

Drug & Poison Control Center

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Objectives

The student will be able to:

- Define Drug Information Center
- List Drug Information Center goals
- Recognize the activities provided by Drug Information Center
- Discuss the role of pharmacists in Drug Information Center
- Differentiate between drug information center and poison center
- Explain the criteria required in pharmacists providing Drug Information services
- Outline the main resources needed to be available in drug information center

Defenitions

- **Drug Information** is the provision of unbiased, well-referenced, and critically evaluated information on any aspect of pharmacy practice.
- **Drug Information Center** is to provide a system for the organization and dissemination of drug information (Francke 1965).
- **Informatics** denote the electronic management of information.

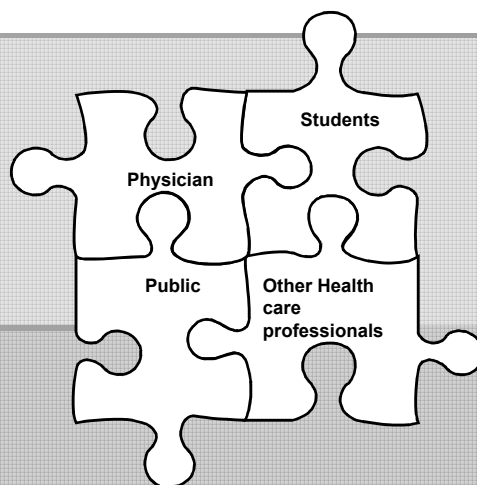
History

- 1950s Product to information shift
- 1962 First pharmacist operated DI Center at University of Kentucky, USA
- 1964 Conference on Drug Information Services
- 1967 The Drug Information Specialist
- 1975 The Millis Commission Report, AACP described the main function of pharmacists as providers of drug information

DPIC GOALS

- Provision of prompt and accurate poison information to those who access the service.
- Provision of drug information to facilitate health professionals in better management of their patients.
- Education of the public in the areas of poisoning prevention and first aid.
- Education of health care professionals in the areas of clinical toxicology, poisoning epidemiology, poisoning prevention, toxicological diagnosis and care.
- Develop effective telecommunications and information technology systems to deliver dependable treatment recommendations.

Who to provide



Role of the Pharmacists

- To stimulate the effective use of drug information resources by pharmacists physicians and other health care professionals
- To educate pharmacy students to serve as effective providers of drug information
- To provide an organized database of specialized information on drug therapeutics to meet the drug information needs of practitioners

Role of the Pharmacists *cont*”

- To expand the role of the pharmacist in providing drug information services to the hospital and community
- To promote patient care through rational drug therapy by the improved availability and use of drug information.

Types of drug information centers

- Hospital based
- Industry based
- Community based

Drug Information Services

- **Response to question**
- Pharmacy and Therapeutic committee (P&T)
 - Development of Drug use policies
 - Formulary considerations
- Coordination of reporting programs (ADR Program)
- Drug Use Review (DUE)/Evaluation
- Investigational Drug Program
- Education and Training (in service programs, students)_
- Publications (Newsletter, Bulletins, Journal, Column)
- Community Services

The main element for providing DIPC

Equipments

1. *Telephone*: the lines should be designed to allow immediate, direct to the center.
2. *Computer devices*:
 - contains the computerized references(local area network)
 - connected to internet network
 - teaching purpose or for the student using.
 - computer reference such as MICROMEDEX.

The Main Element for Providing DIPC

Specific Room

- it should be closed to the pharmacy department to allow both pharmacy staff & health care provider to reach it easy
- sign or label in the door the instruction label indicate who will be allowed to enter the (DIC) room
- (it can be inside the pharmacy department)

The main element for providing DIPC

Equipments

3. *Modem*
4. *Facsimile machine*
5. *Printer*
6. *Copier machine*

The main element for providing DIPC

Personnel

▪ **Specific criteria:**

- Pharm.D degree, Ms.degree, B.sdegree, specialized training in drug information center, experience minimum 1-2 years in pharmacy, residencies & fellowship.

▪ **General criteria :**

- They should have the computers skills
- The person should be cooperative, confidence, accurate, good English language, active, intelligent, and good hand writing

The main element for providing DIPC

Resources

- It is the responsibility of the pharmacist to ensure that up-to-date resources.

- Pharmacists should be familiar with not only the components of the literature (primary) but also the features of individual resources in each component.

The main element for providing DIPC

Resources

- Must have references
 - Tertiary references e.g. textbooks
- Should have references
 - Journals, MICROMEDIX
- Nice-to-have references
 - *Software resources*
 - Videotape resources

Systemic Approach in Answering a Question

- **Step 1: Secure Demographics of Requestor**
- **Step 2: Obtain Background Information**
- **Step 3: Determine and Categorize the Ultimate Question**
- **Step 4: Develop Strategy and Conduct Search**
- **Step 5: Perform Evaluation, Analysis, and Synthesis**
- **Step 6: Formulate and Provide Response**
- **Step 7: Conduct Follow-Up and Documentation**

Type of Question

- Adverse effects.
- Drug therapy.
- Articles/Reviews.
- Drug Identification.
- Assay/Chem
- Pharmacokinetics.
- Availability.
- Compatibility.
- Poisoning.
- Dosage/Administ.
- Pregnancy & lactation
- Drug Evaluation. toxicology.
- Drug Interaction.

