



**The Royal Australian and
New Zealand College of
Obstetricians and
Gynaecologists**

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Excellence in Women's Health

Intrapartum Fetal Surveillance Education Program

Pilot Project Final Report

December 2004

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1. Summary

The Intrapartum Fetal Surveillance Education and Credentialing Pilot Project, was a collaboration between The Three Centres (Southern Health, The Mercy Hospital for Women, The Royal Women's Hospital), Monash University, The Royal Australian and New Zealand College of Obstetricians and Gynaecologists and the Australian College of Midwives Incorporated (Vic branch) and was jointly funded by the Department of Human Services (DHS), Victorian State Government and the Victorian Managed Insurance Authority (VMIA).

The principal objective of The Project was to develop, implement and evaluate a pilot education program in Intrapartum Fetal Surveillance that might be suitable for future application on a statewide basis. The rationale behind the development of such a program was the recognition that inadequate or inappropriate intrapartum fetal surveillance was a common feature of adverse obstetric outcomes in Victoria and the expectation that targeted education could, at least in part, rectify this.

As detailed in this report, the principal objective has been achieved and surpassed. The educational framework and resources developed in this pilot project have been established to a sufficient extent to allow successive rollout of intrapartum fetal surveillance education to all interested Victorian public maternity hospitals in 2005 and beyond. In addition to this principle objective, mapping of current intrapartum fetal surveillance, education and credentialing practices in the Victorian public hospital system was undertaken, to inform and guide future educational developments in this field. A template for clinical practice audit was also developed, to allow monitoring of practice before and after educational intervention. This report describes in detail the developmental stages of The Pilot Project, including those processes that ensured the satisfactory and timely completion of the project, and summarises the results of the project, including participant and external evaluation.

The highlights of the project outcomes are:

- Five hours of educational material developed and delivered
- Development of a dedicated CTG bank
- Development of summative assessment (MCQ) bank
- 10 pilot hospitals participated including 5 metropolitan and 5 rural hospitals
- 439 personnel completed the education program including 59 doctors and 379 midwives
- Mean participant assessment score increased by over 48% following education
- "Excellent" external expert evaluation of course content
- Firm endorsement of quality and value by participant evaluation
- Detailed mapping of current IFS educational strengths and needs across the State
- Development of CPD tools for GPs and Specialists

2. Background and Introduction

It has long been widely recognised that a significant number of adverse obstetric outcomes continue to arise from inappropriate use or interpretation of intrapartum fetal surveillance. In the United Kingdom, national reports on perinatal morbidity and mortality have highlighted that deficiencies in fetal surveillance practice continue to contribute significantly to the burden of adverse outcomes. In a recent editorial in the British Medical Journal it was commented that *“The main problem lies in interpreting the cardiotocograph trace...Another key recommendation is that all professionals involved in managing labour should have regular, continuing training in interpreting and storing cardiotocographs. This recommendation is in line with three recent Confidential Enquiries into Stillbirths and Deaths in Infancy, which have consistently recognised inadequate interpretation of the cardiotocograph as a prime cause of adverse events”*.¹

To examine this formally in Victoria, in 2000 the Victorian Managed Insurance Authority (VMIA), the insurers of Victorian public hospitals, commissioned an expert review of nearly 400 cases of obstetric medico-legal claims in Victoria arising between 1993 and 1998². The authors of this report clearly identified inadequate or inappropriate use of intrapartum fetal surveillance as a major contributor to the claims burden. While such objective data are not available for most populations, it is clear from the UK experience¹ that the findings of the expert review are not unique to Victoria. As such, the continued misuse of intrapartum fetal surveillance has significant implications for the Australian population at large. In light of the UK recommendations and these Victorian findings, it is therefore perhaps surprising that options for formal education and credentialing in fetal surveillance remain extremely limited and that in Victoria, there was no coordinated or standardised education program available to public maternity care providers.

As a first step to improving quality of care in this setting, the Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG) developed, with funding from VMIA, evidence-based clinical practice guidelines on intrapartum fetal surveillance³. It was hoped that these guidelines would become an important resource for maternity care-providers and that they might facilitate both standardisation of existing local education programs and the development of new resources. However, it was also recognised by RANZCOG that the development of guidelines alone, unsupported by education, would be unlikely to have significant impact on clinical practice, at least in the immediate term. In 2003 therefore, funding was sought to support the development of an education and credentialing program based upon the Clinical Practice Guidelines. It was anticipated that the proposed program would decrease perinatal morbidity and mortality attributable to intrapartum fetal asphyxia by:

- developing an education curriculum for intrapartum fetal surveillance based on an evidence-based guideline
- developing a credentialing program in fetal surveillance based on a core set of competencies
- improving the knowledge of the underlying pathophysiology of all health professionals undertaking fetal surveillance
- improving the skills of all clinicians (midwives and doctors) providing maternity care

- improving the appropriate usage and interpretation of intrapartum fetal surveillance, including intermittent auscultation and continuous electronic fetal monitoring

In the first instance funding was made available by VMIA and DHS for a pilot project to assess the feasibility and acceptance of a statewide education program. This report details the outcomes for that pilot project.

3. Pilot Project Administration

3.1 Establishment of a Working Party for the Pilot Project

In July 2003, a Working Party was convened to oversee and direct the Project. The membership of this Working Party was structured to represent the DHS, VMIA, RANZCOG, ACMI (Victoria), and The Three Centres. Funding was not available to support the involvement of the Working Party members. Their time was generously given *pro bono* to the Project. Specifically, the Working Party membership was:

- Associate Professor Euan Wallace, Monash University and Monash Medical Centre, Chair
- Professor Michael Permezel, Mercy Hospital for Women
- Professor Jeremy Oats, Royal Woman's Hospital
- Dr Peter Kirker, VMIA
- Ms Vanessa Owen, ACMI Victoria
- Ms Denise Patterson, Mercy Hospital for Women
- Ms Wendy Dawson, Department Human Services
- Ms Donna Trickey, Monash Medical Centre
- Ms Valerie Jenkins, RANZCOG
- Mr. Mark Beaves, RANZCOG
- Ms Sonja Fischer, RANZCOG

The working party agreed on terms of reference, key outcomes and desired timelines for the Pilot Project. These are summarised in Appendix A.

3.2 Appointment of a Project Manager

A nationwide advertising and recruitment process was undertaken to recruit a Project Manager to run the Pilot Program. In November 2003, a project manager was appointed. Mark Beaves, formerly a specialist midwife in the Maternal-Fetal Medicine Unit at Monash Medical Centre with extensive experience in intrapartum fetal surveillance and adult education, was appointed and commenced work in November. Shortly following his appointment in November, he met with the Working Party to refine and finalise the Project timelines.

3.3 Recruitment of Pilot Project Sites

In collaboration with the DHS and VMIA, the Working Party agreed upon nine selected pilot hospital sites, which together were considered to be representative of the breadth of Victorian public maternity services. These included rural and metropolitan hospitals, Level One, Two and Three hospitals and sites with specialist-led, GP-led and midwifery-led models of maternity care. Without exception, all of the hospitals invited to participate in the Pilot Education Program, agreed to do so. An additional pilot site was included at the request of that hospital for urgent CTG education, following a comprehensive audit process. The final ten pilot sites represented approximately 14,350 public births per annum, or 37.5% of all public births in Victoria. The pilot sites were:

- Bendigo Health Care Group, Bendigo
- Dandenong Hospital, Southern Health, Dandenong
- Hepburn Health Service, Daylesford
- Kilmore and District Hospital, Kilmore
- Mercy Hospital for Women, East Melbourne
- North East Health, Wangaratta
- Sandringham and District Hospital, Sandringham
- Sunshine Hospital, St Albans
- The Royal Women's Hospital, Carlton
- Western District Health Service, Hamilton

In discussion with the pilot sites, suitable dates and times for the delivery of the pilot education program were agreed. Importantly, the Working Party considered it fundamental to the longer-term success of any statewide education program, and indeed to the collaborative nature of maternity services, that the education be delivered in a multidisciplinary manner. Accordingly, the pilot sites were encouraged to ensure that their medical and midwifery staff attended together. This proved to be a challenge to some sites and will be discussed below.

