Faculty of Medicine Siriraj Hospital, Mahidol University

Siriraj Resident/Fellow Exchange Program

To University of California, Los Angeles, United States of America

(Period of visit from 1/2/19 to 26/2/19)

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Study Year: Third Year Resident, 2018

Overseas Clinical Elective Rotation Final Report

My name is Nutnicha Preeprem. I'm now a third year pediatric resident at Faculty of Medicine Siriraj Hospital, Mahidol University. And I'm going to pediatric critical care fellowship program after I finish my residency training.

Last February, I attended my elective rotation at Ronal Reagan Medical Center, a 520-beds hospital at University of Los Angeles, California (UCLA). A pediatric division, Mattel Children's Hospital UCLA, contains 131 pediatric inpatient beds with 18 beds in PICU. There are affiliated hospitals where the residents rotate for training and the patients are referred back from UCLA to continue the treatment.

Since I am going for pediatric critical care fellowship, what I expect from this exchange program is to see how different between PICU in developed country and in our place, Siriraj Hospital, including the diagnosis of the patients, the management from each experts, the care team, and the system of ICU.

Mattel Children's Hospital PICU provides support for medical and surgical critical care including post-transplantation care which I have never worked on it after couple of years of residency training. It is one of the fields I expect to see.

Moreover, I expect to see how is the residency and fellowship training in another school in another part of the world. Besides, it would be nice to have a good relationship with physicians in other medical school. Apart from studying and practicing, I wanted to learn how the healthcare system in developed country is. And I hoped I would get some ideas to improve ours.

I attended PICU with Prof. Yonca Bulut, one of nine pediatric intensivists, in 18-beds PICU. And in another wing of PICU, I also attended pediatric cardiothoracic ICU (or PCT-ICU) and cardiology with Clinical Prof. Nancy Halnon.

The cases in a hospital floor and PICU are not that far from ours by the characteristic of the cases but the ratio is a little different. Almost half of them are post-transplant patients including liver transplant, kidney transplant, and heart transplant patients (whom are treated in PCT-ICU.) I didn't have much experience in post-transplant patients since they weren't monitored in our PICU but in other special wards instead. These attract my interest and much more after I know that our PICU trends is to service those post-transplant patients beginning with post-liver transplanted one.

Apart from those post-transplant cases, complex chronic diseases are alike to ours such as a baby with bronchopulmonary dysplasia, complicated SLE, acute illness in patient who has underlined neurological deficit such as cerebral palsy, metabolic genetic disease and even a case with multiple organ failure which is still a problem and being under investigated for a diagnosis. There are myocarditis cases with uncompensated heart failure treated in PCT-ICU where they are supported with ECMOs. Other general PICU cases such as septic shock, severe respiratory tract infection with respiratory failure are what we could see in our PICU also.

In the aspect of practice, there is not much difference I observed and most were some certain medications use. Some are due to individual reasons but some are resulting from less limitation of financial problem comparing to us. However, overall practice are relevant to what I learned from our institute.

The differences I observed are not only in medical practice but in the service system also. First of all, routine multidisciplinary team round is what impressed me the most. At 7.30 AM of everyday, the team which consists of attending staff, PICU fellow, residents, nurses, respiratory therapist, pharmacist, starts a round systematically and holistically. For some cases, the team is completed with those supporter officers including a staff from a child life program and an interpreter who helps parents understanding what are going on about their child without language barrier.

The office work is absolutely paperless since all of patient records including personal data, medical history, physical examination, laboratory, even an off-service and consultation notes are electronic. Thus the doctor orders can be placed via computer program. To me, who is a pediatrician to be and going for critical care training, this is such a lean user-friendly program that could enhance our potential from those well-known overwhelm paperwork and could lessen the errors such as poor hand-writing problem and medication dose calculation error. Besides, there are so many guidelines that are ready-to-use contained in the program also.

