

A REPORT ON

Methods And Measures For Using Existing Drug Information Material For Patient Information

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Abbreviations and acronyms

DI	Drug information
DIC	Drug information Centre
MR	Medical Representative
NGO	Nongovernmental Organization
OTC	Over-the-counter (drug)
FDAs	Food and Drug Administration)
CDSCO	Central Drugs Standard Control Organization
ADR	Adverse Drug Reactions
PIL	Patient Information Leaflet
WHO	World Health Organization
IPA	Indian Pharmaceutical Association
AIOCD	All India Organisation of Chemists and Druggists

1. Introduction

Medicine is a chemical product **plus** information.

Drug Information is a key to preventing medication errors. Such information leads to **Enhanced Quality of Patient Care** and thus **Improved Patient Outcome**.

Drug Information is a current, critically examined, relevant data about drugs and drug use in a given patient or situation.¹

Current information uses most recent, unbiased, authentic, up-to-date sources possible.

Critically Examined Information-should meet following criteria:

- a) More than one source should be used when appropriate
- b) The extent of agreement of sources should be determined; if sources do not agree, good judgment should be used.
- c) The plausibility if information based on clinical circumstances should be determined.

Relevant Information-must be presented in a manner that applies directly to the circumstances under consideration (e.g. patient parameters, therapeutic objectives, alternative approaches).

¹ Drug Information Resources by Paul F. Souney and Connie Lee Barnes

2. Need for Patient Drug Information

Health is fundamental human right. Availability and easy accessibility of correct, unbiased, authenticated and updated Drug information to patients and by virtue of it the Rational use of medicines (RUM) contributes to high quality health care while irrational use leads to health hazards and wastage of resources that are already insufficient in the majority of health care system. Overuse, underuse or misuse of medicines that characterize irrational use has been called a problem beyond rationality that persists and is difficult to eliminate.² Research from countries such as India, Ethiopia, Ghana, Kenya, Papua New Guinea, and the Philippines shows that consumers general know **very little** about drugs they use, their effects and their basic mechanisms.³ It has been estimated by the WHO that more than 50% of all medicines are prescribed, dispensed, or sold inappropriately and about 50% of patients do not take them correctly. This scenario underscores the need of educating patient including prescriber and dispenser.

Further the patient has a basic right to know what one is consuming. Patients must have knowledge about what medications they are being advised to consume, in the interest of their own health. Community responsibilities and right in health care have been articulated in many international gathering. Alma Ata Declaration⁴ states: "People have the right and duty to participate individually and collectively in the planning and implementation of their health care."

² The Role of Education in Rational Use of Medicines (World Health Organization –Regional Office for South-East Asia New Delhi 2006 SEARO Technical Publication Series No. 45)

³ Public Education in Rational Drug Use: Global Survey (Daphne A.Fresle and Cathy Wolfheim; World Health Organization, Geneva, 1997).

⁴ Declaration of Alma Ata in :Primary Healthcare, Geneva, World Health Organization.1998

The Ottawa Charter⁵ recognizes the "community as the essential voice in matters of its health" and calls for a reorientation of health services towards health promotion; and power sharing with "other sectors, other disciplines and most importantly, with people themselves."

Patient need drug information for number of compelling public health reasons⁶:

- because of important role of pharmaceuticals in modern health care
- so that individuals and communities can take responsibility for their health, including decisions on appropriate therapeutic strategies: both a human right and prerequisite for sound decision making
- so that as patients they can be informed partners in therapeutic decision making and subsequent drug use, an essential element for optimal therapeutic outcomes since the patient is the final determinant of drug use
- so that as consumers they have basic tools for rational and safe direct purchase of medicines, and can put in context the claims of commercial drug promotion: both critical areas in view of extent of self-medication and evidence of unethical drug marketing practices

⁵ Health Promotion, the Ottawa Charter, Geneva, World Health Organization.1986

⁶ Public Education in Rational Drug Use: Global Survey (Daphne A.Fresle and Cathy Wolfheim; World Health Organization, Geneva, 1997).

3. Drug Information Resources^{7, 8}

1) Primary Sources:

Journal articles provide the most current information about drugs and, ideally, should be the source for answering therapeutic questions.

e.g. British medical Journal, New England Journal of Medicine, JAMA

Journals enable pharmacist, doctor or DI specialist to:

- a) Keep abreast of professional news.
- b) Learn how another clinician handled a particular problem
- c) Keep up with new developments in pathophysiology, diagnostic agents, and therapeutic regimens.
- d) Distinguish useful from useless or even harmful therapy
- e) Enhance communication with other healthcare professionals and consumers
- f) Share opinions with other healthcare professionals through letters to editor.

Limitations: Although publication of an article in a well-known, respected journal enhances the credibility of information contained in an article, this does not guarantee that the article is accurate. Many articles possess inadequacies that become apparent as the ability to evaluate drug improves.

⁷ Handbook of Pharma SOS (KSPC Educational Series-III,2005)

⁸ Drug Information Resources by Paul F. Souney and Connie Lee Barnes

2) Secondary Sources:

Indexing and abstracting services are valuable tools for quick and selective screening of primary literature for specific information, data, citation, and articles.

Secondary References	Journal Indexed	Lag Time
ClinAlert	150	1-6 weeks
Current Contents Connect	8000	1-6 weeks
Embase	4550	20 days
Medline/Pubmed	4500	1 week
Inpharma	1800	3 weeks -6 months
International Pharmaceutical Abstracts	500	6-14 months
Inwa drug Information System	200	3-12 weeks
Pharmaceutical News Index	-	2-8 weeks
Reactions	1800	3 weeks -6 months
Science Citation Index	3700	3-12 months

❖ *Not country specific, not necessarily appropriate for Indian Health scenario.*

Limitations: Each indexing or abstracting service reviews a finite number of journals. Therefore, relying on only one service can greatly hinder the thoroughness of a literature search. Another important fact to remember is the substantial difference in lag time (i.e., the interval between the publication of an article and the citation of that article and the citation of the article in an index) among available services.

