Middle Articles

Collection of Unwanted Drugs from Private Homes

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It is not uncommon to find that the unused portions of medicines and tablets prescribed are left on shelves in private houses long after the need for them has ended. It was suspected that this stock might be quite large, and in March 1967 a week's collection was arranged in the Hartlepoons, designed to fit in with the normal period of spring cleaning. The then

TABLE I

Tablets and capsules ..	43,554	Ear-drops (bottles) ..	13
Ampoules ..	194	Nasal drops (bottles) ..	17
Bottles of medicine ..	83	Lozenges ..	131
Liniments ..	16	Powders and cachets ..	123
Ointments and lotions ..	56	Pessaries and suppositories ..	178
Eye-drops and ointments ..	17	Miscellaneous ..	46

The number of separate items was 1,395.

TABLE II.—Tablets, Capsules, and Ampoules Identified

	Tablets and Capsules	Ampoules
Antacids ..	755	
Gastric sedatives and antispasmodics ..	2,679	
Laxatives ..	1,331	
Anticoagulants ..	39	1
Cardiac and cardiovascular reactants ..	1,674	2
Vasoconstrictors ..	871	
Antimigraine agents ..	146	
Analgesics ..	4,571	
Anti-inflammatory agents ..	392	1
Hypnotics ..	2,179	
Anticonvulsants ..	303	
Sedatives and tranquilizers ..	4,719	11
Thymoleptics ..	423	
M.A.O. inhibitors ..	338	
C.N.S. stimulants ..	552	
Antihistamines ..	648	1
Antiemetics ..	341	
Muscle relaxants ..	221	8
Endocrines ..	1,615	30
Hypoglycaemics ..	188	
Urinary antiseptics ..	361	
Diuretics ..	1,192	38
Antibiotics ..	1,523	41
Sulphonamides ..	587	4
Antituberculosis agents ..	418	
Antiamoebics, antileptotics, and antitrichomonal agents ..	266	
Antianaemic agents ..	2,689	45
Vitamin and mineral additions ..	1,510	6
Anabolics ..	235	
Carcinochemotherapeutic agents ..	107	
Cough suppressants and bronchial spasm relaxants ..	2,197	2
Antibesity agents ..	541	
Miscellaneous ..	631	4
Total ..	36,242	194

62 packets of Inpasade were also handed in.

West Hartlepool† Health Department provided posters to be displayed in their departments, the local pharmacies, doctors' waiting-rooms, and the local hospitals. The pharmacists agreed to act as collecting-points from which the Health Department brought the results to the General Hospital, West Hartlepool.† for counting and identification. The collection went on from

13 to 18 March. Considerable local publicity was given by the press and television services. The numbers collected are shown in Table I.

Tablets were identified by determining their diameter by passing them through slots ranging from 5/32 to 22/32 in. (4 to 17.5 mm.) in a specially made steel disc. The references used in identification were: (1) *The Chemist and Druggist* tablet and capsule identification guide; (2) *Medindex*; (3) the punch-card system devised by Mr. C. M. McArdle, chief pharmacist at Birmingham General Hospital; (4) information provided in the literature of some drug firms.

The general findings are shown in Table II and details of some of these are given in Table III.

TABLE III.—Numbers of Tablets Over 200 in Certain Sections of Table II

Gastric sedatives and antispasmodics:	Diuretics:
Tabs Bellergal 870	Tabs Hydrosaluric 253
" Nacton 276	" Hydrosaluric-K 432
" Paminal 296	" Lasix 374
Cardiac and cardiovascular reactants:	Antibiotics:
Tabs digitalis folia 243	Caps Achromycin 249
" Praenitrona 233	" Chloromycetin 396
" Peritrate 203	
Analgesics	Sulphonamides:
Tabs Panadeine 259	Sulphamethazine 253
" Panadol 216	Antituberculosis agents:
" pethidine 628	Tabs isoniazid 393
" Tanderil 636	
Hypnotics, tranquilizers, etc.:	Antianaemic agents:
Caps Sodium Amytal 234	Tabs Ferraplex 238
Tabs Seconal 559	" Fersamal 545
" Soneryl 213	" Sidros 376
" Insidon 268	Anabolics:
" Largactil 1,336	Tabs Anabolex 212
Caps Librium 885	
Tabs Mornidine 417	Cough suppressants, etc.:
" Stemetil 284	Tabs asthmaco 442
" Taractan 242	" Brovonite 502
" Valium 405	" Cardophyllin 324
" Tofranil 295	Antibesity agents:
" Niamid 270	Duromine 219
Antihistamines:	Miscellaneous:
Tabs Phenergan 239	Penicillamine 200

It was not possible to state accurately the number of households involved, but it is thought to be no more than 500. There are about 30,000 households in the area, with a population of 100,000. If the same pattern obtained in the remaining households we might have collected over 2,500,000 tablets and capsules. The identified finds were priced roughly on the basis of N.H.S. costs per 100, and a cost of £220 was obtained. Given a total clear-out for the area, this would represent about £13,200. On a United Kingdom basis the numbers and cost would be staggering.

