Appendix A

ANNUAL RETURNS FOR 1985

The attached tables and graphs contain the information available from the U.K. Haemophilia Centre Directors Annual Returns received by August 1986; we are still waiting for the returns to be completed by several Centres.

Number of patients

By 31.12.85 there were 5,012 haemophilia A patients known to Haemophilia Centres (Table 1). Forty-one per cent of those patients were severely affected with factor VIII levels <2% average normal. The incidence of antibodies to factor VIII is still approximately 6% of all patients (Table 2); 14 new antibody cases were detected in 1985 compared with 11 in 1984, 15 in 1983 and 25 in 1982 (Fig. 1). There are still a large number of patients whose age or level of factor VIII are not known. In 189 patients neither age nor factor VIII level is known; 3 of those patients received replacement therapy during 1985 (Table 1).

The number of patients with Christmas disease known at Haemophilia Centres now stands at 919 of whom 305 (33%) are severely affected (Table 3). Antibodies to factor IX were reported in 7 cases (Table 2). As in the case of haemophiliacs information concerning factor level and age was not available in a number of patients; in 35 cases neither age nor factor IX level was known (Table 3).

By 31.12.85 there were 1877 patients with von Willebrand's disease on the register. Forty-seven (2.5%) of the patients have factor VIII:c levels of <2% and 270 (14.4%) have factor VIII:c levels of 2-14%. Twenty-one (44.7%) of the patients with factor VIII:c <2% and 63 (23%) of the patients with factor VIII:c levels 2-14% were treated in 1985. A total of 15 patients received home treatment in 1985; 6 of these patients had factor VIII:c levels of <2% and 6 had levels of 2-14%. 39% of the patients treated in 1985 had factor VIII:c levels of 30% or more and one of these patients, aged <5 years, received home treatment.

Treatment of patients

Of the 5012 registered haemophiliacs, 2231 (44%) received replacement therapy during 1985 (Table 1), and 1262 were receiving home treatment; 54% of severely affected patients are now on home treatment.

The total amount of factor VIII used to treat haemophilic patients in 1984 was 75M units. If the amount of factor VIII used in the treatment of haemophilia A carriers, patients with acquired Haemophilia A and von Willebrand's disease is included this figure rises to 77M (Table 5). From Fig. 2 it will be seen that the amount of NHS concentrate used by Centres has decreased and the amount of Commercial F.VIII has increased. The average amount of factor VIII used for the treatment of haemophilia A patients is approximately 34,000 units per patient. More than half of the factor VIII used in the management of haemophilia A patients was used for home treatment (Table 6).

Nearly 6.6M units of human factor VIII were used in the treatment of 133 patients who had factor VIII antibodies, the majority of this material

was commercial factor VIII (Table 7). In addition nearly 2M units of porcine factor VIII were used, 1.5M units of NHS factor IX, 1M units of commercial factor IX, 824,000 units of FEIBA and 169,000 units of Autoplex.

With regard to the treatment of patients with Christmas disease the amount of factor IX used decreased to 10M units (Fig. 3 and Table 8). Approximately 18% of all the factor IX used during 1984 was used for Haemophilia A patients with factor VIII antibodies. Fifty-eight per cent of the total amount of material used to treat Christmas disease patients was used for home therapy (Table 10). The amount of factor IX used for the management of patients with factor IX antibodies is shown in Table 9.

Table 11 shows the type and amount of material used to treat von Willebrand's disease patients. Usage of cryoprecipitate has decreased from 2.3M units in 1984 to 1M in 1985, whereas use of commercial concentrates has trebled compared with the amount used in 1984. Use of NHS factor VIII concentrates also shows a very slight increase.

Table 12 gives an analysis of the cause of death in the 42 haemophilic patients, 4 Christmas disease patients and 7 von Willebrand's disease patients who died in 1984. AIDS accounted for 10 deaths (19%). Ten (19%) deaths were due to cerebral haemorrhage and 7 of those were in patients more than 50 years of age. Four patients died as a result of accidents (1 road traffic accident, 2 head injuries and 1 respiratory arrest after alcohol ingestion). Three patients died of gastrointestinal haemorrhage and 1 patient died from a tongue haemorrhage. Five patients died from myocardial infarction. Cancer caused 2 deaths. Pneumonia accounted for 2 deaths. One patient died following surgery. There were 2 deaths from liver failure, 1 death from acute hepatitis, 1 death from pulmonary embolism, 1 from ruptured splenic artery aneurysm, 1 from cardiac failure, 1 from a congenital heart defect and 1 from gastroenteritis. The cause of death was not known for 5 patients.

