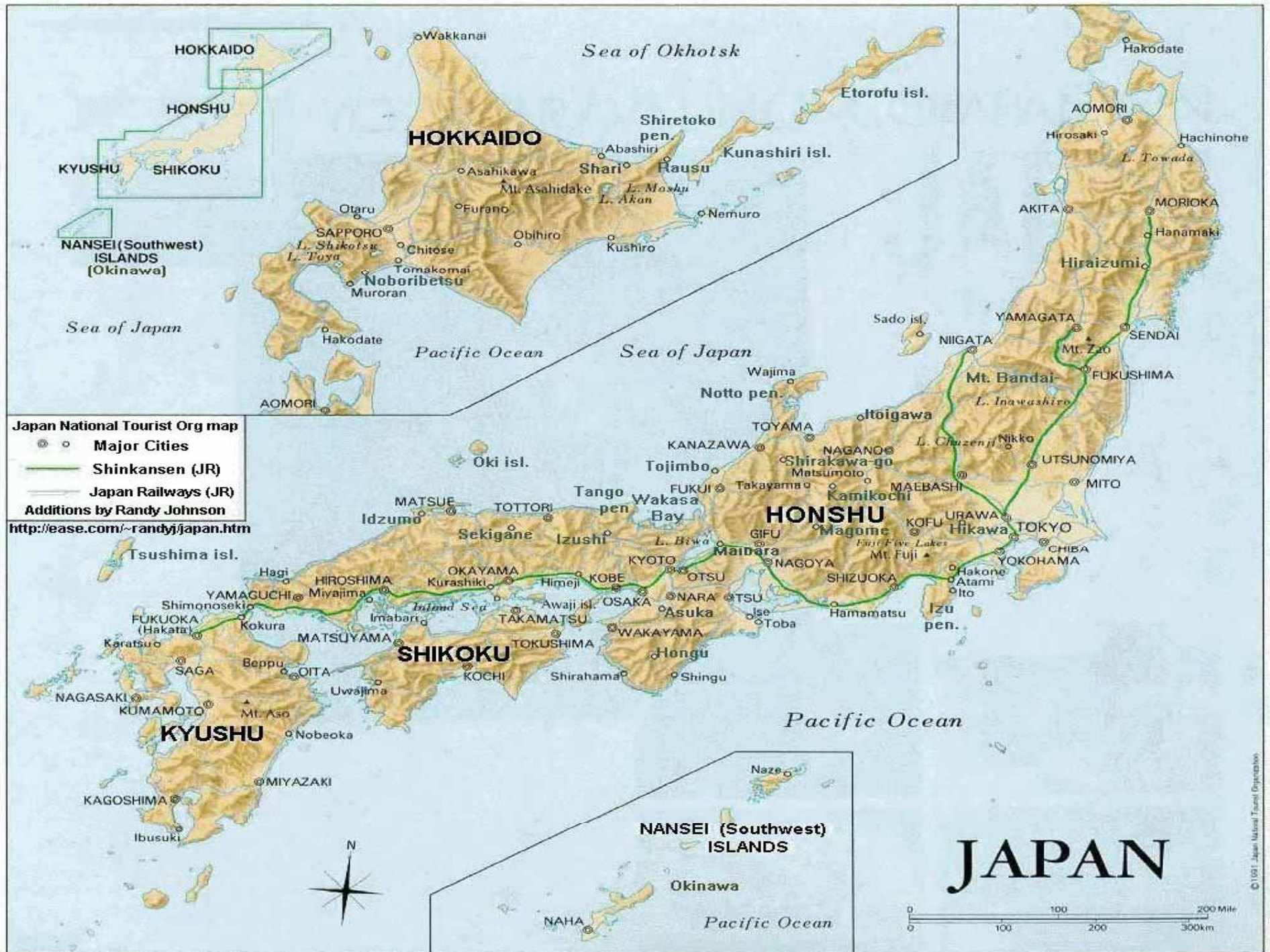


# My Month in Japan

Comparing health care and  
medical education systems

# Objectives

- Overview of my experience in Japan
- Brief introduction to the health care and medical education systems in Japan
- Contrast some of the differences between the Japanese and US systems



HOKKAIDO

HONSHU

KYUSHU

SHIKOKU

NANSEI (Southwest)  
ISLANDS  
(Okinawa)

Sea of Okhotsk

Etorofu isl.

HOKKAIDO

Shiretoko pen.

