

Governor's Newsletter for all ACP members

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Governor: Shotai Kobayashi MD, MACP



(Photo by Toshihiko Hata, MD, FACP)

In this issue

Special Feature: The Medical Service of ACP Japan Chapter's Members in the Tohoku Earthquake

Part 1: Reports from Members Living in the Disaster Area

Part 2: Reports from Members Contributing to the Support of the Disaster Area

Serial Publication: Clinical Medical Education in the USA

Medical Education in the 3rd and 4th years in US Medical Schools

ACP Japan Chapter Governor's Newsletter for all ACP Members, No. 2

Table of Contents

Governor's Address

Shotai Kobayashi, M.D., MACP, Governor; ACP Japan Chapter

Special Feature: The Medical Service of ACP Japan Chapter's Members in the Tohoku Earthquake

Part 1: Reports from Members Living in the Disaster Area

The inspection report in the Heisei Sanriku Massive Tsunami

Shu Konno, MD, PhD, FACP

Part 2: Reports from Members Contributing to the Support of the Disaster Area

Support provided on behalf of various Japanese Red Cross Society facilities to Ishinomaki Red Cross Hospital after the Great East Japan Earthquake: Project participant report

Toshihiko Hata, MD, FJSIM, FACP

Guidelines for Non-Medical Care Providers to Detect Illnesses in Elderly Evacuees

Takashi Takahashi, MD, FACP

Flying Carp Banners over the Rubble

Kazuo Komamura, MD, PhD, FACP

Serial Publication: Clinical Medical Education in the USA

Medical Education in the 3rd and 4th years in US Medical Schools

Jenny Wright MD and Douglas Paauw MD, MACP

■ Governor's Address

Shotai Kobayashi, M.D., MACP, Governor; ACP Japan Chapter



Hello! The first year is flying away very quickly.

This is the second English version Newsletter from Japan Chapter.

We will publish another four impressive reports of Tohoku disaster from our members who worked at the disaster area from a very acute stage to a chronic stage.

This year, we have started publishing the English version of Newsletters for all ACP members more than twice a year as well as the Japanese version. We will report activities of the Japan chapter.

This year also, we have created a fund (100,000 yen/person) to support 4 young physicians to attend Internal Medicine 2012. We expect them to serve as ACP ambassadors who will spread information of ACP activities to our members.

In addition, we are proposing an exchange program of young physicians between Japan and other U.S. chapters, starting from 2012.

We hope this trial will succeed in making closer relationship among ACP Chapters.

■ Special Feature: The Medical Service of ACP Japan Chapter' s Members in the Tohoku Earthquake

Part 1: Reports from Members Living in the Disaster Area

The inspection report in the Heisei Sanriku Massive Tsunami

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A massive 9.0-magnitude earthquake occurred near the Tohoku district on the Pacific coast of northeast Japan at 14:46 on Friday, March 11th, 2011. It was said to be a once in a 1000 years event. The affected area consisting mainly of Iwate, Miyagi, and Fukushima Prefecture undertook catastrophic and unprecedented damage due to the extremely destructive tsunami waves which hit Japan about 30 minutes later after the earthquake. On Wednesday, March 23rd, 13 days after the earthquake, we left for the old Kishuu afforestation which was used as a mortuary in Unosumai town, Kamaishi city for the inspection by the request of the Morioka City Medical Association. As of the 23rd, there were 2773 dead, 5028 missing, and 130 injured individuals in Iwate Prefecture (Figure 1).

1. Morioka city- Unosumai town in Kamaishi city

Rose at 6:00 am. The day was fine with clouds forecast later. The expected low and high temperature for the day were -4°C and 5°C. I took a shower and cleanse myself as proper spiritual preparation. My clothing consisted of a hat with the ear

covering, a towel as a scarf, 6 layers on top, 5 layers on bottom, two pairs of socks and boots as protection against the cold. The chill of the light snow flurries on that day invaded the body gradually. Still, it seemed necessary to bring Hokkairo, Japanese hand warmers, if it had been possible to obtain them at that time.

At 8:40, Mr. K, the Iwate Prefectural Riot Police, arrived at my hospital in his car to pick me up. The fellow passenger was Dr. K, director of Matsuzono First Hospital. The three of us were together the entire day.