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Table 1

Haemophilia A patients known at Haemophilia Centres on 31.12.85, showing the number of patients treated during 1985, with the severity of the coagulation defect and age. Patients known to have died before 1.1.85 have been excluded

Age (years)	Number of Patients Factor VIII Level (%) <2% A.N.			2-10% A.N.			>10% A.N.			Not known			Total		
	In Reg	Trtd 1985	On HT 1985	In Reg	Trtd 1985	On HT 1985	In Reg	Trtd 1985	On HT 1985	In Reg	Trtd 1985	On HT 1985	In Reg	Trtd 1985	On HT 1985
<5	134	103	16	62	31	4	41	9	0	3	4	0	240	147	20
5-9	146	130	82	97	62	11	69	20	1	5	1	0	317	213	94
10-14	162	129	106	121	60	21	99	27	0	15	0	0	397	216	127
15-19	216	188	159	146	69	25	94	18	2	13	0	0	469	275	186
20-29	496	397	340	304	116	36	245	35	3	27	1	0	1072	549	379
30-39	385	267	203	238	63	15	166	24	1	28	1	0	817	355	219
40-49	235	159	127	184	44	10	131	20	1	19	3	0	569	226	138
50-59	142	100	59	125	33	8	126	20	1	12	1	0	405	154	68
60-69	77	45	20	103	28	4	103	18	1	7	1	0	290	92	25
70+	36	16	6	71	12	0	79	9	0	11	0	0	197	37	6
Not known	23	3	0	20	1	0	7	0	0	189	3	0	239	7	0
Total	2052	1537	1118	1471	519	134	1160	200	10	329	15	0	5012	2271	1262

Table 2

The number of patients known to Haemophilia Centre Directors on 31.12.85 and the occurrence of Factor VIII and Factor IX antibodies. Patients known to have died before 31.12.85 have been exoluded

	Haemophilia A	Haemophilia B	von Willebrands
Cumulative total number of patients known at Centres	4970	915	1711
Cumulative total number of factor VIII or IX antibodies	296	7	3
% with factor VIII or IX antibodies	5.96	0.77	0.18

Table 3

Haemophilia B patients known at Haemophilia Centres on 31.12.85, showing the number of patients treated during 1985, with the severity of the coagulation defect and age. Patients known to have died before 1.1.85 have been excluded

Age (years)	Number of Patients Factor IX Level (%) <2% A.N. In Reg	<2% A.N. Trtd 1985	<2% A.N. On HT 1985	2-10% A.N. In Reg	2-10% A.N. Trtd 1985	2-10% A.N. On HT 1985	>10% A.N. In Reg	>10% A.N. Trtd 1985	>10% A.N. On HT 1985	Not known In Reg	Not known Trtd 1985	Not known On HT 1985	Total In Reg	Total Trtd 1985	Total On HT 1985
<5	17	15	1	25	11	1	7	1	0	1	0	0	50	27	2
5-9	28	23	12	32	15	4	18	7	1	0	0	0	78	45	17
10-14	25	21	18	36	21	5	18	6	0	3	0	0	82	48	23
15-19	37	29	23	32	17	9	17	2	1	2	0	0	88	48	33
20-29	72	59	42	70	29	12	33	6	0	9	0	0	184	94	54
30-39	54	31	22	56	14	3	40	7	1	4	1	0	154	53	26
40-49	29	19	15	26	9	2	21	1	1	10	4	0	86	33	18
50-59	21	16	9	36	12	5	9	4	1	1	0	0	67	32	15
60-69	10	6	3	17	4	0	12	0	0	5	0	0	44	10	3
70+	8	1	1	18	3	1	9	0	0	3	1	0	39	5	2
Not known	4	0	0	4	0	0	5	0	0	35	0	0	47	0	0
Total	305	220	146	352	135	42	189	34	5	73	6	0	919	395	193

Table 4

Von Willebrand's disease patients known at Haemophilia Centres on 31.12.85, showing the number of patients treated in 1985, with the Factor VIIIc level and age in 1985. Patients known to have died before 1.1.85 have been excluded

