

**Shanghai Jiao Tong University School of  
Medicine Exchange Program**

**The Renji Hospital Experience and Curricular Proposal**

Christina Feng and Jessica Yu  
University of Michigan Medical School  
May, 2011

## **Objectives:**

The student should by the end of the Shanghai Jiao Tong University (SJTU) exchange experience:

### *Overall:*

- Observe the differences in all aspects of patient care including inpatient, outpatient, acute and chronic management
- Develop an understanding of the Chinese medical insurance and reimbursement system
- Observe the incorporation of traditional Chinese medicine into western medicine at a western medicine hospital
- Understand the nature of the patient-physician relationship
- Learn about the psychosocial aspects involved in patient care and how they may manifest
- Understand the availability and criteria of various procedures and interventions
- Observe the role of preventative medicine and lifestyle modification in patient care

### *Cardiology:*

- Understand differences in methodology of interventional procedures and various protocols for patient management such as acute coronary syndrome (ACS) management
- Understand outpatient management of chronic illnesses such as hypertension and hyperlipidemia
- Observe differences in preventative health counseling
- Learn more about the diagnosis and management of non-cardiac chest pain

### *Dermatology:*

- Understand the diagnosis and management of major dermatologic illnesses common in outpatient clinic such as herpes zoster, psoriasis, eczema, tinea pedis and vitiligo
- Observe the indications for and methodological differences in various dermatologic procedures

### *Surgery:*

- Observe common general surgical procedures such as laparoscopic and open cholecystectomy, bowel resections, mastectomy and thyroidectomy
- Understand the general approach to the outpatient evaluation and follow-up of surgical patients
- Understand the differences in indications for various procedures
- Observe interventional radiology procedures

## **Contact Information:**

### **Administrative Contacts:**

*University of Michigan:*

Amy Huang

Faculty Practice Group

Email: yanhuang@umich.edu

Tel: 734-763-6461

*SJTU student coordinator:*

Ms. Shuyan Xu

International Affairs Office

Shanghai Jiao Tong University School of Medicine

227 Chong Qing South Rd.

Shanghai, 200025

Email: kyo0918@hotmail.com

Tel:(86)21 63846590 EXT 776411

Fax:(86)21 6384 0879

*SJTU – Renji Hospital:*

Vivian Yang

4th floor, Jiao Xue Building

1630 Dong Fang Rd

Tel: 13641631718 (cell)

### **Faculty Contacts:**

*Department of Cardiology:*

Dr. Gong: Main contact for international students on the cardiology service and the medical student facilitator for the cardiology department. His research interests are coronary artery disease and cardiac critical care.

Dr. Mao: Research interests in electrophysiology and pacemaker applications. He is also interested in psychosocial aspects of cardiac disease is currently conducting research on somatoform disorders. He has developed a standardized form/checklist to identify somatization components of patients' symptoms, which he is currently evaluating.

*Department of Dermatology:*

Dr. Wang: Medical student facilitator for dermatology department. He practices general dermatology and focuses on medical education.

*Department of General Surgery:*

Dr. Jay (Jie) Zhuang: Primary international student contact for the department of general surgery and arranged our schedules. Dr. Jay is fluent in English. He is

focused on student and resident education and has a clinical focus on stomach cancer.

### **How to prepare for this rotation:**

#### What to bring:

- ② Bring medical Chinese dictionary, we recommend one with pinyin for easier translation.
- ② We used an iPhone application called “Pleco”, which is a Chinese – English dictionary and has a free and paid version in the iTunes store. It was the most convenient way of looking up terms on the go.
- ② Bring Shanghai tour book. We used *Lonely Planet Shanghai*. Shanghai has an extensive subway system so consider purchasing a metro card, requires 20 RMB deposit. Also expect a lot of walking, as taxis are relatively expensive compared to other forms of public transit.
- ② Bring medical texts for review such as Pocket Medicine, Maxwell’s and Pharmacopeia.
- ② Bring clinic clothes for inpatient services. Although the residents all dressed fairly casually, the attending physicians dressed more formally. We were provided with a SJTU white coat and scrubs for use during the month. Stethoscope was used a few times on the cardiology service, but otherwise medical equipment was not necessary.
- ② Bring mosquito repellent or mosquito nets. Many of the medical students living in the hospital dorms sleep with mosquito nets, as there are lots of mosquitoes at night. We learned this the hard way.
- ② Consider bringing an unlocked international cellphone and buying a SIM card in China for making local calls. Skype was a great way of staying connected with friends and family back home.
- ② Bring a laptop and Ethernet cable. There was internet available in the student dorms at SJTU.
- ② Bring or buy a small notepad to take notes during the rotation, especially common terminology used in English and Mandarin.