- a) Secondary sources usually describe only articles and clinical studies from journals. Frequently, readers respond to, criticize, and add new information to published articles and studies through letters. Services such as Medline/PubMed or the Iowa Drug Information Service generally do include pertinent letters to editor within the scope of coverage.
- b) Indexing and abstracting services are primarily used to locate journal articles. In general, abstracts should not be used as primary sources of information because they are generally interpretations of a study and may be a misinterpretation of important information. Pharmacists, doctors should obtain and evaluate the original article because abstracts might not tell the whole story.
- c) These are not very cost-effective each time.

3) Tertiary Sources:

General-reference textbooks can provide easy and convenient access to a broad spectrum of related topics. Background information on drugs and diseases is often available. Although a textbook might answer many drug-related questions, the limitations of these sources should not be overlooked.

- a) It could take several years to publish a text, so information available in textbooks might not include the most recent developments in field. Other resources should be used to update or supplement information obtained from textbooks.

- b) The author of a textbook might not have done through search of literature search of the literature, so pertinent data could have been omitted. An author also might have misinterpreted the primary or secondary literature. Reference citations should be available to verify the validity and accuracy of the data.

General considerations: when examining and using textbooks as sources of drug information include the following:

- a. The author, publisher, or both: What are the author's and publisher's track records?
- b. The year of publication (copyright date)
- c. The edition of the text: Is it the most current edition?
- d. The presence of a bibliography: If a bibliography is included, are important statements accurately referenced? When were reference published?
- e. The scope of the textbook: How accessible is the formation?
- f. Alternative resources that are available (e.g., primary and secondary sources, other relevant texts)

4. Existing Drug Information (DI) Sources in India

A) Pharmaceutical Companies:

Major Pharmaceutical companies in India have their in-house 'Medical Department' which is responsible for providing DI to their MRs. Medical department collects information of product and provide this DI to MRs during training sessions. Medical Department is also responsible to prepare promotional leaflets in which DI is incorporated.

During promotional activity MRs provide these leaflets also verbally provide DI to prescriber. And most of the doctors in India rely on information provided by MR. It must be noted that drugs have a potential not only for benefit but also harm, and their promotion therefore requires special controls to protect public.

As far as the current situation is India is concerned 'MR' is major source of DI considering Heavy Patient Load at prescriber's clinic and dispensaries so it is up to Doctor, he may or may not pass DI to Patients

DI provided by MR could be biased and is provided in Commercial Point of View. In rural area of India Doctor and Paramedical Staff in Primary Health Centres is only source of DI.

B) Commercial Websites and Publications:

There are several commercial websites and publications, providing DI. All major Pharmaceutical Companies have their own websites providing detailed information of their products. Also there are several commercial publications and promotional material available in market which is easily available to public is common source of DI but the provided information may not be complete, reliable, authentic and updated.

One good example is www.cipladoc.com which gives online, user-friendly medicine/health information for respiratory disorders in language of user's choice.

C) Health NGOs:

Health NGOs across country would be good source of DI. Health NGOs seek DI from well established DIC. Once authenticated and unbiased drug information is collected, NGOs using their man power can reach DI to the consumer. NGOs can play a role in designing, implementing and supporting public education activities.

But if we look at the current situations of Health NGOs across India, most of the NGOs are just on paper and many existing NGOs are not working and not utilizing money, facilities, man power to spread drug information to create health awareness. These existing NGOs are either not motivated or committed. Corruption does hamper the goal of reaching the masses to improve health.

D) Regulators:

Currently State FDAs and CDSCO are two main regulatory bodies present in India, out of which State FDAs are not accessible to common man. For this project online information provided by CDSCO (<http://cdsco.nic.in/>) studied. CDSCO provide general information about Import and registration of drugs, Rules and regulations, Good Manufacturing Practices, Good Clinical Practice, Clinical Trials, Pharmacovigilance, Narcotic and Psychotropic Drugs etc. Site also provides 'National List of Essential Medicines 2003, Drugs Banned in India, Drugs approved for marketing in India etc.

CDSCO website also has section which is useful to patients, at http://cdsco.nic.in/html/Information_consumer.html in this section general patient instructions are gives like procurement of medicines only from licensed registered pharmacist, storage of medicines, self medication, role of pharmacist and doctor, necessity of adherence and so on .Along with this, information about import of drugs for personal use is given. However patient oriented information related to drugs and diseases, list of OTC medicines is absent. Most of information provided on site is technical would be more useful to doctors and pharmacist rather than common people.

Thus prescriber, dispenser (Pharmacist/Nurses) and user all would not be able to in real sense to receive well updated, user-friendly, authenticated and unbiased drug information from this centralized drug regulatory site.

E) Drug Information Centres in India:

DIC refers to a facility specializing in provision of independent and unbiased DI in written and verbal form to healthcare professionals and patients for optimization of drug use. Aim of DIC is to help pharmacists & doctors and common man in getting in-depth and focused drug information and to help medical faculty in monitoring ADRs by using powerful medical data base, thus improving patient compliance.

With rapid advancement in medical and biological sciences, huge information about drugs and diseases has emerged out. The access and authenticity to this vast information being limited, the complexity in rational selection and utilization of drugs has increased.

Lack of independent drug information often leads to over treatment of mild illness, over use of injections, misuse of anti-infective drugs, increased cost of treatment and some times treatment failure.

DIC is an established concept in clinical practice abroad, in developed countries. Concept is just taking its shape here in India in recent years.

