❖ Teaching Dossier ❖

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I Brief Biography

I received my B.A. Honours in Economics from Queen's University in 1985. I received my M.D. from McMaster University in 1989. I then returned to Queen's University and completed my residency in Obstetrics and Gynaecology in 1994. I undertook subspecialty training in Maternal-Fetal Medicine, completing a clinical/research fellowship at Duke University in 1996.

Upon completion of my training, I joined the Department of Obstetrics and Gynaecology at Queen's University in the Division of Maternal-Fetal Medicine in 1996. I was also appointed co-Director of the Fetal Assessment Unit, the regional ultrasound unit detecting and counseling families with anomalous fetuses. From 2000-2005 I was appointed Director, Labour and Delivery and co-Chair of the Joint Practice Committee. I was Chair of the Department of Obstetrics and Gynecology Finance and Staffing Committee from 2003-2005. I currently hold the academic rank of Professor.

Based on my research and clinical duties I have cross appointments to the Department of Diagnostic Imaging and the School of Physical Health and Education. I am actively involved in clinical medicine, undergraduate, postgraduate and continuing medical education and am a funded and published researcher in the fields of prenatal diagnosis, preterm birth prediction, exercise physiology of pregnancy and induction of labour. Our work in exercise in pregnancy has been nationally recognized and has culminated in the development of National Guidelines on Exercise in Pregnancy and the Postpartum period, of which I am the first author.

Since 1999, I have been on the faculty for the Teaching Improvement Project System, a two day workshop offered to medical faculty and residents to aid them in their desire to improve their teaching skills. In 2004, I developed an interactive teaching CD on obstetrics and prenatal diagnosis which has been endorsed by the Association of Professors of Obstetrics and Gynecology and distributed to all Obs/Gyn residents in Canada. Myself and the other two authors of this CD series were awarded the Hugh Prosser Award for Innovation in Education in 2005. I have received teaching awards in both the departments of Obstetrics and Gynecology and Diagnostic Imaging.

In recognition of my teaching abilities I have been asked to provide large and small group seminars on effective teaching methods for the Society of Obstetricians and Gynecologists of Canada, Association of Professors in Obstetrics and Gynecology and the Eli Lilly Physician Speaker Training Workshop.

II Teaching Philosophy

My approach to teaching, whether it is with undergraduate, postgraduate, faculty or my patients is rather simple. I see myself as a facilitator to their learning objectives, as elementary or complex as they may be. My skills as a facilitator come from my knowledge base, clinical experience, familiarity with the literature in my field and the ability to package information for learners in a volume and in language that best allows them to achieve those learning objectives.

As a resident at Queen's University I was increasingly expected to provide undergraduate, postgraduate, faculty and patient teaching without formal training. I felt the need to better prepare myself for this role and my future in an academic centre. I participated in the Teaching Improvement Project System (TIPS) workshop and underwent a life changing experience. I learned how to package and present information in a coherent and animated manner. More importantly I learned about different learning styles that allow me, as an educator, to prepare and present my teaching material in a fashion that will allow the majority of learners to receive the same information in the manner that best suits their personality type.

That being said, when I joined the faculty at Queen's and was now facing class sizes of over 100 learners I reverted into the more formal didactic method of presenting medical information. These lectures were well received by the students but it was obvious that this presentation style was not maximizing the message for all learners. So, I took the TIPS workshop again and it had as profound an effect on my teaching style and confidence as the first time. My large group sessions for the undergraduate reproductive curriculum were revamped such that the concise notes are placed on the internet where the learners can review them prior to and after the class session. The time in class is designed to augment the notes by stimulating discussion and visually exposing the learners to the science and clinical experiences described by the curriculum. This allows those who learn best individually to be confident the notes contain the required information. It also allows the learners who learn best by visual stimulation or active participation and discussion to retain those visual and aural memories for future recall. This is facilitation.

At the postgraduate level my role is to aid in the training of physicians becoming specialists in obstetrics and gynaecology. The teaching opportunities take place in small groups, one to one discussions, and in clinical situations in clinic, the ultrasound suite, the labour ward, the operating room and by involving the residents in my clinical research. I recognize that each patient encounter has the opportunity to be a teaching forum for residents. This may take the form of mentoring a procedure or technique, stimulating basic science or clinical discussion, or demonstrating the skill of presenting and packaging "bad news" in an understandable and compassionate format for patients and their families. Residents are then observed and provided constructive feedback on these skills. I also recognize that each of these encounters allows for education of the patient and the opportunity for the patient to educate both the resident and myself on their perspective. A residency is much like an apprenticeship and it is important for me, as an educator, to aid the residents in the many personal balancing issues

inherent in the practice of medicine. In a one to one discussion I will provide the opportunity for discourse around balancing medicine and one's personal life. Being open about my personal experiences with the residents acknowledges these hardships of their training and provides, I hope, a role model for successful balance. I feel the discussion of these personal balance issues is an education opportunity key to the success of the individual resident.