#### What to expect:

- ② Most doctors speak or at least understand medical English but we still found it occasionally difficult to communicate more complex questions. Often quite a bit was lost in translation during conferences and morning rounds.
- ② Many of the SJTU medical students, especially those in the eight-year medical program, spoke English well.
- ② Expect to not have consistent access to printers, fax machines, or scanners during your stay in the hospital. If necessary, search for stores along the sides of streets that print or fax internationally. Instead, bring already printed out forms including the evaluation form for the rotation.

- ☐ Expect to have more of an observational role, unless you are very pro-active about getting involved. Due to the language barrier and only being on each service for 2 weeks, we found it difficult to get involved early on the rotation.
- ☐ At Renji Hospital, we were given food cards with approximately 200 RMB on it for meals during the month. However, the cafeteria was only open during very narrow hours (11am - 1:30pm & 5-6pm) and thus we ate dinner outside the hospital often. We did not use up all the money on the cards.
- ☐ Ask about national holidays in order to prepare arrival and departure dates.
- ☐ We were able to arrange for rides to and from the airport with our SJTU coordinator, Ms. Xu,. There is a metro line from the airport into Shanghai as an alternative option.

# **Clinical Experience and Curricular Proposal**

## **Cardiology Service Overview**

### *Daily activities*

#### **Inpatient:**

- ☐ 8am conference to summarize patient census
- ☐ 9 am: morning CCU rounds
- ☐ Afternoons: admit new patients

#### **Procedures:**

- ☐ Mon, Tues, Thurs, Fri afternoons
- ☐ PCIs, stenting, ablation, angiography, pacemaker placement

#### **Clinic:**

- ☐ Cardiology clinic occurs every day, with attending physicians staffing each half day

### *Types of diseases seen:*

- ☐ ACS, Angina
- ☐ Arrhythmias requiring pacemaker placement
- ☐ Somatization, non-cardiac chest pain
- ☐ Heart failure

### *Recommended Preparation:*

- Review EKG interpretation
- Review management of acute MI, congestive heart failure and atrial fibrillation

### *Observed Curriculum*

#### **Wards:**

Our mornings began at 8am with morning conference to discuss the patient census. Usually, the meeting lasted thirty minutes, during which a medical student would present the admission and discharge numbers, as well as any changes to the admitted patients. Deaths, complications and difficult management issues were also discussed amongst the attending physicians.

Individual team rounds began after morning conference; we were assigned to round with the cardiac critical care unit (CCU) team. This was our opportunity to see patient care, interpret EKGs, and learn about protocols or management of acute conditions. Most patients admitted to the CCU were ACS patients, rarely patients with CHF or arrhythmias. We later learned that many CHF patients who needed chronic management were not accepted due to slower inpatient turnover and the high demand for beds.

Occasionally, we also joined the general inpatient cardiology team rounds. Patients on this service were also mostly admitted for ACS care but they were more stable and often waiting for interventions. During one such occasion, we rounded with Dr. Mao who pointed out several patients with non-cardiac chest pain. That day we saw an elderly lady who appeared anxious during rounds. She was shaking and rubbing her sternum with her fist, her eyes scanned the



***Morning cardiology conference. Dr. He, director of cardiology department sits on far left.***

room quickly and she was moaning. When asked, she answered, “yes, I’m in pain” and that the chest pain had not changed in any way since admission. An angiogram had been performed and showed only mild stenosis, therefore not explaining her symptoms. Her son, concerned that she was still in pain, asked for a repeat angiogram as he believed the previous one was inaccurate. When Dr. Mao explained that this was non-cardiac chest pain and that she may have somatization disorder, she and her son refused to accept the diagnosis. Despite repeated explanations, the patient and her son continued to believe that there was an underlying cardiac condition. Dr. Mao explained that this was not uncommon among patients and that he planned to prescribe some anxiolytics to demonstrate that there was no cardiac condition.

During our time on the service, we observed each team member’s role, which was similar to the organization of our teams at University of Michigan. The resident physicians admitted new patients, followed-up on old patients and wrote all of the notes. The SJTU medical student on the team was very active and did most of the EKGs and blood sugars readings. There were quite a few differences we observed in the SJTU CCU compared to our CCU. We were surprised by how many patient beds were placed in one large CCU room, 12 beds in total, without any partitions except for a cloth screen when privacy was needed. Patients in the CCU seemed more stable than we were expecting. We even saw many new patients walk into the CCU unassisted to be admitted to a bed.



