

# Pharmacy Division

## Introduction

The Pharmacy Division provides services such as the warehousing and dispensing of drugs, the preparation of injections (including aseptic mixtures), the collection and dissemination of drug information and the providing patients' guidance for proper use of drugs. The division's services have improved in response to the hospital's goal of promoting a higher quality of medical care and practice. A state-of-the-art computerized system and other pharmacy-related equipment ensure quality control and inventory management, promote the proper use of drugs, and enhance the efficiency and quality of our services.

## Routine Activities

As part of its fundamental work, the Pharmacy Division prepares and dispenses oral and topical medicine and injections for individual patients. We conduct aseptic mixtures of injectable chemotherapy agents for all outpatients and some inpatients, and we are responsible for the aseptic preparation of intravenous hyperalimentation (IVH) for inpatients.

The importance of providing drug information to patients has been widely acknowledged. Division pharmacists visit inpatients and give advice on taking medicine, focusing especially on pain control with morphine etc, and they participate in the palliative care support team. Outpatient drug consultation concerning guidance in the proper use of opioids is also given in a "drug consulting area".

Pharmacists collect, compile, and maintain a database of drug information and distribute pertinent information to the medical staff. Drug information is disseminated throughout the hospital by paper distribution and/or on the in-hospital computer network, quickly in the case of emergency safety information from the Ministry of Health, Labour &

Welfare and in a timely manner in the case of general drug information.

Pharmacists individualize dosage regimens for specified drugs such as aminoglycosides or vancomycin based on both measured blood concentrations and pharmacokinetics in order to maximize the efficacy and minimize adverse reactions.

The inventory control and handling of new investigative drugs are conducted in the Pharmacy Division and also monitored by the drug sponsors, in accordance with GCP regulations.

There are educational activities such as providing training course for university students of pharmacy, participating in multi-institutional pharmaceutical TV conference.

## Systems and Devices

(1) The pharmacy division systems linked to the ordering system

The physician's order is conducted through the computerized ordering system. The prescription ordering system links to the medicine package printing system combined with function of providing drug information. The medicine package information and also easy-to-understand explanations and instruction for proper use of drugs such as efficacy and effectiveness, precaution and guidance, symptoms at the early stage of adverse reactions are automatically printed out for patients on entry of prescription ordering.

The injection ordering system links to the automatic "picking system" device, and this linkage ensures that injections are set properly and efficiently. And this injection ordering system contains the additional function ("regimen ordering system for antineoplastics") which makes it possible to check the dose as well as the interval of chemotherapy, and this function supports the proper and smooth ordering operation.

(2) The pharmacy homepage

The pharmacy homepage is established and updated monthly. During information such as current safety information, newly adopted drugs, Q&A, and recent articles are available for medical staffs on the in-hospital computer network.

(3) The touch-panel device for providing drug information to patients

Patients can use the touch-panel device situated at the pharmacy counter to see or print out drug information at their convenience.

## Research Activities

The main research activity of our division is the safety management of chemotherapy, including how to handle with chemotherapeutic drugs and how to reduce incidents regarding drugs. We are also engaged in the study of improving pain control for the patients who need palliative care by using guidance materials.

We are planning to conduct drug utilization study (DUS) and pharmacoeconomic study in 2005.

● T. Hojo ●

	FY 2002	FY 2003
1) Oral and topical preparations		
Prepared in hospital pharmacy	114,370	121,741
Inpatients	97,726	102,619
Outpatients	16,644	19,122
Taken to outside pharmacies	53,928	53,497
(% of prescription filled outside)	76.4	73.7
2) Injections		
Inpatients	294,672	296,021
Outpatients	46,990	51,076

	FY 2002	(%)	FY 2003	(%)
	(including sales tax)		(including sales tax)	
Total	4,577,491	100.00	4,955,478	100.0
Internal medicines	293,762	6.4	384,345	7.8
External	60,268	1.3	55,504	1.1
Injection	3,043,523	66.5	3,164,201	63.9
Narcotics	169,235	3.7	170,041	3.4
Blood	318,733	7.0	448,272	9.0
X-ray	515,243	11.3	550,668	11.1
RI	101,810	2.2	112,707	2.3
Others	74,918	1.6	69,739	1.4

Unit: 1000 yen

	FY 2002	FY 2003
IVH preparation	3,210	2,974
Anticancer Drugs	22,641	24,320
Others	20,525	22,717

	FY 2002	FY 2003
Sterilized	127	134
Nonsterilized	204	223

	FY 2002	FY 2003
Newly registered	28	23
Ongoing study	59	48