At 9:15, we finally entered Route 396 before Morioka South Big Bridge. The gas stations had long lines at each stand in Morioka City, Tono City, and Kamaishi City without exception, which was causing the jam inasmuch as there were few traffic lanes. These scenes sprang into our vision through the car window and flowed to the rear alongside unordinary scenes with many vehicles of Self-Defense Forces, packed taxis, and unfamiliar building of Self-Defense Forces based in Tono City,

At 11:15, we passed Prefectural Kamaishi hospital, but I did not notice anything unusual. Traffic signals were working fine. However, the scenery changed completely when a building of Kamaishi Railway Station came into view; vast piles of tiles, pebbles, mud and cars as seen in the TV images. An abundance of wreckage, rubble, mud, and cars continued on both sides of the road the entire length. We entered Unosumai town in Kamaishi city through Route 45 (Figure 2).

We were speechless at the terrible scenery at this spot. It was beyond anything seen on TV, 360 degrees of destruction. The Unosumai area reminded me of the burnt out wasteland due to atomic bomb that I saw at the Hiroshima Peace Memorial Museum. I felt a battle field was a right word to express my impression of this area.

2. The mortuary in Unosumai town

At 11:40, we arrived at the mortuary. In the Kamaishi Police Station jurisdiction, there were eight mortuaries in total, and the old Kishuu afforestation had the largest mortuary in its warehouse of about 50m × 100m. Many bereaved families were trembling in the cold March wind on the pavement in front of the main gate waiting for the free shuttle bus that connected the old afforestation and Kamaishi city center.

As essential utilities at the site of this mortuary, a private power generator was operated, but I was not sure about water supply, and the mobile phone did not work. Three portable toilets were available and toilet papers were provided. I saw a

sewage disposal vehicle once and had an impression that the disposal of excreta was regularly conducted.

In the warehouse, the incense-burner stand was arranged on the right of the entrance and coffins were displayed in its back with at least approximately 100 coffins in a row (Figure 3). The sorrowful cry of the relatives, who seemed to come from the distance, occasionally filled the whole wintry warehouse. The flowers, sweets, and drink were placed on coffins of identified individuals, however, many of the coffins had nothing on them. The stench of death that I was initially concerned was hardly evident. It seemed gusting wind with light snow and air permeability of the warehouse as well as the incense contributed to this.

There were three corpse inspections teams, the Iwate prefectural police team, the Akita prefectural police team, and the Saga prefectural police team. Each had 7-8 persons per team.

In the mortuary, 267 bodies had been placed and inspection was already performed on 265, of which 215 individuals were identified. The inspection time was about 15 -20 minutes per corpse, and the inspection by a doctor started after the inspection by the polices. Features of the dead bodies were red death spots and countless wounds all over supposedly due to contact with driftwood etc. The state of conservation of the bodies was still fairly well.

The template of certificate for the inspection, "a certificate to save time and effort for entry", was prepared by the Department of Forensic Medicine of Iwate Medical University. Several boxes on the certificate were already filled; e.g.) "Time of death: about 3:00PM, March 11th, 2011 (presumption)", "Additional comments of the external cause of death: victimized by the Tohoku district Pacific Ocean earthquake in 2011". The guideline to fill the form was also provided from the Department of Forensic Medicine and a prefectural police man was there to assist us. Therefore, the time spent to complete the form was less, about ten minutes per corpse. We received several instructions when we started to work. For examples, when the name of the individual was unknown, it had to be left blank. Similarly when the date of birth was unknown, "the estimated age" should be entered. We also learned that the cause of death was most likely either "drowning" or "multiple trauma", and "the time between injury and death" to be written as "short period of time".

A DNA sampling was carried out when the victim remained unidentified. The prefectural police officer asked us to obtain three 2 mm nail samples using a clipper. I had a hard time with clippers as the nails did not split easily, because the finger nails were saturated. We did not perform any blood sampling from heart on the day.

The morning inspection involved only two bodies (U -266 and U -267). Afterwards we left the warehouse to warm up in a Safety Confirmation Office in a prefabricated house to the left of the warehouse. The list of corpses from U-1 to U- 267 was posted on a bulletin board of 3m ×6m by hand using a magic marker. Three kinds of marks were attached to the body's number.

A red circle was a mark that the body was identified. A blue underline was a mark to notify that the body was still inmortuary. A “cross” mark meant that the body was already carried out of the mortuary. Bundles of list sheets including photographs of the bodies at other mortuaries were put on a central table.