At continuing medical education events my philosophy is to hone in on key, learner defined, objectives that will aid in that physician's day to day practice. The use of a needs analysis from the attendants at the annual two day conference in obstetrics and gynaecology, which I chaired for 5 years, allowed me to provide the learners with topics and speakers in areas in which they've shown the desire to learn. I believe this is the reason this conference is continually well subscribed and highly rated. In recognition of my teaching skills, I continue to be invited to speak locally, nationally and internationally on topics related to both education and my areas of research.

As a personal honour and as justification to my teaching methods, I was asked to join the TIPS workshop faculty in 1999. I value the opportunity to be involved in the process of educating medical educators in a prescribed method of packaging and presenting information. I particularly enjoy exploring personality typing with the workshop participants such that they learn how to prepare their teaching sessions to maximize retention based on the different learning styles of their students. My teaching skills have been recognized through awards in the Department of Obstetrics and Gynecology, Diagnostic Imaging and the Faculty of Health Sciences.

III University Teaching Experiences

Undergraduate

Phase I Medicine

In Phase I Medicine the students are keen for clinical experiences, an opportunity to break away from the classroom and see what it's like in the "real" world. Phase I students attend my high-risk pregnancy clinics, see patients with me, are observed in their history and physical exam skills and have the opportunity to see patients independently and present them to me for discussion. This is also an excellent opportunity for me to begin the discussion with the students about career choices and professional/personal balance issues specific to our specialty. This also raises the opportunity for the students to discuss their interest in performing their critical inquiry block under my supervision. Since joining the faculty in 1996, 8 students have undertaken summer research projects with me. Three of these have lead to publication and a fourth has been submitted.

Phase II Medicine

Phase IIE Medicine is the core reproductive teaching block. I have three sessions in this block; Physiology of pregnancy including the placenta; Pre-pregnancy counseling and risk assessment; and Common obstetric procedures including ultrasound. Despite the class size, these sessions are designed to be as interactive as possible. To ensure the content is covered, complete and concise notes are posted on the Phase IIE website prior to the class session. During the sessions I primarily present still images and video to put a realistic touch to the content described in the notes. This method consistently sparks discussion from those who learn best through participation. I believe the combination of concise notes, visual reminders and discussion satisfies the learning objectives of the large majority of the students.

These students also spend time with me in the clinical setting honing their clinical skills and beginning to learn the skills of clinical judgement and decision making. They also spend time on labour and delivery in the evenings as observers of the management of labour and deliveries in normal and complicated situations. I was a tutor for the phase IIA clinical skills program in 2001 but was unable to continue with this due to scheduling conflicts. I have participated since 2002 as a tutor for both IIC and IIE problem based learning. My style is to encourage the students to learn to think like physicians and truly problem solve rather than cutting up the problems and learning individual pieces. Feedback from the students has consistently re-enforced this style.

Phase III Medicine

Students in Phase III spend 6 weeks on our service. During that time I participate in 3 small group interactive sessions focusing on; Prenatal diagnosis; Substance abuse in pregnancy; and Antenatal fetal assessment. During these sessions I present background information and the students are presented with cases to discuss and manage. As a facilitator I ensure the content is correct and covered in the time allotted. Phase III students spend time under my supervision in my outpatient clinic, the Fetal Assessment Unit, the inpatient ward and on labour and delivery. In these venues they are guided in how to participate as a member of the health care team. They are allowed to assess patients and form

management plans independently and discuss these with me where immediate feedback is provided around techniques of information gathering, assimilation of information and providing feedback to the patient in an understandable method. In the operating room these students are demonstrated the techniques of surgical assistance and basic surgical skills. In labour and delivery the students are shown how to perform normal deliveries in a hands on supervised fashion.

Postgraduate
At the postgraduate level I participate in large group, small group and one to one teaching. The large group sessions take the form of departmental Grand Rounds, which I perform two to three times annually. These sessions introduce the residents and faculty to new advances in Maternal-Fetal Medicine expanding their knowledge base in the field. These sessions are interactive and designed to elicit discussion and debate. I have been invited annually to give Grand Rounds to the department of Diagnostic Imaging.