In addition to the ten agreed pilot sites, just prior to commencement of the pilot program delivery, one “non-pilot” hospital contacted the Project office requesting CTG education for their staff. It was agreed with that site (The Northern Hospital, Epping) that the education program be trialled with them, prior to the formal rollout of the Pilot Project.

4 Pilot Education Program

4.1 Development of Educational Material

The Working Party discussed at length whether the Project should develop educational material *de novo* for the project or whether commercial third party material should be purchased and then delivered through the Project. A potentially suitable third party product (K2, Bayer, Australia) was identified and a number of discussions held between Working Party members and K2. While there were clear advantages to both approaches, a number of Working Party members felt strongly that in the longer term, a wholly self-owned product offered both maximum flexibility and the most economic, and therefore sustainable approach. In this regard, the tabled first year costs for K2 for the pilot sites alone were around \$120K. While this represented a significant reduction on normal retail pricing it essentially consumed the total budget for Pilot Project. Indeed, the projected costs for K2 for the entire State would have been around \$1.2M pa. Therefore, it was agreed by the Working Party that the Project Manager should lead the development of a *de novo* education program to become the centrepiece of the Pilot Project. Accordingly, a new and comprehensive intrapartum fetal surveillance education program was developed, using the RANZCOG Clinical Practice Guidelines as a starting point.

In accordance with the RANZCOG Clinical Practice Guidelines, it was agreed that the core of the educational curriculum should be an in-depth understanding of the pathophysiology of fetal heart rate control. This was considered important because the limitations of simple CTG pattern recognition are well recognised and believed to underlie, at least in part, much of the CTG interpretative error responsible for adverse outcomes. It was hoped that an understanding of fetal heart rate control, and how these relate to CTG patterns, would improve clinical management and ultimately, outcomes.

The Working Party also discussed at length the format of the education delivery. Whilst it was recognised that self-directed learning would be a major component of any final education program, it was agreed that there were insufficient time and resources to develop such a component for the Pilot Project. Therefore, no pre-reading material was developed as part of the Pilot Project, but was highlighted for development for any subsequent program. An anticipated benefit of not providing pre-reading was the opportunity, through pre-education assessment (see below), to acquire objective data on the background levels of understanding of the current work force. It was thought that such data might be useful in the development and “selling” any future education program.

Whether the Pilot Project should be developed on CD or as a face-to-face workshop, or both, was also discussed by the Working Party. It was felt that at this early development stage, the most important feature was content rather than the mode of delivery. It was also recognised that there was no objective information on the likely preferences of the workforce that could guide planning at this stage. Indeed, the Working Party decided that an additional aspect of the Pilot Project that was worth undertaking was a survey of current

education practice and future preferences. This component is detailed below (Mapping of Current Practices and Preferences). Nonetheless, in the first instance it was agreed to develop a comprehensive PowerPoint® presentation in a seminar format.

Between January and March 2004, the Project Officer developed the seminar and workshop presentations, initially containing around 130 slides, covering all aspects of intrapartum fetal surveillance. Specifically, the components of the workshop presentation included:

- basic utero-placental physiology
- the physiology of fetal heart rate control
- the fetal response to hypoxia
- fetal acid base balance
- fetal blood sampling
- ultrasound assessment of the fetus
- utilisation of fetal surveillance
- the normal intrapartum CTG
- abnormal CTG features
- management of the abnormal CTG

Together with the Chair of the Working Party, this presentation was refined and further developed prior to review and refinement by the Working Party itself. While all the above elements remained in the final presentations some aspects were significantly shortened so that the seminar component could be undertaken in a three hour timeframe. The elements shortened included fetal acid-base balance, fetal blood sampling, ultrasound assessment of the fetus and utilisation of fetal surveillance. These components have been highlighted for further development, in additional modules.

Once finalised, handouts of the PowerPoint slides were produced for dissemination to participants at each workshop. These handouts were simply to allow and facilitate participant note taking.

In addition to the seminar component, a one hour “CTG case presentation workshop” was developed to allow the participants an opportunity to practice and develop their skills on “real” CTGs, for which the management and clinical outcomes were known. These traces were identified and selected from an extensive resource at Monash Medical Centre’s Maternal-Fetal Medicine Unit, who provided access and copying facilities free-of-charge. The Project Manager continues to collect suitable CTGs, developing a dedicated electronic RANZCOG CTG Bank. At present, the Bank contains about 130 CTGs and CTG series, each tagged with features allowing easy search and retrieval. This aspect of the Project has been critical to content validity. It is also anticipated that the CTG Bank will prove to be an important resource for the Program in the future.

4.2 Development of Summative Assessment Instruments

It was decided that a key component of the Pilot Project would be a summative assessment task. As the project developed, it was thought that two summative tasks, one undertaken before and one after delivery of the education, would provide valuable objective data assessing the effectiveness of the education component, at least in the immediate term. It was hoped that these objective data would also identify weaknesses in the knowledge base of the workforce, if present and thereby inform the on-going development of the future Program. Furthermore, the development of valid and reliable assessments would form the basis of the future credentialing/competency-testing framework, which was planned as an important component of the larger Program.

A multiple choice question (MCQ) format was chosen for the pre and post testing primarily because of its capacity to allow broad sampling of knowledge and because of its ability to be quickly and objectively scored and tabulated for analysis purposes. To this end, scannable pre- and post-test answer sheets were developed for automated scoring by the College's sheet reader (appendix B).

A small bank of MCQs was developed by the Project Manager and the Working Party Chair. Each question was "tagged" with a knowledge or skill domain label (see below) so that future MCQ papers could be created such that they covered all aspects of the curriculum. In addition, domain tagging will allow assessment tools addressing a specific domain or domains to be assembled with ease in the future. The Project Manager and Working Party Chair undertook this tagging exercise independently. From the MCQ bank, 20 questions were selected for each of the two MCQ papers, ensuring that each paper assessed all aspects of the education program. Importantly, a number of MCQs included CTG traces that were selected from the bank of CTGs developed by the Project Manager.

Knowledge / Skill Domains (developed from the RANZCOG IFS Clinical Practice Guidelines):

- *Fetal physiology*
- *Application of fetal physiology*
- *Definitions*
- *Application of definitions*
- *Clinical management*

4.3 Development of an Evaluation Instrument

The Working Party considered that it was important that a formal evaluation of the Pilot Project was undertaken. Accordingly, a "scannable" participant feedback/appraisal form was developed (Appendix C) to assess all aspects of the of the education package. This included overall content, structure, delivery format, perceived impact on knowledge and skills and clinical relevance. Respondents were required to fill in their hospital ID, their designation and the date. This feedback form was completed anonymously at the completion of the education.

The evaluation comprised eleven statements, to which the respondents were required to rate their response,

on a scale of strongly disagree, disagree, undecided, agree and strongly agree. The first seven questions related to the respondents' overall rating of the course and the remaining three questions explored individual course components. Specifically, the statements were:

- The course enabled me to review and update knowledge in the topics presented
- The course enabled me to enhance my understanding in the topics presented
- The sessions featured relevant and practical case presentations
- There was adequate time for discussion
- The course has improved my confidence in CTG interpretation
- Overall the length of each session was appropriate
- The meeting facilities provided a satisfactory environment for learning
- The fetal heart rate physiology session was useful
- The fetal assessment information was helpful
- The intrapartum CTG session was useful
- The intrapartum CTG workshop was helpful

Responses were assigned scores of 1 (strongly disagree) to 5 (strongly agree) to allow statistical analyses. In addition, there was an invitation for free text responses to the question:

What advice would you give to the course organisers in their preparation for the next course?

4.4 Delivery of Pilot Education Project

In summary, a 5-hour education session was developed to consist of:

- A 20 item pre-course MCQ assessment (20 minutes duration)
- A three part PowerPoint seminar (3 hours total duration)
- A CTG workshop (1 hour duration)
- A 20 item post-education MCQ assessment (20 minutes duration)
- A participant feedback/evaluation form (10 minutes duration)

On April 29th, the education package (without formal feedback/evaluation) was successfully trialled at The Northern Hospital, Epping, with 25 participants. These included midwives, GPs, obstetric trainees and specialists. While Epping was not one of the designated pilot sites, they had invited RANZCOG to deliver a session there ahead of formal piloting. This trial was extremely useful, affording valuable insights into the strengths and weaknesses of the “first run” seminar/workshop format. This experience informed further modification to both the content and structure of the seminar and workshop components, prior to delivery of the education to the first pilot sites. Essentially, the number of slides in the presentation was significantly reduced following the trial run at The Northern Hospital. This allowed both an increased focus of the presentation and increased time for participant discussion. The topics reduced in the presentation are detailed above (Development of Educational Material).



