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VISION OF PHARMACIST- TO CREATE THE HEALTHY NATION IN NEXT GENERATION

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ABSTRACT

India being a developing country in wealth but poor in health conditions of people due to lack of quality pharmacist and significance to the pharmacist. Out of total population in rural (around 68%), due to unhygienic conditions and lack of awareness they suffer from several communicable and infectious diseases and in urban people, even though they maintain hygienic conditions due to factors like pollution, lifestyle and stress they suffer from lifestyle diseases. The pharmacist is health professional who is easily available and accessible therefore he should be involved in prevention and treatment of the diseases. In this review, we will study in which generic medicines, Lifestyle modifications, establishing drug information centers, Preventing antibiotic resistance, Conducting smoking cessation and awareness programme's, Improving the percent of immunization further focusing on Clinical research and Pharmacovigilance thus pharmacist has a role from dispensing to total patient care which improves the therapeutic outcomes of patients. The main criteria for these roles are interaction between the pharmacist and patient which needs a consultative area in each pharmacy. A change in nation's health happens when government recognize the importance of pharmacist and provide opportunities to utilize his efforts to society.aspects the pharmacist should be involved for utilizing his efforts for development of health in society. A healthy Pharma nation can be achieved by involving a pharmacist in many aspects like the proper counseling to the patient, Educating people on importance of pharmacist and provide opportunities to utilize his efforts to society.

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INTRODUCTION

Traditionally, the role of pharmacist was to dispense medicines, but nowadays In spite of pharmacist being highly qualified their efforts are utilized only for dispensing, it can be used from dispensing medication to monitoring patient health and progress to optimize their response to medication therapies. So, pharmacist plays a vital role in healthcare system by providing information regarding medicine.

Even though the number of Pharmacists, Pharmaceutical Industries, New drugs, new technologies, Health budgets, Doctors, Hospitals are increasing equally the diseases are also increasing day by day due to:

- Lack of quality pharmacist.
- Lack of importance to pharmacist.

For quality pharmacist, the standards of education in pharmacy are to be increased. The training should be oriented towards patient care. Quality pharmacist can be evolved by improving skills, updating his knowledge, unique expertise that include pharmacotherapy, access to care and prevention

Pharmacists must be able to develop rapport with patient by making him to realize that his working for the patient's welfare and concern with treatment outcomes.

For the importance to the pharmacist: Government should provide opportunities such that pharmacists can explore his knowledge in various aspects of health care system. The pharmacist should maintain a good relationship between physician, nurse and other health care professionals.

When a quality pharmacist and his importance is expanded they can play role in dispensing, patient history, medication history, patient counselling, drug utilization and evaluation review, check if any drug –drug, food interactions. Providing non pharmacological therapy, ADR monitoring. By all this the pharmacist can provide Right drug, Right dose, Right patient, and Right time, through Right route in Right way.

The main objectives of this review are

- To improve the health score of India
- To expand the role of pharmacist
- To create awareness regarding the utilisation of pharmacy services
- To improve the facilities by government to provide pharmaceutical care

The pharmacist should provide all this he should actively participate in the following:

- ❖ Patient counselling
- ❖ Improving percent of immunization¹
- ❖ implementing smoking cessation
- ❖ Preventing antibiotic resistance
- ❖ Establishment of drug information centre and poison information centre
- ❖ Pharmacovigilance programme
- ❖ Conducting awareness programs
- ❖ Clinical research

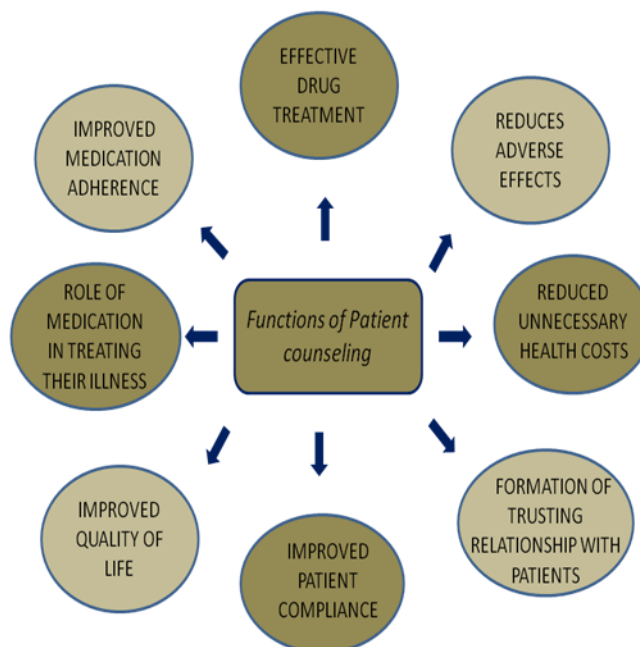
PATIENT COUNSELLING:

It is defined as providing medication information orally or in a written form to the patient or their respective on following aspects².

