

# STINT

## Teaching Sabbatical 2018

### Final report



The Ohio State University College of Medicine

Columbus, OH, US

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The Ohio State University (OSU) was established 1870 and today belongs to the highly ranked state universities, also called “Public Ivy” which refers to the ivy-covered traditional buildings of the old universities. Its main campus is in Columbus but has further campuses in Lima, Mansfield, Marion and Newark, as well as the Ohio Agricultural Technical Institute in Wooster. The latest ranking by the U.S. News and World Report placed OSU as 16<sup>th</sup> among the nation's best public universities. OSU has about 67 000 students enrolled.



The College of Medicine celebrated its 100th anniversary in 2014. Its recently reformed curriculum known as “Lead. Serve. Inspire.” is integrating the basic and clinical sciences. The innovative curriculum makes possible for students to combine their medical education with a professional degree in health management, law, business or research through dual programming options offered in partnership with these OSU professional colleges. Approximately 800 students are enrolled. The Ohio State College of Medicine is ranked 31st in the nation and 11th among public universities in the nation for research, and 27th for primary care in 2018. The Ohio State University Wexner Medical Center is a major referral center throughout Ohio and the Midwest (1443 hospital beds, 1571 specialists and 879 residents).

## Preparations & Planning

For planning the academic activities, housing and other logistics for the autumn semester 2018 I have spent a week in April in Columbus. During this week I had an orientation meeting at the Division of Cardiac Surgery which gave me an overview of their teaching activities and clinical work. We planned for co-teaching in clinical teaching sessions and seminars. Furthermore, I was provided further information on the curriculum which opened up for other potential teaching activities during the autumn semester upon request.

Also, I attended a meeting with the representatives of the Office of International Affairs. During a very welcoming meeting they described their roles and gave me a general picture of OSU as well as the possibility to get my questions about the planned sabbatical answered. I got detailed information about the administrative process for the preparations and provided contacts in case I should have further questions. I chose to wait with booking the housing for my stay until the planning trip. My choice was to check possible housing on the internet and just drive around in Columbus to have a feeling for in which area I want to live in. There were a number of reasonable possibilities to choose from and I decided to stay right outside the campus area in Grandview Heights, ten-minute drive from the medical campus. However, the Office of International Affairs provided a list of suggestion in August as they feel that housing is not a problem and planning so much in advance was a little bit unusual for

people in Columbus. During the preparation OSU's administration was always a step ahead preparing and providing information. The extensive administration was handled exclusively on-line (except the compulsory visa form). All my papers and background checks were duly performed in a timely manner without causing any delay or distress for me.

## Tasks & Responsibilities

Upon arrival I was expected to take part in a compulsory introduction organized by the Office of International Affairs. Following a week of introduction I could take up co-teaching. The teaching activities were localized for the triangle of the Wexner Medical center where I had a fully equipped office at my disposal, the Ross Heart Hospital where the clinical teaching sessions took place and the Clinical Skills Center for clinical task training and medical simulation.



**Wexner Medical Center with Ross Heart Hospital on the left and Prior Hall housing the Medical Library and the Clinical Skills Center on the right.**

### Clinical Rounds & Seminars

The Division of Cardiac Surgery at OSU belongs to the Department of General Surgery so as a member of the faculty I was given the possibility of co-teaching at clinical rounds as well as seminars. This was made possible by the Dean of the Medical College providing me a clearance for being present but not responsible for clinical decisions. The clinical teaching rounds are a patient based teaching form. During these rounds medical students and residents present in-house patients on the ward or ICU, suggest appropriate diagnostics and evaluate the results, and give treatment suggestions for the patients assigned to them. This process is supported by the attending (teaching) physicians. For the Division of Cardiac Surgery this meant anesthesiologists, intensivists and surgeons. There are teaching ward rounds at least once a day and a grand round once a week.



## Task Training of Clinical Skills & Simulation

Among the preparatory information I got from the Division of Cardiac Surgery I could find some information on the Clinical Skills Center which made me interested as I work with clinical task training and medical simulation at my home institution. Upon my arrival I was put in touch with one of the simulation specialist, Scott Winfield at the Clinical Skills Center. After a tour of the center, I was invited first to observe and later on were used as a resource for the medical students during their surgical and anesthesiological task trainings.

During the integrated surgical-operative-anesthesiological rotations the third-year medical students have compulsory task training or simulation 4 hours per week. During these training sessions they are tutored in performing clinical skills and patient management.

This is considered to be an important part of the curriculum as the second part of the national board exam for obtaining the medical degree is an OSCE (Objective Structured Clinical Evaluation) in simulated environment.



