

Supplementary material I

<i>Indicator</i>	<i>How is it recorded in NIMATS?</i>	<i>How is it presented in this study?</i>
Deprivation quintile*	Area-level deprivation was estimated using NIMDM 2017, which aggregates the ranking of seven specific domains into a single ranking. These weighted domains are: 25% income, 25% employment, 15% health and disability, 15% education, skills and training, 10% access to services, 5% living environment, and 5% crime and disorder ¹ . Maternal data in NIMATS were linked to the NIMDM by the super output area code ² .	Area-level deprivation was categorised into quintiles, where the first quintile represented the most deprived areas and the fifth the least deprived ones.
Planned pregnancy	Planned pregnancies were recorded as a binary Yes/No measure at booking.	Planned pregnancies were presented as a Yes/No measure.
Smoking	Smoking status was calculated based on the reported number of cigarettes smoked per day at booking.	Smoking status was presented as a Yes/No measure.
BMI	BMI was derived by clinically measured weight and height recorded at booking.	Women were divided into: underweight (<18.49 kg/m ²), healthy weight (18.50–24.99 kg/m ²), overweight (25.00–29.99 kg/m ²), with obesity class I (30.00–34.99 kg/m ²), with obesity class II (35.00–39.99 kg/m ²), and with obesity class III (≥40.00 kg/m ²) ³ . Recordings of BMI were included if in the range of 14–70 kg/m ² .
Folic acid supplement use	Folic acid supplement use was categorised based on both the timing (i.e., preconception and postconception) and dose reported (i.e., 400µg or 5mg). The data included for this measure were only pertaining to pregnancies with a booking appointment date after 01/12/2014, because of changes in the recording in NIMATS.	Folic acid supplement use was presented as Preconception 400µg, Preconception 5mg, Postconception 400µg, Postconception 5mg, and None.
*Not recorded in NIMATS; postcodes were used to discern deprivation quintiles. Abbreviations: BMI: Body Mass Index; kg: kilogram; m: metre; mg: milligram; NIMATS: Northern Ireland Maternity System; NIMDM: Northern Ireland Multiple Deprivation Measure; µg: microgram.		

References in figure:

1. Ijpelaar J, Power T, Green B. Northern Ireland Multiple Deprivation Measures 2017. Journal of the Statistical and Social Inquiry Society of Ireland 2020;48:163–74.
2. Northern Ireland Statistics and Research Agency. Super Output Areas (Census 2011). no date. Available from: <https://nisra.gov.uk/support/output-geography-census-2011/super-output-areas>.
3. NICE. Obesity: identification, assessment and management. 2014. Available from: <https://www.nice.org.uk/guidance/cg189>

Supplementary Material II

Table 1. Guidance for Reporting Involvement of Patients and the Public (GRIPP) short-form checklist.

<i>Section and topic</i>	<i>Item</i>	<i>Reported on page No</i>
1: Aim	Report the aim of PPIE in the study	5-6
2: Methods	Provide a clear description of the methods used for PPIE in the study	5-6
3. Study results	Outcomes—Report the results of PPIE in the study, including both positive and negative outcomes	8-9 (and Supplementary material VII)
4. Discussion and conclusion	Outcomes—Comment on the extent to which PPIE influenced the study overall. Describe positive and negative effects	13
5. Reflections/critical perspective	Comment critically on the study, reflecting on the things that went well and those that did not, so others can learn from this experience	13
Abbreviation: PPI Patient and Public Involvement and Engagement.		

Supplementary material III

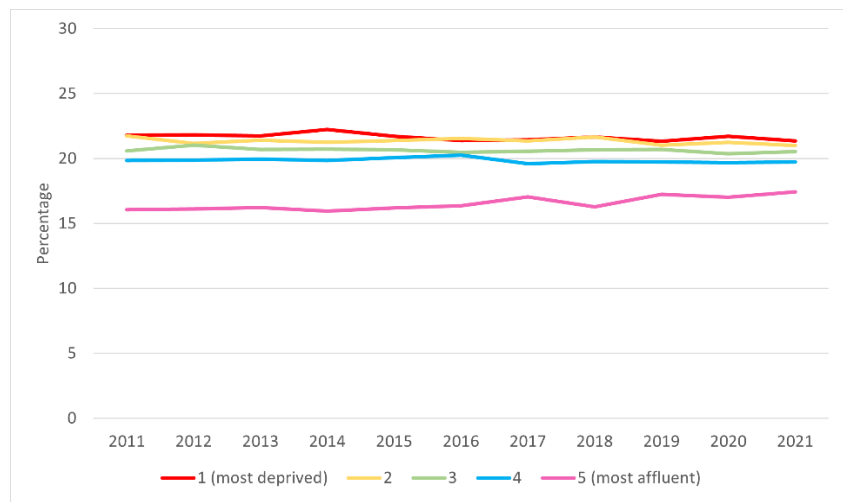


Figure 1a. Trends of deprivation quintiles.

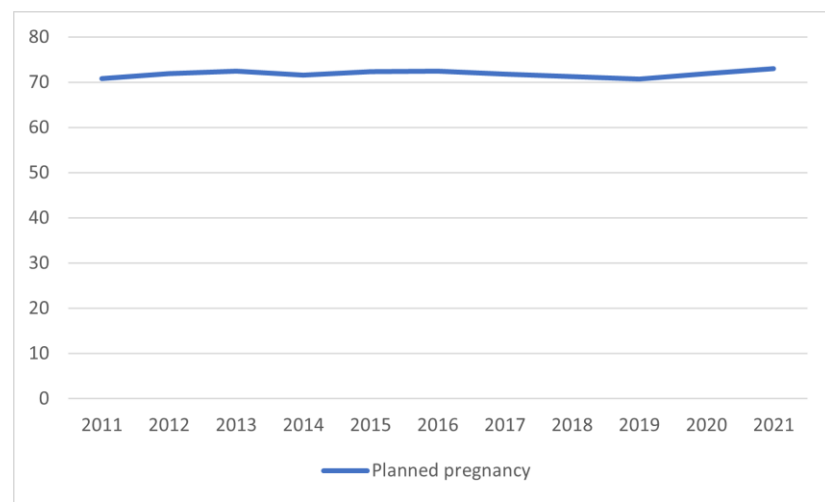


Figure 1b. Trends of reported planned pregnancies.

