

DRUGS AND THERAPEUTICS
COMMITTEES IN
IRELAND

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M.C.Ferrando.B.Pharm.Ph.D

M.C.Henman,B.Pharm.Ph.D.

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School of Pharmacy
Trinity College
Dublin

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1 . INTRODUCTION

In the past thirty years a large number of new and effective drugs have been discovered and made available as medicines for clinical use (1) . Associated with this rise in the number of prescription medicines has been an increase in the cost of health services, which has stimulated many attempts to control the prescribing patterns of doctors. One widely used mechanism in the hospital sector has been that of the Drug and Therapeutics Committee (2) , which is known in the United States of America as the Pharmacy and Therapeutics Committee.

In Ireland, the perception of the cost of medicines as a growing component of health service expenditure led the Department of Health to commission Trident Management Consultants to review the arrangements for the supply of drugs and medicines (3) . Hospital drug and medicine costs were estimated and a number of recommendations were made about the purchasing and control of hospital stocks. One other recommendation was that Hospital Drug Committees be developed (3) . As a result the Department of Health wrote to all Hospitals suggesting that they set up such Committees (4) . A response indicating the action taken by the Hospitals in this respect was to be made to the Department by March 31st 1982. No information has been made available in official sources as to the number and types of Drug and Therapeutics Committees in operation.

Pharmacists have a pivotal role to play in these Committees but with the exception of a report from one Hospital (5) the activities of the Committees and of their pharmacist members has remained anecdotal. Consequently, a survey was designed and carried out, to determine the number, composition and terms of reference of Drug and Therapeutics Committees as well as other aspects of medicines policies in the Irish Hospital system.

2.METHODS.

A nationwide list of the hospitals providing a pharmaceutical service and of the head/pharmacist in charge was compiled. Two self completion questionnaires were constructed and used as the main tools for the survey (see Appendices I and II). The principal aim of questionnaire 1 was to identify the number of Drug and Therapeutics Committees (DTCs) and to determine their characteristics. This questionnaire also included questions about generic drug use in the hospital a subject that may concern all pharmaceutical services regardless of the presence of aDTC in the hospital.

The questionnaire was sent to the pharmacist, the person in charge or head of the pharmaceutical service of the hospital. An explanatory introductory letter with instructions to complete and return the questionnaire, and a stamped self-addressed envelope were also included with the questionnaire.

All participants were assured that the information contained in their replies would be confidential and at no stage would the identity of individuals or individual hospitals be divulged. Follow up reminder letters were sent at an appropriate interval and postal non -responders were also contacted by phone.

The first questionnaire enabled a sub-group of respondents to be selected and these were subsequently included in the second part of the survey. The second questionnaire was addressed to this group and it inquired about the subjects dealt with by Drug and Therapeutics Committees and the means of communication between the DTC and the rest of the hospital staff (staff directly or indirectly involved with some aspect of drug therapy).

One hundred and eighteen hospitals with a pharmaceutical service were included in the survey. Twenty nine of these hospitals belonged to the Psychiatric Services and eighty nine to the General Hospital Services.

The hospitals surveyed were distributed throughout the eight Health Board areas. According to their type of management or administration they were divided into three groups:

Health Board Hospitals: administered by the Health Board and financed by State funds.

Voluntary Public Hospitals: of varied management (religious orders etc.) incorporated by charter or statute and working under a lay Board or Governors. They are largely financed by State funds.

Private Hospitals: they are managed by Private Boards and financed by the funds from charges to their patients.

Under the heading "other" were a miscellaneous group of hospitals (geriatric, mentally handicapped, army etc.). They were grouped separately for clarity's sake because some of the statistical information used in this study was not available for these hospitals.

The Psychiatric hospitals surveyed were administered by a Health Board (n = 25) or privately (n = 4).

The number, type and geographical distribution of the hospitals surveyed are summarised in table 1.

Within the two main management groups (Health Board and Voluntary Public) the hospitals surveyed could also be differentiated by the type of medical treatment that they could provide.

TABLE I
GEOGRAPHICAL DISTRIBUTION AND TYPE OF HOSPITALS SURVEYED

<u>Health Board Area</u>	HOSPITAL MANAGEMENT TYPE				<u>Total</u>
	HB	VP	P+O	PSY	
Eastern	5	23	5+4	9	46
Midland	5	-	-	2	7
Mid-Western	6	2	0+4	2	14
North-Eastern	4	1	-	2	7
North-Western	3	-	-	2	5
South-Eastern	5	2	-	6	13
Southern	7	5	1+0	3	3
Western	5	1	1+0	3	10
TOTAL	<u>40</u>	<u>34</u>	<u>7+8</u>	<u>29</u>	<u>118</u>

Figures indicate number of hospitals; HB • Health Board;
 VP • Voluntary Public; P+O = Private and Other;
 Psy • Psychiatric Service.

Health Board Hospitals are divided by medical speciality into -

- Regional Hospitals: they are frequently teaching hospitals and they have specialised units normally not found in county hospitals.
- County Hospitals: they generally have units for general medicine surgery, obstetrics and gynaecology which are consultant staffed.
- District Hospitals: staffed by general practitioners and with units for general medicine, minor surgery and frequently obstetrics and paediatrics.
- Fever Hospitals: specialise in the treatment of infectious diseases.
- Orthopaedic Hospitals: specialise in orthopaedics and provide service on a regional basis.

The Voluntary Public Hospitals may be subdivided by medical speciality as follows:

General Hospitals: they offer treatment in a wide range of specialities.

(Cottage Hospitals: they offer treatment in the medical and minor surgical fields. Rurally distributed and with a slower through put than other general hospitals; they were not included in the survey)

Special Hospitals: the specialities they cover are maternity, paediatrics, cancer, eye and ear, and orthopaedics.

The number of each type of hospital that have been included in the study are summarised in table 2.

TABLE 2

HOSPITAL TYPE BY MEDICAL SPECIALITY

		<u>Hospital Type</u>	<u>n</u>		
HEALTH BOARD	{	Regional	10		
		County	23		
		District	4		
		Fever	1		
		Orthopaedic	2		
VOLUNTARY PUBLIC	{	General.....	21		
		{	Maternity.....	4	
			Childrens.....	3	
			Cancer.....	2	
			{	Special Eye and Ear.....	2
				Orthopaedic.....	2
		TOTAL SPECIAL.....		13	

n = number of hospitals included in the survey

The degree of national representation of the hospitals surveyed was assessed by using the statistics from the Department of Health for 1983 (6)• The latest data available for the General Hospital Services concerning the number of hospitals, beds and patients discharged at the time of the survey dated from 1981. The national figures for these parameters were compared with those for the hospitals surveyed (see table 3). For psychiatric services hospitals the number of beds, and the number of patients discharged were not available and the number of patients on the register at 31 December 1982 was used instead as a parameter of comparison (see table 3) (7) .

