#### IV. INDIVIDUAL MODALITIES

Several dimensions of clientele participation are explored for seven modalities for the period from 1992 to 1999. The modalities are (1) detoxification, (2) short-term and variable-term residential care, (3) long-term residential care, (4) outpatient care, (5) intensive case management, (6) continuous team treatment, (CTT), and (7) methadone maintenance. The same format is followed for the tabular presentation of each modality. The dimensions are presented separately for all clients, clients enrolled for alcohol as their primary substance abuse, and clients enrolled due to drugs as their primary substance abuse problem.

#### The dimensions presented are:

- 1. **Service duration**, --the average <u>length</u> of client service utilization measured differently for inpatient and outpatient modalities. (Also see Section II for the definitions).
  - Inpatient service duration is total service units (i.e., the total number of days of all clients) divided by total client episodes.
  - Outpatient service duration is the total length of time measured in days that clients were enrolled divided by the total number of client episodes.
- 2. **Service quantity**, --the average <u>quantity</u> of client services measured by total service units divided by all client episodes.
  - Inpatient service quantity is identical to inpatient service duration---total service units (i.e., the total number of days of all clients) divided by total client episodes.
  - Outpatient service quantity is total service units, measured as the total number of encounters of all clients, divided by total client episodes.
- 3. **Unique clients** in the modality which was also presented in Section III and will not be commented upon below, and
- 4. **Annual admission frequency**, --the frequency of annual admissions to the modality by individual clients.

The data on total service units -- days and encounters -- and total client episodes, -- measured by admissions and continuances in the fiscal year -- that are the bases for calculating service duration and quantity are provided in tables in the Appendix.

A statistical analysis is conducted to ascertain the determinants of service duration. Likewise, a statistical analysis is undertaken to evaluate the reasons for service quantity for both modalities.

### A. Detoxification Modality

Over the past eight years two detoxification facilities have been financed through the block grant program –Kirkwood Detoxification Center in New Castle County under

the management of NET Delaware, and Kent/Sussex Detoxification in Ellendale. Detoxification services supply beds in non-hospital facilities. The program provides physician oversight and nursing supervision to ensure safe withdrawal from alcohol and other drugs. Clients are discharged when they are medically cleared of complications for intoxication or withdrawal. The utilization dimensions of detoxification services for both total clients and their participation is shown in Table IV.1.

TABLE IV.1: DETOXIFICATION	N: CLIE	NT ENRO	DLLMEN'	Г ВҮ ТҮІ	PE OF SU	BSTANCI	E	
TOTAL CLIENTS	19	92	19	93	19	94	19	95
A. Service Duration (A/B): Avg. Length of Service	4	.8	4	.5	4.6		4	.1
B. Service Quantity (A/B): Avg. Length of Service	4	.8	4.5		4.6		4	.1
C. Number of Unique (Individual) Clients	2,1	170	1,9	977	2,0	)23	2,1	119
D. Frequency of Admissions	#	%	#	%	#	%	#	%
One	1,593	73%	1,475	75%	1,488	74%	1,591	75%
Two	345	16%	295	15%	316	16%	322	15%
Three	105	5%	104	5%	109	5%	96	5%
Four or More (4 to 36)	127	6%	103	5%	110	5%	110	5%
ALCOHOL CLIENTS		_		<u>-</u>		_		_
A. Service Duration: Avg. Length of Service	4	.7	4	.5	4	.5	4.1	
B. Service Quantity: Avg. Amount of Service	4.7		4	4.5		.5	4	.1
C. Number of Unique (Individual) Clients	1,3	351	1,2	256	1,2	215	1,1	01
D. Frequency of Admissions	#	%	#	%	#	%	#	%
One	1002	74%	932	74%	903	74%	810	74%
Two	195	14%	176	14%	162	13%	160	15%
Three	67	5%	74	6%	69	6%	50	5%
Four or More (4 to 36)	87	6%	74	6%	81	7%	81	7%
DRUG CLIENTS		<u> </u>				<u> </u>		<u> </u>
A. Service Duration: Avg. Length of Service	5	.0	4	.5	4	.6	4	.2
B. Service Quantity: Avg. Amount of Service	5	.0	4	.5	4	.6	4	.2
C. Number of Unique (Individual) Clients	944		82	23	90	07	1,0	)89
D. Frequency of Admissions	#	%	#	%	#	%	#	%
One	762	81%	680	83%	722	80%	876	80%
Two	132	14%	108	13%	134	15%	159	15%
Three	32	3%	22	3%	37	4%	35	3%
Four or More (4 to 36)	18	2%	13	2%	14	2%	19	2%

TABLE IV.1: DETOXIFICAT	TION: CLIE	NT ENR	OLLMEN'	T BY TYI	PE OF SU	BSTANC	E	
TOTAL CLIENTS	19	96	19	97	19	98	19	99
A. Service Duration: Avg. Length of Service	4	.3	4	.3	4	.1	3	.8
B. Service Quantity: Avg. Amount of Service	4	.3	4	4.3		.1	3	.8
C. Number of Unique (Individual) Clients	2,2	2,226		301	1,8	354	2,1	.70
D. Frequency of Admissions	#	%	#	%	#	%	#	%
One	1,665	75%	1,208	67%	1,338	72%	1,533	71%
Two	342	15%	310	17%	322	17%	376	17%
Three	117	5%	138	8%	116	6%	130	6%
Four or More (4 to 36)	102	5%	145	8%	78	4%	131	6%
ALCOHOL CLIENTS								
A. Service Duration: Avg. Length of Service	4	.4	4	.7	4	.6	4	.1
B. Service Quantity: Avg. Amount of Service	4.4		4	.7	4	.6	4	.1
C. Number of Unique (Individual) Clients	1,146		7:	53	6	67	83	35
D. Frequency of Admissions	#	%	#	%	#	%	#	%
One	889	78%	592	73%	516	74%	607	71%
Two	142	12%	104	16%	103	16%	119	14%
Three	52	5%	37	6%	36	6%	52	7%
Four or More (4 to 36)	63	6%	36	5%	26	4%	57	7%
DRUG CLIENTS								
A. Service Duration: Avg. Length of Service	4	.2	4	.0	3	.9	3	.6
B. Service Quantity: Avg. Amount of Service	4	.2	4	.0	3	.9	3	.6
C. Number of Unique (Individual) Clients	1,1	164	1,0	)83	1,2	203	1,3	377
D. Frequency of Admissions	#	%	#	%	#	%	#	%
One	900	74%	831	77%	867	72%	984	71%
Two	180	16%	175	16%	216	18%	256	19%
Three	51	4%	49	5%	68	6%	70	5%
Four or More (4 to 36)	33	3%	32	3%	52	4%	67	5%

- Service duration and service quantity (average length of service days) has declined from 4.8 to 3.8 indicating a shortening of stays at detoxification facilities.
- The number of unique clients for all detoxification clients are generally stable between 1992 and 1999 at approximately 2,100 annually. The drop in 1997 and 1998 is due to fact that some beds were taken out of service due to construction project at one of the providers.
- The frequency of admission among clients followed a similar pattern for the past eight years.
  - 1. Approximately 75% of all clients (unique individual) were admitted once during all the (fiscal) years.
  - 2. Approximately 16% of all clients had two admissions.
  - 3. Approximately 5% of all clients were admitted 4 or more times within a year.
- As the histogram on Figure IV.1 shows, the proportion of detoxification utilization by clients with <u>alcohol</u> and clients with <u>drugs</u> (as primary diagnoses) has changed steadily and continually from: 60% alcohol and 40% drugs in 1992 until 1999 to a reverse of 40% alcohol and 60% drugs.
- Service duration/quantity of <u>drug</u> clients has manifested a decreasing trend between 1992-1999 from 5.0 days to 3.6 days. (See Figure IV.2).
- The frequency of single and multiple admissions are parallel for drug and alcohol, and correspond to overall detoxification services.

