

## Frequencies

Notes		
Output Created		12-SEP-2023 15:16:50
Comments		
Input	Data	S:\Quant\data cleaning & analysis\V2\KN\V3\Analysis\FINAL Analysis 27.06.2022 - used in paper\NERS_NS.sav
	Active Dataset	DataSet1
	Filter	Cohort_Group = 1   Cohort_Group = 3 (FILTER)
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	24749
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data.
Syntax		FREQUENCIES VARIABLES=Date_of_first_consultation_recorded /ORDER=ANALYSIS.

Resources	Processor Time	00:00:00.16
	Elapsed Time	00:00:00.16

## Statistics

Date\_of\_first\_consultation\_recorded

N	Valid	24749
	Missing	0

## Date\_of\_first\_consultation\_recorded

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no	14513	58.6	58.6	58.6
	yes	10236	41.4	41.4	100.0
	Total	24749	100.0	100.0	

## Frequencies

## Notes

Output Created	12-SEP-2023 15:16:51
Comments	

Input	Data	S:\Quant\data cleaning & analysis\V2\KN\V3\Analysis\FINAL Analysis 27.06.2022 - used in paper\NERS_NS.sav
	Active Dataset	DataSet1
	Filter	(Cohort_Group = 1   Cohort_Group = 3) & Date_of_first_consultation_recorded = 1 (FILTER)
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	10236
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data.
Syntax		FREQUENCIES VARIABLES=Date_of_first_exercise_recorded_USE_ME /ORDER=ANALYSIS.
Resources	Processor Time	00:00:00.22
	Elapsed Time	00:00:00.18

### Statistics

Date\_of\_first\_exercise\_recorded\_USE\_ME

ME

N	Valid	10236
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Missing	0
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### Date\_of\_first\_exercise\_recorded\_USE\_ME

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	1140	11.1	11.1	11.1
	Yes	9096	88.9	88.9	100.0
	Total	10236	100.0	100.0	

### Notes

Output Created		12-SEP-2023 15:16:51
Comments		
Input	Data	S:\Quant\data cleaning & analysis\V2\KN\V3\Analysis\FINAL Analysis 27.06.2022 - used in paper\NERS_NS.sav
	Active Dataset	DataSet1
	Filter	(Cohort_Group = 1   Cohort_Group = 3) & Date_of_first_consultation_recorded = 1 (FILTER)
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	10236
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.

Cases Used		Statistics are based on all cases with valid data.
Syntax		FREQUENCIES VARIABLES=Cohort_Group /ORDER=ANALYSIS.
Resources	Processor Time	00:00:00.16
	Elapsed Time	00:00:00.14

## Statistics

Cohort\_Group

N	Valid	10236
	Missing	0

## Cohort\_Group

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Cohort 1	9347	91.3	91.3	91.3
	Cohort 3	889	8.7	8.7	100.0
	Total	10236	100.0	100.0	

## Frequencies

## Notes

Output Created		11-OCT-2023 17:43:08
Comments		
Input	Data	S:\Quant\data cleaning & analysis\V2\KN\V3\Analysis\FINAL Analysis 27.06.2022 - used in paper\NERS_NS.sav
	Active Dataset	DataSet1
	Filter	(Cohort_Group = 1) & Date_of_first_consultation_recorded = 1 (FILTER)
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	9347
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data.
Syntax		FREQUENCIES VARIABLES=Date_of_first_exercise_recorded_USE_ME /ORDER=ANALYSIS.
Resources	Processor Time	00:00:00.14
	Elapsed Time	00:00:00.13

## Statistics

Date\_of\_first\_exercise\_recorded\_USE\_

ME

N	Valid	9347
	Missing	0

## Date\_of\_first\_exercise\_recorded\_USE\_ME

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	1063	11.4	11.4	11.4
	Yes	8284	88.6	88.6	100.0
	Total	9347	100.0	100.0	

## Frequencies

## Notes

Output Created		11-OCT-2023 17:43:09
Comments		
Input	Data	S:\Quant\data cleaning & analysis\V2\KN\V3\Analysis\FINAL Analysis 27.06.2022 - used in paper\NERS_NS.sav
	Active Dataset	DataSet1

	Filter	(Cohort_Group = 3) & Date_of_first_consultation_recorded = 1 (FILTER)
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	889
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data.
Syntax		FREQUENCIES VARIABLES=Date_of_first_exercise_recorded_USE_ME /ORDER=ANALYSIS.
Resources	Processor Time	00:00:00.20
	Elapsed Time	00:00:00.16

## Statistics

Date\_of\_first\_exercise\_recorded\_USE\_ME

N	Valid	889
	Missing	0

## Date\_of\_first\_exercise\_recorded\_USE\_ME

Frequency	Percent	Valid Percent	Cumulative Percent
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Valid	No	77	8.7	8.7	8.7
	Yes	812	91.3	91.3	100.0
	Total	889	100.0	100.0	

## Generalized Linear Mixed Models

### Notes

Output Created		12-SEP-2023 15:16:52
Comments		
Input	Data	S:\Quant\data cleaning & analysis\V2\KN\V3\Analysis\FINAL Analysis 27.06.2022 - used in paper\NERS_NS.sav
	Active Dataset	DataSet1
	Filter	(Cohort_Group = 1   Cohort_Group = 3) & Date_of_first_consultation_recorded = 1 (FILTER)
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	10236

## Syntax

```
GENLINMIXED
  /DATA_STRUCTURE
SUBJECTS=Local_Authority
  /FIELDS
TARGET=Date_of_first_exercise_r
ecorded_USE_ME TRIALS=NONE
OFFSET=NONE
  /TARGET_OPTIONS
DISTRIBUTION=BINOMIAL
LINK=LOGIT
  /FIXED
USE_INTERCEPT=TRUE
  /RANDOM
USE_INTERCEPT=TRUE
SUBJECTS=Local_Authority
COVARIANCE_TYPE=VARIANCE
_COMPONENTS
  SOLUTION=FALSE
  /BUILD_OPTIONS
TARGET_CATEGORY_ORDER=
DESCENDING
INPUTS_CATEGORY_ORDER=D
ESCENDING
  MAX_ITERATIONS=100
CONFIDENCE_LEVEL=95
DF_METHOD=RESIDUAL
COVB=MODEL
PCONVERGE=0.000001(ABSOLU
TE)
```

