EL PASO COUNTY HEALTH DEPARTMENT
501 North Foote Avenue
Colorado Springs, Colorado 80909

ANNUAL REPORT

Venereal Disease Program

January 1, 1980 -- December 31, 1980

"Success takes time. Had Puccinni rushed it, our inheritance would have been Madame Caterpillar". *

* Paraphrased from something read long ago, somewhere, its author (regretfully) forgotten.

This Report is dedicated to

Donald E. Woodhouse

Introduction

The enclosed is a flawed document. It reflects the current pressures of work overload. Though not well composed , it includes the pertinent data and their interpretation. We trust that manner was compromised more than matter; yet none of us rests well knowing the presentation to be substandard.

We are currently involved in the implementation of our most ambitious project: a thorough epdemiologic description of the entire cohort of gonorrhea cases diagnosed in Calendar 1981. Many of the data in this Report will receive disciplined treatment subsequently, since we will prepare manuscripts for publication upon completion of our current (1980-1981) investigations. Kindly forgive the enclosed presentation, secure in the knowledge that it will assume superb form in the future.

Faithfully submitted,

Rita Dawson	John Potterat	Christopher Pratts	Donald Woodhouse
Office Manager	Program Director	Epidemiologist	(Fort Carson) Epidemiologist

PART I

Gonorrhea in 1980

For calendar 1980 we report 1520 cases of gonorrhea, compared to 1525 for 1979 and 1515 for 1978. It appears, prima facie at least, that gonorrhea and the County Health Department have opted for a sustained stalemate. This report presents data that undermine that impression.

Although the aggregate number of cases is strikingly similar for report years 1978 through 1980, scrutiny of the data reveals crucial differences in the kinds (if you will) of gonorrhea cases diagnosed. Several indices provide the basis for optimism and for our prediction that incidence will appreciably decline for the second time in four years during calendar 1981.

In brief, the data indicate that improved contact tracing efforts spawned a substantial increase in the number of asymptomatic females detected, markedly altering the male to female case ratio. Concomitantly and (to us) causally, a solid decline in positive male cases was recorded. For the first time in the nine years since disciplined control was instituted, a decline in repeater cases was noted. (For the first time ever, no prostitute was a repeater in 1980.) In addition, an appreciable decline in gonorrhea cases among street prostitutes occurred. These indices and observations are elaborated below.

Discussion

A. Gonorrhea Morbidity: Trend Comparison

As described in Annual Report 1978, it is revelatory to characterize gonorrhea morbidity not merely by standard criteria (e.g., age/race/sex/reporting source), but by reason for presentation as well. How was the case detected? Males ordinarily present because of urethral symptoms. These are "Volunteers". Co-morbidity is another mechanism: he presents with another STD and is screened for asymptomatic G.C. These are "Screenees". Finally, males are detected via casefinding. These are "Contacts", and they are usually non-symptomatic. Females are detected somewhat differently, though the same classifications may be used. "Volunteers" present because of genitourinary symptoms or pelvic pain. "Screenees" tend to be routine discoveries of the screening program and "Contacts" are revealed by positive males.

The greater ~~the~~ the proportion of females detected actively, the better the program. Females diagnosed as "Contacts" represent active detection. "Screenees" and "Volunteers", passive detection. The latter probably harbor infection longer than the former.

The greater the proportion of males detected actively, the better the program. Males diagnosed as "Contacts" represent active detection; "Screenees" and "Volunteers". passive detection. "Screenees" and "Contacts" harbor infection longer than "Volunteers".

The PID (Prevalence = Incidence times Duration) formula indicates that the shorter the duration of infection, the lower the Prevalence of disease. A program that reduces the prevalence of "passively diagnosed" female cases and increases the num- of "actively diagnosed" cases will eventually reduce incidence. Fewer males should be infected, since the duration of infection in females is curtailed; thus the (recently infected) symptomatic male can be used as not only an incidence indicator but, more importantly, as a prevalence marker.