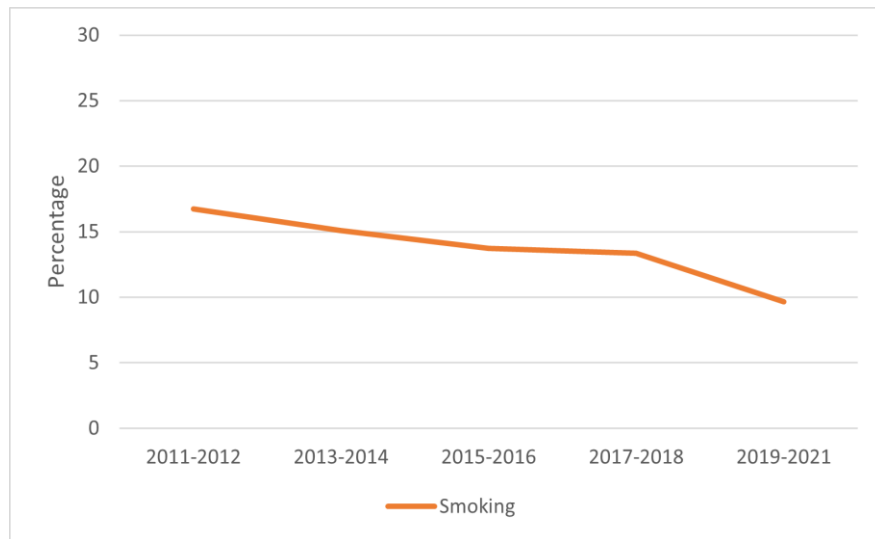


Figure 1c. Trends of reported smoking.

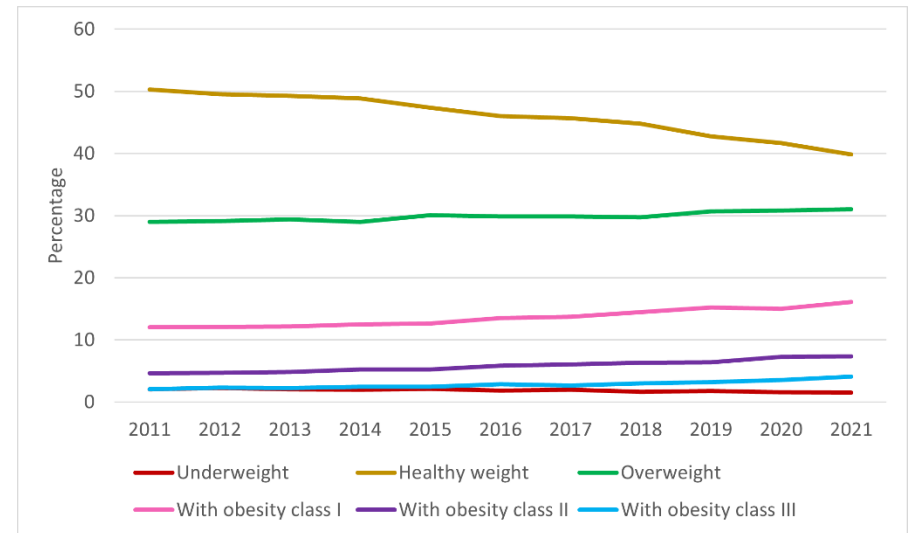


Figure 1d. Trends of BMI categories.

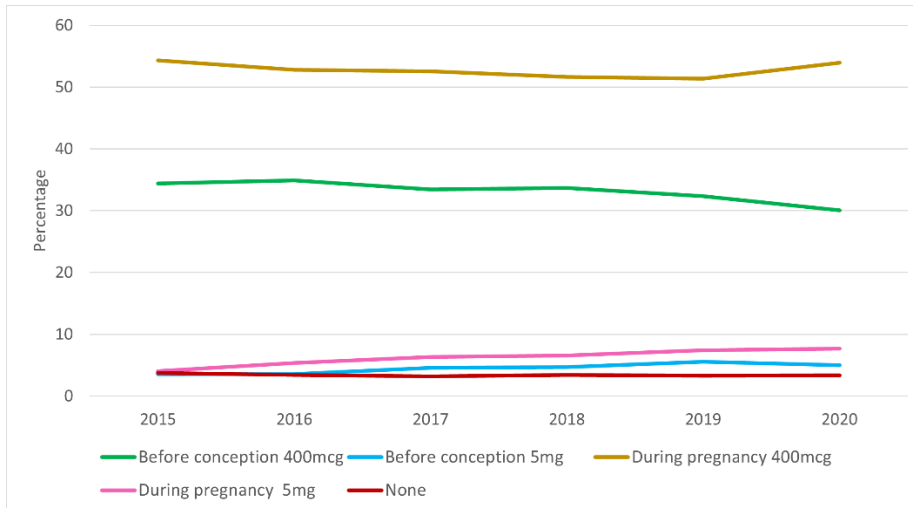


Figure 1e. Trends of reported periconception folic acid supplement use.

Supplementary material IV

Table 1. Trends in deprivation (years: 2011-2021; data source: NIMATS).