		SCORING=0 SINGULAR=0.000000000001 /EMMEANS_OPTIONS SCALE=ORIGINAL PADJUST=LSD.
Resources	Processor Time	00:00:03.11
	Elapsed Time	00:00:02.21

### Case Processing Summary

	N	Percent
Included	10236	100.0%
Excluded	0	0.0%
Total	10236	100.0%

### Model Summary

Target		Date_of_first_exercise_recorded_USE_ME
Probability Distribution		Binomial
Link Function		Logit
Information Criterion	Akaike Corrected	56517.043
	Bayesian	56524.276

Information criteria are based on the -2 log likelihood (56515.042) and are used to compare models. Models with smaller information criterion values fit better.

### Data Structure<sup>a</sup>

	Subjects	Target
		Date_of_first_exercise_recorded_USE
	Local Authority	ME
Data for First Subject	1.000	Yes
	1.000	Yes
	1.000	Yes
	1.000	Yes
	1.000	Yes
	1.000	Yes
	1.000	Yes
	1.000	Yes
	1.000	Yes
	1.000	Yes
Total Number of Levels	22	

Only the first 10 records are displayed.<sup>a</sup>

a. Target: Date\_of\_first\_exercise\_recorded\_USE\_ME

### Classification

**Overall Percent Correct = 88.9%<sup>a</sup>**

		Predicted	
Observed		Yes	No
Yes	Count	9096	0
	% within Observed	100.0%	0.0%
No	Count	1140	0

% within Observed	100.0%	0.0%
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a. Target: Date\_of\_first\_exercise\_recorded\_USE\_ME

Fixed Effects <sup>a</sup>				
Source	F	df1	df2	Sig.
Corrected Model <sup>b</sup>	.	0	.	.

Probability distribution: Binomial

Link function: Logit<sup>a</sup>

a. Target: Date\_of\_first\_exercise\_recorded\_USE\_ME

b. The fixed effects include intercept only.

Fixed Coefficients <sup>a</sup>									
Model Term	Coefficient	Std. Error	t	Sig.	95% Confidence Interval		Exp(Coefficient)	95% Confidence Interval for Exp(Coefficient)	
					Lower	Upper		Lower	Upper
Intercept	2.589	.2306	11.227	.000	2.137	3.042	13.323	8.477	20.938

Probability distribution: Binomial

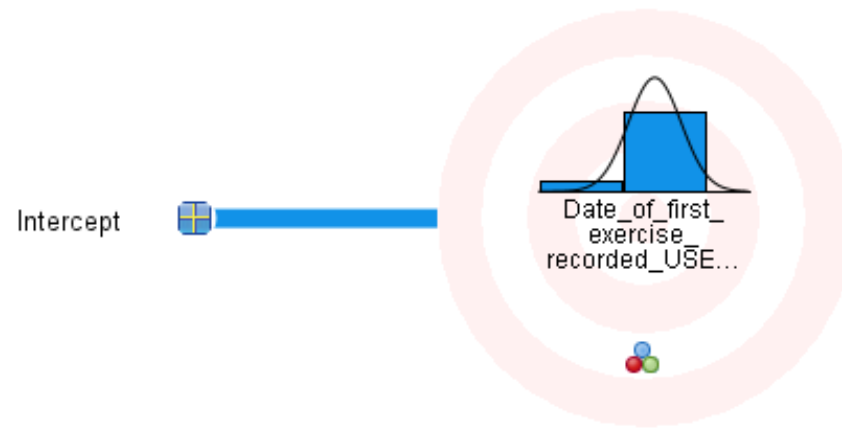
Link function: Logit<sup>a</sup>

a. Target: Date\_of\_first\_exercise\_recorded\_USE\_ME

## Fixed Coefficients

Coefficient  
Estimate

Positive



## Random Effect Covariances

### Random Effect Block 1

Random Effect Block	Intercept
Intercept	1.112

Covariance Structure: Variance components

Subject Specification: Local\_Authority

### Covariance Parameters

#### Covariance Parameters Summary

Covariance Parameters	Residual Effect	0
	Random Effects	1
Design Matrix Columns	Fixed Effects	1
	Random Effects	1 <sup>a</sup>
Common Subjects		22

Common subjects are based on the subject specifications for the residual and random effects and are used to chunk the data for better performance.

a. This is the number of columns per common subject.

### Residual Effect

Residual Effect	Estimate	Std. Error	Z	Sig.	95% Confidence Interval	
					Lower	Upper
Variance	1.000	.	.	.	.	.

Covariance Structure: Scaled Identity

Subject Specification: (None)

### Random Effect

Random Effect Covariance	Estimate	Std. Error	Z	Sig.	95% Confidence Interval	
					Lower	Upper
Var(Intercept)	1.112	.365	3.046	.002	.584	2.117

Covariance Structure: Variance components

Subject Specification: Local\_Authority

## Generalized Linear Mixed Models

### Notes

Output Created		12-SEP-2023 15:16:54
Comments		
Input	Data	S:\Quant\data cleaning & analysis\V2\KN\V3\Analysis\FINAL Analysis 27.06.2022 - used in paper\NERS_NS.sav



Active Dataset	DataSet1
Filter	(Cohort_Group = 1   Cohort_Group = 3) & Date_of_first_consultation_recorded = 1 (FILTER)
Weight	<none>
Split File	<none>
N of Rows in Working Data File	10236

Syntax	<pre> GENLINMIXED   /FIELDS   TARGET=Date_of_first_exercise_r   ecdored_USE_ME TRIALS=NONE   OFFSET=NONE   /TARGET_OPTIONS   DISTRIBUTION=MULTINOMIAL   LINK=LOGIT   /FIXED EFFECTS=IMD_Quintile   Age_at_ref2 Gender2 Pathways_5   Cohort_Group   USE_INTERCEPT=TRUE   /BUILD_OPTIONS   TARGET_CATEGORY_ORDER=   DESCENDING   INPUTS_CATEGORY_ORDER=D   ESCENDING     MAX_ITERATIONS=100   CONFIDENCE_LEVEL=95   DF_METHOD=RESIDUAL   COVB=MODEL   PCONVERGE=0.000001(ABSOLU   TE)     SCORING=0   SINGULAR=0.000000000001   /EMMEANS_OPTIONS   SCALE=ORIGINAL   PADJUST=LSD. </pre>
Resources	Processor Time 00:00:02.83

Elapsed Time	00:00:02.12
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### Warnings

glm: One or more records are not used in the analysis because they have one or more fields with invalid or missing values.

