

The background of the slide features a stylized illustration of Mount Fuji, the highest mountain in Japan, rendered in shades of green and yellow. The mountain is centered and partially obscured by a large, rounded rectangular box with a black border. The box contains the main title and subtitle in dark blue text. The overall background is a light blue gradient.

Information System for Health Promotion in JAPAN

(esp. Traceability for patient safety)

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**GS1 Healthcare Conference, Tokyo, Japan
28 October 2008**

Health Care System in JAPAN

1. Health Promotion Program

(1) Nationwide Regulation

Training for Profession & Construction Standard of Hospital

(2) Local Government

Appropriate Distribution of Medical Facilities
& Human Resources

2. Health Insurance System

All the country is covered by the system since 1961

Today's Serious Subject

1. Structural Changes of Target Disease

Drop in the Birth Rate

Acceleration of Aging Society

2. Increased Need for Advanced Medical Services

Dynamic Progress in Medical Science

Popularization of Informed Consent

Solution of the Difficulty

Reconstruction of
Medical Infrastructure/System

High Quality
Patient Safety
Improvement of Efficiency

IT as a Useful Measures
for Improvement of Health Care System

“Grand Design for Computerization
in Health System” (MHLW 2001)

Standardization of Medical Terminology/Code

Promotion of EHR/Telemedicine

Health Service IT Network in Each Area

“e-Japan Strategy : Advanced Plan” (MHLW 2005)

Further Promotion of

- ★ Computerization in Reimbursement System
- ★ Adoption of EHR
- ★ Telemedicine
- ★ Sharing of Medical Data through IT Network



**Patient Safety Program
through IT
in National Hospital**

How can we manage patient safety?

- We need
 - the Real-time Consumption Data Capturing System
 - ❖ Collects, manages, and uses consumption data at the point of consumption (e.g. Hospital bedside)
 - ◆ In the form of When, Where, Who, to Whom, Why, What, How (6W's, 1H)
 - ❖ The first application is hospital
 - ◆ International Medical Center of Japan (since 2002)
 - ❖ Current technology is PDA/bar code, but RFID technologies are in process for the future
 - Single item management with unique serialized number

What can IT do?

- ◆ By collecting data from wireless PDAs, examination room terminals, and laboratory equipment,
- ◆ Single item management (ex: POAS) can:
 - ❖ Record medical actions in detail, everywhere
 - ❖ Assist practicing medical treatment to patients
 - ❖ Monitor patient symptoms continuously
 - ❖ Comprehend logistical data by the “minimum unit”
- In real-time.

What can IT improve?

◆ RISK MANGEMENT

- ❖ Prevent medication errors □ patient safety

◆ HOSPITAL MANAGEMENT

- ❖ Cost saving because waste is decreased
- ❖ Optimize inventory level of Material (Medical Materials and Medicine)

◆ DATA MANAGEMENT

- ❖ Re-engineering by simulation with system dynamics
- ❖ Accumulate accurate data for clinical research and clinical trials
- ❖ Allows for more accurate cost analysis

◆ DISTRIBUTION MANAGEMENT

Background on POAS (Point of Act System)

<u>When</u>	When	POAS Data (6W's, 1H)
<u>Who</u>	Who – MD, Nurse, etc.	
To <u>Whom</u>	To Whom – Patient	
<u>Where</u>	Where	
<u>Why</u>	Why - Disease	
<u>What</u>	What – Drugs and Medicines	
<u>How</u>	How – Medical Acts	

How is this different from conventional systems?

Conventional systems

For Patient safety

Enter schedule

Enter action

Granularity of Invoice slip
= by one day

Granularity of single item
= real time

Nurse station/Out Patient dep.