With WHO support DICs set up in year 2006 in India are:

Assam

Institute of Pharmacy

Assam Medical College, Dibrugarh – 786 002, ASSAM, INDIA

PH: 0373-2300903; 2301666 Fax: 2300080

E-mail: dicassam@gmail.com, dic_amc@yahoo.com

Chhattisgarh

Institute of Pharmacy, Chhattisgarh State Pharmacy Council
Quarter No. –77, Sector No. – 3, Geetanjali Nagar, RAIPUR (Chhattisgarh
State), INDIA

Tel: (0771) 2444591 Fax: (0771) 2444591

E-mail: dicraipur@gmail.com, dicraipur@yahoo.com

Haryana

Lord Shiva College of Pharmacy
Near Civil Hospital, Sirsa-125055, HARYANA, INDIA

Tel: (01666) 240057 Fax: (01666) 242695

E-mail: dicharyana@gmail.com, dicsirsa@yahoo.co.in

Goa

Hindu Pharmacy
Cunha Rivara Road, P.B. No. 149, Panaji, Goa 403001

PH: 0832-2223176; 2432903 Fax – 22237776

E-mail: dicgoa@gmail.com & dicpanaji@yahoo.com

Rajasthan

Rajasthan Pharmacy Council
Govt. Dispensary Campus
Sardar Patel Marg, Jaipur – 302006 PH: 0141-2228600 Fax: 2223041

E-mail: dicrspc@gmail.com

in co-ordination with

Lal Bahadur Shastri College of Pharmacy
Uday marg, Tilaknagar, Jaipur – 302004, RAJASTHAN, INDIA

PH: (0141) 2620517, 3258229 Fax: (0141) 2620517

E-mail: dicjaipur@gmail.com, dicjaipur@yahoo.com.

Independent DICs existing prior to Year 2006 in India are:

1. CDMU Documentation Centre, Calcutta
2. Drug Information Centre, Maharashtra State Pharmacy Council, Maharashtra
3. Andhra Pradesh State Pharmacy Council, Andhra Pradesh
4. Karnataka State Pharmacy Council (KSPC), Bangalore, Karnataka
5. JSS, Ooty
6. Pharma Information Centre, Tamilnadu, Chennai

Hospital attached DIC's with Clinical Pharmacy Services

- Christian Medical College Hospital Vellore, Tamilnadu
- Drug Information Centre, (KSPC), Victoria Hospital, Bangalore, Karnataka
- Drug Information Centre, (KSPC), Bowring & Lady Curzon Hospital, Bangalore, Karnataka
- Department of pharmacy practice, Chidambaram, Tamilnadu
- Department of Pharmacy Practice, National institute of Pharmaceutical Education and Research (NIPER), Chandigarh
- Jawaharlal Nehru Medical College Hospital (JNMC), Belgaum, Karnataka
- JSS, Mysore, Karnataka
- JSS, Ooty, Tamilnadu
- N.R.S. Medical College & Hospital, Calcutta
- Kempagowda Institute of Medical Sciences (KIMS), Bangalore, Karnataka
- Kasturba Medical College (KMC), Manipal, Karnataka
- Poison Information Centre, All India Institute of Medical Sciences (AIIMS), Delhi
- Poisons Information Centre, National Institute of Occupational Health, Ahmadabad
- Dept of Toxicology, (Incl. Poison Information & Laboratory Services) Amrita

Institute of Medical Sciences & Research, Cochin

- Toxicology & IMCU Unit, Government General Hospital, Chennai
- Sri Ramachandra Hospital, Porur, Chennai
- Sri Ramakrishna Mission Hospital, Coimbatore, Tamilnadu
- Trivandrum Medical College, Trivandrum, Kerala

Maharashtra State Pharmacy Council started its Drug Information Centre in Year 2003 providing unbiased drug information to doctors, pharmacists, nurses, and regulatory Personnel and common man across the country. We have received and responded to more than 1500 medicine queries till date.

F] Internet^{9,10}:

The internet is a valuable source of health Information on topics such as medical products, diseases, therapies, health and medical organizations etc. When used properly it serves as good tool for prescribers, clinical pharmacist and drug information pharmacist but not so safe or ideal for patient without proper training by healthcare professionals and allows quick and easy access to such information from on-line medical libraries, universities, health associations and government agencies. There are many health and medical sites on internet which do provide good information that may not be easily available from other media. They may be designed for health professionals or even for consumers.

However, the quality of health and medical product information on the internet varies, and it is often difficult for internet user to identify the true source of information and to determine whether it is reliable, complete and up to date.

⁹ Medical Products and the Internet –A guide to finding reliable information –World Health Organization Geneva 1999 (WHO/EDM/QSM/99.4)

¹⁰ Drug Information Resources by Paul F. Souney and Connie Lee Barnes

5. Methods to use Existing Drug Information

In general in developing countries, we have low literacy rates, little medical knowledge and are from low socio-economic levels. In order to develop appropriate educational materials for all it is important to understand patient's beliefs about medicines, their attitude towards illness in general, their life style e.g. eating habits, home remedies/practices and their attitude towards "hot" and "cold" or coloured medicines which will affect drug use. Patients should be given information about the drugs that they are taking. This is important to promote adherence to treatment and achieve the maximum benefit from the treatment. On a wider scale, public education is needed so that people have that skills and knowledge to make informed decisions about how to use drugs (and about when not to use them) and to understand the role of drugs in health care, with their potential benefits and risks. Without sufficient knowledge about risks and benefits of using medicines and when and how to use them, people will often do not get the expected clinical outcomes and may suffer adverse effects. This is true for prescribed medicines as well as OTC medicines. Methods to use existing drug information for patient use are described below:

A] Verbal Counseling by Trained Pharmacist at Pharmacy^{11, 12}

Community (retail) Pharmacist is important medium for providing DI to consumers because 90% of drugs are supplied through private sector. In India large number of patient pool goes directly to pharmacies and depends on pharmacist to tell them what medicines to take. The patients then purchase these medicines and take them. Self medication is very common problem in developing countries.

In some parts of world, up to 80% of illness episodes are self-treated with modern pharmaceuticals¹³. Such situations underscores need of verbal patient counseling by Pharmacist when patient comes to pharmacies to purchase medicines. Patients with very little or no knowledge or information, fail to adhere to their medication. This leads to failure of achieving therapeutic goals and decreased quality of life. In developed countries, pharmacists take the responsibility of patient counseling. Studies repeatedly show that effective patient counseling can significantly reduce patient nonadherence, treatment failure, and wasted health resources. In India, pharmacists take little or no part in patient counseling. They are not encouraged, motivated to take up responsibility of patient counseling. Healthcare professional associations, state pharmacy councils should encourage pharmacists to take a more active role in patient counseling to help address problems, with adequate training.