Kunashiri isl.

Asahikawa

Shari

Rausu

Furano

Obihiro

Kushiro

Nemuro

SAPPORO

Chitose

Tomakomai

Noboribetsu

Muroran

Otaru

Hakodate

Pacific Ocean

Sea of Japan

AOMORI

Hirosaki

Hachinohe

L. Towada

AKITA

MORIOKA

Hanamaki

Hiraizumi

YAMAGATA

NIIGATA

MT. Zao

FUKUSHIMA

MT. Bandai

L. Inawashiro

Nikko

UTSUNOMIYA

MITO

Wajima

Notto pen.

TOYAMA

Itoigawa

KANAZAWA

Tojimbo

FUKUI

Takayama

MAEBASHI

KAMIKOCHI

URAWA

Hikawa

TOKYO

CHIBA

YOKOHAMA

Hakone

Atami

Ito

Hamamatsu

Izu pen.

Shizuoka

MAIBARA

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MAIBARA

Oki isl.

Tango pen.

Wakasa Bay

HONSHU

Magome

Fast Five Lakes

MT. Fuji

KOBE

OSAKA

Asuka

WAKAYAMA

Honshu

Shirahama

Shingu

TOKUSHIMA

KOCHI

SHIKOKU

MATSUYAMA

Imabari

Uwajima

OITA

Beppu

SAGA

KUMAMOTO

MIYAZAKI

KYUSHU

KYUSHU

Tsushima isl.

Hagi

YAMAGUCHI

MIYAJIMA

HIROSHIMA

Kokura

FUKUOKA (Hakata)

Karatsu

NAGASAKI

Shimonoseki

Shimonoseki

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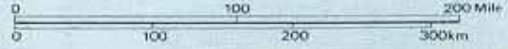
Shimonoseki

NANSEI (Southwest)  
ISLANDS

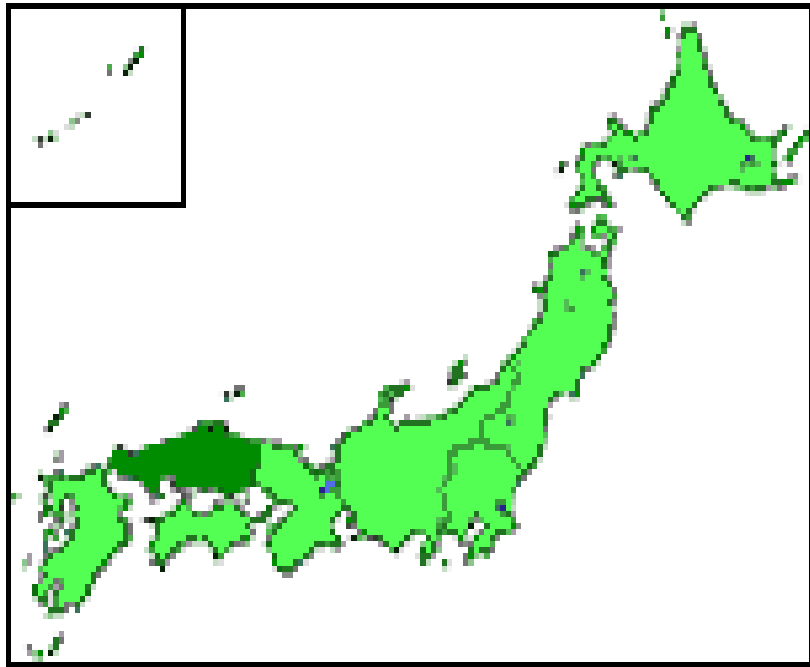
Okinawa

NAHA

Pacific Ocean



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# Introduction

	US	Japan
Area	3,717,813	142,000
Population	312,237,000	127,950,00
GDP	14,657,800	5,458,872

# Japanese Medical System

- Universal coverage mandated in 1961
- Provided by combination of employee based and community based plans
- Services covered and fees are uniform and regulated nationally since 1959.  
The regulation of price has been a key mechanism of equity and containment of costs.