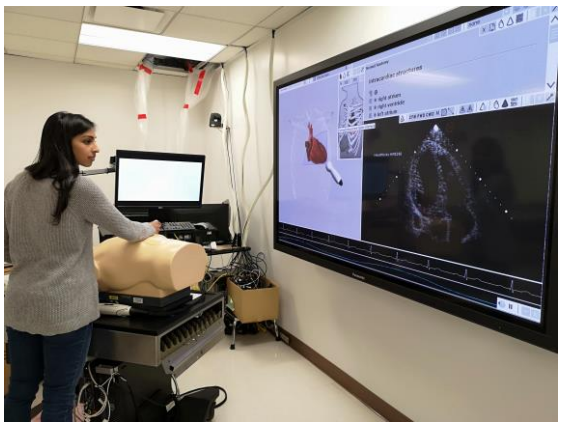
The referral system is an interesting model. The primary physician has to be seen before the patient is referred to higher level of medical care like tertiary hospital or medical school hospital. And those affiliated hospitals continue the care after there is no more complex condition. For me,

and I assumed for other pediatricians also, it would be wonderful if the kids have their own primary physician who is a general pediatrician to take care of their general condition including growth, development, nutrition, immunization, and psychosocial issues.

In our place, Siriraj Hospital and Thai health care system, referral system is not as good as we all expected. In my opinion, well-formed referral system with affiliated hospitals will provide more space for those patients who really need specific care and resources in medical school.

Aside from knowledge, differences of system remind me there are many things to be improved in Thai healthcare including unequal insurance system, referral and affiliated hospital system, and as all of pediatricians' concerns, opportunity to receive complete immunization. It is not easy to change this big problem, unless it is a nation policy. And I will voice this problem whenever I have a chance.

I also joined the academic activities which are moderated by a chief resident who always keep it interactive. What I observed is a little different from my guess. Among Thai student, it's said that we are unconfident and reluctant compared to world students. But after I joined a numbers of activities there, I felt different. We could discuss confidently in both medical practice and other aspects. Sharing some experiences on those common and rare cases from Siriraj Hospital made my friends and I felt so lucky and proud of our institution that we are in a place with high-quality resources including cases and knowledges from our teachers. In my point of view, this could encourage our students to be confident and show off our potential.



Point of care ultrasonography (or POCUS) work shop was held during I was there. POCUS makes us easier to assess of volume status, effusions, and even cardiac function. It was similar to a workshop held in our department so I could practice again with a simulator. And I really hope we still have this workshop

Another thing I got from this exchange program is relationship and connection. I got warm welcome and had a good time there with attending professor and resident friends. And I wish I could welcome them if there is any opportunity also. I believe my experience and this

relationship will provides benefit to our institute, and also, to me in continuing my study abroad in the future.

In Los Angeles, there are plenty of ethnicities but there is American style among those variation. In my point of view, some characteristics of the Americans that are different from the Thais is self-confidence and being prompt to ask or find out when they are in doubt.

Besides, how to live aboard is what I learned aside from medical practice. Having all-time English conversation help me improving my language. Those residents and fellows were very welcome me and my friends so it didn't take long time to make friends with them especially with some of them who have been in Siriraj Hospital in department of pediatrics.

After this elective period, I came up with an intention for myself and my work place. As I mentioned earlier, post-transplantation field is what I am not familiar with. But I am now taking my eyes on it. I plan to study more on this subject and plan to attend those special ward in elective rotation during my fellowship training.

In the other aspects, compare to our institution, there are many interesting things that I observed at Mattel Children's Hospital UCLA that inspire me some ideas to improve my place. As I mentioned, paperless system is such a wonderful system I wanted it to be established in our place. Although I realized this thing couldn't happen so soon but if I have any chance to change it, I will willingly do it to improve our quality of care in our hospital.

For the ready-to-use guidelines, in Siriraj Hospital, there are plenty of experts and guidelines, however, they are placed separately. I think it would be valuable if we can gather it all together systematically.

These intention may sounds too far from my ability as I am just a resident, yet, I got some little idea I got from PICU I visited and I planned to do it in my place. It is a dosage table of continuous drip medication, such as sedative agents and inotropic drugs, which shows ready-to-use amount of each medication in milliliters with calculated per-kilo dose. I used to handwriting it in some cases when I was rotating in PICU and NICU. But from now on, I planned to create it routinely. I believe this could lessen an error which is benefit to us and our critical little patients.

Finally, I would like to sincerely thank you for the scholarship and the MoU contract. I would be thankful if this beneficial program still going on and supporting resident and fellow opportunities to spend elective rotation abroad.