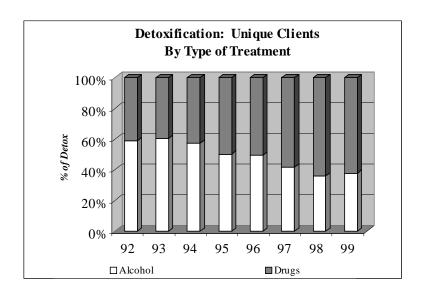


FIGURE IV.1

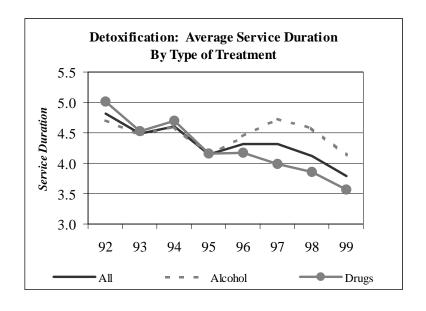


FIGURE IV.2

- Research question: What factors determine clientele service duration in detoxification?
- Dependent variable: length of stay, measured in the number of days, in a facility through which clients received services for a detoxification episode.
- Unit of analysis: Detoxification episode.
- Ordinary Least Squares Equation with variables listed on Table II.1.
- Results of Estimated Equation:
  - 1. Many independent variables were statistically significant. However, as shown by its low adjusted R<sup>2</sup> of .09, the specified equation does not explain much of the variation in the length of stay of clientele episodes. This result indicates that additional independent variables (or alternative estimation of the equation) should be employed.
  - 2. **Age** was positively related to service duration. **Older** clients had slightly longer length of stays in detoxification.
  - 3. On average the length of stay of clients with **heroin** problems and those abusing **marijuana** has been one day shorter than clients with all other types of drug and alcohol abuse.
  - 4. Clients of **Asian** ethnicity spend 2 more days in detoxification than clients of all other racial and ethnic identities.
  - 5. Clients who are **married** had slightly shorter service duration than unmarried clients.
  - 6. Those clients who were older in their **first use** of drugs have slightly shorter length of stays in detoxification facilities.
  - 7. Clients who have had a larger number of prior detoxification **episodes** have longer service duration.
  - 8. Clients from **households with higher incomes** experienced shorter stays in detoxification.
  - 9. Between 1992 and 1999, there has been a gradual **trend** toward shorter length of stays in detoxification facilities.
  - 10. On average the service duration in the New Castle County detoxification facility has been one day shorter than provided in the Ellendale facility.

#### B. Short-Term and Variable-Term Residential Care

Three classes of residential care can be implemented for substance abuse treatment, -- short-term (now variable –term) residential, long-term residential, and hospital (or acute) inpatient care. Hospital inpatient care includes twenty-four hour/day medical care (other than detoxification) in a hospital facility in conjunction with treatment services for alcohol and other drug abuse and dependency. The State program does not finance hospital inpatient services for the provision of residential care. Between 1992 and 1999 there have been four short-term residential care programs that have been provided under the auspices of NET Delaware, Inc. (See Table II.3). Until 1997, short-

term residential care involved treatment services for alcohol and drug abuse and dependency for a maximum of 30 days in a non-acute (non-hospital) care setting (housing). Short-term care has been transposed into variable-term care whereby a provider can vary client service duration according to the treatment needs of the client. Table IV.2 presents the utilization dimensions of short-term inpatient services of both total clients and their participation.

TABLE IV.2: SHORT-TERM RESIDENT	TAL CAF	RE: CLIE	NT ENRO	OLLMEN	Γ BY TYI	PE OF SU	BSTANCI	E
TOTAL CLIENTS	19	992	19	993	19	994	19	95
A. Service Duration (A/B): Avg. Length of Service	2:	3.7	2:	3.3	23.3		20.1	
B. Service Quantity (A/B): Avg. Length of Service								
C. Number of Unique (Individual) Clients	3	94	3	399		22	434	
D. Frequency of Admissions	#	%	#	%	#	%	#	%
One	380	96%	383	96%	315	98%	415	96%
Two	14	4%	15	4%	7	2%	18	4%
Three		0%	1	0%	1	0%	1	0%
Four or More (4 to 36)		0%		0%		0%		0%
ALCOHOL CLIENTS								
A. Service Duration: Avg. Length of Service	24.0		2:	3.6	24	4.7	20.1	
B. Service Quantity: Avg. Amount of Service								
C. Number of Unique (Individual) Clients	368		3	18	2	15	20	05
D. Frequency of Admissions	#	%	#	%	#	%	#	%
One	358	97%	306	96%	211	98%	197	96%
Two	10	3%	12	4%	3	1%	7	3%
Three		0%		0%	1	1%	1	1%
Four or More (4 to 36)		0%		0%		0%		0%
DRUG CLIENTS				ı		· L		L
A. Service Duration: Avg. Length of Service	20	0.5	2:	3.2	24	4.9	19	9.4
B. Service Quantity: Avg. Amount of Service								
C. Number of Unique (Individual) Clients	2	29	8	34	1	07	2:	31
D. Frequency of Admissions	#	%	#	%	#	%	#	%
One	28	90%	80	96%	106	98%	221	96%
Two	1	10%	3	4%	2	2%	10	4%
Three		0%		0%		0%		0%
Four or More (4 to 36)		3%		0%		2%		0%

TOTAL OLIDATE	1.0	20.6	1.0	206	16	200	10	00
TOTAL CLIENTS		996		996		998		99
A. Service Duration: Avg. Length of Service	20	0.3	22	2.5	31.5		31.4	
B. Service Quantity: Avg. Amount of Service								
C. Number of Unique (Individual) Clients		33	491			63	491	
D. Frequency of Admissions	#	%	#	%	#	%	#	%
One	409	95%	461	94%	447	97%	463	94%
Two	22	5%	25	5%	15	3%	28	6%
Three	2	0%	5	1%	1	0%		0%
Four or More (4 to 36)								
ALCOHOL CLIENTS		-						-
A. Service Duration: Avg. Length of Service	20.8		24	4.0	3	32	34.6	
B. Service Quantity: Avg. Amount of Service								
C. Number of Unique (Individual) Clients	216 199 189		169					
D. Frequency of Admissions	#	%	#	%	#	%	#	%
One	204	95%	187	94%	182	96%	161	95%
Two	9	4%	8	4%	7	4%	8	5%
Three	1	0%	4	2%		0%		0%
Four or More (4 to 36)								
DRUG CLIENTS								
A. Service Duration: Avg. Length of Service	20	0.0	22	2.0	31	1.8	29	9.8
B. Service Quantity: Avg. Amount of Service								
C. Number of Unique (Individual) Clients	2	19	2	92	274		32	23
D. Frequency of Admissions	#	%	#	%	#	%	#	%
One	205	94%	274	94%	265	97%	304	94%
Two	13	6%	17	6%	8	3%	19	6%
Three	1	0%	1	0%	1	0%		0%
Four or More (4 to 36)								

- 1. While the growth has been irregular annually, there has been a rising trend in the number of unique clients between 1992 1999 from 394 to 491, a 24% increase over the eight years.
- 2. The service duration has manifested 3 changes, a decline from 23.7 days in 1992 to low time spans in 1995, 1996, and 1997 of 20.1, 20.3 22.5 days to a sharp increase of 31.5 days in 1998 and 1999. This utilization pattern can be seen on Figure IV.3
- 3. Overall each year, approximately 94-95% of all short/variable-term clients have experienced one admission in a year, with most of the remaining clients obtaining two admissions.
- 4. The frequency of admission is the same for alcohol and for drugs (and thus mirrors that of total clients.
- 5. While total admission of unique clients have increased by 96 (491-395) or 24% over 8 years, the absolute number of clients admitted to short/variable-term residential care for alcohol has declined relative to drugs.
- 6. Over the past 8 years there has been a dramatic change in the type of substance abuse of enrolled clients. In 1992, 93% of all short-term residential clients were admitted for alcohol problems and only 7% for drug abuse. In 1999, only 34% of the clients were treated for alcohol abuse, but 66% of them had drugs as their primary substance abuse problem. This shift can be seen on histogram of Figure IV.3.
- 7. Service duration for alcohol and drug clients are similar, with clients with alcohol abuse has experienced slightly longer stays by 1 to 2 days on average since 1993.
- 8. From 1992 the average length of stay declined from 24 days to 20 days but service duration manifested a sharp increase in 1997 and 1998 to 31 days. The chart on Figure IV.4 shows the pattern of service duration.

