

Pharmaceutical Use Scenario and Medicines Policy in India

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Current situation of irrational prescribing and dispensing and their causes

Current general scenario

In spite of rapid growth in almost all sectors, Pharmaceutical management scenario is in a dismal state in India. Pharmaceuticals with 50 to 60 thousand branded products formulated by about 3 thousand companies are proliferating in market estimated at \$ 7.2 billion¹. Poly pharmacy super added by self-medication are the most important reasons for irrational drug use^{2,3}. The most important factors for irrational prescribing are lack of education of doctors on RUD and the pressure of pharmaceutical companies.⁴

Weak drug regulations

The regulations for approval of drug products are weak. Until 1990s the new drugs and their formulations (drug combination) were approved by Drugs Controller of various states, which could be sold throughout the country without any restrictions. Though the Drugs Controller General of India (DCGI) now approves the new drugs, the combinations are still approved by the states. Products banned in other countries continue to remain in the Indian market. Although some irrational drug combinations are banned by the DCGI from time to time, several new emerge in the market.⁵ Inspections and quality testing are rarely done due to manpower shortages.⁶ There are serious concerns about the quality of products freely moving from one state to the other that are manufactured by small-scale pharmaceutical companies.

Poor dispensing services

The dispensing services are poor. These are mostly provided by unqualified persons. Retail outlets obtain license using the name of a pharmacist who is seldom at the pharmacy. The patients purchase only a part of the drugs prescribed and take these for insufficient period due to financial constraints⁷. The information to the patient is rarely given and compliance is poor.

Scientific studies on RUD

Prescribing and dispensing surveys are pre-requisites to achieve rational drug use. There is a dearth of such studies in India, particularly in non-governmental sector.⁸ Only a few scientific studies that have been conducted to analyze the pharmaceutical use scenario have been described.

1. Inappropriate prescribing

In a study of the prescribing and dispensing, the drugs supplied to 2400 patients by the public and private medical sectors and by private pharmacies (over the counter dispensing) were recorded. These were analysed with respect to the patient's presenting complaint and diagnosis. The main findings were:

- 1) Doctors in the private sector prescribe large number of drugs. Combination preparations containing 'hidden' classes of drug are often given. Anti-infective are widely and often inappropriately used.
- 2) Potentially dangerous drugs are sold over the counter and prescribed for trivial or bizarre indications. The drugs that have been withdrawn as dangerous in the west remain popular first line drugs in India.
- 3) Food supplements and tonics of dubious nutritional and pharmacological value make up a high proportion of the total drugs bill.

It is concluded that a rational drugs policy and/or an essential drugs list (EDL) will be useless unless accompanied by intensive efforts to improve the education and updating of doctors and pharmacists and to reduce the commercial pressures on doctors to prescribe unnecessary drugs.^{9,10}

2 Drug utilisation in primary health care

A drug utilization study was conducted for at two primary health centres in Pondicherry. Information on complaints, diagnosis and drugs prescribed was collected. From the 2953 prescriptions

studied, it was found that on an average each patient received 2.71 drugs. Vitamins, antibiotics, analgesics and antihistamines were the most commonly used, accounting for more than 80% of the drugs prescribed. The antimicrobial, which constituted one fourth of the drug consumption, comprised sulphonamides, tetracycline and cotrimoxazole. About half of the patients received injections, particularly of the vitamin B complex and antibiotics.¹¹