Figure 4.1
Mark Beaves delivering
education at Bendigo.

The revised education package, comprising 5 hours of content, was offered to the pilot sites as either a single session or two half sessions. The complete education program was delivered a total of 23 times to the ten pilot sites - 13 times as a single session and ten times as two half sessions. It was generally delivered at times and on days that were thought to best suit the multidisciplinary make up of the attendees. To this end, the program was most often delivered in the afternoon or evenings, with occasional daytime or weekend sessions. 439 participants completed the pre-education and post-education testing. These comprised 13 student midwives, 366 midwives, 31 trainees, 13 GP obstetricians and 15 specialists. All pilot sites organized multidisciplinary sessions, with the exception of one hospital, which scheduled separate sessions for midwives and senior specialists. Those participating at sites with multidisciplinary sessions commented on the value of this approach.

4.5 Pre- and Post-Education Assessment Results

The mean and standard deviation (SD) pre-education assessment score was 10.0 (2.6). Table 4.1 summarises the scores for individual hospitals. The mean and SD post-education assessment score was 14.8 (2.7), significantly higher than the pre-education score ($p = <0.05$) (Table 4.1). Indeed, the post-education score represents an average improvement of more than 48%. In general, the magnitude of the score improvement from pre- to post-education testing was related to the pre-education score. The lower this score, the greater the increase in the post-test score.

Table 4.1 Pre and post education scores by hospital.

Group	Pre Test	Stdev	Post Test	Stdev	Improvement	Participants
Hospital 2	8.00	3.30	14.63	2.27	82.8%	8
Hospital 3	9.80	2.59	15.60	0.89	59.2%	5
Hospital 4	9.25	2.42	13.85	2.88	49.7%	41
Hospital 5	10.28	2.50	14.56	3.04	41.6%	36
Hospital 6	9.64	2.54	14.90	2.57	54.5%	67
Hospital 7	10.46	2.32	14.95	2.89	43.0%	101
Hospital 8	9.00	2.52	14.08	3.25	56.4%	13
Hospital 9	10.89	2.53	15.59	2.05	43.2%	88
Hospital 10	9.91	2.93	14.91	2.95	50.4%	47
Hospital 11	8.76	2.15	14.12	3.00	61.1%	34
Overall	10.01	2.58	14.85	2.73	48.3%	439

There were differences between the professional groups (Table 4.2), with the greater increases in score observed in those with the lower pre-education scores, but no apparent differences between hospital setting (Table 4.3).

Table 4.2 Pre- and post-education scores by professional group

Group	Pre Test	Stdev	Post Test	Stdev	Improvement	Participants
Student Midwives	9.31	2.10	15.08	2.93	62.0%	13
Midwives	9.86	2.59	14.61	2.73	48.2%	366
Residents	11.37	1.61	16.58	2.01	45.8%	19
Registrars	12.83	1.95	16.67	2.02	29.9%	12
GP Obstetricians	10.92	2.53	16.85	1.57	54.2%	13
Obstetricians	9.60	2.61	15.07	3.01	56.9%	15
Overall	10.01	2.58	14.85	2.73	48.3%	439

Table 4.3 Pre- and post- education scores by region

Hospital location	Pre Test	Stdev	Post Test	Stdev	Improvement	Participants
Metropolitan	10.13	2.44	14.93	2.76	47.4%	168
Sub metropolitan	10.55	2.57	15.18	2.52	43.9%	137
Country	9.31	2.63	14.40	2.86	54.8%	134

Together, these data suggest significant and widespread deficiencies in the current knowledge base and management practices, of midwives and doctors in intrapartum fetal surveillance in Victoria. The data also suggest that significant improvements, at least in the immediate term, are achievable with targeted education. The findings have significant implications for the Victorian workforce and the future development of an education program.

4.6 Participant Evaluation of Pilot Education Project

374 Pilot Education Project participants completed the feedback sheet. 310 were midwives, 15 student midwives, 31 trainees, 9 GP Obstetricians and 9 Obstetricians. The mean responses to the statements are summarized in table 4.4. Overall, the responses to the program were overwhelmingly positive.

The responses to the first three questions, regarding the relevance of the education, capacity to update knowledge and improve understanding, were uniformly highly favourable. This was consistent both across all the pilot sites and across both medical and midwifery participants.

The responses to questions four and six, regarding adequate time for discussion and overall session length, were also favourable but did highlight that many participants thought that insufficient time was available. In particular, a lack of time for participant discussion during both the seminar component and the workshop component was commonly expressed. In addition, some participants thought that there was simply too much new information for it to be “taken in” in the allocated time. These findings have important implications for the on-going development of the program.

Table 4.4 Percentage of participants (of 420) who “agreed” or “strongly agreed” with the statements

Statement	% of participants who agreed or agreed strongly
1 The course enabled me to review and update knowledge in the topics presented	100
2 The course enabled me to enhance my understanding in the topics presented	98.7
3 The sessions featured relevant and practical case presentations	99.2
4 There was adequate time for discussion	80.7
5 The course has improved my confidence in CTG interpretation	92.8
6 Overall the length of each session was appropriate	84.8
7 The meeting facilities provided a satisfactory environment for learning	83.9
8 The fetal heart rate physiology session was useful	97.9
9 The fetal assessment information was helpful	97.9
10 The intrapartum CTG session was useful	98.7
11 The intrapartum CTG workshop was helpful	97.1

The majority of participants agreed that the education program increased their confidence in CTG interpretation (statement 5) but it was also apparent from the free-text answers that some participants became more confused regarding CTG interpretation following the education. This may relate to lack of time for discussion. The future provision of supplementary (pre) reading material, such as lecture notes, a book, a CD or web-based material, may also improve this aspect of the program.

As detailed in the table 4.4, the majority of respondents rated the various components of the program (fetal heart rate physiology, fetal assessment, intrapartum assessment and the workshop) very highly.

The majority of pilot sites were able to make available suitable accommodation for the education sessions. However, at a number of sites the available rooms were not appropriate, being too small or too noisy in the main. These findings have implications for the planning of the future delivery of the program, specifically at the time “needs” are discussed with a potential hospital. Accordingly, in the future it is anticipated that the availability of an appropriate learning environment will be discussed at the time of booking the education sessions.

4.7 Independent Evaluation of Pilot Education Program

The working party thought it important that some form of independent expert assessment of the Pilot Education Program be undertaken. Accordingly, Ms Kate Dyer and Dr Russell Jones were invited to review the education package, which was sent to them prior to the commencement of the Pilot Project education. Dr Russell Jones BSc, BEd (Hons), PhD, has extensive experience in the development, implementation and evaluation of educational programs, policy formation, training, accreditation and examinations, research, and quality assurance. Kate Dyer RN, RM, Grad Dip (Mid), Masters (Midwifery), is currently the Clinical Midwife Consultant in High Risk Pregnancy at the Royal Hospital for Women Randwick NSW. Their biographies may be viewed in appendix D.

Dr Russell Jones's evaluation (see below) was an overwhelmingly positive one. His only concern was that the volume of information contained in the allocated delivery time seemed ambitious. As described above, this was addressed to some extent following the trial run at The Northern Hospital. In addition, further refinement of the sessions continued throughout delivery of the pilot program, streamlining the seminars and increasing the discussion time. A more comprehensive review is planned after completion of the pilot phase.

Evaluation of the education program by Dr Russell Jones

Overview

Typical of educational products from RANZCOG, these materials are educationally sound and of high quality. This program is a comprehensive educational package consisting of a hospital survey, pre-test questionnaire and answer sheet, PowerPoint handouts, workshop booklet, post-test and evaluative survey.

The package is designed as a four-hour (approximate) course, which will comfortably fit into a half day of training. The course has minimal reliance on technology and hence is easily transported anywhere within Australian, New Zealand and elsewhere. The course is appropriately structured and follows sound educational principles.