I participate in the resident core education rounds two to three times per year. These small group sessions cover the curriculum for our specialty and are designed to be an in-depth and thorough discussion.

I participate two to three times annually in the resident sub-specialty teaching. These sessions are commonly case based and include significant resident interaction around controversial management topics.

I am responsible for and participate in the weekly resident/faculty Maternal-Fetal Medicine rounds. At these sessions recent difficult cases are presented. The residents are asked about knowledge and management issues. I am often called upon to provide the definitive knowledge/opinion as a solution to the case. From this the residents are familiarized with the relevant literature and learn management techniques. The discussion around these cases in a non-threatening fashion also allows the residents to determine where deficits may lie in their knowledge base.

I lead and participate in the weekly ultrasound teaching session. In these sessions I present to the Obstetric and Gynaecology and Diagnostic Imaging residents and sonography students recent cases of anomalous fetuses to demonstrate techniques of identification, and discuss associated investigations and management options. It is particularly helpful to the residents in Diagnostic Imaging (Radiology) to learn the perspective on management from an obstetrician.

Twice yearly I perform practice oral examinations on two or three of our residents. These are designed to simulate the certification process they will face at the end of their training. Notes are taken about knowledge, management and question fielding skills and feedback is provided immediately after the session.

On an annual basis I participate in the department OSCE exam for residents. This "bell ringer" type exam includes clinical testing stations, basic science testing stations, technical skills testing stations, ultrasound interpretation stations, and

patient interaction stations. It is designed to simulate the Royal College specialty exam for our discipline. After each session immediate feedback is provided to the resident and a handout with pertinent content issues is provided to aid in future review. Feedback from our residents tells us that we prepare them exceptionally well for the examination process. To date all Queen's Ob/Gyn residents have received their Royal College of Physicians and Surgeons of Canada certification on their first attempt.

In each academic year three residents will spend 4 months on a Maternal-Fetal Medicine rotation working directly under the guidance of myself and two colleagues. This rotation is designed to train the resident in knowledge base, assessment, clinical judgment and technical skills in the management of complicated pregnancies. Specific guidelines have been developed by me and my colleagues to ensure the resident is cognizant of the expectations of the rotation. Residents are also trained in the technique of fetal ultrasound. During this time they receive approximately 300 hours of hands on instruction performing and interpreting fetal ultrasound. At the mid-point and conclusion of the rotation the resident is provided feedback in a constructive fashion. The resident is also observed by myself and provided feedback performing an 18 week fetal anatomic ultrasound assessment. I am the member of our Division primarily responsible for the ultrasound component of the rotation. At the beginning of the rotation the resident is assigned a reading list and myself or one of my colleagues meets with the resident on a weekly basis for an hour review of their reading and to facilitate by filling in any knowledge gaps and by providing clinical relevance to the readings.

Four residents annually from Diagnostic Imaging also spend one month receiving training in fetal ultrasound. During this time they receive approximately 160 hours of hands on instruction performing and interpreting fetal ultrasound. At the mid-point and conclusion of the rotation the resident is provided feedback in a constructive fashion. The resident is also observed by myself and provided feedback performing an 18 week fetal anatomic assessment.

I provide approximately 24 hours weekly of on-call support to our department. During this time I work directly with the residents as a supervisor and instructor. The residents assess the patients in labour, the emergency room and on the wards and discuss management issues with me. Teaching takes the form of expanding their knowledge around a particular case and instructing them in management options. In the operating room the residents are supervised continuously and allowed to make decisions and use their technical skills based on their level of competence and seniority. Teaching takes the form of providing feedback on technical skills and management options of difficult operative situations.

The Teaching Improvement Project System (TIPS) is a two day hands on interactive workshop that is offered to residents on an annual basis. This teaching workshop is designed to introduce the resident to a comfortable method for preparing effective small and large group sessions. The program is designed specifically for a medical audience and includes such topics as teaching at the

bedside, providing feedback, the use of questioning and setting objectives. As part of the workshop attendees are videotaped and provided feedback on their teaching style. I have been an instructor in this course for residents since 1999.

