mary care must be to move away from the old model of relying on the passive prescription of pills.

The treatment of depression in late life requires some imaginative commissioning at the interface of primary and secondary care. These arrangements should incorporate the new evidence base, favouring active care management and timely support from specialist mental health services.

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Competing interests: None declared.

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Which drugs should be available over the counter?

The criteria are clear and include safety, timeliness, and opportunity cost

As contraception after intercourse, levonorgestrel is available by prescription in the United States and in most other countries. In over 30 countries it is available without prescription.[1] Levonorgestrel recently came to wide attention when the US Food and Drug Administration (FDA) acted on an application to switch the drug to non-prescription or "over the counter" status.[2] The application was supported by essentially all internal scientific staff and the external advisory committee of the FDA, but the FDA rejected the application. The reason given had to do with the ability of women to understand the appropriate use of the product,[3] but this issue had been explicitly discussed and settled to the satisfaction of the FDA's scientists and external advisory committee.[4] The FDA's explicit denial that the decision had been the result of political pressure has been received with scepticism.[5–8]

How should policy makers decide which drugs should be available over the counter? Practice varies widely. Travellers from developed countries are often surprised to find that antibiotics, antiarrhythmics, and many other drugs are available without prescription in other parts of the world. Even within the United States, some pharmaceuticals are available over the counter in some states but not in others.[9]

Marketing status is not just a choice between requiring and not requiring prescriptions. Drugs with special risks (for example, some antiarrhythmics) are often given a hyperprescription status and sometimes involve central registers of prescribers and patients. To slow the development of bacterial resistance, some hospitals assign hyperprescription status to selected antibiotics. Teratogenic drugs (such as thalidomide) may be dispensed under hyperprescription rules, requiring periodic certificates of non-pregnancy.

In the middle, some jurisdictions make use of pharmacist mediated ("behind the counter") status for non-prescription drugs whose use requires professional guidance, but not necessarily that of a doctor. Toward the loose end of the scale, a product's labelling may instruct patients not to use the product unless a doctor has made the diagnosis, perhaps during an earlier episode of the disease. Finally, many products are available over the counter with no restrictions.

The legal options are different in different jurisdictions. Still, the pertinent considerations are the same everywhere, and they are easy to enumerate.

Diagnostic considerations

Over the counter status is unlikely to be awarded to a drug whose only use is for a condition (such as rheumatoid arthritis, choriocarcinoma, ulcerative colitis, systemic lupus, streptococcal pharyngitis, multiple myeloma) whose diagnosis could not reliably be made by the patient, perhaps because it requires special expertise or laboratory work. The patient's diagnostic difficulties might change with time. Patients could not be expected to make the initial diagnosis of diabetes, but thereafter they will generally carry the diagnosis for life, and most forms of insulin are accordingly available over the counter in the United States. A woman with her first episode of vaginitis due to candidiasis is not expected to distinguish it from other vaginitides, but she is trusted in many jurisdictions to recognise recurrences and to purchase antifungal preparations over the counter to treat them.

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Criteria related to adverse effects

The possibility of serious irreversible adverse effects makes it less likely that a drug will be available without prescription, even if these risks are seen only with doses higher than therapeutic doses, in unintended populations, or in patients other than the index patient. For example, low doses of thiazide diuretics rarely cause hypokalaemia, but thiazides have never been available over the counter in the United States, in part because of concern that some patients might attempt to use them (for weight loss) in much higher doses. Isotretinoin, used to treat acne, presents no special hazards to men or to non-pregnant women, but it is likely to retain prescription (or hyperprescription) status because of its teratogenicity. Most antibiotics are widely held to prescription status, in part because of the risk of bacterial resistance affecting patients other than the original one. Any risk that a drug might be diverted for chemo-recreation is likely to be weighed heavily.