From comparisons of the national data it can be seen that a large percentage of the total number of hospitals and beds in the country were covered by the **survey**. Among those surveyed were all the regional, county, maternity, cancer, eye and ear, together with 21 of the 23 General Hospitals. The hospitals included in the survey (i.e., those in which a pharmaceutical service had been identified) were the busiest as can be appreciated by the large percentage of patients discharged from them. This is perhaps a better parameter of representation than the number, of hospitals or the number of beds. r

LAELE 3:

STATISTICS ^ THE HOSPITALS INCLUDED IN TJC SURVEY

	HEALTH BOARD HOSPITALS					TOTAL
	REGIONAL	COUNL*Y	DISTRICT	KEVER	OKTHOPAMJK	
No. of hospitals	10 (100)	23 (100)	4 (7)	1 (20)	2 (50)	40 (42)
No. patients discharged	117,656 (100)	129,027 (100)	4,183 (19)	3,565 (58)	5,978 (62)	260,409 (92)
No. beds	3,013 (100)	3,201 (100)	568 (22)	208 (57)	313 (63)	7,313 (76)

	VOLUNTARY PUBLIC HOGPIALS						TOTAL
	GENERAL	NATERNITY	CHILDRENS	CANCER	EYE 4 EAR	ORTHOPAEDIC	
No. of hospitals	21 (91)	4 (100)	3 (75)	2 (100)	2 (100)	2 (40)	34 (85)
No. patients discharged	167,909 (90)	42,965 (100)	28,081 (96)	4,684 (100)	9,213 (100)	4,140 (81)	256,992 (92)
No. beds	5,220 (98)	839 (100)	643 (88)	216 (100)	230 (100)	298 (54)	7,446 (94)

	PRIVATE HOSPITALS	PSYCHIATRIC HOSPITALS & UNITS	OTHERS
	TOTAL	TOTAL	TOTAL
No. of hospitals	7 (44)	29 (57)	8 (n.a.)
No. patients discharged	29,207 (71)	12,748 (95)	n.a.
No. beds	955 (62)	n.a.	n.a.

3. RESULTS

3.1. Response to the survey

Questionnaire 1.

A total of 118 questionnaires were sent and 104 were either returned by post or answered by telephone. This gave a return rate of 88%. Six of the questionnaires were returned unanswered leaving the number of replies as 97, a response rate of 82%. Of the answered questionnaires, sixty eight (70%) were obtained by post and twenty nine (30%) by phone. These results are shown in table 4.

TABLE 4.RESPONSE TO THE QUESTIONNAIRE 1.

		No. hospitals	%
Questionnaires sent		118	
"	returned	104	88 (return rate)
"	answered	97	82 (response rate)
"	unanswered	7	6
"	unreturned	14	12
<hr/>			
Questionnaires answered	post	68	70
(n = 97)	phone	29	30

The response rate was also analysed by area and type of management in the hospital. These results are summarised in table 5. The highest response rates were observed for the North Eastern and North Western regions where all the hospitals surveyed replied to the questionnaire giving a response rate of 100%. High response rates of 92% and 94% were also obtained for the South Eastern and Southern regions respectively. The lowest response rate obtained was that of the Western region of 60%.

By type of hospital the highest response rate obtained was for the Health Board Hospitals (87%) closely followed by the psychiatric hospitals (86%). The lowest response was that of private and other hospitals where the rate dropped to 75%.

The response rate by medical speciality of the hospitals surveyed showed that 9 of the 10 regional hospitals and 21 out of 23 county hospitals replied.

3.2 Response to Questionnaire II

Thirty out of the forty participants responded to this questionnaire giving a response rate of 75%.

Forty hospitals with Drugs and Therapeutics Committees had been included in this part of the survey. Two hospitals in which the DTC was only composed of two members were excluded as they had indicated previously that their meetings were informal and irregular and subjects concerning Drug Therapy were dealt with verbally as they arose. For the purposes of the survey these were not considered to be full DTCs.

TABLE 5

RESPONSE RATE BY GEOGRAPHICAL AREA AND HOSPITAL TYPE

Health Board Area	HOSPITAL MANAGEMENT TYPE					Response rate by area
	HB	VP	P+O	PSY.	R/T	
Eastern	3	18	4+3	7	35/46	76%
Midland	4	-	-	2	6/7	86%
Mid-Western	5	-	0+4	2	11/14	79%
North-Eastern	4	1	-	2	7/7	100%
North-Western	3	-	-	2	5/5	100%
South-Eastern	5	1	-	6	12/13	92%
Southern	6	5	1-0	3	15/16	94%
Western	4	1	-	1	6/10	60%
R/T	34/39	26/34	12/16	25/29	97/110	
Response rate by type of hospital	87%	77%	75%	86%	82%	

HB = health board; VP = Voluntary Public; P+O = private + other;
 PSY = psychiatric service; R = respondents; T = total included in
 that area or type.

4. REPLIES TO THE QUESTIONNAIRES

4.1. Drug and Therapeutics Committees.

Forty two of the ninety seven hospitals that responded to the survey indicated that they had a Drug and Therapeutics Committee. This represented 43% of the total number of respondents. When these results were analysed by geographical area it was found that the largest number of DTCs were in the Eastern Health Board area but this only represented 46% of the total number of respondent hospitals in that area. The highest percentage of DTCs was found in the Western, South Eastern and North Eastern areas where 67%, 58% and 57% of their respective hospitals had DTCs. This was in contrast with the results for the Mid Western Health Board Area where only 18% of the hospitals had a Drug and Therapeutics Committee.

By type of Hospital Management the largest percentage of Drug and Therapeutics Committees was found for the Voluntary Public Hospitals (65%). The Health Board Hospitals and the Psychiatric Hospitals had DTCs in 44% and 40% of the cases. These results are in contrast with those of the Private and "other" hospital group where no Drug and Therapeutics Committees were found.

