

## Impact of a preconception counselling resource (DVD) on preconception folic acid intake in women with diabetes

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Women with diabetes face increased risk of pregnancy complications and adverse outcomes compared to the background population, with a fivefold increased risk of stillbirth and twofold increased risk of congenital malformation<sup>(1)</sup>. It is therefore recommended that women with diabetes who are planning pregnancy take a high dose (5 mg) of folic acid preconception and until at least week 12 of pregnancy. An innovative multimedia educational DVD resource was developed by the Women with Diabetes project team, to raise awareness of the importance of planning for pregnancy<sup>(2)</sup>. The DVD was embedded into routine care in Northern Ireland in 2010 (4,710 DVDs distributed via diabetes care teams and GP practices) and a regional audit was carried out before (pre) and after (post) integration of the DVD. The aim of this study was to compare preconception folic acid use, and uptake of the 5 mg dose before and after the DVD was made available to women.

Women who delivered/expected to deliver between 1<sup>st</sup> September 2009 and 31<sup>st</sup> August 2010 were included in the pre DVD audit (*n* 114; type 1 *n* 88; type 2 *n* 26) while women who delivered/expected to deliver between 1<sup>st</sup> February 2012 and 31<sup>st</sup> January 2013 were included in the post DVD audit (*n* 135; type 1 *n* 95; type 2 *n* 40). A secondary, per protocol analysis was also carried out i.e. pre DVD vs watched DVD (*n* 58; type 1 *n* 50; type 2 *n* 8). Data comparisons between groups were made using Chi-square tests. Logistic regressions were performed, adjusting for diabetes type, diabetes duration, parity, area deprivation, age, and booking hospital.

Post DVD women were more likely to have planned their pregnancy and to have taken folic acid preconception when compared to the pre DVD group, although this did not reach statistical significance. However, women who watched the DVD were significantly more likely to have planned their pregnancy (88% vs 59%, *P* < 0.01), taken folic acid preconception (81% vs 42%, *P* < 0.01) and, although not significant, they were also more likely to have taken a 5 mg dose (93% vs 75%, *P* = 0.06) when compared to women pre DVD.

	Pre DVD <i>N</i> = 114	Post DVD <i>N</i> = 135	OR (95% CI) unadjusted* OR (95% CI) adjusted*	Watched DVD <i>N</i> = 58	OR (95% CI) unadjusted + OR (95% CI) adjusted+
<b>Planned pregnancy</b> n/N(%)	63/106 (59%)	87/134 (65%)	1.25 (0.74, 2.11), <i>P</i> = 0.41 1.25 (0.68, 2.31), <i>P</i> = 0.48	50/57 (88%)	4.78 (1.98, 11.54), <i>P</i> < 0.01 4.48 (1.55, 12.96), <i>P</i> < 0.01
<b>Taking folic acid</b> <b>preconception</b> n/N (%)	47/111 (42%)	65/134 (49%)	1.24 (0.75, 2.07), <i>P</i> = 0.40 1.30 (0.91, 2.45), <i>P</i> = 0.41	47/58 (81%)	5.61 (2.63, 11.97), <i>P</i> < 0.001 4.85 (1.94, 12.11), <i>P</i> < 0.01
<b>Taking 5 mg folic</b> <b>acid preconception</b> n/N (%)	21/28 (75%)	47/55 (85%)	1.92 (0.61, 5.98), <i>P</i> = 0.26 2.14 (0.53, 8.68), <i>P</i> = 0.29	39/42 (93%)	4.22 (0.99, 18.07), <i>P</i> = 0.05 6.39 (0.93, 44.07), <i>P</i> = 0.06

\*Pre DVD vs Post DVD, +Pre DVD vs watched DVD.

The findings presented here suggest that implementation of a preconception counselling resource into routine care played a positive role in relation to folic acid uptake for those women who watched the DVD. Preconception counselling for all women with diabetes is essential to signpost women to the appropriate pre-pregnancy care services. An ongoing knowledge transfer process will be instrumental in maximising the impact of this resource<sup>3</sup> to raise awareness of the importance of planning for pregnancy among women with diabetes.

1. CEMACH, 2005.
2. Holmes VA, Spence M, McCance DR *et al.* (2012) *Diabet Med* 29(7), 950–956.
3. <http://go.qub.ac.uk/womenwithdiabetes>