**Images from upside down: Simulated Patient Examination, Task Training on Models and Simulation Suite.**

©2017 Images of the Clinical Skills Center are the courtesy of The Ohio State University Wexner Medical Center

## Comparison of Cardiothoracic Residency Training US & Sweden

During informal discussions an interest was expressed in the education of cardiothoracic residents in Sweden as an extension to medical education. The topic was proved to be of interest due to the upcoming reforms of the cardiothoracic residency program at OSU. So an informal discussion of pedagogical issues resulted in an ample pedagogical project comparing not only the objectives and the structure of the two systems but also the educational activities and applied learning theories. Actually, serendipity gave me the best chance to study and discuss applied pedagogy against two different social

structures of the two countries. I dare say this proved to be the most challenging and rewarding assignment during my stay.

## Extracurricular Activities

*The Extracorporeal Life Support Symposium: Patient Selection and Management, Circuit Management and Transport*

At the end of September the Division of Cardiac Surgery organized a symposium about ECMO (Extra Corporeal Membrane Oxygenation) and I had the privilege to attend this event. The objective of the symposium was to reach out to the referral instances and establish an educational platform for ECMO in Ohio. So the event was interesting both from teaching and medical perspective for me.

*Scientific Sessions – American Heart Association, Chicago November 10-12, 2019*

The meeting is one of the largest scientific and continuous medical educational meeting in the field of cardiovascular diseases. As Dr. Carl Bellander, my adept at my home institution had a scientific abstract accepted for presentation I decided to attend the meeting as well. This was his very first encounter as a presenting researcher at an acknowledged scientific meeting so it was my pleasure to support him at the venue.

## My Reflections on The Role of The Medical Teacher

The Medical Education Programs

The Lead. Serve. Inspire. (LSI) curriculum of OSU is designed to take a holistic, “systems” approach to human biology and fully integrates basic science learned in the classroom with clinical science applied in the clinical setting. The program has a competency-based framework. Medical students are immersed early in the program in longitudinal, practice-based, clinical service. In systems-approach learning blocks, the students learn about the parts of the human body their function, the associated pathological expressions, their diagnoses and treatments. A team-based, self-directed learning with multiple assessment methods, is meant to provide with individualized learning opportunities. Part I (Clinical Foundations) of the curriculum is divided into eight blocks covering the major foundational science topics and their clinical correlates, allowing students to practice and build on clinical and communication skills. Throughout Part I, students participate in weekly Longitudinal Group sessions one half-day per week to discuss topics on interpersonal communication, physical examination, behavioral/social sciences and clinical reasoning. Students receive basic training in medical interviewing, physical exams and procedures. Working longitudinally, students complete Individualized Projects related to Health Coaching, Community Health Education, and Health Systems,

Informatics and Quality. Part II (Clinical Applications) offers three four-month interdisciplinary rotations. Part III (Advanced Clinical Management) Starts with a Hospital-Based Care eight-week clerkship in which students learn acute care management in an integrated manner. Advanced Management in Relationship-Centered Care is a longitudinal course that emphasizes team-based care of patients with complex or chronic diseases. Advanced Competencies and Electives are offered over a 16-week period (four total elective blocks).<sup>1</sup>

The Medical Program of Linköping University has problem-based learning (PBL)<sup>2</sup> as pedagogical framework. Work in small groups which is the backbone of the eleven semester-long curriculum provides the very foundation for student-centered learning.

Part I of the present curriculum is designed for studies of the healthy organ systems through patient cases (“problems”) and the students get immersed in patient management through regular and extensive primary care consultations. Part II is about pathology and pathophysiology of the organ systems and follows the same structure as Part I. A whole semester of this part is devoted to performing and presenting a scientific project. Part III is about advanced clinical management and covers the last five semesters of the program. Four-week-long clinical rotations are followed by two-weeks of didactics during this part of the program.

The outlines of the programs seem to have very much in common as both emphasize the importance of student-centered learning. Even the curricular structures have similar features not only in using integrated blocks for clinical rotations. I had the privilege to experience learning processes in Part III of these curricula. While the team-based approach of the LSI curriculum has been introduced a couple of years ago, the PBL-practice in Linköping has been applied since the 1980s.