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\$3700

\$1650

\$11200

\$1100

\$840

\$39.6 billion

\$3.84 billion

\$31.4 million

\$13.7 billion

\$48.8 billion

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国立大学法人

# 島根大学医学部

Shimane University Faculty of Medicine





# Shimane University

- Public university - Prefecture university
- 600 medical students (100 per year)
- Also nursing, pharmacy, dentistry schools
- University Hospital - 600 beds, clinics, pharmacy,

# Shimane University Schedule

Mon 5/9	Tues	Wed	Thurs	Fri
10:00 AM Introduction Set up room #205	9:30-11:00 Dr Yano Endocrinology Cases	11:00-12:00 Evaluation of Chest Pain (residents - small group)	9:00-11:00 Dr Onigata Pediatrics Case based lectures (3)	11:00-12:30 Dr Oguro Neurology Neck Pain and rounds
13:00-16:00 Dr Karino Nurses - teaching BP technique and using stethoscope with simulator	14:00-15:00 Dentist / Oral surgery Dr Sekine rounds 15:00-16:00 Gastroenterology Approach to abdominal pain	14:00-14:10 Introduction at faculty meeting Dr Kobayashi 15:00-17:00 Meeting with Dr Ishibashi (schedule)		13:00-15:00 Dr Hanada Nephrology Pulmonary Embolism 16:30-18:00 GIM at U of Colorado



# Medical Education in Japan

- 80 Medical schools
- 6 years, students enter after HS
- Major criteria is book knowledge, tests
- Years 1-4 pre-clinical and organ based, didactic
- Year 4 - intro to clinical medicine
- Years 5-6 clinical years

# Medical Education in Japan

- Curriculum reform mandated since 2001, 1218 specific educational objectives
- Almost 90% have adopted an integrated curriculum.
- Problem-based learning is used in about 2/3 by 2004

# Medical Education in Japan

- Common Achievement Test - required to begin clinical education. Computer based testing (CBT) and an objective structured clinical examination (OSCE).
- Clinical clerkships - until 1991 medical students were not allowed to participate in clinical care

# Clinical Clerkships in Japan

- 2005 clinical clerkships were offered in 84% of medical schools
- Medical students on clinical clerkships observe rather than actively participate in clinical care. Bedside teaching is part of that experience but literature reviews, writing reports and attending lectures is emphasized.

# Medical School in Japan

- The 6th year some clinical clerkships but much to the year is spent taking examinations covering each specialty in medicine. Some schools also include an advanced OSCE. Successfully passing the exams the student is awarded an MD degree.

# National Examination for Physicians

- This a required examination for all medical graduates
- Paper based test with 500 multiple choice questions
- Successfully completing the examination allows the physician to enter residency

# Medical Residency

- This is a new requirement since 2004
- The purpose was to provide a solid grounding and effective training in primary care and general medicine, regardless of the possible future specialty choice.
- Work hour restriction (40 hours per wk)

# Specialty Training

- The majority of physicians go on to sub-specialty training
- 95% of physicians in Japan were classified as organ or disease based specialists
- In Japan there is no clinically certified primary care discipline







# Shimane University Schedule

Mon 5/16	Tues	Wed	Thurs	Fri
10:30-12:00 Dr Hashigushi ED cases	10:15-11:45 2nd Year English class Introduction, medical school in US and GIM U of Colorado	11:00-12:00 Evaluation of Dyspnea (residents small group)	10:14-11:45 2nd Year English class Introduction, medical school in US and GIM U of Colorado	10:30-12:00 Dr Yamauchi ED cases
	14:00-15:00 Dr Sekine Dentistry / Oral Surgery - rounds 18:00-20:00 Dr Morita Dermatology - presentations	14:00-18:00 Hamada MC Dr Amiaski Low Back Pain and Cardiac and Pulmonary examination	12:45-14:15 2nd Year English class Introduction, medical school in US and GIM U of Colorado 16:30-18:00 DVT / PE	Drive to Katoh Hospital Kawamoto town  Tour of hospital, travel to Hiroshima, ferry to Miyajima island

# Comparison Japanese and US Health

- Life expectancy
  - Japan #1 82.6 yrs men 79.0 women 86.1
  - US #36 78.3 yrs men 75.6 women 80.8

