



# ARTHRITIS COMMUNITY RESEARCH & EVALUATION UNIT (ACREU)

The Wellesley Hospital Research Institute

*WORKING PAPER: 93-1*

## CTS REFERRALS & CLIENTS:

## Annual Summary for 1991 - 1992

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### Presented to:

- *TAS-CTS Directors - July 1993*
- *ACREU Investigators & Staff - May 1993*

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The Wellesley  
Hospital

*In partnership with The Arthritis Society  
Ontario Division*



University of  
Toronto

**ARTHRITIS SOCIETY CTS DATA**

**April 1/91 - March 31/92**

**REFERRALS**

3075 1st referral: clients not seen before April 1/91

373 referrals/reopenings for above clients

1202 referrals/reopenings for clients seen in previous years

4650

**CLIENTS**

3075 individuals not seen before April 1/91

1037 individuals seen in previous years

4112

1991-92 REFERRALS (n=4650)

SERVICE AREA

	n	%
A (East)	1364	29.3
B (Central)	1257	27.0
D (South West)	1359	29.2
E (North)	670	14.4
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	4650	100.0

## COMMENTS - REFERRALS

### SERVICE AREA LOCATIONS (Table 1)

The main towns and cities in which CTS clients reside are grouped according to the 4 service areas, and listed in order of the number of referrals for a specific location. Only the top 10 locations in terms of referral frequency are included.

### TYPE OF SERVICE (Table 2)

A large majority of referrals (75%) are for physiotherapy.

Service area differences reflect the fact that occupational therapists, social workers, and hydrotherapy programs are not available in all geographic locations.

### DIAGNOSIS (Table 3)

More than half (57%) of all referrals are for clients who have rheumatoid arthritis or lupus. The second highest diagnostic category in terms of the number of referrals is osteoarthritis.

There is some geographic variation in diagnostic categories. The Central service area (B) has the highest proportion of referrals relating to RA and lupus. The South West area (D) has the highest proportion of referrals for both osteoarthritis and nonarticular rheumatism. And the highest proportion of referrals for arthritis associated with spondylitis is found in the Eastern area (A).

### REFERRING PHYSICIAN (Table 4)

More than two-thirds of referrals (67%) to CTS are made by rheumatologists; general practitioners are the referral source for more than a quarter (28%).

Regional variation can reflect the referral habits of specific physicians as well as the availability of rheumatologists in a specific geographic region. The latter factor is particularly noticeable in the Northern service area (E), where the referral frequencies of general practitioners (44%) and rheumatologists (46%) are similar.

### EXTERNAL REFERRAL SOURCE (Table 5)

A large majority of referrals (84%) are from physicians who have seen the patient in a regular practice setting.

Notable regional differences are the relatively low proportions of referrals from rheumatology clinics and Homecare agencies in the South West area (D), and the high rate of clinic referrals in the Northern region (E).

#### **INTERNAL REFERRAL SOURCE (Table 6)**

Once a client has been referred to CTS by a physician, the therapist in charge of the case can refer that client for another type of CTS service. The data in the table are number of referrals.

#### **REFERRAL WAIT TIME (Table 7)**

For all cases, the average time period between the date of referral and the day of the first CTS visit is 4.9 weeks. In some cases, there is no wait because the therapist is present at a clinic. A client not being available is one reason for a lengthy wait. Note that the percentages in the lower part of the table are cumulative. For more than half (54%) of all referrals, the first visit occurs within 3 weeks or less.

Regional variation can reflect the number and type of CTS staff in a particular service area, as well as the referral habits of particular physicians.

#### **TOTAL VISITS (Table 8)**

At the time of the analysis, attendance information was not available for clients who were still receiving treatment; thus data in the table refer to cases which have been closed.

#### **HOME CARE (Table 9)**

A very small proportion of referrals, approximately 7%, are for clients seen in conjunction with the Home Care program. Note that information is for closed cases only.

Note the very low proportion of referrals related to Home Care cases in the South West service area (D).

#### **SEX (Table 10)**

In all regions, the large majority of referrals are for female clients.

#### **AGE (Table 11)**

Three-quarters of all referrals are for clients age 45 or over, and a substantial number (44%) are for individuals in the elderly category (age 65 or older).

Note in the regional comparisons that variation in the under 18 category can reflect the practice locations of pediatric rheumatologists.

#### **DISEASE DURATION (Table 12)**

Clients vary considerably regarding the length of time that they have been living with their arthritis. Considering all referrals, the average duration is approximately 11 years, and the range extends from 1 year or less to 81 years.