On healthy diet: By balanced and complete diet many chronic conditions like blood sugar level, risk of heart diseases, hyperlipidaemia, and weight gain can be maintained. Pharmacist should take care that the patient to have diet which benefits in particular disease. For example: ORS in diarrhea, coconut water in UTI, avoid citrus in UTI.³

Life style modifications: Non pharmacological modifications which improve the patient therapeutic outcomes by providing regular checkups-B.P, Blood sugar level, ECG and Lipid profile, Exercise and Walk at least 30min/day, Reduce salt intake, Avoid fat containing food, manage stress, moderate alcohol consumption.

- Importance of compliance
- Preventive measures
- To avoid self medication.



PATIENT COUNSELLING INCLUDES THE FOLLOWING

- ❖ Name, strength, dosage, route of administration ,benefits of medication
- ❖ How medication works
- ❖ Dose and duration of therapy.⁴
- ❖ Goals of therapy
- ❖ How effectiveness will be monitored
- ❖ Adverse effects and how to deal with them
- ❖ Drug specific issues
- ❖ Proper storage of medications
- ❖ Potential precautions, contraindications, drug food and drug-drug interactions
- ❖ What to do if a dose is missed?
- ❖ Refill information and follow-up plan

IN IMPROVING THE PERCENT OF IMMUNIZATION:

Pharmacist must provide with legal rule in administration of vaccine for high levels of vaccine coverage.⁵

Some countries like Portugal, Ireland by giving role of vaccination to pharmacist the percent of immunization is increased up to 95% thus India should start such administration of vaccines⁶ by pharmacist(Fig 1).

Pharmacist should have an increased role in advising on and administering vaccines for preventable diseases.

Patients with chronic diseases are key target group for influenza immunization programs and these patients see their local pharmacist even more frequently than they are in contact with doctors. For achieving all these training for pharmacist is an essential part of running a successful community based immunization scheme.

DOCTORS TREAT THE DISEASE AND THE PHARMACIST SHOULD PREVENT THE DISEASE

Involving pharmacist in vaccination is a win-win health policy as it increases overall immunization rates it benefits the patients and community. Getting vaccinated is single most effective intervention to protect people.Seasonal vaccination should also be provided by the pharmacist.

FOR EXAMPLE:

Old age above 65 yrs are target for influenza attack

- Thus the pharmacist should create awareness to patient and administer the influenza vaccine to patient.
- By vaccination the disease can be prevented.
- Thus, the pharmacist should awareness to patient and administers the influenza vaccine to patient.

It is simple and easy method in prevention of patients.

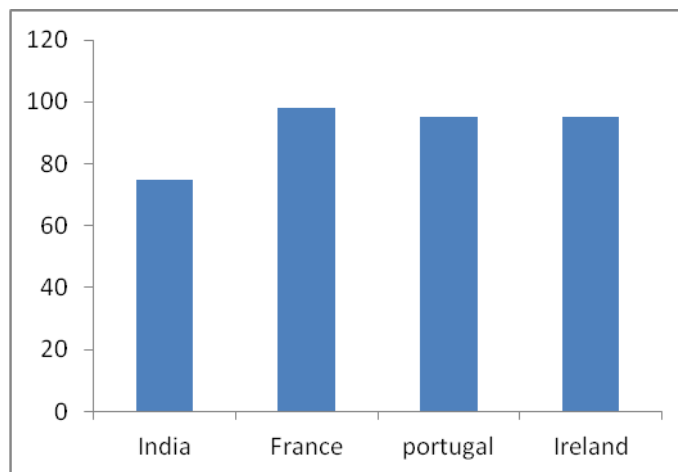


Fig No.1: Role in implementing smoking Cessation:

Pharmacist has many opportunities to be involved in smoking cessation⁷, ranging from encouraging and motivating people to quit to providing a full smoking cessation service.⁸