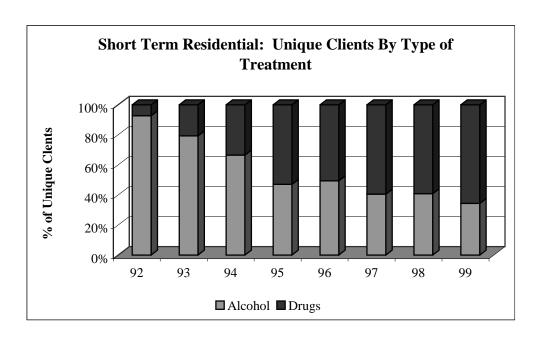


FIGURE IV.3

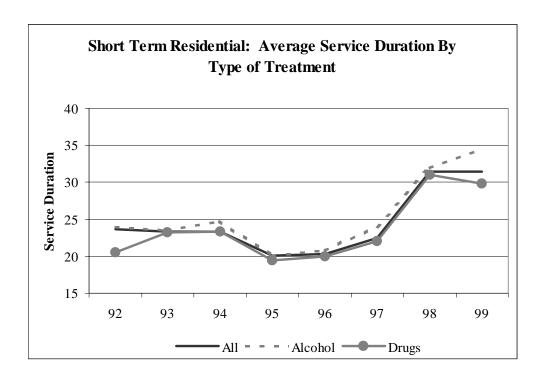


FIGURE IV.4

- Research question: What factors determine clientele service duration in shortterm residential care?
- Dependent variable: Length of stay, measured in the number of days, for which clients resided in a short-term care facility for a treatment episode.
- Unit of analysis: Treatment episode.
- Ordinary Least Squares Equation with variables listed on Table II.1.
- Results of Estimated Equation:
  - 1. As shown by its low adjusted R<sup>2</sup> of .023, the specified equation does not explain much of the variation in the length of stay of clientele episodes. Only three independent variables were statistically significant. These results indicate that additional independent variables (or alternative estimation of the equation) should be employed.
  - 2. Clients who are **married** had slightly shorter service duration in short-term care treatment than unmarried clients.
  - 3. Between 1992 and 1999, there has been a gradual **trend** toward <u>longer</u> length of stays in short-term care facilities.

# C. Long-Term Residential Care

Long-term residential care provides treatment services for alcohol and other drug abuse and dependency for more than 30 days in non-acute care setting (housing) which may include transitional living arrangements such as halfway houses. Since 1992 there has been 10 long-term residential programs funded by DADAMAH. Of these programs, four have been halfway houses. The utilization dimensions of long-term residential inpatient services are presented on Table IV.3.

		_			OF SUBSTA		
19	92	19	993	19	994	19	95
85	5.0	9	8.7	9	2.8	8:	5.0
85	5.0	98.7		9	2.8	8:	5.0
23	35	2	.98	3	06	2	83
#	%	#	%	#	%	#	%
220	94%	280	94%	284	93%	259	92%
15	6%	17	6%	20	7%	22	8%
0	0%	1	0%	2	1%	2	1%
10	1.4	11	10.8	10	9.6	.6 9	
101.4		11	10.8	10	9.6	95	
116 1		25	110		Ç	95	
#	%	#	%	#	%	#	%
111	96%	117	94%	101	92%	85	89%
5	4%	8	6%	9	8%	9	10%
0	0%	0	0%	0	0%	1	1%
70	).3	9	0.5	8	3.5	79	9.2
70	).3	9	0.5	8	3.5	7:	9.2
1.7	19	1	76	1	97	1	89
#	%	#	%	#	%	#	%
109	92%	168	96%	185	93%	176	93%
10	8%	8	5%	10	6%	12	6%
0	0%	0	0%	2	1%	1	1%
	85 85 85 22 # 220 15 0 10 10 11 11 5 0	220 94%  15 6%  0 0%  101.4  101.4  116  # %  5 4%  0 0%  70.3  70.3  71.9  # %  109 92%  10 8%	85.0 9 85.0 9 85.0 9 235	85.0     98.7       85.0     98.7       235     298       #     %     #     %       220     94%     280     94%       15     6%     17     6%       0     0%     1     0%       101.4     110.8       101.4     110.8       116     125       #     %     #     %       111     96%     117     94%       5     4%     8     6%       0     0%     0     0%       70.3     90.5       70.3     90.5       119     176       #     %     #     %       109     92%     168     96%       10     8%     8     5%	85.0       98.7       9         85.0       98.7       9         235       298       3         #       %       #       %       #         220       94%       280       94%       284         15       6%       17       6%       20         0       0%       1       0%       2         101.4       110.8       10         116       125       1         #       %       #       %       #         111       96%       117       94%       101         5       4%       8       6%       9         0       0%       0       0%       0         0       0%       0       0%       0         70.3       90.5       8         70.3       90.5       8         119       176       1         #       %       #       %       #         109       92%       168       96%       185         10       8%       8       5%       10	85.0         98.7         92.8           85.0         98.7         92.8           235         298         306           #         %         #         %           220         94%         280         94%         284         93%           15         6%         17         6%         20         7%           0         0%         1         0%         2         1%           101.4         110.8         109.6           116         125         110           #         %         #         %           111         96%         117         94%         101         92%           5         4%         8         6%         9         8%           0         0%         0         0%         0         0%           70.3         90.5         83.5           70.3         90.5         83.5           70.3         90.5         83.5           119         176         197           #         %         #         %           109         92%         168         96%         185         93%           <	85.0         98.7         92.8         85.8           85.0         98.7         92.8         85.8           235         298         306         2           #         %         #         %         #         %         #           220         94%         280         94%         284         93%         259           15         6%         17         6%         20         7%         22           0         0%         1         0%         2         1%         2           101.4         110.8         109.6         99         99           116         125         110         99         85           5         4%         8         6%         9         8%         9           0         0%         0         0%         0         0%         1           70.3         90.5         83.5         79           70.3         90.5         83.5         79           70.3         90.5         83.5         79           119         176         197         1           #         %         #         %         # <tr< td=""></tr<>

TABLE IV.3 LONG-TERM RESI	DENTIAI	L: CLIEN	T ENROI	LMENT B	Y TYPE C	F SUBSTA	NCE		
TOTAL CLIENTS	19	96	1:	997	1:	998	19	99	
A. Service Duration (A/B): Avg. Length of Service	103	3.2	11	10.1	8	3.0	7:	2.4	
B. Service Quantity (A/B): Avg. Length of Service	10:	3.2	1.	110.1		3.0	72.4		
C. Number of Unique (Individual) Clients	34	11	2	298	3	362	3	78	
D. Frequency of Admissions	#	%	#	%	#	%	#	%	
One	312	92%	266	89%	336	93%	347	92%	
Two	58	8%	29	10%	23	6%	29	8%	
Three	1	0%	3	1%	3	1%	2	1%	
ALCOHOL CLIENTS									
A. Service Duration (A/B): Avg. Length of Service	109	9.0	1.	14.4	8	7.9		90.0	
B. Service Quantity (A/B): Avg. Length of Service	109.0		1:	14.4	8	7.9	9	0.0	
C. Number of Unique (Individual) Clients	140 110		1	11	1	03			
D. Frequency of Admissions	#	%	#	%	#	%	#	%	
One	128	91%	94	86%	107	96%	94	91%	
Two	12	9%	15	14%	4	4%	8	8%	
Three		0%	1	1%	0	0%	1	1%	
DRUG CLIENTS									
A. Service Duration (A/B): Avg. Length of Service	99	.1	10	07.5	8	0.9	6.	5.7	
B. Service Quantity (A/B): Avg. Length of Service	99	0.1	10	07.5	8	0.9	6.	5.7	
C. Number of Unique (Individual) Clients	20	)2	1	.89	2	254	2	77	
D. Frequency of Admissions	#	%	#	%	#	%	#	%	
One	186	92%	174	92%	235	93%	257	93%	
Two	15	7%	13	7%	16	6%	19	7%	
Three	1	1%	2	1%	3	1%	1	0%	