The number and percentage of Drug and Therapeutics Committees by geographical area and type of hospital are shown in table 6 and in Figure 1.

The number of DTCs in hospitals by medical speciality indicated that there were 5 in Regional hospitals and 9 in County hospitals.

FIGURE 1



Geographical Distribution of Drug and Therapeutics Committees in the eight Republic of Ireland Health Board Areas and comparative figure for Northern Ireland.

The figure for Northern Ireland is taken from reference (10)

TABLE 6.

NUMBER OF DRUG AND THERAPEUTICS OFFICERS BY GEOGRAPHICAL AREA AND TYPE OF HOSPITAL MANAGEMENT

<u>Health Board Area</u>	<u>Hospital Management Type</u>				<u>Tot /R.</u>	<u>%</u>
	<u>HB</u>	<u>VP</u>	<u>Psy</u>	<u>P+O</u>		
Eastern	2	13	1	0	16/35	46%
Midland	1	-	1	-	2/6	33%
Mid-Western	1	-	1	0	2/11	18%
North-Eastern	1	1	2	-	4/7	57%
North-Western	2	-	-	-	2/5	40%
South-Eastern	4	-	3	-	7/12	58%
Southern	1	3	1	0	5/15	33%
Western	3	-	1	-	4/6	67%
Tot /R	15/34	17/26	10/25	0/15	42/97	
%	44%	65%	40%	0	43%	

HB=health board; VP=voluntary public ;Psy=psychiatric service; P+O=private and other;

Tot /R : Total number of Drug and Therapeutic Officers/Respondents

4.2. Date of Formation of Drug and Therapeutics Committees.

Of the Drug and Therapeutics Committees identified in our survey the first **one** was formed in 1975. Since then their number increased progressively in the following manner: no Drug and Therapeutics Committee was formed in 1976, one was formed in 1977, three in 1978 and two a year in the period 1978-1981 both years inclusive. The largest number of Drug and Therapeutics Committees was formed between 1982 and 1983 when ten DTCs and eleven DTCs were formed respectively. This distribution accounts for thirty seven of the forty-two Drug and Therapeutics Committees identified. Five other respondents were unable to determine the date of formation of the Drug and Therapeutics Committee in their respective hospitals.

These results are shown graphically in figure 2.

4.3. Composition of Drug and Therapeutics Committees.

The composition of **Drug** and Therapeutics Committees and their number of members are represented graphically in figures 3 and 4.

Among the different groups of hospital staff, the medical consultants group were found to have the largest number of members (n=77) participating in DTCs.

This was followed by the senior nursing staff group (n=57) and in third place the pharmacists (n=46).

Other groups of hospital staff sitting on DTCs were administrators (n=35), registrars (n=25), Junior medical staff (n=19), general practitioners n=4 and junior nursing staff (n=2)

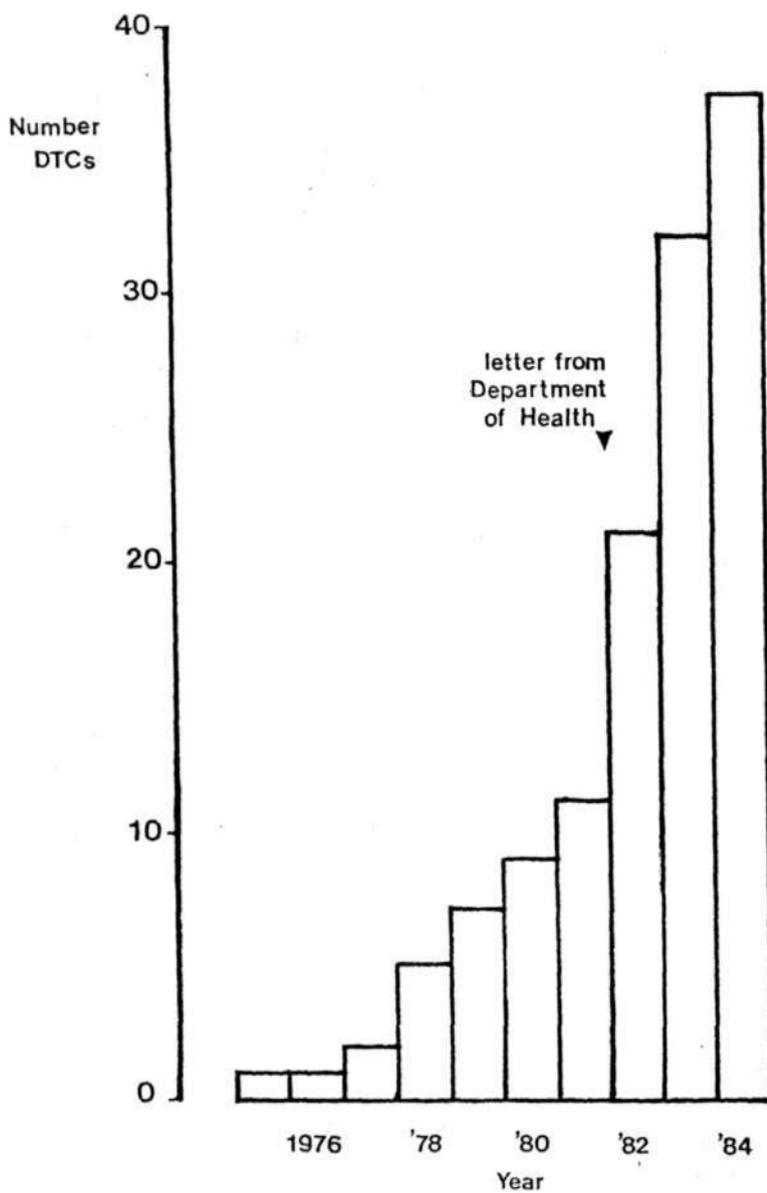
Figure 2. NUMBER OF DTCs FORMED EACH YEAR FROM 1975-1984

Figure 3.