Hospital Survey

This two page scannable survey is designed to quickly elicit pertinent information concerning hospitals, their CTG related education and training practices, and feedback on RANZCOG intrapartum fetal surveillance clinical guidelines.

Pre-Test

The pre-test is comprised of a 20-item MCQ questionnaire. The test is comprehensive covering key points relating to intrapartum fetal surveillance. The questions are well written with an appropriate balance of content. The test also has a high degree of face validity. The use of MCQs ensures high reliability. Further, both the test and answer sheet are well structured and presented. The use of a scannable answer sheet minimises the possibility for transcription error.

PowerPoint Handouts

The PowerPoint handouts comprise four slide shows: introduction and overview, fetal response to hypoxia, intrapartum CTG, and abnormal intrapartum CTG/reporting. The 120+ slides within these presentations comprehensively cover pertinent material related to intrapartum fetal surveillance. Both the order of the presentations and the flow within each presentation is appropriate with slides presented in a logical sequence. The slides are by and large well structured. One concern may be the sheer number of slides. The 120+ slides contain an enormous amount of information that may be a challenge for many instructors who attempt to cover this material as part of a four-hour workshop. Further, the learning styles of workshop participants will vary and not all will respond well to such a large number of slides.

Workshop Booklet

The program includes a booklet of 26 cases that are to be used as a central resource for participant group work. These 26 cases cover an extremely large variety of intrapartum CTG scenarios. Further, they combine to provide ample opportunity for participants to identify their own strengths and weaknesses on this topic. A skilled workshop facilitator will be readily able to use this booklet as a valuable educational tool to benefit workshop participants.

Post-Test

The post-test successfully walks the fine line between being sufficiently similar to the pre-test as to make comparisons possible, but sufficiently different to preclude participants totally relying on their memory of the pre-test. A comparison of participant performance on the pre- and post-tests will yield an indication of the extent of participant learning. As with the pre-test, this post-test is comprised of a 20 item MCQ questionnaire that comprehensively covers key points relating to intrapartum fetal surveillance.

Post-Test (continued)

The questions are well written with an appropriate balance of content. The test also has a high degree of face validity and reliability. Once again, both the test and answer sheet are well structured and use of a scannable answer sheet minimises the possibility for transcription error.

Participant Feedback

Participant feedback is solicited through the use of a post-program evaluative questionnaire. This questionnaire is structured to provide overall ratings for the course, identify the most and least effective learning sessions (and the reasons why), identify pertinent topics which should be added to the program or topics that should be removed, as well as any additional comments a participant might wish to make. This is all appropriate information to be sought following an educational course, especially an evolving course such as this pilot project.

Dr Russell Jones
Director of Education
ANZCA
5th September 2004

Ms Kate Dyer's evaluation (see below) was also extremely positive. Her main concerns also included the volume of material to be covered in the short timeframe and in the "train-the-trainer" concept. The "train-the-trainer" is a format commonly used by RANZCOG to facilitate delivery of education at a local level. As the pilot phase was developed and delivered, it became clear that this format was not likely to be suitable for the program in the short term.

Evaluation of the education program by Kate Dyer

Summary

Overall the ½ day education pilot program appears well constructed, clinically appropriate and contemporary. The focus is clearly and appropriately on the basic fetal monitoring education needs of the practicing clinician. The fetal/placental physiology and acid base components underpinning the program are particularly clear and presented in an easy to understand format providing an excellent beginning to the workshop.

The 'Road Show' approach to providing the education program is likely to be the most popular of the education strategies with clinicians and administrators alike. This "Road Show" format provides a level of standardisation and quality that would be difficult to consistently reproduce with the train the trainer format. Should train the trainer format be the only way face to face education is provided following the pilot project, consideration should be given to building in strategies to ensure that 'trainers' are appropriately educated and supported on an ongoing basis.

I have not made comment on the actual RANZCOG intrapartum Fetal Surveillance guidelines.

Overall Education Course content

The course content is sound, well constructed and appears to be tailored to meeting the basic needs of clinicians who are required to undertake fetal heart rate monitoring, trace interpretation and utilise the RANZCOG intrapartum fetal surveillance guidelines.

I have some concerns as to whether all the content can be adequately covered in the half day program, however given the difficulty of releasing staff for a day this approach is likely to be welcomed by hospital administrators. Adequately covering the proposed course content in ½ a day is probably not a concern if the workshop leader is experienced in teaching and has a deep level of knowledge in the area of IPFS. However for the 'novice' teacher such as in the train the trainer format, covering the course content in this time frame may prove to be more of a challenge and may impact on the ultimate quality of the education.

Fetal Physiology

The fetal/placental physiology, acid base balance and fetal surveillance components are excellent, simple and to the point and should provide a good foundation for the rest of the workshop. This is an area that is likely to be 'new' for many clinicians; this level of education in fetal physiology has not historically formed part of student midwifery education.

CTG Workshop Examples

There appears to be a good range of non-reassuring/abnormal intrapartum 'test' patterns for the participant to work through. Perhaps this could be further complimented by interspersing a few more 'normal' intrapartum patterns. Whilst there is a level of presumed knowledge, interspersing normal patterns throughout may further reinforce basic pattern interpretation and the range of normal.

It is not clear from the documentation whether the participant has the opportunity to initially interpret these patterns individually or only as part of a group, with the workshop facilitator leading discussion. Allowing some time in the workshop session for clinicians to individually interpret and record their interpretation can be very useful in encouraging the learner to identify their own areas of strength and weakness.

CTG Workshop Examples (continued)

The example patterns in the workbook appear enlarged (this may simply be the copy I have) whilst this makes the pattern easier to interpret for teaching purposes it may not reflect the 'real time' size of the intrapartum pattern. Should the participants be given these enlarged patterns in a workbook format, consideration should be given as to whether reviewing enlarged patterns may influence the participant's ability to apply knowledge gained from the education program into the real life clinical setting. I note that the patterns contained in the pre and post -tests are normal size.

Pre-course and Post-course Testing

Testing pre and post workshop clearly provides a less subjective way of measuring any change in the participant's knowledge as a direct result of the educational intervention. I note that there are some subtle differences between the pre and post test papers in sentence structure, range of responses and questions. I have made the assumption that the pre and post -tests have been trialled and validated (it is not clear from the proposal documentation). How the pre and post-tests will be analysed to assess change in knowledge is not documented in the proposal but I understand that the pre and post- tests are being refined during the pilot program.

The questions and responses are in general clearly written and link well to the educational program content and specific areas of the RANZCOG guidelines.

Learning Road Show

Whilst resource intensive the learning road show conducted by the same trainer or small group of experienced lecturers provides a high degree of information standardisation and quality across all pilot sites. Potentially it may be more difficult to reproduce this level of standardisation and quality in delivering the educational program over time if only the train the trainer type program was in use (particularly once the pilot program has completed).

Train the Trainer System

I note in the proposal that 'train the trainer' workshops are planned but it is not clear how these will be undertaken and what strategies will be in place to identify suitable trainers. Strategies to assess individual trainers skills, train clinicians to teach, maintain course objectives and what ongoing training / educational support will be provided are not defined in the documents.

Using a 'train the trainer' type system will clearly allow the education program to be delivered 'locally' with a degree of flexibility not available with the 'learning show' only. However for this strategy to be successful clinicians chosen as trainers are likely to require significant additional training in electronic fetal heart rate monitoring and in 'how to train'. Teaching peers and other experienced learners can be challenging (particularly in the area of fetal heart rate trace interpretation) and the success of 'train the trainer' programs is commonly dependent on the facilitation, presentation and overall group management/leadership skills of the presenter.

The inclusion of an 'advanced monitoring' program for trainers (perhaps just a further ½ day) and a specific 'how to train' program underpinned with adult education principles would be fundamental to the success of the Intrapartum Fetal Surveillance Education Program if a train the trainer program is to be utilized. Consideration should also be given to a funded program of ongoing education, assessment and support for the 'trainers' once the initial pilot program is completed. This would ensure that there was a mechanism in place to continue to train 'new trainers' and support those already providing the education along with updating their knowledge and training skills on an annual basis.

