FSEP

FETAL SURVEILLANCE EDUCATION PROGRAM

The Royal Australian and New Zealand College of Obstetricians and Gynaecologists

Fetal Surveillance Education Program
2005 Annual Report

VMIA

Victorian Managed Insurance Authority

Taking care of risks

State Government Victoria

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1 Executive summary

The principal objective of the Fetal Surveillance Education Program (FSEP) is to develop, implement and evaluate a comprehensive education program in fetal surveillance, with an ultimate aim of improving professional levels of understanding and confidence in the area of fetal surveillance, thereby reducing the risks of adverse perinatal outcomes.

The FSEP was developed in collaboration with Southern Health, The Mercy Hospital for Women, The Royal Women's Hospital, The Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG) and the Victorian branch of the Australian College of Midwives Incorporated (ACMI). RANZCOG acknowledges the significant support of the Victorian Managed Insurance Authority and the Department of Human Services Victoria in jointly funding this program. The FSEP is designed to be universally applicable but was piloted and rolled out in Victoria due the significant funding made available to RANZCOG in that state.

In line with these objectives the following outcomes were successfully achieved during 2005:

- Participation by 2064 medical and midwifery staff.
- Delivery of the education program to 60 Victorian hospitals.
- Delivery of the program to 12 interstate and international sites, including the RANZCOG New Zealand Annual Scientific Meeting.
- Delivery to three of the six Victorian Universities offering undergraduate and post graduate courses in midwifery, with two more having arranged sessions for 2006.
- An average improvement from the pre education test to the post education test, across all professional groups, of 54%.
- Overwhelmingly positive feedback from participants as to the quality and value of the education program.
- Employment of additional educators to facilitate delivery of the education program nationally and internationally.

The following goals have been set to expand the FSEP's delivery of comprehensive CTG education during 2006:

- Development of a validated competency assessment tool.
- Construction of an online education facility.
- Exploration of additional delivery techniques including video conferencing capacity.
- Creation of additional fetal surveillance education modules.
- Co-development of a comprehensive fetal monitoring book.
- Design of a logo and visual identity for the FSEP.

The FSEP is committed to ongoing excellence in women's health and CTG education in 2006 and beyond. Our multidisciplinary and face-to-face education will extend to user-friendly and practical online and hard copy resource materials. Combined with our position as a non-profit resource of RANZCOG, the FSEP will remain one of the leading cost-effective CTG education providers throughout Australia and New Zealand.

2 Delivery of the FSEP

This Annual Report summarises the progress of the FSEP from the successful conclusion of the pilot program in December 2004.

The delivery and development of the FSEP during 2005 were jointly funded and supported by the Victorian Managed Insurance Authority, the Department of Human Services Victoria and RANZCOG

2.1 Changes to the program following evaluation of the Pilot Project

The evaluation of the Pilot Project led to a review of the educational material and the workshop structure. The full education program was extended to six hours with increased time for workshopping cases and discussion. Testing and content continued to be refined. Testing and feedback processes were also streamlined. A three hour refresher program was developed as a time efficient annual update for those participants who had previously attended the full program. The refresher program revises the fundamental concepts, expands on the full program and builds on knowledge previously covered in the full program.

2.2 Launch

The FSEP was launched in Victoria by The Hon. Bronwyn Pike MP Minister for Health on 24 November 2004. Delivery of standardised education to Victoria's public hospitals remained the FSEP's primary priority. Successful Victorian uptake increased awareness of the FSEP throughout Australia and New Zealand, and workshops were expanded to private maternity hospitals, Victorian universities with midwifery courses and interstate and international sites.

2.3 Victorian public hospitals

During 2005 the FSEP was delivered to 45 of the 54 Victorian public hospitals offering intrapartum care, establishing the program as the primary provider of fetal surveillance education in Victoria. Of the nine hospitals not using the FSEP in 2005, five have subsequently booked our education program for 2006.

2.4 Victorian private hospitals

Of the 18 private hospital providers of intrapartum care, 15 hospitals utilised the FSEP in 2005 with several making participation in the program compulsory for all staff. Two more have subsequently booked the education for 2006.

2.5 Victorian Universities

On the premise that facilitating access to the education program for student midwives might have long term benefits, the program was offered free to the six Universities offering undergraduate and post graduate midwifery training. Three of those institutions accepted the offer in 2005 with two more incorporating the FSEP into their syllabus for 2006.