¹¹ Interview with Mrs. Zarine Khety, Chief Pharmacist, Saifee Hospital, Mumbai

¹² Indian journal of pharmaceutical sciences, 2004 vol. 66 (Patient counseling; Practicing community pharmacists' perceptions from two South Indian states by ADEPU Ramesh ; NAGAV B. G. ; MAHENDRA KUMAR B. J.)

¹³ Public Education in rational Drug Use (World Health Organization, 1997)

B] Distribution of Patient Information Leaflets^{14, 15, 16}

Patient Information Leaflet serves as major source of Drug Information. Currently in India Pack inserts are supplied with few products, and these pack inserts are meant for doctors and hospitals and not for patients. Thus in India PILs providing drug/disease information in simple language are still not provided by the doctors or pharmacist. Leaflets have long been seen as integral to educational strategies designed to promote health by promoting rational use of drug and providing authenticated and unbiased drug information, persuade people to adopt healthy lifestyles. PILs have also been developed to educate patients in self care of such chronic conditions as arthritis, hypertension, stress related psychological problems, gastrointestinal diseases, and back pain, and in general how to take medicines correctly. Leaflets can therefore play an important part in supplementing and reinforcing information provided by healthcare professionals, but the information they contain must conform to the highest standards of scientific accuracy and must be tested for comprehensibility and relevance.

PILs can be used to

- educate consumers about the medicine and how to take it effectively – in the view of current scenario of increasing interest of patients to participate actively in decision making of treatment and strategy to manage their health problems PILs play very crucial and important role of educating patients as well as providing DI.

¹⁴ *BMJ* 1998;317:225-226 (25 July)

¹⁵ Australian Prescriber Volume 30 Number 5 October 2007

¹⁶ Rational drug use: consumer education and information(DAP/MAC(8)/96.6)World Health Organization,1996

- support verbal information- PILs are only a support not a substitute for good verbal information provided by healthcare professionals, as counseling is short and sometimes patient do not receive the information, they are in need of. Studies show improvement in patient knowledge and treatment outcome when oral communications are supplemented by written DI¹⁷.
- inform and reassure about adverse effects, and monitor adverse events –PILs always give good information regarding precautions, adverse effects hence it becomes ready tool to retrieve information as and when required.
- improve adherence to therapy.

An ideal PIL should include

- Correct Dosage
- Etiology of the disease state in a few words comprehensible to patients
- Correct use of medicines i.e. pre-meal or post-meal and when to take
- Side effects commonly perceived and felt by patients
- What to avoid
- For how long to use it
- Storage of Drugs
- What the known misuses are
- Pictorial presentations wherever applicable and necessary.
- All information incorporated in PIL must be in simple, clear and easy to understand language.

¹⁷ Vahabi M, Ferris L. Improving written patient education materials: a preview of the evidence. Health Education Journal 1995;54:99-106

Health professionals should be familiar with its structure and content of PIL and should be able to explain it to patient. None of part of PIL should be deleted or crossed as it will increase health professional's liability if any problem occurs.

C] Education Programmes to Common Public

Consumer or patient education is an important area, often neglected in developing countries. The overall aim of public education in the use of medicines is to provide individuals and communities DI, and foster skills and confidence, which will enable them to use medicines in an appropriate, safe and judicious way. Public education in DI is needed, because without it, people lack the skills and knowledge to make informed decisions.

Principles to guide public health education should include the following¹⁸:

- ✓ Public health education should be included in national drug policies
- ✓ Public health education should address important drug use issues that consumers should be appropriately informed about.
- ✓ Public health education should encourage informed decision-making and cover basic concepts related to drug action; how to choose when self-medicate and when to seek medical advice; which conditions do not require medication; how to read a drug label or patient information.
- ✓ Public health education on drugs should recognize and take account of cultural diversity and the influence of social factors.

¹⁸ How to develop and implement a national drug policy (World Health Organization, 2001)

- ✓ Health NGOs, teachers, professional associations and community groups have an important role to play in public education programmes and should be involved in planning, development and implementation.
- ✓ Health education programmes should have clear and measurable objectives. It should be recognized that to change deep-rooted beliefs and practices requires a sustained effort and a stepwise process which moves from creating awareness, to acquiring knowledge and finally changing behaviour.
- ✓ Ideally, health education programmes should have long-term sustainability.

Patient Education programme can be conducted using following strategies.

1. Continuous Education Courses¹⁹:

Local branch of Healthcare associations can organize Educational Modules for common man of society. During holidays such courses can be arranged free of cost and through advertisement on TV, Radio and in local newspapers. During Polio vaccination camps, rallies, check-up camps peoples can be encouraged to attend such courses. Faculty members can be professors from medical, pharmacy colleges, well known doctors, proactive community pharmacists. These experts should deliver sessions in local and easy to understand language. Series of sessions including topics such as rational use of medicines,

¹⁹ The Role of Education in Rational Use of Medicines (World Health Organization –Regional Office for South-East Asia New Delhi 2006 SEARO Technical Publication Series No. 45)

Methods to use Existing Drug Information

Education Programmes to Common Public

Continuous Education Courses cont...

Exhibitions of Books

Free Check-up Camps

need of well informed patient, source of authentic drug information, hazards of self medications etc. can be included. Information on disease like hypertension, diabetes, asthma, angina, hyperlipidemia, heart disease, stroke, arthritis etc. can be provided. Efforts should be taken so that session can be interactive and patients ask more and more questions related to drugs and diseases.

2. Exhibitions of Books:

Local professional associations can arrange exhibitions of good health information related books, PILs, Drug Information Bulletin. Through advertisement people can be encouraged to attend such exhibitions. Trained personnel can convince people the importance of well informed patient. By means of such exhibitions people can be encouraged to ask more questions about medicines.