DISTRIBUTION OF DTCs BY SIZE OF COMMITTEE

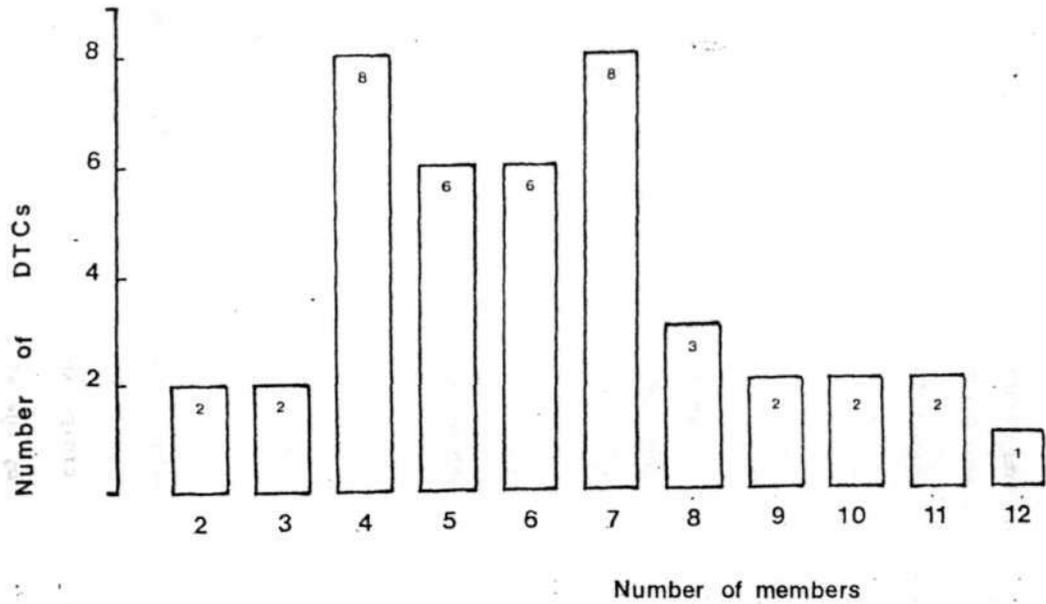


TABLE 7

RATIO OF NUMBER OF STAFF PER DTC BY
STAFF GROUP

Hospital Staff Group	Staff/DTC Ratio
Consultant	1.83
Senior Nursing	1.36
Pharmacist	1.10
Administration	0.83
Registrar	0.60
Junior Medical	0.45
General Practitioner	0.10
Junior Nursing	0.05
Others	0.19

All Drug and Therapeutics Committees had at least one pharmacist and one consultant. Four DTCs had two pharmacist members and twelve DTCs had three.

Also participating in some Drug and Therapeutics Committees there was a miscellaneous group of hospital staff (grouped under the heading of other) that included one bacteriologist, one consultant microbiologist, two anaesthetists, one secretary, one Director of Community Care, one psychologist and one specialist consultant who attended when required.

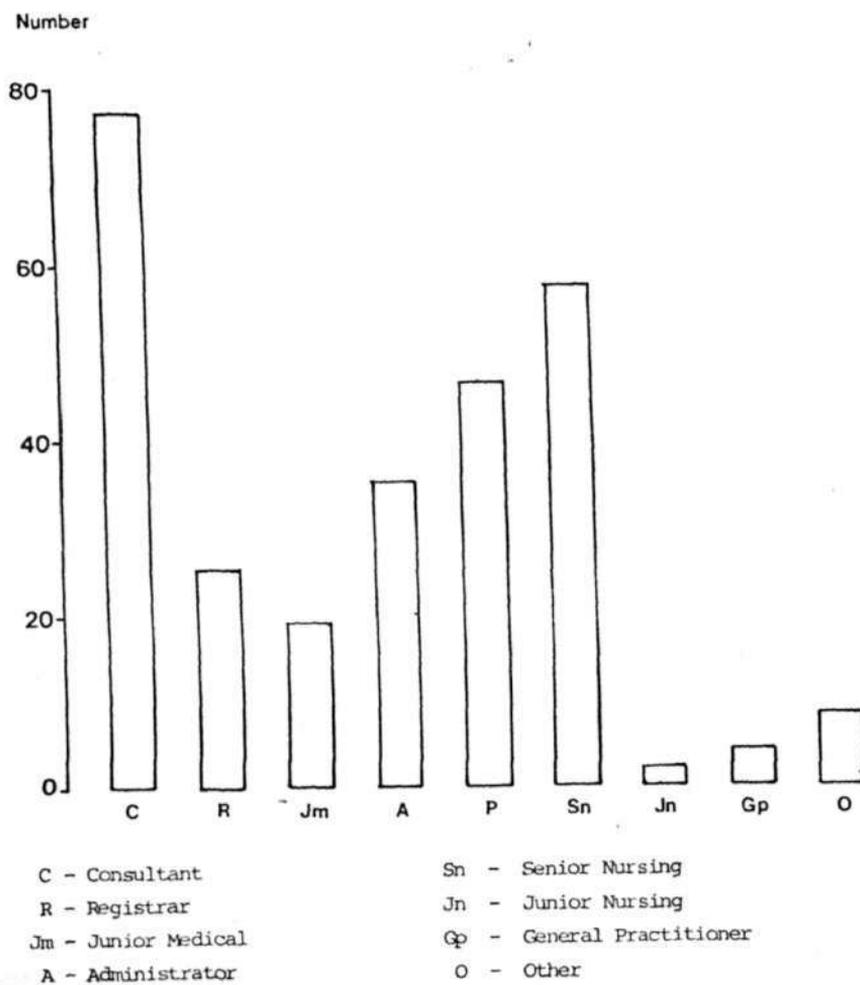
The number of each category of hospital staff per DTC is shown in Table 7. The highest staff DTC ratio is for the consultant group with 1.83 consultants per Drug and Therapeutics Committee. In contrast, the junior nursing staff with 0.05 member per Committee were the smallest group represented, despite the large number employed in the hospital service.

4.4 Size of DTC

The number of members per Committee is shown in figure 4. This ranged from two to fourteen members per Committee but most Drug and Therapeutics Committees had between four and seven members.

4.5 Chairperson

The chairperson was a medical consultant in thirty-five of the forty-two Drug and Therapeutics Committees and an Administrator in the remaining seven.

Figure 4. MEMBERSHIP BY STAFF GROUP OF DICs

4.6 Frequency of Meetings

The number of meetings per year of the different Drug and Therapeutics Committees is indicated in Table 8. This ranged between one and twenty times a year but most Committees met three or four times a year (49%). One respondent did not indicate the precise number of meetings a year of their Drug and Therapeutics Committee as they met irregularly. Six other respondents did not indicate how many times a year their DTCs met.

