

Outcomes for the Evaluation of FNP Programme in Scotland

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Short term outcomes / large cohort																				
Mid term outcomes /longer follow-up/smaller cohort																				
Descriptive analyses																				
Outcome no.	Outcome description	Follow-up time point								Dataset/source name (approval)	Variables	Direction of FNP programme effect	Main analyses	Proposed method of analysis	Sensitivity		In FNP logic model	Descriptive analysis only	Exploratory (mid term outcomes/reduced sample)	
		During pregnancy	At birth	10 days post partum (pp)	6-8 weeks pp	27-30 months pp/2 year assessment	2 years pp	4-5 years pp	5-6 years pp						Impact of FNP dosage (visits)	Subgroup analysis				
MATERNAL																				
Positive health behaviours	1	Alcohol/substance misuse during pregnancy	✓								SMR01, SMR02, SMR04, A&E (PBPP)	Admission and discharge date Alcohol involved Diagnosis External cause of injury Referral Admission and discharge date Main conditions Admission type/reason/transfer	Reduced alcohol use / substance misuse during pregnancy	Proportion of mothers with at least one inpatient admission or A&E attendance with alcohol/ substance misuse involvement during pregnancy or firstborn with withdrawal symptoms at birth	Binary outcome - logistic regression. Number of attendances will be described by group		SIMD	✓		
Improved parental life-course	2	Childcare use					✓				CHSP-PS (PBPP)	Attends childcare (by type)	Uncertainty of direction of effect	Proportion of children receiving any childcare by 27-30 month visit	Descriptive only			✓	✓	
	3	Return to Education						✓			School leavers (EAS) School/ Pupil Census (EAS)	Date of leaving Reason for leaving – exceptional permission to leave or left school after minimum date Student status Student stage	Increased returners to education	Proportion of mothers still in school at booking that return to education within 2 years of first baby	Binary outcome - logistic regression		SIMD	✓		
	4	Highest educational attainment for all school leavers								✓	Scottish Credit and Qualifications Framework level	Highest SCQF level at which one or more passes were achieved	Improved education/skills	Highest educational attainment for all school leavers within 5 years of first baby	Descriptive only			✓	✓	
	5	Subsequent birth (live/still)						✓		✓	SMR02 (PBPP)	Outcome of pregnancy	Less births within 24 months of first child	Proportion of women with a subsequent live/still birth within 24 months of first baby	Binary outcome - logistic regression		SIMD/ Age at booking	✓		
	6	Inter-pregnancy interval								✓	SMR02 (PBPP)	Date of booking Gestation at booking (weeks) Derived days between 1st birth and estimated conception date	Increased pregnancy spacing	Time to subsequent pregnancy after first baby (follow up until March 2016)	Cox (time to event) regression			✓		
	7	Inter-birth interval								✓	SMR02 (PBPP)	Outcome of pregnancy Derived days between birth of 1 st baby and subsequent birth (days)	Increased birth spacing	Time to subsequent birth after first baby (follow up until March 2016)	Cox (time to event) regression			✓		
CHILD																				
Competent parenting in term of child health	8	Breastfeeding		✓							CHSP-PS (PBPP) SMR02 (PBPP)	Week/year of visit Ever breastfed (Yes/no) Always exclusive breastfed (yes/no) Current feeding (previous 24 hours) (B, F, M, O, U) First feed given Feed on discharge	Increased initiation of breastfeeding	Proportion initiating breastfeeding (exclusive BF or mixed vs. none) at birth	Binary outcome - logistic regression		Age at booking	✓		
	9	Breastfeeding			✓						CHSP-PS (PBPP)	Current feeding (previous 24 hours) (Breast, Formula, Mixed, Other, Unknown) Child's age when breast feeding stopped: (weeks/days)	Increased breastfeeding rates at 6-8 weeks	Proportion of babies still breastfed (exclusive BF or mixed vs. none) at the 6-8 week visit	Binary outcome - logistic regression			✓		
	10	Breastfeeding		✓	✓	✓					CHSP-PS (PBPP)	Current feeding (previous 24 hours) (Breast, Formula, Mixed, Other, Unknown) Week/year of visit Child's age when breast feeding	Increased duration of feeding (days)	Duration of breastfeeding (exclusive BF and mixed) (up to 6-8 week visit)	Cox (time to event) regression			✓		
	11	Passive smoking			✓	✓	✓				CHSP-PS (PBPP)	Week/year of visit Derived age of child at visit (days) Child exposed to second hand smoke (yes/no) Child exposed to passive smoking (yes/no)	Reduced passive smoking	Proportion of children exposed to second hand smoke at the 10 day, 6-8 week, 27-30 month visit	Binary outcome - repeated measures logistic regression		booking smoking history	✓		