**CCU inpatient team.** Christina Feng (third from left) and Jessica Yu (third from right) spent 2 weeks on the inpatient cardiology team, led by Dr. Gong (far right) at Renji Hospital in Shanghai, China.

**Procedures:**

Following rounds, we would observe various procedures scheduled for the day. The interventions varied based on the day of the week. Tuesdays and Thursdays were set aside for angiography and stent placement while Mondays and Fridays were pacemaker placement and electrophysiology procedure days.

**Clinic:**

We also attended two cardiology clinics with Dr. Gong and Dr. Mao. The outpatient clinic experience was very revealing in terms of seeing the inefficiencies of the



Chinese medical system. Our experience in Dr. Gong's clinic was quite interesting. A junior attending and Dr. Gong were both in the clinic room seeing patients at the same time. On that half-day, about fifty patients were seen, each visit lasting only four to five minutes. We noticed that very few physical exams were performed, other than a brief cardiac exam, however most patients left with some form of prescription.

**Entrance of outpatient building.** People wait in line to see which doctor they would like to see that morning and afternoon.

approximately one hundred patients, spending again only about three to four minutes with each. However, Dr. Mao had a special emphasis on the treatment of

Dr. Mao's clinic was just as busy, however, quite different. During a full clinic day, Dr. Mao saw



non-cardiac chest pain and somatization disorders. Patients whom he believed to be suffering from depression or somatization disorders were told to fill out a form that he had designed in order to perform a thorough review of systems. The form had an objective score applied to each response based on whether the patient filled out “sometimes”, “frequently”, or “often” to a specific symptom. Dr. Mao then used the final score to determine if the patient required anti-depressant therapy. He explained that he was one of the only physicians at Renji hospital who felt comfortable managing depression, anxiety and somatoform disorders. He felt that by developing this form, he could help other physicians manage somatoform disorders as well. He said that this practice was particularly necessary since there are no primary care physicians in China. Patients refer themselves to whichever specialist they want to see, or are told by a triaging nurse the clinic they should go to. As a result, many patients can wait an entire morning to see a physician only to be told that their symptoms were not cardiac in origin. They would then be sent to see a different physician, such as a pulmonologist or surgeon, leading to a very inefficient use of medical resources.

***Outpatient cardiology clinic.*** Dr. Gong (top) is seeing a patient concurrently with another cardiology physician as patients wait in line outside the door.



### **Didactics:**

Attending physicians held medical student lectures approximately once a week. On our two weeks on service, we attended one such lecture given by Dr. Gong about chest pain differential diagnosis and management.

We also attended a department-wide teaching conference geared more towards residents. There, a fellow presented a patient case and one of the senior attending physicians lead a discussion regarding the case. Our particular discussion involved the use of milrinone in congestive heart failure.

### **Other:**

We asked to see the emergency department during our cardiology service on one of the less busy days. We were given a tour by one of the CCU residents who showed us the general process of admitting patients from the ED. We learned that patients who arrive in the ED must be accepted by an inpatient service in order to be transferred to the wards. Often, patients who arrive with symptoms of heart failure are refused

admission into the CCU due to the chronic nature of their disease and availability of beds. Thus, these patients can stay in the ED for an extended period of time since they are too sick to leave the hospital. Patients who arrive in the ED can also be seen quickly by attending physicians from different specialties who are specifically staff for the ED that month, such as ED neurology or ED cardiology in clinic-type rooms.



***Emergency Department at Renji Hospital.*** A separate large room was used specifically for patients who required IVs in the ED (left). Often, the ED was overcrowded and patients were placed on beds lined in the hallways (top right).

#### Proposed changes for curricular improvement

We felt our two-week rotation in the cardiology department was quite comprehensive and gave us a good sense of the practice of cardiology in China. Rounds were educational as long as the attending physician actively engaged us in the discussion. We were able to only spend one day on the general wards, but felt more time devoted to this would give a more diverse experience.

Even though we understand basic Mandarin Chinese, the use of Chinese medical terminology along with local dialects made it difficult for us to comprehend fully what was going on. Dr. Mao and one of the residents on the CCU team felt more comfortable using English with us. We were able to ask more questions and gain further understanding in their answers since they were able to provide English translations for medical terms. Thus, it was invaluable to have at least one team member who spoke English to help us translate.

We also recommend the outpatient clinic experience to future exchange students. Spending even half a day to a full day each week in clinic will allow the student to learn about longitudinal care. Because future students may have language barriers to overcome, we suggest providing students with a schedule at the beginning of the rotation. This will help future students plan for any conferences or lectures and truly get a diverse experience.

