

EL PASO COUNTY HEALTH DEPARTMENT

501 N. Foote Avenue

Colorado Springs, Colorado

ANNUAL REPORT

Venereal Disease Program

January 1, 1978 - December 31, 1978

"There's too many beers  
I haven't drunk  
And too many thoughts  
I haven't thunk."

(Kris Kristofferson)

This Report is dedicated to Lynn  
Phillips and Diane Richards, who  
contributed so much to our successes  
(1973 - 1978).

Introduction

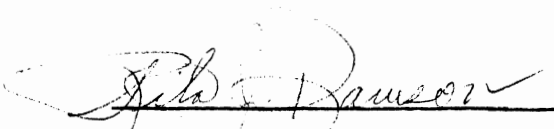
Gonorrhea control is a jig saw puzzle with most of the pieces missing. In the enclosed we detail the apparent impact of some of the pieces we've positioned. Hopefully they were correctly placed.

Our perceptions about the importance of "core" groups - notably our street prostitutes and the urethrally asymptomatic males - have received mixed reviews. A common criticism is that we've permitted our enthusiasm to distort true perspective. Rather than holding opinions, we are held by them. Maybe. Ours is admittedly a glandular style. We think more with our adrenal, than our cerebral, cortex. And yet there is reason in our madness!

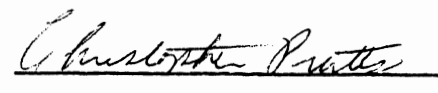
- The presentation and conclusions that follow will generate skepticism in the dispassionate reader. So be it. If incorrect, our theories will be discredited soon enough. The crucial thing in gonorrhea control is to do something. Until the puzzle is complete, action is more important than theory. There are many thoughts about gonorrhea dynamics that haven't been "thunk"; yet successful control need not await their birth or demonstrated validity. Epidemiology is the art of the practical, the possible and the probable. With sound theory preferably, but not necessarily.

Part I comprises a narrative of gonorrhea's behavior (it behaved itself!) in 1978; Part II consists of the traditional, laborious Tables.

Faithfully and Joyfully Submitted,

  
Rita J. Dawson  
Office Manager

  
John Potterat  
Director

  
Christopher Pratts  
Epidemiologist

PART I

"The record shows  
We took the blows  
And did it our way"

(Paul Anka's My Way,  
paraphrased)

Gonorrhea in 1978

A. For Calendar 1978 we report 1515 cases of gonorrhea, a virtual 25% decline over 1977. For the first time since disciplined control was instituted in 1972 we inherit the pleasant task of explaining a substantial, sustained decrease. It's an easy feeling.

Public health means prevention; there is no other reason for its existence. That we were apparently able through implementation of innovative control strategies to prevent nearly 500 cases in 1978 constitutes a solid endorsement of the value of public health measures.

It remains the burden of Part I of this Report to detail the dynamics of our successes. First the trends, here and elsewhere...

Reported Gonorrhea Cases 1972 - 1978

<u>Year</u>	<u>El Paso County</u>	<u>%Change</u>	<u>Colorado</u>	<u>%Change</u>	<u>USA</u>	<u>%Change</u>
1972	1541		7,734		767,215	
1973	1597	+3.6%	9,326	+20.6%	842,621	+9.8%
1974	1630	+2 %	10,307	+10.5%	906,121	+7.5%
1975	1681	+3.1%	11,531	+11.9%	999,937	+10.4%
1976	* 1978	+17.7%	11,239	-2.5%	1,001,994	+0.2%
1977	1998	+1 %	11,589	+ 3.1%	1,000,177	-0.2%
1978	* 1515	-24.2%	11,558	-0.3%	1,006,347	+0.6%

The United States experienced a decade of 10 -15% annual increases that ended around 1975. Because of vigorous control efforts, initiated in 1972, El Paso County's rates of increase were held to the 2 - 3% range. In 1976 new control strategies based on the detection and removal of the urethrally asymptomatic male helped occasion a sudden surge in reported cases for that year, while gonorrhea declined elsewhere. (Indeed, morbidity decline in Colorado would have been 5% rather than 2.5% in 1976 had El Paso County continued previous trends). By 1978 the U.S. exhibited a slight increase while Colorado should have recorded a 4% increase, had we sustained 1976 - 1977 El Paso County levels. In sum, gonorrhea morbidity can be said to have stabilized in Colorado and the United States since 1975, except in El Paso County. We feel the anomalies can best be explained by the introduction in 1976 of new strategies. These were not being rigorously implemented elsewhere. It is notable as well that El Paso County's population increased 30% since 1971, while gonorrhea morbidity returned to pre - 1972 levels by 1978.