Kate Dyer
July 2004

5. Mapping of Current Practices and Preferences

5.1 Distribution of Information to all Victorian Public Maternity Hospitals

The Working Party was anxious that the on-going success of a statewide education program might be compromised if only the pilot sites were informed of the Pilot Program. During development of the Pilot Education Program therefore, all Victorian public maternity hospitals providing intrapartum care were kept informed in writing (Appendix E) about the Project and invited to indicate potential interest in subsequent rollout of a more comprehensive program. Subsequent to the completion of the Pilot Project, those hospitals were re-contacted. Of the 59 facilities written to, 38 hospitals, thus far, including all 10 of the pilot sites, have committed to incorporating the IFSE package into their institution's staff development processes for 2005.

5.2 Mapping of Current Intrapartum Fetal Surveillance, Education and Credentialing Practices in Victorian Public Hospitals

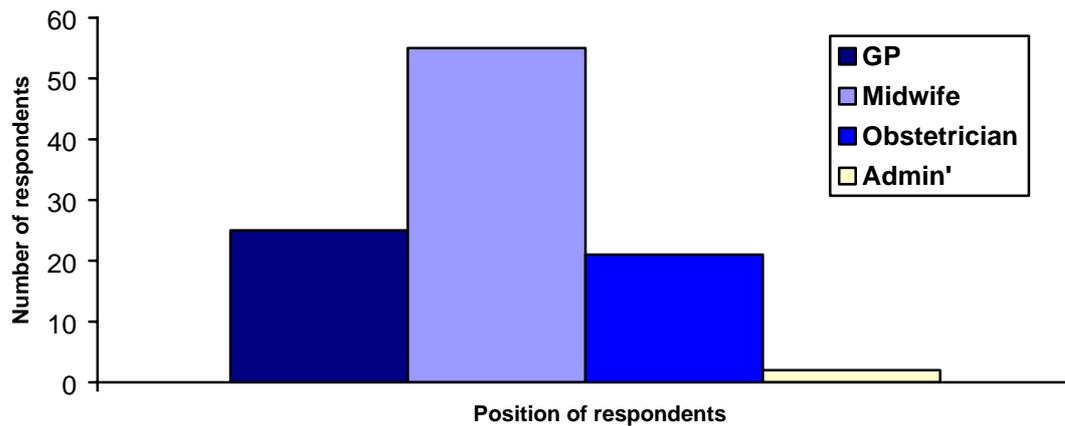
The Working Party wished to acquire objective data regarding current intrapartum fetal surveillance, education and credentialing practices in Victorian public units. It was believed that this information would compliment the experiences and data acquired during the Pilot Project. This would also be fundamental to the subsequent development of education and credentialing resources, which could be applied on a broad scale across the diverse maternity services in Victoria. Accordingly, by February 2004, a survey had been developed to map current practices including intrapartum fetal assessment, education resources and credentialing (Appendix F). The opportunity was taken to collect information on recipient's perceived needs in the areas of education and credentialing as well as their awareness of the RANZCOG Intrapartum Fetal Surveillance Clinical Guidelines. The survey highlighted the Guidelines and their importance to the overall Program, with the aim of stimulating feedback for the review planned of the guidelines.

The survey was mailed, with a pre-paid return envelope, in February 2004, to both a medical and a midwifery representative at each Victorian public hospital that offered intrapartum care - a total of 62 hospitals and 124 surveys. Initial non-responders were re-contacted after 2 months and surveys re-sent where required. There were 103 responses from 59 hospitals, an 84% individual respondent return rate and a 95% hospital return rate.

The respondents

Of the respondents representing the 59 hospitals from which information was collected, 53% were midwives, 24% were GP's, 20% were Obstetricians and 2% were hospital administrators (Fig 5.1). Of the 59 respondent hospitals, 17 (30%) had less than 100 deliveries per annum, with 77% of the hospitals having less than 1000 deliveries per annum. Together, the respondent hospitals represented 98% of public births in Victoria.

Figure 5.1 Respondents to the survey by position



Presence of an existing intrapartum fetal surveillance education program

Only 19 (33%) of the hospitals surveyed had an existing CTG education program. There was a link between hospital size (as assessed by number of annual deliveries) and the presence of an education program. Of the hospitals with less than 1000 deliveries pa, 77% had no education program compared to only one of seven (14%) large (>2000 deliveries pa) hospitals.

Elements of the existing intrapartum fetal surveillance education program

An understanding of fetal physiology is a core component of the RANZCOG Guidelines and, as described above, formed the foundation for the education pilot project. Whether fetal physiology was a component of the currently used intrapartum fetal surveillance education programs was explored. Only nine of the 19 (47%) existing education programs were reported to contain any fetal physiology, as a component of that education.

Education program frequency

80% (15) of the education programs were offered annually with the remaining four hospitals running their program twice a year.

Provider of the existing education program

Of the 19 hospitals that had an existing intrapartum fetal surveillance education program, nine (47%) provided the education themselves. The remaining ten hospitals used an external provider. There was a trend for larger hospitals to use their own education and for smaller hospitals to purchase external education.

Rating of the existing education program

Only 63% of the individual respondents rated their hospitals education program as good or better, with 37% rating their program as adequate to poor.

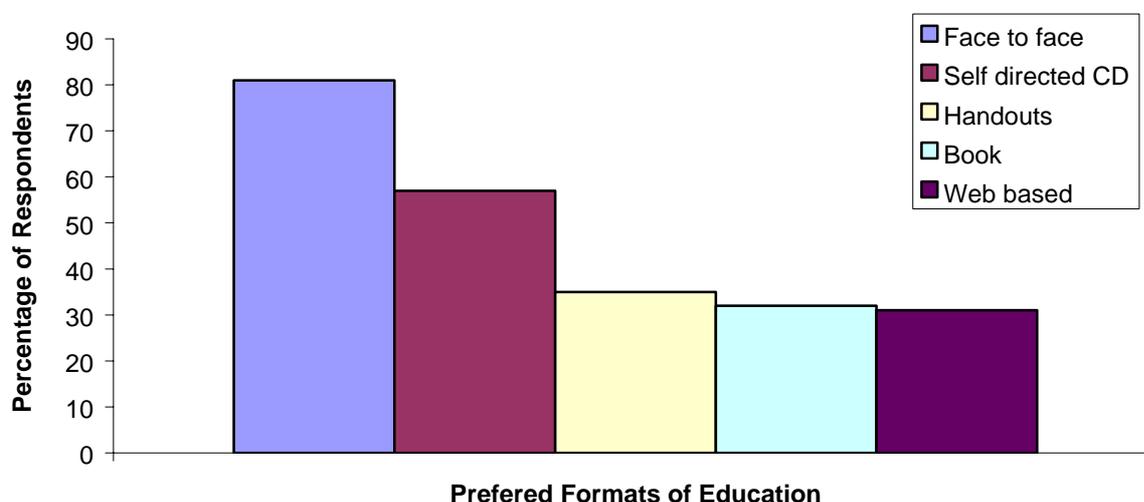
Opinion regarding compulsory intrapartum fetal surveillance education

All (100%) respondents, including those from hospitals that currently do not provide education, believed that education in intrapartum fetal surveillance should be compulsory for staff working in an intrapartum environment.

The preferred format for CTG education

There were diverse preferences expressed for the desirable education format (Fig 5.2). Where more than one option was selected, 81% of respondents felt that face-to-face education (e.g. seminar/workshop style) was desirable, 57% that a self-directed interactive CD would be useful. 35% of respondents valued lecture handouts, 32% a book and 31% web-based education.

Figure 5.2 Respondents preferred formats for education



The preferred frequency of a compulsory education program

A significant proportion of respondents (40%) felt that annual compulsory education was appropriate. 30% believed that the education should be continuous (self directed) with additional compulsory education at intervals. 20% thought every six months was the most appropriate time frame for compulsory education and 10% thought every two years appropriate.

Presence of a credentialing (competency) process

Only six of the 59 (10%) hospitals surveyed had an existing credentialing or competency testing process. Of those six hospitals, five required their staff to undergo the process on an annual basis with the remaining hospital requiring assessment every two years.

Opinion regarding compulsory CTG credentialing

Of the respondents, 91% saw benefit in a compulsory credentialing/competency testing process.

