Implementation of an Interprofessional Team Review of Adverse Events in Obstetrics Using a Standardized Computer Tool: A Mixed Methods Study

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Abstract

Objective: As part of a larger study, an interprofessional team piloted a computer tool called Standardized Clinical Outcome Review (SCOR) to review adverse obstetric events that occurred at a tertiary care hospital over a 12-month period. We sought to understand whether the SCOR tool offered a feasible, acceptable, and appropriate strategy for improving patient safety through improved review of incidents.

Methods: We designed a mixed methods implementation study. Following completion of the 12-month pilot period, team members completed a questionnaire and participated in a focus group. Quantitative data analysis was performed using descriptive statistics, and qualitative data were analyzed using grounded theory to generate themes.

Results: The SCOR tool was easy to implement with an interprofessional team. Despite technical challenges with the software, the tool was quicker and more efficient than traditional case review methods. The content was appropriate for an obstetric unit and provided objective identification of factors contributing to adverse events. Team members were positive about the use of the tool in their institution and in wider contexts and believed that it was a valuable tool for raising awareness and addressing patient safety at their unit.

Conclusions: SCOR was an acceptable and appropriate tool for the interprofessional team review of adverse outcomes, and its use represents a significant advance in the quality assurance process for formal peer review of incidents.

Key Words: Quality assurance, patient safety, mixed methods

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Résumé

Objectif : Dans le cadre d'une étude de plus grande envergure, une équipe interprofessionnelle a fait l'essai-pilote d'un outil informatique du nom de *Standardized Clinical Outcome Review* (SCOR) pour analyser les événements indésirables obstétricaux qui étaient survenus dans un hôpital de soins tertiaires sur une période de 12 mois. Nous avons cherché à déterminer si l'outil SCOR avait offert une stratégie faisable, acceptable et appropriée pour l'amélioration de la sécurité des patientes par l'intermédiaire d'une analyse améliorée des incidents.

Méthodes : Nous avons conçu une étude de mise en œuvre à méthodes mixtes. À la suite d'une période pilote de 12 mois, les membres de l'équipe ont rempli un questionnaire et participé à un groupe de réflexion. L'analyse des données quantitatives a été menée au moyen de la statistique descriptive et les données qualitatives ont été analysées au moyen de la théorie ancrée pour générer des thèmes.

Résultats : L'outil SCOR a été facile à mettre en œuvre au sein d'une équipe interprofessionnelle. Malgré des défis techniques en ce qui concerne le logiciel, l'outil s'est avéré plus rapide et efficace que les méthodes traditionnelles d'analyse de cas. Le contenu était approprié pour une unité d'obstétrique et a permis l'identification objective des facteurs contribuant aux événements indésirables. Les membres de l'équipe voyaient d'un œil favorable l'utilisation de cet outil au sein de leur établissement et dans des contextes élargis, et estimaient qu'il s'agissait d'un outil utile pour la sensibilisation et pour traiter de la question de la sécurité des patientes au sein de leurs unités respectives.

Conclusions : L'outil SCOR s'est avéré un outil acceptable et approprié pour l'analyse des issues indésirables par l'équipe interprofessionnelle, et son utilisation constitue une percée significative pour ce qui est du processus d'assurance de la qualité dans le cadre de l'analyse officielle des incidents par les pairs.

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INTRODUCTION

The Standardized Clinical Outcome Review (SCOR) computer tool was developed in the United Kingdom to address significant variation in the way National Health Service hospitals review stillbirths and neonatal deaths. It was believed that poor outcomes potentially were avoidable.[1] The ad hoc review of stillbirth cases existing at the time did not promote proper identification of key issues, and clear learning or action points for clinicians were lacking. In response to this, a regional interprofessional working group was created to develop a standardized review and reporting mechanism to facilitate effective and efficient response to adverse outcomes. The aim was to use the tool to provide a standardized process for reviewing perinatal deaths, to promote learning that would improve practice, and to ensure action points are implemented in a timely way. Additionally, when used by a region to track incidents from more than one hospital, it was hoped that it would facilitate the pooling of aggregate data to form a database to examine larger trends.[2] SCOR was launched in the United Kingdom in September 2011, and to date over 400 perinatal mortality cases have been entered into the electronic tool.[3]

The SCOR tool incorporates three components: (1) systematic entry and assessment of data related to all phases of perinatal care through peer case review, including links to evidence-based guidelines; (2) automatic computer-generation of "case summary," "key points," "risk factors," and "care issues"; and (3) completion of an "action plan" outlining any identified care issues to be addressed, with the timeline and person responsible.

In September 2012, we began to work with our partners in the United Kingdom to create a Canadian version of the tool (using Canadian research and clinical practice guidelines) that would allow for review of all adverse outcomes in obstetrics, rather than reviewing only perinatal deaths as had been done in the United Kingdom.

An adverse event, defined as an unexpected incident directly associated with the care of the patient or an incident that results in injury or death, is estimated to occur in up to 10% of obstetric cases, and up to half of these could be prevented.[4–6] Comprehensive multicomponent programs for improving patient safety in obstetrics have demonstrated a reduction in the number of adverse events and in the attendant costs of litigation and compensation.[7–10] One critical component of these programs is the formal review of adverse events.[11] To do this, standardized mechanisms for both identifying and conducting the review of adverse events with the aim of identifying risk factors and making recommendations for action are needed.[5,7,10–13] There also is evidence that standardizing the review process, using a structured tool to investigate and learn from events, contributes to improved outcomes.[2,14] Furthermore, formal incident review conducted by peers is effective for improving practice.[9] Formal peer case reviews of this nature have a positive impact on the patient safety culture at an institution and on the rates of adverse events.[14] This is due to the improved identification of adverse events and dissemination of lessons learned.[4]

As in many other hospitals in Canada, our tertiary care obstetric unit had an obstetric quality assurance committee that was responsible for reviewing incidents involving adverse outcomes or near misses. The committee was interprofessional in its composition and included midwives, nurses, obstetricians, and pediatricians. The group met monthly. Incidents were identified through an informal ad hoc process. The committee reviewed all maternal deaths and unexpected stillbirths, along with any case brought to the attention of the chair. One member of the committee was assigned to read the hospital chart and then present the case for discussion by the committee, after which recommendations were made. We planned to pilot the SCOR tool as part of this process.

Between September 2012 and March 2014, we created, implemented, and evaluated a Canadian version of the SCOR tool for conducting standardized, formal peer review of adverse events instead of the traditional quality assurance process. As part of our pilot project, we