### Case Processing Summary

	N	Percent
Included	9868	96.4%
Excluded	368	3.6%
Total	10236	100.0%

### Model Summary

Target		Date_of_first_exercise_recorded_USE_ME
Measurement Level		Nominal
Probability Distribution		Multinomial
Link Function		Generalized logit
Information Criterion	Akaike Corrected	3831.207
	Bayesian	3917.540

Information criteria are based on the -2 log likelihood (3807.175) and are used to compare models. Models with smaller information criterion values fit better.

**Classification**  
**Overall Percent Correct = 88.7%<sup>a</sup>**

Observed		Predicted	
		Yes	No
Yes	Count	8756	0
	% within Observed	100.0%	0.0%
No	Count	1112	0
	% within Observed	100.0%	0.0%

a. Target: Date\_of\_first\_exercise\_recorded\_USE\_ME

**Fixed Effects<sup>a</sup>**

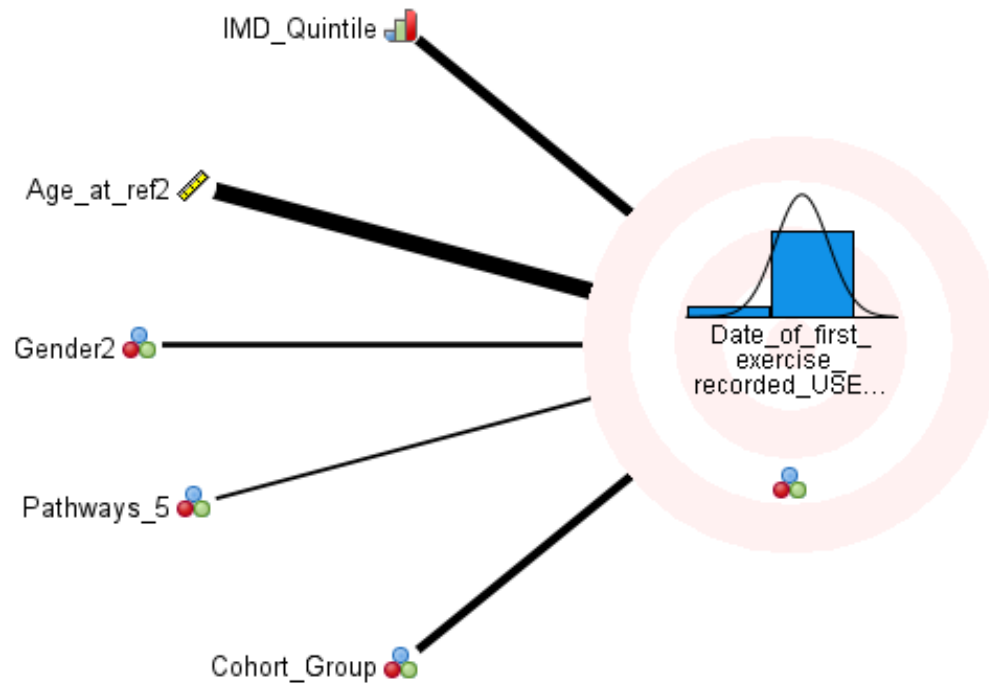
Source	F	df1	df2	Sig.
Corrected Model	5.444	11	9856	<.001
IMD_Quintile	3.699	4	9856	.005
Age_at_ref2	23.026	1	9856	<.001
Gender2	1.644	1	9856	.200
Pathways_5	.624	4	9856	.645
Cohort_Group	4.541	1	9856	.033

Probability distribution: Multinomial

Link function: Generalized logit<sup>a</sup>

a. Target: Date\_of\_first\_exercise\_recorded\_USE\_ME

## Fixed Effects



### Fixed Coefficients<sup>a</sup>

Date_of_first_exercise_recorded_USE_ME	Model Term	Coefficient	Std.	t	Sig.	95% Confidence Interval		Exp(Coefficient)	95% Confidence Interval for Exp(Coefficient)	
			Error			Lower	Upper		Lower	Upper
Yes	Intercept	1.423	.1456	9.774	.000	1.137	1.708	4.149	3.119	5.519
	IMD_Quintile=5	.080	.1107	.721	.471	-.137	.297	1.083	.872	1.346
	IMD_Quintile=4	-.016	.1031	-.155	.877	-.218	.186	.984	.804	1.205
	IMD_Quintile=3	.155	.1059	1.468	.142	-.052	.363	1.168	.949	1.438
	IMD_Quintile=2	-.203	.0993	-2.043	.041	-.397	-.008	.816	.672	.992
	IMD_Quintile=1	0 <sup>b</sup>	.	.	.	.	.	.	.	.
	Age_at_ref2	.010	.0021	4.799	<.001	.006	.015	1.010	1.006	1.015
	Gender2=2	.086	.0670	1.282	.200	-.045	.217	1.090	.956	1.242
	Gender2=1	0 <sup>b</sup>	.	.	.	.	.	.	.	.
	Pathways_5=6	-.134	.0927	-1.443	.149	-.316	.048	.875	.729	1.049
	Pathways_5=5	-.083	.1328	-.628	.530	-.344	.177	.920	.709	1.194
	Pathways_5=3	.016	.1692	.096	.924	-.316	.348	1.016	.729	1.416
	Pathways_5=2	.014	.0898	.152	.879	-.162	.190	1.014	.850	1.209
	Pathways_5=1	0 <sup>b</sup>	.	.	.	.	.	.	.	.
	Cohort_Group=3	.269	.1264	2.131	.033	.022	.517	1.309	1.022	1.677
	Cohort_Group=1	0 <sup>b</sup>	.	.	.	.	.	.	.	.