- 1. Although not continuous annually, the number of unique clients enrolled has manifested a rising trend between 1992 1999 from 235 to 378, representing a 61% increase over the eight years.
- 2. On average throughout the 8 years, 93% of <u>all</u> clients had a onetime admission, with virtually all of the remaining clients taking two admissions.
- 3. The number of clients admitted to long-residential care for alcohol has also been irregular and has declined relative to drugs for which enrollment has shown a considerable increase. In 1992 individuals with alcohol problems accounted for 49% of all clients while 51% of the clients suffered from drug abuse. In 1999, abusers enrolled for drugs comprised 73% of all clients compared to 27% of the clients who abused primarily alcohol. This change can be seen on the histogram in Figure IV.5.
- 4. The frequency of admission is the same for alcohol and for drugs (and thus mirrors that of total clients. Approximately 91% for all clients had one admission during the year with virtually all of the remainder having two admissions.
- 5. Service duration for alcohol and drug clients has followed the same pattern but with alcohol clients obtaining slightly longer length of stays in the inpatient facilities than the drug clientele. (See Figure IV.6). Between 1992 and 1999 enrollment can be characterized as bimodal. Enrollment increased initially in 1993 from 1992 and declined to a low point in 1995. Thereafter enrollment rose again, with the length of stays higher than the 1992-1995 period. However, client service duration decreased precipitously in 1998 and 1999 to a length of stay lower than or equal to the 1992-1995 time frame. Such a decline maybe due to the introduction of managed care and the "era" of cost containment.

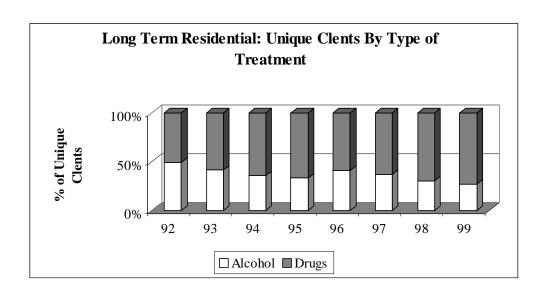


FIGURE IV.5

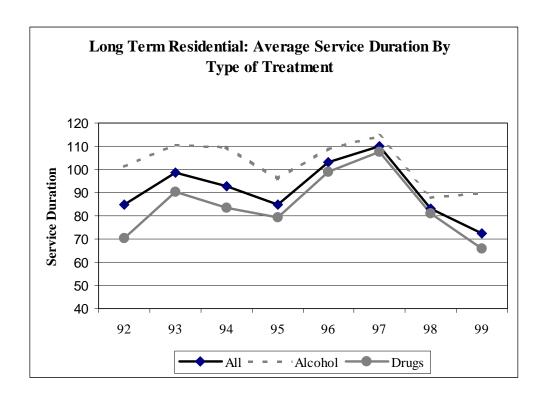


FIGURE IV.6

- Research question: What factors determine clientele service duration in long-term residential care?
- Dependent variable: Length of stay, measured in the number of days, for which clients resided in a long-term care facility for a treatment episode.
- Unit of analysis: Treatment episode.
- Ordinary Least Squares Equation with variables listed on Table III.1.
- Results of Estimated Equation:
  - 1. Many independent variables were statistically significant. However, as shown by its low adjusted R<sup>2</sup> of .06, the specified equation does not explain much of the variation in the length of stay of clientele episodes. This result indicates that additional independent variables (or alternative estimation of the equation) should be employed.
  - 2. **Age** was positively related to service duration. **Older** clients had slightly longer length of stays in long-term residential care.
  - 3. **Female** clients have experienced greater service duration in long-term residential treatment than **male** clients.
  - 4. Clients of **Asian** ethnicity have had substantially longer stays in long-term care than **White** clients, and **Black** and **Hispanic** clients have experienced substantially less time in such care than **White** clients have.
  - 5. Clients who are **single** had considerably longer service duration than **married** and **widow/divorced** clients.
  - 6. Between 1992 and 1999, there has been a strong and clear **trend** toward shorter length of stays in long-term residential care facilities.

# D. Outpatient Care

Outpatient <u>care</u> is one of four types of outpatient <u>services</u> that are provided by the State funded programs. Outpatient services encompass ambulatory care received by a patient who does not reside in a treatment facility. The patient could obtain drug abuse or alcoholism treatment therapy, with or without medication, and also counseling and supportive services. The four modalities subsumed under outpatient services are outpatient care, intensive case management, continuous team treatment, and methadone maintenance.

Outpatient <u>care</u> is the provision of treatment services in the form of periodic counseling and therapies that are delivered in either individual, family, or group sessions (encounters) of short time duration, viz. an hour per session. Between 1992 and 1999, the State program has financed, partially or entirely, 18 separate outpatient care programs through contracts with 7 providers. The utilization dimensions of "traditional" outpatient care are given in Table IV. 4.

TABLE IV.4: OUTPATIENT	Γ CARE: C	CLIENT E	NROLLM	ENT BY T	YPE OF S	UBSTANC	E	
TOTAL CLIENTS	19	92	19	993	19	)94	19	995
A. Service Duration: Avg. Length of Service	23′	7.3	25	53.4	23	37.0	19	4.0
B. Service Quantity: Avg. Number of Sessions	18	5.0	1	2.8	13.8		1.	3.5
C. Number of Unique (Individual) Clients	1,9	01	1,	655	1,	1,490		888
D. Frequency of Admissions	#	%	#	%	#	%	#	%
One	1,782	94%	1,399	85%	1,3146	88%	1,782	94%
Two	117	6%	216	13%	148	10%	100	5%
Three	2	0%	29	2%	26	2%	6	0%
Four or More	0	0%	11	1%	2	0%	0	0%
ALCOHOL CLIENTS								
A. Service Duration: Avg. Length of Service	194	4.3	23	35.0	21	16.3	16	6.1
B. Service Quantity: Avg. Number of Sessions	14	14.1 11.9 12.8		12	2.8			
C. Number of Unique (Individual) Clients	95	59	7	81	6	555	8	56
D. Frequency of Admissions	#	%	#	%	#	%	#	%
One	935	98%	727	93%	605	90%	804	94%
Two	23	2%	51	7%	38	8%	49	6%
Three	1	0%	2	0%	12	2%	3	0%
Four or More	0	0%	1	0%	0	0%	0	0%
DRUG CLIENTS								
A. Service Duration: Avg. Length of Service	279	9.0	26	57.4	25	53.7	21	7.9
B. Service Quantity: Avg. Number of Sessions	23	.1	1	4.3	1	5.2	14	4.6
C. Number of Unique (Individual) Clients	95	57	905 826		10	)41		
D. Frequency of Admissions	#	%	#	%	#	%	#	%
One	876	92%	729	81%	752	88%	996	96%
Two	81	9%	144	16%	93	11%	42	4%
Three	0	0%	22	2%	11	1%	3	0%
Four or More	0	0%	10	1%	2	0%	0	0%