<i>Year of booking</i>	<i>Indicator level</i>	<i>N</i>	<i>%</i>
2011	1	5367	21.79
2012		5250	21.82
2013		5190	21.73
2014		5290	22.24
2015		5174	21.71
2016		4979	21.38
2017		4826	21.44
2018		4778	21.66
2019		4621	21.31
2020		4630	21.7
2021		2320	21.35
2011	2	5355	21.74
2012		5095	21.17
2013		5113	21.41
2014		5052	21.24
2015		5094	21.37
2016		5016	21.54
2017		4809	21.36
2018		4776	21.65
2019		4561	21.03
2020		4531	21.24
2021		2280	20.99
2011	3	5068	20.58
2012		5061	21.03
2013		4940	20.68
2014		4930	20.73
2015		4924	20.66
2016		4768	20.48
2017		4630	20.56
2018		4555	20.65
2019		4488	20.69
2020		4346	20.37
2021		2230	20.53
2011	4	4887	19.84
2012		4783	19.88
2013		4767	19.96
2014		4720	19.85
2015		4781	20.06
2016		4715	20.25
2017		4413	19.60
2018		4359	19.76
2019		4280	19.73

2020		4196	19.67
2021		2142	19.72
2011	5	3953	16.05
2012		3876	16.11
2013		3875	16.22
2014		3792	15.94
2015		3860	16.20
2016		3807	16.35
2017		3836	17.04
2018		3590	16.28
2019		3738	17.24
2020		3630	17.02
2021		1892	17.42

Table 2. Trends in planned pregnancy (years: 2011-2021; data source: NIMATS).

<i>Year of booking</i>	<i>Indicator level</i>	<i>N</i>	<i>%</i>
2011	Yes	17173	70.81
2012		17036	71.94
2013		17106	72.44
2014		16826	71.59
2015		17030	72.36
2016		16635	72.44
2017		16034	71.75
2018		15714	71.28
2019		15295	70.67
2020		15308	71.91
2021		7914	72.98
2011	No	7079	29.19
2012		6645	28.06
2013		6509	27.56
2014		6676	28.41
2015		6504	27.64
2016		6328	27.56
2017		6313	28.25
2018		6331	28.72
2019		6347	29.33
2020		5979	28.09
2021		2930	27.02

Table 3. Trends in smoking (years: 2011-2021; data source: NIMATS).

<i>Year of booking</i>	<i>Indicator level</i>	<i>N</i>	<i>%</i>
2011-2012	Yes	8239	16.74
2013-2014		7241	15.08
2015-2016		6512	13.73

2017-2018		5992	13.37
2019-2021		5218	9.64
2011-2012	No	40982	83.26
2013-2014		40783	84.92
2015-2016		40909	86.27
2017-2018		38840	86.63
2019-2021		48911	90.36

Table 4. Trends in periconception folic acid supplement use (years: 2015-2020; data source: NIMATS).

<i>Year of booking</i>	<i>Indicator level</i>	<i>N</i>	<i>%</i>
2015	Preconception 400µg	7975	34.4
2016		7910	34.91
2017		7386	33.43
2018		7346	33.68
2019		6922	32.35
2020		6325	30.03
2015	Preconception 5mg	827	3.57
2016		800	3.53
2017		1009	4.57
2018		1025	4.70
2019		1192	5.57
2020		1048	4.98
2015	Postconception 400µg	12588	54.31
2016		11958	52.78
2017		11603	52.52
2018		11260	51.62
2019		10995	51.38
2020		11363	53.94
2015	Postconception 5mg	931	4.02
2016		1220	5.38
2017		1392	6.30
2018		1435	6.58
2019		1592	7.44
2020		1616	7.67
2015	None	859	3.71
2016		768	3.39
2017		702	3.18
2018		746	3.42
2019		699	3.27
2020		713	3.38

Table 5. Trends in BMI (years: 2011-2021; data source: NIMATS).

<i>Year of booking</i>	<i>Indicator level</i>	<i>N</i>	<i>%</i>
2011	Underweight	490	2.03

2012		532	2.24
2013		487	2.06
2014		470	1.99
2015		505	2.14
2016		432	1.88
2017		441	1.97
2018		370	1.68
2019		384	1.78
2020		342	1.61
2021		163	1.51
2011	Healthy weight	12148	50.27
2012		11742	49.52
2013		11656	49.25
2014		11511	48.85
2015		11202	47.39
2016		10597	46.04
2017		10213	45.68
2018		9865	44.80
2019		9231	42.73
2020		8856	41.69
2021		4316	39.86
2011	Overweight	6999	28.96
2012		6906	29.12
2013		6958	29.40
2014		6828	28.98
2015		7104	30.05
2016		6881	29.89
2017		6671	29.84
2018		6541	29.70
2019		6622	30.65
2020		6554	30.85
2021		3361	31.04
2011	With obesity class I	2909	12.04
2012		2874	12.12
2013		2885	12.19
2014		2941	12.48
2015		2991	12.65
2016		3113	13.52
2017		3071	13.74
2018		3188	14.48
2019		3291	15.23
2020		3185	14.99
2021		1747	16.13
2011	With obesity class II	1113	4.61
2012		1112	4.69
2013		1144	4.83

2014		1230	5.22
2015		1246	5.27
2016		1341	5.83
2017		1362	6.09
2018		1395	6.33
2019		1379	6.38
2020		1547	7.28
2021		798	7.37
2011	With obesity class III	505	2.09
2012		548	2.31
2013		537	2.27
2014		583	2.47
2015		589	2.49
2016		655	2.85
2017		599	2.68
2018		662	3.01
2019		696	3.22
2020		761	3.58
2021		443	4.09

Supplementary material V

Table 1. Trends of periconception folic acid supplement use based on deprivation quintile (years: 2015-2020; data source: NIMATS).