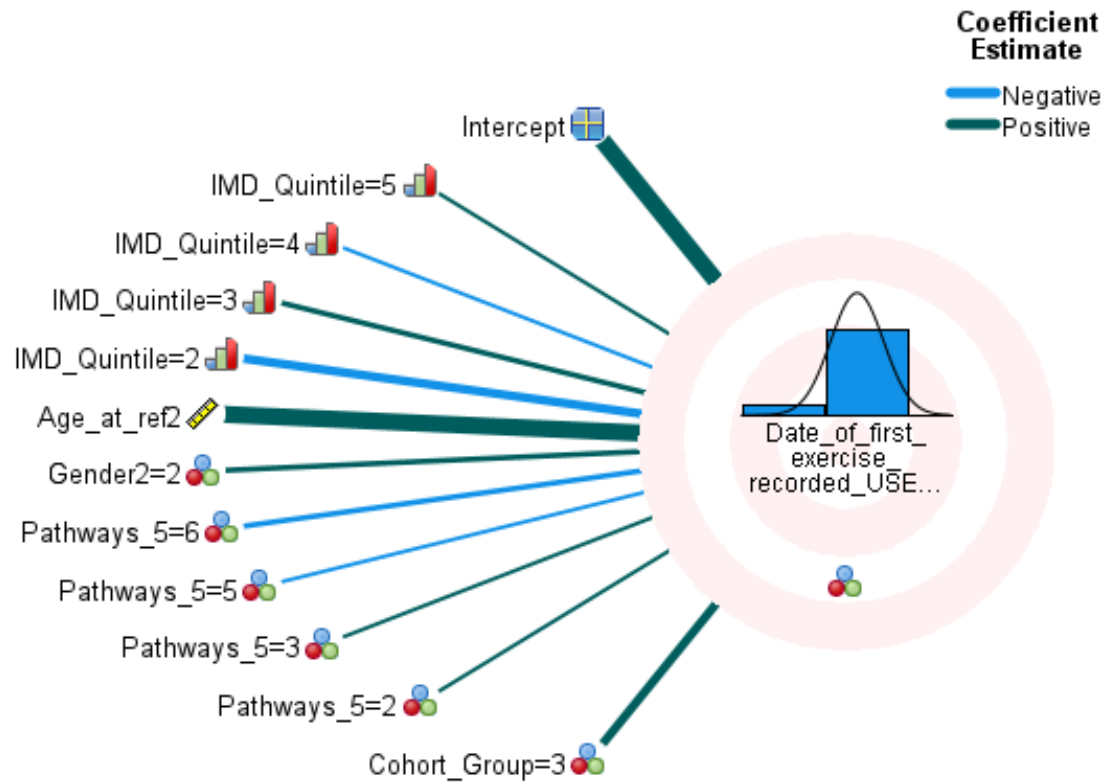
Probability distribution: Multinomial

Link function: Generalized logit<sup>a</sup>

a. Target: Date\_of\_first\_exercise\_recorded\_USE\_ME

b. This coefficient is set to zero because it is redundant.

## Fixed Coefficients



## Covariance Parameters

Covariance Parameters Summary

Covariance Parameters	Residual Effect	1
	Random Effects	0
Design Matrix Columns	Fixed Effects	16
	Random Effects	0 <sup>a</sup>
Common Subjects		1

Common subjects are based on the subject specifications for the residual and random effects and are used to chunk the data for better performance.

a. This is the number of columns per common subject.

Residual Effect						
Residual Effect	Estimate	Std. Error	Z	Sig.	95% Confidence Interval	
					Lower	Upper
Variance	1.015	.000	.	.	1.015	1.015

Covariance Structure: Scaled Identity  
Subject Specification: (None)

Generalized Linear Mixed Models



## Notes

Output Created		12-SEP-2023 15:16:56
Comments		
Input	Data	S:\Quant\data cleaning & analysis\V2\KN\V3\Analysis\FINAL Analysis 27.06.2022 - used in paper\NERS_NS.sav
	Active Dataset	DataSet1
	Filter	(Cohort_Group = 1   Cohort_Group = 3) & Date_of_first_consultation_recorded = 1 (FILTER)
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	10236

## Syntax

```
GENLINMIXED
  /DATA_STRUCTURE
SUBJECTS=Local_Authority
  /FIELDS
TARGET=Date_of_first_exercise_re
corded_USE_ME TRIALS=NONE
OFFSET=NONE
  /TARGET_OPTIONS
DISTRIBUTION=MULTINOMIAL
LINK=LOGIT
  /FIXED EFFECTS=IMD_Quintile
Age_at_ref2 Gender2 Pathways_5
Cohort_Group
USE_INTERCEPT=TRUE
  /RANDOM
USE_INTERCEPT=TRUE
SUBJECTS=Local_Authority
COVARIANCE_TYPE=VARIANCE
_COMPONENTS
  SOLUTION=FALSE
  /BUILD_OPTIONS
TARGET_CATEGORY_ORDER=
DESCENDING
INPUTS_CATEGORY_ORDER=D
ESCENDING
  MAX_ITERATIONS=100
CONFIDENCE_LEVEL=95
DF_METHOD=RESIDUAL
COVB=MODEL
```

		PCONVERGE=0.000001(ABSOLUTE) SCORING=0 SINGULAR=0.000000000001 /EMMEANS_OPTIONS SCALE=ORIGINAL PADJUST=LSD.
Resources	Processor Time	00:00:06.84
	Elapsed Time	00:00:06.48

### Warnings

glmm: One or more records are not used in the analysis because they have one or more fields with invalid or missing values.