TABLE IV.4 OUTPATIENT	CARE: C	LIENT E	NROLLMI	ENT BY TY	YPE OF SU	JBSTANCE	2	
TOTAL CLIENTS	19	96	19	)97	19	)98	19	99
A. Service Duration: Avg. Length of Service	20	7.2	20	7.3	19	95.6	18	0.0
B. Service Quantity: Avg. Number of Sessions	12	0	8	3.7	10.5		9	.4
C. Number of Unique (Individual) Clients	20	43	20	)25	24	193	3032	
D. Frequency of Admissions	#	%	#	%	#	%	#	%
One	1,837	90%	1,858	92%	2,283	92%	2,799	92%
Two	183	9%	153	8%	197	8%	213	7%
Three	21	1%	11	1%	12	1%	16	1%
Four or More	3	0%	3	0%	1	0%	4	0%
ALCOHOL CLIENTS								
A. Service Duration: Avg. Length of Service	17:	5.4	16	58.7	16	52.0	15	7.6
B. Service Quantity: Avg. Number of Sessions	11	.5	8	3.5	1	0.7	9	.7
C. Number of Unique (Individual) Clients	82	20	9	35	9	37	1,0	018
D. Frequency of Admissions	#	%	#	%	#	%	#	%
One	758	92%	694	93%	877	94%	954	94%
Two	57	7%	54	7%	56	6%	63	6%
Three	5	1%	1	1%	0	0%	1	0%
Four or More	0	0%	0	0%	0	0%	0	0%
DRUG CLIENTS								
A. Service Duration: Avg. Length of Service	228	3.3	23	31.2	21	5.5	19	1.6
B. Service Quantity: Avg. Number of Sessions	12	8	9	9.1	1	0.2	9	.0
C. Number of Unique (Individual) Clients	1,2	36	1,	287	1,	581	2,0	041
D. Frequency of Admissions	#	%	#	%	#	%	#	%
One	1,102	89%	1,183	92%	1,454	92%	1,894	93%
Two	118	10%	93	7%	120	8%	133	7%
Three	15	1%	9	1%	6	0%	10	1%
Four or More	1	0%	2	0%	1	0%	4	0%

- 1. Overall between 1992 and 1999 the number of unique clients has increased by 59%. This increase has been characterized by a very large rise in outpatient care clients after 1997, perhaps due to the impact of managed care and cost containment forces and reflects the shift from inpatient care to outpatient services over time in the State program.
- 2. The substantial 8-year increase masks the facts that the number of clients with alcohol problems has risen by a very small amount (959 to 1018), but drug clients have doubled in number (1,040 to 2,041). Consequently, alcohol clients accounted for 50% of total clients in 1992 but only 34% of them in 1999. (See Figure IV.7).
- 3. Throughout the 8 years, approximately 90% have been admitted for one episode, while most of the remainder has incurred only two episodes.
- 4. The average length of client time within the system for an episode, i.e., service duration, has steadily declined since 1993 from 253.4 days to 180 days (a 29% drop in the time spent receiving services by clients for an episode).
- 5. The pattern of service duration of both drug and alcohol clients has been parallel but since 1995 drug clients have had episodes more than 30 days longer—and up to 50 to 60 days longer—than alcohol clients..
- 6. Like service duration, service quantity has declined since 1994 from a high of 13.8 to 9.4 encounter sessions, or a drop of 46%. (See Figure IV.8).
- 7. However, between 1992 to 1995 drug clients had a higher number of sessions than alcohol clients did but in 1996 and thereafter there has been little difference in the number of sessions by both types of clients.

- Research question: What factors determine clientele service duration in "traditional" outpatient care?
- Dependent variable: Length of time, measured in the number of days, for which clients were enrolled in outpatient care for a treatment episode.
- Unit of analysis: Treatment episode.
- Ordinary Least Squares Equation with variables listed on Table II.1.
- Results of Estimated Equation:
  - 1. Many independent variables were statistically significant. However, as shown by its low adjusted R<sup>2</sup> of .01, the specified equation does not explain much of the variation in the length of time of clientele episodes. This result indicates that additional independent variables (or alternative estimation of the equation) should be employed.
  - 2. **Female** clients have experienced longer service duration in outpatient care (6 days) than **male** clients.
  - 3. Clients of **Hispanic** ethnicity have had substantially longer time in outpatient care (16 days) than **White**, **Black**, and **Asian** clients have.
  - 4. The episodes of clients who were **older** when they **first used** substances are longer in service duration for their outpatient care.
  - 5. Clients who have had more **prior episodes** spend less time in outpatient care for a particular episode.
  - 6. Clients with **marijuana** as their primary substance have longer service duration (of 19 more days) than clients who abuse all other types of substances.
  - 7. Clients who reside in **Kent County** are in outpatient care treatment for (23) fewer days than clients in both **New Castle** and **Sussex Counties**.

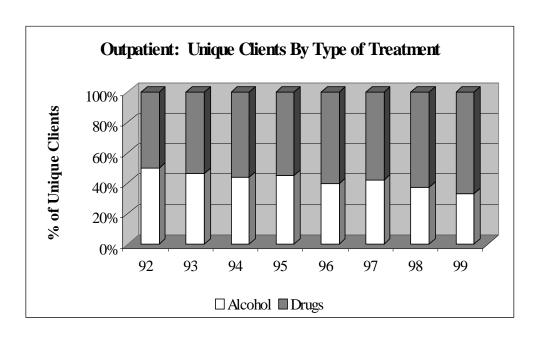


FIGURE IV.7

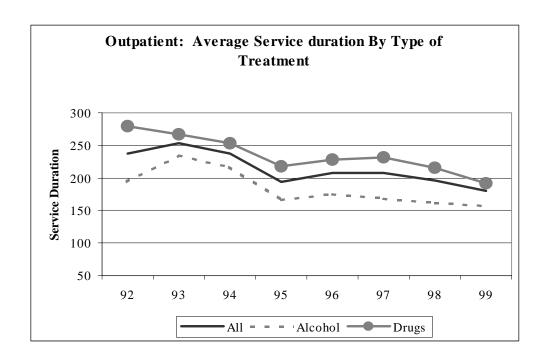


FIGURE IV.8

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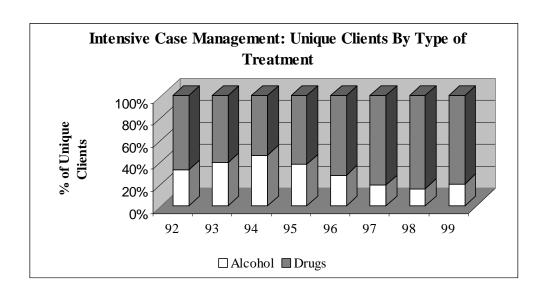
# E. Intensive Case Management

Intensive case management is intensive outpatient care comprised of a bundle of services provided to clients with long-term disabling alcohol and drug addictive disorders. Services are provided to the client in sessions that encompass two or more hours per day for three or more days per week. Between 1992 and 1999, DADAMH has financed, in part or entirely, 8 intensive case management programs through contracts with 5 providers. In the near future this modality will be eliminated from the DADAMH financing. The profile of clientele participation is given in Table IV.5.