<i>Year of booking</i>	<i>Folic acid supplement use</i>	<i>Indicator level</i>	<i>N</i>	<i>%</i>
2015	Preconception 400µg	1: most deprived	1235	24.32
2016			1072	21.96
2017			988	20.73
2018			1027	21.71
2019			937	20.50
2020			890	19.45
2015	Preconception 5mg		142	2.80
2016			156	3.20
2017			181	3.80
2018			177	3.74
2019			220	4.81
2020			177	3.87
2015	Postconception 400µg		3144	61.91
2016			2994	61.34
2017			2976	62.44
2018			2867	60.60
2019			2766	60.51
2020			2833	61.90
2015	Postconception 5mg		241	4.75
2016			375	7.68
2017			367	7.70
2018			373	7.88
2019			372	8.14
2020			398	8.70
2015	None		316	6.22
2016			284	5.82
2017			254	5.33
2018			287	6.07
2019			276	6.04
2020			279	6.10
2015	Preconception 400µg	2	1609	32.39
2016			1556	31.85
2017			1467	31.07
2018			1426	30.19
2019			1330	29.52
2020			1232	27.54
2015	Preconception 5mg		166	3.34
2016			177	3.62
2017			194	4.11
2018			205	4.34
2019			246	5.46
2020			215	4.81

2015	Postconception 400µg		2796	56.28
2016			2717	55.61
2017			2567	54.37
2018			2595	54.93
2019			2430	53.94
2020			2533	56.63
2015	Postconception 5mg		200	4.03
2016			254	5.20
2017			328	6.95
2018			326	6.90
2019			344	7.64
2020			350	7.82
2015	None		197	3.97
2016			182	3.72
2017			165	3.50
2018			172	3.64
2019			155	3.44
2020			143	3.20
2015	Preconception 400µg	3	1674	34.93
2016			1727	37.13
2017			1583	34.84
2018			1591	35.28
2019			1477	33.38
2020			1306	30.47
2015	Preconception 5mg		171	3.57
2016			137	2.95
2017			227	5.00
2018			212	4.70
2019			231	5.22
2020			245	5.72
2015	Postconception 400µg		2624	54.75
2016			2430	52.25
2017			2333	51.35
2018			2270	50.33
2019			2244	50.71
2020			2272	53.01
2015	Postconception 5mg		182	3.80
2016			231	4.97
2017			273	6.01
2018			293	6.50
2019			346	7.82
2020			338	7.89
2015	None		142	2.96
2016			126	2.71
2017			127	2.80
2018			144	3.19

2019			127	2.87
2020			125	2.92
2015	Preconception 400µg	4	1830	39.48
2016			1821	39.95
2017			1630	37.83
2018			1685	39.15
2019			1575	37.29
2020			1444	34.78
2015	Preconception 5mg		193	4.16
2016			177	3.88
2017			226	5.24
2018			225	5.23
2019			263	6.23
2020			215	5.18
2015	Postconception 400µg		2302	49.67
2016			2241	49.17
2017			2107	48.90
2018			2045	47.51
2019			1978	46.83
2020			2079	50.07
2015	Postconception 5mg		176	3.80
2016			209	4.59
2017			240	5.57
2018			259	6.02
2019			311	7.36
2020			313	7.54
2015	None		134	2.89
2016			110	2.41
2017			106	2.46
2018			90	2.09
2019			97	2.30
2020			101	2.43
2015	Preconception 400µg	5: least deprived	1627	43.9
2016			1734	47.12
2017			1718	45.78
2018			1617	45.64
2019			1603	43.62
2020			1453	40.62
2015	Preconception 5mg		155	4.18
2016			153	4.16
2017			181	4.82
2018			206	5.81
2019			232	6.31
2020			196	5.48
2015	Postconception 400µg		1722	46.47
2016			1576	42.83

2017			1620	43.17
2018			1483	41.86
2019			1577	42.91
2020			1646	46.02
2015	Postconception 5mg		132	3.56
2016			151	4.10
2017			184	4.90
2018			184	5.19
2019			219	5.96
2020			217	6.07
2015	None		70	1.89
2016			66	1.79
2017			50	1.33
2018			53	1.50
2019			44	1.20
2020			65	1.82

Table 2. Trends of periconception folic acid supplement use based on age at booking (years: 2015-2020; data source: NIMATS).

<i>Year of booking</i>	<i>Folic acid supplement use</i>	<i>Indicator level</i>	<i>N</i>	<i>%</i>
2015	Preconception 400µg	<25Y	567	12.87
2016			526	13.14
2017			437	11.36
2018			418	11.16
2019			411	11.67
2020			383	11.80
2015	Preconception 5mg		64	1.45
2016			69	1.72
2017			78	2.03
2018			87	2.32
2019			86	2.44
2020			77	2.37
2015	Postconception 400µg		3232	73.39
2016			2883	72.02
2017			2831	73.59
2018			2679	71.54
2019			2502	71.06
2020			2320	71.49
2015	Postconception 5mg		200	4.54
2016			256	6.40
2017			257	6.68
2018			276	7.37
2019			273	7.75
2020			226	6.96
2015	None		341	7.74

2016			269	6.72
2017			244	6.34
2018			285	7.61
2019			249	7.07
2020			239	7.37
2015	Preconception 400µg	25-34Y	5474	38.07
2016			5479	38.44
2017			5087	36.84
2018			5075	37.27
2019			4749	35.78
2020			4283	32.07
2015	Preconception 5mg		524	3.64
2016			484	3.40
2017			632	4.58
2018			602	4.42
2019			692	5.21
2020			656	4.91
2015	Postconception 400µg		7418	51.59
2016			7188	50.44
2017			6902	49.99
2018			6723	49.38
2019			6546	49.32
2020			7056	52.83
2015	Postconception 5mg		561	3.90
2016			718	5.04
2017			820	5.94
2018			848	6.23
2019			938	7.07
2020			992	7.43
2015	None		401	2.79
2016			383	2.69
2017			367	2.66
2018			368	2.70
2019			347	2.61
2020			368	2.76
2015	Preconception 400µg	35+Y	1934	43.97
2016			1905	43.29
2017			1862	41.97
2018			1853	41.63
2019			1762	38.25
2020			1659	37.16
2015	Preconception 5mg		239	5.43
2016			247	5.61
2017			299	6.74
2018			336	7.55
2019			414	8.99

2020			315	7.05
2015	Postconception 400µg		1938	44.07
2016			1887	42.88
2017			1870	42.15
2018			1858	41.74
2019			1947	42.26
2020			1987	44.5
2015	Postconception 5mg		170	3.87
2016			246	5.59
2017			315	7.10
2018			311	6.99
2019			381	8.27
2020			398	8.91
2015	None		117	2.66
2016			116	2.64
2017			91	2.05
2018			93	2.09
2019			103	2.24
2020			106	2.37

Table 3. Trends of periconception folic acid supplement use based on maternal gravida (years: 2015-2020; data source: NIMATS).