2.6 Non-hospital sites

Throughout 2005, the education program was run three times at RANZCOG College House in Melbourne, specifically for GP Obstetricians, Obstetricians and trainees. This facilitated delivery of the education to those medical staff with no particular hospital affiliation or who were unable to attend the education in their own institutions. The same program was also run at the RANZCOG Regional Offices in Queensland and New South Wales.

2.7 Interstate sites

In the second half of 2005, the FSEP was also run at 10 interstate sites, with 30 health care facilities represented. This was done on a cost recovery basis only. Of great encouragement was that the interstate interest in the FSEP was not through advertising but simply through word of mouth, again demonstrating the need for high quality education in this area.

2.8 International sites

The program was run at two sites in New Zealand in 2005, including the RANZCOG Annual Scientific Meeting in Nelson, with many institutions represented. Subsequent interest has also been high, with multiple bookings already accepted for New Zealand in 2006.

2.9 Total participants

1644 midwifery staff and 420 medical staff attended the FSEP during 2005 making a total of 2064 participants.

3 Results from participant testing

3.1 Testing process

Throughout 2005, participants in the full education program continued to undertake pre and post education assessments. These 20 item multiple-choice question (MCQ) tests were developed in 2004, the process of which is described in the 2004 Annual Report which is available on the FSEP website. These tests covered the following five domains:

- Basic definitions (as per RANZCOG Intrapartum Fetal Surveillance guidelines).
- Application of these definitions (to the CTG examples).
- The physiology of fetal heart rate control.
- Application of this physiology (to the CTG examples).
- Management of the CTG.

These questions were designed to assess whether the education program was able to meet the perceived participant needs in the short term.

3.2 Results

The results from participants who completed the full program during 2005 are summarised in table 3.1. The mean and standard deviation (SD) for the pre education assessment in the full education program in 2005 was 9.3 (2.6) while the mean (SD) post education assessment score was 14.4 (2.7), significantly higher than the pre education score ($p<0.05$). This post education score represents an average improvement of 54%. There were clear differences between the professional groups (table 3.1), with the greater increases apparent in those with the lower pre test scores. Again, this data suggests widespread deficiencies in the current knowledge base and shows that targeted education can address these deficiencies, at least in the short term. The results reaffirm the observations from the Pilot Project, continuing to demonstrate that the needs of the workforce are being well met by the education, resulting in significant improvements in the appreciation of the underlying pathophysiology of the fetal heart rate control. Importantly, improvements in scores were seen across all professional groups, emphasising the value in this education for both medical and midwifery staff. While this testing will continue during 2006 to demonstrate long term improvements, a validated competency testing tool will replace the MCQ in 2007.

Table 3.1 FSEP results of pre and post testing by professional group 2005.

Group	Numbers	Pre test (SD)	Post test (SD)	Improvement (%)
Midwifery Students	114	8.2 (2.1)	13.6 (2.6)	66%
Residents	47	8.7 (2.5)	14.8 (2.6)	70%
Midwives	1278	9.0 (2.5)	14.1 (2.5)	56%
GP Obstetricians	122	10.1 (2.5)	15.8 (2.4)	57%
Obstetricians	150	11.7 (2.5)	15.8 (2.6)	35%
Registrars	50	12.0 (2.2)	16.9 (2.1)	41%
Average	1804	9.3 (2.6)	14.4 (2.7)	54%

Of course, while immediate improvement in the assessment scores was pleasing and reassuring, the ultimate usefulness of the FSEP will depend on whether these improvements can be sustained in the longer term. In 2005, 85 participants repeated the education program, having completed the pilot program during 2004. Some participants attended the full education program and some attended the three hour refresher program. For these individuals, it has been possible to compare the original scores in 2004 with their 2005 results, as a measure of longer term value of the education. Table 3.2 summarises these results.

Table 3.2 FSEP pre education results for previous attendees 2005 (long term data).

Group	Numbers	2004 Pre test	2005 Pre test	Improvement (%)
Full program	35	9.7	11.2	16%
Refresher program	50	10.1	12.5	24%
Combined average	85	9.9	12.0	21%

Although the numbers of participants having attended the education program a second time are small at present, the results to date are encouraging. We will continue to collect this data in 2006 to guide the ongoing development of the program.