Age (years)	Factor VIIIc Level																	
	<2% A.N.			2-14% A.N.			15-29% A.N.			>30% A.N.			Not known			Total		
	In Reg	Trtd 1985	On HT 1985	In Reg	Trtd 1985	On HT 1985	In Reg	Trtd 1985	On HT 1985	In Reg	Trtd 1985	On HT 1985	In Reg	Trtd 1985	On HT 1985	In Reg	Trtd 1985	On HT 1985
<5	3	2	0	9	9	1	16	4	0	24	3	1	1	0	0	53	18	2
5-9	2	1	0	15	6	1	27	8	0	67	9	0	2	0	0	113	24	1
10-14	8	5	1	22	7	1	38	5	0	101	14	0	0	0	0	169	31	2
15-19	4	1	1	34	8	1	35	4	0	106	12	0	5	0	0	184	25	2
20-29	11	2	1	55	10	1	95	20	1	216	21	0	7	0	0	384	53	3
30-39	8	5	3	50	11	0	92	13	0	174	17	0	8	0	0	332	46	3
40-49	7	3	0	35	4	0	82	9	0	124	13	0	3	0	0	251	29	0
50-59	3	1	0	22	4	1	37	4	0	71	7	0	4	0	0	137	16	1
60-69	0	0	0	12	3	0	27	6	1	47	6	0	2	0	0	88	15	1
70+	1	1	0	11	1	0	23	1	0	40	4	0	9	1	0	84	8	0
Not known	0	0	0	5	0	0	14	0	0	18	1	0	45	7	0	82	8	0
Total	47	21	6	270	63	6	486	74	2	988	107	1	86	8	0	1877	273	15

Table 5

Factor VIII units used by Haemophilia Centres in 1985

Type of Patient	Total number* of patients treated	Plasma	Cryo.	NHS F.VIII conc.	Commercial F.VIII conc.	Total F.VIII conc.	% Total F.VIII units	Average amount used per patient
Haemophilia A**	2,231+	5,000	2,244,000	22,644,000	50,275,000	75,168,000	97.19	33,693
Carriers of Haem. A	36++	Nil	21,000	42,000	132,000	195,000	0.25	5,417
von Willebrand's	267+++	5,000	1,062,000	248,000	465,000	1,780,000	2.30	6,667
Acquired Haem. A	11	Nil	8,000	163,000	30,000	201,000	0.26	18,273
Total	2,545	10,000	3,335,000	23,097,000	50,902,000	77,344,000	100	30,391
% Total	-	0.01	4.31	29.86	65.81	100	-	-

* Adjusted for duplications

** Including material used for Haemophilia A patients with F.VIII antibodies. See Table 6 for materials used for patients with F.VIII antibodies

Additional materials used for Haemophilia A patients and patients with Acquired Haemophilia

NHS F.IX concentrate	1,293,000	units
Commercial F.IX concentrate	1,247,000	"
Porcine F.VIII concentrate	1,961,000	"
FEIBA	822,000	"
AUTOPLEX	169,000	"

\+ Plus 40 who received no doses ++ Plus 9 who received no doses +++ Plus 6 who received no doses

Table 6

Materials used for treatment of Haemophilia A patients during 1985 and the amount used for Home Treatment

Material	Total F. VIII units used for all Haemophilia A patients	F.VIII units used for Home Treatment only	% used for Home Treatment
Plasma	5,000	Nil	-
Cryoprecipitate	2,244,000	525,000	23.40
NHS F.VIII concentrate	22,644,000	14,626,000	64.59
Commercial F.VIII conc.	50,275,000	31,302,000	62.26
Total units	75,168,000	46,453,000	61.80
Number of patients treated	2231	1262	56.57
Average amount used per patient	33,693	36,809	-

In addition, NHS F.IX, Porcine F.VIII, FEIBA and AUTOPLEX were supplied for HT to Haemophilia A patients with F.VIII antibodies (see Table 7)

Table 7

Materials used by Haemophilia Centres in 1985 to treat 133 Haemophilia A patients who had F.VIII antibodies. In addition, 6 other patients were treated but received no doses

