An Economic Evaluation of Teratology Information Services

by Rebecca L. Hancock

A thesis submitted in conformity with the requirements for the degree of Doctor of Philosophy. Institute of Medical Science University of Toronto © Copyright by Rebecca L Hancock 2010

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Abstract

BACKGROUND
Teratology Information Services (TIS) educate the public and health professionals via telephone regarding the safety of drugs and other exposures during pregnancy and lactation. Currently TIS consultations are free, but funding is eroding. A cost-benefit analysis may inform resource allocation. It was hypothesized that an individual TIS consultation regarding anti-depressant use during pregnancy provides a positive net benefit compared to a family doctor (FD) consultation.

METHODS
A survey of international TIS was conducted to gauge TIS costs. A discrete choice experiment (DCE) was designed to assess preferences and willingness-to-pay (WTP, an estimate of benefit) for teratology counseling. DCE respondents (local community volunteers) chose between potential counseling services following an anti-depressant exposure during pregnancy. Services were described by five service attributes and one cost attribute, which were generated in focus groups. Preferences and WTP were estimated using logit regression. Incremental benefits and costs of counseling by TIS and FD were compared in a probabilistic sensitivity analysis to obtain the incremental net benefit from both a societal (productivity costs included) and health system perspective. The FD consultation was costed through OHIP billing codes. The TIS consultation was micro-costed.

RESULTS
Eighteen TIS in North America and 16 international TIS completed the survey. Most TIS are small (median two employees, median budget US$69,000). The DCE had 175 respondents. The most important attribute of counseling was receiving very helpful information; information delivery methods were less important. WTP for the TIS scenario was CDN$124 (SD $12); WTP for the FD scenario was CDN$79 (SD $8). Service costs were similar for TIS and FD (approximately $32/consultation); FD had higher productivity costs. Incremental TIS benefits were likely to outweigh costs under both the societal and health system perspectives (probability 99% and 97% respectively).

CONCLUSIONS
An economic evaluation of a program that delivers pregnancy health information via telephone required a novel approach. While there are some methodological challenges to valuing benefits through willingness-to-pay, it may be appropriate for valuing counseling. TIS should emphasize their ability to provide high quality information. The benefits of an individual TIS consultation on anti-depressant use during pregnancy are likely greater than the costs.