Table 1

AREA A		AREA B	
Ottawa	383	Toronto	615
Kingston	210	Hamilton	202
Peterborough	145	Mississauga	81
Belleville	39	Burlington	61
Pembroke	35	Brampton	58
Arnprior	23	Markham/Unionv.	28
Cornwall	23	Thornhill	22
Brockville	17	St.Catherines	19
Cobourg	17	Woodbridge	13
Lindsay	15	Brantford	12
Ennismore	15		
AREA D		AREA E	
London	566	Sudbury	92
Kitchener/Waterl.	124	Sault St. Marie	84
Windsor	57	North Bay	57
Cambridge	52	Thunder Bay	57
Chatham	39	Timmins	53
St.Thomas	31	Kenora	22
Woodstock	28	Huntsville	21
Stratford	22	Bracebridge	13
Owen Sound	21	Gravenhurst	13
Ingersoll	17	Chelmsford	12

Table 2

**THERAPY SERVICE**

	TOTAL		AREA A	AREA B	AREA D	AREA E
	n	%	%	%	%	%
PT	3492	75.1	84.8	52.2	88.5	71.0
OT	786	16.9	8.4	36.8	3.8	23.4
social work	202	4.3	1.8	9.7	4.0	0.0
hydrotherapy	170	3.7	4.9	1.4	3.6	5.5

Table 3

**DIAGNOSIS**

	TOTAL		AREA A	AREA B	AREA D	AREA E
	n	%	%	%	%	%
RA JRA LE	2640	56.8	55.9	71.8	42.9	58.5
OA	1304	28.0	26.5	23.2	36.4	23.1
nonart rheum	375	8.1	7.8	2.2	13.5	8.4
spondylitis	211	4.5	7.3	1.8	4.0	5.2
infectious	24	0.5	0.4	0.1	0.6	1.3
metab/endoc	24	0.5	0.6	0.2	0.8	0.3
bone/cart/perio	23	0.5	0.5	0.3	0.5	0.7
neuropathic	9	0.2	0.1	0.2	0.2	0.3
neoplasms	2	0.0	0.1	0.0	0.0	0.0
misc	37	0.8	0.6	0.1	1.0	2.1
(missing)	(1)					
JRA (yes)	209	4.5	4.8	7.8	1.8	3.0

Table 4

**REFERRING PHYSICIAN**

	TOTAL		AREA A	AREA B	AREA D	AREA E
	n	%	%	%	%	%
Rheumatologist	3126	67.2	77.9	75.8	59.1	46.0
GP	1315	28.3	18.0	20.4	38.4	43.6
Orthopod	74	1.6	2.1	1.4	0.5	3.1
Internist	69	1.5	0.5	0.6	1.2	5.8
Other	66	1.4	1.6	1.8	0.8	1.5

Table 5

**EXTERNAL REFERRAL SOURCE**

	TOTAL		AREA A	AREA B	AREA D	AREA E
	n	%	%	%	%	%
Regular	3923	84.4	80.1	86.1	94.0	70.1
Home Care	317	6.8	10.4	8.3	1.3	8.1
Clinic	272	5.8	6.8	3.6	0.1	19.7
RDU	138	3.0	2.6	2.1	4.6	2.1

Table 6

**INTERNAL REFERRAL SOURCE**

PT	to	OT	55
PT	to	social work	30
PT	to	hydrotherapy	4
OT	to	PT	15
OT	to	social work	5
SW	to	OT	16
SW	to	PT	6
SW	to	hydrotherapy	6

Table 7

REFERRAL WAIT (weeks)

	TOTAL	AREA A	AREA B	AREA D	AREA E
mean	4.88	5.04	6.58	3.79	3.45
range	0-99	0-62	0-50	0-99	0-95
(missing)	(183)	(55)	(24)	(43)	(61)

  

	TOTAL	AREA A	AREA B	AREA D	AREA E
	%	%	%	%	%
same day	5.6	5.5	1.5	4.9	15.6
1 week or less	23.3	23.1	11.7	23.6	46.3
3 weeks or less	54.2	53.5	36.2	63.8	71.4
6 weeks or less	77.1	73.6	65.1	87.3	87.0
3 months or less	92.5	91.6	87.5	97.0	95.2
(missing)	(183)	(55)	(24)	(43)	(61)

Table 8

**TOTAL VISITS**

	TOTAL	AREA A	AREA B	AREA D	AREA E
mean	4.10	4.27	4.36	4.08	3.29
range	0-44	0-38	1-27	1-44	1-32
(missing)	(9)	(2)	(2)	(5)	(0)