Material	Factor VIII units Used at Hosp.	Supplied for HT	Total F.VIII units
Plasma	-	-	-
Cryoprecipitate	19,000	-	19,000
NHS F.VIII conc.	278,000	392,000	670,000
Commercial Human F.VIII conc.	2,941,000	2,967,000	5,908,000
Total Human F.VIII conc.	3,238,000	3,359,000	6,597,000
Porcine F.VIII	1,456,000	233,000	1,689,000
Other Materials:	Units	Units	Units
FEIBA	766,000	58,000	824,000
AUTOPLEX	162,000	7,000	169,000
NHS F.IX conc.	428,000	1,011,000	1,439,000
Commercial F.IX conc.	472,000	578,000	1,050,000

Table 8

Factor IX units used by Haemophilia Centres in 1985

Type of patient	Total number of patients	Plasma	NHS IX	Commercial IX	Total units	% Total F.IX units	Average amount used per patient
Haemophilia B*	386+	19,000	7,734,000	2,857,000	10,610,000	80.60	27,487
Carriers of Haemophilia B	15++	8,000	16,000	41,000	65,000	0.49	4,333
Haem. A patients with F.VIII antibodies	42	-	1,439,000	1,050,000	2,489,000	18.91	59,261
Total	443	27,000	9,189,000	3,948,000	13,164,000	100	29,716
% Total	-	0.21	69.80	29.99	100	-	

* Adjusted for duplicates

\+ Plus 9 who received no doses

++ Plus 1 who received no doses

Table 9

Material used by Haemophilia Centres in 1985 to treat 3 Haemophilia B (Christmas disease) patients who had F.IX antibodies

Material	F.IX units used at hospital
NHS F.IX concentrate	241,000
Commercial F.IX concentrate	39,000
Total	280,000

Table 10

Material used for treatment of Haemophilia B patients during 1985 and the amount used for Home Treatment

Material	Total F.IX units used for all Haemophilia B patients	F.IX units used for Home Treatment only	% used for Home Treatment
Plasma	19,000	-	-
NHS F.IX concentrate	7,734,000	4,324,000	55.91
Commercial F.IX concentrate	2,857,000	1,875,000	65.63
Total units	10,610,000	6,199,000	58.43
Number of patients treated	386	193	50
Average amount used per patient	27,487	32,119	-

Table 11

Material used for treatment of von Willebrand's disease patients during 1985 and the amount used for Home Treatment

Material	Total F.VIII units used for all von Willebrand's patients	F.VIII units used for Home Treatment only	% used for Home Treatment
Plasma	5,000	Nil	-
Cryoprecipitate	1,062,000	49,000	4.61
NHS F.VIII concentrate	248,000	59,000	23.79
Commercial F.VIII conc.	465,000	133,000	28.60
Total units	1,780,000	241,000	13.54
Number of patients treated	267	15	5.62
Average amount used per patient	6,667	16,067	-