TABLE 8.

NUMBER OF MEETINGS PER YEAR OF DTCs.

Meetings times/year	Number of DTCs
1	2
2	3
3	6
4-	11
5	1
6	3
8	2
9	1
10	3
12	2
20	1

4.7. Formularies/Limited Lists

Twenty four (57%) of the hospitals in which a Drug and Therapeutics Committee existed, also indicated that they had a formulary or limited list for use in the hospital (Table 9). This includes four hospitals in which the formulary was still being constructed but work was near completion. In one other hospital the formulary had not been drawn up by the hospital DTC as they used the British National Formulary.

Two hospitals that did not have a formulary indicated that they had the intention of developing one or that they were discussing its introduction.

The same number of hospitals in the Health Board and Voluntary Public management groups had formularies but the percentage was somewhat greater for the Health Board group. In the Psychiatric Service only 4 hospitals had formularies which amount to 40% of the hospitals in this service and two had none.

The number of Regional and County hospitals with formularies was 4 and 6 respectively.

TABLE 9.

HOSPITALS WITH A FORMULARY/LIMITED LIST

<u>Hospital Management Type</u>	<u>DTCs</u>	<u>FORMULARIES</u>	<u>%</u>
HB	15	10	66.6
VP	17	10	58.8
PSY	10	4	40.0
Total	42	24	57.1

DTCs = Drug and Therapeutics Committees

HB = Health Board Hospitals

VP = Voluntary Public Hospitals

PSY = Psychiatric Service

4 . 8 . FULL-TIME AND PART-TIME PHARMACY SERVICES AND DTC s

Not all the hospitals that responded to the survey had a full-time pharmaceutical service. Part-time pharmaceutical services were taken to be those in which a pharmacist was not normally present for a five-day, 35 hour week. However, part-time ranged from five mornings each week from 9-12 am to one morning each week from 10-11 am.

Notwithstanding the difficulty of classifying pharmacy departments as full-time or part-time an analysis of the numbers of Drug and Therapeutics Committees and Formularies in these two groups was undertaken. The results are presented in Table 10 and clearly show that three quarters of DTC s were in hospitals with full-time pharmaceutical services while over 87% of formularies were in those hospitals.

However, of those hospitals with full-time pharmacy services almost half had a Drug and Therapeutics Committee (31 v 36) and slightly less than a third of the same group had a formulary (21 v 46) . A substantial number of hospitals with part-time pharmacy services had operational DTC s (10 v 17) while very few had a formulary (3 v 24) . The proportion of DTC s and formularies for the total number of full-time pharmacy services was greater than the proportion for hospitals with part-time pharmacy services.

TABLE 10 • OCCURRENCE OF DTC S AND FORMULARIES IN PHARMACY DEPARTMENTS
PROVIDING FULL-TIME OR PART-TIME SERVICE -

	Full-Time	Part-Time	Unclassified
DTC			
Yes	31	10	1
No	36	17	2
Formulary			
Yes	21	3	0
No	46	24	3

4.9 SUBJECTS DEALT WITH BY DRUG AND THERAPEUTICS COMMITTEES (QUESTIONNAIRE 2)

The subjects discussed by DTCs and the numbers dealing with each subject are given in Table 11. Three subjects were dealt with by over half the DTCs; these were, antibiotics policies aimed at reducing expenditure, which was discussed by 67% of DTCs while monitoring medicines expenditure and generic prescribing policies were both discussed by 90% of DTCs." The supply and level of ward stocks and antibiotics policies linked to pathogen sensitivities were covered by 87% and 87% respectively. In contrast, the reporting of adverse drug reactions was considered by only 10% of DTCs and monitoring adverse drug reactions by 27%. Respondents were given the opportunity to include other subjects not included in the given list and the following subject headings were obtained from those replies; monitoring prescriptions, drug information notes, dispensing of disposable items, drug trolleys, drug distribution systems, disinfection policies and disposal of out of date drug stock.

TABLE 11

SUBJECTS DEALT WITH BY DRUG AND THERAPEUTIC COMMITTEES

<u>Subject</u>	Number of DTC	
Antibiotic Policy (in terms of expenditure)	27	90
Monitoring Drug Expenditure	26	87
Generic Prescribing Policy	26	87
Supply and Level of Ward Stocks	19	63
Antibiotic Policy (in terms of pathogen sensitivity)	18	60
Enteral and Parenteral Nutrition	13	43
Layout of Patient Prescription Charts	13	43
Drug Administration by Nursing Staff	12	40
Handling of Cytotoxics	12	40
Addition of Drugs and Additives to IV Fluids	9	30
Guidelines for Medical Representatives visiting the Hospital	9	30
Disposal of Cytotoxics	8	27
Monitoring of Adverse Drug Reactions	8	27
Reporting of Adverse Drug Reactions	3	10

Number of respondents, 30.

TABLE 12 COMMUNICATION BETWEEN DTC AND OTHER HOSPITAL STAFF

Communication Method	Number
Newsletter	3
Chairman's letter to individual	14
Inclusion in formulary	4
Discussion at postgraduate meeting	10
Informal verbal personal communication	22

4.10 COMMUNICATION BETWEEN DTCs AND OTHER HOSPITAL STAFF (QUESTIONNAIRE 2)

The most common method of communication between Drug and Therapeutics Committees and other hospital staff was that of informal verbal communication (Table 12). A letter from the DTC Chairman to individual staff and discussion at postgraduate meetings were the next most frequently used methods with 14 and 10 respondents respectively. Twelve replies indicated that only one method of communication was used, while ten indicated that two methods were used and six DTCs used three or four methods.

4.11 RESPONSIBILITY FOR DRUGS PRIOR TO DTC FORMATION

Those hospitals with DTCs were also asked if there was anyone responsible for dealing with drugs before the formation of the DTC. In 16 cases a body or person was dealing with drug related matters while in 6 instances there was no designated body or person. In nine of the 16 cases respondents identified pharmacists as one of the responsible person but in the remaining seven instances *no* details were given.

5. OTHER ASPECTS OF DRUG POLICY IN HOSPITALS

5.1. HOSPITAL PRESCRIBING POLICY

In fifty-seven instances (59%) respondents replied that there was no restriction on clinicians prescribing while in thirty-one hospitals (32%) a restricted prescribing policy was in operation and nine hospitals (9%) did not indicate. Of the thirty-one hospitals with a prescribing policy, twenty-four were administered through formularies, three had antibiotics policies and in three consultants were the only staff allowed to prescribe new and/or expensive medicines. In one hospital prescribing was said to be limited by the range of stock available.

