

Introduction

From June 2023 through July 2023, I was part of a global exchange program between RWJMS and Kobe University School of Medicine – spending 3 weeks at the Division of Disaster and Emergency medicine.

Methods

- This was the first time RWJMS had an exchange program with Kobe University.
- This exchange program was free of charge although flights, lodging, and food came out of our own expenses. My funding came from:
 - A stipend from the US Army National Guard.
 - Pay from Vive Collective – a California-based venture capital firm.

I was also given The Sukumar and Anne Nagendran International Medical Study Scholarship which generously helped fund my exchange program.

- California-based

Background Info

- As of 11/8/2023, Japan had a population of 123,056,390.
 - **0.53%** decline from last year which has capped off 14 straight years of population decline.
 - Peak of 128,117,042 in 2009 – **3.83% decline since 2009.**
- Median age is **49.1** to the US which is 38.9 years.
- Total land mass is 364,555 km² (140,755 sq. miles) with a population density of 338 per km² (876 people per sq. mile). The US is 96 people per sq. mile.
- 93.5% of the population lives in cities (115,292,289 people).
- Infant mortality was **1.7 deaths per 1,000 live births** in 2021 compared to 5.4 deaths per 1,000 live births in the US.
- Average life expectancy is **85.03** compared to 76.4 in the US.
- Leading causes of deaths:

1) Malignancy: 27.2%	1) CVD: 21.1%
2) Cardiovascular disease: 15.1%	2) Malignancy: 17.5%
3) Senility: 8.8%	3) Injuries: 6.5%
- Japan has the third largest economy in the world with a nominal **GDP of \$4.41T** and is the largest creditor in the world.
- Unemployment rate as of August 2023 was **2.70%**.
- GDP Breakdown:
 - Agriculture: 1.1%
 - Industry: 30.1% - includes car manufacturing, finished goods, textiles, etc...
 - Services: **68.7%** - includes tourism, consulting, finance, entertainment, etc...
- Average annual income is **6,170,000 JPY (\$45,453).**
- Literacy rate is **99%** (US is 79%).

Kobe University School of Medicine

- Kobe University is a government funded public research institution based in Hyogo Prefecture.
 - Annual tuition at Kobe University is 535,800 JPY which is about \$3,500.
- It is the 2nd largest hospital in Kobe with 920 beds.
 - ED volume was about 3,000 patients per year.

Primary Point of Contact:

- Our point of contact was Joji Kotani MD/PhD – head of the Division of Disaster and Emergency Medicine.
 - Contact info: kotanijo0412@gmail.com

Goals for Studying Abroad

- Learn more about Japanese medical system and their education system – Japan is known for producing top-notch doctors and treatment modalities so I wanted to see part of that process.
 - Compare the Japanese system with the US.
- Learn Japanese – although unrealistic to fully master a language, I wanted to learn basic phrases.
- Have a proper cultural immersion program – the best way to learn about others is to live and work somewhere. Studying abroad offered a true cultural immersion into the Japanese way of life.



The doctor's car, which is based out of the hospital is dispatched through the EMS system for severe calls when the need exceeds what EMS can provide.

Summary

Formal Lectures and Training:

Each morning of my rotation started off with morning rounds. Throughout the week, there were formal lectures. I attended the following lectures:

- BLS and ALS procedures.
- Evidence-based medicine.
- Disaster and emergency medicine system response in Japan.
- Endotracheal intubation procedures.
- Pericardial Thoracentesis procedures.
- Chest tube procedures.

Program Training Locations:

Over the course of my 3 weeks, I spent time at 4 different hospitals.

- Week 1: Kobe University.
- Week 2: Kobe University/Konan Medical Center.
- Week 3: Kobe City Medical Center General Hospital/Hyogo Emergency Medical Center/Kobe University.

