

**Teaching sabbatical at the Yong Loo
Lin School of Medicine, National
University of Singapore**

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1 Summary and conclusion

First of all, I like to express my sincere gratitude to STINT and the National University of Singapore (NUS) for giving me this opportunity to teach, and do research, in Singapore. I am utterly impressed by the teaching, research and health care provided by the NUS-National University Health Care System (NUH), and the by the professionalism, generosity, and warmth by which I have been greeted. The administrative support from NUS, both at the central and departmental level, is beyond anything I have previously experienced; their endeavours to facilitate my arrival and stay at the NUS were phenomenal. Finally, my sincerest thanks to professor Eu-Leong Yong, Head of the Obstetrics and Gynecology Department at NUS, who has taken such good care of me (and my family) both professionally and privately. I have been abroad previously, as a post doc and for a research fellowship, but I have never experienced anything close to the reception I received at the NUS.

2 Preparation and planning

2.1 Planning trip

My husband and I spent one week in April in Singapore. My stay was meticulously planned by the HR-administrator at the Department of Obstetrics and Gynecology, NUS, and included several meetings and lunch with the Head of Department, meetings with the teaching staff, housing viewing, administrative preparations and even some sight-seeing of Singapore. I met with some of the clinical scientists, other visiting scientists, and was shown around the hospital. Further, I was also asked to give a presentation of myself and my research. Finally, the planning trip was rounded off by lunch with selected colleagues and the Head of Department at a downtown location.

The planning trip clearly facilitated the sabbatical in many ways; meeting with the teaching staff gave me an opportunity to express my teaching expectations, understand what was expected of me from the Singaporean colleagues, but also gave valuable insights to the way Obstetrics and Gynecology is being taught at NUS. The three main teachers, professor Kuldip Singh, Dr Arundhati and Dr Huang, at the department were very open

about the problems they saw with the curriculum, the lectures and with the students, and had a long list of tasks for me. I repeatedly had to remind them that I was there to learn from them, not the other way around. They also generously shared all course-related materials, including power-point presentations from the web-based lectures and the local text book (compiled by the colleagues at the department) for my preparation.

2.2 Preparations

With excellent help from the university, the work pass application was smooth. We were early on offered a two-bedroom apartment at the academic residential area in Kent Vale. I spent some time during the summer holidays reading the text book and going through the lectures to familiarize myself with the curriculum. We arrived in Singapore during the third week of August, just in time for the start of the second rotation of students.

3 Tasks and responsibilities

3.1 Undergraduate teaching

The NUS has 300 medical students per year, and we saw the students in their fourth year. During the Obstetric and Gynecology course students are placed at three different hospitals; the NUS, Singapore General Hospital and KK Women's and Children's Hospital. The academic year for medical students differs from the rest of the university; from early July to late December, the students do four clinical rotations (Obstetrics Gynecology, Anesthesia Emergency medicine, Psychiatry, and Pathology), meaning that the department receives about 25 students per rotation. All in all, this allows for relatively intimate rotations, and the students were well received at the Department. As the students are placed at three different hospitals, all lectures are web-based. Besides the clinical placements, teaching is mainly delivered as tutorials and seminars. The students are well integrated in the clinic, and are expected to participate during rounds and other meetings. Their days are long, they start at 7.30 in the morning, and may have their final seminars at 6.00 PM. My primary tasks within the undergraduate education were tutorials and seminars, and I had about 4-6 hours of teaching each week. My main areas

were endocrinology, contraception, puberty, and menopause. All tutorials and seminars were case-based. I was also expected to participate in briefings and feedback sessions during each of the rotations. Obviously, as I was not cleared for clinical service, I was unable to participate in bedside teaching. However, I was allowed to observe bedside teaching in the outpatient clinic.

3.2 Postgraduate teaching

I also became involved in the postgraduate teaching, i.e. the teaching and training of residents. The Department of Obstetrics and Gynecology had an ambitious program for their junior doctors (not only the residents but also the house officers and the medical officers were expected to participate). We started every morning at 7.30 with one hour of education; Mondays were dedicated to clinical lectures, Tuesdays to scientific presentations, Wednesdays to the Grand Ward Round (a terrible event where the junior colleagues presented all obstetric, benign gynecology and gyne-oncology cases, under the scrutiny and scolding of the senior consultants), Thursdays to Journal club, and finally Fridays for the overall hospital Grand Round (usually invited lectures and visiting scientists). I gave a number of lectures for the residents and participated in the training of the residents who were up for their oral assessment exam during the fall. After the morning sessions, breakfast was served. Besides being very educational, also for me, these early morning meetings provided an excellent opportunity to meet with all colleagues before they rushed off to their busy clinics.