Documentation of medication information requests

1. Date and time received.
2. Requester's name, address, method of contact (e.g., telephone), and category (e.g., health care discipline, patient, public).
3. Person assessing medication information needs.
4. Method of delivery (e.g., telephone, personal visit, mail).
5. Classification of request.
6. Question asked.
7. Patient-specific information obtained.
8. Response provided.
9. References used.
10. Date and time answered.
11. Person responding to request.
12. Estimated time in preparation and for communication.
13. Materials sent to requesters.
14. Outcome measures suggested (e.g., impact on patient)

Outline

- History
- Introduction
- Comparison between PCC and DIC
- Telephone Protocol for handling Poison Calls

History

- 1953 The establishment of the First PCC
- 1958 Formation of American Association of Poison Control Center (AAPCC)
- 1960 600 poison center in the USA

Poison Control Centers

- PCC were established for two reasons:
 - To provide rapid access to information valuable in assessing and treating poisonings.
 - To assist with poisoning prevention

Functions

- Assess and treatment recommendations during poisoning via 24-hour emergency telephone services
- Provide public and professional educational programs
- To collect data on poisonings
- To perform research
- Assist the public and health care providers during hazardous material spills

Staffing

- Medical director (physician with interest and expertise in medical toxicology) duties include
 - Protocol review and approval
 - Audit of poison center recommendations
 - Availability for consultation on difficult cases
- Administrative director
- 5-6 full time specialists
 - Pharmacists
 - Nurses
 - Physicians
 - One year experience
 - answered at least 2000 calls
 - Exam
- Public education Coordinator

Poison Center Certification

AAPCC provides a program That certifies regional poison centers:

- Designation by appropriate public health officials
- Demonstration that the center is used appropriately throughout the region
- adequate staffing by specialist
- Demonstration of the role of the physician

Poison Center Certification

- Medical director in the operation of the center
- Adequate training and experience of an administrative director
- Demonstration of adequate programs in professional and public education
- Participation in the AAPCC data collection

Comparison Between DIC and PCC

- Both have a common goal
“provide comprehensive, accurate, and timely information to their clients”
- Both used the information
“to enhance the medical care of patients”
- Both have similar
“information retrieval process and physical layouts”
- Despite these similarities, there are a number of important differences between the two services

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Comparison Between DIC and PCC (Cont'd)

- Clientele :
 - Public vs. health care professionals
 - Eighty eight percent of PCC calls came from public
 - Nine to 10 percent of DIC calls came from public

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Comparison Between DIC and PCC (Cont'd)

Call Volume :

- Exteremily large from public versus health care professionals.
 - Average is 103 calls per day (human exposure only)
 - Range is 33 to 213 calls per day

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Comparison Between DIC and PCC (Cont'd)

Administrative differences

- Hours of Operation/Cost :
- PCC operates 24 hrs a day year-round vs. 9 AM to 5 PM
 - PCC requires large staffs compare to DIC
- PCC is more expensive to operate than DIC

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Comparison Between

DIC and PCC (Cont'd)

Administrative differences

- Staffing :
 - PCC relies not only on pharmacist but also on other health care professionals (nurses, physicians, technicians)
 - Nurses worked 52% of the total phone hours in 1993
 - Pharmacists and physicians worked 36% and 3% of the total hours, respectively

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Comparison Between DIC and

PCC (Cont'd)

Procedural differences

- Response Time :
 - All PCC calls require an immediate response
 - Time is related to the efficacy of the therapeutic interventions
 - The average response time is 5 min. in PCC vs. 15 - 30 min DIC

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Comparison Between DIC and PCC (Cont'd)

Procedural differences

- **Call complexity :**
 - PCC calls are less complex than DIC calls
 - Most poisoning patients rarely have complex medical history
 - Poisoning agents re-occur constantly from year-to-year
 - PCC is the first point of contact by public and health professionals

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Comparison Between DIC and PCC (Cont'd)

Procedural difference

- **References:**
 - PCC assess and make treatment recommendation for any potential poison (medication, chemical, household, biological, natural toxin). But DIC handle medication- and pharmacy-related inquires
 - PCC will often have a broader base reference collection than DIC

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Comparison Between DIC and PCC

(Cont'd)

Procedural difference

■ Documentaion:

- Documentation helps in developing a data system
 - General Epidemiological Data (date & time of call, reason of exposure)
 - Caller characteristics (site of call)
 - Patient characteristics (age, gender, pregnancy status)

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Comparison Between DIC and PCC

(Cont'd)

Procedural difference

■ Documentaion:(Cont'd)

- Exposure characteristics (substance, route and site of exposure)
- Clinical course (Clinical manifestation, medical outcomes)
- Medical management characteristics(Therapeutic intervention)

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Considerations of PCC

- **Facility considerations :**
 - Location (near ER, medical library, hospital pharmacy)
 - Work space and environment
- **Equipment :**
 - Telephone system (direct with enough lines)
 - PC computer system and/or local area network (LAN)
 - Modem and facsimile machine
 - Internet access
 - Other (such as file cabinets, refrigerators, microwave)

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Considerations of PCC

(Cont'd)

- **Resources :**
 - Two factors should be available in PCC
 - The experience and training of the specialist
 - The quality of the information available to the specialist.

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Considerations of PCC

(Cont'd)

■ Resources :

- Micromedex's Poisindex (a database of more than 800,000 household products, chemicals, and medications)
- Clinical Toxicology of Commercial Products
- General clinical toxicology texts
- Specialized toxicology texts
- Internal protocol for handling certain poisons
- Primary literature (case report)
- On-call medical support and experts in the area

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Considerations of PCC

(Cont'd)

■ Policy and Procedures :

- Different than DIC in almost all aspects
 - Handling intentional exposure
 - Long term public education program
 - Release of PCC tape recording
 - Telephone system repair

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