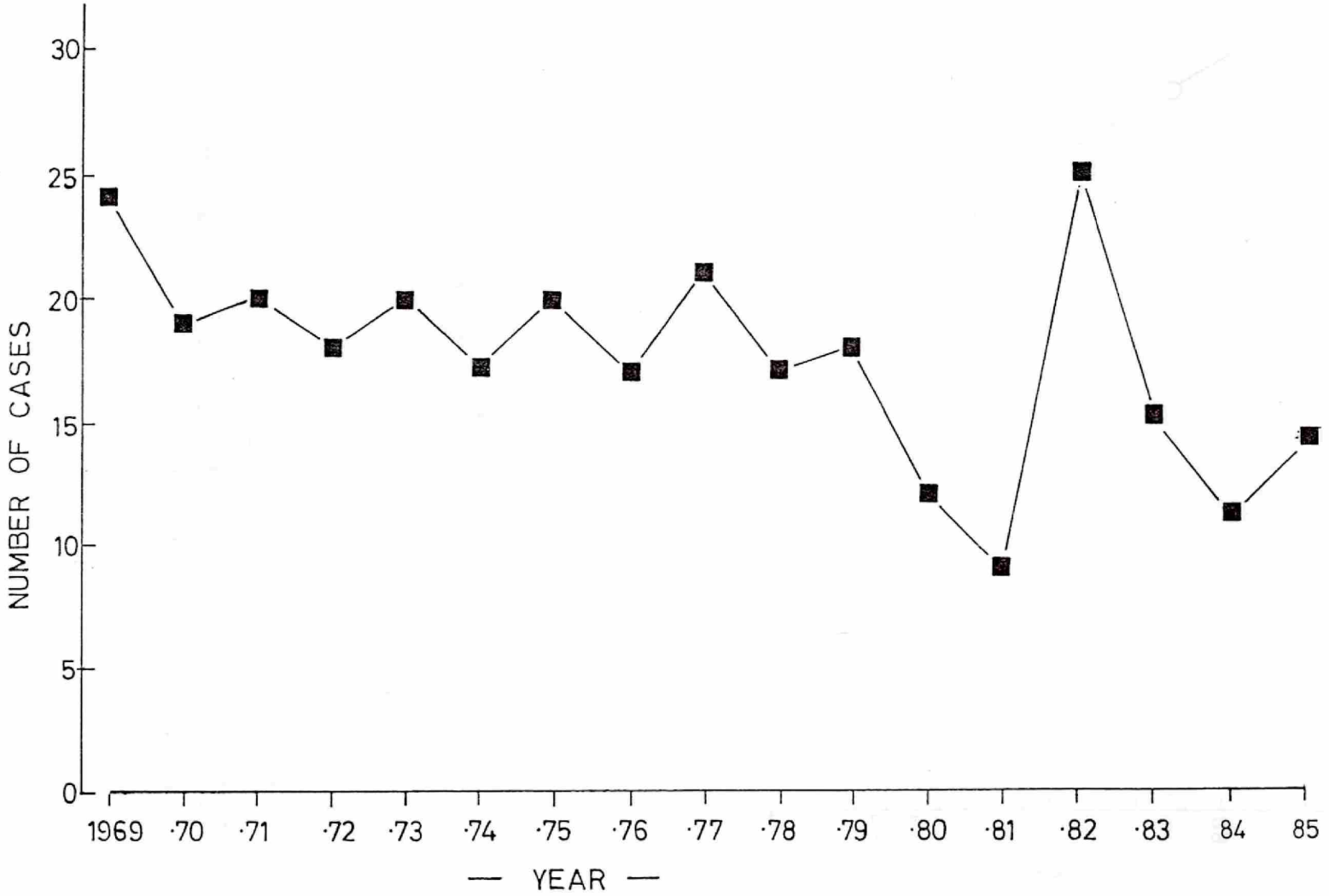
Table 12

Cause of death of 42 Haemophilia A, 4 Haemophilia B and 7 von Willebrand's disease patients in 1985, showing severity of coagulation defect and age at death

Cause of death	F.VIII/IX level %	Number of Deaths* Age at Death (years)								
		<5	10-19	20-29	30-39	40-49	50-59	60-69	70+	TOTAL
Cerebral Haemorrhage	<2	1	-	-	-	1	4	-	1	10
	2-10	-	-	-	-	-	2	-	-	
	>10	-	-	-	-	1	-	-	-	
AIDS	<2	-	-	1	1	1	2	2	1(1)	10(2)
	2-10(vW)	-	-	-	-	-	-	-	1(1)	
	>10	-	-	-	-	-	-	-	1	
Myocardial Infarction	<2	-	-	-	-	-	2	-	-	6
	2-10	-	-	-	-	-	-	-	1	
	>10	-	-	-	-	-	-	2	1	
G.I. Bleed	2-10	-	-	-	-	1	-	-	1	3
	>10	-	-	-	-	-	-	-	1	
Cancer	<2	-	-	-	-	-	-	-	1	3
	2-10	-	-	-	-	-	1	-	-	
	>10	-	-	-	-	-	-	1	-	
Accident	<2	-	-	1	2	-	-	-	-	4
	2-10	-	-	1	-	-	-	-	-	
Pneumonia	<2	-	-	-	1	-	-	-	-	2
	2-10	-	-	-	-	-	-	-	1	
Hepatitis	2-10	-	-	-	-	-	-	-	1	1
Liver Failure	2-10	-	1	-	-	-	-	-	-	2
	N/K	-	-	-	-	-	-	-	1	
Pulmonary Embolism	61(vW)	-	-	1	-	-	-	-	-	1
Ruptured Splenic Artery Aneurysm	30(vW)	-	-	-	-	-	-	1	-	1
Cardiac Failure	2-10	-	-	-	-	-	-	-	1	1
Congenital Heart Defect	<2	1	-	-	-	-	-	-	-	1
Gastroenteritis	>10	-	-	-	-	-	-	-	1	1
Post-operative complications	<1	-	-	-	-	-	1(1)	-	-	1(1)
Tongue Haemorrhage	<2	-	-	-	1	-	-	-	-	1
Not Known	<2	-	-	-	1	-	-	-	-	5
	>10	-	-	-	-	-	-	1	3	
TOTAL		2	1	4	6	4	12	7	17	53

