

# Early Childhood Development Surveillance supported by ASQ-3 in Scotland

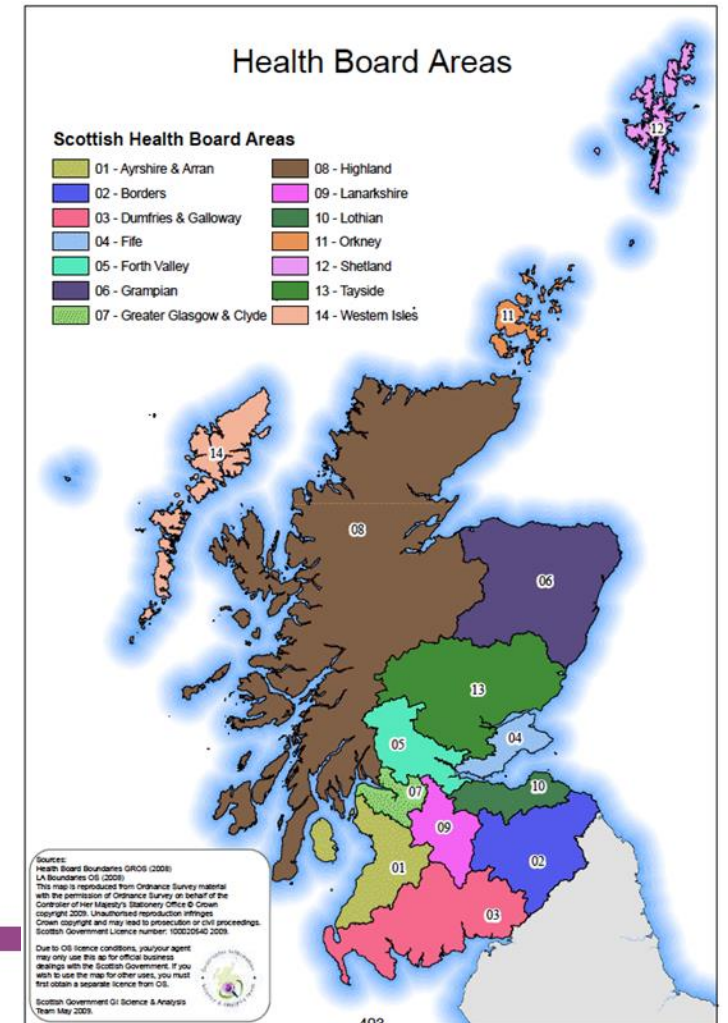
Susanne Brunton, Principal Information Analyst, Child Health  
Dr Lynda Fenton, Consultant in Public Health Medicine