3. Drug utilisation through prescription and self-medication

The profile of 1769 doctors' prescriptions and 763 self-orders were monitored at pharmacy outlets in the twin cities of Hyderabad and Secunderabad and 4 rural areas of Andhra Pradesh with the aim of identifying urban and rural differences, in the self-medication rate, prescription costs, types of drugs purchased and factors influencing self-medication showed that it was high in urban areas (37%) compared with rural areas (17%), and the majority of the over-the-counter sales were for prescription drugs. The majority of physicians' prescriptions were incomplete with respect to diagnosis and dosage regimen. The mean cost of the drugs purchased on doctors' prescriptions was two fold higher than the cost of drugs that are sold over the counter. A higher proportion of patients from rural areas (80%) purchased all the prescribed drugs compared with those from urban areas (54%). Financial constraints in urban areas were a major determinant in the partial purchase of prescribed drugs. In addition, the urban elite (i.e. professional people with high incomes, who comprise of 18% of the total population) considered that all of the prescribed drugs were not necessary for their present illness. Nutritional products, potent compounds with analgesic, antipyretic and anti-inflammatory effects, and broad-spectrum antibiotics constituted a high proportion of prescriptions in both urban and rural areas. The consumption of food supplements was higher in rural areas than in urban areas. Based on WHO criteria, most of the drugs (60%) prescribed in rural areas were nonessential, compared to 47% in urban areas. The results of this study emphasize the need for comprehensive measures, including information, training, legislation and education at all levels of the drug delivery system, to rationalize drug therapy by improving prescribing patterns and curbing self-medication.⁷

Similar results were obtained in an earlier study on drug consumption, prescribing habits of physicians, self-medication rate and therapeutic classes of drugs purchased. It revealed high self-medication rate, faulty prescribing habits of physicians and

poor dispensing methods of pharmacist. The wide gap between the precepts and practices prevailing among practitioners, the use of potent medicines without proper medical advice and the uninhibited sale of scheduled drugs over the pharmacy counter require careful consideration. It was emphasized that physician, pharmacist and the public need to cooperate to improve the drug usage.²

4. Drug Policy indicators study of World Bank

A drug policy indicator study was conducted by World Bank in 3 representative states, namely, Tamil Nadu, Karnataka and Uttar Pradesh.

Availability: The study showed that the availability of drugs is good in the private sector. However, except for Tamil Nadu, the availability in the public sector is unsatisfactory this is more so in the remote areas of all three states.

Affordability: Regarding affordability, the prices in the private sector are high. The consumers, including the poor, are left with few options of purchasing drugs in the private sector or go without drugs altogether.

Quality: Regarding drug quality, there are significant inter-state variations, with the quality assurance in the public sector being good in Tamil Nadu, but very poor in Uttar Pradesh.

Procurement and Distribution: In Tamil Nadu, the TNMSC maintains procurement and distribution of drugs in the state and the quality of drugs supplied is of standard. Karnataka, though, has not yet established a corporation similar to TNMSC, but its system is superior to that of Uttar Pradesh. Regarding the information on quality control within the states, the information on samples collected was available for Karnataka but not that of the testing. While 75.2% of all samples collected were tested in Tamil Nadu, only 29.70% were tested in Uttar Pradesh. This was clearly due to shortage of trained manpower. While 1.73% of all batches failed the test in Tamil Nadu, none failed in Uttar Pradesh. But, this lack of failure does not necessarily mean that the system is working well. Rather it is likely that as too few samples were collected and tested. The time lag between sampling and testing is very high. In Uttar Pradesh, the availability of very few inspectors is responsible for poor quality control.

Storage and MIS: The Management Information Systems was strong in Karnataka and Tamil Nadu both at the state and local levels but not in Uttar Pradesh. Storage norms are satisfactory in both Tamil Nadu and Karnataka, although power outages are frequent. Uttar Pradesh still needs to develop this facility.

Rational Drug Use: The RUD indicators e.g. number of drugs per prescription in public sector were 2.9, 3 & 3.3 respectively whereas in private sector these were 3.2, 4, 3.7. The injection use was 58.4, 62.1 and 11.6 per cent respectively in public sector whereas in private sector it was 7.6, 62.1 & 9.5. Most of the children with diarrhoea received ORS with antidiarrhoeals. Out of the of the 50 best selling drugs in the private sector, 40% & 72.4 % were from National EDL in Tamil Nadu and Kamataka.¹²

Aided vertical health programmes of Government of India

Various vertical programmes of Government of India such as reproductive and child health (RCH), tuberculosis & leprosy control, prevention of blindness, and national AIDS control run in isolation. There is need for training of manpower involved and avoidance of its duplication. The logistic of procurement, distribution and use of drugs needs to be improved. For example, a study conducted on RCH programme showed that there are delays of almost of a year in procurement of drugs. The distribution is delayed at several health facilities and it needs to be streamlined. The storage conditions are poor. The Government departments use parastatal agencies for procurement and distribution e.g. HSCC, MICON, RITES. There needs to have uniformity in logistics.