Competent parenting: child protection	12	Safe home environment						✓			SMR01 (PBPP)	Admission and discharge date Main conditions Procedure codes Admission type/reason/transfer Age of mother/child at admissions	Reduced hospital admissions for unintentional injuries in the home	Proportion of children with an unintentional injury where the injury occurred in and around the home by 2 years. Plus a description of numbers (%) by age and type of attendance.	Binary outcome - logistic regression			✓		
	13	Safe home environment								✓	SMR01 (PBPP)	As above	Reduced hospital admissions for unintentional injuries in the home	Proportion of children with an unintentional injury where the injury occurred in and around the home by 5 years old. Plus a description of numbers (%) by age and type of attendance.	Binary outcome - logistic regression			✓		✓
Improved birth outcomes	14	Pre-term delivery		✓							SMR02 (PBPP)	Gestational age at delivery (weeks)	Reduced pre-term delivery	Proportion of babies delivered (live/still births) before 37 weeks of gestation	Binary outcome - logistic regression		Age at booking	✓		
	15	Pre-term delivery		✓							SMR02 (PBPP)	Gestational age at delivery (weeks)	Reduced pre-term delivery	Proportion of babies delivered by preterm categories (<28 weeks, 28 to <32, 32 to <37, 37+)	Descriptive only			✓	✓	
	16	Babies with appropriate birth weight		✓							SMR02 (PBPP)	Gender	Descriptive only	Proportion of babies with birthweight appropriate for	Descriptive only		Age	✓	✓	

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			During pregnancy	At birth	10 days post partum (pp)	6-8 weeks pp	27-30 months pp/2 year assessment	2 years pp	4-5 years pp	5-6 years pp						Impact of FNP dosage (visits)	Subgroup analysis			
Intervention											Birthweight (grams) Gestational age at delivery (weeks) Ethnicity		gestational age (AGA)							
Improved child health	17	Physical development: Healthy BMI					✓				CHSP-PS (PBPP)	Week/year of visit Derived: age of child at visit Height (cms) Weight(kg) BMI and centile (derived)	Increased children with healthy/normal BMI	Proportion of children with healthy BMI at 27-30 month visit (healthy BMI defined as >2 and <85th centile) adjusted for BW	Binary outcome - logistic regression		pre-term delivery	✓		
	18	Physical development: Healthy BMI							✓		CHSP- P1 (PBPP)	Week/year of visit Derived: age of child at visit Height (cms) Weight(kg) BMI and centile (derived)	Increased children with healthy/normal BMI	Proportion of children with healthy BMI at Primary 1 (4-5 years) assessment (healthy BMI defined as >2 and <85th centile) adjusted for BW	Binary outcome - logistic regression			✓		✓
	19	Gross motor skills concern				✓	✓				CHSP-PS (PBPP)	Each developmental outcome (Concern newly suspected or previously identified)	Reduced gross motor concern at 27-30 months	Proportion of children with a gross motor skill concern by the 27-30 month visit	Binary outcome - logistic regression			✓		
	20	Fine motor skills concern					✓				CHSP-PS (PBPP)	Each developmental outcome (Concern newly suspected or previously identified)	Reduced fine motor concern at 27-30 months	Proportion of children identified with a fine motor skill concern at 27-30 month visit	Binary outcome - logistic regression			✓		
	21	Registered with dentist at 24 months					✓				CHSP-PS (PBPP)	Registered with dentist at 24 months	Increased registrations to dentist	Proportion of children registered with a dentist at 24 months	Binary outcome - logistic regression			✓		
	22	Attended a dentist by the 27-30 month visit					✓				CHSP-PS (PBPP)	Attended dentist in last 12 months	Increased uptake of dental care	Proportion of children attended dentist by 27-30 month visit	Binary outcome - logistic regression			✓		
	23	Hospital admissions for dental procedure						✓		✓	SMR01 (PBPP)	Admission date Main conditions Admission type Cause of death	Reduced admissions for dental problems and inceased time to event	Time to first dental event	Cox (time to event) regression model			✓		✓
	24	Hospital admissions for serious injuries						✓		✓	SMR01 (PBPP) and deaths	Admission date Main conditions Admission type Cause of death	Admissions for serious injuries present later	Time to first (and subsequent) serious injury admission up to last point of follow up. Plus a description of numbers (%) at 6m, 1, 2, 5 years, number of attendances and type	Cox (time to event) regression/ and descriptive			✓		✓
	25	Any attendance to A&E						✓		✓	Accident & Emergency (PBPP)	Arrival date Diagnosis codes Procedures Nature of injury	Uncertainty of direction of effect	Describe the number of children in each group with at least one attendance to Accident and emergency at 6 months, 1, 2, 5 years Describe by type of attendance Describe time to first attendance (median number of days)	Descriptive only				✓	