Preferred frequency of a compulsory credentialing process

Of the respondents who saw value in a formalised credentialing process, 61% felt it should be done annually, 34% thought it should be every two years and 5% thought it should be done every six months.

Summary

While all of the respondent hospitals believed that staff education in intrapartum fetal surveillance should be compulsory, only one third of hospitals currently have such a program of education, highlighting the unmet needs. The majority of respondents (80%) indicated that face-to-face education would be the preferred mode of delivery but a significant proportion also indicated that supplementary self-directed material (CD, hard copy, web delivered) would be desirable. Over 90% of hospitals indicated that competency in intrapartum fetal surveillance should be tested and yet only 10% of hospitals currently have a competency testing process in place. Together, these data inform the further development of the statewide intrapartum fetal surveillance education program.

6 Development of CPD Tools for Specialist and GP Obstetricians

The Working Party was concerned that every effort be made to encourage Fellows and GP Obstetricians to participate in multidisciplinary workshops. RANZCOG have previously demonstrated that a very successful means of encouraging participation in education activities is to ensure that Fellows and GPs are able to earn CPD points in the mandatory CPD categories (Practice review and clinical risk management [PR&CRM] for Fellows and Group 1 Women's Health points for GP obstetricians). A PR&CRM template has been developed (Appendix G) for RANZCOG Fellows, that incorporates the workshop, the pre and post testing and an audit framework, is under development to encourage on-going multidisciplinary review of CTG monitoring. This framework is currently under pilot testing in a rural site and the results of this testing will be used to refine the audit tool prior to making it more widely available.

The College has also obtained approval from RACGP for Group 1 women's health points for GP obstetricians participating in the program. The RACGP has already expressed support for the concept of developing an ongoing multidisciplinary audit of intrapartum fetal surveillance practices. The introduction of the audit process will enable Fellows and GP Obstetricians to gain additional PR&CRM points or Group 1 women's health points and in the longer term, would be expected to lead to both uniformity in practice and higher quality care. Participation of Fellows and GPs at the Pilot Education sessions has been encouraging, with very positive feedback from individuals regarding this CPD opportunity.

7 Discussion

The Pilot Project was undertaken to assess the feasibility of developing and delivering a high quality education program in intrapartum fetal surveillance suitable for midwives, GPs, specialist obstetricians and trainees in all of these disciplines. As detailed above, this aim has been met and significantly surpassed. An intrapartum fetal surveillance education program has been developed and delivered to ten pilot sites. Both

participant and external expert evaluation of the program has been outstanding. In addition, the Project has allowed the development of a number of key resources including a CTG Bank and an Assessment Bank.

These resources will be critical to the on-going development of a larger education program and to workforce competency testing. Furthermore, within the Project an objective mapping of the current educational needs and preferences of Victorian public hospitals has been completed. This information will also be important in the planning of the structure and deliver of any future education program. A preliminary audit tool for use by specialists and GPs has also been developed and is currently under testing. This will facilitate the continued implementation of the knowledge and skills that are the core content of the education program. Lastly, and perhaps most importantly, the Pilot Project has been established as a new educational resource of high quality. As such it has already established a “market” for itself with a large number of hospitals not involved in the Pilot Project already making contact to book sessions for 2005.

8 Conclusion

In summary, the Pilot Project has laid the foundations for an on-going Intrapartum Fetal Surveillance Education Program and created an environment suitable for the development of a competency-testing program. A considerable amount of work remains to be undertaken including the further development of the educational material, the development of other delivery formats (eg web-enabled, CD-ROM etc), the development of further assessment material (both formative and summative) and the training of additional “teachers” to allow wider delivery. In addition, a pricing structure that will encourage uptake but ensure on-going sustainability needs to be developed.

These are the challenges for 2005.

Euan M Wallace and Mark Beaves, on behalf of the Pilot Project Working Party

9 References

- Goddard, R. BMJ Editorial, page 1437, Volume 322, June 16th 2001
- Report prepared by Professor R Pepperell and Professor M Permezel for VMIA, July 2001
- RANZCOG Clinical Guidelines, Intrapartum Fetal Surveillance. December 2002

10 Acknowledgements

The success of the pilot project has been achieved with the professional support and expertise of RANZCOG staff at College House. Thank you to

- Valerie Jenkins, Fellowship services for project advice, guidance and collaboration in the development and refinement of professional development activities
- Peter White and Andrew Haxton, Assessment services for their advice on the format and validity of the multiple-choice questionnaires (MCQs) and the evaluation of the overall performance of the assessment tools.
- Sharyn Toohey and Kate Lording, Fellowship services for developing the scannable surveys and MCQs, to streamline the data collection and analysis and for their on-going contribution to the project.

In addition, the project has benefited from the professional advice and support of Val Spark and the financial expertise of Bob Kelly.

11 Appendices

11.1 Appendix A: Projected Timeline, Key Outputs and Indicators of Success

Goal	Key indicators
To develop a pilot education program in fetal surveillance	Education program developed and implemented. All HealthCare professionals performing intrapartum CTG monitoring will have completed the education module surveillance – CTG
1 Establishment of Reference Group and Pilot Program Team Advisory Group	Pilot Program Team meetings held
1.1 Recruitment of Program Officer	Appropriately qualified personnel recruited
1.2 Agree terms of reference, outcomes and timelines	Documented terms of reference and agreed outcomes and timelines
2 Development of educational intervention	Pilot Program Team develop education program and report to Reference Group
2.1 Education program and resources designed in alignment with RANZCOG guidelines	Drafting deadline met
2.2 Standard setting to determine a core set of competencies	Standards agreed
2.3 Education program tested at tertiary site	Data from trial
2.4 Education program endorsed	Reference Group reported to
3 Implementation of education program	Guidelines implemented & practice changes as result
3.1 Design and production of workshop material and pre and post workshop assessments	Drafting deadline met.
3.2 Design and production of CTG education computer program and CD ROM	Drafting deadline met
3.3 Recruitment of suitably qualified trainers to participate in trainer workshops	Appropriately qualified personnel recruited
3.4 Workshop program (x14)	Drafting deadline met
3.5 CD-ROM program distributed to pilot sites	Drafting deadline met
4 Evaluation of outcomes of the Program	Pilot Program evaluated to allow development of full Program in liaison with the Reference Group
4.1 Participant evaluation of the education program	Drafting deadline met
4.2 Comprehensive evaluation and final report on the Program.	Drafting deadline met

11.2 Appendix B: Pre-Test Answer Sheet



The Royal Australian and New Zealand College of
Obstetricians and Gynaecologists



IFS Education & Credentialing Pilot Pre-Test

ANSWER SHEET

Completely fill in the response box

Mark your answers by filling in the responses as shown:

Use black/blue pen or pencil

Do NOT use a red or felt-tip pen

Erase or white-out errors completely



REGION	HOSPITAL ID			DESIGNATION	D	D	M	M	Y	Y
NSW <input type="checkbox"/>				Midwife <input type="checkbox"/>						
SA <input type="checkbox"/>				Resident <input type="checkbox"/>						
TAS <input type="checkbox"/>				Registrar <input type="checkbox"/>						
QLD <input type="checkbox"/>				GP <input type="checkbox"/>						
NT <input type="checkbox"/>				Obstetrician <input type="checkbox"/>						
ACT <input type="checkbox"/>				Other <input type="checkbox"/>						
WA <input type="checkbox"/>										
O/S <input type="checkbox"/>										

ID

Name: _____

Hospital: _____

Address: _____

Contact Number: _____ E-mail Address: _____

1	A <input type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>	D <input type="checkbox"/>
2	A <input type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>	D <input type="checkbox"/>
3	A <input type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>	D <input type="checkbox"/>
4	A <input type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>	D <input type="checkbox"/>
5	A <input type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>	D <input type="checkbox"/>

11	A <input type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>	D <input type="checkbox"/>
12	A <input type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>	D <input type="checkbox"/>
13	A <input type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>	D <input type="checkbox"/>
14	A <input type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>	D <input type="checkbox"/>
15	A <input type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>	D <input type="checkbox"/>