3. Free Check-up Camps²⁰:

Healthcare Associations with help of Doctors and Pharmacists can conduct free Camps on Chronic Diseases like Diabetes, Asthma, Cancer, Heart Diseases etc. wherein Doctors and pharmacist during free check up can interact with patients and can emphasize need of well informed patient and make them aware about availability of DI booklets and patient oriented booklets. Alternatively in camp

²⁰ Interview with Mr. Raj Halwai, Community Pharmacist, Shree Ganesh Medical and General Stores, Kalyan and Mr. Santosh Ghodinde

Methods to use Existing Drug Information

Education Programmes to Common Public

Free Check-up Camps cont....

Pulse Polio Vaccination Camps

organisers can think of arranging exhibition of such books. They can make them aware regarding availability of DIC where they can get authenticated DI free of cost, availability of consumer library.

4. Pulse Polio Vaccination Camps²¹:

As we aware Government of India is extensively organising Polio vaccination camps to eradicate polio. Now a days such camps are organised not only at Hospitals but we can see team of 2-3 health professionals is present at Railway stations, bus stops, mall etc. Such camps are organised frequently by government. Health professionals appointed by Government also visits to home personally to deliver polio vaccine to child. Government can make best use of this opportunity by appointing trained team of pharmacist, who along with delivering vaccines to child can interact with mother, who play important role in health care of children and family. They can encourage mothers and other family members for asking the DI, can handover PILs free of cost.

²¹ Interview with Mr, Santosh Ghodinde, Community Pharmacist, Dhanwantari Medical, Panvel

5. **Electronic Media**²²:

The media is a powerful force in shaping public opinion. Now a days TV has reached to even smallest Indian Village, and radio reaches to all concerns of India. Proper use of Electronic Media can play major role in creating awareness in common peoples. Radio communications, useful flyers with visual illustrations are valuable aids for public. Direct-to-consumer advertising can be used to inform public and to influence their opinion, attitudes and behaviour matters relating to medicines. Such medicine information provided should be reliable, accurate,

truthful, informative, balanced, up-to-date, capable of substantiation, and good taste. Videos of Home Medical Review (HMR) by Australian Pharmacist can be broadcasted on TV to encourage Indian Pharmacist. Various shows on TV and even on radio can be organized by channels where competent and famous Healthcare professional can be invited and people must be encouraged to ask question related to drug via phone to guest or panel of 4-5 doctors, pharmacist in show will answer to question. TV and radio channel even organize debate programme wherein panel of 4-5 health professionals can discuss on need of well informed patient in current scenario, which will be very beneficial to patients. Government bodies, NGOs and Professional Associations of Doctors, Pharmacists can take initiative in preparing TV programmes,

²² The Role of Education in Rational Use of Medicines (World Health Organization –Regional Office for South-East Asia New Delhi 2006 SEARO Technical Publication Series No. 45)

non commercial documentary films, advertising films on Medicines and Disease. Need drug of drug information, patient counseling, PIL can be effectively conveyed through advertisement on TV and radio. DES Action, USA runs TV and radio programme; The Pills and Older Persons Project (POPP) in Australia used radio spots complemented by relaxation video. Another Australian project, Tranquilizer Recovery and New Existence (TRANX) used radio and TV.

6. Print Media:

Print Media has its own impact on people and can play important role in creating awareness regarding drug use. Leading newspapers, magazines should dedicate some pages and invite famous healthcare professions to write articles emphasizing why patient must be well informed, why patient counseling by pharmacist is important, why PILs must be distributed, how internet can be used to get drug information etc. Government, NGOs also can publish advertisement in newspaper related to drug and disease information in leading newspapers across India.

The Pills and Older Persons Project (POPP) in Australia and another Australian project, Tranquilizer Recovery and New Existence (TRANX) used newspaper.

7. Display in Pharmacy²³:

This is also very important method through which authenticated drug information can be made easily available to patients. Information regarding drugs and medicines can be displayed on Display wall in big and bold font in such a way that it can be viewed by patients while collecting medicines at counter. Information can be conveyed by means pictures, charts etc. Important and key drug information and typical storage conditions can be displayed in large and bold font e.g.

- a. Store: Nicorandil Tablets (Anti-anginal) in Refrigerator.
- b. Cerviprime Gel (Prostaglandin) in Refrigerator
- c. All reconstituted suspensions to be used within seven days
- d. Insulin Injection to be used as per units prescribed and
- e. Injected Subcutaneously.
- f. Now a days Electronic displays are also available and can be used to display drug information.

²³ Interview with Mrs. Zarine Khety, Chief Pharmacist, Saifee Hospital, Mumbai.

Methods to use Existing Drug Information

Education Programmes to Common Public
Posters and banners allotment at prominent places
Rally
Street Play

8. Posters and banners allotment at prominent places:

Display of Posters at famous places can draw immediate attention. Posters containing key information about commonly used drugs can be displayed at Hospitals, railway stations, bus stops etc. Information about how to take medicines can be conveyed by means incorporating pictorial presentation on posters at prominent places.

9. Rally:

It could also serve as good method to educate patients. Rally can be organised during certain occasions like National Pharmacy week, World Health Day etc. Students can be involved in rally where by means of posters and banners consumers can be educated.

10. Street play²⁴:

Healthcare Associations can organise Street Plays through which key DI can be conveyed effectively to consumers. The themes of performances can be general education about rational drug use, storage of drugs, common adverse effects of particular drugs, how to take medicines properly etc. Active participation of celebrities can certainly put additional impact.

²⁴ The Role of Education in Rational Use of Medicines (World Health Organization –Regional Office for South-East Asia New Delhi 2006 SEARO Technical Publication Series No. 45)

D] Education to Students^{25, 26}:

In order to reach school children with information and education on drugs, pharmacists can deliver lectures in easy language. Important basic knowledge about drugs such as role, action and use of drugs can be delivered. Successful delivery of important basic knowledge of drugs to student hopefully improves the ways they will use drugs later on. Materials for younger school children using pictures and a brief text should be designed. Students in school and undergraduate colleges could be informed about harmful effects of using too many medicines. They can be also informed that medicines are not always necessary; that in most instances an oral pill is good as a more expensive injection and that when antibiotics are taken, whole course of treatment should be completed as otherwise the microorganisms may become resistant to antibiotic being used which may be ineffective. Such simple messages can be conveyed to students. About 10 such messages should be identified and disseminated among persons taking their first college course. These undergraduates would not only observe these simple guidelines for better use of medicine but they could also spread messages to others.