In 1997 I received the Council on Resident Education in Obstetrics and Gynecology national faculty award for excellence in resident education. In 1998 I received the resident teaching award from the Department of Diagnostic Imaging. In 2005 I received, with two other colleagues, the H.F. Pross Technology Award for my interactive teaching CD, which has been endorsed by the Association of Professors of Obstetrics and Gynecology and distributed to all Obs/Gyn residents in Canada.

Faculty
As described above I present two to three Grand Rounds topics annually to our department. They are presented at a level to be as valuable to the department faculty as they are to the residents. The sessions are interactive.

As described above I participate in a weekly review of Maternal-Fetal Medicine cases. In this I commonly act as the definitive information source for both the residents and my colleagues.

I participate every second week in a teleconference as the "expert" opinion helping nurses and physicians in isolated northern native communities care for the pregnant women in their region. This is an excellent opportunity to teach both knowledge base and management issues to these isolated primary care providers. In 2005 we have begun the first videoconference clinic for Moose Factory where patients will be seen and assessed remotely and feedback provided to them and their caregivers reducing the need for patient travel and family disruption.

The Teaching Improvement Project System (TIPS) is a two day hands on interactive workshop that is offered to faculty on an annual basis. Due to the popularity of this program the Faculty of Health Sciences has made mandatory that all new faculty attend a teaching workshop like TIPS. This teaching workshop is designed to introduce the faculty attendant to a comfortable method for preparing effective small and large group sessions. The program is designed specifically for a medical audience and includes such topics as teaching at the bedside, providing feedback, the use of questioning and setting objectives. As part of the workshop attendees are videotaped and provided feedback on their teaching style. I have been an instructor in this course for faculty since 1999.

Continuing Medical Education
Since joining the faculty, I have been invited to participate in over 100 continuing medical education events. These sessions are designed to hone in on the specific needs of the audience to minimize content and maximize useful pearls for their practice. The sessions are always interactive and I have used such techniques as questionnaires, secret ballots, questioning and hand held computer feedback devices. Formal feedback from these sessions confirms my presentation content and style have been well received.

In 2005 I have accepted invitations to present at the International Society for Ultrasound in Obstetrics and Gynecology, the American College of Obstetrics and Gynecology and the Canadian Society for Exercise Physiology.

IV Measures of Teaching Effectiveness

Formal Undergraduate Evaluation

Appendix A-1 is a brief evaluation of my teaching in Phase IIE, October 1999.

Appendix A-2 is a summary of the evaluation of my three sessions in Phase IIE, October 2000.

Appendix A-3 is a letter of commendation for Phase III teaching, 2000.

Appendix A-4 is an evaluation of my role as tutor for Phase IIA Clinical Skills, 2001.

Appendix A-5 is an evaluation of my role as tutor for Phase IIC Problem Based Learning, 2003.

Appendix A-6 is an evaluation of my role as tutor for Phase IIC Problem Based Learning, 2004.

Appendix A-7 is a letter of commendation for my participation in the A.A. Travill Debate.

Appendix A-8 is an evaluation of my role as lecturer for Phase IIE, 2004.

Appendix A-9 is an evaluation of my role as tutor for Phase IIE Problem Based Learning, 2004.

Appendix A-10 is an evaluation of my role as lecturer for Phase IIE, 2002.

Appendix A-11 is an evaluation of my role as lecturer at the Mohawk College school of ultrasound, 2001.

Formal Postgraduate Evaluation
Appendix B-1 is an evaluation of my teaching skills from the residents in Obstetrics and Gynaecology at Duke University Medical Center, June 1995.

Appendix B-2 includes evaluations of my teaching skills from the residents in Obstetrics and Gynaecology from July 1999, when this assessment was initiated, to May 2005, the most recent circulated.

Appendix B-3 is a summary of my teaching skills assessed by the residents in Diagnostic Imaging in November 2000 and again in September 2005. No formal evaluation was done before or between these times.

Formal Continuing Medical Education Evaluations

Appendix C-1 Queen's Obstetrics and Gynecology CME Day, 1993.

Appendix C-2 Queen's Medical Science Rounds, 1993.

Appendix C-3 Victoria County Medical Society Clinic Day, 1993.

Appendix C-4 Queen's Obstetrics and Gynecology CME Day, 1994.

Appendix C-5 Queen's Obstetrics and Gynecology Memorial Day, 1994.

Appendix C-6 Queen's Obstetrics and Gynecology Memorial Day, 1996.

Appendix C-7 Queen's Obstetrics and Gynecology CME Day, 1997.

Appendix C-8 Queen's Obstetrics and Gynecology Memorial Day, 1997.

