Pilot study of the use of a computer agent to provide information and support to breastfeeding mothers

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Background: Even though exclusive breastfeeding is the preferred choice of feeding for all infants, only 14.8% of infants are breastfed exclusively for six months. Initiation and continuation of breastfeeding can be difficult without healthcare professional and social support, especially during the critical time around birth. Resource constraints often prevent 24/7 support even in breastfeeding-supportive settings.

Methods & Setting: We developed and evaluated a tablet computer-based interactive, animated Computer Agent designed to provide knowledge and support to breastfeeding mothers in order to improve exclusive breastfeeding rates. Subjects were randomly assigned to either: a) have access to the Computer Agent via a tablet laptop prenatally and while in the hospital; or b) usual care. Subjects had access to the Computer Agent at a third trimester prenatal visit and 24/7 while admitted to the hospital for delivery.

Results: Fifteen primaparous women (mean age 27.9) participated. Breastfeeding knowledge was significantly greater in the intervention group compared to the control group ($p<0.05$).Breastfeeding self-efficacy and intent to exclusively breastfeed for six months were trending higher in the intervention group (not statistically significant). Intent to breastfeed for six months increased after the intervention group used the Computer Agent (within subjects) ($p<0.05$).

Conclusions: This pilot study demonstrated the feasibility of providing computer-based, customized support and information to breastfeeding mothers. Results suggest that there is a role for such technologies even in facilities with practices that are already supportive of breastfeeding. Ongoing work is focused on making the Computer Agent accessible via the Internet during the post-partum period.