<i>Year of booking</i>	<i>Folic acid supplement use</i>	<i>Indicator level</i>	<i>N</i>	<i>%</i>
2015	Preconception 400µg	1: first-time pregnancy	2473	34.52
2016			2605	37.48
2017			2424	35.59
2018			2373	35.03
2019			2378	34.74
2020			2071	32.71
2015	Preconception 5mg		194	2.71
2016			221	3.18
2017			231	3.39
2018			272	4.01
2019			303	4.43
2020			258	4.08
2015	Postconception 400µg		3974	55.48
2016			3605	51.87
2017			3651	53.60
2018			3542	52.28
2019			3541	51.73
2020			3415	53.94
2015	Postconception 5mg		269	3.76
2016			333	4.79
2017			361	5.30
2018			384	5.67

2019			443	6.47
2020			389	6.14
2015	None		253	3.53
2016			186	2.68
2017			144	2.11
2018			204	3.01
2019			180	2.63
2020			198	3.13
2015	Preconception 400µg	≥2: subsequent pregnancy	5502	34.35
2016			5305	33.78
2017			4962	32.47
2018			4973	33.07
2019			4544	31.22
2020			4254	28.87
2015	Preconception 5mg		633	3.95
2016			579	3.69
2017			778	5.09
2018			753	5.01
2019			889	6.11
2020			790	5.36
2015	Postconception 400µg		8614	53.78
2016			8353	53.18
2017			7952	52.04
2018			7718	51.33
2019			7454	51.21
2020			7948	53.94
2015	Postconception 5mg		662	4.13
2016			887	5.65
2017			1031	6.75
2018			1051	6.99
2019			1149	7.89
2020			1227	8.33
2015	None		606	3.78
2016			582	3.71
2017			558	3.65
2018			542	3.60
2019			519	3.57
2020			515	3.50

Table 4. Trends of periconception folic acid supplement use based on planned pregnancy (years: 2015-2020; data source: NIMATS).

<i>Year of booking</i>	<i>Folic acid supplement use</i>	<i>Indicator level</i>	<i>N</i>	<i>%</i>
2015	Preconception 400µg	Yes	7596	45.35
2016			7541	46.00
2017			6993	44.15

2018			7010	45.10
2019			6525	43.16
2020			5990	39.54
2015	Preconception 5mg		753	4.50
2016			728	4.44
2017			897	5.66
2018			914	5.88
2019			1063	7.03
2020			936	6.18
2015	Postconception 400µg		7498	44.76
2016			7088	43.24
2017			6842	43.20
2018			6485	41.73
2019			6316	41.78
2020			6899	45.53
2015	Postconception 5mg		546	3.26
2016			722	4.40
2017			842	5.32
2018			825	5.31
2019			973	6.44
2020			1015	6.70
2015	None		357	2.13
2016			314	1.92
2017			264	1.67
2018			308	1.98
2019			241	1.59
2020			311	2.05
2015	Preconception 400µg	No	379	5.89
2016			369	5.89
2017			393	6.28
2018			336	5.36
2019			397	6.32
2020			335	5.66
2015	Preconception 5mg		74	1.15
2016			72	1.15
2017			112	1.79
2018			111	1.77
2019			129	2.05
2020			112	1.89
2015	Postconception 400µg		5090	79.16
2016			4870	77.76
2017			4761	76.13
2018			4775	76.16
2019			4679	74.48
2020			4464	75.48
2015	Postconception 5mg		385	5.99

2016			498	7.95
2017			550	8.79
2018			610	9.73
2019			619	9.85
2020			601	10.16
2015	None		502	7.81
2016			454	7.25
2017			438	7.00
2018			438	6.99
2019			458	7.29
2020			402	6.80

Table 5. Trends of periconception folic acid supplement use based on maternal BMI category (years: 2015-2020; data source: NIMATS).

<i>Year of booking</i>	<i>Folic acid supplement use</i>	<i>Indicator level</i>	<i>N</i>	<i>%</i>
2015-2016	Preconception 400µg	Underweight	257	28.00
2017-2018			208	26.00
2019-2020			179	24.9
2015-2016	Preconception 5mg		21	2.29
2017-2018			14	1.75
2019-2020			16	2.23
2015-2016	Postconception 400µg		574	62.53
2017-2018			506	63.25
2019-2020			463	64.39
2015-2016	Postconception 5mg		22	2.4
2017-2018			32	4.00
2019-2020			27	3.76
2015-2016	None		44	4.79
2017-2018			40	5.00
2019-2020			34	4.73
2015-2016	Preconception 400µg	Healthy weight	8012	37.46
2017-2018			7519	37.85
2019-2020			6473	36.14
2015-2016	Preconception 5mg		597	2.79
2017-2018			621	3.13
2019-2020			551	3.08
2015-2016	Postconception 400µg		11566	54.07
2017-2018			10528	53.00
2019-2020			9828	54.87
2015-2016	Postconception 5mg		530	2.48
2017-2018			567	2.85
2019-2020			510	2.85
2015-2016	None		685	3.20
2017-2018			630	3.17
2019-2020			550	3.07

