any other condition (please specify); None of the above; don’t know; refused. These correspond to the POCLS Data Asset variable names ‘HS\_CRR\_6M\_HEAR’ to ‘HS\_CRR\_6M\_OTH’.

The follow-up question (GHD12) asks “Have there been any changes in [Study Child]’s [GHD11] since [he/she] came to live here? IF YES, ADD: is this an improvement or a deterioration?” with the possible response options “Yes - improvement; Yes - deterioration; No; Don’t know; Refused”. The loop/skip instruction for the interviewer is “Loop for each yes at GHD11”. That is, the ‘changes’ question is asked for each of the conditions the child has, requiring up to 20 ‘loops’ through the question.

Further questions ask:

(GHD14) (Loop for each ‘yes’ at GHD11) “Since coming to live with you, has [Study Child] received any professional services for [GHD11]?”, with the possible responses “Yes; No; Don’t know; Refused”

(GHD15) (Loop where GHD14=‘Yes’) “What has happened as a result of these services?”, response “Child responding/ed well; Referral made; Problem not resolved; None of these; Don’t know; Refused”

(GHD16) (Loop where GHD14=‘No’) “Is there any reason [Study Child] has not received professional services for [his/her] [GHD11]?”, response “Yet to make any referral; Not aware of available services; Services not needed; Services not available locally; Waiting for services; Other (Specify); Don’t know; Refused”

(GHD19) (If yes to GHD9 or GHD11 (not looped)) “What makes it hard for [Study Child] to receive the professional attention [he/she] needs?”, response "No appropriate services; Too far to travel; Problems with transport; Long waiting lists; Cost of the service; Something else (please specify); None; Don't know; Refused"

An illustration of the impact of looped and skipped values using Wave 1 sample data, where the response to GHD11 is ‘Asthma’, is presented in Table 1. The Caregiver questions are listed in Appendix 1 mapped to both the questionnaire item and data dictionary variable name.

There were 146 children where the caregiver reported ‘Asthma’ “lasting 6 months or more” (questionnaire question name GHD11; corresponding POCLS Data Asset variable name HS\_CRR\_6M\_ASTHMA). The condition was reported to have improved (GHD12 and HS\_CRR\_CHG\_ASTHMA, respectively) for 102 children (70%), remained the same for 37 (25%), deteriorated for 4 (3%) and 3 (2%) respondents did not know the answer to the question. The denominator for calculating proportions is 146 children.

Of those 102 children whose condition had improved, 91 (89%) had received professional services (GHD14 and HS\_CRR\_SERV\_ASTHMA, respectively) for their asthma and 11 (11%) had not. The denominator for calculating proportions is now 102 children.

Of those 91 children with asthma, whose condition had improved and who had received professional services, all had been referred for treatment (GHD15 and HS\_CRR\_RES\_ASTHMA, respectively) (i.e. ‘Referral made’=0) and 86 (95%) were responding well to treatment while the problem was unresolved for 5 (6%). The denominator for calculating proportions here is 91 children.

Of those 11 children with asthma, whose condition had improved and who had not received professional services, all were reported as not needing the service (GHD16 and HS\_CRR\_NOT\_ASTH\_NEED, respectively). The denominator for calculating proportions here is 11 children.

Further, for those children identified by the caregiver as having one of the listed conditions (GHD11), a generic (i.e. not specific to the condition and therefore not requiring looping) question about barriers to accessing services (GHD19 and HS\_CRR\_BAR\_APPROV to HS\_CRR\_BAR\_WAITLIST, respectively) revealed that, for those children with asthma (who may also have had a range of other conditions), 3 respondents thought there was a lack of appropriate services, 6 considered the distance to professional services was too great, and so on (Table 2).

Table 1: Illustration of the impact of looped and skip variables. Frequency table for Caregiver questions GHD12, GHD14, GHD15 and GHD16 for children reported as having asthma (n=146) at Wave 1

Change in condition since placement (HS_CRR_CHG_ASTHMA) [GHD12]		Professional services (HS_CRR_SERV_ASTHMA) [GHD14]		Results of professional services (HS_CRR_RES_ASTHMA) [GHD15]		Reason for not receiving professional services (HS_CRR_NOT_ASTH_xxx) [GHD16]	
Improved	102	Yes	91	Responding well	86	N/A	91
				Referral made	0		
				Problem not resolved	5		
				None of these	0		
				Don't know	0		
				Refused	0		
	11	No	N/A	11	6	1. yet to make a referral	0
						2. not aware of available services	0
						3. services not needed	11
						4. service not available locally	0
						5. waiting for service	0
						6. other	0
No change	37	Yes	25	Responding well	17	N/A	25
				Referral made	1		
				Problem not resolved	7		
		No	12	N/A	12	1. yet to make a referral	0
						2. not aware of available services	0
						3. services not needed	12

						4. service not available locally	0
						5. waiting for service	0
						6. other	0
Deteriorated	4	Yes	4	Responding well	2	N/A	4
				Referral made	0		
				Problem not resolved	2		
		No	0	N/A	0	N/A	0
Don't Know/ Refused	3	Yes	3	Responding well	3	N/A	3
				Referral made	0		
				Problem not resolved	0		
		No	0	N/A	0	N/A	0
TOTAL	146	Yes	123	Responding well	108	N/A	123
				Referral made	1		
				Problem not resolved	14		
		No	23	N/A	23	3. services not needed	23
TOTAL	146		146		146		146

See Appendix 1 for the Caregiver questionnaire questions.