In practical way the pharmacist should offer BP and Cholesterol⁹ check-up and thereby addressing them the risk in developing Hypertension and Chronic heart disease then encouraging by implementing models like (Fig no.2)

1. Client is counseled and provided with smoking cessation progression card.

- It contains hints for stopping smoking
- Health benefits of smoking cessation
- Natural remedies for curing withdrawal symptoms by taking care of individual patient

2. In group model gathering the smoking people and to share their problems and experience with other people. The success rate is more in group model for smoking cessation.¹⁰

3. By advising the use of nicotine replacement therapy providing “Nicotine replacement therapy drug on OTC.” This was done in Sweden and Denmark by pharmacists who were very successful.

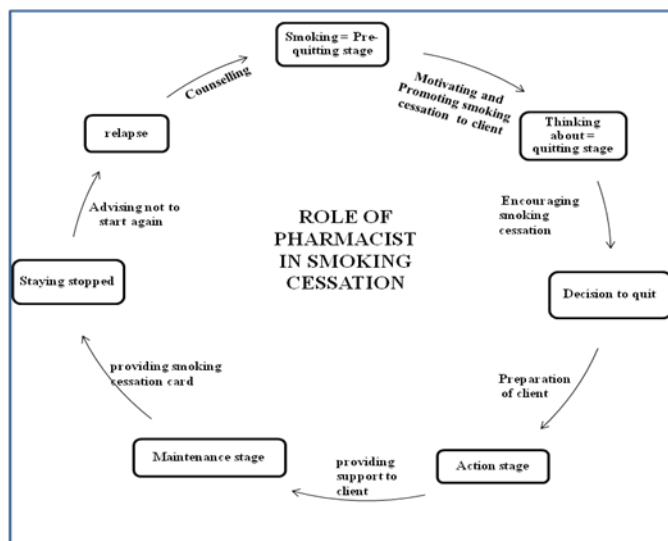


Fig no.2: STAGES OF PATIENT IN SMOKING CESSATION AND THE ROLE OF PHARMACIST AT EVERY STAGE.

GENERIC DRUGS REDUCE HEALTH CARE COSTS:

As India is developing country the cost of drug also effect the patient adherence, Use of generic drugs should be encouraged by pharmacist who reduces the cost burden to the patient.

A recent IMS Health study showed that generic drugs saved the U.S. health care system 1.07 trillion over the past decade, It is important that pharmacists are reimbursed in such a way as to not discourage them from dispensing the least expensive product. Pharmacist should create awareness regarding the generic drugs and their use (Fig no.3).

DRUG	GENERIC COST	BRANDED COST
Diclofenac	Rs 4-5	Rs 20-25
Amoxicillin	Rs 13-14	Rs 40-120
Azithromycin	Rs 40-42	Rs 100-135

ROLE OF PHARMACIST IN PREVENTING ANTIBIOTIC RESISTANCE

Antibiotic resistance is considered critical and needed full attention by the pharmacist because of its danger to the society¹¹
Pharmacist should insist to patient that Antibiotics are not for headaches, common cold, flu and virus.

To promote rational and safe use of antibiotics the role of pharmacist in the hospital

- Guide and advice on the products useful in infection control.
- Educate patient and also all grades of healthcare workers.
- Carry out research on new antibiotic formulation.
- Review of antibiotic prescriptions dispensed.
- Simple measures such as modification as IV treatment to oral and automatic stop orders could be followed
- Regular periodic review of antibiotic usage.
- Detect, enquire and supervise the antibiotic resistant cases.

Reasons of Antibiotic resistance

- Lack of medication adherence.
- Lack of patient counseling.
- Lack of awareness regarding antibiotic resistance.
- No rational use of drugs.
- Prescription of high power antibiotics.

All these reasons can be overcome by pharmacist counselling about antibiotics

ESTABLISHMENT OF DRUG INFORMATION CENTRE AND POISON INFORMATION CENTRE:

A "DRUG INFORMATION CENTRE" is an area where pharmacists (or other health professionals) specialise in providing information to health professionals or the public on drug safety aspects by answering their call regarding the all critical problems on drug information, their uses and their side effects.¹²

It should contain information of

- scientific developments,
- New drugs and formulations added,
- Journals and magazines.