Appendix C-9 Picton Spring Conference, 1998.

Appendix C-10 Queen's Obstetrics and Gynecology Memorial Day, 1998.

Appendix C-11 Society of Obstetricians and Gynaecologists of Canada Annual Meeting Workshop, 1999.

Appendix C-12 Queen's Obstetrics and Gynecology Memorial Day, 1999.

Appendix C-13 Society of Obstetricians and Gynaecologists of Canada Annual Meeting Workshop, 1999.

Appendix C-14 American College of Obstetrics and Gynecology postgraduate course, 1999.

Appendix C-15 Teaching Improvement Project System for Residents, 2000.

Appendix C-16 Teaching Improvement Project System for Faculty, 2000.

Appendix C-17 Family Medicine Program in Obs/Gyn, 2000.

Appendix C-18 Champlain Valley Physcians Hospital Medical Center Grand Rounds, 2000.

Appendix C-19 Kingston General Hospital Bioethics Conference, 2000.

Appendix C-20 Queen's Obstetrics and Gynecology Memorial Day, 2000.

Appendix C-21 Queen's Obstetrics and Gynecology Memorial Day, 2001.

Appendix C-22 Teaching Improvement Project System for Residents, 2002.

Appendix C-23 Teaching Improvement Project System for Faculty, 2002.

Appendix C-24 Queen's Obstetrics and Gynecology Memorial Day, 2002.

Appendix C-25 Ontario/Atlantic Senior Residents' Weekend, 2003.

Appendix C-26 Quinte Healthcare Corporation Maternal-Child Council Continuing Education Program, 2003.

Appendix C-27 Queen's Obstetrics and Gynecology Memorial Day, 2003.

Appendix C-28 Association of Professors of Obstetrics and Gynecology of Canada Annual Meeting, 2003.

Appendix C-29 Teaching Improvement Project System for Residents, 2003.

Appendix C-30 Perinatal Partnership Program of Easter and Southeastern Ontario Annual Conference, 2004.

Appendix C-31 Champlain Valley Physcians Hospital Medical Center Grand Rounds, 2004.

Appendix C-32 Quinte Healthcare Corporation Maternal-Child Council Continuing Education Program, 2004.

Appendix C-33 Queen's Obstetrics and Gynecology Memorial Day, 2004.

Appendix C-34 Teaching Improvement Project System for Residents, 2005.

Informal Undergraduate Testimonials

The following present and past undergraduate students have been approached to provide assessments of my teaching/mentoring skills. Their letters have been collected in Appendix D.

Informal Postgraduate Testimonials

The following present and past postgraduate students have been approached to provide assessments of my teaching/mentoring skills. Their letters have been collected in Appendix E.

Informal Patient Testimonial

Dr. Rena Upitis, Dean of Education has given me permission to include her unsolicited letter commenting on my education skills when I had the opportunity to care for her in a recent pregnancy. This letter is included as Appendix F.

Teaching Awards

Appendix G-1 is a copy of the Resident Memorial Teaching Award presented to me as a resident in 1992-93 in recognition of my contribution made to the education of the clinical clerks (senior medical students) in that academic year.

Appendix G-2 is a copy of the National Faculty Award for Excellence in Resident Education for promoting high standards of residency education in the field of obstetrics and gynecology, which I received in 1997.

Appendix G-3 is a letter documenting my receipt of the Department of Diagnostic Imaging award for resident education, which I received in 1998.

Appendix G-4 is a letter documenting my receipt of the H.F. Pross Technology in Education Award, 2005.

Media

Appendix H-1 CBC's The National, October 16, 2002 and CBC's Health Matters featuring my research on misoprostol for induction of labour.

Appendix H-2 The Whig Standard, July 22, 2003 featuring the SOGC guidelines on exercise in pregnancy of which I was the principal author.

Appendix H-3 The Toronto Star, January 26, 2004 featuring my expertise on 3D/4D ultrasound.

Appendix H-4 The Ottawa Citizen, March 5, 2004 featuring my expertise on 3D/4D ultrasound.

Appendix H-5 The Whig Standard, April 9, 2005 featuring our research on exercise as a prevention/treatment for preeclampsia.

Appendix H-6 The Queen's News Centre, June 24, 2003 featuring the SOGC guidelines on exercise in pregnancy of which I was the principal author.

Appendix H-7 Queen's Gazette, July 14, 2003 featuring the SOGC guidelines on exercise in pregnancy of which I was the principal author.