Japan’s Postgraduate medical education

PG-EPOC2-（Postgraduate） E-Portfolio Of Clinical training

Topics

1. Introduction
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4. Post graduate junior residency program
5. PG-EPOC2 - what is possible and what is actually done

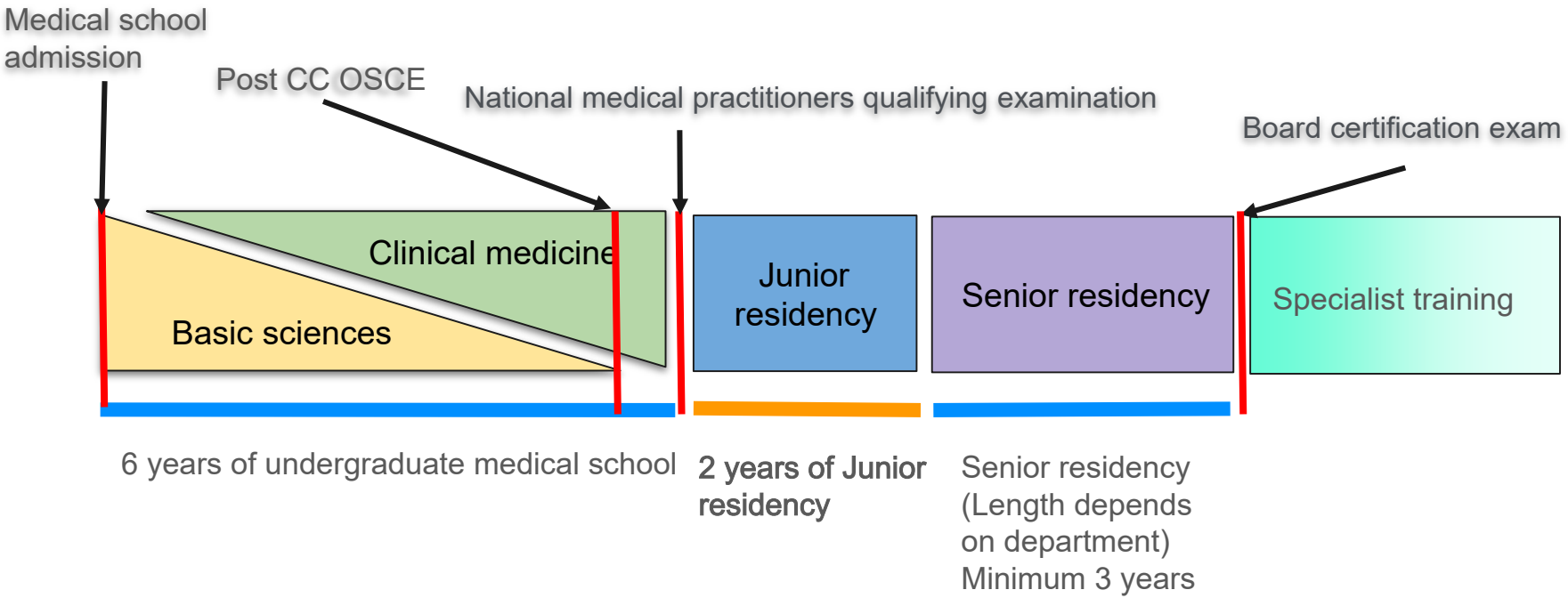
Introduction　- Japan’s PG medical education

Japan’s medical education has gone through rapid change in the last few years due to external pressure from WFME (among other things), most importantly the 2023 issue:

Medical programs that does not fulfill the WFME standard are not eligible to even sit for USMLE, and cannot be accepted into US residencies.

Due to the above situation, rapid change has been happening in the field of medical education, be it undergraduate or postgraduate.

Basic overview of Japanese medical education



Stages and transitions in medical education around the world: Clarifying structures and terminology