At 13:50, lunch was brought from the Kamaishi city. It consisted of one bread with sweet-bean filling, two croissants, a vegetables juice, and a plastic bottle of cold tea. I brought lunch and supper that my wife made early in the morning, because I had heard that the food procurement in the local area was difficult. However, since the police prepared it with much effort, I had a sweet-bean bread and a croissant to express our appreciation. I thought I should have brought a thermos of hot tea with me.

A long sutra recitation by a Buddhism priest echoed in the warehouse in the afternoon. Was he visiting each mortuary by himself in the flurry of snow? My thoughts and prayers were with all victims.

At 15:35, three corpses were carried in. The investigations of the three teams started promptly. Since we understood the point of the inspection from the morning, we shared roles. Dr. K was assigned the nail-clippers for DNA sampling, and I wrote the certificate for the inspection .

At 16:30, today's inspection was finished, five bodies in total. Because of insufficient supply of heavy machinery in the stricken area, the removal of rubble had not progressed. It seemed that the pace of the corpse collection would advance more in future if the debris removal advanced.

3. Dr. H in Unosumai town (Figure 4)

In Unosumai town, Dr. H, an alumni of the Department of Neurology at Iwate Medical University, had been practicing at his clinic. I was informed that Dr. H. evacuated his patients from the clinic safely before the tsunami hit the area. I visited several shelters in Otsuchi town and the headquarters of Kamaishi city and asked his whereabouts to deliver the medical

supplies collected in Morioka, but I was not able to locate his whereabouts. Two days later, I saw an article reporting that he had restarted the temporary clinic to provide medical care there.

I felt that only a sense of mission as a doctor supported him.

I heard later that his parents, his younger brother's wife and his own child were missing.



(Figure 1) JAPAN MAP



(Figure 2)

An approach to a shrine in the debris of Unosumai district where a light snow falls on March 23rd (left).
A present approach on November 27th (right).



(Figure 3)

A large number of coffins which were displayed in the severely cold warehouse (left).
The mortuary changed into the elementary and junior high school construction planned ground (right).



(Figure 4)

A trace of Dr. H' Clinic in Unosumai district where only MRI was left (left).
Dr. H' new Clinic (right).

Part 2: Reports from Members Contributing to the Support of the Disaster Area

Support provided on behalf of various Japanese Red Cross Society facilities to Ishinomaki Red Cross Hospital after the Great East Japan Earthquake: Project participant report

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On March 11, 2011, the magnitude 9.0 Great East Japan Earthquake struck off the coast of Sanriku. The devastating tsunami left over 20,000 people dead or missing throughout the country. The subsequent series of accidents at the Fukushima nuclear plant dealt a further blow to the region. The city of Ishinomaki suffered one of the highest casualty rates: the disaster left almost 4,000 people dead or missing, and many homes damaged or destroyed. The Ishinomaki Red Cross Hospital had been moved to a location away from the Pacific Ocean three years ago, and thus it remained intact. However, other medical facilities closer to the coast suffered enormous damage, leaving the city of Ishinomaki in need of medical support.

When the earthquake hit, I was performing an ultrasound scan in the Musashino Red Cross Hospital in Tokyo. When I learned of the devastation that had been caused, I volunteered to be transferred to the affected area. Despite concerns for my daughter – who is not yet 12 months old – my family fully supported my wish to contribute to the relief effort.

With the goal of providing medical aid to the city of Ishinomaki, the Japanese Red Cross Society first assembled volunteer doctors, from across the country, in Tokyo – where its headquarters are based – and then transferred teams by bus to

Ishinomaki Red Cross Hospital. The purpose of our mission was to support the provision of emergency medical care in the affected area and to assist the A&E department of Ishinomaki Red Cross Hospital. I was a member of the first team (April 4 – 9) (Figure 1) and the fourth team (April 19 - 24) (cover photo) to travel to Ishinomaki. The first team comprised six doctors between the ages of 30 and 50; the second team, seven doctors between the ages of 20 and 40. The medical team - made up of specialists in internal medicine, pediatrics, anesthesiology, orthopedics and emergency medicine – slept on makeshift beds in the hospital meeting rooms. Volunteer doctors, who were meeting each other for the first time, worked together with volunteer nurses to set up temporary medical facilities in Ishinomaki Red Cross Hospital. We worked in shifts to support the provision of secondary care across all medical fields, sometimes also helping to provide tertiary care.