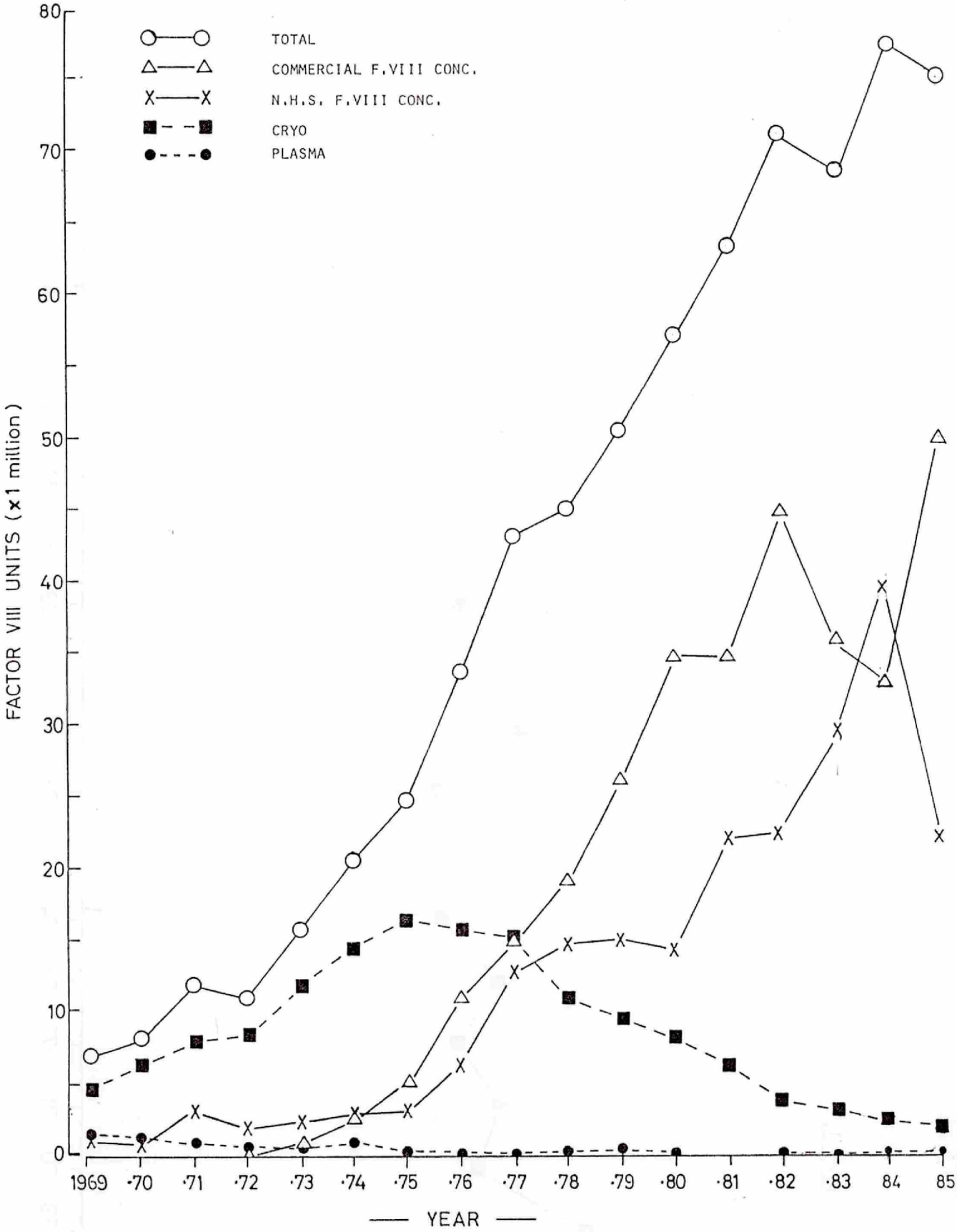
* Figs. in brackets ( ) = Number of patients who had F.VIII antibodies

FIG. 1.