Delhi's experience on Rational use of drugs (RUD)

Situation at public health facilities

In 1994, the prevailing situation regarding availability and use of medicines in the capital's public sector hospitals and health centres showed that many prescribed drugs were not available and were perceived to be of poor quality. Procurement of unnecessary drugs e.g. Traditional medicines and drug combinations was common. There was no essential drugs list and each hospital used its own list. Prescriptions were unrestrained, often preferring expensive alternatives and information to patients on drug use was poor.¹³

Development of Drug Policy at Delhi

Delhi State was the first in the country that took the lead in developing a comprehensive drug policy for promotion of RUD. Delhi Society for Promotion of Rational Use of Drugs (DSPRUD), an NGO, formed in 1995 worked with State Government with support from the WHO.

The drug policy statement was approved by the cabinet. A gazette notified Essential Drugs Selection Committee consisting of sixteen members comprised of academicians, drug control administrators at the centre and state, bureaucrats, eminent private

Actitioners and hospital administrators was the starting point.¹⁴ An EDL based on WHO guidelines was made in 1994, which has been revised in 1996, 1998 and 2001.

A common pooled procurement based on quantification of drug needs was introduced through a Purchase Committee involving pre-qualification of suppliers. Doctors are advised to prescribe from EDL with some flexibility allowing not more than 10% outside it. The bulk purchases resulted in a sharp fall in the procurement prices of essential drugs. The saving of about 35% allows purchase of more of essential drugs with the same amount. The Director of Health Services tests the quality of all drugs at approved testing laboratories, which is reinforced by GMP inspections of major suppliers.

Support to other states

With the support from WHO, the RUD programme has spreaded to 13 states.¹⁵ The effect of programme implementation evidenced by research studies on RUD has been described.

1. Studies at Delhi

Effect of educational intervention on Prescribing in ARI and diarrhoea

ARI and acute diarrhoea are the common cause of morbidity for which therapeutic guidelines are well established. A prospective study on prescribing in ARI and diarrhoea with the objective of identifying the factors affecting drug use was conducted. The impact of educational intervention in the form of small group discussions in improving the use of antibiotics at 32 primary health centres and 7 colony (15 bedded) hospitals was studied. The results showed that inappropriate use of antibiotics is common for the treatment of these conditions. In-depth interviews were conducted to find out the beliefs and perceptions of the prescribers, which lead to irrational drug use. It revealed that though the prescriber's knowledge about antibiotic use and risks involved was sufficient, they overused antibiotics due to uncertainty of etiology, prevent secondary infections and demand of the patients.

In both ARI and acute diarrhoea, after intervention, prescriptions by generic names were about 75%, and 90% drugs prescribed

were from essential drug list.

Number of drugs prescribed per encounter decreased significantly in the intervention group. There was no substitution effect i.e. other drugs replaced antimicrobial and antidiarrhoeals. The antibiotic use declined significantly in the intervention group.¹⁶

When cost of therapy in ARI and diarrhoea was compared with the pooled procurement rates and retail price, it was observed that cost of therapy in these two common conditions reduced to about half at pooled procurement rates in comparison with retail prices. It was further observed that prescription costs reduced further by 50 to 63% in ARI and diarrhoea respectively due to standard treatment guidelines.¹⁷

Effect of educational intervention on Prescribing in private practice

The effect of educational intervention on prescribing using "Guide to Good Prescribing" was studied among private practitioners. In a prospective study of 200 prescriptions from 20 private practitioners analysed using the indicators such as average number of drugs prescribed per encounter, percentage of drugs prescribed by generic name, percentage of encounters with injection, percentage of encounters with antibiotics, percentage of drugs prescribed from essential drug list (EDL), total cost and completeness of a prescription.¹⁵

Educational intervention in the form small group discussion regarding steps involved in prescribing process e.g. defining therapeutic objectives and 'P' drug concept for pharmacotherapeutics reasoning and a standard approach to common disorders, resulting in a set of first choice drugs called (Personal) drugs was made using 'Guide to Good Prescribing'.