(Figure 2)

The rubble in the affected area meant that we saw a lot of patients with respiratory tract infections and bronchial asthma. Cases in the field of internal medicine included gastrointestinal bleeding, hepatitis, cerebral infarction, dehydration, ischemic heart disease, atrial fibrillation, anaphylaxis, and renal failure. The majority of orthopedics cases consisted of leg injuries or broken bones. Surgical treatment was required for acute appendicitis and intestinal obstruction. Mental health was an issue, too, with cases of suicide by hanging evident in the despair following the disaster. Day after day, the volunteer doctors and physicians from academia, medical associations, and university hospitals offered their support, and a form of complementary cooperation took shape. As many as 113 doctors were dispatched from the Japanese Red Cross Society to Ishinomaki Red Cross Hospital between April and August 2011 and their mission has now been successfully completed.



(Figure 1) The members of the first medical team to the Ishinomaki Red Cross Hospital, from Tokyo, Saitama, Nagano, Otawara, Asahikawa, and Himezi



(Figure 2) Emergent Trephining for subarachnoid hemorrhage at the A&E department (accident and emergency department) in the Ishinomaki Red Cross Hospital

Guidelines for Non-Medical Care Providers to Detect Illnesses in Elderly Evacuees

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An outbreak of norovirus gastroenteritis among elderly evacuees following the 2007 Noto Peninsula earthquake was previously reported (1). There were 74 evacuees, including 61 elderly persons, in the shelter where the outbreak occurred. Thirty-one evacuees with gastroenteritis, 29 of whom were aged 65 and older (mean age 76 ± 7 years), were examined and treated. This experience suggests that elderly victims are more susceptible to disaster-related illnesses (i.e., infectious diseases, exacerbation of underlying illnesses, and mental stress) and disaster-related death. Therefore, a plan to establish guidelines to detect illnesses and perform triage rapidly in elderly evacuees was necessary.

In April, 2010, ten members formed the Study Group on Guidelines for the First Steps and Emergency Triage to Manage Elderly Evacuees under a grant-in-aid for scientific research from the Ministry of Health, Labour, and Welfare of Japan. Two types of guidelines were established: one for medical care providers (MCPs) and the other for non-MCPs (NMCPs, e.g., volunteer, helpers, and family members taking care of elderly relatives), public health nurses (PHNs), or certified social workers (CSWs). The guidelines for NMCPs, PHNs, or CSWs seemed to be more effective than those for MCPs, because there were limited MCP resources. The guidelines had three chapters: (i) Features and prevention of critical diseases in elderly in evacuation areas; (ii) Signs of acute diseases in elderly; and (iii) Symptoms of anxiety in elderly in shelters. In order for NMCPs, PHNs, or CSWs to be able to understand the contents easily, it was written concisely.

On March 11, 2011, at 2:46 p.m. (JST), a strong earthquake occurred off the Pacific Coast of Tohoku and hit the northeast part of Japan. Devastating tsunamis followed that destroyed many coastal cities (Figure 1). The magnitude of this

quake according to the Japan Meteorological Agency was Mj9.0. A huge number of aftershocks continued after the quake, even now. Many displaced people were living in shelters supplied by the government, because of disruption of community utility services and health risks of nuclear power plant accidents in Fukushima prefecture.

One week after the 2011 earthquake off the Pacific Coast of Tohoku, a total of 20,000 guideline booklets were sent by members of the Japan Geriatrics Society (JGS) and the Japan Medical Association Team (JMAT) to NMCPs, PHNs, or CSWs working in Iwate, Miyagi (Figure 2), and Fukushima prefectures (2). JGS and JMAT members were dispatched to these areas to care for evacuees. NMCPs, PHNs, or CSWs used the booklets to detect illnesses rapidly in elderly evacuees in shelters or homes. The aim was to reduce morbidity and mortality from disaster-related illnesses in elderly evacuees. An investigation of the differences in morbidity and mortality between areas where the guidelines were and were not applied is planned.

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Figure 1. Sendai city destroyed by the tsunamis.



Figure 2. A community center for the evacuees at Higashi-matsushima city.



Flying Carp Banners over the Rubble

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During Golden Week holidays, a number of voluntary members of Japan Primary Care Association Disaster Relief Project were dispatched to Tohoku area to provide medical support services. Among them, I and two other supporters were sent as part of the "PrimaryCare for All" Team (PCAT) to the evacuation center "Yugakukan" in Ishinomaki City.