Bedside

Medical affairs section

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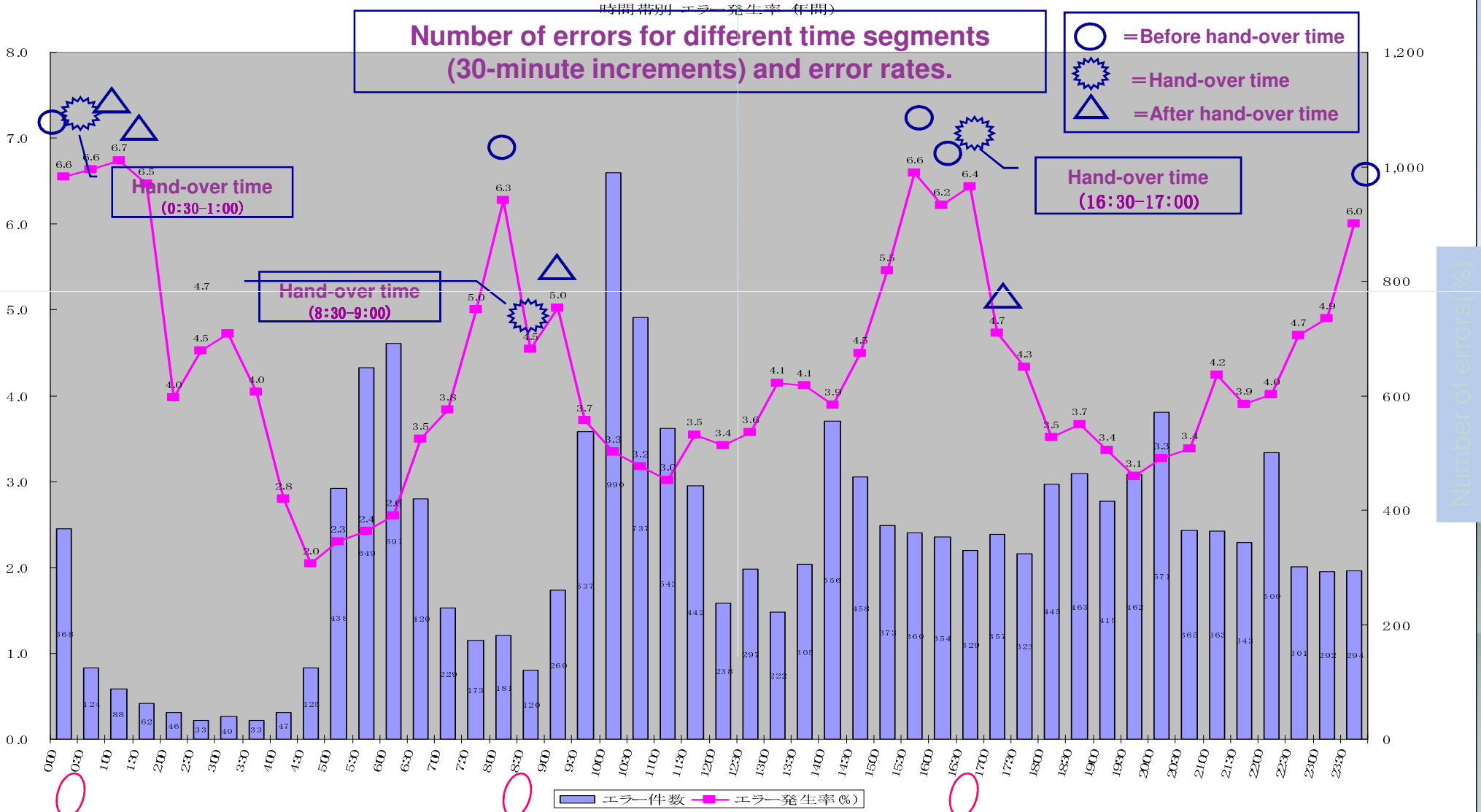
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◆ DISTRIBUTION MANAGEMENT

- ❖ Optimize supply chain management (SCM) in the medical/pharmaceutical industry

Alarm status according to different time segments

Time segments with higher alarm rates become even clearer when seen in 30-minute increments.



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◆ HOSPITAL MANAGEMENT

- ❖ **Cost saving because waste is decreased**
- ❖ **Optimize inventory level of Material (Medical devices and Medicine)**