TABLE IV.5: INTENSIVE CASE M	IANAGEM	ENT: CL	IENT ENI	ROLLMEN	T BY TYI	PE OF SUBS	STANCE	
TOTAL CLIENTS	19	92	19	993	1	994	19	995
A. Service Duration: Avg. Length of Service	310	0.4	27	75.9	20	03.9	20	3.3
B. Service Quantity: Avg. Number of Sessions	67	'.5	5	59.9		66.0	82	2.7
C. Number of Unique (Individual) Clients	432		5	566	ç	909	5	54
D. Frequency of Admissions	#	# % # % # %		#	%			
One	425	98%	511	90%	835	92%	527	95%
Two	7	2%	53	10%	73	8%	23	5%
Three	0	0%	2	1%	1	0%	3	1%
ALCOHOL CLIENTS		-						
A. Service Duration: Avg. Length of Service	27	3.5	21	10.2	10	67.7	19	2.0
B. Service Quantity: Avg. Number of Sessions	N.	/A	4	0.6	6	7.4	9:	3.5
C. Number of Unique (Individual) Clients	14	142 222 422		2	09			
D. Frequency of Admissions	#	%	#	%	#	%	#	%
One	142	100%	211	95%	392	93%	199	95%
Two	0	0%	10	5%	28	7%	9	5%
Three	0	0%	1	1%	1	0%	1	1%
DRUG CLIENTS		_				-		
A. Service Duration: Avg. Length of Service	329	9.6	32	20.4	2.	37.4	20	9.2
B. Service Quantity: Avg. Number of Sessions	65	5.4	6	3.5	6	55.1	7	6.4
C. Number of Unique (Individual) Clients	291		3	346	4	187	3	44
D. Frequency of Admissions	#	%	#	%	#	%	#	%
One	285	98%	326	94%	469	95%	328	95%
Two	6	2%	20	6%	26	5%	14	4%
Three	0	0%	0	1%	0	0%	2	1%

TABLE IV.5 INTENSIVE CASE MA	ANAGEMI	ENT: CLI	ENT ENR	OLLMEN	Г ВҮ ТҮР	E OF SUBS	TANCE	
TOTAL CLIENTS	19	96	19	)97	1	998	19	)99
A. Service Duration: Avg. Length of Service	208	8.4	17	77.0	1:	52.3	24	17.3
B. Service Quantity: Avg. Number of Sessions	74	.1	4	49.4		0.9	N	J/A
C. Number of Unique (Individual) Clients	423		2	47	1	115	4	40
D. Frequency of Admissions	#	%	#	%	#	%	#	%
One	392	93%	227	92%	109	95%	33	83%
Two	29	7%	20	8%	6	5%	6	15%
Three	2	1%		0%		0%	1	3%
ALCOHOL CLIENTS								
A. Service Duration: Avg. Length of Service	20	1.3	16	54.3	12	21.2	15	50.0
B. Service Quantity: Avg. Number of Sessions	78	3.9	5	5.2	N	V/A	N	I/A
C. Number of Unique (Individual) Clients	11	19 47 18			8			
D. Frequency of Admissions	#	%	#	%	#	%	#	%
One	112	94%	45	96%	18	100%	6	75%
Two	5	5%	2	4%	0	0%	2	25%
Three	2	2%	0	0%	0	0%	0	0%
DRUG CLIENTS								
A. Service Duration: Avg. Length of Service	21	1.4	18	30.1	1:	58.3	27	76.9
B. Service Quantity: Avg. Number of Sessions	71	.1	4	7.0	5	5.9	N	I/A
C. Number of Unique (Individual) Clients	30	)6	200			97	(	32
D. Frequency of Admissions	#	%	#	%	#	%	#	%
One	284	93%	182	91%	91	94%	27	84%
Two	22	7%	18	9%	6	7%	4	13%
Three		0%		0%		0%	1	3%

- 1. The number of unique individual clients initially peaked in 1994 (909) and since then the clientele participating in the modality has precipitously declined by 95% to 32 in 1999.
- 2. Throughout this rise and fall in clientele, drugs always the predominant substance abused by clients, with client abusing drugs accounting for 60% to 80% of all clients between 1992 to 1994. (See Figure IV.9).
- 3. Both drug and alcohol clients have manifested the same admission frequency per year, with more than 90% of all clients having one admission in a year.
- 4. The service duration of clients—i.e., the number of days per episode-- has declined sharply since 1992 until 1998. However, a considerable upturn in the length of participation has occurred in 1999. The length of service has always been higher for drug clients than alcohol ones, but the difference has ranged per year between 10 to a 120 days. (See Figure IV.10).
- 5. The service quantity per client episode,--i.e., the average number of encounter sessions—was stable from 1992 to 1994 and then peaked in 1995, rising from approximately 65 sessions to 82 sessions. Thereafter the number of client encounters has taken a sharp downturn to approximately 50 per episode.



**FIGURE IV.9** 

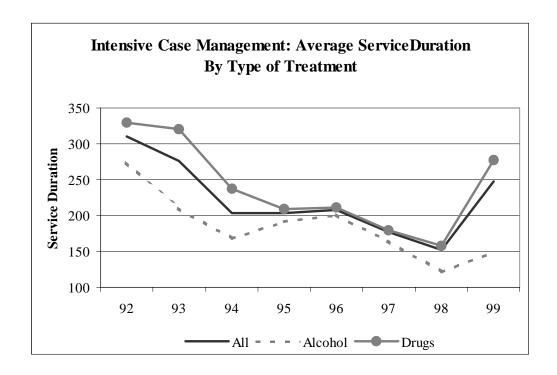


FIGURE IV. 10

- Research question: What factors determine clientele service duration in intensive case management?
- Dependent variable: Length of time, measured in the number of days, for which clients were enrolled in intensive case management for a treatment episode.
- Unit of analysis: Treatment episode.
- Ordinary Least Squares Equation with variables listed on Table II.1.
- Results of Estimated Equation:
  - 1. Only a few independent variables were statistically significant. Moreover, as shown by its low adjusted R<sup>2</sup> of .03, the specified equation does not explain much of the variation in the length of stay of clientele episodes. This result indicates that additional independent variables (or alternative estimation of the equation) should be employed.
  - 2. Clients who were **older** when they **first used** substances spend a longer time in outpatient care for their treatment episode.
  - 3. Clients who have had more **prior episodes** spend less time in outpatient care for a particular episode.
  - 4. Clients with **crack** as their primary substance have shorter service duration (of 41 fewer days) than clients who abuse all other types of substances.
  - 5. Clients who reside in **Sussex County** are in outpatient care treatment for (62) more days than clients in both **New Castle** and **Kent Counties**.
  - 6. Between 1992 and 1999, there has been a strong and clear **trend** toward shorter time of enrollments in outpatient care treatment for each episode.

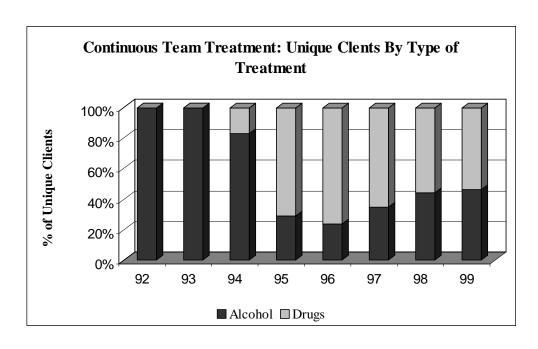
### F. Continuous Treatment Team

Continuous team treatment (CTT) is also intensive outpatient care. Services are provided to clients with long—term disabling alcohol and drug addictive disorders in the form of an array of continuous support services. The CTT model is a team approach to case management that provided almost exclusively in community setting. Team members with medical, nursing, social work, counseling and vocational rehabilitation backgrounds share clinical responsibility of clients. Services are inclusive of treatment therapy, vocational, educational and social counseling. From 1992 to 1999, DADAMH has financed 6 programs contracted through 4 providers. As a distinctive program, CTT will be terminated in the near future and clients who were eligible for such intensive services are to be entered into the State's long—term care program. Table IV.6 shows the clientele dimensions involving CTT.

