Does Teaching of Documentation of Shoulder Dystocia Delivery Through Simulation Result in Improved Documentation in Real Life?

Robyn Comeau, MD, Catherine Craig, MD, FRCSC

Department of Obstetrics and Gynaecology, Dalhousie University, Halifax NS

Abstract

Objective: Documentation of deliveries complicated by shoulder dystocia is a valuable communication skill necessary for residents to attain during residency training. Our objective was to determine whether the teaching of documentation of shoulder dystocia in a simulation environment would translate to improved documentation of the event in an actual clinical situation.

Methods: We conducted a cohort study involving obstetrics and gynaecology residents in years 2 to 5 between November 2010 and December 2012. Each resident participated in a shoulder dystocia simulation teaching session and was asked to write a delivery note immediately afterwards. They were given feedback regarding their performance of the delivery and their documentation of the events. Following this, dictated records of shoulder dystocia deliveries immediately before and after the simulation session were identified through the Meditech system. An itemized checklist was used to assess the quality of residents' dictated documentation before and after the simulation session.

Results: All eligible residents (18) enrolled in the study, and 17 met the inclusion criteria. For 10 residents (59%) documentation of a delivery with shoulder dystocia was present before and after the simulation session, for five residents (29%) it was only present before the session, and for two residents (18%) it was only present after the session. When residents were assessed as a group, there were no differences in the proportion of residents recording items on the checklist before and after the simulation session ($P > 0.05$ for all). Similarly, analysis of the performance of the10 residents who had dictated documentation both before and after the session showed no differences in the number of elements recorded on dictations done before and after the simulation session ($P > 0.05$ for all).

Conclusion: The teaching of shoulder dystocia documentation through simulation did not result in a measurable improvement in the quality of documentation of shoulder dystocia in actual clinical situations.

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Résumé

Objectif : La documentation des accouchements compliqués par une dystocie de l'épaule constitue une compétence communicationnelle précieuse que les résidents doivent chercher à maîtriser au cours de leur formation. Nous avions pour objectif de déterminer si l'enseignement de la documentation de la dystocie de l'épaule dans le cadre d'une simulation se traduisait en une amélioration de la documentation d'un tel événement dans le cadre d'une situation clinique réelle.

Méthodes : Nous avons mené, entre novembre 2010 et décembre 2012, une étude de cohorte portant sur des résidents en obstétrique-gynécologie qui en étaient rendus à la 2e, 3e, 4e ou 5e année de leur formation. Chacun de ces résidents a participé à une séance de simulation de la dystocie de l'épaule; à cette occasion, nous leur avons demandé de rédiger une note sur l'accouchement immédiatement à la suite de la séance de simulation. Des commentaires leur ont été offerts quant à leur rendement au cours de l'accouchement et à leur documentation des événements. Par la suite, les dossiers dictés liés aux accouchements compliqués par une dystocie de l'épaule ayant eu lieu immédiatement avant et après la séance de simulation ont été récupérés dans le système Meditech. Une liste de vérification détaillée a été utilisée pour évaluer la qualité de la documentation dictée par les résidents avant et après la séance de simulation.

Résultats : Tous les résidents admissibles (18) se sont inscrits à l'étude et 17 d'entre eux ont répondu aux critères d'inclusion. Dix résidents (59 %) avaient procédé à la documentation d'un accouchement compliqué par une dystocie de l'épaule avant et après la séance de simulation, cinq résidents (29 %) n'avaient procédé à une telle documentation qu'avant la séance et deux résidents (18 %) ne l'avaient fait qu'après la séance. Lorsque l'évaluation a porté sur les résidents en tant que groupe, aucune différence n'a été constatée pour ce qui est de la proportion des résidents consignant des articles tirés de la liste de vérification avant et après la séance de simulation ($P > 0,05$ pour tous). De façon semblable, l'analyse du rendement des 10 résidents qui avaient dicté une documentation tant avant qu'après la séance n'a révélé aucune différence pour ce qui est du nombre d'éléments consignés dans cette documentation avant et après la simulation ($P > 0,05$ pour tous).

Conclusion : L'enseignement de la documentation de la dystocie de l'épaule au moyen de la simulation ne s'est pas traduit en une amélioration mesurable de la qualité de la documentation de la dystocie de l'épaule dans des situations cliniques réelles.