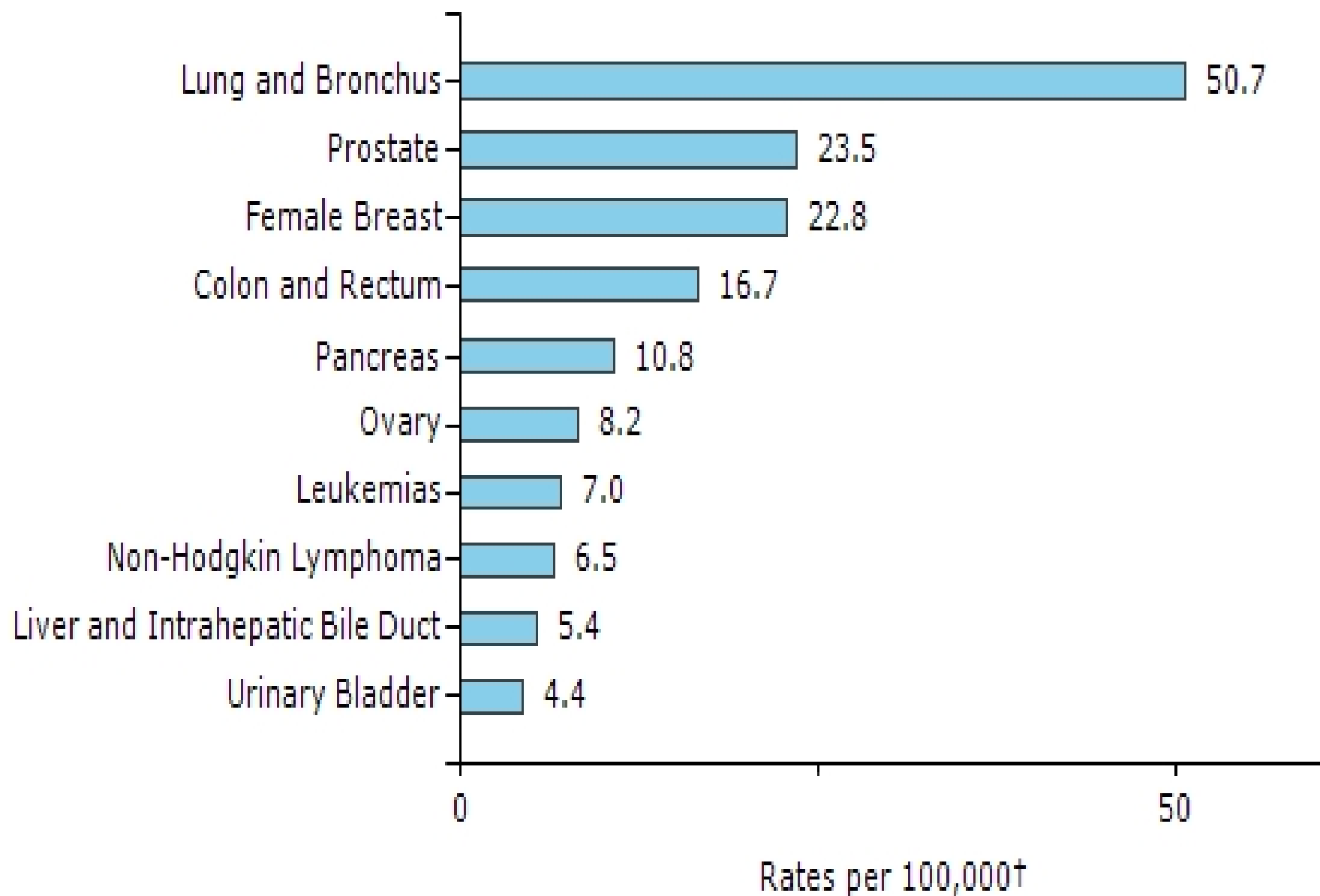
What is responsible? Decrease in communicable diseases, followed by decrease in stroke and continued decrease in infant and childhood mortality.

# Death rate and causes

	US	Japan
Crude death rate	8.04	8.98
Ischemic heart	25.4%	10%
Cerebral vasc	5.6%	14%
Lower resp chronic	5.3%	9%
Lung cancer	6.4%	6%
Stomach cancer	<1%	5%
Accidents	5.1%	3%
Colorectal cancer	2%	4%
Pancreatic cancer	1.6%	2%
Breast Cancer	1.6%	0.9%
Prostate cancer	1.4%	0.7%

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### Top 10 Cancer Sites: 2007, Male and Female, United States—All Races



# Japanese Health

- Homogeneous and egalitarian (education)
- Universal access to health care
- Favorable diet (decrease in salt intake)
- Lack of obesity (4% of population)

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# Japanese Health

- Smoking rates are much higher (>50% of young men smoke)
- Typical salaried worker - 6 days a week from early morning to late at night
- Decades of economic stagnation, more part-time workers, increasing unemployment, political unrest
- Aging population