6<sup>th</sup> February 2024

# Scotland, the National Health Service and Health Boards

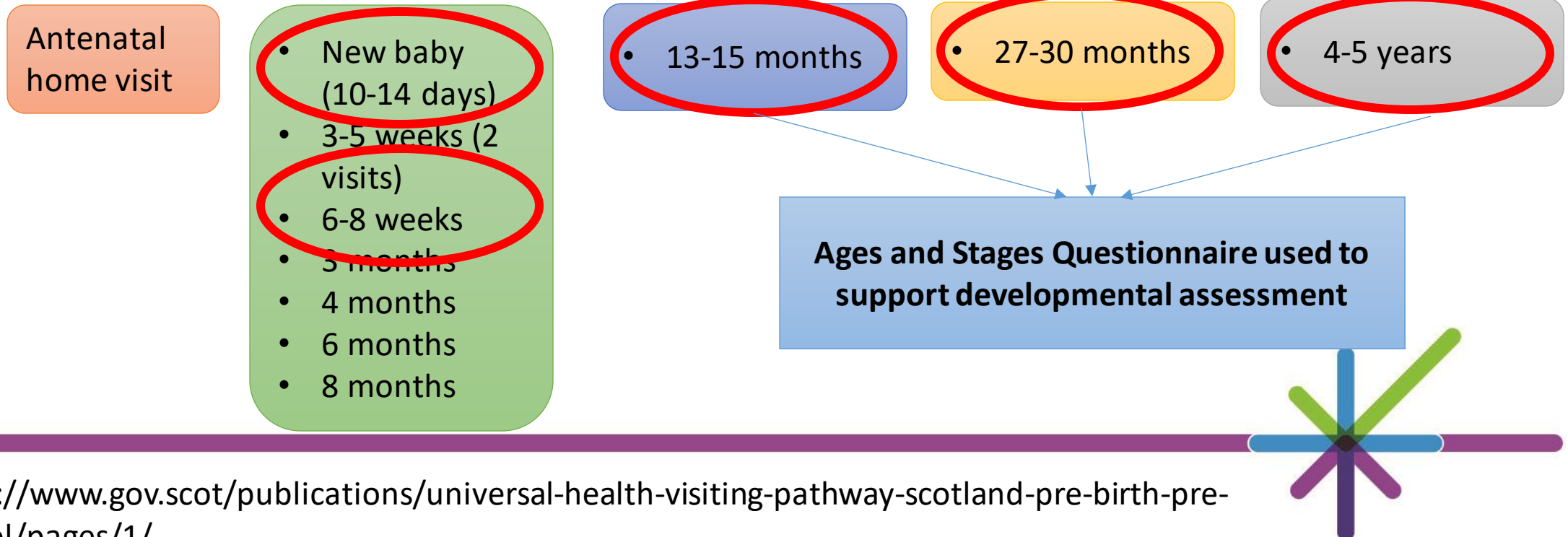


- Population 5.5 million
- 19% aged under 18 years
- Around 45,000 births per year



# Scotland: Universal Health Visiting Pathway

- Revised in 2015
- 11 home visits to all families from birth to pre-school, plus antenatal home visit



# ASQ-3 - questionnaire

- 30 questions covering 5 domains:
  1. Communication
  2. Gross Motor
  3. Fine Motor
  4. Problem Solving
  5. Personal-Social
- Overall section – general parental concerns, medical problems

Does your child climb the rungs of a ladder of a playground slide and slide down without help?




Yes, Sometimes, Not yet

**ASQ-3** 48 Month Questionnaire page 3 of 7

**COMMUNICATION** (continued)

	YES	SOMETIMES	NOT YET	
5. Without your giving help by pointing or repeating, does your child follow three directions that are unrelated to one another? Give all three directions before your child starts. For example, you may ask your child, "Clap your hands, walk to the door, and sit down," or "Give me the pen, open the book, and stand up."	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<u>0</u>
6. Does your child use all of the words in a sentence (for example, "a," "the," "am," "is," and "are") to make complete sentences, such as "I am going to the park," or "Is there a toy to play with?" or "Are you coming, too?"	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<u>5</u>
<b>COMMUNICATION TOTAL</b>				<b>25</b>

**GROSS MOTOR**

	YES	SOMETIMES	NOT YET	
1. Does your child catch a large ball with both hands? (You should stand about 5 feet away and give your child two or three tries before you mark the answer.) 	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<u>10</u>
2. Does your child climb the rungs of a ladder of a playground slide and slide down without help?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<u>10</u>
3. While standing, does your child throw a ball overhand in the direction of a person standing at least 6 feet away? To throw overhand, your child must raise his arm to shoulder height and throw the ball forward. (Dropping the ball or throwing the ball underhand should be scored as "not yet.") 	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<u>10</u>
4. Does your child hop up and down on either the right or left foot at least one time without losing her balance or falling?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<u>10</u>
5. Does your child jump forward a distance of 20 inches from a standing position, starting with his feet together?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<u>10</u>
6. Without holding onto anything, does your child stand on one foot for at least 5 seconds without losing her balance and putting her foot down? (You may give your child two or three tries before you mark the answer.) 	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<u>10</u>
<b>GROSS MOTOR TOTAL</b>				<b>60</b>

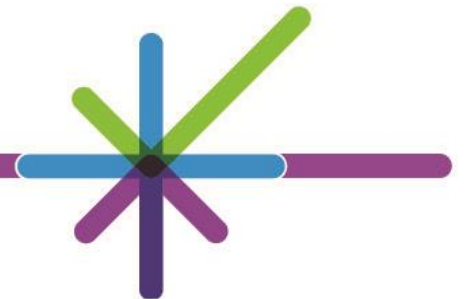
**FINE MOTOR**

	YES	SOMETIMES	NOT YET	
1. Does your child put together a five- to seven-piece interlocking puzzle? (If one is not available, take a full-page picture from a magazine or catalog and cut it into six pieces. Does your child put it back together correctly?)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<u>5</u>