For postgraduate students lectures and experts can be delivered regarding need of well informed patient and how to get authenticated drug information. Small modules such as how to use common OTC medicines, how self medication is hazardous etc. can be included. The information should be given in such way that it should strengthen the ability of these persons to take medicines when required.

²⁵ Report of an informal working group on educational material for Patients, World Health Organization (DAP/85.10)

²⁶ The Role of Education in Rational Use of Medicines (World Health Organization –Regional Office for South-East Asia New Delhi 2006 SEARO Technical Publication Series No. 45)

E] Drug Bulletins and Publications²⁷:

Drug Bulletins are useful means to disseminate unbiased and updated drug information to healthcare professionals and consumers. Drug Bulletins and publications or booklets related to drug and disease published by regulatory body or Health NGOs should be in local and easy to understand language. Healthcare associations, NGOs, Government can take initiative and publish such bulletins and booklets. By means of TV, radio or advertisement in local paper, posters people can be encouraged to buy such publications.

F] Free Consumer Health Library²⁸:

This could be novel method to reach DI to common people. Such library can provide DI directly to the patients. Government, NGOs, Hospitals, Healthcare professionals associations can take initiative to establish consumer libraries. Internationally available health related material like journals, book, and drug bulletins can be made available in this library. Developed countries like USA, Australia, Canada, and UK have developed PILs for patients; these available PILs can be made available in such library. It would be helpful not only to consumers but also to the doctors and pharmacist. Local pharmacists and

²⁷ How to develop and implement a national drug policy(World Health Organization ,2001)

²⁸ http://www.obgyn.net/infertility/infertility.asp?page=/infertility/articles/malpani_library

doctors should take initiative in translating available literature in local language. Doctors and Pharmacists must encourage their patient to refer PILs, books related to their health, illness available in library. By means of such libraries we can empower the patient with information about his own medical problems, he can then become an educated partner in his own medical care, instead of leaving everything up to his doctor.

Healthcare professionals associations must encourage hospitals all over country to start such consumer library. Since hospitals receives loads of patients everyday with their relatives, who always have thousands of unanswered queries in their mind. These in-hospital patient education libraries can help hospitals to improve the medical care they provide

G] Establishing forum consisting doctors, pharmacists and common people²⁹:

In each village and in every area of Cities such forums including doctors, pharmacists and common public should be formed. Members of this forum should meet once in week or once in month as per convenience. During each meeting new topic related to drug, disease can be discussed. Such meeting and interactions will surely reach DI to common public.

²⁹ Interview with Mr, Santosh Ghodinde, Community Pharmacist, Dhanwantari Medical, Panvel

HJ Encourage Patients to use Internet as source of DI³⁰:

As stated earlier if used properly, the internet allows quick and easy access to health information. In India young generation in urban areas is computer and e-friendly and computer has reached to rural area as well so healthcare professionals can take initiative to encourage and educate patients to use internet as good tool of DI. Even though good sites are available which provide authenticated DI proper training to patient to use such DI is must. Consumers must be convinced that the DI from internet can be helpful only when you consult your healthcare provider about you disease or condition and such DI from internet must not be replaced with consultation with health care provider. And based on such DI from internet self medication must be avoided. Healthcare professionals by means of seminars in colleges, medical camps should give training and must highlight that all DI on internet is not authenticated and such **information may not be truthful when**

- Information use phrases such as “scientific breakthrough” ,”miraculous cure”, “exclusive product”, “secret formula”, “ancient ingredient”, “without risk”, “anti-ageing”, “improve sexual performance”, and “all natural”
- Case histories about particular drug from cured customers claiming amazing results.
- Claims that particular drug product is “scientifically proven and “absolutely safe”

It must be informed to patients that products with the same name contain different ingredients in different countries. Therefore, when searching for information one should look at the international Non-proprietary Name (INN) of active ingredients and not just the product name (brand name, trade name)

³⁰ Medical products and the Internet –A guide to finding reliable information –World Health Organization Geneva 1999 (WHO/EDM/QSM/99.4)

I] Establishing Telemedicine Facility³¹:

Leading Pharmacies or Hospitals etc. should take initiative and should offer Telemedicine Facility to Patients. Pharmacy owner, Hospitals etc. can appoint competent, trained Pharmacist who can solve all queries of patients related to drug and should provide authenticated drug information. Through advertisement in TV, radio and newspaper people must be encouraged to use such facility.

J] Awareness through Mobile:

Now a days because of reduction in cost of mobile phones and also too many telecompanies providing mobile services, usage of mobile phone has been increased to great extent in urban as well as rural area. Common rural man sometimes may not have television set at his home but certainly has mobile! Considering this fact best use of mobile can be done by providing SMS alerts related to DI to all consumers. Government or Associations of healthcare professionals can tie-up with different mobile service provides and then these telecompanies can regularly send updated and authenticated DI through SMS. Alternatively telecompanies themselves can take initiative and can collect authenticated DI and send this DI in compact form through SMS at reasonable cost.

³¹ Interview with Mrs. Zarine Khety, Chief Pharmacist, Saifee hospital, Mumbai

6. Measures to use Existing Drug Information

A] Creation of Right to Health Information Act:

As stated earlier the need for consumer drug information emanates from the basic right to health of individuals. People have a right to receive accurate and up-to-date information about their medicines from their health professionals. Considering that the patient is the ultimate user of the drug and usually also ultimately controls his/her own usage of the drug, a consumer thus needs information about the medications being taken by him or her. Government can take initiative to pass 'Right to Health Information Act' so that as per directions and arrangements from Government it will be mandatory to Leading Hospitals and Medical colleges and any other reliable Health related establishments to provide authenticated drug and disease information to consumers free of cost. Government can encourage consumers to make best use this Act by Advertisements on TV Channels, Leading national and local newspapers. Also government can form teams of Healthcare professionals who can guide patients about this Act at Primary Health Care Centres, Municipal as well as private Hospitals. Once common consumer would be aware such act he will start asking his queries related to drugs to concerned person/institute appointed/recognised by Government. Government with the help of expertise and national/International organizations like DICs, WHO, can collect authenticated drug information and distribute to patient as per their requirement.