	26	Accidental injuries						✓		✓	Accident & Emergency (PBPP) and deaths	As above	Attendances for serious injuries present later	Time to first serious injury attendance up to last point of follow up. Plus a description of numbers (%) at 6m, 1, 2, 5 years, number of attendances and type	Cox (time to event) regression model and descriptive			✓		
Child development	27	Any child development concern				✓	✓				CHSP-PS (PBPP)	Each developmental outcome (New Concern/Previous concern)	Reduced child development concerns at 6-8 w and/or 27-30 m	Proportion of children identified with any concern by 27-30 month visit	Binary outcome - logistic regression		Gender	✓		
	28	Any NEW child development concern at 27-30 months					✓				CHSP-PS (PBPP)	Each developmental outcome (New Concern)	Reduced number of new concerns identified for the first time at 27-30m	Proportion of children identified with any NEW concern by 27-30 month visit	Categorical (new/previous/no concern) Multinomial regression			✓		
	29	Any student need concern							✓		School /Pupil census (EAS)	Each student need category (except more able pupil)	Reduced number of children with a student need	Proportion of children identified with any concern at Primary 1	Binary outcome - logistic regression			✓		✓
	30	(a) Personal/social & (b) Emotional/behavioural concern				✓ ^a	✓ ^{ab}				CHSP-PS (PBPP)	Each developmental outcome (Concern newly suspected or previously identified)	Reduced personal, social, emotional, and behavioural concern at 6-8 weeks and/or 27-30 months	Proportion of children identified with a social, emotional, and behavioural concern by 27-30 month visit	Binary outcome - logistic regression			✓		
	31	Social, emotional, and behavioural difficulty							✓		School/Pupil census (EAS)	Year of census Student stage = Primary 1 Student need category = 26	Reduced social, emotional, and behavioural difficulty at 4-5 years	Proportion of children identified with a social, emotional, and behavioural difficulty at 4-5 years	Binary outcome - logistic regression			✓		✓
	32	Speech, language, and communication concern				✓	✓				CHSP-PS (PBPP)	Each developmental outcome (Concern newly suspected or previously identified)	Reduced speech, language, and communication concern at 6-8 weeks and/or 27-30 months	Proportion of children identified with a speech, language, and communication concern by 27-30 month visit	Binary outcome - logistic regression			✓		
	33	Language or speech disorder/Communication Support Needs							✓		School/Pupil census (EAS)	Year of census Student stage = Primary 1 Student need category = 24 and 44	Reduced language or speech disorder/ communication support needs at 4-5 years	Proportion of children identified with a language or speech disorder or communication support need at 4-5 years	Binary outcome - logistic regression			✓		✓
	34	Physical or motor impairment							✓		School/Pupil census (EAS)	Year of census Student stage = Primary 1	Reduced physical or motor impairment at 4-5 years	Proportion of children identified with a physical or motor impairment at 4-5 years	Binary outcome - logistic regression			✓		✓

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			During pregnancy	At birth	10 days post partum (pp)	6-8 weeks pp	27-30 months pp/2 year assessment	2 years pp	4-5 years pp	5-6 years pp						Impact of FNP dosage (visits)	Subgroup analysis	In FNP logic model	Descriptive analysis only	Exploratory (mid term outcomes/reduced sample)
Improved child												Student need category = 23								
	35	Vision concern				✓	✓				CHSP-PS (PBPP)	Each developmental outcome (Concern newly suspected or previously identified)	Reduced vision concern at 6-8 weeks and/or 27-30 months	Proportion of children identified with a vision concern by 27-30 month visit	Binary outcome - logistic regression			✓		
	36	Visual impairment							✓		School/Pupil census (EAS)	Year of census Student stage = Primary 1 Student need category = 20	Reduced vision impairment at 4-5 years	Proportion of children identified with a vision impairment at 4-5 years	Binary outcome - logistic regression			✓		✓
	37	Hearing concern				✓	✓				CHSP-PS (PBPP)	Each developmental outcome (Concern newly suspected or previously identified)	Reduced hearing concern at 6-8 weeks and/or 27-30 months	Proportion of children identified with a hearing concern by 27-30 month visit	Binary outcome - logistic regression			✓		
