2

RECLASSIFICATION OF MEDICINES

(As Listed in the Medicines Regulations 1984)

Report for the Medicines and Benefits Unit

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MEDICINES CLASSIFICATION

Summary

During August-October 1988 I participated in the production of a report on the re-classification of medicines. The "reclassification" referrred to is on the basis of availability- whether general (e.g. in supermarkets) or pharmacy-only (sold by pharmacist) or by prescription only.

A system of rating the drugs numerically, based on criteria such as toxicity, potency, potential for abuse, was evolved. Drugs which achieved a low rating were then further considered for derestriction. Additional considerations included pack sizes, labelling, consumer information etc. A team of people from the Medicines & Benefits Unit of the Health Department met weekly to direct and evaluate the work I was doing.

This report also discusses community pharmacy, "over-the-counter" availability of medicines, and other related topics.

Background

Though the situation of the Wellington Health Development Unit (my work-base) is physically nearer to the seat of power in this country, in practice one might as well be working on Chatham Island as far as access to "inside knowledge" of political matters is concerned. However, through my work with staff at the Medicines and Benefits Unit (Health Dept Head Office) I was able to gather at second or third-hand, a much greater insight into the political process. Therefore it was interesting to hear that some of the powerful were favourably inclined toward the liberalisation of medicines availability. Perhaps part of the cause of this, is the increasing pressure from consumers wanting to be able to purchase drugs previously available on prescription only. For instance, women wanted to be able to buy antifungals for the common, recognisable, and recurrent conditions of oral (seen generally in babies) and vaginal candidiasis. Others questioned why they must return every three months (sometimes every month) to obtain further repeat prescriptions when the occasion apparently called for little or no medical input.

At the present time as we are trying to promote the health development process, which calls for the transfer of knowledge to the community; individuals (and communities) taking responsibility for their own health; consumer awareness and so on; surely such trends as are mentioned above are to be encouraged.

However, one could question the ethics of putting powerful and/or toxic medicines into the hands of people who have not undergone the years of medical training necessary to be able to diagnose the conditions for which such drugs may be required. Many of the drugs available over the counter (henceforth OTC) at present are so available by tradition rather than good planning. For instance, aspirin is a frequent cause of potentially serious side effects, and a great danger in overdose. Others, such as herbal medicines may comprise substances of which little is known (e.g. regarding carcinogenicity) and of which the quantity may be extremely variable.

Another consideration relating to health development is the role of the community pharmacist. Some think that much of the training of the pharmacist is not utilised and that pharmacists could play a broader role in providing advice and treatment to the public. In many ways pharmacists are hamstrung in their ability to use their training, for instance by regulations forbidding generic substitution unless sanctioned by a doctor. Internationally this idea of greater involvement (and responsibility) of pharmacists in health matters in the community is being more frequently heard.

For instance, consider this extract from a speech by the

National Pharmaceutical Assoc'n (U.K.) President in June 1988: "...stressing the current high level of pharmacy education, [Mr Astill] maintained that, even granted a minor incidence of adverse reactions and the slight risk of resistant bacterial strains developing, pharmacists could be entrusted with a limited range of antibiotics without any notable detriment to public safety".

Similarly,
".....the government's green and white papers on primary care recommended an increase in the role of the community pharmacist".
(from "Rediscovering the Role of the Pharmacist", in Journal of the Royal College of General Practitioners March 1988).

Over-the Counter (OTC) Drugs

Nonprescription drugs are receiving more attention because they offer a means of containing health care costs(@). In many developed countries there is a trend for increased new licensing of OTC products. Previous experience shows that reducing the choice of medicines available on prescription leads to increased buying of OTC products.

[@ see Brit Med Jl 3 Oct 1987; 295 (6602): p 797.]

There are several hazards associated with the availability of drugs OTC:

-"escape" from medical supervision- in potentially lifethreatening conditions such as asthma.

-increased morbidity/mortality due to delay in coming to medical attention ; also the potential masking of symptoms by palliative therapy (such as H2 receptor blockers) resulting in delay in detection of true pathology (e.g. cancer of the stomach).

-toxicity in overdose of the medicine (patients often obtain the drugs used in overdose OTC).

-side effects/drug interactions/cautions associated with the medicine's proper use being ignored.

-in practice, the advisory function of pharmacists is often poorly performed (see "Advice to the Public from Pharmacists" reported in Lancet 26 Mar 1988 p720: ".....86% of pharmacists suggested various brands of unnecessary vitamin supplements... ..many accepted customers' self-diagnosis without question") The point of making medicines available pharmacy-only instead of on prescription is precisely so that pharmacists can advise and direct the consumer as to proper use of the medicine.