Here is not the place to detail the strategies marshalled to combat gonorrhea in El Paso County; Annual Report 1976 described these, while Annual Report 1977 predicted their outcome.

We have made our assertions. It is time to offer supportive evidence. We are aware of the dangers inherent in interpreting disease trends; we claim no immunity

from this condition. Highly suggestive as our data are, their interpretation may be simply self-serving.

How can we know that circa 500 cases were prevented by strategies designed to interrupt transmission? It seems to us that the best way to characterize gonorrhea morbidity is not merely by standard criteria (e.g. age/race/sex/reporting source) but by reason for presentation as well. How was this case of gonorrhea detected? Males ordinarily present because of urethral symptoms: discharge and/or dysuria of various intensity. These are "Volunteers". Co-morbidity is another mechanism: the patient presents with another S.T.D. and is screened, usually by public V.D. Clinics, for asymptomatic GC. These are "Screenees". The last category comprises those detected via casefinding. These are "Contacts" and they are usually non-symptomatic. Females are detected somewhat differently, though the same categories can be used. "Volunteers" ordinarily present because of symptoms: abnormal gynecologic symptoms, very often discomfort or pain (P.I.D.). "Screenees" tend to be a by-product of the screening program (The idea that susceptible females, while in the stirrups, are automatically screened for G.C.). "Contacts" are epidemiologically linked, referred usually by a frankly symptomatic male.

The chief shortcoming of orthodox control programs is their failure to implement active mechanisms to detect the urethrally asymptomatic male. This is very surprising. Epidemiologic information has long suggested that the prevalence of asymptomatic urethral G.C. in the male ranges from 15 - 20%. If we can trust that more than a million males are estimated to be infected annually in the U.S., there must be close to 200,000 that are affected asymptotically. And yet these are not being systematically addressed. They are seldom screened, except in public clinics interested in co-morbidity, nor are they likely to be intercepted by complications. The most viable mechanism is casefinding. In the non-homophile population this means

interviewing or counseling female infectees. This procedure is not highly recommended by V.D. Control authorities. It does, however, comprise the cornerstone of our control efforts: the follow-up of selected females whose diagnosis implies the presence of an asymptomatic (or subsymptomatic) male in their sexual environment. The removal of this asymptomatic male should curtail a major substrate for continued transmission - silent infection in a seldom intercepted patient. If successful, fewer future cases should be generated. Do our data suggest its validity?

It is not significant simply to state that 500 cases may have been prevented. It is important to detail where the prevented cases may have occurred. If our hypotheses are correct, then a control program that removes asymptomatic transmitters should see its greatest decline mainly in contact to gonorrhea females. Also, the fewer infected females, the fewer symptomatically infected males. (The incidence of asymptomatic male G.C. is probably 1 - 2%; the prevalence - because these tend to accumulate undetected - is 15 - 20%). These are precisely the areas of greatest decline when we compare 1977 with 1978. Of the 483 case decrease, 394 (81.6%) comprise contact to G.C. females (-101 cases) and symptomatic males (-293 cases).

El Paso County  
Gonorrhea Morbidity By Gender and Reason For Presentation  
 1976 - 1978

<u>MALES</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>
Volunteers (Usually symptomatic)	1119	1132	* 839
Contacts and Senees (Usually asymptomatic)	147	152	125
Totals	<u>1266</u>	<u>1284</u>	<u>964</u>

<u>FEMALES</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>
Volunteers (Usually P.I.D.)	* 130	111	* 85
Screenees (Usually vaginitis or incidental finding)	* 225	214	* 178
Contacts	<u>* 357</u>	<u>389</u>	<u>* 288</u>
Totals:	712	714	551

(Note the steady decline of females in the P.I.D. and Screenees categories. Since half of them have an asymptomatic male in their sexual environment, his removal "causes" fewer future cases to occur.)