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# Shimane University Schedule

Mon 5/23	Tues	Wed	Thurs	Fri
11:00-15:00 Dr Isobe Pulmonary GIM at U of Colorado and rounds	11:00-12:00 Evaluation of chest pain (residents - small group)	10:15-11:45 4th Grade English Medical History	Katoh Hospital Tour of hospital Long term care hospital Alzheimer's home	Katoh Hospital  Lecture on Insomnia (translated into Japanese)
17:00-18:30 Dr Karino Simulator - heart and lung auscultation with nurses	14:30-15:30 1st Grade English Primary Care - communication with patients	12:45-14:15 5th Grade English Physical examination - Cardiac and Pulmonary 15-16 Dyspnea 16:30-18:00 Cardiac exam using simulator		Matsue City Hospital 14:00-16:00 Chronic cough

# Rounds

- Rounds are once a week and lead by the Division Chief
- Each patient's case is presented by the resident taking care of that case.
- The presentations emphasize lab and xray findings
- There is brief discussion of case usually lead by resident or the Division chief

# Rounds

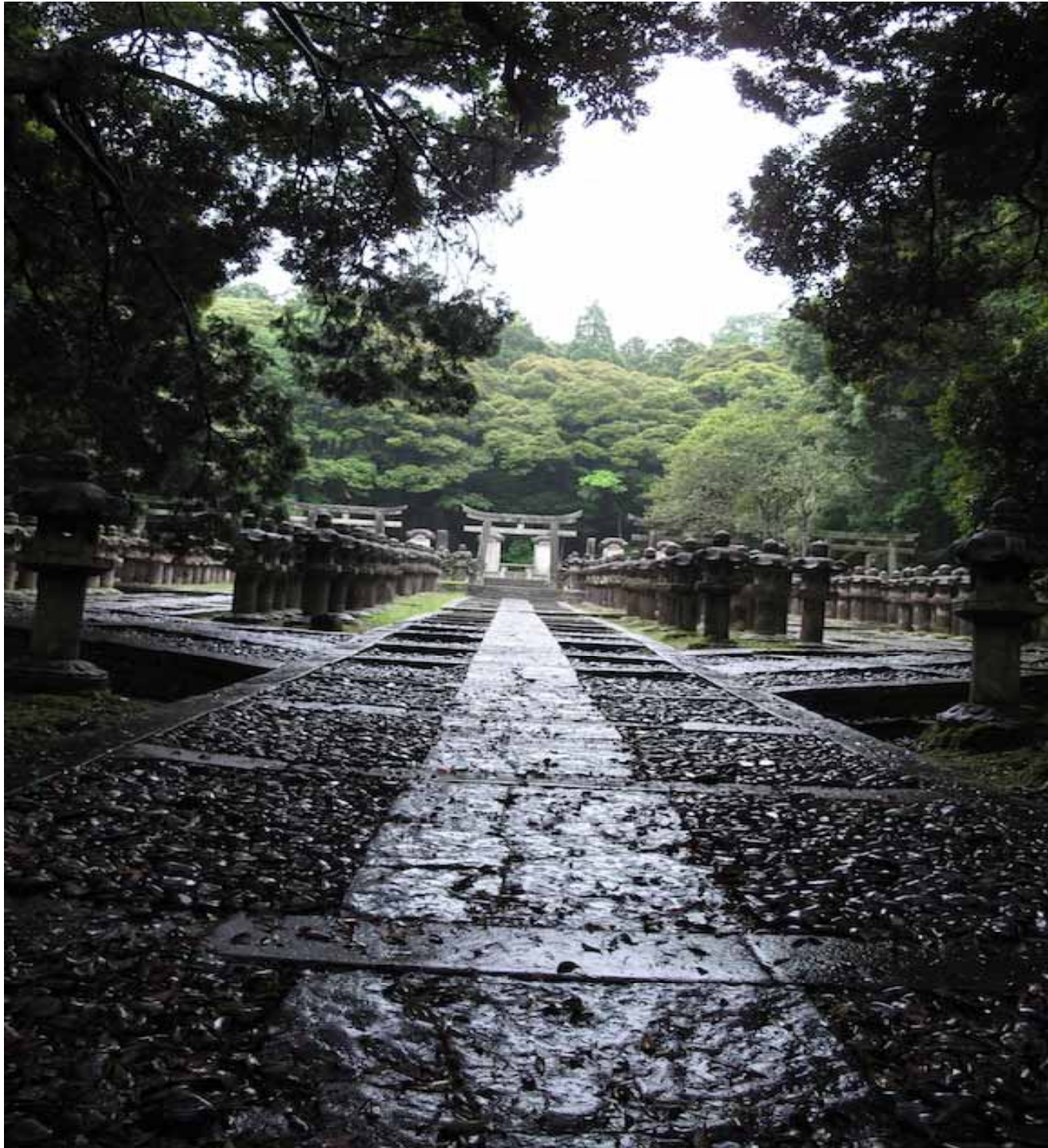
- After the case presentations, the Division chief leads the team (20-30 attendings, residents and students) around to see all the patients.
- These are mainly social type rounds but occasionally treatment decisions are discussed with patients and residents.