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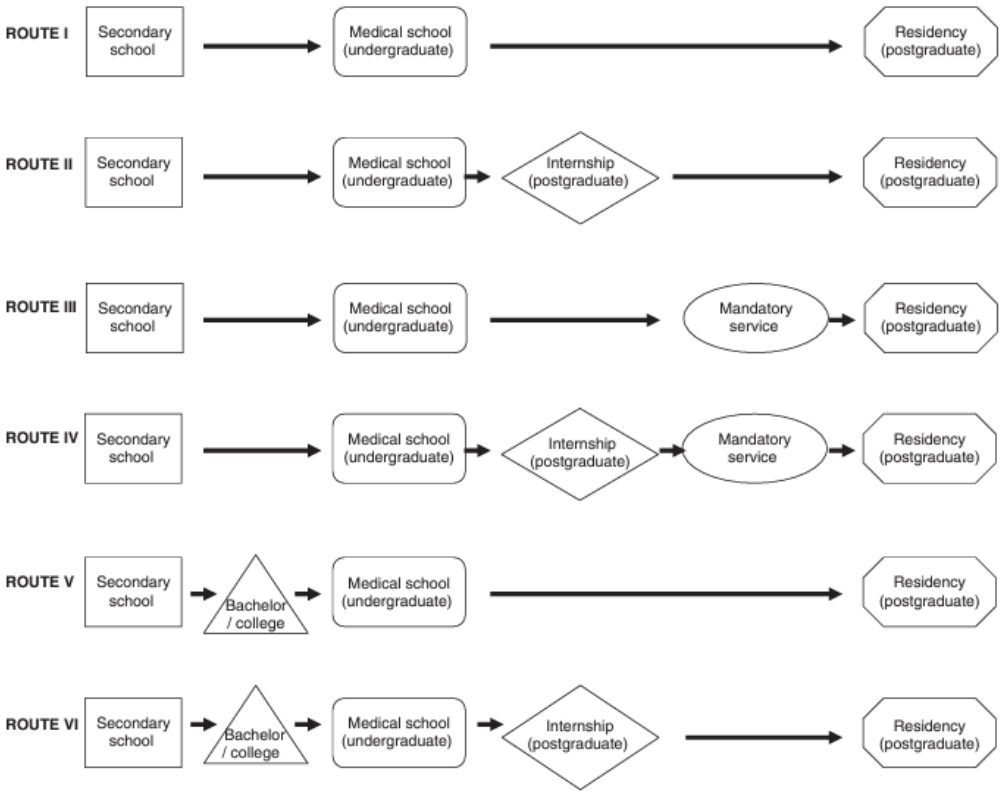


Post-graduate medical education : junior residency

- Typically, the junior residency lasts 2 years (In cases of joint programs with cooperative teaching hospitals or facilities, at least 1 year of training must be conducted at a sponsoring hospital. Up to 12 weeks of training at community facilities can be counted as conducted at a sponsoring hospital)
- It is a rotation system that requires junior residents to rotate in various departments, some mandatory and others elective.
- Mandatory rotations are
  - Internal Medicine : Cardiology, Neurology, Nephrology, Pulmonology, Endocrinology, Gastrology
  - Surgery: General surgery
  - Emergency medicine
    - Up to 4 weeks of rotation at an anesthesiology department can be counted as a period of training in emergency medicine*
  - Pediatrics
  - Obstetrics and Gynacology
  - Psychiatry
  - Community medicine
- Elective rotations
  - Radiology, Rheumatology, Laboratory medicine, Surgery subspecialities etc

Information from MHW - https://www.mhlw.go.jp/stf/newpage_03924.html

It is mandatory to provide opportunities for residents to learn infection control (in -hospital infection, sexually transmitted infections, etc.), preventive medical care (vaccinations, etc.), response to abuse, support in social rehabilitation, palliative care, advance care planning (ACP), and attend clinicopathological conferences (CPC), all necessary for fundamental clinical practice

Information from MHW - https://www.mhlw.go.jp/stf/newpage_03924.html

Signs and Symptoms to be Experienced / Diseases and Disorders to be Experienced

Signs and Symptoms to be Experienced

Residents must experience initial encounters and independently develop initial responses based on knowledge of pathophysiology and clinical reasoning through the findings in the medical history, physical examinations and simple laboratory tests of outpatients or inpatients with the following signs and symptoms:

Shock, Weight loss and cachexia, Skin rash, Jaundice, Fever, Forgetfulness, Headache, Vertigo, Disturbance of consciousness and Syncope, Convulsion, Visual disturbance, Chest pain, Cardiac arrest, Dyspnea, Hematemesis and hemoptysis, Melena and bloody stool, Nausea and vomiting, Abdominal pain, Abnormal bowel movement (diarrhea and constipation), Burns and injuries, Back pain, Arthralgia, Motor paralysis and muscular weakness, Urinary dysfunction (urinary incontinence and difficulty in urination), Agitation and delirium, Depression, Growth and developmental disorders, Pregnancy and childbirth, Terminal signs and symptoms (29 signs and symptoms)

Information from MHW - https://www.mhlw.go.jp/stf/newpage_03924.html

Signs and Symptoms to be Experienced / Diseases and Disorders to be Experienced

Diseases and Disorders to be Experienced

Residents must experience treating the following diseases and disorders in outpatients or inpatients:

