
Scanning into the future

An interview with Dr Margaret Booth

Dr Margaret Booth has a private O and G practice in Penshurst, a south-western suburb of Sydney, New South Wales. Her practice has a slightly higher obstetric bias, with deliveries being between 250 and 300 per year.

In July 2001, Dr Booth recognised that some of her obstetric patients were being disadvantaged by a lack of continuity of care and delays in obtaining timely ultrasound appointments. For example, a patient would present at her antenatal visit with a story of spotting and/or bleeding. The process would be to refer the patient to a dedicated ultrasound unit two suburbs away to be scanned, and then be advised by someone other than Dr Booth that the pregnancy was not viable. There were also situations where the possibility of a delay in the next available ultrasound appointment could lead to increased patient anxiety.

Having previously had some ultrasound experience performing emergency scanning at St George Hospital, both in the labour ward and the antenatal clinic, Dr Booth decided that she wanted to improve the standard of her practice. This could be achieved by being able to perform office ultrasound scans for the diagnosis of early and late obstetric complications. Dr Booth viewed this update of her practice as a 'positive and beneficial' step forward and looked for the best ways to implement such a change. It was then

that she decided to focus the change as a practice improvement activity.

After recently reading a practice improvement information flyer printed in *O&G*, Dr Booth considered following the same framework to implement the introduction of scanning into her practice. She recognised that this framework would provide a 'systematic' approach of incorporating change.

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The pre-audit, which took the most amount of time, was able to establish a statistical basis for the refresher course and justify the purchase of a portable Sonosite ultrasound machine. Although the results of the audit were not a surprise, they did provide a snapshot of the current rate of ultrasound referrals for her practice, which would later be a useful benchmark against which to compare her post-audit results.

In April 2002, following the purchase of an Ultrasound machine, as well as attendance at the RANZCOG Obstetric Ultrasound Stage One workshop, Dr Booth arranged to hold an ultrasound refresher course in her rooms with Andrew MacLennan and Fergus Scott. To maximise the learning impact of this course, three other obstetricians also attended. The theoretical element of the session consisted of a two-hour discussion on physics and bioeffects of ultrasound, also incorporating the

anatomy of normal and abnormal pregnancies. There was also discussion regarding the technical aspects of ultrasound in relation to the ultrasound machine Margaret Booth had purchased.

The practical side of the session consisted of the scanning of six patients who were in early pregnancy and two patients who were in late pregnancy. During the scanning, Andrew MacLennan and Fergus Scott supervised and provided expert opinion and feedback.

Margaret Booth cites one of the most beneficial factors of having this 'in-house' training session was that all the scanning and technical references were done on her machine, enabling a quick familiarity with the machine, as well as the convenience of being in her own surroundings. It also resulted in one of the other attending obstetricians deciding to purchase the same ultrasound machine.

Following the quality cycle framework, the next stage in the process was to implement the changes and to audit the outcomes. Dr Booth was keen to start scanning straight away and as she knew that she was going to perform a follow up audit, she kept a 'log book' of all obstetric ultrasound cases as she performed them. The results of this audit confirmed her own feelings that she was able to offer her obstetric patients a more timely and consistent service that minimised anxiety and delay. Although she admits that she expected these results to be consistent with her 'feelings and impressions', the statistical evidence reinforced her practice improvement.

Indeed, Dr Booth stated that it was pleasing to confirm that 'there is benefit' and the real reward is in 'seeing it for yourself'.

One of the advantages of being able to perform ultrasounds in the rooms is the ability to assess correct dates. Dr Booth has noted that this has had a great impact on being able to discuss and organise pre-natal tests, such as nuchal translucency scans.

Another factor that Dr Booth recognised as being a positive element in implementing change using the systematic approach of the PI framework was the way that adverse events were dealt with. Without the recording of cases in a follow up audit, Margaret Booth admitted that it would be easier not to have focused on any adverse events. However, Dr Booth was able to document the one case in which she experienced an adverse event and organise follow up to encourage further learning.

As a result of undertaking this activity, Margaret Booth is able to state that she is now able to provide an increased benefit to 25 per cent of her obstetric patients. She has noted that 'responses from patients have been very positive. The women appreciate confirmation of viability, especially women with a history of miscarriage'. She has been happy that she has been able to 'identify a positive, quantifiable improvement in the service offered by my practice in terms of obstetric ultrasound'.

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| PI Process | Example |
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| <p>Identifying an area for improvement</p> | <p>Referral of obstetric patient to separate dedicated ultrasound unit was not optimal for continuity of patient care.</p> <p>This was reinforced by a six month audit.</p> <p>Audit from January to July 2001 – 153 pregnancies booked, 25 resulting in miscarriage which consisted of:</p> <ul style="list-style-type: none"> • seven did not present for booking visit, and • 18 presented with bleeding or pain and were then sent on for a formal ultrasound at a dedicated ultrasound unit. <p>Two other women presented with threatened miscarriage and were also referred on to a dedicated ultrasound unit. Four women in their later stage of pregnancy were also sent to an ultrasound unit in order to confirm presentation and size.</p> |
| <p>Establish goals</p> | <p>Improve patient continuity of care by being able to perform office ultrasound scans for pregnancy complications.</p> <p>In order to meet these goals, Dr Booth purchased a portable Sonosite ultrasound machine and held a refresher course in her rooms. As soon as this was complete, her goals were to:</p> <ul style="list-style-type: none"> • start performing ultrasounds in her rooms, and • keep records of all ultrasound performed and their outcomes. |
| <p>Audit outcomes</p> | <p>A follow up audit from May to October 2002 showed 120 women booked in for antenatal care. Fifteen had an ultrasound elsewhere before their first visit. Results showed that:</p> <ul style="list-style-type: none"> • 73 women were able to have their dates and viability confirmed in the rooms of Dr Booth; • 11 women were able to have their date confirmed who previously did not know; • viability was reassured for five women with a history of miscarriage; • a provisional diagnosis of miscarriage was able to be made for nine women; and • confirmation of presentation was made for five women in late pregnancy. |