With these prefatory remarks behind us, let's examine gonorrhea morbidity in El Paso County historically, by gender, and by reason for presentation:

1976 - 1980

Male Gonorrhea Cases

	1976	1977	1978	1979	1980
Volunteers (Usually symptomatic)	1119	1132	839	874	787
Contacts/Screenees (Usually asymptomatic)	147	152	125	128	131
TOTAL	1266	1284	964	1002	918

Observe the substantial decline in symptomatic Volunteers not only from the base year (1976) to the present, but especially from 1979 (874 cases) to 1980 (787, or minus 87 cases). The fewer the symptomatic males the fewer infected females in the reservoir. That's prevention! Historically, control was achieved primarily as a result of our seeking asymptomatic males (since early 1976). If we consider that a "normal" male gonorrhea burden in the absence of our control strategies should be in the 1250 cases range, then a good case can be made that about 900 male cases were prevented for the period 1978 through 1980.

1976 - 1980

Female Gonorrhea Cases

	1976	1977	1978	1979	1980	
Volunteers (PID especially)	130	111	85	84	84	76
Screenees	225	214	178	153	150	~~139~~ 127
Contacts	357	389	288	286	368	403
TOTAL	712	714	551	523	602	606

Observe the substantial increase in females detected as "Contacts" for 1980 compared to 1978 and 1979 (similar years). The vast majority of the "excess" cases represent the superb casefinding efforts of the Fort Carson Program (which came of age in late 1979). Fort Carson traditionally reports about 50 positive females annually; for 1980, 110 were reported!! The data are unequivocal: these females were detected via Don Woodhouse's personal casefinding efforts at Fort Carson. Here, also lies much of the reason for the decline in symptomatic males in 1980:

removing these females early prevented male cases.

Removal of asymptomatic males from the disease pool (started in 1976) also led to a substantial decline in female cases associated with asymptomatic males: screenees and PID. If we consider 1976 as a "normal" year, then a good case can be made that about 330 female cases were prevented in the period 1978 - 1980. This represents a minimum number: if we assume that 2000 total cases is "normal" for El Paso County annually, then close to 1500 cases were prevented during the last 3 calendar years. Self-serving as this may sound, we derive intense satisfaction from these data.

B. Male to Female Ratio:

A notable improvement in the male to female case ratio was recorded in 1980:

Year	Males	Females	Total Cases	Ratio
1973	984	613	1597	1.6:1
1974	1015	615	1630	1.65:1
1975	1038	643	1681	1.61:1
1976	1266	712	1978	1.78:1
1977	1284	714	1998	1.8:1
1978	964	551	1515	1.75:1
1979	1002	523	1525	1.92:1
1980	918	602	1520	1.53:1 (Lowest on Record)

C. Street Prostitutes

No prostitute was a repeater during 1980! What a splendid outcome of our diligent surveillance - control efforts. It sounds so beautiful, we're going to repeat it: no prostitute was a repeater in 1980! Lovely.

Gonorrhea in Street Prostitutes

(1970 - 1980)

Year	Initial Visits	GC Cases	% Positive
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
1979	204	36	17.6
1980	228	21	9.2

Passive gonorrhea control efforts vis-à-vis street prostitutes existed between June, 1970 (the inception of the Health Hold system) through 1975. Active efforts

started in 1976 and have continued unabated since. The Table reflects the increase in clinic visits subsequent to 1975 and the initial increase in cases (superior detection). If we assume 1976 as a "normal" year (119 cases), the current burden (21) is acceptable, as is the positivity rate (< 10%). Prostitutes are no longer significantly involved in the endemicity or transmission of gonorrhea in El Paso County. Relaxation of our vigilant posture can easily reverse the current situation.