	38	Hearing impairment							✓		School/Pupil census	Year of census Student stage = Primary 1 Student need category = 21	Reduced hearing impairment at 4-5 years	Proportion of children identified with a hearing impairment at 4-5 years	Binary outcome - logistic regression			✓		✓
	39	Other student need*							✓		School/Pupil census (EAS)	Year of census Student stage=Primary 1 Student need category	Reduced other student need at 4-5 years	Proportion of children with Student Needs (ASN) at 4-5 years	Binary outcome - logistic regression			✓		✓
	40	More able pupil							✓		School/Pupil census (EAS)	Year of census Student stage = Primary 1 Student need category = 43	Uncertainty of direction of effect	Proportion of children identified as being a 'more able pupil' at 4-5 years	Descriptive only			✓	✓	
41	Child attainment								✓	Achievement of Curriculum for Excellence levels collections (EAS)	Child attainment for reading, writing, listening and talking, numeracy	Descriptive only	Proportion of P1 pupils achieving early level .not acheived: reading, writing, listening and talking, numeracy			✓	✓			
	Child protection																			
	42	Child protection (CP) investigation						✓		✓	Child Protection register database (EAS)	Flag for Child Protection investigation Date investigation ended	Uncertainty of direction of effect	Proportion of children with a CP investigation by 2 years old Proportion of children with a CP investigation by 5 years old	Descriptive only			✓	✓	
	43	Age at first child protection investigation								✓	Child Protection register database (EAS)	Duration/ age of child at first CP investigation ended	Children are investigated sooner		Descriptive only			✓	✓	
	44	Number of CP								✓	Child Protection	Flag for Child Protection investigation	Reduction in the number of repeat	Number of investigations by 5 years old	Descriptive only			✓	✓	

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Improved child protection		investigations									register database	Date investigation ended	investigations for the same child								
	45	Investigation requires a CP Case Conference (CPCC)						✓		✓	Child Protection register database (EAS)	Flag for Child Protection investigation Did the investigation result in a CPCC Type of case conference (pre-birth/initial/review) Date of case conference	Uncertainty of direction of effect	Proportion of children with a CP investigation requiring a Case Conference by 2 years old	Descriptive only			✓	✓		
	46	Type of concern identified at the CPCC						✓		✓	Child Protection register database (EAS)	Concern identified at the time of the case conference Date of case conference	Descriptive only	Proportion of children with a CPCC by each type	Descriptive only			✓	✓		
	47	Length of time on CP register						✓		✓	Child Protection register database (EAS)	Date of case conference de-registered status/episode looked after	Descriptive only	Duration of days on register	Descriptive only			✓	✓		
	48	Child registered as a result of conference									Child Protection register database (EAS)	If pre-birth/nital/transfer in Case Conference, was the child registered as a result of the Case Conference?	Descriptive only		Descriptive only			✓	✓		
	49	Child de-registered									Child Protection register database (EAS)	Date of case conference registered or de-registration status	Descriptive only		Descriptive only			✓	✓		
	Looked after Child																				
	50	Looked after status			✓	✓	✓				CHSP-PS (PBPP)	Current LAC	Descriptive only	Proportion of children looked after by 27-30 month visit	Binary outcome - logistic regression				✓	✓	
	51	Children with a looked after status						✓		✓	Looked after children database (EAS)	Episode start date Duration to first episode of care	Descriptive only	Time to first looked after episode (age of child at first episode) up until last follow-up plus descriptiopn on N (%) at 2 and 5 years	Descriptive only			✓	✓		
	52	Time spent in first placement									✓	Looked after children database (EAS)	Duration between first placement start and end date	Descriptive only	Duration of days on placement	Descriptive only			✓	✓	
	53	Placement type									✓	Looked after children database (EAS)	Placement type	Descriptive only	Proportion of children looked after by each type	Descriptive only			✓	✓	
	54	Placement type									✓	Looked after children database (EAS)	Placement type = potential adopters or Destination at end of episode - with new adoptive parents.	Descriptive only	Proportion of children placed for adoption or adopted	Descriptive only			✓	✓	

* Learning disability, dyslexia, other specific learning difficulty, other moderate learning difficulty, deafblind, autistic spectrum disorder, physical health problem, mental health problem