The various functions of drug information centre by the pharmacist is:

- ✓ ANSWERING MEDICATION RELATED INQUIRIES
- ✓ DRUG EVALUATION
- ✓ THERAPEUTIC ADVICE
- ✓ EDUCATION AND TRAINING
- ✓ DISSEMINATION OF INFORMATION
- ✓ PHARMACOVIGILANCE
- ✓ RESEARCH

SUCH DRUG INFORMATION CENTRES SHOULD BE DEVELOPED MORE IN HOSPITALS AND OTHER PLACES

Poison Information centre:

The poison Information centre is a specialized unit providing Information on poisoning, to the whole community. The well experienced pharmacist should establish poison information centers; service provided by poison information centers offers considerable direct health benefits by reducing morbidity and mortality from poisoning.¹³

Pharmacist plays an important role in treating poison cases:

- ❖ Pharmacist working in emergency care so, they should be familiar with the management of common poisonings such as overdose of paracetamol, antidepressants, and hypnotics.
- ❖ Advice on treatment regimens and possible complications.
- ❖ Monitoring the adverse drug reactions of drugs and in handling problems of substance abuse.
- ❖ Suggest tips for the prevention of Accidental poisoning in elderly.
- ❖ Contingency planning for chemical incidents and disasters.
- ❖ They will help to prevent the unnecessary use of special antidotes and expensive treatments.
- ❖ Information concerning poisons, antidotes management and provide prevention services.
- ❖ Educate community, other health care professionals. they will organized database management.
- ❖ Pharmacovigilance activities, research education and training.

PHARMACOVIGILANCE:**Pharmacist play important role in detection, assessment, understanding and prevention of adverse effects or any other medicine related problems.¹⁴**

- It function like a safe guard against the undetected use of ineffective, substandard or counterfeit medicines hence reduce the wastage of resources.¹⁵
- Pharmacist communicates the information on effectiveness and risks of drugs thereby educates the healthcare team and the public. Pharmacist by Pharmacovigilance ensures safe, rational and effective use of medicines by patients¹⁶.

MAIN AIMS OF PHARMACOVIGILANCE

- To enhance public health¹⁷
- To encourage monitoring understanding and training in pharmacovigilance program thereby altering health care team and general public¹⁸
- To evaluate drug benefits, risks and effectiveness and thereby to promote safe and rational use of drugs
- To improve patient care and safety

ADVANTAGES

- ❖ It is a cost effective method of detecting and minimizing problems to patients and thereby
- ❖ preventing potential disaster
- ❖ It safeguards against the undetected use of ineffective, substandard or counter fit medicines and reduce the wastage on drugs
- ❖ It communicates the information on the effectiveness and risks and risks of drugs and thereby
- ❖ Educate the health care team and the public
- ❖ It ensures safe, rational and effective use of medicines by patients¹⁹

Medicines are like double edged weapons and to use it wisely without being hurt, vigilance is needed.

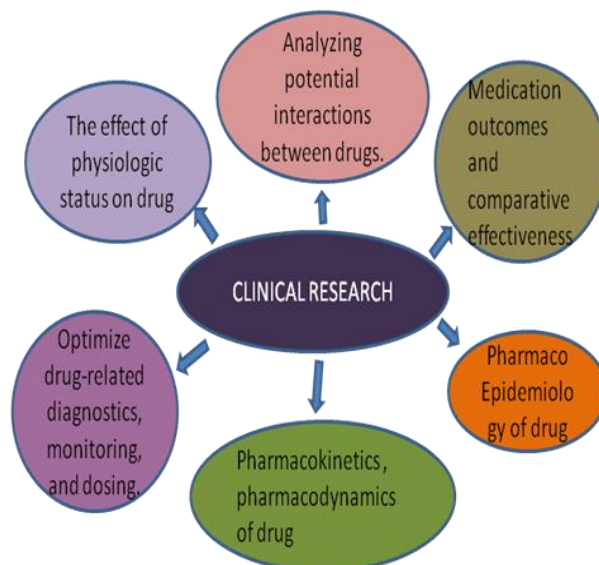
- ✓ Increases the confidence and faith of people on medicines and health care providers
- ✓ provides essential information to drugs regulatory authorities, so as to function more effectively and educate the health care professionals about the medicine they prescribe, dispense and administer.
- ❖ Deaddiction services by pharmacist :
 - Alcohol deaddiction
 - Tobacco deaddiction
- ❖ Programme for control of vector borne diseases
 - ensuring rational use of prescribed medicines
 - sensitizing people about various vector control measures
 - providing consumer health information and other IEC materials

Creating awareness on schemes and policies of government:

- Government is providing schemes like Swachh Bharat; Some communication is missing which is filled by community pharmacist by creating awareness programmes on importance and benefit of such schemes.
- Pharmacist should provide information regarding the policies for rural like National rural health mission by government for benefit of patient.