D. Gonorrhea Repeaters

The good news continues... We report 1520 cases of gonorrhea for Calendar 1980, a rate of about 475 cases per 100,000. This rate was:

1973 - 560/100,000	1977 - 655/100,000
1974 - 572	1978 - 473
1975 - 590	1979 - 476
1976 - 664	1980 - 475

Of the 1520 cases, 243 (16%) represent infections in 114 people. Recidivism was 18.4% in 1979 (280 cases in 124 people) and 16.8% (255 cases in 117 people). Though modest, the 13.2% decline in repeat episodes between 1979 and 1980 is encouraging. It is the first time we seem to have had impact on the repeater rate. (Annual Report 1979 details the apparent reasons for the difficulties, on page 8).

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

a. 74 of 114 repeaters (65%) are male.
b. 53 of 74 male repeaters (71.6%) are military.
c. 43 of 55 total military repeaters (78.2%) are black. These account, incidentally, for 36.2% of all repeat episodes (88/243).
d. Nine of 21 civilian male repeaters (42.8%) are homosexual.
e. Forty of 114 repeaters (35%) are female (2 being military); eleven are black, 21 white, 8 hispanic.

Of the 114 repeaters, 101 had two episodes, 11 had three episodes and 2 had four episodes each.

E. Miscellaneous Observations

a. For the first time in the nine years since accurate records have been maintained, gonorrhea morbidity by race was refined to differentiate between white and hispanic (previously subsumed under white). Its usefulness remains obscure. In 1980, 12.5% of reported venereal disease was in hispanics, 45.8% in blacks and 41.7% in whites. The 45.8% represents a slight decrease (47.7% in 1979) for blacks.

b. Prenatal screening has traditionally yielded 6 gonorrhea cases annually. None was positive in 1980!

F. Fort Carson Control Program

The assignment of a highly motivated V.D. Epidemiologist (Don Woodhouse) at Fort Carson in the fall of 1979 generated immediate successes, detailed in the Appendix of Annual Report 1979.

Most of the successes recorded in 1980 can be attributed to the substantial amelioration of the Fort Carson Program since late 1979. A summary of some indices buttresses these assertions:

1) Gonorrhea Contact Interviews (Fort Carson V.D. Clinic)

During 1980, Don Woodhouse doubled the traditional contact index at Fort Carson and more than doubled the number of contacts elicited in interviews. During the last full year(1978) prior to Don's arrival, 570 contact interviews were performed and 419 contacts obtained (0.74/interview); in Don's full year (1980), a similar number of interviews was recorded (574), yielding 865 contacts (1.5/interview). Don's personal index even improved from 1.3/interview from September '79 - December, '79 (his first work quarter) to 1.5 in Calendar 1980!

2) Contact Tracing

The high quality of the contact interviews performed is reflected in three indices: the number of "brought to treatment" cases, of "epi treatment" cases and of "unable to locate" dispositions generated by these interviews. (Out of jurisdiction contacts are not counted).

a. He has more than doubled the traditional number of "brought to treatment" cases, from 53 (1979) to 119 in 1980. Most of the 119 are females, incidentally.

b. The "epi treatment" cases nearly doubled, from 42 in 1979 to 82 in 1980.

c. Above all, the proportion of elicited contacts that cannot be located has dropped substantially, for the first time ever. From 1973 through 1979, usually more than 40% of named contacts could not be located. In 1980, 141 (36.3%) of 388 contacts investigated locally, could not be examined:

Contacts of Fort Carson Troops Not located	Contacts of Civilians
1973 - 44%	1973 - 16%
1974 - 42%	1974 - 23%
1975 - 38%	1975 - 20%
1976 - 51%	1976 - 24%
1977 - 37%	1977 - 22%
1978 - 45%	1978 - 22%
* 1979 - 50%	1979 - 21%
* 1980 - 36%	1980 - 23%

" A man is old
when regrets replace dreams."

Conclusion

Our assertion is straightforward: we are confident that the subtle changes experienced since the introduction of effective contact tracing efforts at Fort Carson in late 1979 presage a decline in gonorrhea incidence during 1981.