In theory most of the abovementioned hazards apply to prescription as well as to OTC medicines.

But perhaps the compelling caution is the "escape from medical supervision" factor. Experience with OTC availability of bronchodilator inhalers (for treatment of asthma) suggests that many people (especially adolescents) obtain inhalers OTC which may then be used inappropriately for severe grades of asthma. Prophylactic drugs such as steroids or other anti-asthma preparations obtained only on prescription are not used and the opportunity for asthma education is missed. Recently it has been suggested ($) that the continuing high mortality rate from asthma is related to this OTC availability.

[$ Henry et al "The Use of Non-prescription Salbutamol Inhalers by Asthmatics in the Hunter Valley, New South Wales" unpub, University of Newcastle, NSW]

Demographical studies (*) of the characteristics of people who <u>frequently use OTC druos</u> show that they are characterised by being in "poorer mental health, poorer physical health and worrying more". Are these people actually improving their health by the use of OTC medicines? Are they likely to benefit from availability of yet more OTC preparations?

[* e.g. Johnson & Pope, "Health Status and Social Factors in Non-prescribed Drug Use" Medical Care Feb 1983; vol.XXI (2):225-232.]

In addition, and somewhat in contrast, the same study showed that the most important factors discriminating between <u>users</u> and <u>non-users</u> of OTC drugs were: sex, income, tendency towards self-treatment, and well-being (worries). Users are characterised by being, more frequently, "female, having a high tendency to self-treat, having a higher income, and having more worries".

Again the "worry" factor is a discriminant. One wonders if it would be a good thing if more of the "worried" (whether "well" or not) were to be transferred from the care of the GP to that of the pharmacist. Or, as the case may be, "self-treat" themselves more vigorously, as they may be in the care of <u>neither</u> GP nor pharmacist?

Similarly the study showed that <u>the</u> most important health status factors in nonprescribed drug use were <u>"beino poorer in mental health and lower in well-beino"</u> (i.e. more "worries"). It is not likely that people suffering from socioeconomic deprivation and/or poor mental health are likely to experience improved health status through the use of OTC drugs.

Method

The "method" used was simple, although time-consuming. All the medicines listed in the British National Formulary (and later, the Medicines Regulations) were the subject of investigation. Relevant information was obtained on each drug (or occasionally, group of drugs) from pharmacological and medical texts. It was not possible (in terms of the proposed timescale) to do a literature search on each drug, as over 400 drugs, or groups of drugs, were eventually considered. This was not an unreasonable or rash as it may seem, as early on it had been decided that it would be inappropriate to derestrict "newer" drugs. However, literature searches on the subject of "over-the-counter" medicines were carried out.

Categories were defined at the outset (see "Criteria for Recommended Availability Rating") on an empirical basis. A score (generally from 0 to 4) was awarded for each category; the medicines were considered seperately; and each medicine was given a total score comprising the sum of the scores for the individual categories. This total score was then taken as an indicator of the "recommended availability". A high score would mean that the medicine should not be derestricted, a very low score could mean that the medicine could be suitable for general availability.

It may be seen that the categories chosen centred on the safety of the medicine (e.g. "toxicity", "therapeutic range", and so on). There was discussion about whether to choose "efficacy" as a separate category. The feeling in the group was against this (although consensus was not acheived); but perhaps it is best to presume that all (licensed) drugs have some degree of efficacy.

No attempt is made to claim that the evolved rating system had objective "scientific" validity. It was, however, useful as a screening tool to determine which medicines should be further considered for derestriction. Otherwise the mammoth task of having to consider virtually every medicine used in this country (when normally this process occurs for only one drug at a time) would have been much more difficult to get to grips with.

The group from the Medicines and Benefits Unit was comprised of a pharmacist, medical doctor,and scientists (two). We had weekly meetings to monitor progress as I carried out the task of investigating the medicines as listed in the British National Formulary.

It soon became apparent that the numbers system had some meaningfulness and consistency and was not unduly subjective. The following are some examples of total scores: (the lower the score the wider the recommended availability): Antacids (such as AlOH)- 3; Sucralfate- 5; Cimetidine- 9; Cheodeoxycholate- 15; Warfarin- 20.

Obviously the structuring and nature of the categories chosen had considerable bearing on the resulting totals. For instance, topically applied medicines tended to score lowly, due to low ratings in the "therapeutic range" and "toxicity" categories. This, however, might be seen to be not an unreasonable feature.