2015-2016	Preconception 400µg	Overweight	4904	35.71
2017-2018			4563	34.94
2019-2020			4366	33.40
2015-2016	Preconception 5mg		410	2.99
2017-2018			496	3.80
2019-2020			523	4.00
2015-2016	Postconception 400µg		7507	54.66
2017-2018			7086	54.26
2019-2020			7266	55.59
2015-2016	Postconception 5mg		408	2.97
2017-2018			473	3.62
2019-2020			480	3.67
2015-2016	None		505	3.68
2017-2018			442	3.38
2019-2020			436	3.34
2015-2016	Preconception 400µg	With obesity class I	1825	30.34
2017-2018			1705	27.53
2019-2020			1588	24.74
2015-2016	Preconception 5mg		318	5.29
2017-2018			447	7.22
2019-2020			549	8.55
2015-2016	Postconception 400µg		3100	51.54
2017-2018			3107	50.16
2019-2020			3177	49.5
2015-2016	Postconception 5mg		517	8.60
2017-2018			731	11.8
2019-2020			874	13.62
2015-2016	None		255	4.24
2017-2018			204	3.29
2019-2020			230	3.58
2015-2016	Preconception 400µg	With obesity class II	641	25.13
2017-2018			555	20.33
2019-2020			483	16.66
2015-2016	Preconception 5mg		179	7.02
2017-2018			290	10.62
2019-2020			374	12.90
2015-2016	Postconception 400µg		1244	48.77
2017-2018			1168	42.78
2019-2020			1168	40.29
2015-2016	Postconception 5mg		391	15.33
2017-2018			622	22.78
2019-2020			768	26.49
2015-2016	None		96	3.76
2017-2018			95	3.48
2019-2020			106	3.66
2015-2016	Preconception 400µg	With obesity class III	246	20.03

2017-2018			182	14.50
2019-2020			158	10.93
2015-2016	Preconception 5mg		102	8.31
2017-2018			166	13.23
2019-2020			227	15.70
2015-2016	Postconception 400µg		555	45.20
2017-2018			468	37.29
2019-2020			456	31.54
2015-2016	Postconception 5mg		283	23.05
2017-2018			402	32.03
2019-2020			549	37.97
2015-2016	None		42	3.42
2017-2018			37	2.95
2019-2020			56	3.87

Supplementary material VI

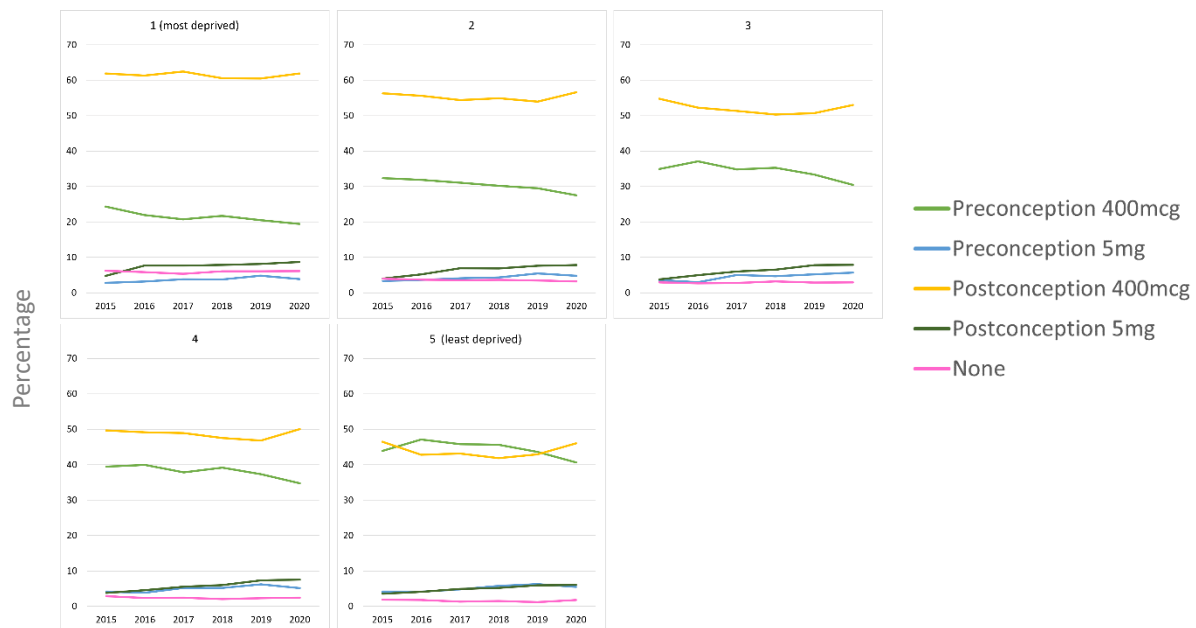


Figure 1a. Prevalence of folic acid supplement use levels based on deprivation quintile.