Though difference in the average number of drugs prescribed per encounter was small (3.5 vs. 3.23) in the pre and post intervention period, the maximum number of drugs prescribed per encounter reduced from 9 to 6 in the post intervention period and the drugs prescribed were by brand names with only 14-15% as generic names, and about 70% of drugs prescribed were from BDL. Percentage of prescriptions for antibiotics increased from 42.54% to 56.10% after the intervention. Rationality of prescription drugs could not be determined in most instances as prescriptions were incomplete. The average score for a prescription increased to 7.54 from 7.20.

The high prevalence of polypharmacy including antibiotics and prescriptions by brand names continued. Perhaps repeated discussions with the prescribers would change the deep / rooted

wrong perceptions habit and their mis-beliefs.¹⁵

Effect of drug information to patients

The impact of drug information on patients' knowledge about drug use at a teaching hospital was studied.

A prospective randomized controlled study through verbal instructions given by pharmacist and written information in the form of leaflets about the purpose, dosage, frequency and duration of administration, common side effects and precautions was conducted. The impact of the intervention was assessed by comparing the scores for primary indicators (i.e. dosage, frequency and duration and purpose of each drug) and supplementary indicators (i.e. most important, precautions and instructions, most commonly observed side effects of the drugs, next appointment and emergency visits). The compliance was assessed by comparing the number of missed doses by verbal recall before and following intervention.

The results showed that the patient's knowledge about drugs prescribed improved significantly following intervention. This was more for the supplementary indicators. The patients' compliance also improved.

Amongst various confounding variables such as age, sex, literacy level and number of drugs prescribed, it was observed that number of drugs influenced the patients knowledge negatively for both control and intervention group.^{18,19,20}

Assessment of the impact of good dispensing on patient knowledge about drug use

The aim of this study was to improve dispensing practices at pharmacy and to assess the impact of imparting information on patient knowledge on use of drugs. In a prospective randomized controlled study 100 patients were interviewed.

Results of the study showed that intervention at pharmacy significantly increased the dispensing time from 25.4 seconds to 114.4 seconds. The more time spent by pharmacist in explaining the patients about drugs prescribed to them. This enhanced time increased patients' knowledge about correct use of drugs from 56.66% to 90%.²⁰

2. Studies at Maharashtra

Impact of STGs on prescribing

Mean prescription for antibiotics was $46.77 \pm 11.64\%$ at dispensaries and $36.58 \pm 10.52\%$ in general OPD of peripheral

hospitals though the infection rate was 30%. Drugs prescribed by generic names in 90% cases, which were from EDL. The injection use was between 6% and 14.2%. Physicians' consultation time ranged from 30-40 seconds.

Most of the drugs being prescribed to the patients were available at dispensaries but some were not available at tertiary and intermediate care hospitals. Copy of the essential drugs list was not available in any of the health facility.

A study was conducted to assess the adherence to Standard Treatment Guidelines (STGs) in clinical practice at municipal corporation hospitals (MCGM), Greater Mumbai, since STGs represent one approach to promote therapeutic effective and economically efficient prescribing. The EDL and STGs were prepared and distributed. The extent of adherence to STGs in 20 hospitals and 7 dispensaries of MCGM using tracer diseases viz. gastroenteritis, malaria, tuberculosis, fever; and in pediatrics viz. convulsions, rheumatic fever, pneumonia, bronchial asthma and gastroenteritis showed that adherence to STGs ranged from 16-59%. Similar results were obtained from dispensaries. STGs were followed only in 40% encounters with malaria, gastroenteritis, and fever each and in 17% of encounters with respiratory tract infections. Forty per cent of doctors prescribed as per guidelines of National Malaria Control Programme..