Table 9

**HOME CARE**

TOTAL		AREA A	AREA B	AREA D	AREA E
n	%	%	%	%	%
254	6.6	10.0	8.7	1.1	7.8

Table 10

**SEX**

	TOTAL		AREA A	AREA B	AREA D	AREA E
	n	%	%	%	%	%
females	3786	81.4	77.1	85.5	83.1	79.3
males	864	18.6	22.9	14.5	16.9	20.7

Table 11

**AGE GROUP**

	TOTAL		AREA A	AREA B	AREA D	AREA E
	n	%	%	%	%	%
under 18	166	3.6	4.4	6.1	1.1	2.1
18-29	202	4.3	4.7	4.5	4.0	4.2
30-44	739	15.9	17.4	14.2	15.1	17.6
45-64	1501	32.3	33.3	28.3	32.7	36.7
65-74	1028	22.1	21.6	22.4	21.4	24.2
75 & over	1014	21.8	18.6	24.6	25.7	15.2

Table 12

**DISEASE DURATION (years)**

	TOTAL	AREA A	AREA B	AREA D	AREA E
mean	10.6	9.3	12.1	10.4	10.7
range	1-81	1-60	1-60	1-64	1-81
(missing)	(634)	(139)	(110)	(321)	(64)

1991-92 NEW CLIENTS (n=3075)

SERVICE AREA

	n	%
A (East)	951	30.9
B (Central)	665	21.6
D (South West)	984	32.0
E (North)	475	15.4
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	3075	100.0

## COMMENTS - NEW CLIENTS

### SERVICE (Table 13)

For the first referral, the predominant type of service is physiotherapy (83%).

Service area differences reflect the fact that occupational therapists, social workers, and hydrotherapy programs are not available in all geographic locations.

### DIAGNOSIS (Table 14)

Approximately one-half of new clients have rheumatoid arthritis or lupus, and about a third have osteoarthritis.

There is some geographic variation in diagnostic categories. The Central service area (B) has the highest proportion of RA and lupus. The South West area (D) has the highest proportion of both osteoarthritis and nonarticular rheumatism. And the highest proportion of arthritis associated with spondylitis is found in the Eastern area (A).

### REFERRING PHYSICIAN (Table 15)

More than two-thirds of new clients (68%) are referred to the CTS by rheumatologists; general practitioners are the referral source for more than a quarter (28%).

Regional variation can reflect the referral habits of specific physicians as well as the availability of rheumatologists in a specific geographic region. The latter factor is particularly noticeable in service area E, which is the Northern region.

### EXTERNAL REFERRAL SOURCE (Table 16)

A large majority of new clients (85%) are referred in the regular practice setting.

Notable regional differences are the relatively low proportions of referrals from rheumatology clinics and Homecare agencies in the South West area (D), and the high rate of clinic referrals in the Northern region (E).

### REFERRAL WAIT TIME (Table 17)

On average, the time period between the date of referral and the day of the first CTS visit is 4.5 weeks. In some cases, there is no wait because the therapist is present at a clinic. A client not being available is one reason for a lengthy wait.

Regional variation can reflect the number and type of CTS staff in a particular service area, as well as the referral habits of particular physicians.

**TOTAL VISITS (Table 18)**

At the time of the analysis, attendance information was not available for clients who were still receiving treatment; thus data in the table refer to cases which have been closed.

**HOME CARE (Table 19)**

A very small proportion of CTS clients (5%) are seen in conjunction with the Home Care program. Note that active cases are not included in the analysis.

Note the very low proportion of Home Care cases in the South West service area (D).

**SEX (Table 20)**

In all regions, the large majority of clients are female.

**AGE (Table 21)**

CTS clients represent a very broad age range (2-97 years), with a mean in the middle-age category (age 58). Three-quarters of the clients are age 45 or over, and a substantial number (44%) fall in the elderly category (age 65 or older).

Note in the regional comparisons that the Central service area (B) has the highest proportions of clients in both the youngest and oldest age categories; of particular interest is the relatively large proportion (30%) who are age 75 or over.

**MARITAL STATUS (Table 22)**

The relatively high proportion in the widowed category reflects the predominance of females and the number of clients who are middle-aged or elderly.

**DISEASE DURATION (Table 23)**

Clients vary considerably regarding the length of time that they have been living with their arthritis. The periods range from 1 year or less to 64 years, with a mean of 9 years.