Some of the adverse drug effects receiving recent attention have been what economists call moral hazards. Moral hazards are the hazards of insurance. Might drivers be more reckless when they wear seat belts? Might adolescents increase their sexual activity when they have access to contraception? Might easy availability of naloxone cause more people to abuse opiates? Moral hazards are subject to evidence based investigation, but much public discussion of moral hazards consists of baseless speculation. To the extent that non-monetary moral hazards (including the three just mentioned) have been studied systematically, the risks are usually found to be small or non-existent.

Opportunity cost

Drugs that are safe but of only minimal efficacy may be denied over the counter status out of concern that patients will choose these medications in lieu of more effective treatments. A minimally effective antihypertensive might not be made available over the counter for this reason.

Timeliness

A drug is more likely to be available without prescription if the delay implicit in visiting a doctor might reduce the drug's potential efficacy. For example, syrup of ipecac, used in the treatment of childhood poisoning—although that use is now substantially discredited—is available without prescription in many jurisdictions.

Funding

In many health insurance schemes, the insurer subsidises the cost of prescribed drugs, but not those obtained over the counter. For patients with limited means, the switch to over the counter status may mean that a drug's availability is paradoxically reduced. This factor is outside regulators' usual purview, but it sometimes features in the discussion.

Levonorgestrel

How should all this have played out with levonorgestrel? Timeliness of treatment was always the driver, and self diagnosis (of exposure to unprotected sex) was not an issue. The medical hazards of levonorgestrel seem to be minimal in absolute terms and also relative to those of responses to pregnancy—including full term delivery. Few data from women under 16 are available, but no reason existed to suspect that levonorgestrel's hazards, in that population or any other, would turn out to be as great as those of aspirin or paracetamol. Moral hazards were discussed, but often on the basis of uninformed speculation, and there was some evidence that women with access to levonorgestrel were less likely to engage in unsafe sex.[4]

Levonorgestrel might be less effective than the immediate placement of an intrauterine device, but the difference in efficacy does not seem to be great. Not surprisingly, the proposed switch to over the counter status was supported by the American College of Obstetrics and Gynecology[4–10] and the American Academy of Pediatrics.[11] Levonorgestrel was an easy case, and it should have been useful as a model of systematic regulatory discussion. In the event, it was an induced regulatory abortion.

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Competing interests: RRF is a former employee of the US Food and Drug Administration. In recent years he has served as a consultant, never to the manufacturer of the levonorgestrel preparation mentioned in this editorial, but at one time or another to Abbott Laboratories, Actelion Pharmaceutical, Aderis Pharmaceuticals, Almirall Prodesfarma, Advanced Nutritional Sciences, AstraZeneca LP, Aventis Pharmaceuticals, Baxter, Bayer, Berlex Laboratories, Beverly Glen, BioPure, Boehringer-Ingelheim Pharmaceuticals, Bristol-Myers Squibb, Centocor, Cor, Corgentech, Corvas International, CV Therapeutics, DepoMed, Discovery Therapeutics, DOV, Eisai Medical Research, Forest, Fujisawa, GlaxoSmithKline, Hoffman-LaRoche, Idun Pharmaceuticals, KAI Pharmaceuticals, Lilly Research Laboratories, H. Lundbeck A/S, Meditor, Medtronic, MetaPhore Pharmaceuticals, Millenium Pharmaceuticals, Mission Pharmacal, Mylan Laboratories, Myogen, the U.S. National Institute on Drug Abuse, NeuroSearch, Novartis, Otsuka, Penwest Pharmaceuticals, Pfizer, Pharmacia & Upjohn, Pharmacyclics, Procter & Gamble, Purdue, Dr. Reddy Pharmaceuticals, Reliant Pharmaceuticals, Ross, Roxane Laboratories, Sanofi-Synthélabo, Schering-Plough, Schwarz BioSciences, Scios, Scotia Pharmaceutical, Sepracor, Shire Pharmaceutical Development, Sigma Tau, Solvay, Somerset Pharmaceuticals, Synpac (North Carolina), Theravance, United Therapeutics, Upsher-Smith, Watson Pharma, Wyeth-Ayerst, Yamanouchi Pharma America, and Zengen.

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