The years 1976 and 1977 were essentially similar with respect to reported cases by age/race/sex/reporting source and reason for presentation. Case decline awaited virtually 18 months post implementation of these new control strategies (In early 1976) to be observed. This emphasizes the observation, recorded in Annual Report 1977, that it takes time before impact can be substantially felt. Clinically, gonorrhea is an acute infection; epidemiologically it is, however, a disease of great chronicity. Endemicity encourages chronicity and much of the endemicity is occasioned by the asymptomatic male.

All of the above illuminates the importance of diagnostic considerations (i.e. how was the case detected?) in gonorrhea surveillance. Additionally, it is our feeling that core groups (the idea that numerically small gonorrhea populations are responsible for most continued transmission) should be characterized mainly by diagnosis, as well as by sexual behaviors. Prostitutes or promiscuous patients may be "core" but so are females with P.I.D., Screenee females and female repeaters since these usually harbor an asymptomatic male in their sexual environment and since they usually harbor G.C. for a comparatively long duration before detected. Of all the "core" groups, none is probably of greater import for endemicity than the asymptomatic male.



Most control programs face an overwhelming caseload: it is impossible in most areas, given current resources, to perform case management (contact interview and contact follow-up) on a significant proportion of the infected population. The experiment in El Paso County suggests that by addressing a small and eminently manageable proportion of the total burden, substantial reduction can occur. We conducted disciplined case management on approximately 300 cases annually, mostly females, and these comprise about 15% of the total reported gonorrhea. Of these patients we were able to interview only 75% <sup>and</sup> proved unable to find one-third of their sexual contacts for assessment. And yet the impact on aggregate morbidity was appreciable.

Ideally, our aim is to reduce the burden so significantly that, given current manpower resources, most infected patients can undergo thorough case management. Until this occurs, the concentration of effort on groups whose diagnosis or behaviors argues for core membership seems most appropriate.

They said it couldn't be done; that gonorrhea couldn't be controlled. They cited the disease's characteristics - short and infectious incubation period, high spread rate, man's poor resistance and the dearth of preventive mechanisms (vaccines) - as promoting uncontrollable spread. It appears to us that these are biologically accurate observations but that they do not necessarily obtain epidemiologically. The aggregate gonorrhea burden, rather, seems to perpetrate itself relatively slowly, its endemicity stubbornly sustained by asymptomatic males. Given current diagnostic and therapeutic tools, the disease would soon burn itself out for lack of sustained transmission were it not for this silent male transmitter. Even if we are wrong about his impact on continued transmission, programs still face the fact of his existence (200,000 strong in the U.S.?) and the consequent need to detect him. Irrespective of his importance, he must be addressed.

Our program will continue to assign highest priority to his detection even if we have overstated his importance in gonorrhea transmission. Of all the infectees in the reservoir he has the least chance of detection without active program intervention. This is so for many reasons, not least of which is his feeling of invulnerability. Self-referral systems perform poorly: females experience great difficulty in motivating him to seek care. It is, then, up to us.

#### B. Street Prostitution

Skeptics of the impact of solid public health measures applied diligently to presumed core populations are invited to scrutinize the following.

Passive gonorrhea control efforts vis-à-vis street prostitutes existed between June, 1970 (The inception of our Health Hold system) through 1975. Prostitutes were examined when program intervention or the police successfully motivated them to seek examination, woefully infrequent events! A vigorous system was implemented in mid - 1976 (described elsewhere) stimulating prostitutes to regular (Ideally, monthly) examination.

Retrospective chart review revealed that between 1970 and 1975 there were 794 initial visits with 235 (29.6%) positive G.C. cultures. On the average, thus, there were approximately 133 visits and 39 positive cultures annually. The following table illustrates that initial visits (excludes test of cure or follow-up visits) more than doubled since 1976 and that positivity rates have been halved annually since.

