Specialist Training in Obstetrics and Gynecology in Singapore: Transition to Structured Residency Program

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Abstract

Background The article describes the experience of planning and implementing the transition of the residency program in obstetrics and gynecology at Singhealth, Singapore, from a model largely based on British training principles to a new model in accordance with the ACGME-International (ACGME-I) standards.

Intervention Initial steps in transitioning to the new model entailed (1) identifying faculty with an interest in education to lead the various initiatives and programs and to ensure appropriate educational role models, (2) securing adequate funding, (3) holding focus groups with physicians to identify opportunities for improvement in the new system, and (4) developing a schedule for the phased implementation of key features of the structured system.

Results The program started in July 2011, with 14 residents for a 4-year course of training. The curriculum consisted of 5 modules: (1) general obstetrics and gynecology and ambulatory care, (2) maternal fetal medicine, (3) urogynecology and minimally invasive surgery, (4) reproductive medicine, and (5) gynecology oncology. Faculty was assigned responsibility for teaching and assessing the 6 competencies, and appropriate training was provided through specially designed, professional-development programs.

Conclusions Challenges in the implementation of the new training program included the need to replace clinical service previously provided by trainees, a lack of fit between the traditional qualifying exam and the new model for training, and the need to adapt teaching strategies to new competencies not explicitly taught in the prior program, particularly practice-based learning and improvement and systems-based practice. The strength of the new obstetrics and gynecology residency lies in having a structured, competency-based, closely supervised approach to training with standardized evaluations, timely feedback, and a committed faculty.

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Introduction

The goal of an obstetrics and gynecology residency program is to achieve and maintain excellence in the education and training of obstetricians and gynecologists. This ensures that the program adequately prepares the next generation of obstetrician-gynecologists to become competent and confident specialists with an interest in lifelong learning, leadership skills, and the ability to adapt to the needs of their health care system.[1] Starting in 2010, the residency program in obstetrics and gynecology at Singhealth, Singapore, began a transition from an educational model based largely on British training principles, to a new training model in accordance with the Accreditation Council for Graduate Medical Education-International (ACGME-I) standards.

The program's objectives, as defined under the ACGME-I requirements, are based on 6 core competencies: clinical care, medical knowledge, communication skills, professionalism, practice-based learning, and systems-

based practice.[2] The expectation is that each resident obtains competency in these areas to the expectations of the ACGME-I and the Council on Resident Education in Obstetrics and Gynecology. This is accomplished through an organized educational experience with graded responsibility throughout 48 months (year 1 to year 4) and supervision by dedicated teaching faculty. The clinical sites for the residency program are KK Women's and Children's Hospital and the Singapore General Hospital, which offer teaching settings with diverse patient populations. Completing the program qualifies graduates to take the postgraduate examination to be a member of the Royal College of Obstetricians and Gynecologists (MRCOG).

Laying the Foundation for Transition

Before instituting the new training model based on the ACGME-I standards, obstetrics and gynecology training in the Singapore model had consisted of 4 years of basic specialist training, which allowed trainees to progress to 2 years of advanced training after passing a qualifying examination (MRCOG). The aim of advanced training was to develop the clinical skills and knowledge with exposure to administrative, teaching, and research roles. Upon completion of advanced training, trainees completed an exit assessment that qualified them to become registered specialists with the Ministry of Health and Singapore Medical Council.

To ensure a smooth transition to the new model, national leaders and faculty in obstetrics and gynecology developed a comprehensive strategy.[3] Initial steps entailed identifying faculty with a special interest in education to lead the initiative, ensuring appropriate educational role models, and securing adequate funding. This was followed by developing a schedule for the phased implementation of key features of the new system, in close coordination with the existing training program. The team included representatives from KK Women's and Children's Hospital and Singapore General Hospital.

Identifying Core Faculty and Developing the Curriculum

A key step entailed recruiting core faculty from different subspecialties, including maternal-fetal medicine, urogynecology, reproductive medicine, oncology, and minimally invasive surgery, and designating a program coordinator for administrative support. A residents' coordinator was appointed to represent residents on issues like the efficiency of the program and related matters. From January through June 2011, faculty leaders developed a curriculum based on graded and progressive responsibility, in keeping with the ACGME-I standards. The curriculum was reviewed and evaluated, and the final version was approved by senior hospital management. The structured modular training curriculum included the following focal areas:

Module 1—General Obstetrics and Gynecology, Ambulatory

Module 2—Maternal Fetal Medicine

Module 3—Urogynecology and Minimally Invasive Surgery

Module 4—Reproductive Medicine

Module 5—Gynecology Oncology

Recruiting Residents

A Structured Internship Program was initiated in August 2010 to help identify and develop potential residents. Residents were selected based on academic credentials, ability, preparedness, and motivation. Singhealth program directors selected the applicants and Ministry of Health Holdings then matched the applicant's choices to the selection. The new obstetrics and gynecology residency started in July 2011 with 14 residents for a 4-year program.