There was not an automatic cutoff point for total scores in terms of "recommended availability"; but in general , a total of below 10 would cause a medicine to be considered seriously for "general availability", and a total of below 12-13, for "pharmacist-sale". Of the medicines scoring over 14, none were considered suitable for anything other than availability only on prescription.

If a medicine scored fairly low, but was considered for some reason to be unsuitable for availability at that level, an asterix beside its total score indicated that the availability (as determined by the group) should be more restricted than was indicated by the score. The usual considerations in this regard concerned the perceived necessity for medical diagnosis and supervision; for example in the case of topical antibiotic creams, where although the lowish scores reflected the relative safety of these medicines, the asterix indicated that the group felt that only doctors had the skill to diagnose correctly the conditions warranting such treatments.

Once all the relevant therapeutic groups as listed in the British National Formulary had been considered, it was necessary to go through all the medicines listed in the Regulations, as many of these did not appear in the BNF. This book does not include most of the preparations which are usually available over the counter, and probably reflects the lack of emphasis given to such medicines by prescribers. Indeed, some patients do not consider such substances to be "medicines" in the usual sense, and they may be omitted from the medical history given by the patient.

During the process of going through the medicines listed in the Regulations, many medicines were found that were little used or frankly archaic. With the help of the listed medicines in the comparable publication of the U.K., those that were deemed obsolete were deleted from the Regulations.

The proposed category of "pharmacist-sale" (whereby the medicine is to be sold personally by the pharmacist or possibly their legitimate "proxy", with the probable requirement of some form of record-keeping on the pharmacist's part) caused some discussion. At the most basic level it meant that all the medicines listed under the old "Pharmacy-Only" category in the Regulations had to be reclassified as either "pharmacist-sale" or "general availability". However, the implications of such a change were not really explored at this time, and at a future time, consultations with the relevant professional organisations should be useful.

Criteria Used in Determining "Recommended Medicine Availability"

TOXICITY:

Capacity of a substance to produce adverse effects in biologic systems. Range 0 (nontoxic) ------- 4 (highly toxic).

POTENCY:

Ability of a drug to produce a strong physiological effect.
0 (low)--------- 4 (high potency)

THERAPEUTIC RANGE:

Gap between pharmacological and toxic levels. Rated "2" if no specific information available (for medicines taken systemically); otherwise 0 (wide)------- 4 (narrow).

ABUSE POTENTIAL:

Likelihood of a medicine being used for gratification, producing effects not required for therapy. Range 0 (low)----- 4 (high).

MISUSE "1" (DISEASE FACTORS):

This category is based on the suitability of the disease for self-treatment; potential for self-monitoring; likelihood of disease requiring medical supervision.
Range 0 (suitable)----- 4 (unsuitable).

MISUSE "2" (DRUG FACTORS):

This score takes account of the precautions /side-effects/ interactions associated with the medicine: their severity and frequency. Range 0 (few)----- 4 (many).

PERSONAL UTILITY:

The score is the amalgam of a number of factors centering on the consumer; convenience, accessibility of medicine (time, place); suitability of self-treatment of minor recurring conditions; the likelihood of the medicine being used "as necessary" (rather than regularly) and therefore running out at odd times, etc. Safety factors were again taken into consideration.
The score was a negative one, ranging from
-4 (high "personal utility")---- 0 (no "personal utility").

COMMUNAL:

This factor reflects the likelihood of community harm (resulting from increased availability), usually with reference to the development of antibiotic resistance in bacteria.

Results

The results in the form of a table are appended. The last three columns show the "recommended availability"- whether "general", "pharmacist", or "prescription-only". Asterixed totals mean that the implications of the final number were over-ridden by some other consideration (as explained in the previous section).

The final lists of:

(1) deletions from the Medicines Regulations
(2) medicines recommended for general availability
(3) medicines recommended for pharmacist-sales
(4) medicines added to presciption-only category

are included.

Discussion

Without wishing to go through the entire table discussing each of the proposed changes in classification under the Medicines Regulations, I would like to mention some of the most important of these changes.

Histamine-2 Receptor Blockers

The prototype cimetidine and the next most well-established in the group, ranitidine, have a very good safety record and are used extensively (and with increasing frequency long-term) for gastrointestinal disorders (particularly peptic ulceration). These medicines were recommended to be available from the pharmacist. It is expected that the pharmacist would take a brief medical history, and direct the client to medical help if necessary. It is probable that some sort of guidelines should be issued for pharmacists, describing the questions to be asked and the circumstances under which medical help should be sought (e.g. client has never had a gastroscopy, or is losing weight).