#### El Paso County Street Prostitutes

1970 - 1978

<u>Year</u>	<u>Initial Visits</u>	<u>G.C. Cases</u>	<u>% Positive</u>
1970-1975 (Averaged)	133 (Average)	39 (Average)	29.3 (Average)
1976	341	119	34.9
1977	311	57	18.3
1978	348	32	9.2

<u>By Semi-Annual Period:</u>	<u>Initial Visits</u>	<u>GC Cases</u>	<u>% Positive</u>
7/76 - 12/76	150	54	36 %
1/77 - 6/77	151	31	20.5%
7/77 - 12/77	160	26	16.3%
1/78 - 6/78	181	19	10.5%
7/78 - 12/78	167	13	7.8%

(This table in way of illustrating the "gradualness" of the decline. Note especially that clinic attendance remains similar for each period, while the absolute number of positives declines steadily. Nice, isn't it?)

Critics of the system currently in use to "legally force" street prostitutes into periodic, regular examination will be hard put to deny its impact on morbidity. Though the system may achieve little in preventing infection, in curtailing the duration of the disease a substantial impact can be recorded. Along with our strategies designed to remove the asymptomatic male the contribution of prostitute control cannot be underestimated in the 25% decline reported for Calendar, 1978.

PART II

Gonorrhea Repeaters

We report 1515 cases of gonorrhea for calendar 1978, a rate of 473 per 100,000 population (Assuming a County population of circa 320,000). This rate was 560 in 1973; 572 in 1974; 590 in 1975; 664 in 1976 and 655 in 1977. The difference between 1977 and 1978 is really appreciable.

Of the 1515 cases, 255 (16.8%) represent infections in 117 people, a moderate rate of recidivism. This rate was 17.7% in 1973; 19.5% in 1974; 14.5% in 1975; 15.7% in 1976 and 20.2% in 1977. Our control strategies seemed to have had but moderate impact on repeaters - a thorn in our side since we should have expected a substantial decline.

The tendency to repeat is still most pronounced in black, military males:

1. 82 of 117 repeaters (70%) are male
2. 50 of 82 male repeaters (61%) are military
3. 44 of 50 military repeaters (88%) are black; with these accounting for 38% of all repeat episodes (97/255).

Female repeaters are 60% caucasian (80% in 1977) and 40% black, (A substantial percentage change over 1977, though the numbers are small.) with prostitutes comprising less than 12% of female repeaters.

Of the 117 repeaters, 102 had 2 episodes each, 9 three episodes each, 6 four each and (lovely!) none with more than 4 each.

# EL PASO COUNTY GONORRHEA MORBIDITY

1973 - 1978

By Month

Year	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Monthly Average	Annual Total
1973	175	150	102	93	122	122	134	149	188	124	146	93	133	1598
1974	110	79	108	133	138	143	203	198	127	155	101	134	135	1629
1975	133	138	122	145	116	126	191	186	171	124	82	146	140	1680
1976	140	119	154	138	158	155	185	174	246	131	213	165	165	1978
1977	193	117	133	182	161	215	134	193	149	145	212	164	167	1998
1978	134	124	107	128	112	134	119	136	129	137	137	118	126	1515

Monthly Venereal Disease Morbidity Report

CALENDAR, 1978

Reporting Source	Morbidity				Age Group										Race			Pro	EX
	Syphilis			Gon	14-19		20-24		25-29		30-39		40+		Cav	Blk	Unk	Syph	Gon
	P&S	E.L.	Other		Syph	Gon	Syph	Gon	Syph	Gon	Syph	Gon	Syph	Gon					
Categories																			
Private Physician																			
Men	1		2	71		4		33	1	13		18	2	3	50	21	3		
Women	1	4	9	125	1	47	2	44	2	21		9	9	4	99	39	1		
V.D. Clinic																			
Men	4	4	2	357		36	3	147	2	109	3	54	2	11	270	95	2	19	256
Women	2	2		290		100	1	115	2	50	1	24		1	210	76	8	6	306
CHC/Pren/Family P.				37		14		15		3		5			31	6			
Planned Parenthood				41		12		16		12		1			35	6			
Health Hold			1	5		3		2	1						4	2			
Fort Carson																			
Men	4	3	3	521	2	85	4	323	2	80	1	31	1	2	177	353	1		
Women		1	2	49		18		23	1	6	1	2	1		27	22	3		
Ent Air Base																			
Men				9				4		3		2			3	6			
Women				1				1								1			
Air Academy																			
Men				6		1		4				1			3	3			
Women				3		1		1		1					2		1		
Totals	12	14	19	1515	3	321	10	728	11	298	6	147	15	21	911	630	19	25	562