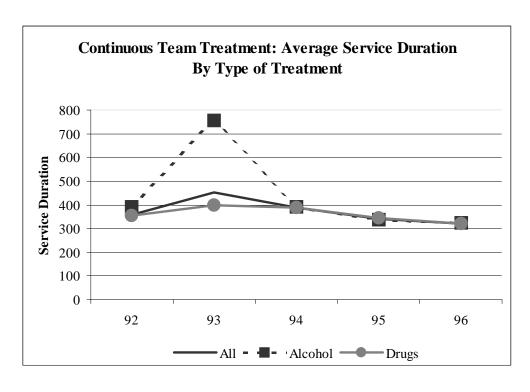
TABLE IV.6: CONTINUOUS TEAN	_	·	IENT EN	ROLLMEN	T BY TY	PE OF SUB	,		
TOTAL CLIENTS	1	992	1	1993	1	994	1995		
A. Service Duration: Avg. Length of Service	N	V/A	]	N/A	1	N/A	358.0		
B. Service Quantity: Avg. Number of Sessions	N	J/A	]	N/A		N/A	N/A		
C. Number of Unique (Individual) Clients	2 3			54	100				
D. Frequency of Admissions	#	%	#	%	#	%	#	%	
One	2	100%	3	100%	54	100%	98	98%	
Two		0%		0%		0%	2	2%	
Three		0%		0%		0%		0%	
ALCOHOL CLIENTS		-		-		<del>.</del>		<del>-</del>	
A. Service Duration: Avg. Length of Service	N	J/A	]	N/A	1	N/A	392.6		
B. Service Quantity: Avg. Number of Sessions	N/A		]	N/A	l	N/A	N	N/A	
C. Number of Unique (Individual) Clients		2	3 45		45		29		
D. Frequency of Admissions	#	%	#	%	#	%	#	%	
One	2	100%	3	100%	45	100%	29	100%	
Two		0%		0%		0%		0%	
Three		0%		0%		0%		0%	
DRUG CLIENTS									
A. Service Duration: Avg. Length of Service		-		-	1	N/A	35	53.6	
B. Service Quantity: Avg. Number of Sessions		-		-		-		-	
C. Number of Unique (Individual) Clients		0	0			9	,	71	
D. Frequency of Admissions	#	%	#	%	#	%	#	%	
One			0		9	100%	69	97%	
Two						0%	2	3%	
Three						0%		0%	

TABLE IV.6: CONTINUOUS TEAM	I TREATM	IENT: CL	IENT EN	ROLLMEN	T BY TY	PE OF SUB	STANCE	
TOTAL CLIENTS	19	96	19	997	1	998	19	99
A. Service Duration: Avg. Length of Service	45	3.5	38	38.6	34	41.0	32	2.2
B. Service Quantity: Avg. Number of Sessions	N	N/A		J/A	N	J/A	N	//A
C. Number of Unique (Individual) Clients	147		2	288	3	333	3	49
D. Frequency of Admissions	#	% # % # %		#	%			
One	137	93%	268	93%	308	93%	325	93%
Two	10	7%	19	7%	25	8%	21	6%
Three	0	0%	1	0%	0	0%	3	1%
ALCOHOL CLIENTS								
A. Service Duration: Avg. Length of Service	39	3.3	39	91.0	338		324.5	
B. Service Quantity: Avg. Number of Sessions	N	/A	N	J/A	N	J/A	N	/A
C. Number of Unique (Individual) Clients	35 104 148		.48	1	64			
D. Frequency of Admissions	#	%	#	%	#	%	#	%
One	35	100%	102	98%	139	94%	159	97%
Two	0	0%	1	1%	9	6%	5	3%
Three	0	0%	1	1%	0	0%	0	1%
DRUG CLIENTS								
A. Service Duration: Avg. Length of Service	39	8.5	38	37.1	34	43.3	32	0.7
B. Service Quantity: Avg. Number of Sessions		_		-		-		-
C. Number of Unique (Individual) Clients	112 184 186		.86	1	90			
D. Frequency of Admissions	#	%	#	%	#	%	#	%
One	102	91%	166	90%	171	92%	175	92%
Two	10	9%	18	10%	15	8%	13	7%
Three		0%		0%		0%	2	1%

- 1. Since 1994 CTT enrollment has risen substantially every year culminating in an increase of 546% over six years.
- 2. Although initially in 1994 clients with alcohol problems were dominant, drugs became the predominant substances abused by clients, always exceeding 55% of all clientele. However, as the program has progressed, individuals with alcohol problems have increased in their share of modality clientele. (See Figure IV.11).
- 3. Both drug and alcohol clients have manifested the same admission frequency per year, with more than 90% of all clients having one admission in a year.
- 4. The service duration of clients—i.e., the number of days per episode—has declined sharply since the peak of 453 days in 1996 to 322 days in 1999. The length of service has always been only slightly higher for drug clients than alcohol ones, with a difference of approximately 5 days. (See Figure IV.12).



**FIGURE IV.11** 



**FIGURE IV.12** 

- Research question: What factors determine clientele service duration in continuous team treatment?
- Dependent variable: Length of time, measured in the number of days, for which clients were enrolled in continuous team treatment for a treatment episode.
- Unit of analysis: Treatment episode.
- Ordinary Least Squares Equation with variables listed on Table II.1.
- Results of Estimated Equation:
  - 1. Many independent variables were statistically significant. Moreover, as shown by its high adjusted  $R^2$  of .40, the specified equation explains considerable variation in the length of time that clientele participate in continuous team treatment for an episode.
  - 2. **Female** clients have experienced longer service duration in continuous team treatment (49 days) than **male** clients.
  - 3. Clients who are **single** have had substantially longer time in continuous team treatment (52 days) than clients with other **marital status**.
  - 4. The CTT episodes of clients who have entered the treatment for the **first time** spend (55) fewer days in treatment.
  - 5. Clients who reside in **Kent** and **Sussex Counties** are enrolled in CTT for more days than clients in **New Castle County**.
  - 6. Between 1992 and 1999, there has been a strong and clear **trend** toward shorter time of enrollments for each CTT episode.

# G. Methadone Maintenance

Methadone Maintenance is the provision of methadone as a substitute drug for heroin for those individuals addicted to the latter substance. Since 1992, the State program has funded 9 programs through contracts with 2 providers. The contractors are BCI and Kent County Counseling. Clientele participation in Methadone Maintenance programs is presented in Table IV.7.

TABLE IV.7: METHADONE MAINTENANCE								
	1992		1993		1994		1995	
A. Service Duration: Avg. Length of Service	738.7		646.6		261.3		290.2	
B. Service Quantity: Avg. Number of Sessions						43	3	7.3
C. Number of Unique (Individual) Clients	35		71		259		413	
D. Frequency of Admissions	#	%	#	%	#	%	#	%
One	35	100%	71	100%	231	89%	379	92%
Two	0	0%	0	0%	26	10%	33	8%
Three	0	0%	0	0%	2	1%	1	0%
Four or More (4 to 36)	0	0%	0	0%	0	0%	0	0%
	1996	96	1997		1998		1999	
A. Service Duration: Avg. Length of Service	266.0		294.7		247.1		188.7	
B. Service Quantity: Avg. Number of Sessions	34.9		29.6		23.6		10.9	
C. Number of Unique (Individual) Clients	513		642		817		994	
D. Frequency of Admissions	#	%	#	%	#	%	#	%
One	400	79%	423	66%	565	69%	760	77%
Two	95	18%	183	29%	217	27%	187	19%
Three	12	3%	35	6%	27	3%	40	4%
Four or More (4 to 36)	1	0%	1	0%	8	1%	7	1%

- 1. The number of unique clients has increased tremendously on an annual basis by 2,840% since 1992. (See Figure IV.13).
- 2. During this rise in clientele, service duration has varied considerably per episode within each year between 1992 and 1999.
- 3. Since 1994 there has been a general downward trend in the service quantity. The average number of encounter sessions has fallen steadily each year from 43 in 1994 to 11 in 1999.
- 4. Throughout the 8 years, the frequency of admission by individual clients has changed considerably. In 1994 and 1995 approximately 90% have been admitted for one episode, while most of the remainder has incurred only two episodes. Thereafter, onetime episodes dropped to approximately 80%, with the remaining 20% of all clients experiencing 2 and 3 episodes per year.