4 Results from participant feedback

4.1 Feedback process

The scannable feedback form developed by the FSEP anonymously assesses the perceived value of the following components of the program:

- Relevance to practice.
- Length of sessions.
- Adequacy of discussion time.
- Whether the presenters' style enhanced their learning experience.

The respondents were required to fill in their hospital identification code, their designation and the date. Twelve statements were posed with the respondents required to rate their response on a scale of strongly disagree, disagree, agree and strongly agree. The responses were assigned scores of 1 to 4 (1 = strongly disagree) to allow numerical analysis. The first seven statements related to the respondents overall rating of the course while statements 9 to 12 related to individual components of the program. Question 13, requiring a freehand response, asked "What advice would you give to the course organisers in their preparation for the next course?"

4.2 Results

Table 4.1 summarises feedback collected from the 1,800 participants in the full program. This data demonstrates extremely positive evaluations, suggesting overwhelming support for the program and its individual components. There are also no significant differences in the scores from medical staff and midwifery staff, indicating similar perceptions of the value of the FSEP. Importantly, 100% of participants agreed or strongly agreed with the first three statements, those being that;

- 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.

Table 4.1 FSEP Evaluation Data 2005.

Scale: 1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree.

#	Statement	Medical	Midwifery	Combined
1	The course enabled me to review and update knowledge in the topics presented	3.56	3.77	3.64
2	The course enabled me to enhance my understanding in the topics presented	3.58	3.77	3.66
3	The sessions featured relevant and practical case presentations	3.56	3.71	3.62
4	There was adequate time for discussion	3.04	3.23	3.12
5	The course has improved my confidence in CTG interpretation	3.27	3.41	3.33
6	Overall the length of each session was appropriate	3.21	3.32	3.26
7	The meeting facilities provided a satisfactory environment for learning	3.35	3.35	3.35
8	The presenter's style enhanced my learning experience	3.32	3.55	3.41
9	The fetal heart rate physiology session was useful	3.56	3.58	3.57
10	The fetal assessment information was helpful	3.34	3.73	3.51
11	The intrapartum CTG session was useful	3.43	3.67	3.53
12	The intrapartum CTG workshop was helpful	3.49	3.80	3.62

Given the cohort of participants, it is impractical to list the individual responses to question 13. Summary of the responses indicates reinforcement of the data derived from the previous 12 questions. Common themes included praise for the quality of the education, enjoyment of the presenters' style of delivery and a desire for increased time for delivery of the education and discussion.

Of the statements that scored lowest in a relative sense, two of them (3 and 5) relate specifically to the time constraints in such a comprehensive education program. Efforts have been made over the past 18 months to fine tune the volume of educational material to facilitate discussion time. Much of the critical appraisal from participants centred on being able to slow down delivery of the program and allowing increased discussion time. From mid 2006 it is planned drop the pre test from the program. By this stage it is envisaged that we will have collected sufficient data from the differences in the pre and post test results, in both the short and long term to negate the need for the pre test. This will allow an extra 30 minutes for delivery of the education and meet those perceived short comings in the program

5 Review and update of Continuing Professional Development opportunities

Recognising that participation in professional education is facilitated by the provision of Continuing Professional Development (CPD) points – collection of which are mandatory for the retention of professional qualifications – the FSEP has sought formal approval for the education in different CPD programs.

5.1 RANZCOG CPD program

Fellows participating in the FSEP earn points in the mandatory CPD category of Practice Review and Clinical Risk Management (PR&CRM) points. The number of PR&CRM points was updated from 5 points to 6 points during 2005 following the increased duration of the workshop. The FSEP refresher program earns 4 CPD points in the Meetings category.

5.2 Royal Australian College of General Practitioners QA&CPD program

The Royal Australian College of General Practitioners (RACGP) has approved the FSEP in their QA&CPD program for 30 Category 1 points. These points meet the CPD requirements in Women's Health to recertify the DRANZCOG or DRANZCOG Advanced diploma.

5.3 Australian College of Rural and Remote Medicine PDP program

The Australian College of Rural and Remote Medicine (ACRRM) has approved the FSEP in their PDP program for 10 PDP points, 5 mandatory points and 10 Obstetrics and Gynaecology MOPS points. These points meet the PDP requirements in Women's Health to recertify the DRANZCOG or DRANZCOG Advanced diploma. The FSEP refresher program has also been approved for 3 PDP points and 6 Obstetrics and Gynaecology MOPS points.