3.3 Research education

Although it was never my intention to be involved in research during this teaching sabbatical, it became clear already in April that professor Eu-Leong Yong had other plans. The Obstetrics and Gynecology Department has a long-standing tradition of involving visiting professors in their research projects, and I soon realized that my experience in psychoneuroendocrinology suited the aims of my mentor. I was early on involved in a project named The Integrated Women's Health Program (IWHP). The IWHP is a longitudinal study on 1,200 midlife Singaporean women aiming to tackle some of the most

common medical health problems in contemporary Singapore, namely type 2 diabetes, osteoporosis and mental health problems. My roles were to act as advisor or informal supervisor of PhD students, research assistants or clinicians, mainly concerning statistics but also regarding content/interpretation and scientific writing. I have been invited to numerous meetings and also had the pleasure of working closely with visiting professor Michael Kramer in this task.

Professor Yap-Chang Chong, newly appointed Dean of the Medical Faculty, is the principal investigator of a famous Singaporean birth cohort; the Growing Up in Singapore Towards healthy Outcome (GUSTO) study. He kindly invited me to participate in, and sometimes lead (as it turned out), the weekly research seminars of the GUSTO study. In doing so, I was introduced to a number of excellent international visiting professors and post docs, in addition to the local staff working with the study. The GUSTO study is, indeed, among the most comprehensively phenotyped birth cohorts in the world, addressing important questions of childhood obesity and neurodevelopment.

4 Activities during the semester

During the first rotation upon my arrival, I had a relatively light teaching schedule. While this was slightly disappointing in relation to the discussions I had had with the teaching staff in April, it gave me further time to familiarize myself, in practise, with the teaching activities and, even more importantly, Singaporean health care. In retrospect, these were very useful weeks as it turned out that there are important differences in obstetric and gynecologic health care between Sweden and Singapore, and I had to adopt my teaching to suit the local perspective. Besides the seminars I had during this rotation, I took the liberty of observing tutorials, seminars and bedside teaching given by my colleagues. I was also given the opportunity to do some clinical observation, and accompanied one of the residents for three days. From the second rotation and on-wards, I was fully incorporated in the teaching rooster.

In September I participated in the 8th Teaching and Learning in Higher Education Conference at the NUS. The theme for the conference was research-based education. I was completely blown away by how research can be implemented and used in undergrad-

uate education, as described by two of the plenary speakers at the conference. During September, I was also asked to give a presentation at the Hospital Grand Round, and choose to talk about mental health problems during pregnancy.

In October I participated in the World Congress on Ultrasound in Obstetrics and Gynecology, which was held in Singapore. During these days, I also hosted some of my colleagues from Uppsala who had come for the congress, and I arranged for PhD student Linda Lindström from Uppsala to give a presentation at the GUSTO research fellow seminars. Linda's presentation on childhood growth in Sweden, using register-based data, was highly appreciated and spurred lots of interest from the GUSTO researchers. October also meant going to Hong-Kong for the STINT conference, arranged in collaboration with the Chinese University of Hong-Kong. This conference was a great opportunity to meet with the other STINT scholars, and share their experiences.

In November, by kind invitation of professor Eu-Leong Yong, my friend associate professor Eileen Luders from University of Auckland spent two weeks at the department of Obstetrics and Gynecology as a visiting scientist. While the main objective of her stay was to finalize a joint project of ours, Eileen's expertise in human brain mapping was of great interest to the GUSTO group. I arranged for her to present at one of the Scientific Tuesday meetings, and we had a fruitful meeting with the PI of the imaging part of the GUSTO study. In November I also arranged for Anna Stakkestad Jobe, wife of STINT scholar William Jobe, and also a licensed pediatrician, to do a two-week clinical observation at the NUH neonatal intensive care unit (NICU). However, in all honesty, my role was merely the facilitator. It should be acknowledged that my HR-administrator did most of the footwork for Anna. Anyway, I believe these two weeks were inspiring for Anna, who was later invited twice to present on Swedish neonatal care, both for the NICU physicians and the nurses.

When the rest of the university closed down after the first week in December, teaching at the Medical faculty continued for another two weeks. I had my final seminar on December 18, and took off with my family for some holiday around Christmas. Remaining time in Singapore was spent wrapping up the ongoing projects with professor Yong, and preparing for the Obstetrics and Gynecology exam in January. The students' exam is due 22-26 of January, and I had promised to extend the repertoire of multiple choice

questions (MCQ). While I honestly dislike the use of MCQ, I provided my NUS colleagues with around one hundred new questions, spanning 10 different topics in Obstetrics and Gynecology. I assume these will be used in the next-coming ten years...