6	A <input type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>	D <input type="checkbox"/>
7	A <input type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>	D <input type="checkbox"/>
8	A <input type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>	D <input type="checkbox"/>
9	A <input type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>	D <input type="checkbox"/>
10	A <input type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>	D <input type="checkbox"/>

16	A <input type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>	D <input type="checkbox"/>
17	A <input type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>	D <input type="checkbox"/>
18	A <input type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>	D <input type="checkbox"/>
19	A <input type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>	D <input type="checkbox"/>
20	A <input type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>	D <input type="checkbox"/>

Yes, I would like feedback on my results

11.3 Appendix C: Post-Test Answer Sheet



The Royal Australian and New Zealand College of
Obstetricians and Gynaecologists



IFS Education & Credentialing Pilot Post-Test

ANSWER SHEET

Completely fill in the response box
Use black/blue pen or pencil
Do NOT use a red or felt-tip pen
Erase or white-out errors completely

Mark your answers by filling in the responses as shown:

REGION	HOSPITAL ID			DESIGNATION	D	D	M	M	Y	Y
	VIC <input type="checkbox"/>					Student <input type="checkbox"/>				
NSW <input type="checkbox"/>				Midwife <input type="checkbox"/>						
SA <input type="checkbox"/>				Resident <input type="checkbox"/>						
TAS <input type="checkbox"/>				Registrar <input type="checkbox"/>						
QLD <input type="checkbox"/>				GP <input type="checkbox"/>						
NT <input type="checkbox"/>				Obstetrician <input type="checkbox"/>						
ACT <input type="checkbox"/>				Other <input type="checkbox"/>						
WA <input type="checkbox"/>										
O/S <input type="checkbox"/>										

1	A <input type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>	D <input type="checkbox"/>
2	A <input type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>	D <input type="checkbox"/>
3	A <input type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>	D <input type="checkbox"/>
4	A <input type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>	D <input type="checkbox"/>
5	A <input type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>	D <input type="checkbox"/>

11	A <input type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>	D <input type="checkbox"/>
12	A <input type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>	D <input type="checkbox"/>
13	A <input type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>	D <input type="checkbox"/>
14	A <input type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>	D <input type="checkbox"/>
15	A <input type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>	D <input type="checkbox"/>

6	A <input type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>	D <input type="checkbox"/>
7	A <input type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>	D <input type="checkbox"/>
8	A <input type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>	D <input type="checkbox"/>
9	A <input type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>	D <input type="checkbox"/>
10	A <input type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>	D <input type="checkbox"/>

16	A <input type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>	D <input type="checkbox"/>
17	A <input type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>	D <input type="checkbox"/>
18	A <input type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>	D <input type="checkbox"/>
19	A <input type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>	D <input type="checkbox"/>
20	A <input type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>	D <input type="checkbox"/>

Yes, I would like feedback on my results

11.4 Appendix D: Participant Feedback Form



The Royal Australian and New Zealand College of
Obstetricians and Gynaecologists



Intrapartum Fetal Surveillance Education and Credentialing Pilot Project – 27th April to 31st July, 2004

Participant Feedback

In this questionnaire, you are asked to give feedback about your learning in the IFSE&C pilot program. Your feedback will help us ensure that the course is appropriate to the learning needs of all professionals involved in intrapartum care.

Please fill in and hand in the questionnaire before you leave.

The learning objectives for participants in the course are:

- To review and update knowledge
- To enhance understanding
- To improve confidence in CTG interpretation

Completely fill in the response box Mark your answers by filling in the responses as shown:
 Use black/blue pen or pencil
 Do NOT use a red or felt-tip pen
 Erase or white-out errors completely

HOSPITAL ID	DESIGNATION	D	D	M	M	Y	Y
Midwife <input type="checkbox"/> Resident <input type="checkbox"/> Registrar <input type="checkbox"/> GP <input type="checkbox"/> Obstetrician <input type="checkbox"/> Other <input type="checkbox"/>							

OVERALL RATING OF THE COURSE

Using the following criteria, please rate the characteristics of the course as a whole:

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
The course enabled me to review and update knowledge in topics presented	<input type="checkbox"/>				
The course enabled me to enhance my understanding in the topics presented	<input type="checkbox"/>				
Sessions featured relevant and practical case presentations	<input type="checkbox"/>				
There was adequate time for discussion	<input type="checkbox"/>				
The course has improved my confidence in CTG interpretation	<input type="checkbox"/>				
Overall, the length of each session was appropriate	<input type="checkbox"/>				
The meeting facilities provided a satisfactory environment for learning	<input type="checkbox"/>				

B. SESSIONS

The fetal heart rate physiology session was useful	<input type="checkbox"/>				
The fetal assessment information was helpful	<input type="checkbox"/>				
The intrapartum CTG session was useful	<input type="checkbox"/>				
The intrapartum CTG workshop was helpful	<input type="checkbox"/>				

What advice would you give to the course organisers in their preparation for the next course?

Comments:

11.5 Appendix E: Biographies of Dr R Jones and Ms K Dyer

Dr Russell Jones BSc, BEd (Hons), PhD, has extensive experience in the development, implementation and evaluation of educational programs, policy formation, training, accreditation and examinations, research, and quality assurance. Dr Jones has more than 50 peer-reviewed and book publications and has worked with numerous organizations on educational issues, including the International Assessment of Educational Progress, UNESCO, the World Bank, the International Association for the Evaluation of Educational Achievement, the National Assessment Governing Board (USA), and the Institute for International Research. He is currently Director of Education at the Australian and New Zealand College of Anaesthetists (ANZCA).

Kate Dyer RN, RM, Grad Dip (Mid), Masters (Midwifery), is currently the Clinical Midwife Consultant in High Risk Pregnancy at the Royal Hospital for Women Randwick NSW. Kate has a high level of experience providing consultancy and continuity of midwifery care for women with complex pregnancies, spanning over 25 years. Since 2001 Kate has been Deputy President of the Nurses and Midwives Board NSW. Kate is well known for her contribution to ongoing midwifery education, through the provision of seminars and one-day workshops throughout Australia. Kate has been the primary facilitator for the NSW Midwives Association Fetal Monitoring Workshop run annually in NSW for the past 10 years and is the co author of 'Beat To Beat A Guide To Fetal Heart Rate Monitoring For Midwives (1995). Kate regularly co-authors articles for Midwifery Matters and is an Advanced Life Support Obstetrics (ALSO) accredited trainer.

Intrapartum Fetal Surveillance Education and Credentialing Program

Pilot Education Program Progress Report: August 2004

Summary

The Intrapartum Fetal Surveillance Education and Credentialing Project (*The Project*) is a collaboration between Southern Health, The Mercy Hospital for Women, The Royal Women's Hospital, The Royal Australian and New Zealand College of Obstetricians and Gynaecologists and the Australian College of Midwives Incorporated (Victorian branch). The College acknowledges the support of the Department of Human Services Victoria and the Victorian Managed Insurance Authority in jointly funding this pilot project, November 2003 - November 2004.

The Project is the second phase in an ongoing program to improve outcomes for women and babies. The first step was to develop clinical guidelines in intrapartum fetal surveillance, launched in February 2003. The education content of the Project is based on the Clinical guideline. The principal objectives of The Project were to develop, implement and evaluate a pilot education program in Intrapartum Fetal Surveillance. Progress of The Project is on schedule and has successfully delivered the educational intervention to all of the planned clinical pilot sites.

The Pilot Education Project progress

The Pilot Education Program was delivered to the pilot sites from the 3rd of May and was completed on the 31st of July 2004. There were a total of 439 participants from the ten sites, including 13 student midwives, 366 midwives, 13 GPs, 31 trainees and 15 specialist obstetricians. The average pre- and post-education test scores (combined medical and midwifery) were around 50% and 74%, respectively. These scores confirm a need for education and that the educational intervention results in improvements in knowledge and understanding, at least in the short term. The formal evaluation data has also been favourable.

All of the pilot sites visited thus far have indicated they would like to continue to participate in the education program on a regular basis, in a variety of formats.