These results showed that merely printing and distribution of the manual is not enough to change the prescribing behaviour. The prescribers should be adequately sensitized and trained to use the STGS.¹⁵

Dispensing of drugs

To assess the effect of educational training on dispensing practices a prospective randomized controlled study was conducted. One hundred & three (103) pharmacists from 30 different pharmacies were enrolled. Patient care indicators for 120 patients in each dispensary were evaluated. The dispensaries were then divided into control and intervention group. The results showed improvement in the patient care indicators in intervention group.¹⁴

3. Studies at West Bengal

A study on morbidity and mortality in a rural community of West Bengal

A door-to-door survey of morbidity and mortality and attitudes of the rural community towards professional health care in Bankura District was conducted. The main objectives of this study were to

find out the point prevalence rate of morbidity during different seasons and to find out the attitudes of the rural community towards professional medical care for the illnesses.

One or two members from each of the 1500 families of 'Panchayats' areas of villages were interviewed using pre-tested semi-structural questionnaire by trained investigators. A total of 1781 persons were interviewed. The results of the study showed that 32% population under study was in the age group of 40 years or below and only 9.5% lived in concrete houses. The common diseases were enteric fever 40%, followed by cough and cold 28% and fever 8%. Forty four percent of people did not seek any professional medical care, while 19% visited primary health centers and 3% visited the nearby hospital. In case of pregnant women, a trained 'Dai' (midwife) conducted most of the deliveries 53% at home and only 33% deliveries took place at the public health centres.¹⁵

4 Studies at Kerala

Drug utilisation through self-medication and at public health facilities.

Determinants of access to and utilization of health care services in Kerala among 1001 households (rural 504; urban 497) from five Panchayats of Trivendrum District using multistage cluster sampling has shown that 2237 had at least one morbidity in the past one month. In a study population of 4000 the prevalence of morbidity was 544 in the rural and 495 in the urban per thousand.

Use of drugs and determinates of drug usage indicators showed that the majority of the subjects used drugs by prescription and there was significant difference in the rural-urban population. Urban subjects tend to use drugs without prescription more than the rural. Similarly, subjects with high socio-economic status used drugs without prescription ($P < 0.001$) compared to low and middle socioeconomic strata.

Drugs constitute a major part of the expenditure at the primary health centers. Data on 2756 prescriptions collected over a period of 3 months from a base hospital in Kerala showed that the number of drugs prescribed per encounter ranged from 1 to 7 (Mean $\pm$ SD of 2.4 ± 1.1). The most commonly prescribed groups of drugs were analgesics, antibiotics, and anti inflammatory agents. The average cost per prescription was Rs. 8.8 ± 8.6 . The expenditure on the most commonly used drugs was approximately 50% of the total cost. However, all the drugs prescribed were from WHO Essential Drugs List.¹⁵

5. Studies at Andhra Pradesh

Access of drugs to private pharmacy outlets

In Andhra Pradesh, a study was carried out to identify the use of drug in urban and rural region with a special reference to rate of self-medication, cost of prescription, types of drugs purchased and other factors influencing self-medication. A profile of 1769 doctors' prescriptions and 763 self-orders were monitored at pharmacy outlets in the twin cities of Hyderabad and Secunderabad and 4 rural areas of Andhra Pradesh.

Self-medication expressed as the percentage of the total population that self-medicates, was found to be high in urban areas (37%) compared to rural areas (17%). The majority of physicians' prescriptions were incomplete with respect to diagnosis and dosage regimen. The mean cost of the drugs purchased on doctors' prescriptions was 2 fold higher than that of sold without prescription.

A high proportion of patients from rural areas (80%) purchased more prescribed drugs (80%) compared as to urban areas (54%). Financial constraints in urban areas were a major determinant in the partial purchase of prescribed drugs. In addition, the urban elite (i.e. professional people with high income, who comprise 18% of the total population) expressed that all of the prescribed drugs were not necessary for their present illness.

Nutritional products, analgesic, antipyretic, anti-inflammatory and broad-spectrum antibiotics constituted a high proportion of prescriptions in both urban and rural areas. The consumption of food supplements was higher in rural areas than in urban areas. Based on WHO criteria, most of the drugs prescribed in rural areas (60%) were non-essential compared to those in urban areas (47%).