E101480300 Agm & Stages Questionnaire®, Third Edition (ASQ-3™), Squires & Bricker  
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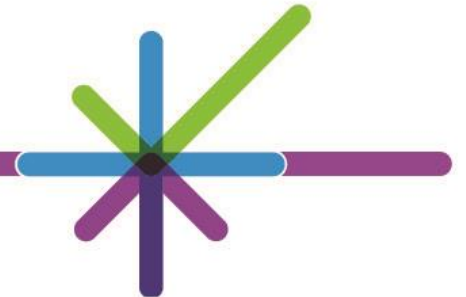
# ASQ-3 – scoring and thresholds

- 21 versions according to child age: 2 to 60 months
- Each domain scored out of 60
  - 6 questions
  - Yes = 10, Sometimes = 5, Not yet = 0
- Three outcomes
  - On schedule (above cutoff threshold)
  - Monitor (close to cutoff threshold)
  - Further assessment (below cutoff threshold)
- Threshold values vary by domain and questionnaire version (age)



# ASQ-3 within developmental assessment in Scotland

- Varied use of tools across areas prior to 2015
- Consistent use of ASQ-3 recommended for all areas from 2015
- Additional tools may be used in particular circumstances, for example:
  - PEDS – Parents Evaluation of Developmental Status
  - ASQ-SE 2 – ASQ: Social-Emotional
  - SDQ – Strengths and Difficulties Questionnaire
- Health visitor uses ASQ-3 outcomes, additional tools and professional judgement to reach overall assessment of development



# Recording of assessment outcomes

**MEDICAL-IN-CONFIDENCE** HEALTH VISITOR COPY  
**13-15 Month Review** IF THE CHILD IS MORE THAN 18 MONTHS PLEASE USE AN 'UNSCHEDULED' FORM

SCHEDULED DATE OF ASSESSMENT: \_\_\_\_\_ DATE ASSESSMENT COMPLETED: [ ][ ][ ][ ][ ][ ]

CHI NO \_\_\_\_\_ HB \_\_\_\_\_  
 GENDER \_\_\_\_\_  
 HEALTH VISITOR \_\_\_\_\_  
 TREATMENT CENTRE \_\_\_\_\_  
 GP PRACTICE \_\_\_\_\_  
 EDD \_\_\_\_\_

PLEASE PRINT CLEARLY IN BALL POINT PEN

*Please check the information above and if appropriate, enter amendments below. Please also advise the GP of any changes.*

Change of name to: \_\_\_\_\_ Change of GP to: \_\_\_\_\_

Change of TC to: CHSP PS [ ][ ][ ] SIRS [ ][ ][ ] Change of Caseload HV to: [ ][ ][ ][ ][ ][ ]

Change of address to: \_\_\_\_\_ Postcode: [ ][ ][ ][ ][ ][ ][ ]

Carer present with child at review (Y)  Primary carer  Additional carer  Other  Current LAC Status

Ethnicity: [ ][ ]\* Is English 1st language at home? (Y/N) \* Bilingual/multilingual (Y/N) \*

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At risk TB \* BCG Given \*

TB Risk Status - Please indicate which countries the following people were born in: Child \_\_\_\_\_

Parents/Carers (1) \_\_\_\_\_ (2) \_\_\_\_\_

Grandparents (where applicable) (1) \_\_\_\_\_ (2) \_\_\_\_\_

(3) \_\_\_\_\_ (4) \_\_\_\_\_

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Childsmile outcome at last review \* Registered with Dentist \* Ever attended Dentist? \*

Toothbrushing twice daily (Y/N)  Primary carer current smoker (Y/N)  Child exposed to 2nd hand smoke (Y/N)

Concerns raised by carer, enter (R) \_\_\_\_\_

Feeding/Diet  Growth/Weight  Sleep  Development  Physical Health  Other  \_\_\_\_\_