One aspect that we did not get to see was how patients were evaluated before admission, although we did get a brief tour. We did see the new patient admission process once they got to the CCU, which was similar to our own. We would, therefore, recommend an ED experience, whether it is through an inpatient service or a full rotation in the ED. Also, due to the high volume of patient admissions, a variety of diseases can be observed.

## **Dermatology Service Overview**

### Daily activities

8:30 – 9:30am: Medical student lecture

9:30am – Noon:

- ☑ Teaching clinic with Dr. Wang
- ☑ Procedure clinic

### Types of Diseases Seen:

- Eczema
- Infectious - Tinea, Scabies, Warts
- Psoriasis
- Zoster
- Allergic and contact dermatitis
- Vitiligo

### Preparation:

- Review the findings and management of common dermatologic illnesses including psoriasis, eczema, dermatitis and zoster.

### Observed Curriculum

#### **Didactics:**

Each morning began with a thirty minutes to one hour long medical student lecture based off of the required text for the rotation. We were lent a textbook by one of the medical students. Topics covered ranged from viral, bacterial infections to allergic dermatitis and eczema. Lectures were entirely in Chinese; however we were able to follow along using the figures in the book. The textbook also had key phrases and diagnoses in English, making it useful for learning key dermatologic terminology.



#### ***Dermatology clinic waiting room.***

*There were usually three clinics open with two additional rooms available for detailed physical examinations*

**Clinics:**

We were expected to shadow in clinic following lectures every morning. During our rotation, SJTU medical students were also present in clinic and we gathered in a clinic room especially focused on student teaching. Patients with classic presentations of common diseases were typically triaged to this clinic, led by Dr. Wang. Therefore, each morning we saw only four to five patients, compared to the normal twenty to thirty seen in the regular clinics. Because of the set up of the clinic rooms, patients presenting with possible STIs or those needing more in depth examinations were sent to other clinic rooms. The attending also had only male students observe the male patients with dermatologic pathology involving the groin region. We were occasionally allowed to do a brief exam including scraping of psoriasis patches. Although most patients were examined solely by Dr. Wang who would then explain the findings to us; when asked, Dr. Wang would attempt to provide an English explanation for us.

We were encouraged to observe dermatologic procedures that were done by another attending. For example, on our first day, we observed a patient who had a facial wart removed. In the procedure clinic, we also watched electro-cautery wart removal on several other patients. In addition to wart removals, we also watched a session of phototherapy for vitiligo.

**Proposed changes for curricular improvement:**

This rotation allowed us to experience what a rotation would be like for a SJTU student. Unfortunately, it is not geared well for an exchange student. In particular, the attending and students were not able to translate the medical terminology very well. This was especially challenging given the amount of time we spent in didactics. Furthermore, because there were five other medical students, we did not have much hands-on experience. This rotation could be improved by assigning exchange students to another clinic in addition to the specific teaching clinic, and perhaps a whole or half-day dedicated to the procedures clinic.

**General Surgery Service Overview:****Daily activities**

7am patient rounds

8am conference to run patient census

9am operations begin usually lasting until early afternoon

- Exception: Shadowing in clinic with Dr. Jay every Wednesday and observing interventional radiology procedures

**Types of diseases seen:**

- ☐ Acute cholecystitis, biliary colic, chronic cholecystitis

- ☒ GIST, stomach cancer
- ☒ Malignant breast cancer, lung and liver cancer

Types of operations seen:

- ☒ Cholecystectomy, open and laparoscopic, with and without CBD exploration
- ☒ Tumor resection
- ☒ Mastectomy
- ☒ Chemotherapy treatment

Recommended Preparation:

- Review knot-tying and suturing skills
- Review management of common general surgical procedures as listed above

Observed Curriculum



**General Surgery Service at Renji Hospital.**  
 From left, Jessica Yu, Christina Feng, Dr. Jay

**General Comments:**

The general surgery service covered three floors in the Surgery Building, with different attending physicians on each floor. The 11<sup>th</sup> floor has about 40 beds whereas the 12<sup>th</sup> floor has about 80. We were assigned to the 10<sup>th</sup> floor service with Dr. Jay as our faculty contact who was responsible for our schedule. In addition to Dr. Jay, many of the other attending physicians and residents on that service spoke English very well and were able to help us during the day.