### Case Processing Summary

	N	Percent
Included	9868	96.4%
Excluded	368	3.6%
Total	10236	100.0%

### Model Summary

Target	Date_of_first_exercise_recorded_USE_ME
Measurement Level	Nominal

Probability Distribution		Multinomial
Link Function		Generalized logit
Information Criterion	Akaike Corrected	55046.874
	Bayesian	55054.069

Information criteria are based on the -2 log likelihood (55044.873) and are used to compare models. Models with smaller information criterion values fit better.

### Data Structure<sup>a</sup>

	Subjects	Target
		Date_of_first_exercise_recorded_USE
	Local_Authority	_ME
Data for First Subject	1.000	Yes
	1.000	Yes
	1.000	Yes
	1.000	Yes
	1.000	Yes
	1.000	Yes
	1.000	Yes
	1.000	Yes
	1.000	Yes
	1.000	Yes
Total Number of Levels	22	

Only the first 10 records are displayed.<sup>a</sup>

a. Target: Date\_of\_first\_exercise\_recorded\_USE\_ME

**Classification**  
**Overall Percent Correct = 88.8%<sup>a</sup>**

Observed		Predicted	
		Yes	No
Yes	Count	8751	5
	% within Observed	99.9%	0.1%
No	Count	1097	15
	% within Observed	98.7%	1.3%

a. Target: Date\_of\_first\_exercise\_recorded\_USE\_ME

**Fixed Effects<sup>a</sup>**

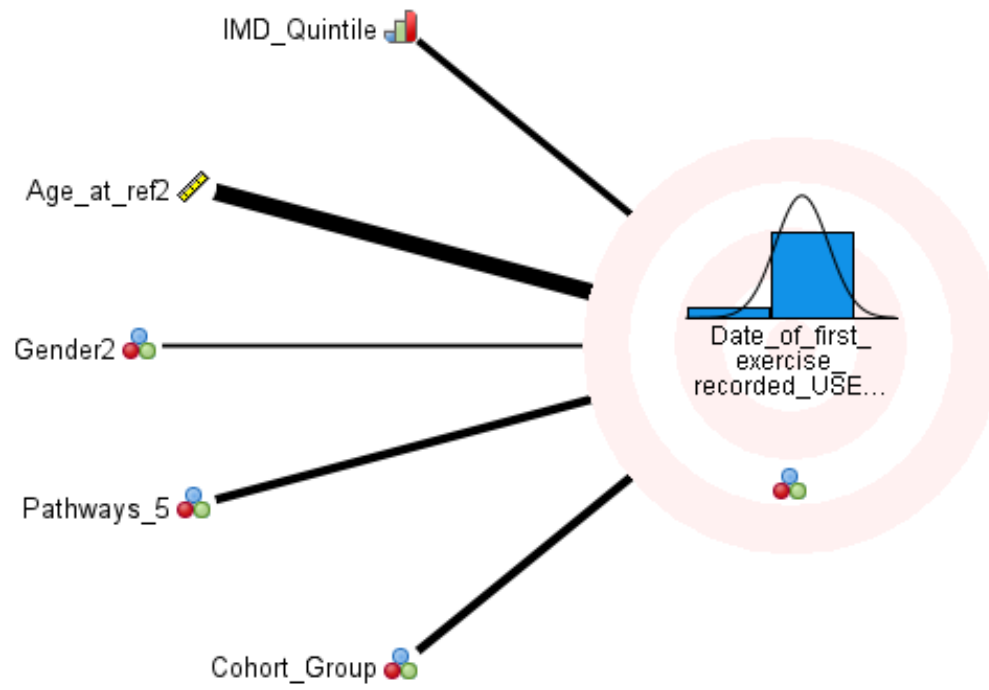
Source	F	df1	df2	Sig.
Corrected Model	7.078	11	9856	<.001
IMD_Quintile	2.164	4	9856	.070
Age_at_ref2	24.478	1	9856	<.001
Gender2	1.322	1	9856	.250
Pathways_5	3.198	4	9856	.012
Cohort_Group	4.594	1	9856	.032

Probability distribution: Multinomial

Link function: Generalized logit<sup>a</sup>

a. Target: Date\_of\_first\_exercise\_recorded\_USE\_ME

## Fixed Effects



### Fixed Coefficients<sup>a</sup>

Date_of_first_exercise_recorded_USE_ME	Model Term	Coefficient	Std.	t	Sig.	95% Confidence Interval		Exp(Coefficient)	95% Confidence Interval for Exp(Coefficient)	
			Error			Lower	Upper		Lower	Upper
Yes	Intercept	1.753	.2877	6.094	<.001	1.189	2.317	5.774	3.285	10.149
	IMD_Quintile=5	.223	.1203	1.855	.064	-.013	.459	1.250	.987	1.582
	IMD_Quintile=4	.132	.1134	1.165	.244	-.090	.354	1.141	.914	1.425
	IMD_Quintile=3	.243	.1156	2.102	.036	.016	.470	1.275	1.017	1.600
	IMD_Quintile=2	-.005	.1074	-.050	.960	-.216	.205	.995	.806	1.228
	IMD_Quintile=1	0 <sup>b</sup>	.	.	.	.	.	.	.	.
	Age_at_ref2	.011	.0023	4.947	<.001	.007	.016	1.011	1.007	1.016
	Gender2=2	.082	.0711	1.150	.250	-.058	.221	1.085	.944	1.248
	Gender2=1	0 <sup>b</sup>	.	.	.	.	.	.	.	.
	Pathways_5=6	-.189	.1014	-1.863	.062	-.388	.010	.828	.679	1.010
	Pathways_5=5	-.155	.1432	-1.083	.279	-.436	.126	.856	.647	1.134
	Pathways_5=3	-.029	.1793	-.161	.872	-.380	.323	.972	.684	1.381
	Pathways_5=2	.234	.0951	2.463	.014	.048	.421	1.264	1.049	1.523
	Pathways_5=1	0 <sup>b</sup>	.	.	.	.	.	.	.	.
	Cohort_Group=3	.286	.1333	2.143	.032	.024	.547	1.331	1.025	1.728
	Cohort_Group=1	0 <sup>b</sup>	.	.	.	.	.	.	.	.