All the medical colleges attached to big hospitals receive loads of patients coming from different layers of strata, different socio-economical

background. It is learnt that these teaching hospitals will be having ADR monitoring centre as part of National Pharmacovigilance Program. Thus ADR monitoring activity can be clubbed officially with dissemination of medical information to patient by trained, Healthcare professionals. To fulfil this we require large no. of highly trained and motivated healthcare professionals, this can only achieved by having more clinical Pharmacists across India doing this job.

If Healthcare Professional bodies like AIOCD Ltd., IPA take initiative, can force government to establish "Right to Health Information Act."

B] Programmes to Healthcare Professionals^{32, 33}:

Healthcare professionals and their associations must play vital role in spreading DI. As discussed doctors, pharmacist, nurses are key personnel who disseminate DI to patients. Doctors and pharmacist comprise group to whom the public turns when they want information about their medicines. These professionals, especially retail pharmacist in India must keep themselves updated regarding latest DI. As far as current scenario is concerned, Pharmacy Diploma holder is eligible to be registered pharmacist that means he can play role as retail pharmacist. Since in depth clinical knowledge required to offer counseling and solve queries of patient is not provided to diploma students. This situation demands need of designing continuous education programmes by PCI and state pharmacy councils

³² Report of an informal working group on educational material for Patients, World Health Organization (DAP/85.10)

³³ The Role of Education in Rational Use of Medicines (World Health Organization –Regional Office for South-East Asia New Delhi 2006 SEARO Technical Publication Series No. 45)

according to current pharmacy practice in developed countries. Government, PCI and State councils, Chemist and Druggist Associations should take initiative in designing such programmes. Renewal of Pharmacist registration or revalidation of practicing should be done on basis of successful completion of such training programmes periodically.

Also free seminars on new drug developments for pharmacist should be arranged.

Apart from continuous education programmes Printed material such as DI Bulletins, Journals, and drug formularies can be provided. As stated earlier information from MR and material provided by pharmaceutical companies is only source of DI to doctors. Unless the doctor is also provided objective and-to-date DI he or she accepts MR's version that could lead to irrational use of medicines. Thus there is need for independent information generated/provided by government/university for comparison with DI provided by pharmaceutical company. Established DICs and associations should also design programmes, seminars to doctors to make them aware of new drug developments, and should provide them updated, authenticated and complete drug information. Also printed material such as DI Bulletins, Journals, drug formularies, Standard Treatment Guidelines (STGs) can be provided.

Apart from all this Face-to –face meetings in small or large groups of pharmacists or doctors are useful ways of providing and exchanging DI. Electronic interational programme (e-RUM)-Electronic discussion groups (e-drug) of pharmacists and doctors have paved the way for interaction and exchange of DI in areas such as WHO Pharmaceutical Newsletters, and WHO DI.

C] Establishment of DIC:

As stated earlier DIC as a very easy and authenticated tool to access DI is welcomed in our country but needs to be publicized widely to all strata of society, prescribers, dispensers, regulators and other stake holders of public health.

DICs have started at some places in India (There are no. of states in India where DIC is not established), still lot publicity of DIC is needed. As per current scenario in India around 70% population is residing in rural area and still poverty is a major issue. There is lack of awareness and information regarding health. Many rural areas of India are not even well connected with Taluka and District places so it not practical to visit DIC personally. Even though computers have entered in rural areas but people are not computer friendly, Internet is not economical, electricity is also major problem because of all these issues people from rural are can not their queries through e-mail and telephone is still not very economical to common man in India. Also there is big question mark regarding sustainability of DICs since to start with DIC you need to hire well qualified, trained and motivated manpower and internet connection along with access to many paid sites related to Health and medicine is must.

Standard authenticated database is also vital requirement of DIC which can be expensive. Investment and running cost of DIC is still not made available easily. In view of such issues PCI and State Governments should direct State Pharmacy Councils to Establish DIC and Government should take care of

funding. Government can take initiative in starting DICs linked to teaching hospitals. Latter is better option when their functions include a 24-hour poison information service. DICs can also be very effectively run by NGOs, particularly those targeting information to consumers.

D] Education to Policy Makers, Political Leaders, Planners and Bureaucrats³⁴:

It is evident that political will is necessary for spreading DI. Education to policy makers, political leaders, planners and bureaucrats need to motivate and be made aware of need of well informed patient. By using media and disseminating information in newspaper articles, editorials, press release. Also they can be motivated by inviting them to meetings, make keynote addresses, and meet experts who are playing role in dissemination DI. Initiation of briefing programme for bureaucrats and incentives to encourage DI experts and policy makers to encourage them to work together using organizational changes, redefining the starting point for knowledge transfer, expanding the accountability horizon and acknowledging the complexity of policy making should be pursued. There is need for government to have a long term strategy and to have focal point for programmes on DI, rational use of medicines, and sustained support for continuing medical education programmes. Successful results are possible if backed by political will of policy makers, political leaders, planners and bureaucrats. It is important to get them involved and interested.