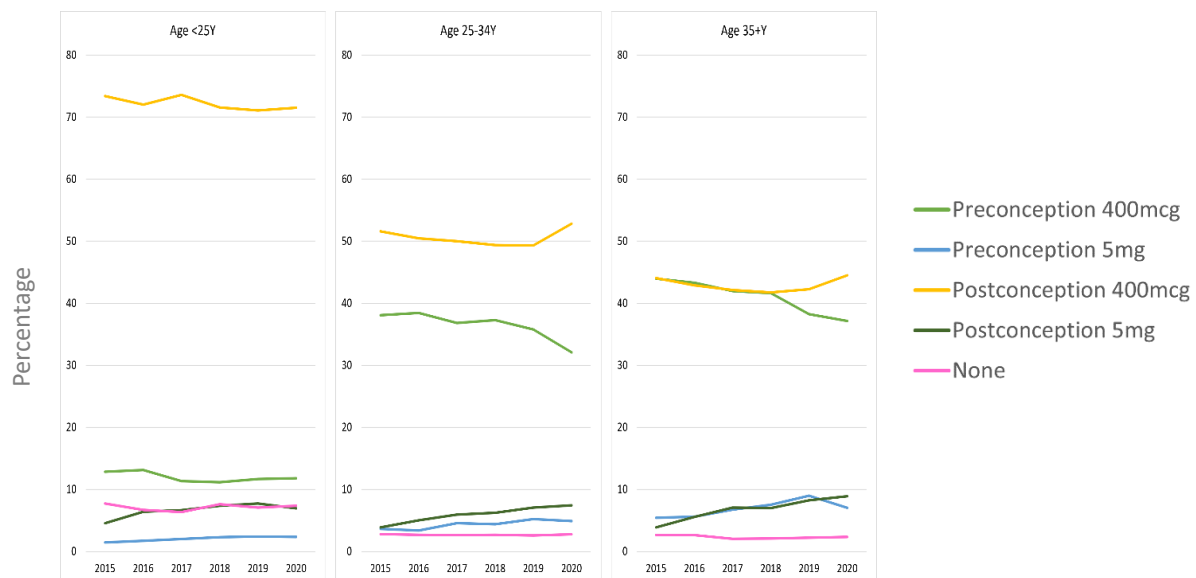


Figure 1b. Prevalence of folic acid supplement use levels based on age at booking.

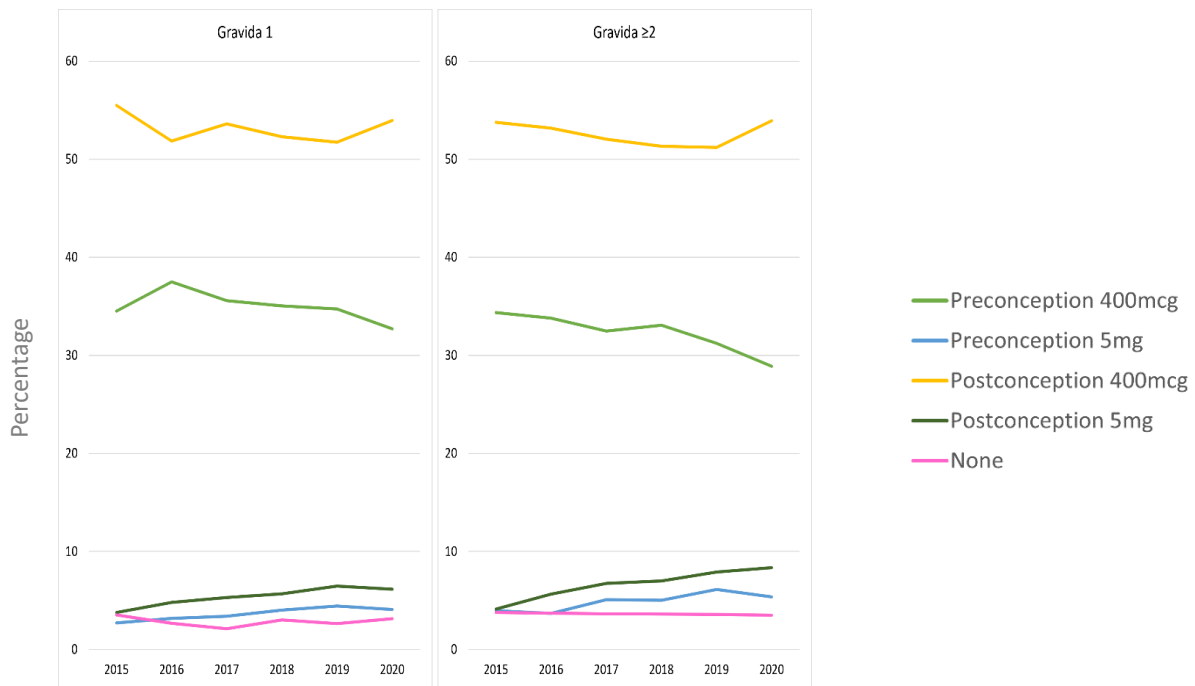


Figure 1c. Prevalence of folic acid supplement use levels based on maternal gravidity.

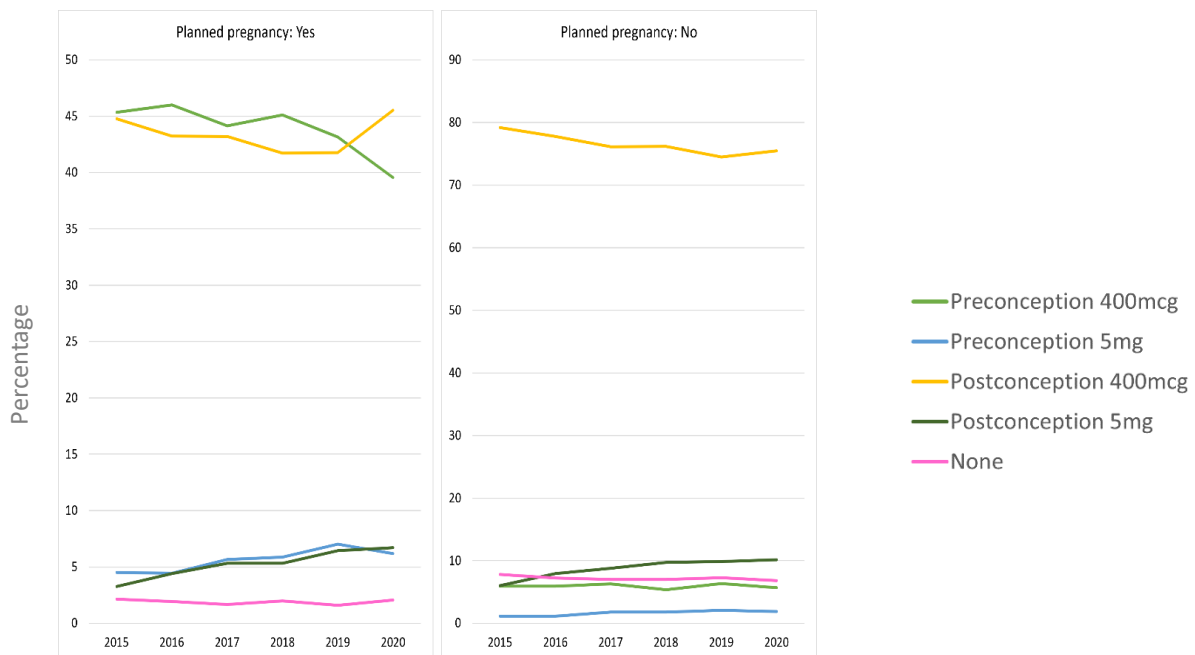


Figure 1d. Prevalence of folic acid supplement use levels based on planned pregnancies.