# Shimane University

- Differences
- No General Internal Medicine or Family Medicine (do not exist in Japan)
- No Medical Oncology Division
- No Infectious Disease Division







# Shimane University Schedule

Mon 5/30	Tues	Wed		
11:00-15:00 Dr Isobe Pulmonary COPD rounds	9:00-10:00 Dr Onishi Hematology cancer treatment in Japan 11-12 evaluation of chest pain	9:00-10:30 Dr Onigata Pediatrics - cases (3)		
Matsue Red Cross Hospital 17:00-20:00 GIM at U of Colorado	14:00-15:00 Dr Sekine Dentistry and oral surgery - rounds 15-17:00 Dr Oguro Neurology Low Back Pain	Hamada MC Dr Amisaki 14:00-18:00 VTE and Gout		



# Primary Care in Japan

- No recognized primary care specialists
- 2004 National physician census - active medical doctors working for clinics with less than 20 beds were designated “PCP’s in Japan”
- Compared to Britain there were 73.4 / 100,000 in Japan vs 63.9 / 100,000 or 34.4% were PCP in Japan vs 27.1% in Britain

# Primary Care in Japan

- Many specialists in mid career leave hospital medicine to practice in clinics and become primary care physicians.
- There is no difference in income between hospital employed specialists.
- The average income of self-employed (clinic physicians) is almost twice that of hospital physicians

# Dr Shiraishi's clinic

- Family Practice - graduate of Jichi Medical school, private school educates all physicians for community medicine.
- Physician head of hospital / clinic on island with 4,000 people
- Friday AM clinic - almost all scheduled that morning, about 40 patients, 1st come first served

# Dr Shiraishi's clinic

- 2-3 nurses, 3-4 exam areas, computerized medical records
- Each patient was appropriately gowned for complaint and history was documented
- Many injections - shoulder, carpal tunnel, knees, SI joint, aspiration of hematoma using US

# Dr Shiraishi's clinic

- Rash and burn follow up - used digital photos to compare
- 1 elderly woman with unexplained symptoms - exam and labs normal, anxiety / mild dementia - reassurance
- New diagnosis of stomach cancer

# Clinic and hospital visits

	phys/1000	visits	dc/1,000	ave length	\$
Japan	2.1	13.7	106	19.2	11,181
US	2.4	4.0	119	5.6	17132

Common Wealth Fund 2006 data

# Primary Care in Japan

- “A 3 hour wait for 3 minute consultation”
- Comparative study of family medicine in US vs clinic visit in Japan. US 668.7 sec vs 505 sec in Japan
- US physicians spent more time on treatment and f/u talk (31%) and social talk (12%) vs phys exam (28%) and diagnosis (15%) in Japan

# My impressions

- Medical education - the students are equally talented / motivated
- The US students have a much better clinical education experience that I think better prepares them for residency / clinical care.
- The current Japanese system stresses book knowledge over clinical care.