TABLE 13

GENERIC DRUG USE IN HOSPITALS

	Number of Hospitals	% of Total
Respondents	97	100
Generic Drug Users	89	92
Non Generic Drug Users	5	5
Did not indicate	3	3

5 . 2 Generic Drug Use

From a total of ninety-seven respondents to questionnaire I, 89 (92%) replied that they used generic preparations in their hospitals regularly. Five other hospitals replied that they did not or only rarely used generic drugs and the three remaining did not indicate their position. These results are summarised in Table \ 3.

Of the 89 respondents who used generic drug products, 77 went on to indicate their reasons for choosing generics and to rank these in order of preference. Five reasons were listed, price, pharmaceutical quality, country of origin, company preference and ease of availability of supply. In 66 replies 3 reasons were indicated and in 37 all five reasons were ranked. These results are given in detail in Table 14 while Figure 5 shows the distribution of reasons selected for each preference and figure 6 shows the distribution of preferences that were selected for each reason. Thus Figure 5 shows that three reasons were selected for first preference, price (48%), pharmaceutical quality (41.5%) and country of origin (10%) while Figure 6 shows that 50% of those who selected price as a reason for choosing a generic put it as first preference, 26% as second, 18% as third, 7% as fourth and none of the respondents put price last. Similarly using Table 14 it can be seen that price, pharmaceutical quality and country of origin were the three reasons most frequently selected, their respective totals being 74, 65 and 68. From the table it is also apparent that the single largest selection assigned at each preference level were in order price (37), pharmaceutical quality (22), country of origin (30), ease of availability of supply (21) and finally company preference (19).

TABLE -, 4 .

GENERIC SELECTION POLICY

REASONS	ORDER OF PREFERENCE					REASONS TOTAL
	1	2	3	4	5	
A	37	19	13	5	—	74
B	32	22	9	2	—	65
C	8	19	30	6	5	68
D	—	5	10	21	13	49
E	—	4	4	16	19	43
PREFERENCE TOTAL	77	69	66	50	37	