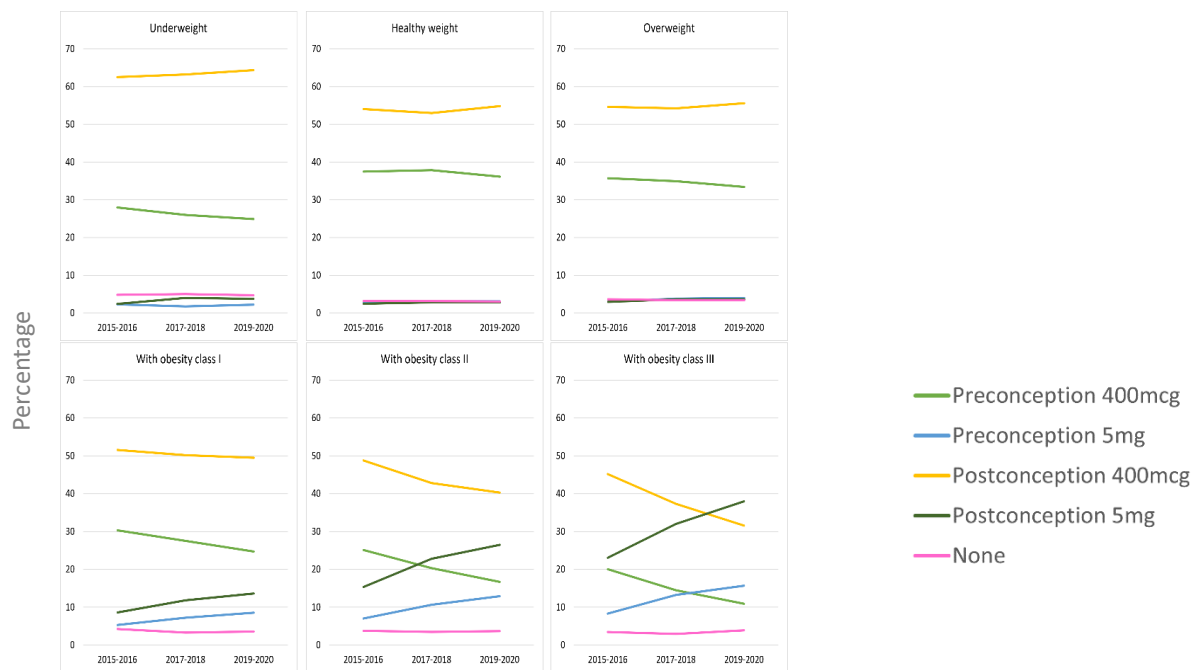


Figure 1e. Prevalence of folic acid supplement use levels based on maternal BMI.

Supplementary material VII

Box 1. Summary of key discussions discussing folic acid supplement use in NI with PPIE contributors.

Understanding folic acid supplement use trends: discussion on preparation for pregnancy

Some women recalled receiving generic preconception advice pertaining to nutritional optimisation (e.g., 'avoiding sugary stuff') or 'slowing down' to avoid excessive stress and anxieties, sometimes from family members. When discussing folic acid supplement use specifically, there was some acknowledgement among the group that this is an important behaviour to engage with. However, some women were unsure what folic acid supplements are recommended for and some were worried about side effects. Most women were not aware that there are two doses available in the UK (i.e., 400µg and 5mg).

Many women acknowledged the challenge presented by unplanned pregnancies and the disinclination to disclose pregnancy intentions prior to conception.

Sources of information

Some women discussed looking for information online in preparation for their pregnancy (e.g., NHS website), with some recalling that family members also recommended folic acid supplement use before conception. Healthcare professionals were highlighted as key sources of information, though two women in particular expressed receiving little support before and in the early stages of pregnancy, and described their HCP as 'judgemental', particularly in relation to body weight. Other women agreed that GPs are not always easily approachable.

TikTok was mentioned as a platform for advice/information retrieval; it was described as more up-to-date than other platforms, including YouTube. However, there was also some distrust in online advice, especially from these types of social media, with a woman stating that 'old information is recycled' when it comes to preconception advice.

Suggestions to improve folic acid supplement use

Suggestions to improve the provision of folic acid supplement use advice initially revolved around raising awareness via GPs, including flyers and posters within GP surgeries. Women wanted more personalised care from GPs ('no one size fits all') and more educational information to support their decisions. The limited time dedicated to each patient by GPs was also acknowledged, alongside the recognition that they are under pressure within the healthcare system. The importance of providing folic acid supplement use education in school was mentioned. However, some women revealed they might not have been interested in learning about this topic at school age, feeling like it was not relevant for them at that life stage.

The role of men was not openly discussed, with women ultimately stating they felt the main responsibilities lay with them (and with that also the blame in case of adverse pregnancy outcomes). However, when prompted, some did acknowledge that men should also be involved in the optimisation of health before conception.

Supported by our findings, women recognised that some groups of women (e.g., younger women, non-planners) may need extra support in regard to preconception folic acid supplement use.

Abbreviations: GP: General Practitioner; HCP: Healthcare professional.