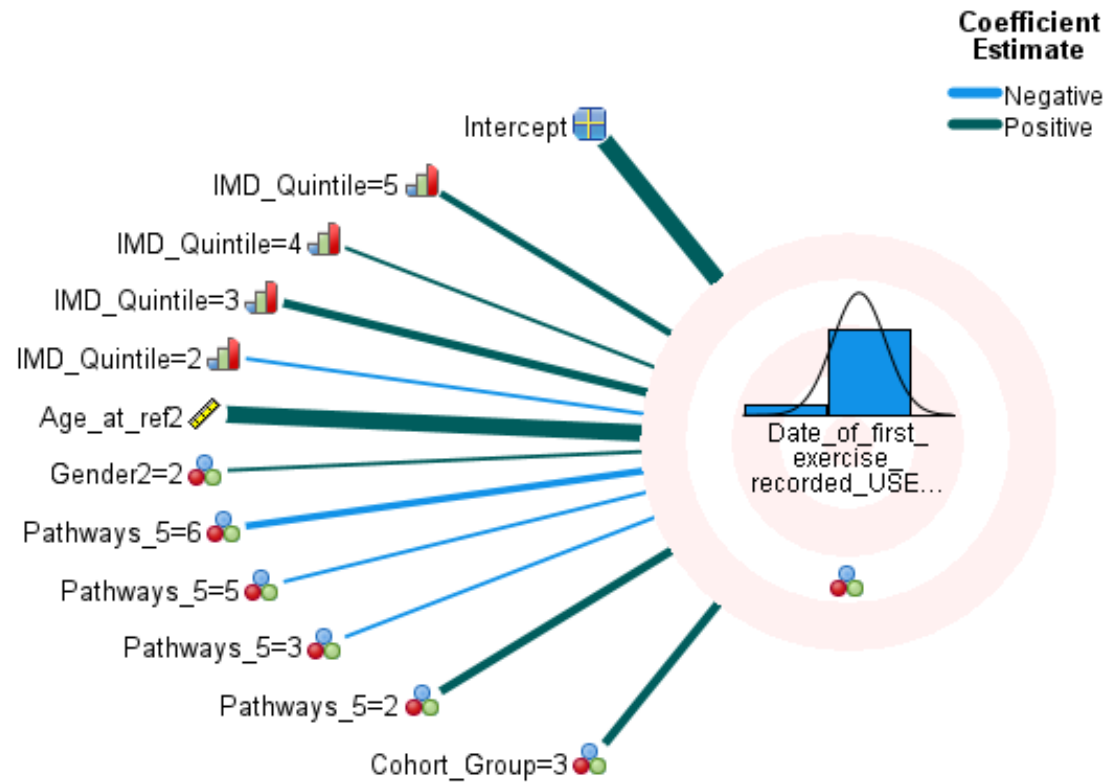
Probability distribution: Multinomial

Link function: Generalized logit<sup>a</sup>

a. Target: Date\_of\_first\_exercise\_recorded\_USE\_ME

b. This coefficient is set to zero because it is redundant.

## Fixed Coefficients



## Random Effect Covariances



### Random Effect Block 1

Date\_of\_first\_exercise\_recorded\_

USE_ME	Random Effect Block	Intercept
Yes	Intercept	1.244

Covariance Structure: Variance components

Subject Specification: Local\_Authority

### Covariance Parameters

#### Covariance Parameters Summary

Covariance Parameters	Residual Effect	0
	Random Effects	1
Design Matrix Columns	Fixed Effects	16
	Random Effects	1 <sup>a</sup>
Common Subjects		22

Common subjects are based on the subject specifications for the residual and random effects and are used to chunk the data for better performance.

a. This is the number of columns per common subject.

### Residual Effect

Residual Effect	Estimate	Std. Error	Z	Sig.	95% Confidence Interval	
					Lower	Upper
Variance	1.000	.	.	.	.	.

Covariance Structure: Scaled Identity

Subject Specification: (None)

### Random Effect

Date_of_first_exercise_recorded_		Estimate	Std. Error	Z	Sig.	95% Confidence Interval	
USE_ME	Random Effect Covariance					Lower	Upper
Yes	Var(Intercept)	1.244	.412	3.018	.003	.650	2.381

Covariance Structure: Variance components

Subject Specification: Local\_Authority

## Generalized Linear Mixed Models

### Notes

Output Created		12-SEP-2023 15:17:02
Comments		
Input	Data	S:\Quant\data cleaning & analysis\V2\KN\V3\Analysis\FINAL Analysis 27.06.2022 - used in paper\NERS_NS.sav

Active Dataset	DataSet1
Filter	(Cohort_Group = 1   Cohort_Group = 3) & Date_of_first_consultation_recorded = 1 (FILTER)
Weight	<none>
Split File	<none>
N of Rows in Working Data File	10236

## Syntax

```
GENLINMIXED
  /DATA_STRUCTURE
SUBJECTS=Local_Authority
  /FIELDS
TARGET=Date_of_first_exercise_re
corded_USE_ME TRIALS=NONE
OFFSET=NONE
  /TARGET_OPTIONS
DISTRIBUTION=BINOMIAL
LINK=LOGIT
  /FIXED EFFECTS=IMD_Quintile
Age_at_ref2 Gender2 Pathways_5
Cohort_Group
USE_INTERCEPT=TRUE
  /RANDOM
EFFECTS=IMD_Quintile
Age_at_ref2 Gender2 Pathways_5
Cohort_Group
USE_INTERCEPT=TRUE
  SUBJECTS=Local_Authority
COVARIANCE_TYPE=VARIANCE
_COMPONENTS
SOLUTION=FALSE
  /BUILD_OPTIONS
TARGET_CATEGORY_ORDER=
DESCENDING
INPUTS_CATEGORY_ORDER=D
ESCENDING
```

		MAX_ITERATIONS=100 CONFIDENCE_LEVEL=95 DF_METHOD=RESIDUAL COVB=MODEL PCONVERGE=0.000001(ABSOLUTE) SCORING=0 SINGULAR=0.000000000001 /EMMEANS_OPTIONS SCALE=ORIGINAL PADJUST=LSD.
Resources	Processor Time	00:00:06.66
	Elapsed Time	00:00:06.25

### Warnings

glm: One or more records are not used in the analysis because they have one or more fields with invalid or missing values.

glm: Valid values for events (target) and trials variables are non-negative and positive integers respectively, and the number of trials cannot be less than the number of events.