Table 13

**THERAPY SERVICE**

	TOTAL		AREA A	AREA B	AREA D	AREA E
	n	%	%	%	%	%
PT	2548	82.9	89.9	65.9	93.2	71.2
OT	384	12.5	5.2	27.7	3.0	25.5
hydrotherapy	79	2.6	3.9	0.8	2.1	3.4
social work	64	2.1	1.1	5.7	1.6	0.0

Table 14

**DIAGNOSIS**

	TOTAL		AREA A	AREA B	AREA D	AREA E
	n	%	%	%	%	%
RA JRA LE	1501	48.8	48.3	65.1	37.8	49.9
OA	1016	33.0	31.1	29.5	39.6	28.2
nonart rheum	310	10.1	10.1	2.7	15.2	9.7
spondylitis	153	5.0	7.7	1.5	4.3	5.9
bone/cart/perio	20	0.7	0.7	0.3	0.6	1.1
metab/endoc	16	0.5	0.6	0.3	0.7	0.2
infectious	13	0.4	0.2	0.0	0.3	1.7
neuropathic	8	0.3	0.2	0.3	0.2	0.4
neoplasms	2	0.1	0.2	0.0	0.0	0.0
misc	35	1.1	0.8	0.2	1.2	2.9
(missing)	(1)					
JRA (yes)	121	3.9	4.9	7.1	1.3	2.9

Table 15

**REFERRING PHYSICIAN**

	TOTAL		AREA A	AREA B	AREA D	AREA E
	n	%	%	%	%	%
Rheumatologist	2082	67.7	78.7	75.6	60.8	49.1
GP	872	28.4	18.7	20.8	37.0	40.4
Internist	48	1.6	0.4	0.6	1.2	5.9
Other	41	1.3	1.2	2.0	0.9	1.7
Orthopod	32	1.0	1.1	1.1	0.1	2.9

Table 16

**EXTERNAL REFERRAL SOURCE**

	TOTAL		AREA A	AREA B	AREA D	AREA E
	n	%	%	%	%	%
Regular	2627	85.4	82.9	86.3	94.5	70.5
Clinic	200	6.5	7.4	4.4	0.2	20.8
Home Care	155	5.0	7.0	7.4	0.9	6.3
RDU	93	3.0	2.7	2.0	4.4	2.3

Table 17

REFERRAL WAIT (weeks)

	TOTAL	AREA A	AREA B	AREA D	AREA E
mean	4.52	5.13	5.99	3.59	3.16
range	0-62	0-62	0-49	0-54	0-44

Table 18

TOTAL VISITS

	TOTAL	AREA A	AREA B	AREA D	AREA E
mean	3.93	4.07	4.37	3.91	3.07
range	0-38	0-38	1-23	1-20	1-14
(missing)	(5)	(1)	(1)	(3)	(0)

Table 19

HOME CARE

TOTAL		AREA A	AREA B	AREA D	AREA E
n	%	%	%	%	%
130	4.9	7.0	7.0	0.8	7.0

Table 20

**SEX**

	TOTAL		AREA A	AREA B	AREA D	AREA E
	n	%	%	%	%	%
females	2426	78.9	74.0	82.7	81.3	78.3
males	649	21.1	26.0	17.3	18.7	21.7

Table 21

**AGE GROUP**

	TOTAL		AREA A	AREA B	AREA D	AREA E
	n	%	%	%	%	%
under 18	109	3.5	5.0	6.3	1.0	1.9
18-29	145	4.7	4.9	4.7	4.6	4.6
30-44	505	16.4	18.3	13.7	15.1	19.2
45-64	964	31.3	31.5	25.7	32.8	35.8
65-74	658	21.4	21.3	19.7	21.8	22.9
75 & over	694	22.6	18.8	29.9	24.6	15.6
mean	58.1		55.8	59.2	60.2	56.9
range	2-97		2-97	2-96	2-97	3-93

Table 22

**MARITAL STATUS (age 18 & over)**

	TOTAL		AREA A	AREA B	AREA D	AREA E
	n	%	%	%	%	%
married	1940	65.4	68.4	60.1	63.8	70.2
widowed	611	20.6	16.5	23.8	23.2	18.9
single	274	9.2	9.7	12.1	8.5	6.0
divorced	140	4.7	5.3	4.0	4.5	4.9
(missing)	(1)					

Table 23

**DISEASE DURATION (years)**

	TOTAL	AREA A	AREA B	AREA D	AREA E
mean	9.4	8.2	11.1	9.4	9.6
range	1-64	1-60	1-60	1-64	1-50
(missing)	(479)	(107)	(75)	(237)	(60)