INTRODUCTION

Simulation-based medical education is a valuable method for providing hands-on training for high risk, low frequency events. This form of medical education has been used in obstetrics and gynaecology in the teaching and assessment of the management of cardiac arrest, postpartum hemorrhage, eclampsia, vaginal breech delivery, and shoulder dystocia.[1,2] The Royal College of Obstetricians and Gynaecologists defines shoulder dystocia as a vaginal cephalic delivery that requires additional obstetrical manoeuvres to deliver the fetal head when gentle traction fails.[3] However, there is a degree of subjectivity associated with the diagnosis, since it depends on the opinion of the person assisting with the delivery as to whether or not a typical amount of traction is used and whether additional obstetric manoeuvres are required. Nevertheless, if significant shoulder dystocia occurs, there is an appreciable risk of adverse outcomes for both mother and baby, and written or dictated documentation with a comprehensive record of the events of the delivery is essential. This documentation may assist in the care of the mother and neonate, and may assist in the management of future pregnancies. The delivery note is the most reliable piece of information documenting the events of the delivery.[4] Documentation at the time of delivery may also underpin related medico–legal proceedings; if the documentation is deficient in key elements, it may be challenging to support the medical care that was administered. In one study in the United States, 54% of litigated cases of shoulder dystocia were settled out of court due to suboptimal documentation.[4]

There are some clinical practice resources related to the optimal documentation that should accompany deliveries complicated by shoulder dystocia. The Advances in Labour and Risk Management course, developed by family physicians, obstetricians, midwives, and nurses, and backed by the Society of Obstetricians and Gynaecologists of Canada, includes high-risk obstetrical emergencies with a section on the recognition of and management options for shoulder dystocia.[5] Written documentation of deliveries complicated by shoulder dystocia is identified as an important aspect of a delivery record, and critical components for inclusion are discussed. The RCOG guideline published in 2005 also outlines the management and documentation of shoulder dystocia.[6]

ABBREVIATIONS

ALARM	Advances in Labour and Risk Management
MORE^{OB}	Managing Obstetrical Risk Efficiently
RCOG	Royal College of Obstetricians and Gynaecologists

Studies evaluating written documentation of deliveries complicated by shoulder dystocia have used simulated environments and have shown the existence of suboptimal documentation.[7,8] The current study adapted elements of the 2005 RCOG guideline[6] and assessed written documentation in actual deliveries complicated by shoulder dystocia among postgraduate trainees in obstetrics and gynaecology before and after participation in a simulation education session to determine the level of improvement.

METHODS

We performed a cohort study from November 2010 to December 2012 to assess improvement in the dictated documentation of deliveries complicated by shoulder dystocia following participation in a simulation education session. Training in the Royal College of Physicians and Surgeons of Canada Residency Training Program in Obstetrics and Gynaecology at Dalhousie University takes place primarily at the IWK Health Centre, a stand-alone maternity centre and the tertiary referral centre for high risk pregnancies in Nova Scotia and Prince Edward Island. There are approximately 10 000 deliveries in Nova Scotia each year, with approximately half of these occurring at the IWK Health Centre. In-house consultant obstetrical care and obstetrical anaesthesia are available on a 24-hour basis.

All eligible residents first took part in the simulation education session; dictated records for deliveries with shoulder dystocia were then assessed before and after the time of the simulation session. Residents in their second to fifth year of training comprised the group asked to participate in the study. Residents in their first year were excluded because core obstetrical rotations begin in their second year. Dictations in the Meditech system (Medical Information Technology, Inc., Westwood, MA) that had been edited by staff obstetricians were excluded, so that the data analyzed would not be contaminated. Deliveries complicated by shoulder dystocia that were documented with solely a hand-written note in the chart were not able to be identified by Meditech and were therefore excluded.

To clarify resident experience with deliveries complicated by shoulder dystocia, information regarding participation in the ALARM course was collected, as well as an estimation by individual residents of the number of deliveries complicated by shoulder dystocia that they had been involved in before the simulation education session. The simulation education sessions on delivery with shoulder dystocia took place from March to December 2011. Educational sessions for residents using simulation for situations that have the potential for