Table 2: Illustration of the impact of looped and skip variables. Frequency table for Caregiver questions GHD19 for children reported as having asthma (n=146) at Wave 1.

Barriers to professional support (HS_CRR_BAR_APPROV to HS_CRR_BAR_WAITLIST) [GHD19]	Professional help (HS_CRR_SERV_ASTHMA) [GHD14]		Total
	Yes	No	
1. no appropriate services (HS_CRR_BAR_SERV)	3	0	3
2. too far to travel (HS_CRR_BAR_TRAVEL)	4	2	6
3. problem with transport (HS_CRR_BAR_TRANS)	3	2	5
4. long waiting lists (HS_CRR_BAR_WAITLIST)	30	6	36
5. cost of the service (HS_CRR_BAR_COST)	4	0	4
6. Other (HS_CRR_BAR_OTH_CODE)	9	1	10
6.1. child won't attend*	(2)	(1)	
6.2. difficulty getting agency approval*	(7)	(0)	
7. don't know; not applicable			82
TOTAL			146

\* Note, these responses are coded from 'Other (please specify)'

Note, many questions have the response option "Other (specify) [TEXT BOX]". The names of the variables in the POCLS Data Asset indicating a text response may be available ends in '\_CODE' and the variables that contains the actual text responses ends in '\_TXT'.

In many instances these text responses have been coded to a new variable (format 'Yes'/'No'/'Not applicable'). Where a variable has been coded from a free text response this is indicated in the variable label by 'RECODE:'.

Care should be taken when presenting the data for such variables, since the 'RECODE' responses are actually a subset of the 'Other specify' ('\_CODE') variable and in most cases should not be double counted in column totals.

For example, in Table 2 there are 10 records where the respondents indicated an 'Other barrier to professional support' (HS\_CRR\_BAR\_OTH\_CODE). The text response to these 'Other barriers' (HS\_CRR\_BAR\_OTH\_TXT) have been coded to 'Child won't attend' (HS\_CRR\_BAR\_CHILDREFUSE) (n=3) and 'Difficulty getting agency approval' (HS\_CRR\_BAR\_APPROV) (n=7). These responses are a subset of, not additional to, HS\_CRR\_BAR\_OTH\_CODE.

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To illustrate how Tables 1 and 2 can be derived from the data, Figure 1 provides the relevant pseudo-code.

Figure 1: Illustration of the impact of looped and skip variables. Pseudo-code to generate data from Tables 1 and 2, Caregiver questions GHD12, GHD14, GHD15, GHD16 and GHD19 for children reported as having asthma at Wave 1

1. Constrain analysis to the condition 'Asthma' (questionnaire question name GHD11):  
Where HS\_CRR\_6M\_ASTHMA = 1 (yes)
2. Generate table 'Change in condition since placement' (question name GHD12):  
Table HS\_CRR\_CHG\_ASTHMA
3. Generate table 'Professional services received' (questionnaire question name GHD14) for each 'Change' response:  
Table HS\_CRR\_CHG\_ASTHMA by HS\_CRR\_SERV\_ASTHMA
4. Generate table 'Results of professional services' (question name GHD15) for each of the 'Change' (question name GHD12) and 'Professional services' (question name GHD14) options:  
  
Where HS\_CRR\_CHG\_ASTHMA = 1 (yes-improvement) and HS\_CRR\_SERV\_ASTHMA= 1 (yes), Table HS\_CRR\_RES\_ASTHMA  
  
Where HS\_CRR\_CHG\_ASTHMA = 1 (yes-improvement) and HS\_CRR\_SERV\_ASTHMA= 2 (no), Table HS\_CRR\_RES\_ASTHMA  
  
Where HS\_CRR\_CHG\_ASTHMA = 2 (yes-deterioration) and HS\_CRR\_SERV\_ASTHMA= 1 (yes), Table HS\_CRR\_RES\_ASTHMA  
  
**Etc ...**  
  
Alternatively, if your statistical package supports tables with many strata:  
Table HS\_CRR\_CHG\_ASTHMA by HS\_CRR\_SERV\_ASTHMA by HS\_CRR\_RES\_ASTHMA
5. Generate table 'Reason for not receiving professional services' (question name GHD16):  
  