The results of this study emphasize the need for comprehensive measures, including information, training, legislation and education at all levels of the drug delivery to rationalize drug therapy by improving prescribing patterns and curbing self-medication¹⁵

Access of drugs through public health care pharmacy outlets

Government of Andhra Pradesh (AP) has adopted centralized drug procurement and distribution scheme after implementing Health Sector Reforms in 1998. Under the Programme, 80% of the drugs are procured by Medicine and Housing Development Corporation and supplied to all levels of the health care. The

respective directorate procures the remaining drugs. The present study was conducted with objective of identifying drug consumption profile in rural and urban AP using core drug use indicators as prescription defined by WHO. The preliminary results showed that the average number of drugs prescribed were 2.1 1.32. Among the various categories of drugs prescribed 35% drugs belonged to 'antibiotic, 29% nutritional product, 12% antipyretic and 27% other categories. Injection use was alarming (70-80%) in all the centers. Patient care indicators namely average consulting time was 1.4 minutes. Encouragingly nearly all drugs were dispensed at the pharmacy.¹⁵

6. Studies at Punjab

Dispensing practices and patients knowledge about the drugs prescribed

A study was undertaken to assess the prescription writing habit and dispensing pattern of drugs at the Health Center of Punjab University. Five hundred randomly selected prescriptions were monitored over a six-month period (June 1998 to December 1998). The parameters studied were category of drug, drug dosage form, frequency, duration, single or combination drugs and whether generic or proprietary; and patient care indicators viz. consultation time, information provided by the prescriber and the dispenser to the patient, labeling of dispensed drugs and patient's understanding of the drugs to be taken.

About half of the patients were prescribed generic drugs (50.75%). Fixed doses combinations were 18.27%. These were 22.76%, analgesics 21.76%, anti-histamines 12.56%, drugs for gastrointestinal tract diseases 9.47%, steroids 3.57% and drugs for cardiovascular diseases 3.16%. Doses were mentioned correctly for 19.28% of the antibiotics prescribed. The pharmacist did not give written instructions on the packaging for any of the dispensed drugs. Among the drugs prescribed 85.51% were available at the pharmacy, of which 43.23% were dispensed in envelopes without labeling. Only 17.25% of the patients knew about the nature of medication prescribed to them and 68.25% were aware of the medication schedule.

The study highlights lacunae in the prescribing, instructions to patients and labeling of drugs. An intervention not only improves the prescribing habit but can also promote rational use of drugs within economic constraints.¹⁵

7. Studies at Rajasthan

Antimicrobial resistance (AMR) study

A prescription audit study for use of antibiotics was carried out for hundred prescriptions each collected randomly from outpatient and inpatient departments of urology, surgery and neurosurgery of a tertiary hospital.

An analysis of prescription showed that antibiotics were prescribed in 92% of the patients attending urology clinic. Of these 77% received 1 antibiotic and remaining 23% received 2 or 3 antibiotics. Fluoroquinolones alone or in combination with other antibiotics was the most commonly prescribed antibiotic. The duration of therapy with antibiotic ranged from 3-15 days (mean 7.03 ± 3.09).

Among the hospitalized patients, 48.5% received antibiotics, 29.2% non-steroidal anti-inflammatory drugs (NSAIDs), 8.8% antiprotozoal, 7.7% vitamins and 5.7% opioid analgesics. All patients received antibiotics by parenteral route. Fifty four per cent patients received 3 antibiotics and 22% 2 antibiotics for a duration ranging from 3-15 days (mean 7.78 ± 2.78 days). Urine culture and sensitivity test was advised only in 3 out of 200 patients.

Among the gram-negative organism, *E. coli* showed resistance to ampicillin, amikacin, ampicillin, gentamicin and nitrofurantoin. *Klebsiella* spp was 100% resistant to ampicillin while resistance to amikacin, ampicillin and ceftazidime was only 50%. *Proteus* and *enterobacter* species were completely resistant to ampicillin, ciprofloxacin, chloramphenicol and tetracycline. Both organisms showed only 50% resistance to amikacin, ampicillin and ceftazidime and showed maximum resistance to cefotaxime (92.8%), while amikacin was found to be most effective showing 64.2% resistance.