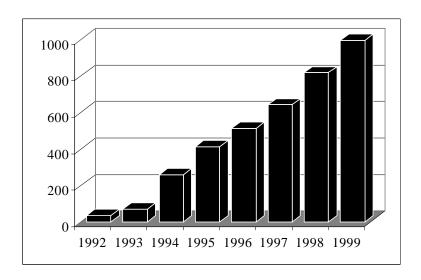


Figure IV.13

- Research question: What factors determine clientele service duration in methadone maintenance?
- Dependent variable: Length of time, measured in the number of days, for which clients were enrolled in methadone maintenance for a treatment episode.
- Unit of analysis: Treatment episode.
- Ordinary Least Squares Equation with variables listed on Table II.1.
- Results of Estimated Equation:
  - 1. Only a few independent variables were statistically significant. However, as shown by its low adjusted R<sup>2</sup> of .27, the specified equations explain a considerable amount of the variation in the length of time of clientele methadone episodes.
  - 2. **Older** clients have had longer service duration in methadone maintenance.
  - 3. Clients who reside in **Kent** and **Sussex Counties** are enrolled in methadone maintenance for substantially fewer days than clients in **New Castle County**.
  - 4. Clients with higher **household income** participate for a longer time frame for each methadone maintenance episode.

# H. Service Quantity (Encounters/Sessions) in Outpatient Services

The following presentation is a statistical analysis of the service quantity consumed in outpatient services. Service quantity is the amount of encounters (or sessions) that an individual participates/receives while a client in either outpatient care, intensive case management, CTT or methadone maintenance. First, the determinants of the number of client encounters are examined. Second the reasons for the number of encounters by types of sessions—individual, group, family therapies—are explored.

### 1. The Number of Encounters

### **Statistical Analysis**

- Research question: What factors determine clientele service quantity in the various modalities of outpatient services?
- Dependent variable: Number of encounters, measured in the number of sessions, when clients were enrolled in outpatient services for a treatment episode.
- Unit of analysis: Treatment episode.
- Ordinary Least Squares Equation with variables listed on Table II.1 with the addition of (dummy) variables of outpatient care, methadone maintenance, and intensive case management (the reference category).
- Results of Estimated Equation:
  - 1. Several independent variables were statistically significant. Moreover, as shown by its adjusted R<sup>2</sup> of .25, the specified equation explains a considerable amount of the variation in the number of encounters that are received by clientele in outpatient services.
  - 2. **Female** clients have more encounter sessions per episode than **male** clients.
  - 3. Clients with **alcohol, coke, crack, and marijuana** problems have fewer encounters per episode than clients who abuse either **heroin** or "other" drugs.
    - Alcohol clients have 4 fewer sessions per episode than clients who are **heroin** or "other" drug abusers.
    - **Coke** clients have 5 fewer sessions per episode than clients who are **heroin** or "**other**" drug abusers.
    - **Marijuana** clients have 5 fewer sessions per episode than clients who are **heroin** or "**other**" drug abusers.
    - Crack clients have 7 fewer sessions per episode than clients who are heroin or "other" drug abusers.
  - 4. Between 1992 and 1999, there has been a clear **trend**, manifesting a gradual change, toward fewer encounter sessions per episode for clients enrolled in outpatient services.
  - 5. Clients enrolled in either "traditional" outpatient care or methadone maintenance are engaged in fewer treatment sessions than clients participating in intensive case management.
    - Clients enrolled in "traditional" outpatient care received 37 fewer sessions per episode than clients in intensive case management.

• Clients enrolled in **methadone maintenance** received 25 fewer sessions per episode than clients in **intensive case management**.

### 2. Types of Encounters

# **Statistical Analysis: Individual Counseling**

- Research question: What factors determine clientele service quantity of individual sessions?
- Dependent variable: Number of individual-therapy encounters, measured in the number of sessions, when clients were enrolled in outpatient services for a treatment episode.
- Unit of analysis: Treatment episode.
- Ordinary Least Squares Equation with variables listed on Table II.1 with the addition of (dummy) variables of outpatient care, methadone maintenance, and intensive case management (the reference category).
- Results of Estimated Equation:
  - 1. Several independent variables were statistically significant. Moreover, as shown by its adjusted R<sup>2</sup> of .16, the specified equation explains a considerable amount of the variation in the number of individual encounters that are received by clientele in outpatient services.
  - 2. **Female** clients have (approximately 2) more individual encounter sessions per episode than **male** clients.
  - 3. Clients with **alcohol**, **coke**, **crack**, **and marijuana** problems have fewer encounters per episode than clients who abuse either **heroin** or "**other**" drugs.
    - Alcohol clients have 4 fewer individual sessions per episode than clients who are **heroin** or "other" drug abusers.
    - **Coke** clients have 3 fewer individual sessions per episode than clients who are **heroin** or "**other**" drug abusers.
    - **Marijuana** clients have 4 fewer individual sessions per episode than clients who are **heroin** or "other" drug abusers.
    - **Crack** clients have 4 fewer individual sessions per episode than clients who are **heroin** or "**other**" drug abusers.
  - 4. Between 1992 and 1999, there has been a clear **trend**, manifesting a gradual change, toward fewer individual encounter sessions per episode for clients enrolled in outpatient services.
  - 5. Clients enrolled in either "traditional" outpatient care or methadone maintenance engaged in fewer individual treatment sessions than clients participating in intensive case management.
    - Clients enrolled in "traditional" outpatient care received 7 fewer individual sessions per episode than clients in intensive case management.
    - Clients enrolled in **methadone maintenance** received 6 fewer individual sessions per episode than clients in **intensive case management**.

# Statistical Analysis: Family Counseling

- Research question: What factors determine clientele service quantity of family counseling sessions?
- Dependent variable: Number of family counseling encounters, measured in the number of sessions, when clients were enrolled in outpatient services for a treatment episode.
- Unit of analysis: Treatment episode.
- Ordinary Least Squares Equation with variables listed on Table II.1 with the addition of (dummy) variables of outpatient care, methadone maintenance, and intensive case management (the reference category).
- Results of Estimated Equation:
  - 1. Several independent variables were statistically significant. However, as shown by its low adjusted R<sup>2</sup> of .07, the specified equation explains only a small amount of the variation in the number of individual encounters that are received by clientele in outpatient services.
  - 2. **Black** clients have (approximately 1) fewer family counseling sessions per episode than clients of all other races and ethnicity.
  - 3. **Married** clients have (approximately 1) more family counseling sessions per episode than single and divorced/widowed/separated clients.
  - 4. The number of family counseling session increased but only very slightly as income of clients rose.
  - 5. Clients with **alcohol**, **coke**, **crack**, **heroin and marijuana** problems have fewer encounters per episode than clients who abuse either or "other" drugs.
    - Alcohol clients have 4 fewer individual sessions per episode than clients who are **heroin** or "other" drug abusers.
    - **Coke** clients have 3 fewer individual sessions per episode than clients who are **heroin** or "**other**" drug abusers.
    - **Marijuana** clients have 4 fewer individual sessions per episode than clients who are **heroin** or "other" drug abusers.
    - **Crack** clients have 4 fewer individual sessions per episode than clients who are **heroin** or "**other**" drug abusers.
  - 6. Between 1992 and 1999, there has been a slight **trend**,-- manifested by very small annual reductions,-- toward fewer family counseling encounters per episode for clients enrolled in outpatient services.
  - 7. The numbers of family counseling encounters were not different among clients enrolled in "traditional" outpatient care, methadone maintenance or intensive case management.