

Application of Computer in Pharmacy

Why computer is important in the field of Pharmacy...?

- The computer has become a very common tool in all areas of science and technology. With the rise of the Internet and the developments in computer technology and manufacturing, has resulted in the development of number of computer applications.
- The field of pharmacy has immensely benefited by the use of computer and will continue to benefit as the pharmacist's gain more familiarity with computer. Some of the important areas where computers are useful are new drug discovery, drug design, analysis, manufacturing of drugs and hospital pharmacy. Other than these, computers helps pharmacist collaborate with other professionals, which is very essential in today's research work.

- It also provides solutions for time consuming manual task. Various hardware and software's have been developed without which drug discovery, designing, manufacturing and analyzing would become virtually impossible. Further development is still in progress which will make pharmacist's job easier.
- The more important fact is that they will enable us to discover new drugs for the complete care of dangerous of diseases like aids, cancer etc. and reduce the cost of production of drugs for diseases which are easily cured.
- Computers are also useful for hospital pharmacist and in telemedicine. A lot has been done and a still has to be done for improving the computer facilities for pharmacist.

Here are some important applications of computer in pharmacy.

1. **Prescription filling:** Patient name, doctor name, drug name, quantity, prescription number; prints the label, calculates the price, discount, etc.
2. **E-Prescribing** E-prescriptions are computer-generated prescriptions created by healthcare provider and sent directly to pharmacy. E-prescriptions are sent electronically through a private, secure, and closed network.

E-prescriptions are:

Fast - Your prescription arrives at your pharmacy before you leave your doctor's office.

Convenient - You don't have to make that extra trip to drop off your prescription at the pharmacy.

3. Prescription Processing: Prescription processing is invariably one of the main activities going on within a pharmacy on a day-to-day basis, and computers are used to make this process more reliable and efficient.

Both the customer service side of pharmacy operation and the dispensing aspect are today carried out through the use of computing systems.

Pharmacy computers also handle customer service activities such as sales and cash handling within the retail operation.

4. Patient Counseling: Pharmacist can print counseling handout, prescription label and invoice.

Also handout contains any information the patient might need to know regarding precautions or side effects of the medication.

5. Patient Profile: Pharmacist can update patient profile whenever a new prescription is filled.

Also if the patient might have any symptoms like allergies, it should be added to patient profile

6. Nursing Home Reports: Some information must be added by nursing home administrators, including physician order sheet, unit dose filling profile, medication administration records, and consultant pharmacist evaluation.

7. Stock movement reports: This depend on how much of drugs taken from previous inventory and this allowing to pharmacy manager to minimizing the actual inventory investment.

8. Electronic Order Entry: Now the wholesalers provide for other pharmacies interface with their central computers to order new medications.

Also pharmacy's employees take inventory of the shelf stock using optical scanner to read and record product codes and quantities

9. Permanent Shelf Labels: In-addition, wholesalers provide shelf labels containing the product description, item number, size, fine-line code, universal product code bars and other information

10. Customized Price Stickers: Wholesalers supply price stickers, also sticker include other information (quantity ordered item number, cost and date of merchandise order)

11. Daily and Monthly Log: Computer program can provide a pharmacy with a timely, precise review of prescriptions broken out into prescription number, patient type, gross profit margins and other information.

12. Management Reports: There is a lot of different types of reports can help the pharmacy manager in his practice and his business. These like, accounting, payroll administration, cost and financial analysis market analysis, budgeting, sales forecasting and investment analysis.

13. Communication: Computers are used within pharmacies to facilitate communication.

From email to other Internet-based messaging systems, online communication allows pharmacists and other pharmacy staff to keep in contact both within their own organization and within the professional community.

Some pharmacy companies have their own Intranet systems for internal communications over the Internet.

14. Information: Having access to the Web via pharmacy computers is something that has enhanced the ability of pharmacists to carry out their duties to a higher standard.

As well as giving the pharmacy staff access to the vast store of information that is available on the Internet, including those on specialist pharmacy resources,

Internet connects pharmacists to their peers on a global scale.

Professional communities for pharmacists operate on-line, creating an atmosphere that is conducive to professional development.

15. Patient Management: Health care clinicians and administrators alike are showing enthusiasm for one of the medical field's newest technological trends: patient information management systems.

These electronic systems serve as a database for storing patient files.

Information can be easily added, changed, deleted, printed or audited by clicking a few buttons on the computer.

Pharmacists do not have to store or carry around health records any longer, because all they need is access to a computer or laptop to pull up patient information.

16. Error Prevention: Pharmacy computer systems can help to prevent errors in medication, potentially saving lives and generally preserving the health of patients. As well as checking medicines and combinations of medicines, these systems can in some cases check on patient information. The availability of such systems varies across the different geographical areas, but in some cases pharmacy computers are able to check on prescribed medicines with specific reference to a patient and their overall health-care picture.

17. Computer and medical education

Computers have revolutionized the way education is handled in the today's world.

In medical education, computers are particularly useful because there is such a need for learning and presenting large amounts of data, getting and comparing accurate study and test results, and effectively monitoring patients..

SPECIAL AREAS OF PHARMACY REQUIRED COMPUTER

A. USE OF COMPUTERS IN RETAIL PHARMACY SHOP

Computers are used by community pharmacist for various functions. Some accounting functions are like;

- preparation of prescription label
- providing a receipt for patient
- generation a hard copy record of transactions
- calculating total prescription cost
- automatically ordering the low quantity products via electronic transitions
- preparation of annual withholding payrolls.
- Managerial functions include generation of multiple sales analysis for a day, month, weak and to date for number of prescriptions handled and amounts in cash.
- Estimation of profits and financial ration analysis
- calculation of number of prescription handled per unit time
- printing of billing and payment details
- purchasing and inventory control in retail pharmacy.