

MANPOWER REQUIREMENTS FOR HOSPITAL PHARMACY BASED CENTRALIZED CYTOTOXIC RECONSTITUTION - A SURVEY IN 6 EUROPEAN COUNTRIES

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Introduction

Staff requirements for a hospital pharmacy based centralized cytotoxic reconstitution (CCR) unit has been theoretically determined by official organisations in several European countries, such as France¹ and Germany². The manpower figures for 10000 cytotoxic reconstitutions (CR's) per year were respectively 6.5 and 4.7 persons.

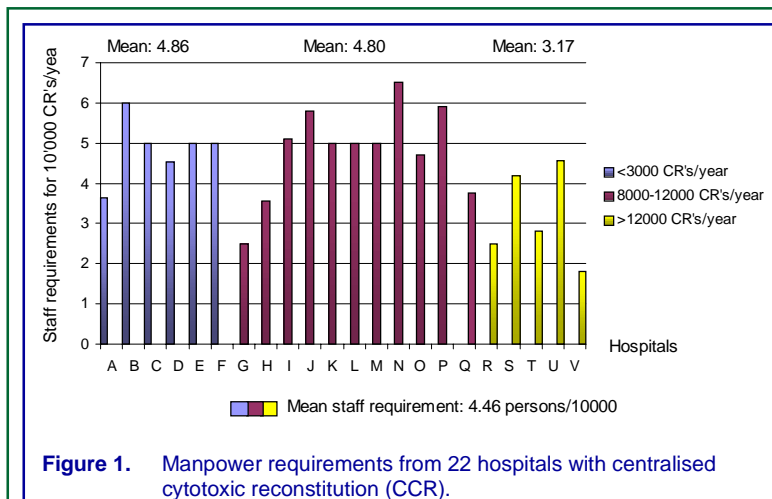
French authors^{3,4} have determined by extrapolation 2.6 and 2.7 persons. Due to these large variations, the aim of our study was to collect in the field data, as our hospital management did not accept theoretical data.

Method

A questionnaire was sent out to 36 hospitals chosen at random in Austria, Belgium, France, Germany, Switzerland and the United Kingdom. Thirteen questions were asked including the number of CR's per year, the staff employed (pharmacists, technicians), whether isolators or laminar flow cabinets were used, etc... In order to compare manpower requirements, all the results were converted to 10000 CR's annually, which corresponds to the HUG figures for the year 2000.

Results

Twenty two hospitals replied (60%). The number of CR's per year varied from 3300 to 50000. 50% of the hospitals prepared between 8000 and 12000, 27% between 3000 and 8000 and 23% more than 12000. The mean manpower requirements were **4.46/10000** CR's for all the hospitals (see Table 1 and Figure 1). The results also showed that the proportion of pharmacists in the team was 30%. It can be seen that proportionately fewer staff (-34%), both in the case of technicians (-30%) and pharmacists (-44%), are required when there are more than 12000 CR's, in comparison with hospitals preparing between 8000 and 12000. The results concerning the other questions will make the object of a future communication.



Country	CR's/year (nb)	Existing staff (nb)	Pharmacist(s) (nb)	Technician(s) (nb)	Pharmacist(s) (%)	Staff equivalence for 10'000 CR's/year (mean)	Hospitals (No)
CH	3 300	1.20	0.2	1.00	16.6	3.64	A
CH	5 000	3.00	0.5	2.50	16.6	6.00	B
B	5 000	2.50	1.0	1.50	40.0	5.00	C
B	5 558	2.50	1.0	1.50	40.0	4.52	D
UK	6 000	3.00	1.0	2.00	33.0	5.00	E
CH	7 000	3.50	1.0	2.50	28.0	5.00	F
B	8 000	2.00	1.0	1.00	50.0	2.50	G
CH	9 000	3.20	1.2	2.00	37.5	3.55	H
F	10 000	5.10	1.6	3.50	31.3	5.10	I
F	10 000	5.80	1.8	4.00	31.0	5.80	J
D	10 000	5.00	1.5	3.50	30.0	5.00	K
A	10 000	5.00	1.0	4.00	20.0	5.00	L
D	10 000	5.00	1.5	3.50	30.0	5.00	M
D	10 000	6.50	3.0	3.50	46.1	6.50	N
F	10 000	4.70	1.7	3.00	36.1	4.70	O
D	11 000	6.50	1.5	5.00	23.0	5.90	P
UK	12 000	4.50	1.0	3.50	22.0	3.75	Q
B	15 000	3.75	1.0	2.75	26.6	2.50	R
UK	17 000	7.00	2.0	5.00	28.5	4.20	S
D	25 000	7.00	1.0	6.00	14.3	2.80	T
UK	27 500	12.50	4.0	8.50	32.0	4.55	U
UK	50 000	9.00	3.0	6.00	33.0	1.80	V

Table 1. Manpower requirements from 22 hospitals with centralised cytotoxic reconstitution (CCR).

Conclusions

These in the field observations versus theoretical determinations were more convincing to hospital management in Geneva. These results enabled the HUG to obtain 4.35 posts. Data collection is continuing and is being enlarged to other countries and will be a part of a future publication.

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Acknowledgments

We would like to thank all the hospitals that answered our questionnaire. They will all receive a copy of this document in the near future. We are sorry that we were not able to include the Scandinavian replies due to lack of time but they will be used in a future publication.



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