Some of the "hoards" were probably "left-overs" from houses where there had been a death. The biggest hoard was 1,200 tablets from a house where an elderly woman had died

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† The County Borough of West Hartlepool and the Borough of Hartlepool amalgamated on 1 April 1967 to form the County Borough of Hartlepool.

just before the collection started. It included Guy's pills 179, Blaud's pills 85, calomel 1 gr. (65 mg.) 78, calomel $\frac{1}{2}$ gr. (32 mg.) 85, Bellergal 234, various analgesics, laxatives, and a tin of rat poison; it seemed to represent a lifetime of discarded treatment. The hoards of pethidine were no doubt left-overs from deaths from cancer. But doctors cannot be acquitted of some overprescribing. The pethidine hoards were 10 in number, and two contained over 100. There were other large single hoards—Largactil 576, Seconal 209, Librium 170, Monidine 302, Valium 159, Chloromycetin 300, Fersamal 261, Lasix 190. Against the accusation of overprescribing, it must be remembered that a patient may be given a course of treatment and the treatment may be changed, or the patient comes into hospital or dies or may decide not to continue the treatment. The remnants of the prescription usually then go on to a shelf in case they may be needed again. In time the original use is forgotten or the drugs may cease to be effective. They may be offered to relatives or friends on the basis of "these did me good, they may help you." I have seen a case of glaucoma precipitated by the misuse of an atropine-containing ointment, and combinations of tablets can be very dangerous. There is the risk of distraught persons taking any tablets available in an act of self-poisoning. In 1965 a man was admitted here with thalidomide poisoning. If the patient had been a pregnant woman the results would have been disastrous. Also there is the risk to children, for drugs in homes are seldom properly guarded and so many tablets look like sweets.

It is difficult to know how to deal with the situation. Established hypochromic anaemia may need several months' treatment with iron. Patients with depression may need a long course of antidepressive drugs. Nevertheless, the patient will have to be seen at intervals to check progress, and the prescriptions should cover no more than these intervals. Patients should be encouraged to hand to their doctors or pharmacists all the unused portions of prescriptions, and when there is a death all the drugs left over should be handed in. It would help if doctors would ask for this to be done. Similarly, hospitals

could help where death has occurred in hospital by offering to dispose of drugs still at home.

The National Health Service is not likely to benefit financially by the handing back of unused drugs. Apart from administrative difficulties it would hardly be possible to make use of them again, in view of the limited shelf life of many. Some waste is inevitable under any form of service, private or public. There are a large number of drugs marketed with only minor variations. Selling pressure causes them to be prescribed, and for a short time there are runs on this or that drug. If demand fails they may be left on the hands of the retail pharmacist. One pharmacist handed in for disposal 6,328 tablets and capsules, out-of-date stock (these are not included in the collection described above). In few homes are there not bits of this and that put aside in case they might be useful at some time, and the dustbins proclaim the great quantity of waste food from plates and left-overs. But if unwanted drugs were handed in there would not be this frightening load of poisons lying on the shelves.

Summary

A collection of unwanted drugs was made in the Hartlepool area from 13 to 18 March. A total of 43,554 tablets and capsules were handed in, of which 36,242 were identified.

The counting and identification were done mainly by Miss E. Irvine. I should like to thank Dr. H. C. Milligan, Medical Officer of Health for Hartlepool, his staff, the local pharmacists, and the press and T.V. services for their help in the collection. I should like to thank Mr. W. Ryder, hospital group engineer, and his staff for their help in designing and cutting the prototype disc; the pharmacists and pharmaceutical firms for assistance in identification; and the Hartlepool Hospitals Management Committee for the use of a room for counting and identification.

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NEW APPLIANCES

Roto-rest

Dr. F. X. KEANE, of the National Medical Rehabilitation Centre, Dun Laoghaire, County Dublin, Eire, writes: The Roto-rest has been designed to introduce automation into the nursing of severely disabled patients. It makes improved nursing care possible which hitherto was not practical or economical, and facilitates medical examination and specific therapy of these patients. This bed is primarily intended for use in the treatment of spinal injuries, with or without the complication of paraplegia or quadriplegia, and also for head injuries and orthopaedic cases. It may also be used to great advantage for the chronic patient at home.

The standard Roto-rest is remarkably simple in construction, and is no longer than the standard hospital bed fitted with skull-traction equipment; it is 3 ft. (91 cm.) overall in width and 8 ft. (244 cm.) in length. In the horizontal position the patient is at a convenient height, being 41 in. (104 cm.) above floor level. This size of bed will take a patient varying in stature from 4 ft. 10 in.

to 6 ft. 3 in. (147 to 190 cm.), including the distance required to accommodate conventional skull-traction tongs and special traction assembly.

The bed consists basically of three parts. A ground frame with four braked 6 in. (15 cm.) castors. This frame has two upright pillars on which a U frame rocks longitudinally to provide varying degrees of head and foot inclination. The foot of the U frame may be clamped in bearings on the ground frame at the foot end, and by activating a jack, mounted between the ground frame and this U frame, the U frame may be raised so that the patient can be put in a standing position if desired. The bed proper is pivoted at either end in the U frame, so that rotation about the longitudinal axis is achieved (Figs. 1-3).

The surface of the bed is divided into hatches which may be opened independently. These are situated under the patient's legs, arms, and centrally under his head and neck, thorax, and buttocks. The hatch situated in the thoracic region carries a spring steel

section which permits adjustment, so that the lumbar and thoracic spine may be supported or extended at any position along its length (Fig. 4). In place of a conventional mattress plastic-covered removable foam-plastic sections are used. Upright removable members are fitted which extend from the axilla to the foot of the bed, and may be contoured to the individual patient by the surgeon to afford lateral support. Adjustable head, shoulder, knee, and foot supports are also provided. Skull traction is available, from 0 to 56 lb. (25.4 kg.), by a constant-tension spring system, which is concealed within a frame member of the bed. Conventional bedclothes are dispensed with, and an air blower in the foot of the bed may be provided.

The patient is placed on the bed, all parts of which can be adjusted to the surgeon's satisfaction. This usually takes about five to ten minutes. The patient never again has to be manually lifted for the full duration of his treatment. Nursing care may be carried out by one person alone through the