A dedicated educational session, scheduled every Friday afternoon, which had been initiated in 2008 to ensure protected time for education and training, was incorporated in the new residency program. Each member of the faculty was assigned responsibility of one of the 6 core competencies, and appropriate training was provided by the training programs offered by Center for Resident and Faculty Training. Teaching strategies for practice-based learning and systems-based practice had to be designed because these competencies had not been explicitly taught in the previous obstetrics and gynecology program. One of the teaching strategies entailed reorganization preexisting activities, such as perinatal morbidity and mortality meetings, to include a focus to teach these new competencies.

The expectation for strict adherence to duty hour limits and protected educational time for residents meant that a service backfill for clinical care was urgently needed. In anticipation of this, doctors to provide service needs (Service Registrars) were recruited for dedicated clinical care. These individuals received appropriate training to improve patient safety and clinical care. At the same time, nurses were also trained to take more-responsible roles in patient care. Adjustments in overall clinical care included consultant-led care in the delivery suites, clinics, and operating theater to provide adequate supervision to the residents. In the ambulatory clinics, direct supervision is provided to all the residents, and the consultants in charge of the operating theater supervise residents' surgeries and evaluate their operative skills.

For residents, a night float system was introduced, together with bridging calls, to optimize duty hours and ensure 24-hour coverage for all clinical service areas. For residents, average work hours were not to exceed 80 h/wk. The schedule also needed to provide for 1 day off in 7 days, averaged throughout a 4-week period, continuous on-site duty limited to 24 hours, and a minimum rest period of 10 hours.

Provisions were made for communicating (in writing, by telephone, by e-mail, or in person) with the program director or program coordinator in instances where duty hour standards were violated. The department faculty was trained (with the help of lectures) to monitor residents closely for signs of fatigue, and residents were briefed on how recognize their own fatigue.

Strength of the New Program

Advantages of the new residency program in obstetrics and gynecology include structured, supervised training, as opposed to a traditional "see one, do one" approach. Continuity clinic sessions and individual operating slots enhance resident exposure to the longitudinal care of patients. In addition, there are dedicated research and elective postings with online teaching introduced by the Center for Resident and Faculty Training, using the Blackboard Inc (Washington, DC) online teaching software and teaching materials, as well as evaluations delivered by the New Innovations, Inc (Uniontown, OH), electronic residency data management suite.

An evaluation system has been put in place to provide periodic assessment of residents' developing competencies, which increases the learning efficiency. When deficits are identified, formal educational support or remediation will be provided by the residency program. Several assessment tools are used to evaluate the residents, including global assessment, direct observation, assessment based on simulation performance, multiple assessments, chart reviews, and objective structured assessment of technical skills. Objectivity in assessing surgical skills, such as caesarean section, is being promoted by training faculty using a standardized video recording. The video was watched by all faculty members, and standard setting was decided in the monthly meetings.

Teaching of communication skills uses a simulation workshop in which standardized patients were used to reenact real situations. The workshop addresses situations such as breaking bad news, open disclosure, and dealing with difficult patients and families. The experienced and dedicated faculty, with the availability of the protected time for teaching, ensures a high level of accountability and close supervision.

The accreditation process is intended to ensure the quality of approved programs.[4] A program evaluation committee, chaired by core faculty, evaluates the program every 6 months to ensure it meets standards and to allow improvements to be made. Residents have the opportunity to evaluate faculty anonymously on an annual basis as part of the Faculty Review process.

Challenges

In view of the different requirements for the traditional and the new residency programs, planning the duty roster was a challenge. A roster-planning advisory committee was formed. The hospitals also created more space for continuity clinics for the residents and to facilitate consultant-led care in the outpatient clinics. The larger challenge involved matching service needs with the academic focus of the program. This required recruitment of doctors to provide clinical services and realignment in the overall model of clinical care. Focus groups with committed physicians assisted in leading this clinical transition. Extensive readjustments in clinical work were needed to ensure adequate hours of protected time for teaching by the core faculty.

A study of the attitudes of faculty and junior doctors toward a structured residency program in KK Women's and Children's Hospital found that the overall opinion of changing to a structured obstetrics and gynecology residency program was neutral among faculty and junior doctors.[5] Faculty physicians appeared to have more knowledge of the new system than trainees but were concerned about the implications of the change, such as a decrease in clinical work volume and an increase in required documentation and paperwork.

Other challenges in the implementation of the new training program included a lack of fit between the traditional qualifying exam and the new model for training, and the need to adapt teaching strategies to new competencies not explicitly taught in the prior program, particularly practice-based learning and improvement and systems-based practice.

The British-style qualifying exam, or the MRCOG, may become a challenge for the trainees because of the transition. The MRCOG has been the traditional qualifying exam to progress from Medical Officer to Registrar grade. At present, the Resident Advisory Committee is in the process of creating a United States-style board exam.

Conclusion

Led by a program director with a strong interest in education and enthusiastic core faculty, a successful transition to a new model of residency education was

achieved, and an ACGME-I accredited program was developed through a carefully planned approach, supported by shared vision, effective communication, and adequate funding. The strength of the new obstetrics and gynecology residency lies in having a structured, competency-based, closely supervised approach to training with standardized evaluations, timely feedback, and a committed faculty.

The program leadership and the faculty look forward to training the next generation of specialists in a structured manner to improve the quality of care for women and to further explore the benefits of the new training program, using regular evaluation.

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