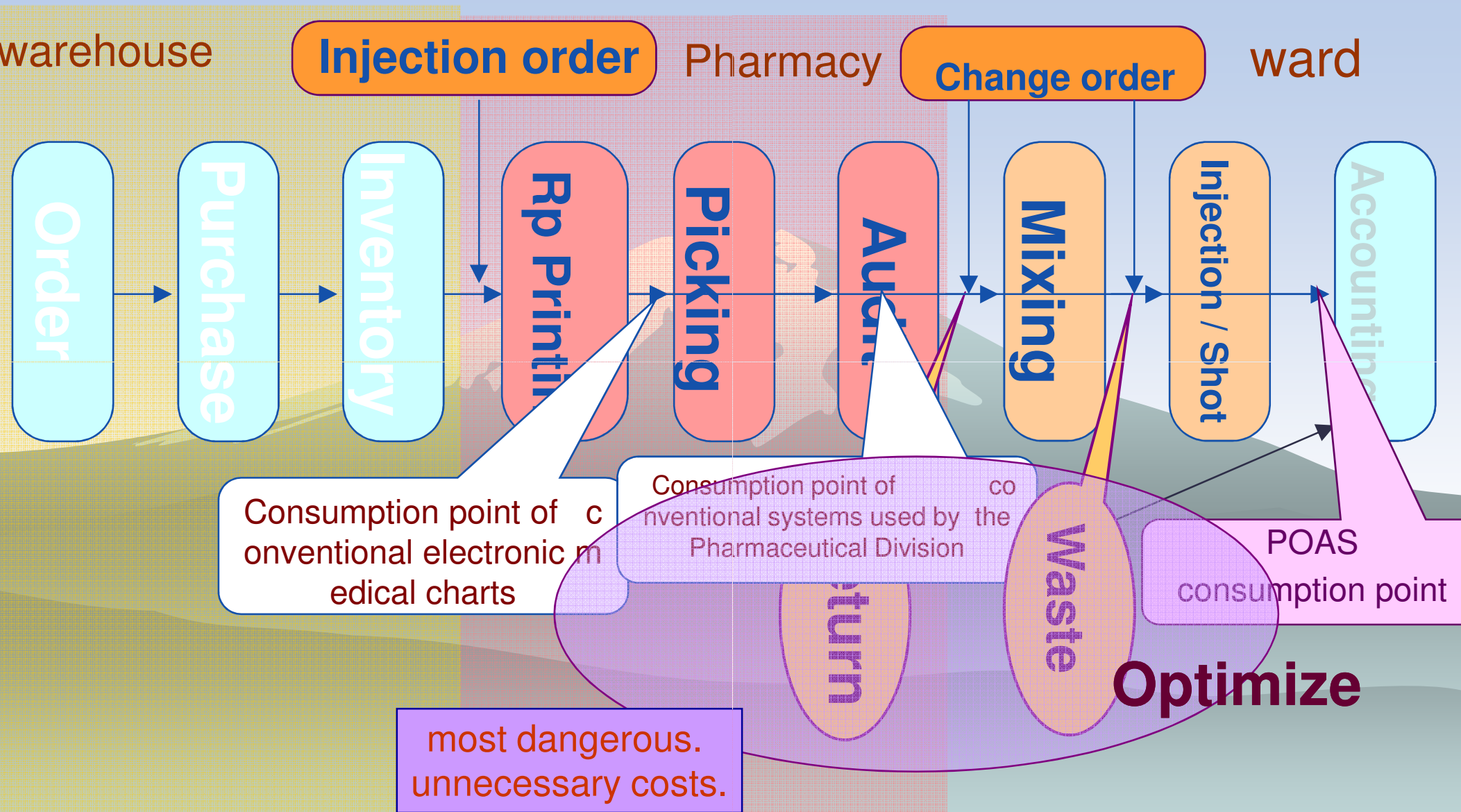
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Automatically acquired information : Digitize



IT can be improved hospital management.

- ◆ Prevent medical accidents.
- ◆ Thorough inventory management
- ◆ Keywords are “**real-time** entry” and “**serialization** for single item management.”
- ◆ The accurate acquisition of information on bedside actions is crucial.
- ◆ Acquire cancellation and change data.
 - ❖ Only about 60% can be acquired in conventional systems.
 - ❖ POAS gives an overall picture.
 - ❖ POAS can **save 1 million dollar per year**.
- ◆ This improves medical **safety** and **management efficiency**.