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Feeding:-

Ever breast fed? (Y/N) \* Child's age when breastfeeding stopped: Completed Months [ ][ ]\*

Current Feeding  (previous 24 hours) (B, F, C, M, O, U) Child's age when weaning foods introduced: Months [ ][ ]

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Development: outcome of assessment (N, C, P, X) Ages and Stages results: ASQ score is 0-60

Speech, Language & Communication	<input type="checkbox"/>	ASQ score	[ ][ ][ ][ ]	Problem Solving	<input type="checkbox"/>	ASQ score	[ ][ ][ ][ ]	Emotional/Behavioural	<input type="checkbox"/>
Gross Motor	<input type="checkbox"/>	ASQ score	[ ][ ][ ][ ]	Personal/Social	<input type="checkbox"/>	ASQ score	[ ][ ][ ][ ]	Vision	<input type="checkbox"/>
Fine Motor	<input type="checkbox"/>	ASQ score	[ ][ ][ ][ ]					Hearing	<input type="checkbox"/>

Tools: - indicate all used during the review to support developmental assessment (see over for codes) [ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ]

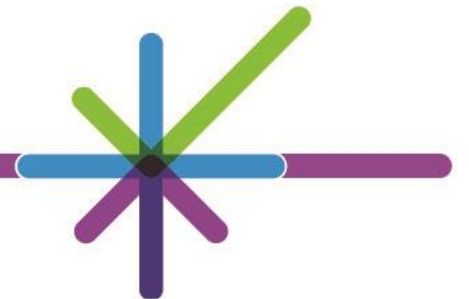
**Development:** outcome of assessment (N, C, P, X) Ages and Stages results: ASQ score is 0-60

<b>Speech, Language &amp; Communication</b>	<input type="checkbox"/>	ASQ score	[ ][ ][ ][ ]	<b>Problem Solving</b>	<input type="checkbox"/>	ASQ score	[ ][ ][ ][ ]	<b>Emotional/Behavioural</b>	<input type="checkbox"/>
<b>Gross Motor</b>	<input type="checkbox"/>	ASQ score	[ ][ ][ ][ ]	<b>Personal/Social</b>	<input type="checkbox"/>	ASQ score	[ ][ ][ ][ ]	<b>Vision</b>	<input type="checkbox"/>
<b>Fine Motor</b>	<input type="checkbox"/>	ASQ score	[ ][ ][ ][ ]					<b>Hearing</b>	<input type="checkbox"/>

**Tools:** - indicate all used during the review to support developmental assessment (see over for codes) [ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ]

# Actions following assessment

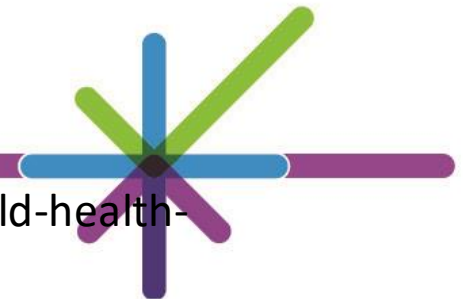
- Additional support from the health visiting team e.g. parenting support
- Signposting by health visiting team e.g. local services (play, library etc)
- Referral for specific therapy e.g. speech and language therapy, physiotherapy, occupational therapy
- Referral for further assessment e.g. General Practitioner, Community Paediatrics
  