### Case Processing Summary

	N	Percent
Included	9868	96.4%
Excluded	368	3.6%

Total	10236	100.0%
-------	-------	--------

## Model Summary

Target		Date_of_first_exercise_recorded_USE_ME
Probability Distribution		Binomial
Link Function		Logit
Information Criterion	Akaike Corrected	54628.492
	Bayesian	54671.659

Information criteria are based on the -2 log likelihood (54616.484) and are used to compare models. Models with smaller information criterion values fit better.

### Data Structure<sup>a</sup>

[illegible]

	1.000	Yes
	1.000	Yes
Total Number of Levels	22	

Only the first 10 records are displayed.<sup>a</sup>

a. Target: Date\_of\_first\_exercise\_recorded\_USE\_ME

### Classification

**Overall Percent Correct = 88.7%<sup>a</sup>**

Observed		Predicted	
		Yes	No
Yes	Count	8728	28
	% within Observed	99.7%	0.3%
No	Count	1085	27
	% within Observed	97.6%	2.4%

a. Target: Date\_of\_first\_exercise\_recorded\_USE\_ME

### Fixed Effects<sup>a</sup>

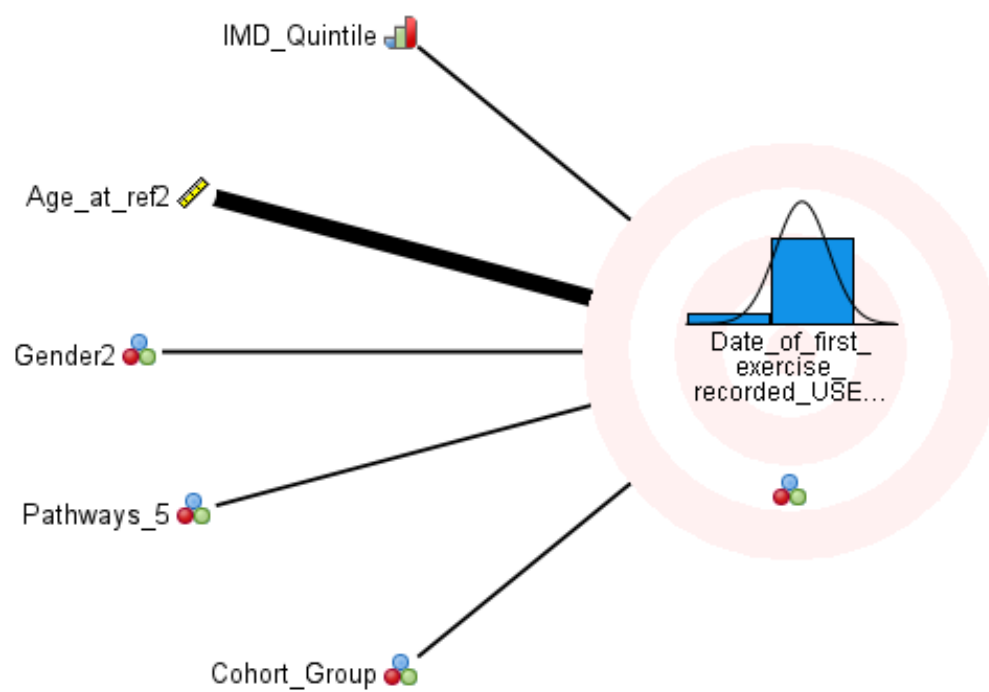
Source	F	df1	df2	Sig.
Corrected Model	3.490	11	9856	<.001
IMD_Quintile	1.351	4	9856	.248
Age_at_ref2	18.302	1	9856	<.001
Gender2	1.119	1	9856	.290
Pathways_5	1.107	4	9856	.351
Cohort_Group	.223	1	9856	.637

Probability distribution: Binomial

Link function: Logit<sup>a</sup>

a. Target: Date\_of\_first\_exercise\_recorded\_USE\_ME

### Fixed Effects





### Fixed Coefficients<sup>a</sup>

Model Term	Coefficient	Std. Error	t	Sig.	95% Confidence Interval		Exp(Coefficient)	95% Confidence Interval for Exp(Coefficient)	
					Lower	Upper		Lower	Upper
Intercept	1.748	.3178	5.500	<.001	1.125	2.371	5.742	3.080	10.704
IMD_Quintile=5	.271	.1567	1.732	.083	-.036	.578	1.312	.965	1.783
IMD_Quintile=4	.144	.1468	.983	.326	-.144	.432	1.155	.866	1.540
IMD_Quintile=3	.243	.1469	1.654	.098	-.045	.531	1.275	.956	1.700
IMD_Quintile=2	.022	.1428	.153	.878	-.258	.302	1.022	.773	1.352
IMD_Quintile=1	0 <sup>b</sup>	.	.	.	.	.	.	.	.
Age_at_ref2	.012	.0027	4.278	<.001	.006	.017	1.012	1.006	1.017
Gender2=2	.107	.1012	1.058	.290	-.091	.306	1.113	.913	1.357
Gender2=1	0 <sup>b</sup>	.	.	.	.	.	.	.	.
Pathways_5=6	-.182	.1379	-1.317	.188	-.452	.089	.834	.636	1.093
Pathways_5=5	-.110	.1746	-.630	.529	-.452	.232	.896	.636	1.261
Pathways_5=3	-.043	.2061	-.208	.835	-.447	.361	.958	.640	1.435
Pathways_5=2	.144	.1316	1.096	.273	-.114	.402	1.155	.893	1.495
Pathways_5=1	0 <sup>b</sup>	.	.	.	.	.	.	.	.
Cohort_Group=3	.131	.2774	.472	.637	-.413	.675	1.140	.662	1.963
Cohort_Group=1	0 <sup>b</sup>	.	.	.	.	.	.	.	.