On the day that we arrived, we went to work right away to provide medical care together with Dr. Kenjiro Akai from the Cardiovascular Department of Ishinomaki Municipal Hospital. There were fewer cases of upper airway inflammation than we expected. Majority of victims have high blood pressure, insomnia, gastrointestinal damage, cutaneous disorder, and worsened diabetes mellitus. Ishinomaki Municipal Hospital wasn't operational because of the tsunami damage to it. However, Dr. Akai told the place we were sent to was just an evacuation center, not a hospital, so even if we were able to offer the same level of treatment as hospital patients receive, that wouldn't necessarily be support for self-reliant life.

At the plenary meeting held every day from 6pm at Ishinomaki Red Cross Hospital, the disaster medical coordinator Dr. Tadashi Ishii told us their goal is to help victims to become self-reliant, not to create a dependence on supporters.



The nurses from Ishinomaki Municipal Hospital had lost their original workplace and quietly lined up around the corner of the Yugakukan in great numbers, planning to go to the temporary dwelling or to stay the night for work there. The nurses talked to each other during the busy time, "I've lost my home and don't have a place to live anymore." "The bus is no longer running so how am I supposed to get to work."

Our Ishinomaki team didn't have problems taking baths or using the restroom, as the neighborhood supermarket was well

stocked with various foods and water. However, the team for Kesenuma had to travel three hours each one-way from their lodging to the evacuation center. They didn't have a bath, and for food they only had bread and rice balls. From what we heard they had a tough time, working with only getting 4 hours of sleep.

The following morning, we came up to the flooded area around Ishinomaki Municipal Hospital. We saw that Kadonowaki Elementary School was burnt down, and found the burnt sign "Raising Healthy Minds and Bodies" remained on its roof. It evoked us painful images of the young victims of the disaster.



Standing amongst the rubbles, so foul smelling enough to cause a coughing fit, nobody said a word. But when we found a sign "Do your best Ishinomaki!" and colorful carp banners flying around it, everyone cheered up. Yes, that's it! And today is the next day of Children's day! What the local residents need is this kind of uplifting topic. Temporary housing, some money, things that make us smile and basic medical care are the vital commodity for them. We felt if they could obtain those things, then reconstruction would soon be possible.



■ **Serial Publication: Clinical Medical Education in the USA**

Medical Education in the 3rd and 4th years in US Medical Schools

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Medical student education varies country to country and to a lesser extent, institution to institution within a given country. This document serves as an introduction to education of medical students during their 3rd and 4th years of medical school, the “clinical” years of training, in the United States.

Background on physician education in the United States:

Following completion of high school, students interested in becoming physicians proceed to attend a 4 year university or college to receive an undergraduate degree. This can be in any field of interest, from a foreign language, to history, to the sciences. Students are required to have a background in math and science in order to enter medical school therefore regardless of their undergraduate degree; all applicants have taken classes in calculus, biology, chemistry and physics and taken a medical colleges admission test. Students then apply to medical school and if accepted, begin a four year graduate program for their medical degree. The first two years are generally “pre-clinical”; this is primarily lecture based teaching of the basic sciences. In more recent years, “Problem Based Learning (PBL)” has been integrated into the curriculum during the 1st two years. The last two years of medical school are the “clinical” years, during this time the vast majority of education takes place in hospitals and outpatient clinics, either one-on-one or in small groups with teaching physicians, also called attendings.

Clinical medical education:

During their third year of medical school student rotate through 6-12 week courses in family medicine, internal medicine, pediatrics, obstetrics and gynecology, surgery and psychiatry. These rotations are called “clerkships”. Student education is provided in multiple forms to students during their clerkships, though overwhelmingly the education is based on the care of patients.

Using the Internal Medicine clerkship as an example, the general goal is to make the student proficient in evaluation of patients, by the end of the clerkship we expect students to be able to collect a patient history, perform an appropriate physical exam and to be able to then present this information in written and oral forms. Ideally students also begin to develop their diagnostic abilities. Students that are advanced will be able to offer strategies to manage patient’s medical issues.

