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Laparoscopy for theatre nurses

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Introduction:
The use of laparoscopic surgery in gynaecology has steadily increased over the last few decades. With the advancement of this form of surgery there have been a number of new devices and techniques that have been introduced into the operating theatres. Despite this, the basic equipment including a "tower" containing the insufflation equipment, camera and monitor as well as the diathermy equipment, ports and handheld instruments (bipolar scissors and graspers) have remained relatively constant.

The laparoscopic-specific requirements of patient positioning, equipment set up and intraoperative assistance with settings and laparoscopic products, makes laparoscopic surgery "team" dependent. The ultimate aim is to provide a safe and efficient environment.

A recent paper looking at intraoperative complications identified risk management issues such as human and system errors as contributing factors (Coudier et al., 2009). Although the laparoscopic product industry provides "in-service" training, this is usually in isolation from other related products unless they also happen to provide these. In essence a number of different companies contribute to the final "laparoscopic procedure" in terms of product utilization.

The issue of personnel is interesting as the various professions, nursing/theatre and medical/surgeons, are usually taught in isolation. One way of overcoming this is to teach principles of laparoscopy to the nursing staff and use the various products used during laparoscopic surgery in a realistic role playing environment (Georgiou et al., 2009).

Aims:
- Provide basic training in the concepts of laparoscopic training including: diathermy principles, development of pneumoperitoneum and port sites
- Provide an example of a "team approach" to laparoscopic surgery
- Role-playing examples of setting up and trouble-shooting
- Hands-on with the laparoscopic equipment used in the hospital of the participants within a theatre environment
- Empower staff to offer suggestions that will increase efficiency and minimize complications through trouble shooting sessions.

Methods:
"Laparoscopy for theatre nurses" (LFN) was initially designed with the view of improving patient care through minimizing operative risk by encouraging laparoscopic product and theory knowledge expansion of theatre staff. By empowering theatre staff to participate as a more effective "Team" member, job satisfaction and operative efficiency was also anticipated.

The course is based on a combination of didactic and hands-on teaching involving the representative of companies that supply the laparoscopic equipment to local hospitals in the Illawarra, Australia. (Figure 1-3). It runs within the theatres of two hospitals in the region.

By providing a 1:2 ratio of course facilitator:participants, a unique learning environment was provided that encouraged open communication in a non-threatening environment.

Specific topics
- Theatre set up
- Patient position
- Theatre floor equipment
- Electroscopy / Tower (Tack)
- Ports & Instruments
- Removal of specimen
- Port site closure

Hands-on Sessions

Graph 1: Number of years experience as a theatre nurse (blue) and corresponding number of theatre sessions (yellow) attended by participants (n=62) per week.

Graph 2: Number of theatre sessions attended by participants (n=62) per week.

Role-playing

Results:
The first "Laparoscopy for Theatre Nurses" Course at Wollongong Public Hospital, Illawarra, New South Wales, Australia, was conducted in March 2009. The concept of teaching principles of laparoscopy to Theatre Nurses through the combination of a didactic and hands-on course was a novel and bold approach within a Public Hospital system, particularly as the course was designed as a regional teaching resource, at no cost to the participants.

To date (2013), eight such courses have been conducted involving some 60 participants from five separate hospitals both within our region and Interstate (Darwin, Australia). As the courses have occurred, past participants have returned as facilitators. Furthermore, one Nurse Educator attending first as participant and then as facilitator has subsequently returned to her hospital and conducted a similar laparoscopic course.

The range of operating theatre experience ranged from newly qualified to over 30 years (Mean: 10.4yrs). Only 10% (n=7) of the participants have ever received a formal laparoscopic course. Two of these participants actually previously attended a LFN course in previous years. Therefore, 92% of participants have learnt their laparoscopic teaching "on the job" (Graph 1).

The number of current laparoscopic theatre sessions (60% and 34% attend 1-2 and 3-4 sessions per week, respectively), does not reflect the years of theatre experience (Graph 1) or previous laparoscopic teaching (not shown).

Discussion:
We are often concerned about the laparoscopic training of our Registrars and compare the laparoscopic surgeon to the airline pilot. However, we sometimes fail to see the similarities of the Theatre staff to the airport ground staff and the Control Tower of the airport.

Data collection from the participants of these courses, together with the ongoing demand for the course, demonstrates that this is a worthwhile program for our Illawarra Shoalhaven Local Health Network.

This poster demonstrates how we have taken a step towards providing a sustained and self-perpetuating Regional resource in our "budget" Public Hospital."