**Examining the effects of an obstetrics interprofessional programme on reductions to reportable events and their related costs**

**Appendix**

**Definitions**

MMC frequency – defined as the number of MMCs recorded for a given institution for a given time period.

MMC cost – defined as the dollar amount paid out by a MMC, backdated to the date of occurrence. This was done to correct for any litigation time lag between date of occurrence and date of payment. Even if an event does not turn into an actual statement of claim – i.e. a legal action – the event may generate costs at the level of the insurer. The insurer wanting to gain benefit of *recent memory* may investigate events, and start a file, which may require expert witnesses and other costs. As a result, costs mentioned in this study do not just include costs from any actual legal action, but also costs associated with the desire by the insurer for timely information in the case of a possible future statement of claim.

Quantile regression – A regression model that uses median line of best fit, in contrast to the mean line of best fit used in ordinary least squares regression. For all models used in our analysis we used the median value with tau=0.5.

**HIROC database**

The data provided for analysis by HIROC is held in a private electronic database, chiefly used for administrative purposes. Information on variables such as hospital subscribers, medical providers, clinical classification, date of occurrence, reporting, litigation procedures and outcomes, among other pertinent variables are collected for each MMC reported to HIROC, and kept on a secure server under restricted access. Access was granted to the study authors who were bounded by nondisclosure agreements, to maintain restricted access. The data was accessed via encrypted excel spreadsheet files, downloaded to a closed computer for analysis.

**Interrupted time series design**

The interrupted time series design is a common method used in the evaluative sciences to assess the impact of a specified intervention. The multiple baseline variant of the method aggregates multiple time series sequences relative to the intervention start date. Timelines described in this multiple baseline time series are not chronologically consistent (e.g. time point -1 represents the measure of one time unit before the intervention and not a specific point in time). Each time point in the multiple baseline interrupted time series approach represents an aggregate measure of its components. In our case hospitals that implemented the MOREOB programme. As a result, multiple institutions contribute to each time point, and the number of institutions contributing to a given time point reduces towards the extremes. Since only a few institutions (i.e. those implementing early or late) contribute to time point towards these extremes, we restrict our analysis to only include time points with a minimum of 30 hospital institutions. This is large enough to produce stable models and ensure consistency. The outputs from an interrupted time series model are parameter estimates representing changes in the level and slope of the baseline trends (Biglan, Ary & Wagenaar, 2000; England, 2005; Ramsay, Matowe, Grilli, Grimshaw & Thomas, 2003) and we present the difference between expected and observed outcomes, termed the expected reduction.

**Hospital level of care**

Hospitals with maternity units in Canada are generally classified as follows:

* Level 1 – where low-risk maternity care and deliveries from 36 weeks onwards can be planned and managed. Family physicians and nurses often staff these with widespread responsibilities within the organisation. Midwives may also work in these facilities.
* Level 2 – where a nursery able to manage infants at 32 weeks and above increases the range of care. These are frequently staffed with a variety of both specialised and generalist medical staff, with nursing often unit based. Midwives may also work in these facilities.
* Level 3 – advanced Neonatal Intensive Care Unit support and care for the severely premature infants. These are staffed as Level IIs, with a greater focus on specialised care. Midwives may also work in these facilities.

**MOREOB follow-up programmes**

Follow-up programmes for MOREOB can be initiated after completion of 3 years of the initial MOREOB programme, and hospital institutions may follow one of the following:

* MOREOB *Plus -* a programme designed to embed Patient Safety practices, **with** the support of a coach in patient safety in addition to the programme
* MOREOB *Plus Plus –* A site that will have run two follow-up programmes one after the other
* MOREOB *self-directed -* a programme designed to embed Patient Safety practices, **without** the support of a coach in patient safety in addition to the programme

**References to Appendix:**

Biglan, A., Ary, D., & Wagenaar, A. (2000). The value of interrupted time series experiments for community intervention research. *Prevention Science*, *1*(1), 31-49.

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Ramsay, C., Matowe, L., Grilli, R., Grimshaw, J., & Thomas, R. (2003). Interrupted Time Series Designs In Health Technology Assessment: Lessons From Two Systematic Reviews of Behavior Change Strategies. *International Journal Of Technology Assessment In Health Care*, *19*(04), 613-623. <http://dx.doi.org/10.1017/s0266462303000576>