The first, substantial and sustained, decline was registered in 1978. It was occasioned largely by the removal of unsuspecting and unsuspected carriers of gonorrhea: asymptomatic males. Removal of such males curtailed the duration component of the PID formula. This strategy has not been abandoned.

The second, substantial and sustained, decline is predicted for 1981 (and hopefully into the future). It will be occasioned by the removal of unsuspecting carriers of gonorrhea of both genders via aggressive contact interviewing and contact tracing of the entire cohort of El Paso County gonorrhea patients. Rapid removal of such asymptomatic patients will curtail the duration component of the PID formula with greater impact than previously, since it will be implemented simultaneously rather than serially. The years 1976 - 1977 proved to us that success could be achieved (we predicted it); 1980 proved to us that a disciplined effort at Fort Carson would be successful (we predicted it).

Successful outcome of our current brash prediction should destroy the pessimistic, nonsensical notion that gonorrhea can't be defeated. It can, and it will, be. It will have been a long match, lasting years. We're in the final set, serving at "advantage in". Gonorrhea's return is destined for the net.

PART II

(The Traditional, Inelegant, Laborious TABLES)

Monthly Venereal Disease Morbidity Report

Month CALENDAR, 1980

Reporting Source	Morbidity				Age Group										Race			Pro	EX
	Syphilis			Gon	14-19		20-24		25-29		30-39		40+		Cav	Blk	HISP	Syph	Gon
Categories	P&S	E.L.	Other		Syph	Gon	Syph	Gon	Syph	Gon	Syph	Gon	Syph	Gon					
Private Physician Men		1		67	1	13		13		17		21		3	40	22	6		
Women			4	122	1	38		47		21	1	15	2	1	79	30	17		
V.D. Clinic Men	5	3		287		19	3	120	2	93	2	44	1	11	178	75	42	15	275
Women		1		289		84		102	1	56		41		6	158	77	55	3	297
CHC/Pren/Family P.				29		10		12		6		1			20	7	2		
Planned Parenthood				39		12		20		7					29	5	5		
Health Hold		1		8		2		3	1	2		1			3	5	1		
Fort Carson Men	7	4		546	2	71	4	341	4	85	1	41		8	88	418	51		
Women		1		110		31	1	55		20		4			43	55	13		
Ent Air Base Men				12		1		6		4		1			2	9	1		
Women				3		1		1						1	1	2			
Air Academy Men				6		2		4							3	3			
Women				2				1						1	1	1			
Totals	12	11	4	1520	4	284	8	725	8	311	4	169	3	31	645	709	193	18	572

Clinic Attendance: 4168
New: 2209
Return: 1959

ER Males: 27
ER Females: 59

($1961.55)

Above includes 5 cases of disseminated gonorrhea (All female) and 1 premenarcheal G.C. case.

Treatment Failure: 6 Clinic Females, 5 Clinic Male
1 PMD Male.