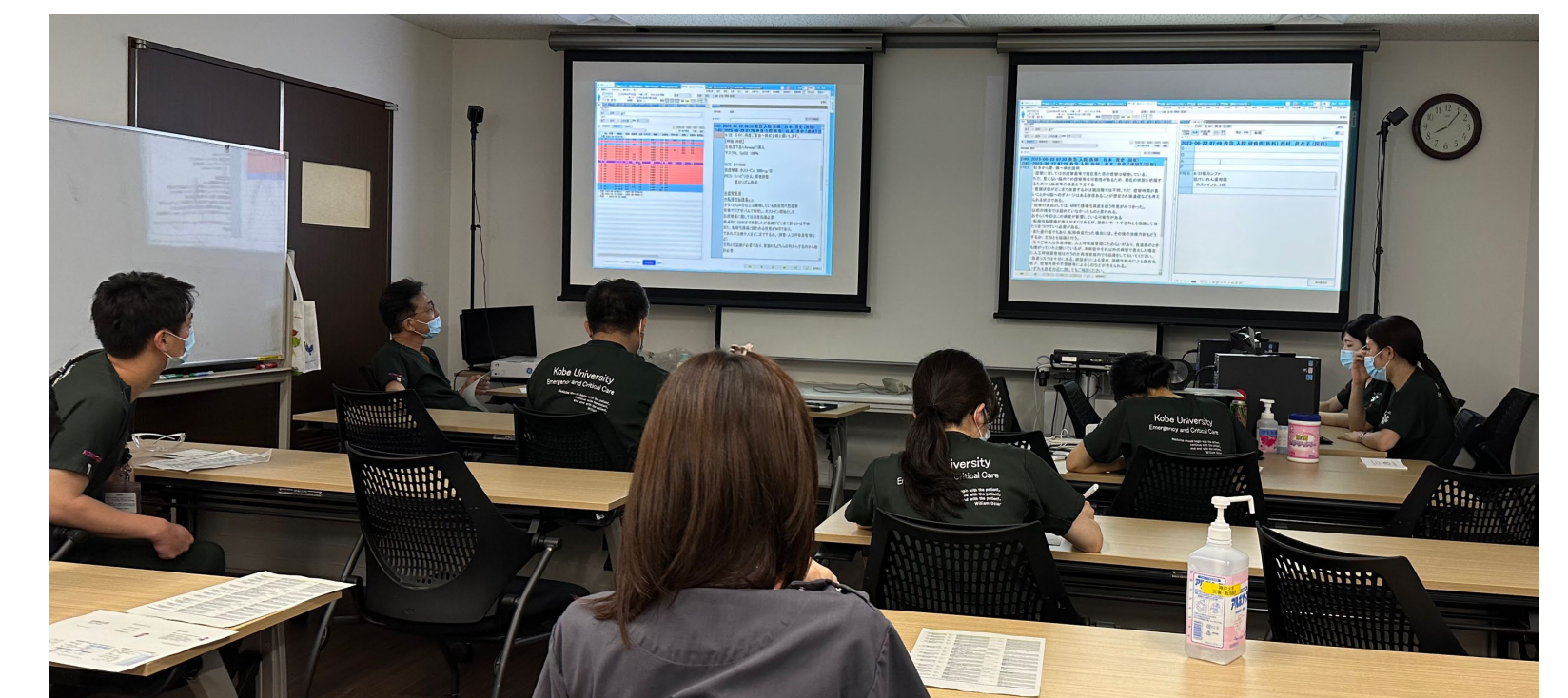
Kobe University, Hyogo Emergency Medical Center (HEMC), and Kobe City Medical Center General Hospital (Kobe General) saw the highest acuity patients while Konan saw much less severe patients. Kobe General was also the largest and busiest hospital with over 25 ED beds and an ICU. HEMC was the least busy but saw the highest acuity patients. Kobe University was in the middle in terms of patient volume and acuity.

Japanese Medical Training:

- 6 years of medical school (typically straight out of high school).
- 2 years of “Junior Resident” – Junior Residents are matched into hospitals and rotate through all services to learn the basics of medicine.
- Senior Residents must match into a certain hospital and residency and this is when they begin their true specialty of choice training
- Resident pay is typically around 5,300,000 JPY (\$35,000) and attending pay is about 22,500,000 JPY (\$150,000)
 - Pay is standardized via the government regardless of specialty.

Health System:

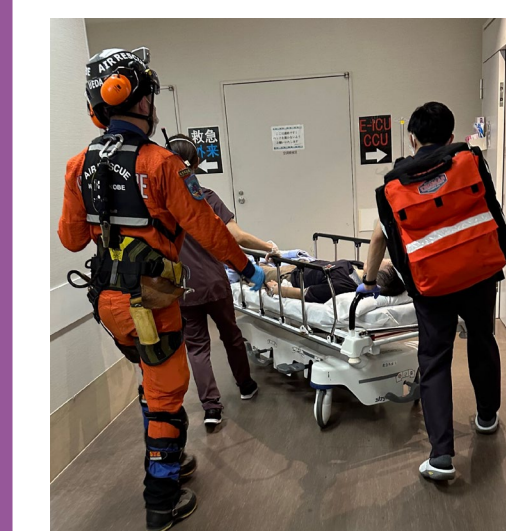
- Universal Healthcare system – patients pay based on income and government pays the rest.
 - Out-of-pocket expenses are capped.
- National insurance mandate.
- Hospitals must be non-profit and physician-managed.



Top: Starting each morning with morning rounds.



Top: CT scanner in the resuscitation bay.



Left: Heli patient after collapsing on a mountain.



Right: Tracheostomy performed in the ED.

Right: A true cultural exchange of sharing American candies – Reese's was the favorite.



Left: Coffee break with Dr. Kotani

Conclusions

- Doctors are called “Sensei” to signify that their main job is to teach their patients and their students.
- “People are People and Doctors are Doctors.”
 - Whether Japanese or American, doctors will be doctors and will always want to do their best to care for patients.
- We may have two systems, but the core of being a doctor is the same.
- Universal healthcare really limits the financial burdens of healthcare on populations.