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Abstract Title

Exploring the Impact of Prenatal Substance Use on Child Outcomes After the Families First Home Visiting Program

Authors

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Background

Home visiting programs may help mitigate risks associated with exposure to prenatal substance use, but

evidence regarding their long-term impact in this population is limited.

Objective

This study aimed to assess whether participation in Manitoba's Families First Home Visiting (FFHV) program was associated with improved long-term educational, health and developmental outcomes among children exposed to prenatal smoking or prenatal alcohol/drug use.

Methods

A population-based retrospective cohort study was conducted using data from the Manitoba Centre for Health Policy (MCHP). Children identified through the Universal Newborn Screen (UNS) as being exposed to prenatal smoking or alcohol/drug were analyzed as separate cohorts. Outcomes included childhood mental and physical health diagnoses, immunization status, Early Development Instrument (EDI) scores, and standardized provincial education assessments. Inverse probability of treatment weighting was used to balance baseline characteristics between FFHV participants and risk-matched controls who were eligible for the program but did not participate.

Results

In the alcohol/drugs cohort (n = 834), FFHV participation was associated with higher probabilities of completing MMR/MMRV (76.1% vs. 72.0%; risk difference [RD] 4.1), Tdap-IPV (76.7% vs. 73.5%; RD 3.2), and HPV (18.2% vs. 12.8%; RD 5.4) immunizations. FFHV participants were also more likely to meet/approach expectations in Grade 3 reading (70.3% vs. 66.0%; RD 4.4) and Grade 8 reading/writing (62.5% vs. 52.5%; RD 10.0%) and had fewer inpatient hospitalizations (risk ratio [RR] 0.90). In the smoking cohort (n = 512), FFHV participation was associated with higher MMR/MMRV (75.2% vs. 70.4%; RD 4.9), Tdap-IPV (74.9% vs. 71.1%; RD 3.8), and HPV completion (19.4% vs. 12.5%; RD 6.9), and fewer emergency visits (RR 0.76). No differences in developmental vulnerability on the EDI were observed.

Conclusion

Findings support the hypothesis that FFHV participation is associated with more favorable long-term outcomes, with the most consistent benefits observed for immunization completion. FFHV is a valuable support for families impacted by prenatal substance use.