**Daily Activities:**

Our day began with morning conference at 8:00 – 8:30 am. Afterwards, we usually followed a resident to one of the day's procedures. The most common operations we saw included laparoscopic and open cholecystectomy, bowel resection, mastectomy and lumpectomy. We were allowed to scrub in on two of the procedures but did not have much hands-on involvement as there were many people already present at the operating table. Each

operation usually included one main attending, a second attending as first assistant, and one resident as the second assistant. The main attending physician performed most of the procedure and there wasn't a heavy teaching component to each



procedure. However, the technical aspects of each operation were very similar to ones in the U.S. Most of the scheduled operations for the day ended in the early afternoon. Some things that we noted as positive aspects of the Chinese system were the extremely efficient turnover times for each operation and the concern for cost to the patient. For example, during a laparoscopic cholecystectomy, instead of using a special laparoscopic net tool to collect the resected gallbladder; surgeons simply used a sterile surgical glove as a net, so that the cost would be much less for the patient.

Additionally, each general surgery floor takes emergency surgery call once every four days, and most of the procedural teaching occurs during the emergency cases. Floor management was also done mostly by the resident on call and medical students, who also write the daily progress notes and attend to the day-to-day patient concerns.

### **Inpatient wards:**

Most patients who undergo what normally would be outpatient procedures usually spend at least one night in the hospital and leave the next day. Patients who undergo more advanced procedures usually stay around ten days to two weeks in the hospital. The longer in-hospital time is usually due to concern about poor follow-up that occurs in the outpatient setting and possible complications due to this. Occasionally, before the operations for the day, we followed SJTU medical students to examine patients, change wound dressings, and take history and physicals on newly admitted patients.

### **Outpatient clinic:**

Once a week, we went to outpatient clinic for a half-day and observed Dr. Jay and his interactions with his patients. Most patients were surgical follow-up patients; quite a few were long-term cancer patients. One interesting aspect of outpatient clinic we saw was that many families came into clinic to ask questions on behalf of the actual patient, who were not able to come to clinic. As a result, Dr. Jay usually had to ask the family members or friends to come back with the patient so that he ask the patient directly. We were also taken to observe interventional radiology procedures during the clinic days and observed directed chemotherapy delivery for a variety of different malignancies.

### *Proposed changes for curricular improvement:*



***Operating room.*** The Surgery Building has 14 floors devoted to all surgical services. ORs span 2 floors of the building. Each inpatient floor has from 40 to 80 beds.

Future students should try to report to the conference room at 7:30 am a few days during the rotation to attend surgery work rounds. New patients were evaluated throughout the day; however, since most patients only spoke Chinese we found it hard to communicate directly with them. Future students should instead follow SJTU residents and medical students to observe the admission process.

We had no problem communicating with Dr. Jay who provided us with a great schedule daily; however because the schedule varied so much, having a schedule at the beginning of the rotation would have been useful. Furthermore, we were not able to attend any didactics during our rotation although we were told there usually are grand rounds. During our rotation, the session was cancelled due to graduate student dissertations that took the place of grand rounds that week. We suggest including a conference schedule as well.

It would be useful to see how emergency call is conducted. Students can use one of the days that the surgical team is on call to follow the medical student on call that day. That way,, the student can observe the initial evaluation of such patients and attend any emergent surgeries. We would also suggest students continue to attend.

## **CONCLUSION**

Overall, we found our experience at Renji Hospital to be extremely rewarding. We were able to accomplish our primary goal of understanding the differences between the Chinese and American health systems. We found this to be particularly relevant during our outpatient experiences because of the lack of primary care physicians or any referral systems. We also saw each day the impact of the sheer number of patients on every aspect of the Chinese medical system. We feel that these experiences were by far the most important learning objective of this rotation; therefore, we recommend that for future students to have an even more diverse experience than we did. Students should experience at least four different aspects of medical practice, including medical and surgical, outpatient and inpatient care. Therefore, because future exchange students will be unfamiliar with the hospital, having a structured schedule will be very important.

While developing a better grasp of the management of illnesses in different specialties was very important to us, we found this difficult due to the language barrier. Therefore, we think a more important objective is to understand the differences in management in order to develop a better understanding of the protocols we use in the US. We feel it is important to review current management of common diseases in whichever specialty future students will be assigned to in order to critically analyze these differences. All the attending physicians, residents and students we met were more than happy to discuss any questions or translate any terminology for us to the best of their abilities. Although we both have basic knowledge of Mandarin, we found it difficult to communicate directly with the patients, although we were able to better communicate with our teammates and attending physicians. Because future students may not have any knowledge of Chinese, this language barrier may be best addressed by assigning future exchange students to teams with someone who can readily interpret.