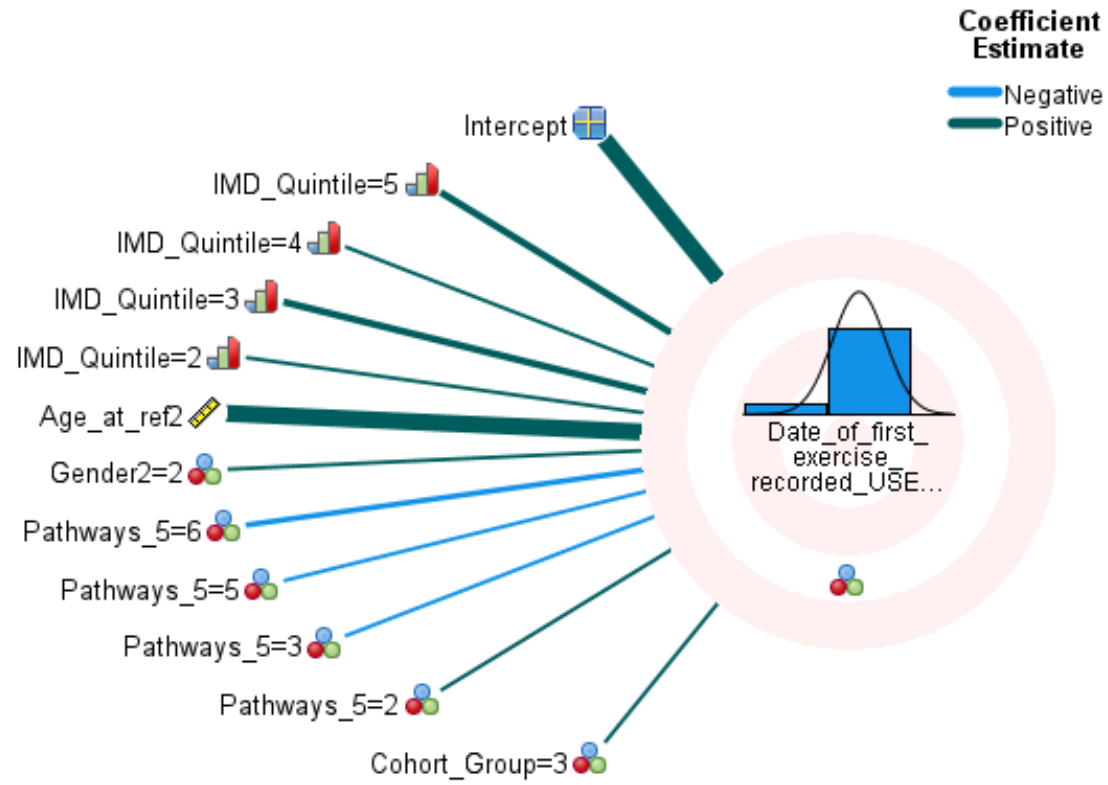
Probability distribution: Binomial

Link function: Logit<sup>a</sup>

a. Target: Date\_of\_first\_exercise\_recorded\_USE\_ME

b. This coefficient is set to zero because it is redundant.

## Fixed Coefficients



## Random Effect Covariances

### Random Effect Block 1

Random Effect Block	Intercept	IMD_Quintile=5	IMD_Quintile=4	IMD_Quintile=3	IMD_Quintile=2	IMD_Quintile=1	Age_at_ref2	Gender2=2	Gender2=1	Pathways_5=6	Pathways_5=5	Pathways_5=3	Pathways_5=2	Pathways_5=1	Cohort_Group=3	Cohort_Group=1
Intercept	.942	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
IMD_Quintile=5	.000	.054	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
IMD_Quintile=4	.000	.000	.054	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
IMD_Quintile=3	.000	.000	.000	.054	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
IMD_Quintile=2	.000	.000	.000	.000	.054	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
IMD_Quintile=1	.000	.000	.000	.000	.000	.054	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
Age_at_ref2	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
Gender2=2	.000	.000	.000	.000	.000	.000	.000	.037	.000	.000	.000	.000	.000	.000	.000	.000
Gender2=1	.000	.000	.000	.000	.000	.000	.000	.000	.037	.000	.000	.000	.000	.000	.000	.000
Pathways_5=6	.000	.000	.000	.000	.000	.000	.000	.000	.000	.054	.000	.000	.000	.000	.000	.000

Pathway s_5=5	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.054	.000	.000	.000	.000	.000
Pathway s_5=3	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.054	.000	.000	.000	.000
Pathway s_5=2	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.054	.000	.000	.000
Pathway s_5=1	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.054	.000	.000
Cohort_ Group=3	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.444	.000
Cohort_ Group=1	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.444

Covariance Structure: Variance components

Subject Specification: Local\_Authority

## Covariance Parameters

### Covariance Parameters Summary

Covariance Parameters	Residual Effect	0
	Random Effects	6
Design Matrix Columns	Fixed Effects	16
	Random Effects	16 <sup>a</sup>
Common Subjects		22

Common subjects are based on the subject specifications for the residual and random effects and are used to chunk the data for better performance.

a. This is the number of columns per common subject.

Residual Effect						
Residual Effect	Estimate	Std. Error	Z	Sig.	95% Confidence Interval	
					Lower	Upper
Variance	1.000	.	.	.	.	.

Covariance Structure: Scaled Identity

Subject Specification: (None)

Random Effect						
Random Effect Covariance	Estimate	Std. Error	Z	Sig.	95% Confidence Interval	
					Lower	Upper
Var(Intercept)	.942	.482	1.954	.051	.346	2.568
Var(IMD_Quintile)	.054	.034	1.601	.109	.016	.183
Var(Age_at_ref2)	2.828E-5	3.403E-5	.831	.406	2.674E-6	.000
Var(Gender2)	.037	.045	.841	.401	.004	.385
Var(Pathways_5)	.054	.035	1.524	.127	.015	.194
Var(Cohort_Group)	.444	.221	2.007	.045	.167	1.178

Covariance Structure: Variance components

Subject Specification: Local\_Authority