Distribution of information to all Victorian public maternity hospitals

The working party for the Intrapartum Fetal Surveillance Education and Credentialing (IFSE&C) Program, were mindful that the on-going success of a statewide education program might be compromised, if only the pilot sites were informed about the Pilot Program. Therefore, during development of The Project all Victorian public maternity hospitals providing intrapartum care were informed in writing of the Project and expressions of interest in a future statewide roll out of a more comprehensive program were called for. Of the 59 facilities written to, 20 hospitals have thus far indicated a strong commitment to incorporating the IFSE package into their institution's staff development processes, as soon as it is available. As word of the success of the Pilot Education Program disseminates, more hospitals are indicating a desire to be involved in the education. The working party considers that this aspect of the Pilot Project has been most important and will prove invaluable for future developments.

Mapping of intrapartum CTG, education and credentialing practices in Victorian Public Hospitals

As with the early engagement of all public maternity units, the working party wished to acquire objective data regarding current intrapartum fetal surveillance, education and credentialing practices in Victorian public units. It was believed that this information would compliment the experiences and data acquired during the Pilot Project and be fundamental to the subsequent development of education and credentialing resources. Accordingly, by February 2004, a survey had been developed to map current practices including intrapartum fetal assessment, education resources and credentialing. The opportunity was taken to collect information on recipient's perceived needs in the areas of education and credentialing, satisfaction with current resources and practices as well as awareness of the RANZCOG Intrapartum Fetal Surveillance Clinical Guidelines. The survey highlighted the Guidelines and their importance to the overall program, with the aim of stimulating feedback for the proposed review of the guidelines, planned for late 2004.

The survey was mailed to both a medical and a midwifery representative at each Victorian public hospital that offers intrapartum care - a total of 59 hospitals. To date, 57 hospitals have replied. Once completed these data will be summarised and used to inform future education and credentialing plans. A full report of these data will also be included in the Final Report of the Pilot Project, due for delivery in November 2004.

Review of The Pilot Project

With delivery of the education program now complete, collation, analysis and the writing up of the complete project results can begin. Evaluation and assessment tools have been developed and embedded in The Project, and the data generated by these will inform a review of the entire Education Program including content, delivery format and impact on practice. Together with the mapping survey data, The Project will describe current standards of care and practices, preferred curriculum content and modes of delivery and will have identified common barriers to the delivery of an improved education program.

In summary, it is anticipated that this The Pilot Education Project will afford detailed insights into how best to deliver intrapartum fetal surveillance education to the public hospital workforce in a collaborative and multidisciplinary manner, thereby facilitating improved intrapartum care. A final report of The Project will be produced in November 2004, when all Victorian public hospitals offering intrapartum care will be updated and invited to take part in the statewide rollout of the education program, in 2005.

If you or your institution is interested in incorporating the education package into the professional development program for your staff, or should you wish to discuss any aspect of the program, please feel free to contact us.

(tel: +61 3 9412 2942 or email mbeaves@rancog.edu.au).

Yours sincerely



Mark Beaves
Project Manager



Euan M Wallace
Chair

11.7 Appendix G: Hospital Survey



The Royal Australian and New Zealand College of Obstetricians and Gynaecologists



A Victorian Public Hospital Survey of Education and Credentialing in Intrapartum Fetal Surveillance

*A copy of this survey will be sent to a medical and a midwifery representative in each organisation.

* You are filling this out as a representative of your peers; feel free to consult with them.

Completely fill in the response box Mark your answers by filling in the responses as shown:

Use black/blue pen or pencil

Do NOT use a red or felt-tip pen

Erase or white-out errors completely

About you.

Printed label with contact details

Amended details

1. Are you mailing/contact details correct and complete? Please amend as required

- Yes
- No

2. Are you a:

- GP
- Midwife
- Obstetrician
- Other, please specify:

3. Your primary role is that of:

- NUM
- Administrator
- Educator
- Clinician
- Director

Other, please specify:

4. Approximately, how many PUBLIC births per annum are there in your hospital?

- <100
- 101-200
- 201-500
- 501-1000
- 1001-2000
- >2000

Current CTG education practice

5. Does your hospital/service currently have a formalised or structured CTG education program? Yes No. If no, proceed to Q11

6. Which of the following elements does it contain? (please mark all that apply): Fetal physiology The normal CTG

- The abnormal CTG
- Management of the abnormal CTG
- Abnormal uterine activity
- Fetal Assessment

CTG Workshop Other, please specify:

7. How often does it take place? Six monthly Yearly Other, please specify:

8. Who provides your current CTG education? Internal provider External provider

9. In what format is it presented? (please mark all that apply) Lectures CTG trace review

Case review Workshop Other, please specify:

10. How would you rate your current education program?

Excellent Good Adequate Poor Very Poor

Comments:

Future CTG education practice.

11. Do you think CTG education should be compulsory for those working in an intrapartum setting? Yes No

12. What format of education delivery would you prefer? (please mark all that apply): A book Handouts

Face-to-face i.e. power point presentation Web-based Interactive CD based

Other, please specify:

13. What frequency of education sessions do you think appropriate? (please mark all that apply): Continuous (self-directed)

Six monthly Yearly Every two years

Current CTG Credentialing (competencies) Practice.

14. Do you currently have a compulsory CTG credentialing process? Yes No. If no, proceed to Q18

15. How often is it required? Six monthly Yearly Every two years

16. What format does it involve? A written assessment Peer Review Other, please specify:

Future CTG Credentialing practice.

17. Is your current credentialing practice adequate in your opinion? Yes No

Comments:

18. Do you see benefit in a formalised credentialing process? Yes No. If no, proceed to Q21

19. How often should it be carried out? Six monthly Yearly Every two years

20. Who do you feel should administer it? Internal provider External provider

21. Have you seen the RANZCOG clinical guidelines? Yes No.

22. Do you currently have them at your disposal i.e. available within the units? Yes No.

23. Are there any aspects of the guidelines that need clarification?

Yes*

No.

*if yes, please specify:

24. What barriers or problems do you expect in implementing these guidelines?

Comments:

**END OF SURVEY
THANK YOU FOR YOUR PARTICIPATION**



Practice Review activities associated with the Intrapartum Fetal Surveillance Education and Credentialing Project

Points in the category of PR&CRM can be claimed on the completion of each stage

Stage	Activity	PR&CRM Points
<p>OPTIONAL</p> <p>Stage One</p> <p>Pre education Intervention audit</p> <p>To be undertaken prior to the education package or retrospectively</p>	<p>Review the records of 30 consecutive deliveries OR all deliveries for 3 months</p>	<p>5 CPD points in the PR&CRM category</p>
<p>Stage Two</p> <p>Completion of the Intrapartum fetal surveillance education program module</p>	<ul style="list-style-type: none"> • Completion of the Pre Test • Participation in the workshop • Completion of the Post Test • Completion of the Evaluation Feedback sheet <p>YOU HAVE NOW COMPLETED THIS STAGE</p>	<p>5 CPD points in the PR&CRM category</p>
<p>OPTIONAL</p> <p>Stage Three</p> <p>Follow up activity</p> <p>Peer review activity and follow up audit</p>	<p>Set goals, develop action plan and implement plan</p> <p>Conduct regular multi-disciplinary meetings to review all obstetric cases using the same method that was used in stage one</p>	<p>2 CPD points in the PR&CRM category</p> <p>1 CPD points in the PR&CRM category per hour</p>

HOW TO CLAIM POINTS: To claim points in the category of Practice Review and Clinical Risk Management, enter the title of the activity and the amount of points on your annual Points Claim form. Please keep a summary of your activity, as verification documentation in case you are selected for verification check.



PR&CRM ACTIVITY WORKSHEET

1. TITLE OF ACTIVITY

Intrapartum Fetal Surveillance Education and Credentialing Project

2. DATA COLLECTION brief summary of results from previous 3 month audit.

3. COMPLETION OF PRE-QUESTIONNAIRE Yes No
- COMPLETION OF LEARNING PACKAGE Yes No
- COMPLETION OF POST-QUESTIONNAIRE Yes No

4. ACTION PLAN

Part A: Set Goals – From the results of the workshop/seminar that you attended, document some areas where you think improvements can be made to your clinical practice

Part B: Action Plan – Document how you plan to achieve your goals

Part C: Monitor and evaluate – Document results of reviewing outcomes of cases for following 3 months

5. EVALUATION OF THE EFFECTIVENESS OF THE PROJECT