5.4 Procedural GP grants

The FSEP has been approved for procedural GP grants as part of the federal government's Medicare Plus scheme. Eligible rural GPs can apply for funding and locum support when participating in the FSEP.

5.5 Australian College of Midwives Incorporated PDCP program

Midwives attending this program are allocated 6 points in the ACMI PDCP program, which is currently being expanded throughout Australia. The FSEP refresher program has also been approved for 3 points.

5.6 New Zealand GP obstetricians and midwives

Following expansion of delivery into New Zealand, the FSEP is currently exploring equivalent CPD opportunities for New Zealand GPs and midwives.

5.7 Incorporating learning into practice

RANZCOG understands the value of providing an additional activity for participants following an educational intervention. To this end, RANZCOG PR&CRM activities are based on the quality cycle; Fellows are encouraged to develop an action plan, implement changes, audit their performance and evaluate the outcomes. In collaboration with Dr Bruce Wharton and the Maternity Services staff at Western District Health Service, Victoria, an audit tool has been developed to complement the education and is available on the FSEP website (Appendix 1). The pilot data from this tool were presented by Dr Wharton at the RANZCOG Annual Scientific Meeting in Hobart in 2005 and published in the RANZCOG O&G magazine, volume 7, number 3, spring 2005. The follow-up audit "confirmed the success of the education program" and revealed vast improvements in identification and documentation of records, quality of the traces, compliance with RANZCOG indications for monitoring and subsequently a significant reduction in the number of CTGs performed.

The RACGP, ACRRM and ACMI also support an ongoing multidisciplinary audit of fetal surveillance practices. GP Obstetricians are also eligible for additional CPD points by completing a CTG audit. The FSEP encourages the use of the audit in pursuit of uniformity in practice and higher quality care; multidisciplinary and peer review audit meetings are invaluable for building stronger and safer working environments, leading ultimately to improvements in clinical outcomes. The FSEP hopes to further facilitate such meetings by continuing to encourage broad application of the CTG audit tool.

6 Program management

6.1 Clinical Consultant

Professor Euan Wallace, Clinical Director of the Centre for Women's Health Research, Monash Medical Centre Victoria, has played a considerable role in the development and ongoing review of the FSEP. His generous contribution of clinical expertise, experience and research in the area of maternal fetal medicine has been central to the FSEP's clinical integrity and relevance to contemporary practice.

6.2 Management Consultant

RANZCOG's support has been significant in consolidating the vision of the FSEP into a successful and viable education program. Valerie Jenkins, RANZCOG Manager of Fellowship Services, has contributed extensive management expertise and guidance to ensure the FSEP's efficient use of resources, smooth processes and effective delivery of education during 2005.

6.3 Program Manager

Mark Beaves, FSEP Program Manager, coordinates the ongoing strategy and administration of the FSEP while delivering education throughout Australia and New Zealand. Mark also maintains his extensive clinical skills as a registered midwife, Associate Charge Nurse and sonographer with Southern Health's Maternal Fetal Medicine department. His Bachelor of Education (Studies) complements his thirteen years of clinical expertise to ensure FSEP effectively responds to adult learning methodologies.

6.4 Program Administrator

To support the Program Manager in the growth of the FSEP, the full time Program Administrator is responsible for the day-to-day administrative tasks associated with the program. This includes initial liaison with potential hospitals, bookings, evaluation of results and certification of attending participants. Other duties include maintenance of external relationships such as the FSEP's respective CPD points, and supporting the FSEP educators' travel requirements. In August 2005 Hilary Peterson took over from Sonja Fischer who previously held this position prior to going on maternity leave.

6.5 Additional Clinical Educators

During 2005 the FSEP employed Val Egan as an experienced permanent part-time educator to deliver additional education throughout Australia and New Zealand. This recruitment was in response to increased demand for education and growing travel commitments to deliver education beyond Victoria. It was also an important risk management initiative; prior to these appointments the FSEP depended on one individual, the Program Manager. This recent appointment has enabled expanded educational delivery and will allow additional time to be available for the ongoing development of the FSEP education content. The FSEP is currently exploring recruitment of a second permanent part-time educator to further meet these growing demands.