- Follow-up by health visiting team – routine or additional





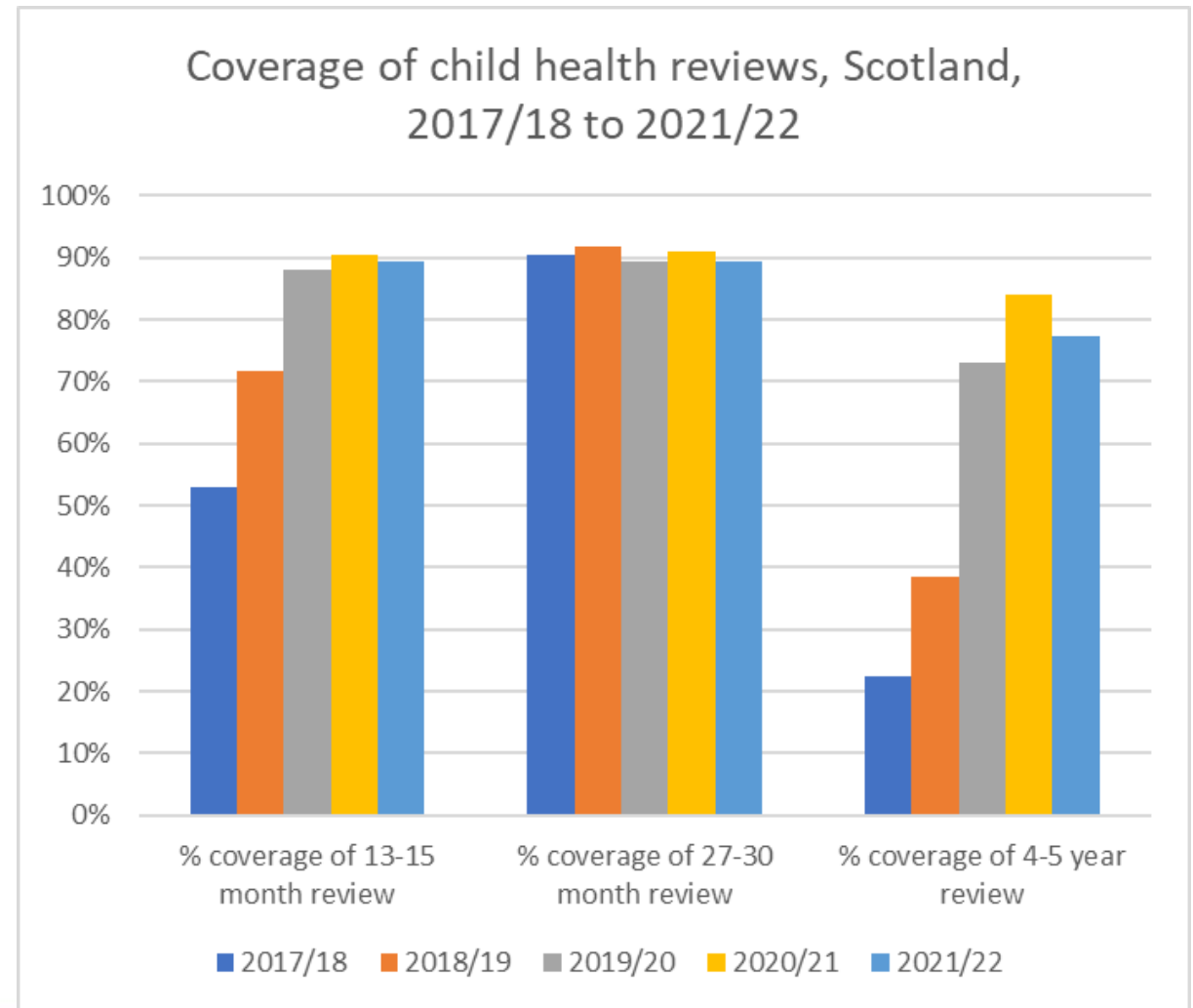
# National data on child health reviews and early childhood development

- All Health Boards enter data from reviews onto national system – CHSP – Pre-school
- Data is extracted and collated by Public Health Scotland
- Two annual publications (coverage and early childhood development)
- Early childhood development → percentage of children with a concern in any developmental domain
  - Sex, Socioeconomic deprivation, Ethnicity, Language, Looked after and accommodated
- Quarterly dashboard