Cerebrovascular disorders, Dementia, Acute coronary syndrome, Cardiac failure, Aortic aneurysm, Hypertension, Lung cancer, Pneumonia, Acute upper respiratory infection, Bronchial asthma, Chronic obstructive pulmonary disease (COPD), Acute gastroenteritis, Gastric cancer, Peptic ulcers, Hepatitis and cirrhosis, Cholelithiasis, Colorectal cancer, Pyelonephritis, Urolithiasis, Renal failure, High-energy trauma and fractures, Diabetes mellitus, Dyslipidemia, Depression, Schizophrenia, Dependency (nicotine, alcohol, drug, compulsive gambling) (26 disorders and conditions)

Information from MHW - https://www.mhlw.go.jp/stf/newpage_03924.html

Signs and Symptoms to be Experienced / Diseases and Disorders to be Experienced

* Experiences of the above signs, symptoms, diseases and disorders must be confirmed through the existence of discharge summaries written by resident in the routine work, which includes medical history, physical findings, laboratory findings, assessment, planning (diagnosis, treatment, and education), and discussion.

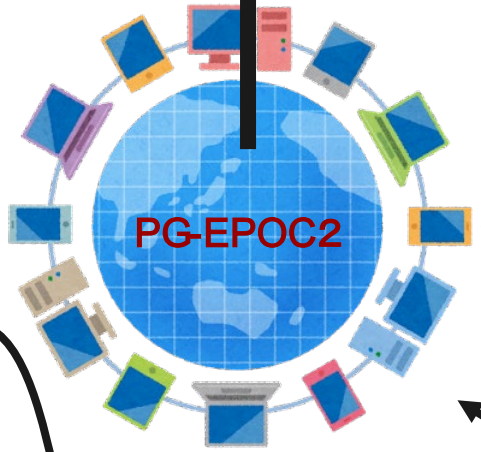
In order to fulfill these requirements, the following system has been developed…

PG-EPOC2

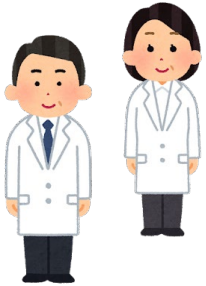
- Short for E-POrtfolio of Clinical training, it is an online clinical education assessment platform
- The assessment format follows the instructions given by the Ministry of Health and Welfare (discussed in the previous few slides)
- It is designed to manage the resident's working assessment logs, and assessments given by the healthcare professionals, patients and senior doctors.

EPOC2 server
(the actual server
is in UTokyo)

Hospital manages the
Clinical internship



patients



Assessor doctors

Residents being assessed

List of things that is possible using the PG EPOC2

- Log of clinical cases experienced by the trainee
- 360 degree assessment from:
  - Senior doctors from each department
  - Patients
  - Health professionals e.g. Nurses, Radiology technicians, PT, OT, ST…
- Detailed assessment with comments from the assessors
  - Mini-CEX, DOPS, CbD
- Feedback form for junior residents to raise concerns regarding the training program
- Log of clinical skills training with assessment from seniors
- Academic research using big data from EPOC2

List of things that is done using the PG EPOC2

Really depends on the hospital training program, but most hospital training program requires the log of clinical cases experienced by the trainee.

Currently, (as of Feb 2022), the data from PG EPOC2 is being used for various studies(information via https://epoc2.umin.ac.jp/) :

- 医師の臨床研修評価関連データの分析
- EPOC2 データを用いた侵襲的医行為の評価方法の確立のための解析および研修医の評価に影響を与えうる要因の分析
- 医師臨床研修と連携可能な卒前の臨床教育評価システムの 開発・運用・評価とデータ分析
- 「ICT を基盤とした卒前卒後のシームレスな医師の臨床教育評価シ ステム構築のための研究

An example of the user interface of the experienced case submission form.

The junior residents are required to input the patient ID, followed by anonymisation of the ID by the resident entering a unique password. The case is then given the “EPOC case ID”.

Residents are required to specify the department, and time (or time frame) of which the cases were experienced.

The “memo” area can be the brief details of the case, which serves as a message to the reviewing senior doctors.

A reminder says “please take extra caution as to not include any details that may lead to identification of the patient’s identity or patients’ personal information”.

An example of the PGEPOC2 user interface. The page below shows the “experienced cases” in red, and “reviewed cases” in blue. At the end of the 2 year junior residency, all of these categories should be experienced and reviewed.

Summary

Japan has a unique postgraduate medical education system that has gone through rapid change in the last 2~4 years, due to external pressure.

There is an ongoing change in the field of PG medical education as well, a shift that enables usage of big data and possibly a more outcome-based education.

If implemented wisely, it could help in the quality control of medical graduates and professionals however, given the current stage of early implementation, there is a huge discrepancy in the level of implementation as well as the amount of work being put in (for the fulfilment of residency training) among hospitals' training programs.

Thank you for your kind attention.

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