³⁴ The Role of Education in Rational Use of Medicines (World Health Organization –Regional Office for South-East Asia New Delhi 2006 SEARO Technical Publication Series No. 45)

E] Up-gradation of current Pharmacy Education System in India:

Pharmacist can play very important role in delivering authenticated drug information to patients. But according to current scenario in India the students who have done Diploma in Pharmacy are eligible for registration with State Pharmacy Councils. Also current syllabus till B. Pharm is Industry Oriented; emphasis on clinical education is not given till B.Pharm. Government should take initiative and henceforth minimum qualification should be B.Pharm to open pharmacy or to work as community pharmacist. Emphasis on Clinical Pharmacy has to given till B.Pharm. Alternatively separate Pharmacy Programs such as Industry oriented Pharmacy Program and Clinical Pharmacy program can be developed so that student as per their interest can select appropriate course and those who are Clinical Pharmacy Graduates can play vital role as a community pharmacist. As discussed above up gradation of Pharmacy Program in India is must. Role of Pharmacist highly un-recognized in India. Pharmacists who have taken Clinical Pharmacy education are not willing to be a community Pharmacist since compare to industry least salary is offered. So Government must understand role of pharmacist and should make legally mandatory that only clinical pharmacist should work as Community pharmacist and providing authenticated drug information to patients through counseling and PIL must be compulsory.

Measures to use Existing Drug Information

Verbal Counseling by trained Pharmacist at pharmacy

Distribution of Patient Information Leaflets

F] Verbal Counseling by Trained Pharmacist at Pharmacy:

Major barriers to counseling were identified as doctor dispensing, lack of knowledge, and non legalization of patient counseling. In developed countries patient counseling is mandatory by law. Government can legally make verbal counseling compulsory. Through various training courses to pharmacists, we can encourage them to offer counseling to their patients at counters. PCI and all state pharmacy councils of India should design training courses emphasizing need of patient counseling. Successful completion of such training course by diploma or degree holders must be mandatory requirement to get registration. Healthcare profession associations such as IPA, AIOCD and State Chemist and Druggist Associations should take initiative to start such course across country.

G] Distribution of Patient Information Leaflets:

A European Union (EU) legislation stipules that medicines dispensed in Union must be accompanied by PILs. Such PILs contains information which the EU considers a responsible patient should know. Government of developing countries must take powerful initiative in developing PILs in local or regional language and distribution of same must be mandatory by law. Through Public education programmes and advertisement on TV, radio, newspapers, posters people must be encouraged to ask PIL along with each and every prescribed as well as OTC medicines they purchase.

H] Media:

It has been seen that one or two programmes on DI do not make any difference. Sustained efforts are needed and this is not only difficult but also expensive. Sustainability of such programmes is problem. It has been observed that enthusiasm generated by programmes becomes less after that event or programme is over. Also it has not easy to obtain airtime for programmes on DI either on radio or television. If airtime is given, it is usually given when people would not be listening to the radio or watching television. Considering these problems Healthcare professional's associations, health NGOs must convince need of such programs to private radio and TV channels also Government should make use of its power to allot prime time to broadcast such programmes repeatedly. Healthcare professional's associations, health NGOs should generously avail funds. Celebrities must be convinced need of such programmes so that as social responsibility these social celebrities can participate in such programmes free of charge and certainly it would create good impact.

I] Internet Use:

Health authorities and organizations should provide list of authenticated sites of health and drug information. Additionally several private organizations, NGOs, Healthcare associations should actively search ways to ensure the quality of information on internet. Government can think of establishing Cyber café at reasonable cost to get access to authenticated DI.

Measures to use Existing Drug Information

Telemedicine Facility
Pharmaceutical Companies
Establishment of Multidisciplinary National Body

J] Telemedicine Facility:

Patients can be encouraged to use such facility by providing Toll-Free numbers. Government and Healthcare Professional Associations can take initiative and offer Funds to retail pharmacies and hospitals to start this facility.

K] Pharmaceutical companies:

Pharmaceutical companies must observe ethical criteria for medicinal drug promotion with clear responsibility for providing unbiased information about their own pharmaceutical products. Promotion of medicinal drugs must be in conformity with accepted ethical standards. Country should have functioning drug regulatory agency or other national private or public sector organizations responsible for overseeing drug promotion so that authentic and unbiased DI can reach to doctors and pharmacists.

L] Establishment of a Mandated Multidisciplinary National Body:

A mandated multidisciplinary national body to coordinate medicine use policies must be established by Government. Such national body when established should regularly monitor use of medications, analyze data, disseminate information and make recommendations to further reach DI to common patient.

Measures to use Existing Drug Information

The involvement of Communication Experts
Overcome Language Barrier

M] The involvement of Communication Experts:

The involvement of communication experts to prepare appropriate messages and deliver these to the public, health professionals, students, policy makers, politicians, and bureaucrats will go along way in strengthening programmes on DI.

N] Overcome Language Barrier:

Collections of PILs are now available in number of countries but major problem is available DI is in English. Especially in a country like India where there are 22 officially recognized languages but around 33 different languages and 2000 dialects have been identified and around 70% Indian Population is residing in RURAL area where Health Care Professionals must provide DI local language. So collective and collaborative effort must be taken by pharmacists, doctors their associations, NGOs, medical and pharmacy educational institutions to make available DI in local language.

K, L, M- The Role of Education in Rational Use of Medicines (World Health Organization – Regional Office for South-East Asia New Delhi 2006 SEARO Technical Publication Series No. 45)

7. To Conclude.....

Ultimately, we hope that well informed patients will demand the best treatment available internationally and that this will act as an incentive for doctors and Pharmacist to update their skills, and for hospitals to improve their facilities.

The disempowerment of the patient in India today is truly tragic.

Traditional Indian medical system 'AYURVEDA' which is evolved 5000 years ago highlighted and stressed involvement of Patient in maintaining his or her health. As far as current scenario in India is concerned most of Doctors are practicing modern medicine blindly without taking into account need of patient involvement, copying western approach of delivering medical care to passive patient, who is supposed to simple follow instructions from doctors. It is truly sarcastic is that western and developed countries are re-learning the whole process of patient treatment and taking efforts at each and every possible juncture so as to patient taking responsibility on his or her own health rather that completely depending on healthcare professionals, Indian doctors, pharmacists are not at all taking any efforts in this direction. Hopefully collective efforts by Doctors, Pharmacist, their associations DI experts and Government will once again put the patient at the centre of DI universe!

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