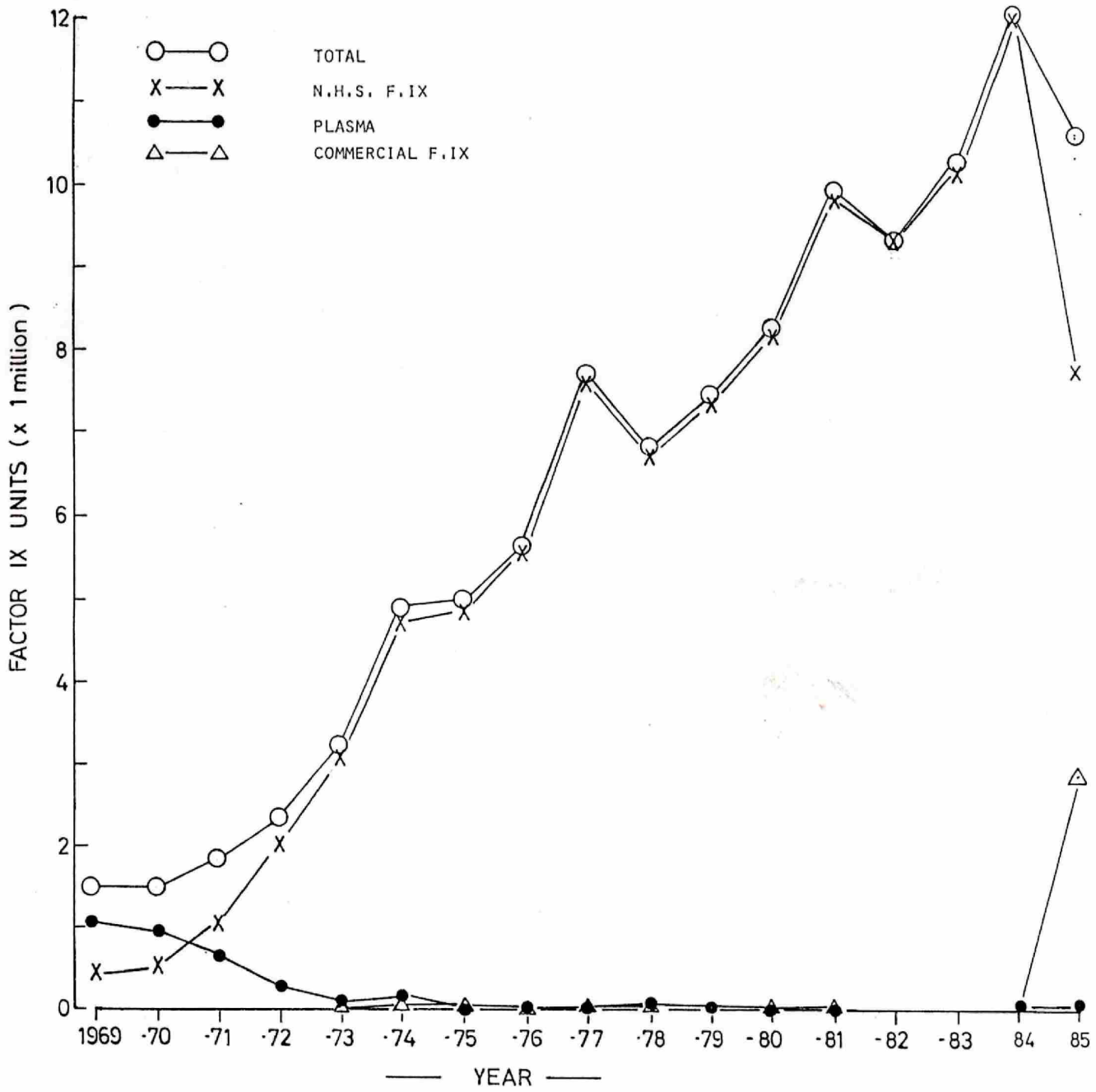
NUMBER OF NEW CASES OF F.VIII ANTIBODIES (INHIBITORS) IN HAEMOPHILIA A PATIENTS DETECTED PER YEAR

FIG. 2.



AMOUNT OF BLOOD PRODUCTS (F.VIII UNITS) USED TO TREAT HAEMOPHILIA A PATIENTS IN THE U.K.

FIG. 3.



AMOUNT OF BLOOD PRODUCTS (F.IX UNITS) USED TO TREAT HAEMOPHILIA B PATIENTS IN THE U.K.