Vaginal Anti-fungal Preparations - The Case for the Consumer

Vaginal candidiasis ("thrush") is very common and often very distressing. It tends to recur and particular precipitating factors (such as the taking of antibiotics, or oral contraceptives) can usually be identified. It may be of acute onset with symptoms of pain and/or itching. Most women are aware that they are suffering form "thrush", particularly as it recurs and the sufferer thus becomes familiar with the symptoms. Many women resent having to wait to get a doctor's appointment in order to tell their GP that they have got thrush. The usual treatment , in the form of vaginal pessaries and/or creams

(imidazoles) is effective, specific, and has few side-effects or cautions.

The main concerns (with the topical imidazoles) would be of minor local irritation, and the slight possibility of systemic absorption (in the long term, especially in pregnancy). The main concern diagnostically would be of the patient mistaking candidiasis for other causes of vaginitis, for example Trichomonas. While this is possible it is unlikely to result in very much harm, as the non-resolution of symptoms would surely send the patient to the GP, and the usual sources of diagnostic confusion are also not commonly a cause of serious pathology if untreated.

Candidiasis is at present probably the most common cause of vaginitis, and, as I have said, is often recognised by the woman by its recurring nature. The possibility of delay in diagnosing, say, Chlamydia (which can cause a dysuria-urethral syndrome), would be a worry- but Chlamydia is often present asymptomatically in any case, and most doctors would probably not test a patient presenting with "thrush" for chlamydia.

This sort of information (particularly relating to possible side-effects, mis-diagnoses, and so on) will need to be made available to the consumer.

Treatment of Skin Conditions

Several topical preparations used in the treatment of common skin conditions such as acne and psoriasis were recommended for derestriction and pharmacist availability. These medicines are relatively safe, and the conditions for which they are used are recognisable (in the case of psoriasis, would usually have been diagnosed medically). These conditions are recurrent, are often lifelong (or long-term) and may pursue a course of exacerbation and waning. Many people who know what they have got would benefit from being enabled to purchase these effective medicines form the pharmacist. These medicines (which include topical Clindamycin, coal tar, and dithranol, are recommended for pharmacist-sale rather than general availability because some advice regarding application of the substance should usually be given.

Antihistamines

Most antihistamines are already available from the pharmacy. These drugs can have powerful effects (particularly in terms of sedation), but they have a kind of traditional acceptability in our society akin to that of aspirin, and even alcohol. The two newer (and "non-sedating") antihistamines astemizole and terfenadine, were recommended for general availability, and the others in the group for pharmacist-sales. Anti-histamines should not be recommended idly, as (like aspirin), they are not totally

clear of suspicion as regards teratogenicity. Astemizole has a very long half-life (up to 19 days), while terfenadine has a much more rapid onset/offset of action. The two drugs are complementary in some ways. However, if the public at large are to be purchasing these medicines then they should be made aware of the possible harm (risks and benefits) that may result.

Non-steroidal Anti-inflammatory Drugs

These medicines are used frequently in the treatment of arthritic conditions. They also are being promoted more recently, for the treatment of sports injuries (the value of this method of therapy is debated). They are characterised by relatively frequent but usually minor, side-effects, principally gastro-intestinal. The majority of side-effects occur in the elderly. They act similarly to aspirin, but have fewer side-effects. One could argue thus: as aspirin is available generally, (and has an probably unshakeable place on the home medicine-shelf), why should not these safer substitutes be similarly available?

In the international literature of "NSAIDs", ibuprofen stands out amongst other NSAIDs for its safety record. This product is available OTC in the United States. Therefore, this medicine was recommended for general availability; and the other (established) NSAIDs for pharmacist-sale (the pharmacist should be able to try to screen out "at-risk" purchasers such as the elderly, who should porbably obtain such medicines, if they are necessary, on prescription).

There were several medicines which were not derestricted for which there might have been expected to exist a strong consumer pressure for such a step. In particular, beta-agonists inhalers such as Ventolin in the treatment of asthma, oral contraceptives, oral hypoglycaemics and antihypertensives come to mind. The case against derestriction of asthma medicines is stated elsewhere, but some of the other types of medicines mentioned could well be suitable for availability by purchase under a "warrant" system.

The "Warrant" System

The idea of a "warrant" system is worth exploring. There are many medicines that would be suitable for this system, whereby a patient is allowed (certified by their GP) to purchase medicines for a period of time without prescription (time scale could be of the order of years).

Some people, (with suitable conditions), would be greatly convenienced and run little risk of harm from such a system. For instance, one thinks of (low-risk) women taking oral contraceptives, diabetics (those who are capable of self-monitoring their condition) on long term oral medication, some hypertensives, and certain (stable and "sensible") asthma patients. We felt that general practitioners would be well able to judge who such people are.