Where HS\_CRR\_CHG\_ASTHMA = 1 (yes – improvement) and HS\_CRR\_SERV\_ASTHMA= 2 (no), Tables HS\_CRR\_ASTH\_AVAIL, HS\_CRR\_ASTH\_NEED, HS\_CRR\_ASTH\_OTH\_CODE, HS\_CRR\_ASTH\_REFER, HS\_CRR\_ASTH\_SERV, HS\_CRR\_ASTH\_WAIT  
  
Where HS\_CRR\_CHG\_ASTHMA = 2 (yes-deterioration) and HS\_CRR\_SERV\_ASTHMA= 2 (no), Tables HS\_CRR\_ASTH\_AVAIL, HS\_CRR\_ASTH\_NEED, HS\_CRR\_ASTH\_OTH\_CODE, HS\_CRR\_ASTH\_REFER, HS\_CRR\_ASTH\_SERV, HS\_CRR\_ASTH\_WAIT  
  
**Etc...**
6. Generate table 'Barriers to professional services' (question name GHD19):  
  
Where HS\_CRR\_6M\_ASTHMA = yes, Tables HS\_CRR\_SERV\_ASTHMA by HS\_CRR\_BAR\_APPROV, HS\_CRR\_BAR\_CHILDREFUSE, HS\_CRR\_BAR\_COST, HS\_CRR\_BAR\_KNOW, HS\_CRR\_BAR\_OTH\_CODE, HS\_CRR\_BAR\_SERV, HS\_CRR\_BAR\_TRANS, HS\_CRR\_BAR\_TRAVEL, HS\_CRR\_BAR\_WAITLIST



## Appendix 1: Example of looped Caregiver questions on the child's conditions, access to related professional services and progress.

Caregiver questionnaire item	Caregiver data dictionary variable	Caregiver question (new carer)
GHD11	HS_CRR_6M_ASTHMA	<p>Does [Study Child] have any of the conditions on this card that have lasted or are expected to last 6 months or more and have been diagnosed by a health professional?</p> <p>MULTICODE OK</p> <p>[SHOWCARD 12]</p> <ul style="list-style-type: none"> <li>• Problems with hearing</li> <li>• Problems with eyesight</li> <li>• Problems with teeth/ oral hygiene</li> <li>• Food or digestive allergies</li> <li>• Respiratory allergies such as hay fever</li> <li>• Other allergies</li> <li>• Asthma</li> <li>• Bronchitis</li> <li>• Heart condition or disease</li> <li>• Epilepsy</li> <li>• Diabetes</li> <li>• Foetal alcohol spectrum disorder</li> <li>• Hepatitis C</li> <li>• Cerebral palsy</li> <li>• Kidney condition or disease</li> <li>• Blood disorder</li> <li>• Developmental delay – physical (please specify) [TEXT BOX]</li> <li>• Language or cognitive problems (including developmental delay) (please specify) [TEXT BOX]</li> <li>• Behavioural or social problems (e.g. ADHD, autism) (please specify) [TEXT BOX]</li> <li>• Emotional, or nervous difficulties (e.g. anxiety) (please specify) [TEXT BOX]</li> <li>• Any other condition (please specify)[TEXT BOX]</li> <li>• None of the above</li> <li>• DON'T KNOW</li> <li>• REFUSED</li> </ul>
GHD12	HS_CRR_CHG_ASTHMA	<p>Have there been any changes in [Study Child]'s [GHD11] since [he/she] came to live here ? IF YES, ADD: is this an improvement or a deterioration?</p> <p>Yes - improvement; Yes - deterioration; No; DON'T KNOW; REFUSED;</p>
GHD14	HS_CRR_SERV_ASTHMA	<p>Since coming to live with you, has [Study Child] received any professional services for [GHD11]?</p> <p>Yes; No;</p>

		DON'T KNOW; REFUSED;
GHD15	HS_CRR_RES_Asthma	What has happened as a result of these services?  Child responding/ed well to treatment; Child not responding/ed well to treatment Referral made but no treatment yet; Other (specify) [TEXT BOX] DON'T KNOW; REFUSED;
GHD16	HS_CRR_NOT_Asth_Avail	Is there any reason [Study Child] has not received professional services for [his/her] [GHD11]?  Yet to make any referral; Not aware of available services; Services not needed or the condition improved; Services not available locally; Waiting for services; Other (Specify) [TEXT BOX]; DON'T KNOW; REFUSED;
GHD19		What makes it hard for [Study Child] to receive the professional attention [he/she] needs?  No appropriate services; Too far to travel; Problems with transport; Long waiting lists; Cost of the service; Too hard to get approval from Department / Agency; Child/yp won't attend (or attends but won't engage); Not knowing what services are available/Not offered; Something else (please specify) [TEXT BOX]; None; DON'T KNOW; REFUSED;