In addition, three suitably qualified clinical educators were recruited during 2005. As employees of Victorian public hospitals, they were trained to deliver FSEP education from within their own hospital (The Mercy Hospital for Women, The Royal Women's Hospital and Southern Health.) This recruitment was similarly to provide a contingency plan, support the Program Manager and expand delivery of education.

7 Planned developments for 2006

With the state wide success of the FSEP in 2005 and increasing interstate and international interest, the key foundations for a sustainable and high quality education program are in place. Future developments are now focussed on the scope of the education material, further assessment development, including valid competency testing, and the provision of different educational formats.

7.1 Competency assessment and validation

Of primary importance to the future of the FSEP will be the development of a reliable and valid tool to assess competency in fetal surveillance. Competency assessment is seen as significant to ensure the people who are assessing CTGs have sufficient knowledge to interpret and manage the information being derived from the CTG, with the ultimate aim of improving clinical outcomes and risk management. The FSEP is aware of the industrial implications of competency assessment, and is committed to widespread consultation of key stakeholders during the development of this competency tool.

The FSEP is currently negotiating with outside experts in medical education to develop a discriminatory and scientific validated testing process. It is planned that psychometric analysis and item response theory will be employed as the primary models to ensure the assessment tool is of an appropriate and effective standard in assessing competency of the individual.

We anticipate that a pilot program will be in place for the second half of 2006 for assessment of the planned testing program. A pilot hospital site has already agreed to implement and evaluate the pilot competency testing tool.

7.2 Online delivery

The development and implementation of an interactive online educational facility is seen as a core component of the future FSEP. It is recognised that some practitioners find it difficult to access the program. While the FSEP is committed to delivering face-to-face education, development of an online self directed program and additional educational resources will increase the availability of the program and on-demand needs for education. Facilitation of online assessments will also increase accessibility for independent learning. The FSEP looks forward to delivering an additional format of education to respond to a variety of learning styles.

The FSEP is currently in discussion with potential developers to this high quality online facility. The FSEP currently has a section on the RANZCOG website which will form a base for this development: www.ranzcog.edu.au/fse_program/. This website is currently regularly updated with FSEP reports, contact details and information about the program.

Face-to-face education was identified as the preferred format of education in the Survey of Education Practice which was described in the 2004 Annual Report. The FSEP recognises the

associated benefits of improved channels of staff communication when participating in face-to-face and multidisciplinary education. It should be noted that development of online education will be complementary to the existing face-to-face and multidisciplinary education remains a priority for the program.

7.3 Video conferencing

In a similar manner to website development, the FSEP is currently negotiating with a regional centre to trial video conferencing as a method of educational delivery. It is envisaged that video conferencing will provide greater accessibility for regional centres with reduced costs. Logistical and financial analysis of this option is under consideration.

7.4 Further curriculum modules

Following expressions of interest, the development of further specialised modules has been planned for 2006, with particular focus on an advanced CTG interpretation program and an antenatal module. A specific three hour introductory module has already been prepared for midwifery students. A module for participants who might benefit from a focused revision of the fundamental concepts is also under development.

7.5 Development of a handbook

The FSEP is discussing and scoping the development of a comprehensive fetal monitoring book. The book will act as a valuable resource to support the face-to-face and web based components of the program and will tightly integrate with both the program and the RANZCOG Intrapartum Fetal Surveillance Clinical Guidelines. It is anticipated that the book will also act as a standalone reference for those not accessing the FSEP.

7.6 Logo and visual identity

Consistent with the increasing profile and operations of the FSEP, the development of more visible branding is now appropriate. Implementation of a new logo will be used to strengthen the impact of FSEP publicity, educational materials and the website.

8 Budget

8.1 2005 Budget

The FSEP was delivered within budgeted funds from the Department of Human Services Victoria and the Victorian Managed Insurance Authority.

8.2 2006 Budget

Funding from VMIA and DHS concludes at the end of 2005 and from 2006 the FSEP will be self funded. The FSEP remains committed to delivering standardised education in a non profit and cost effective manner throughout Australia and New Zealand during 2006.

9 Contact details

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Our website is regularly updated with information:
www.ranzcog.edu.au/fse_program/

Please refer to our website to access the FSEP 2004 Annual Report or the RANZCOG Intrapartum Fetal Surveillance Clinical Guidelines.

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