However, many problems could hinder the use of this system: GPs may be reluctant to "discharge" their patients from their care in such a manner; abuses could occur if patients with warrants were to obtain by purchase and sell medicines to others; patients using this system would have to take on more of the responsibility - for their condition (e.g. should deterioration occur) and for the effects of the medicine (e.g. teratogenicity or the effects of drug interactions).

The potential benefits of such a system could be: increased consumer (patient) participation (and responsibility); consumer convenience (wider availability-convenience of purchasing versus doctor's appointment); possibly lower cost to the consumer (this depends very much on the current cost of a GP consultion); less medicine wastage (if paid for less likely to be not taken, one would think); less cost to the Government in terms of medicines paid for on the Drugs Tariff.

The Case for Further Restriction of Medicines

The medical profession in general would probably be able to put a strong case for continued restriction of medicines to prescription-only. Part of the motivation may be the desire to preserve professional "territory", but also it must be recognised that from the safety aspect, derestriction can never be more than a limited exercise. Also, for many of the medicines, the cost is high, and major savings are unlikely to result from making them available from pharmacies. Pharmacies in New Zealand tend to avoid competition with each other and the consequent cost-cutting(*). Making medicines available "generally" (i.e. from supermarkets etc.) might result in greater cost-savings, should the supermarkets decide to stock them.

[* see "The Battle to Sell Oil of Ulan" Consumer June 1985; no. 228]

So who is likely to benefit from such a derestriction? This derestriction has no impact on the Drugs Tariff, and therefore makes no changes to the choice of medicines which are available free to the patient (but not the Government, and the taxpayer) via the Social Security system. The patient has the cost (and often the inconvenience) of a visit to the doctor to balance against the cost (and presumably greater convenience) of a visits to the pharmacist (or dairy or supermarket, as the case may be). If the present trend toward marginally increasing the charge for a presciption while trying to hold GP charges down (via the General Medical Benefit) continues, it is unlikely that there will be significant consumer pressure for derestriction. However, if doctor's charges rise appreciably, (and if doctors' bad public image doesn't improve), then there may be a trend towards increased purchasing of medicines without prescription.

Whether this will be a good thing for the public health is debatable. It certainly fits in well with the "more market" concept. Certainly some relatively innocuous drugs used in the treatment of some common conditions have been unduly restricted. But where to draw the line is a problem. The Board of Health Committee on Health Promotion in its recent booklet "Promoting Health in New Zealand", in the section on "Promoting health.... through reducing drug use", recommended that health promotion agencies seek to reduce the inappropriate use of over-the-counter medicines and food supplements. Making even more medicines available over-the-counter may not be very consonant with this policy!

However, a key factor is consumer education.
Education of the public on these matters will help to reduce the inappropriate use and encourage the appropriate use of over-the-counter medicines. This is especially important if we are increasing the availability of these medicines. Such education will need to include the schools, and other community sites as well as the traditional health care service outlets. Non-deceptive packaging and understandable product inserts will need to be provided. Pharmacists and their assistants will need to be prepared with the requisite health education material, and the time and the place(a separate room?), as well as the knowledge, and the desire to impart it, to the purchaser. The pharmaceutical industry will need to have enforcable restrictions placed on it regarding advertising direct to the public. Such advertising, if allowed, must be responsible, honest, ethical, and must be subject to regulation.

Considering the demographical studies of "OTC users" versus "non-OTC-users", and "frequent users" versus "infrequent":
(1) This may not be relevant to New Zealand (the study quoted is from the USA, where the structure of the health care and welfare systems are quite different).
(2) The projected role of the pharmacistas advice-giver to the purchasers of OTC medicines may help to reduce the inappropriate use of these medicines.
Similar research could be usefully carried out in New Zealand.

Recommendations

(1) That the medicines as listed for general, pharmacist, and prescription availability be adopted as such and incorporated into the Medicines Regulations.

(2) With regard to the (sometimes) cumbersome process of consultation: at the very least, members of the pharmacy and medical professions (including GPs and Family Planning Clinic doctors) should be consulted prior to any such alterations to the Regulations being made law.

(3) Consumers be canvassed regarding the types of education and educational material that will be required (particularly with regard to package inserts).

(4) That the pharmaceutical industry be restrained by enforceable measures from pursuing unethical or otherwise unsanctioned advertising methods (especially regarding direct to the public advertising).

(5) That the option of the "warrant" system be further investigated.