Clinic Attendance: 4430 (\$1907.00)

New: 2316

Return: 2114

Treatment Failure 3 Females and 1 male  
(All Clinic)

ER Males: 34  
ER Females: 71

(GC Arthritis: 5 females and 3 males)

Summary of Investigative and Interviewing Activities

CALENDAR, 1978

Originating Agency	Investigations	Disposition of Persons Examined										Totals	Number of Interviews	Contacts Obtained	CT Index
		0	1	2	3	6	7	8	9	X	Y				
Armed Forces	Contact To:														
	1. Primary & Secondary Syph.	2			1	1				3		7	2	6	3.00
	2. Early Latent Syphilis				2	6	2		1	2		13	4	11	2.75
	3. Other Syphilis														
	4. Gonorrhea	5	53		40	69	8	49	3	42	3	272			
Private Physicians	1. Primary & Secondary Syph.	1	1		1					1		4	4	6	1.50
	2. Early Latent Syphilis	5	1		1	1				3		11	2	8	4.00
	3. Other Syphilis														
	4. Gonorrhea	17	42		19	46	11	10	2	94	2	243			
Public Cases (Clinic)	1. Primary & Secondary Syph.	10	6		4	2			4	17		43	6	41	6.83
	2. Early Latent Syphilis	5	1		2	1			1	4		14	4	15	3.75
	3. Other Syphilis														
	4. Gonorrhea	10	74		61	65	12	14	8	120		364	382	821	2.15
Armed Forces Public & Private	Positive S.T.S. Follow-Up	59	27		70	10	2		5	4	10	187			
Clinic	Clinic Patient Field Follow-Up (Rechecks)	46	22		92	17	9		5	2		393			
Totals		160	427		293	218	44	73	29	292	15	1551	404	908	2.25

# of Personal Visits with Private Physicians 10 # of Laboratory Visits 14 Contacts & Follow-Up  
Open at end of Month

1. Syphilis
2. Gonorrhea N/A
3. Other



Monthly Venereal Disease Laboratory Testing Report

CALENDAR, 1978

Tests	No.	Pos.	% Pos.	RX	Disp.	Pndg	V.D.Clinic		private Physicians		Pren	CHC	P.P.C.	Health Hold	F.P.
							Men	Women	Men	Women					
VDRL(Routine)	3367	80	2.4%												
VDRL(Pre-Marital)	0														
FTA	70	42	60%												
Darkfield	13	5	38.5%												
GC Smear	1935	270	14%				1892 (268)					43 (2)			
GC Culture	19223	807	4.2%				2291 (349)	1703 (285)	343 (30)	6390 (61)	526 (6)	1130 (21)	6334 (39)	100 (6)	406 (10)
Trichamonas	543	138	25.4%												
Monilia	517	82	15.9%												
Gravindex	17	5	29.4%												
Urinalysis	19														
Pap	334														
Profiles	5														
Rechecks	568	28	5%				272 (13)	282 (14)	25 (0)	39 (1)					

24 reinfections  
4 Treatment failures

Private Physician Screening (females): 1%  
Planned Parenthood Screening: 0.6%  
CHC Screening: 1.85%  
Prenatal Screening: 1.14%  
Family Planning Screening: 2.5%

## ACTIVITIES REPORT

Clinic or Division \_\_\_\_\_

: CALENDAR      Year 1978

action

MONTHLY DATA

[illegible]

---

CALENDAR      Year 1978

## CUMULATIVE DATA

[illegible]