Among the gram positives cocci isolated staphylococcus were sensitive to oxacillin and vancomycin. Both coagulase positive staphylococci and negative staph spp. were 100% resistant to cotrimoxazole, erythromycin and ciprofloxacin. Among the coagulase negative staphylococci, amikacin, clindamycin, gentamicin, nitrofurantoin showed only 50% resistance. - Coagulase positive Staph showed least resistance with clindamycin (25%).

All enterococci were sensitive to vancomycin and were 100% resistant to tetracycline.

Isolates from general surgery and neuro-surgery also showed an alarming pattern of antibiotic resistance amongst the common

pathogens. It calls for an urgent need of an antibiotic policy in the hospital.¹⁵

Rational drug use training and human resource development

Basic training of health professionals is an important strategy for achieving rational use of drugs. DSPRUD is continuously striving in this area and workshops and/or seminars on rational use of drugs have been conducted in various states in regular intervals.

Advocacy

It is an important component to keep in place the philosophy of RUD in India. This has been successfully done by the incorporation of RUD and EDL into the Medical text books on pharmacology in a few instances. More and more influential support from Government, Policy makers, International agencies, University departments and Medical associations needs to be mobilized to the concept of RUD and its implementation in India.²²

Potential incentives that can be put in place to improve rational prescribing

It has been emphasized that economic pressures have made it increasingly difficult for governments to provide adequate funds for the supply of drugs to health facilities. Increasingly, reliance is placed on private sector pharmacies and drug outlets, but their prices are often beyond the reach of much of the population in need of drugs. Many countries are now experimenting with a variety of ways to generate additional funds for drugs; others are in the planning process.

Before embarking on cost recovery schemes, it is important to ensure that a drug supply system is as efficient as possible. Otherwise, the imposition of a fee becomes an additional burden on already poor people. It is especially inequitable if the funds thus recovered are mixed with general revenues and are not used specifically for the purchase of drugs, with the result that drug shortages continue and the payment becomes a sort of "sickness tax". Significant savings can be made and prices reduced through measures to reduce over-expenditure and over-prescription; by improving purchasing, storage and distribution; and by improving the management of donations. Similarly, financial resources for drugs can be augmented by increasing the government budget allocation for health; by reallocating resources, including manpower, and by increasing external assistance. A final possibility is to recover costs from the patient, either "directly", at the time of the illness, or "indirectly", either before or after the

illness episode. Political commitment and a clear idea of the objectives of the cost recovery mechanism were felt to be especially important to the success of such initiatives.

Considerable savings are to be found within the drug supply system, and through reallocation of the health sector expenditures. Virtually every country can do much to improve the efficiency with which it uses available funds. Furthermore, experience to date with user fees has shown that in many low-income countries, such fees do not contribute greatly to revenue. Even full cost recovery for drugs has not been possible to achieve in many countries. There should be a re-examination of policies in this area; with the current emphasis on cost recovery the existing expenditure patterns are often taken for granted, and insufficient attention is paid to the possibilities of improving efficiency.²¹

Future directions

The experience and success story of DSPRUD in improving RUD in India has though been remarkable; the benefits have reached to a limited number of public health facilities. So there is a need to reinforce the various components of Drug Policy so that there will be a multiplying effect on promoting RUD to benefit large sections of the population.

The aim must be to advocate and expand the rational use of drugs in a cost effective manner in all health facilities and ensuring rational prescribing practices, which should be part of a sustainable health care policy. Starting with the public sector facilities in medical care at Central, State and Municipal levels including large autonomous Government hospitals, the programme should expand to training and sensitizing the private practitioners through IMA/CME/Reregistration linkages, expanding and revising medical education curricula to include rational use of drugs (RUD) and rational prescribing (RP), voluntary private sector hospitals to be assisted in adopting the desired package of practices.

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