PHARMACISTS IN CLINICAL RESEARCH:

Clinical research in the Department of Clinical Pharmacy that determine the safest, most effective use of medications for a given patient or population and disease state, while accounting for age, gender, ethnicity, health status, and genetics.²²
 "An actual pathway is research for budding pharmacist in India."



Individuals trained in pharmacy are in the perfect position to bridge the gap between the flood of genomic information becoming available and the goal of personalized medicine.

Pharmacy practices	Present situation in India	For Healthy India
Personnel	Non Pharmacist also dispense in pharmacies.	Only quality pharmacist should dispense in pharmacy.
Percent of Immunization	70% of total population	Totally immunized when it becomes pharmacist's responsibility.
Procurement and inventory control	Not maintained in all hospitals.	Should be maintained and inspected regularly
Prescription refilling	Not proper	Information and Importance of refilling should be provided by pharmacist for roper refilling.
Patient history	Not considered	With consideration medication errors can be decreased.
Patient counseling	Not proper and Not a legal act	Should become legal act and properly counseled after prescription by pharmacist.
Medicine records and patient records.	Not properly maintained	Should be maintained by chief pharmacist for ADR monitoring.
pharmacovigilance	Developing now a days	Should be further developed.
Drug information centres	Only in big hospitals	Should be established in all hospitals and other places

The pharmacist plays vital roles by involving in all aspects like dedication, awareness programmers, immunization who is a care giver, decision maker, communicator to the society. As Pharmacist is available health professional at all time and easily available. So, the Government should offer opportunities to the pharmacist for improving health conditions of people. Every Pharmacist being responsible to their profession, healthy nation can be achieved sooner. A change happens when all the pharmacies in India are provided with consultative area for interaction between pharmacist and society.

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CONFLICT OF INTEREST

None

REFERENCES

1. <https://www.pharmacyregulation.org/resources/registrant-survey./responsibilities>
2. <https://www.journals.elsevier.com/patient-education-and-counseling>
3. <http://drugtopics.modernmedicine.com/drug-topics/news/pharmacy-dispensing-and-patient-counseling>
4. cph.sagepub.com/content/140/4/262.full
5. www.vaccinestoday.eu/stories/pharmacists-can-play-key-role-in-immunisation/
6. drugtopics.modernmedicine.com/.../pharmacists-role-administering-vaccinations-incre...
7. [smoking-cessation-pharmacy-practice-tips-bu](http://www.smokingcessation.com/pharmacy-practice-tips-bu)
8. https://www.fip.org/www/uploads/database_file.php?id=200&table_id=rf_msm&q=smoking%20cessation&dqi=SMOKIN%20CESSATION%20PHARMACIST&am=modifiedbroad&an=msn_s
9. <https://www.pharmacist.com/promoting->
10. http://c.ymcdn.com/sites/www.aparx.org/resource/resmgr/CEs/CE_Winter_Smoking_Cessation.pdf
11. <http://www.medscape.com/viewarticle/747212>
12. http://www.srmuniv.ac.in/sites/default/files/downloads/ESTABLISHMENT_OF_DRUG_INFORMATION_CENTRE.pdf
13. <http://www.hus.fi/en/medical-care/medical-services/Poison%20Information%20Centre/Pages/default.aspx>
14. www.who.int/medicines/areas/quality_safety/safety
15. Hospital and clinical pharmacy (2nd edition) by S.balasubramanian, N.Narayan
16. https://www.chemtech-online.com/P&B/vijay_march13.h
17. apps.who.int/medicinedocs/en/d/Js6164e/2.html
18. www.pharmabiz.com/ArticleDetails.aspx?aid=87506&
19. https://www.chemtech-online.com/P&B/vijay_march13.h
20. <http://isoponline.org/>
21. <http://www.cshp.ca/advocacy/PAWMaterials/Pharmacy-Awareness-Guide-2016.pd>
22. <http://widango.in/ad-creatin>
23. www.sciencemag.org/.06/behind-scenes-pharmacists-play-key-role-clinical-research



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