A - price

B = pharmaceutical quality

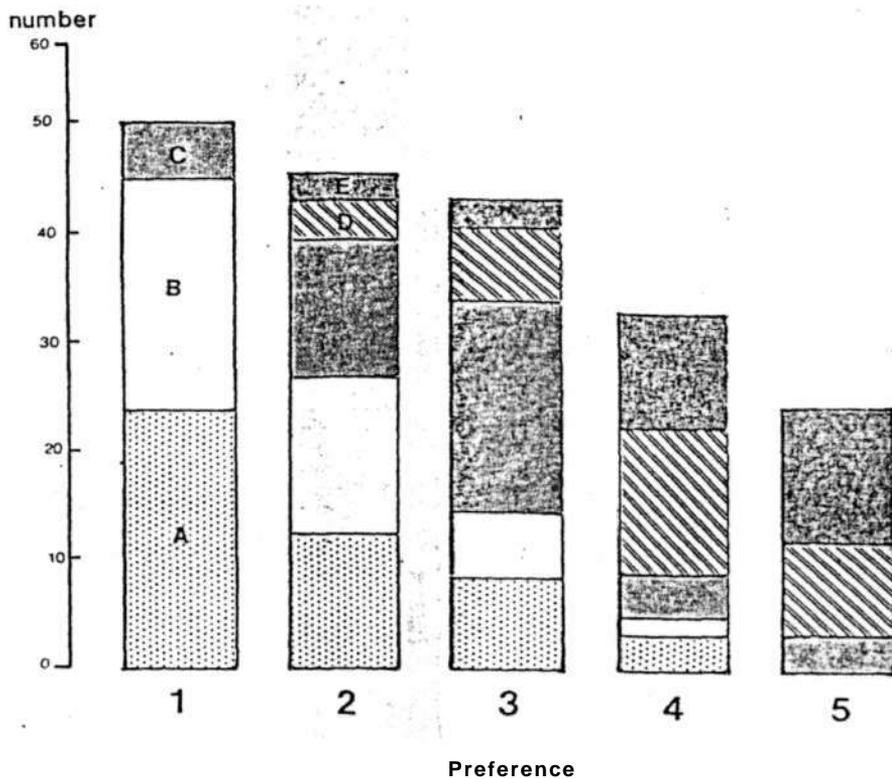
C = country of origin

D = ease of availability of supply

E = company preference

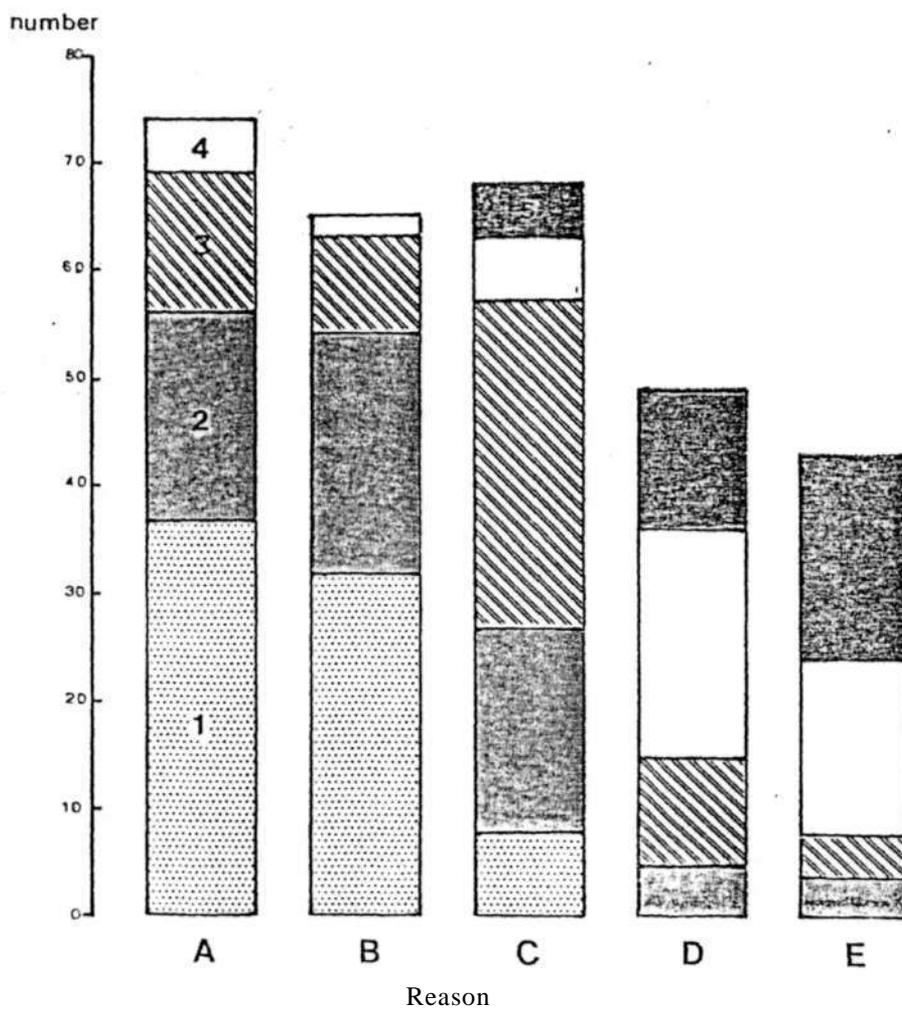
figures indicate number of hospitals

Figure 5. DISTRIBUTION OF REASONS SELECTED AT EACH PREFERENCE LEVEL



- A - Price
- B - Pharmaceutical Quality
- C - Country of Origin
- D - Ease of availability of supply
- E - Company preference

Figure 6. DISTRIBUTION OF PREFERENCES SELECTED FOR EACH REASON



Price
Phanraceutical quality
Country of origin
Ease of availability of supply
Company preference

TABLE 15.

GENERIC DRUG USE IN HOSPITALS BY THERAPEUTIC CLASS	Number of hospitals	% that specified therapeutic group
Generic Users total	89	
Generic Users that specified therapeutic groups	66	100
Psychotropics	56	85
Antibiotics	46	67
Analgesics	22	33
Antihypertensives	10	17
Diuretics	5	9
Minerals	5	9
Vitamins	2	3
Antihistamines	2	3

5.3 Therapeutic Categories of Generic Products used

From eighty-nine hospitals that replied that they used generics, sixty-six (74%) also indicated that for some therapeutic groups generic products **were** frequently used. Eight other hospitals (9%) replied that generics were used whenever possible and 15 respondents indicated that generic use was not more frequent in any particular therapeutic group. The frequency with which different therapeutic groups **were** given by respondents is shown in Table 15. The most frequently used therapeutic groups of generic products were psychotropics (85%), antibiotics (67%), analgesics (33%). Other classes of medicines listed were antihypertensives, diuretics, minerals and vitamins.

5.4 MEDICINES CO_STS

The data obtained was converted into medicines, costs per bed and then the figures were grouped according to the hospital size (number of beds) and the management type. Further subdivision into the medical speciality was not carried out as the sub-groups formed by the initial classification were already small. The results of this analysis are shown in Table 16 • For each group the range and mean of medicines, costs per bed as well as the group size is given. The range of medicines costs per bed gives an idea of the variability of the data; thus, for medium Health Board hospitals the range of costs is sevenfold and for large Health Board hospitals it is ten-fold. The range and mean costs do not seem to be related to hospital size and the most uniform group is that of the psychiatric hospitals in which, independent of size medicines costs range from £100 - £290.

The data obtained was sufficient to make general comparisons and the small size of the sub-groups meant that reliable comparisons between hospitals with and without DTCs were not possible. █

TABLE 16. ESTIMATED MEDICINES COSTS [fij] PER RED FOR 1983

Hospital Size (Bed numbers)		Hospital Management Type			Private & Other
		HB	VP	PSY	
0-200	Range	780-1600	540-1350	230	380-2000
	Mean	1130	980		
	Group Size	4	8	1	3
200-400	Range	200-1460	430-2250	240-260	40-840
	Mean	850	1130		
	Group Size	6	6	2	4
400	Range	190-1880	1540-1820	100-290	
	Mean	790		190	
	Group Size	7	2	6	0

of a DTC (i.e. that it must include the hospital pharmacist) the size and balance of representation was left up to the individual hospital (8). It was interesting that although administrators were the fourth largest single group they were not present on every DTC identified. Consultants were the most frequently represented group with senior nursing staff and pharmacists also present on every DTC. Consultants chaired 35 of the 42 DTCs identified and administrators the remaining seven. This is disturbing since the Department's guidelines specifically state that a consultant should act as DTC chairman. Thus, in formal terms at least, DTCs are peopled and controlled principally by senior medical, pharmaceutical and nursing staff. Some two thirds of DTCs had between 4 and 7 members and a further quarter between 8 and 14 members. Out of 42 Committees most met 3 or 4 times a year but almost 20% of respondents were unable to give the frequency of meetings. The Department's guidelines suggested that a minimum of 4 meetings of the DTC per year should be **held.**

The activities of DTCs identified in this study can be assessed by collating results from both the questionnaires. The development of a formulary is a major tool in the rationalisation of medicines use, especially in teaching hospitals, with their high turnover of medical personnel and the range of specialities covered. Only just over half the hospitals with DTCs also had formularies in operation. Formulary development necessitates considerable staff commitment and consumes a great deal of time. Given this fact it was not surprising to find very few formularies in hospitals served by part-time pharmacy departments. While formularies represent a formal method of restricting the prescribing choices of hospital medical staff other methods may also be used. Out of 31 hospitals operating a restricted prescribing policy, 24 did so through a formulary and seven did so

6. DISCUSSION

Survey research work is often dogged by poor response rates. In this study over two-thirds of the responses were received by post and the remainder were obtained by a telephone follow-up. The overall response rate of 82% was excellent. One group of hospital pharmacists decided not to take part in the survey but since the total returned was so high they must represent less than 18% of the hospital pharmacists in Ireland. Although there was some variation in the response rate by hospital type the lowest percentage returned was 75% from those hospitals in the combined private and other group.

The first conclusion of the study must be that while a substantial number of hospitals in Ireland had a Drug and Therapeutics Committee in 1984 they represented less than half the total number of respondents in the survey. The majority of DTCs were formed in response to the Department of Health's letter of February 1982 but a quarter of the DTCs operating pre-dated the letter. DTC formation when looked at geographically has remained uneven.