To meet these goals, teaching during the clerkship takes many forms:

1. Direct patient care:

a. When working in the hospital students see patients being admitted to the hospital. Ideally they are able to perform a history and physical independently as patients are admitted. They write a thoughtful admission note, outlining the patients' major medical issues, their presenting problem and the differential diagnosis of this problem. Students give oral presentations to the resident and attending team, summarizing the information they collected and discussing their thoughts on the patient's diagnosis and, if they are able, management. Students then follow this patient throughout their hospital stay, acting as a key member of their healthcare team. They are involved in the day to day management of the patient, seeing them multiple times a day, presenting their progress to the medical team, writing daily progress notes and, when possible, writing orders for medications and studies with the supervision of the resident physicians. All of this care is under the supervision of the residents and attending physicians, but initially allowing the medical student to think through the patient's medical problems independently is encouraged. A student would typically have 2-3 patients at a time, admitting no more than 1 a day. Ideally, students are getting feedback on a daily basis on their write ups and presentation skills.

b. In the ambulatory setting students see 4-6 patients a day, this ideally includes 1-2 patients who are new to the clinic. Students see patients as they arrive in clinic, collect an appropriate history and physical and then, present the information they collected and their thoughts on the patient's diagnosis and management. Again, the care is under the direct supervision to an attending physician, but the students are encouraged to take an active role in the patients care, collecting the history and physical independently, then having the attending physician refine this, collecting additional history and repeating key portions of the physical exam as needed. Presentations can be done in the exam room in the presence of the patient, or outside the exam room(1). Students also continue to work on their written communication skills, documenting in the patient's medical record. If labs and studies are performed medical students are encourage to follow-up on these, discussing the results and management of these

results with the attending and then the patient.

2. Small group didactic education:

A few times a week students will meet with a physician to review key medical concepts. These sessions may involve reviewing cases, for example working through management of patients with hyponatremia. Or perhaps the students will be taken to the bedside of a patient and physical exam findings will be reviewed. Regardless of the exact structure, clinical evaluation and management of patients is the center of the teaching rather than generalities of pathophysiology, pharmacology, etc. These sessions may go over individual problems students have seen in their patients or predetermined cases that the preceptor brings to the sessions. This kind of teaching falls in the realm of “Problem Based Learning”.

3. Large group lectures:

There is some material that all students need to be familiar with, topics including diabetes, anemia, and hypertension, and for these key topics students are asked to attend a weekly lecture in a central location. This also offers a time for students in various clinics and hospitals to come together, and a good forum to field general questions, briefly discuss administrative issues, etc. These lectures are “case based”, speakers are encouraged to use clinical scenarios to highlight key teaching points, making the information clinically relevant. In many medical schools, the large group lecture series are available on line for students to review, or to watch if they can't be at the site where the lecture is occurring. This is a very good option for medical schools that use multiple clinical sites.

4. Independent study and on-line modules:

Independent study can come in many forms. There are books designed in question and answer format, similar to the format used on standardized tests medical students take in order to get medical licensing. There are also on-line patient simulations students can work through. In our clerkship completion of one on-line case a week is required, though students may opt to complete additional cases if desired.

5. Clinical skills observation:

Overall student independence is promoted, this fosters ownership of the patient and development of critical thinking, but we also acknowledge that students need direct observation and feedback on their clinical skills. The structure of the clerkship results in frequent observation of students' ability to counsel

patients, but attendings and residents are also encouraged to periodically observe the student performing other elements of patient care – collecting a history and performing a physical exam. At least once during the rotation this needs to be documented; an attending or resident observes the student perform a history and physical exam then completes a written evaluation that is submitted to the clerkship office. This is an area where students wish they had more opportunities. They desire more direct observation and feedback of their developing skills.

Evaluation of students is a complicated process. Attendings and residents working with students are asked to evaluate their clinical skills and professionalism. To aid in their assessment, the faculty and residents are provided with examples of student behaviors/skills that would be considered a “pass” level, an “honors” level, etc. The students also complete a written exam which factors into their final grade, though not as heavily as their clinical evaluation, in-keeping with the importance of clinical skills over test-taking abilities. An example of a widely used evaluation system is the RIME system (2-4).

Fourth year medical students also take part in a variety of clerkships, many of which are required. At our institution, a “sub-internship” is optional, this can be completed in various fields including internal medicine and surgery. During sub-internships students are treated more as interns. They care for more patients than third year students and they are expected to have more diagnostic and management skills. In addition to refining their clinical skills and increasing their medical knowledge, students develop skills in caring for patients during transitions of care and skills needed to function as an intern such as cross-coverage of patients, safe patient discharge from the hospital, etc. The other rotations the students do are elective rotations, where students work with consultants in different departments. In these rotations, students usually do hospital consults or work in specialty clinics.

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