It was an interesting experience to follow the clinical educational sessions at the OSU and see that despite the best intentions of student-centered learning the tutors very often fall back to Socratic teaching or used the well-known master-apprentice model. When enquiring about faculty development programs at OSU Medical College it turned out that there is none though there are recommendations. Teaching assignments are compulsory for the physicians employed at the teaching hospitals throughout the Wexner Medical Center, but they could not have built a common

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<sup>1</sup> College Viewbook OSU Medical College <https://medicine.osu.edu/admissions/md/brochures-fact-sheets/Documents/College%20Viewbook.pdf>

<sup>2</sup> Problembaserat lärande – Vision, Värdegrund och Verktyg, Medicinska fakulteten [https://old.liu.se/medfak/utbildn/pedagogisk-verksamhet/hogerartikel/1.689141/PBL\\_Vision\\_Varden\\_Verktyg.pdf](https://old.liu.se/medfak/utbildn/pedagogisk-verksamhet/hogerartikel/1.689141/PBL_Vision_Varden_Verktyg.pdf)

philosophical and pedagogical platform to use as it would be desirable. In comparison there is a robust faculty development program both for PBL and for teaching in higher education at Linköping University.

#### Clinical Skills Training & Simulation

The Ohio State Wexner Medical Center Clinical Skills Center occupies a space of approximately 1700 m<sup>2</sup> and offers educational sessions for medical (800) and nursing (950) students as well as for healthcare professionals of the hospitals (7600). Clinicum-LiU has an area of 4000 m<sup>2</sup> at its disposal in two campuses (Linköping & Norrköping) and serves solely the 3700 students enrolled to the different programs of the Faculty of Medicine and Health Sciences. Accordingly, the profile of the two simulation centers are somewhat different. What is common that both offers task trainings and simulations at different levels for students. Following best practice recommendations, the educational sessions starts with an introduction (simulation as such and the equipment in the room) which is followed by a simulation and the session ends with a de-briefing (feedback). The first phase, the introduction is quite similar in the two institution. The simulations differ in a bigger extent but the variation between the two centers does not seem to be bigger than within the simulations within any of them. My observation was that these differences arise from the different backgrounds of the simulation educators supporting the sessions. The abundant ways for conducting debriefing at OSU was stunning (GAS: Gather, Analyze, Summarize; non-judgmental debriefing; small lecture, etc.). Debriefing is considered to be the most important part of a simulation session considering that through the reflections made during this part this is the actual part where learning happens. There are variations in debriefing in Clinicum-LiU as well but there is a consensus recommendation for structuring and leading a debriefing. My informal interviews revealed that the simulation educators at the OSU have a very varied education for working as a simulation educator, if any at all. There is no formal requirement for documented teaching competency at any of the institutions. Furthermore, none of them offer faculty development courses to support their simulation educators. Medical simulation as a relatively new teaching modality requires special knowledge of specific learning theories in addition to basic pedagogical knowledge. Simulation practice as a technique supporting learning has been expanding since the beginning of the 21<sup>st</sup> century. Originally a technique aimed to prevent malpractice, it turned out to be an excellent learning modality for adult learners. The expansion of application still goes on with more and more simulation session integrated to new curricula and continuous medical education programs for healthcare professionals. Against this background I find it striking that the pedagogical knowledge of the supporting teacher is neglected in such manner jeopardizing the quality of the simulation sessions.

## Cardiothoracic Residency Training

The basic difference between the two programs is that the OSU Cardiothoracic Residency Program is planned for two years and candidates finished a 5-year general surgery program. As opposed to Sweden, where the residency training is an integrated program and candidates come often after finished internship. Though the objectives are very similar the educational and assessment methods are fundamentally different. While the OSU program offers a standardized program, which is used for all of the residents and graduation upon following the curriculum, the Swedish program is competency based and requires an individual study plan over a suggested time-span. Teaching is very much in the focus of the OSU program and ample didactics are offered in a Socratic fashion according to tradition. Residents in Sweden are given time (10%) for self-study which they use as they consider most useful for their development. Both programs have simulation sessions but not extensively. Finally, formative assessment is given continuously by faculty, but twice a year minimum at both institutions. The summative assessment of taking the Board Exam is expected at OSU while the Swedish residents are signed off by their mentor and the director of the department when required competency levels are met.

Having been fostered in an environment where awareness of philosophical background (social constructivism) is high I found it astonishing that the residency program builds on traditions in the medical practice. Which I found to be in contrast not only with the Swedish program but even with the learner centered policy of the OSU Medical College and their modern curriculum for medical students.

### My take-home message

My understanding of how important to support teachers' pedagogical development so that they can facilitate students' learning processes in the most optimal manner has increased amazingly during this semester at the OSU. Having the possibility to get insight in how learning is supported at another university provides a great opportunity to evaluate the practice and traditions of my own university. Being exposed to something different made me reflect on my own teaching and reflect on learning with fresh eyes. With different traditions, philosophy and set values in their background both universities provide excellent learning environments and acknowledged for their contribution for the education of knowledgeable future healthcare professionals.

Upon my return I intend to explore the possibilities to design and establish a course for novice simulation educators combining application of specific learning theories and simulation specific subjects.



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Thank you STINT!