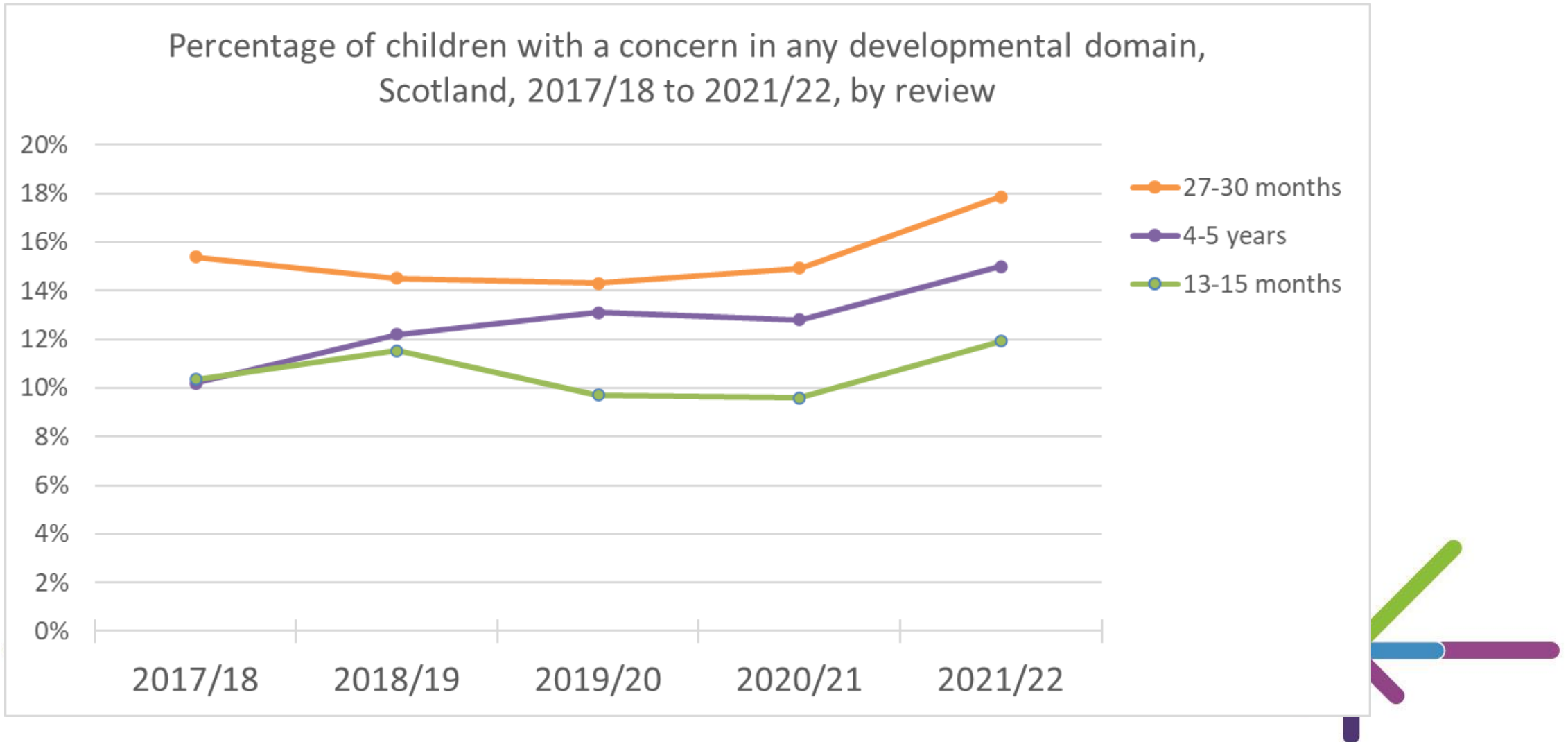


# What proportion of children are reviewed?

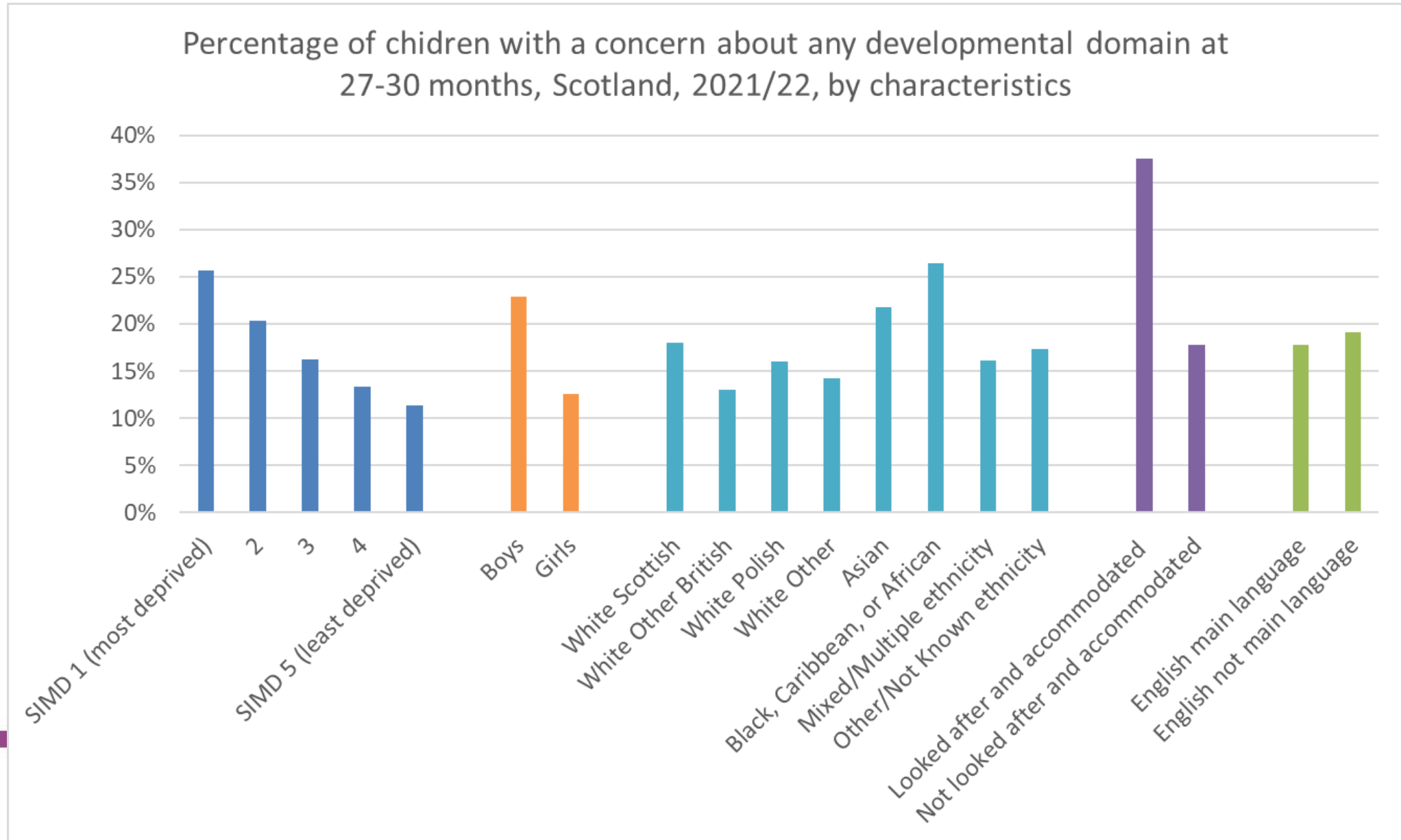
- 27-30 month review in place since 2013, usually close to 90% of children reviewed
- 13-15 months review in place since 2017, now implemented across all areas and around 90% of children reviewed
- 4-5 year review in place since 2017 – slower and more varied implementation, up to 80% of children reviewed



# Trends over time in developmental concerns



# Inequalities in developmental concerns



# Reporting challenges using national data

- Currently IT system collects ASQ-3 scores, but does not allow for capture of ASQ-3 version, therefore cannot report accurately against thresholds
- Reporting overall health visitor assessment of concerns is helpful, but also partly subjective, therefore some variation between areas and over time



## Useful links

- Public Health Scotland publications on Early Childhood Development

<https://www.publichealthscotland.scot/publications/child-health-pre-school-review-coverage/>

<https://www.publichealthscotland.scot/publications/early-child-development/>

<https://scotland.shinyapps.io/phs-health-in-the-early-years-in-scotland/>

- The Health Visiting Pathway in Scotland

<https://www.gov.scot/publications/universal-health-visiting-pathway-scotland-pre-birth-pre-school/pages/1/>

- ASQ-3

<https://agesandstages.com/>

**Contact:** [phs.childhealthstats@phs.scot](mailto:phs.childhealthstats@phs.scot)