# My impression

- Hospital care in Japan is compromised by having 1 resident be in charge of all care, lack of senior resident or attending oversight, ? Long hospital stays
- The care and outcomes appear to be excellent despite a very elderly population

# My impressions

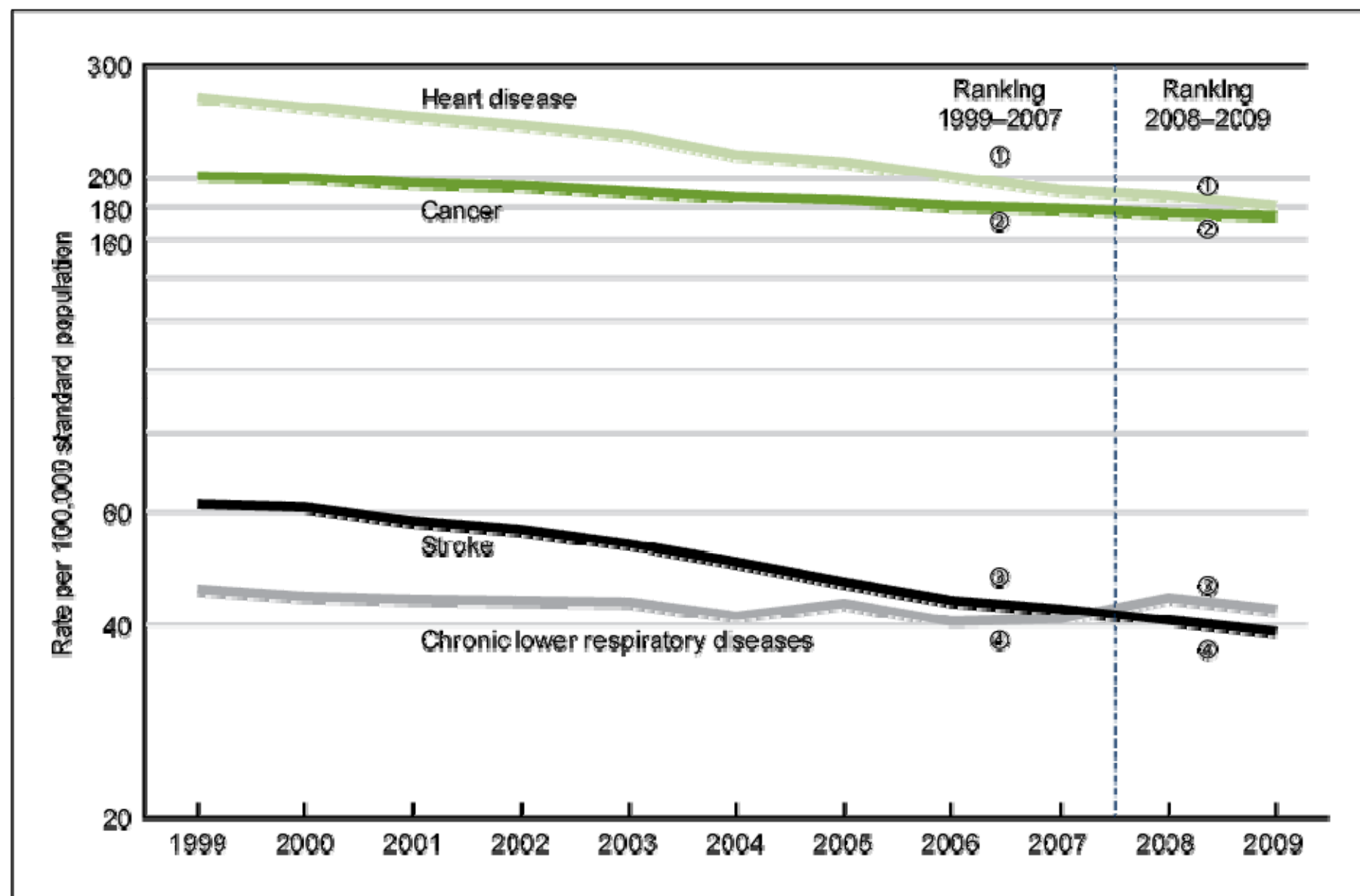
- Universal health care is amazing to witness in practice
- The Japanese system has been able to control costs by centralized coverage and fee schedule. The system has generated its own inequities.

# Challenges for the future

- Improve the education system - improve clinical teaching
- The health care system will require significant adjustments to accommodate the growing elderly population
- The primary care system, while functioning is not an optimal way to provide for complex elderly population



Figure 6. Age-adjusted death rates for leading causes of death: United States, 1999–2007 and preliminary 2008 and 2009



NOTES: Rates are plotted on a logarithmic scale. Leading causes of death from 1999 through 2007 were, in order: heart disease, cancer, stroke, and chronic lower respiratory diseases. Leading causes of death for 2008 and 2009 were, in order: heart disease, cancer, chronic lower respiratory diseases, and stroke.  
 SOURCE: CDC/NCHS, National Vital Statistics System, Mortality.