5 The teaching experience

I don't know if it is my age (all students were younger than my own children), the climate, or my over-heated brain, but I fell head over heels in love with my Singaporean medical students. As mentioned previously, teaching was intimate with seminars comprising 6-7 students, and I met with all students several times. In that sense, the teaching situation was relatively similar to Sweden, although we cannot muster up the number of seminars these students were provided with. I had feared the students would be difficult to engage, but these were charming, funny, outspoken, self-confident and extremely well-prepared. They were also very homogeneous; all were born in Singapore, and all were of the same age.

What I most enjoyed was the flipped class-room teaching. All lectures were web-based, and it was a relief not to lecture, but instead focus on case-based teaching. Most of the web-based lectures were also very clear and relevant, and it helped tremendously that the curriculum was structured, and that the department had produced their own textbook. It was apparent that students were well-prepared before coming to my tutorials or seminars, meaning that we could focus on deepening and implementing their knowledge. However, it was also clear that some of the teachers at the department did not make full use of the web-based lectures. As I took the time to observe most of the tutorials my colleagues held, I realized that quite a few of them used the tutorial as a classroom lecture (in contrast with the intention of the teaching staff). The Obstetrics and Gynecology course was also denser, with many more tutorials and seminars than we provide in Sweden.

I was also impressed by the competence of my fellow teachers, and the structured program they had for their professional development in education. All teachers were expected to participate in educational courses, seminars, and conferences every year, corresponding to at least 3.0 points. In addition, they were constantly monitored regarding course performance, clinical skills and research activities. As one of them said, "A is not

good enough, we constantly need to be A++".

The administrative support was phenomenal. The Entrada system, for posting of educational material and attendance, was easy to use. We had two feed-back sessions during each rotation, during which the students were fed a buffet lunch. Whether it was the lunch or the excellent teaching that did the trick, the students nevertheless had very few complaints. Overall, the NUS students accepted conditions that we would never dream of subjecting our students to; tutorials were sometimes re-scheduled to late afternoon (or evening) if the consultant could not find time due to busy clinic, and students had long days on top of night shifts.

Bedside teaching, however, as implemented at the NUS, would not be acceptable to Swedish patients. I prefer not to dwell on that part.

Working in a clinical department also meant that I was in position to observe the end-product of the NUS Medical School, i.e the junior physicians. We always had 6-7 house officers who had just finished medical school, as these are supposed to do four three-month rotations during their first postgraduate year. Despite the fact that my NUS students excelled in textbook knowledge in comparison with their Swedish counterparts, the end-product was still very similar. Where Swedish student may not know of 10 differential diagnoses of low abdominal pain, they are better trained in critical thinking and patient consultations.

6 Important lessons

Working at a high-ranking university means working with extremely skilled colleagues. Humility is thus an important attribute. Further, subject knowledge is key, but this may have to be adopted to the local situation, especially in the health care area.

Working at a high-ranking university also means working with highly skilled students. In order to challenge the students, I had to adopt an entirely different level of teaching. Again, subject and curriculum knowledge helped me identify the areas where the NUS students were deficient.

Finally, I have been extremely well received by interested colleagues. I was lucky to work in an international department, where most senior consultants had trained in

Great Britain, the United States, Australia, or elsewhere abroad. However, the system is incredibly hierarchical, and my integration was no doubt facilitated by the fact that my CV was circulated.

I was overall very happy with my sabbatical, and cannot think of anything that could have been done differently.

7 Action plan

Spending these months in Singapore was overwhelming. Especially, the complete flip of the entire Obstetric and Gynecology course was exhilarating. It is my clear intent to implement the flipped class-room during the Obstetrics and Gynecology course at Uppsala University. My fellow teachers at the Department of Women's and Children's health are already on board, and we will meet with representatives of the Pedagogical Committee at the Medical Faculty in February. The main obstacle for introduction of flipped-class room teaching at my faculty is the financial concern for the department. As of now, the financial reimbursement for web-based lectures is only about 25 percent of that of classroom lectures, and tutorials/seminars also receive less compensation than lectures. We need to settle a financial agreement with the faculty, ensuring that a web-based teaching does not impair the departmental economy. However, I am positive that we can find an agreement. If the Obstetrics and Gynecology course set the standard for flipped class room teaching, hopefully other departments will follow.

Yet another action plan for the future: I will be going back to NUS and Singapore. The Obstetrics and Gynecology department at NUS has kindly invited me for two two-week periods in 2019. I'm going back in August, and again, probably in December. I cannot wait.

Also, I have to reciprocate the generosity by which professor Yong has received me. Being on the scientific committee of the next-coming Nordic Conference on Obstetrics and Gynecology, my plan is to invite him to Reykjavik for a Nordic-Asian symposium on mid-life women's health. I'm sure he will love the invitation.