The existence of DTCs in hospitals with different management structures showed that the Voluntary Public hospital sector possessed the most and Health Board hospitals 50% fewer. The proportion of DTCs in Health Board hospitals increases if those hospitals in the psychiatric service are included but it remains surprisingly low. Although three quarters of the DTCs identified were in hospitals with full-time pharmacy departments the fact that the remaining quarter were in hospitals with part-time pharmacy services raises several questions. Furthermore, of those hospitals with full-time pharmacy departments less than half also had DTCs.

Apart from general guidelines from the Department on the composition

three cases consultants had complete prescribing freedom while other medical staff could not prescribe 'new and/or expensive medicines'. Complementary questions about the work of DTCs showed that the three most frequently discussed subjects were all concerned with costs; namely, antibiotic drug expenditure, monitoring drug expenditure and generic prescribing. Many of the antibiotic policies identified in this survey were concerned with expenditure control rather than pathogen sensitivity. The main work being done by DTCs was thus control of drug expenditure and the emphasis was on generic product use .

The majority of hospitals that responded to the survey used generic products and listed psychotropics and antibiotics as the two most common therapeutic classes in which generic substitution occurred. In choosing these generics, price was the dominant selection factor. An interesting feature of generic product selection was the strong emphasis on Irish generic products. This was, overall, the second most frequently identified factor by respondents, although pharmaceutical quality received more first preference rankings than country of origin. The major Irish generic manufacturers were perceived by those pharmacists spoken to as producing a high quality product but some believed that licence approval by the National Drugs Advisory Board was sufficient proof of the quality of any generic product. The Department of Health's guidelines also listed several other functions for DTCs but the results of this survey suggest that many of these tasks were not being carried out or were of low priority. For example adverse drug reaction reporting was referred to by only 3 out of 40 DTCs, making it the least discussed subject listed. Whatever work DTCs do, how they communicate with the staff of the hospital can markedly influence the effectiveness of their work. A minority of DTCs use formal methods of communication and the least frequently

used method was that of the newsletter. Most communication was by word of mouth.

The most difficult section of the survey to analyse was that of the estimates of drug costs for the previous year. Over half the survey respondents completed this section but of the remainder some did not wish to divulge such information and some, mostly those working part-time, claimed that they had never known the size of the drug bill. From the survey data there were too few hospitals of similar type and size and without DTCs for reliable comparisons to be made. Precisely what products would be included in the cost of medicines concerned some respondents and there was probably variation in the costs reported because of this. More detailed information would be required to monitor expenditure before and after DTC formation in the same hospital and between matched hospitals.

Drug and Therapeutics Committees are by no means a new idea and fairly extensive experience of their operation has been gained in other countries. This section will discuss that experience/ particularly that of the U.K. since it is more comparable to Ireland and it will also summarize the results of studies into the effects of DTCs and formularies on hospital costs and patient care.

In the U.K. DTCs evolved from 'Hospital Pharmacy Committees' of which there were 70 in action in 1975 (9) . It was reported that some of these committees discussed matters directly related to the running of the hospital pharmacy and the control of ward stocks while others dealt with "medical matters"* and "hospital expenditure". In 1980 a Co-ordinating Centre for Drug and Therapeutics Committees was established and this surveyed the number of DTCs

operating in 1981 (10). It reported that 146 were in existence and their size as in Ireland varied considerably. No estimate was given of what proportion of U.K. hospitals had *UTCs*. In contrast to the composition of DTCs in Ireland those in the U.K. possessed many more consultants, fewer nursing staff, administrators and junior medical staff and slightly more pharmacists (Table 17).

TABLE 17. COMPARISON OF NUMBERS OF EACH STAFF GROUP PER PTC

	<u>IRELAND</u>	U.K.
Consultants	1.8	3.2
Pharmacists	1.1	1.4
Nursing staff	1.41	0.54
Junior medical staff	0.45	0.27
Administrators	0.83	0.46

The principal aim of these DTCs was (1) to develop drug policies; to produce lists/formularies in order to control pharmacy stocks and achieve effective use of drugs'. The second most common aim was to achieve economy in the use of drugs and the third was to achieve safety. In 1985 the centre estimated that the number of DTCs had risen to 216 of which 60 had developed formularies and a further 26 were in the process of doing so (11). In the survey of DTCs in Ireland 57% of U*2 committees had drawn up a formulary or limited list. A formulary in the U.K. tends to be a printed document and only a small proportion of the 57% in Ireland would have such an equivalent. Another group in the U.K. have claimed that 'at least 150 hospitals or hospital groups . . . operate some level of drug restriction' (12). This may be more comparable to the figure of 31 hospitals in Ireland with some form of restricted prescribing policy. In summary, DTCs in the U.K. are staffed by consultants and pharmacists to a greater extent than those in Ireland and

probably a greater proportion of DTCs have printed formularies in use, whereas in Ireland the approach has so far been more informal.

The effects of formularies on drug cost control in hospitals have been studied in several countries (13,14,15). In the U.K. considerable economies were reported for two hospital groups but none in a third (11). The most detailed analyses have been carried out in the U.S.A. and the main conclusion of one study was that a 'restrictive formulary would have limited financial rewards unless supported by other managerial skills* (14) while another study reported a decrease in drug costs but an increase in other drug-related costs (16,17). Savings in antibiotics costs have been reported for the Irish Hospital (5). Most authors conclude that the considerable expenditure of staff time and effort to produce a formulary is underestimated (12) and an Australian survey concluded that most of the formularies examined had not been adequately prepared (18). The Co-ordinating centre in the U.K. estimates that committees¹ take at least five years of operation before they can successfully produce a restricted list or formulary'(11).

In Ireland there are only around one quarter of the number of pharmacists per hospital pharmacy that there are in England and Wales (19). . It is likely that DTC development will pose particular problems for this group. If DTCs are to produce the financial savings expected of them, then more attention to efficient pharmacy stock control methods and greater managerial skills to oversee formulary implementation will be required. Sane acceptance of this view was implied in the Department of Health's letter about DTC formation (4). Success in the establishing of DTCs has been referred to in official reports (20) and true as this is, to ensure the economic effectiveness of DTCs will require an investment of extra resources. It seems unlikely that the Department of Health . or the hospital administrators are prepared to make that investment at present.

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