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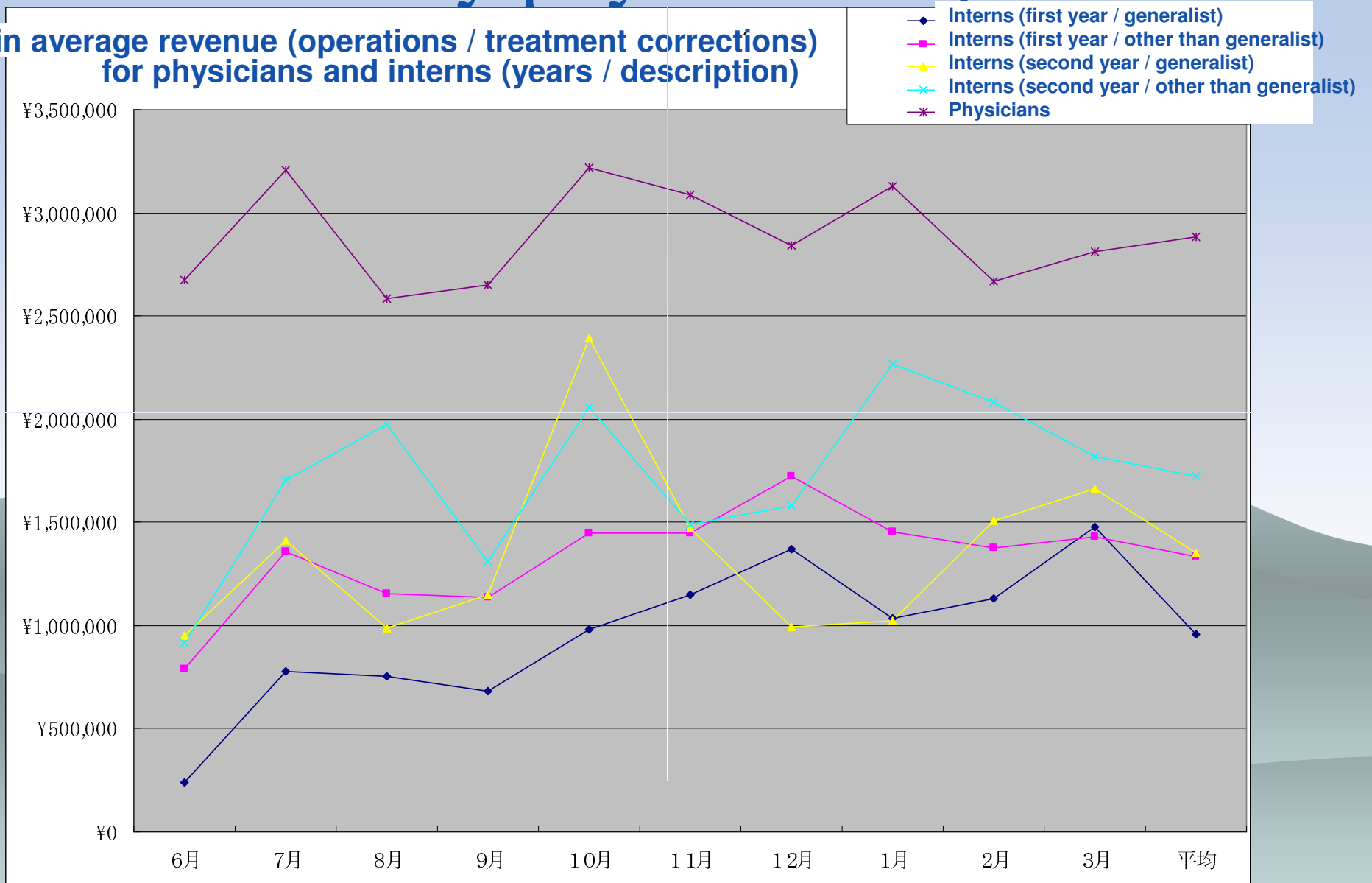
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Revenue by physician experience

Trends in average revenue (operations / treatment corrections) for physicians and interns (years / description)



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Standardization - ISO/TC 215

- ◆ the International Organization for Standardization's (ISO) Technical Committee (TC) on health informatics.
- ◆ TC 215 works on the standardization of Health Information and Communications Technology (ICT), to allow for compatibility and interoperability between independent systems.
 - ❖ WG 1: Data structure
 - ❖ WG 2: Messaging and communications
 - ❖ WG 3: Health Concept Representation
 - ❖ WG 4: Security
 - ❖ WG 5: Health Cards
 - ❖ WG 6: Pharmacy and Medication
 - ❖ WG 7: Devices
 - ❖ WG 8: Business requirements for Electronic Health Records

Thank you for your attention.



Have A Nice Day In Japan !