ITY-COUNTY HEALTH DEPARTMENT COLORADO SPRINGS, COLORADO

ACTIVITIES REPORT

linic or Division Venereal Disease Control Month DECEMBER Year: 1980

ection MONTHLY DATA

YPE OF CTIVITY	JAN	FEB	MAR	APR	MAY	JUN	JLY	AUG	SEP	OCT	NOV	D
linic tendance	392	340	296	349	318	334	399	390	342	397	317	29
umber linics	13	13	13	13	13	13	12	13	13	14	12	1
esting	1412	1163	1165	1419	1287	1247	1583	1251	1445	1483	1489	155
yphilis esting	282	261	245	272	239	264	298	287	278	303	241	22
on VD esting	110	89	93	89	113	92	136	103	66	94	70	7
yphilis eatment	2	0	6	2	0	0	3	1	3	4	3	
eatment	74	64	43	51	51	54	69	67	36	65	57	4
o yphilis	3	1	0	3	1	0	5	1	0	3	0	
o	39	57	33	57	42	54	46	64	40	52	45	4
on VD	133	99	102	110	116	144	135	122	118	121	102	11
yphilis rbidity	2	0	3	5	2	0	6	1	2	4	1	
rbidity	164	149	73	118	109	122	156	170	98	118	126	11
terviews	86	68	33	66	61	49	71	83	52	54	Will be counted in December Report.	13
philis terviews	2	0	2	3	0	0	6	0	2	3		
vestigations	87	104	67	127	71	82	129	143	108	105		23
philis vestigations	4	3	2	13	2	2	7	4	2	4		
checks & s. Bloods	40	33	40	51	60	42	67	64	40	52		8
AL CIVITIES												

TY-COUNTY HEALTH DEPARTMENT COLORADO SPRINGS, COLORADO

ACTIVITIES REPORT

inic or Division Venereal Disease Clinic Month DECEMBER Year 1980

ction CUMULATIVE DATA

'PE OF CTIVITY	JAN	FEB	MAR	APR	MAY	JUN	JLY	AUG	SEP	OCT	NOV	DE
linic ttendance	392	732	1028	1377	1695	2029	2428	2818	3160	3557	3874	416
umber linics	13	26	39	52	65	78	90	103	116	130	142	15
C esting	1412	2575	3740	5159	6446	7693	9276	10527	11972	13455	14944	1650
yphilis esting	282	543	788	1060	1299	1563	1861	2148	2426	2729	2970	319
on VD esting	110	199	292	381	494	586	722	825	891	985	1055	112
yphilis reatment	2	2	8	10	10	10	13	14	17	21	24	2
C reatment	74	138	181	232	283	337	406	473	509	574	631	67
ro yphilis	3	4	4	7	8	8	13	14	14	17	17	1
ro C	39	96	129	186	228	282	328	392	432	484	529	57
on VD x	133	232	334	444	560	704	839	961	1079	1200	1302	141
yphilis orbidity	2	2	5	10	12	12	18	19	21	25	26	2
C orbidity	164	313	386	504	613	735	891	1061	1159	1277	1403	152
C nterviews	86	154	187	253	314	363	434	517	569	623	Will be counted in December Report.	75
yphilis nterviews	2	2	4	7	7	7	13	13	15	18		1
C nvestigations	87	191	258	385	456	538	667	810	918	1023		125
yphilis nvestigations	4	7	9	22	24	26	33	37	39	43		1
echecks & os. Bloods	40	73	113	164	224	266	333	397	437	489		5
OTAL CTIVITIES												

Summary of Investigative and Interviewing Activities

Month: CALENDAR, 1980

Originating Agency	Investigations	Disposition of Persons Examined										Totals	Number of Interviews	Contacts Obtained
		0	1	2	3	6	7	8	9	X	Y			
Armed Forces	Contact To: 1. Primary & Secondary Syph.	1	1			1		1				4	5	10
	2. Early Latent Syphilis												2	2
	3. Other Syphilis													
	4. Gonorrhea	4	119		31	91	14	36	11	82		388		
Private Physicians	1. Primary & Secondary Syph.	1								1		2		
	2. Early Latent Syphilis	1			1	2				6		10	1	12
	3. Other Syphilis													
	4. Gonorrhea	4	36		19	36	10	2	2	97	2	208		
Public Cases (Clinic)	1. Primary & Secondary Syph.	1	1			3	2		1	10		18	6	12
	2. Early Latent Syphilis	4			1	1			1	4		11	4	8
	3. Other Syphilis													
	4. Gonorrhea	8	139		104	112	19	17	6	255	1	661	759	1466
Armed Forces Public & Private	Positive S.T.S. Follow-Up	34	20		38	5	1			2	1	101		
Clinic	Clinic Patient Field Follow-Up (Rechecks)	56	185		101	17	7		1			367		
Totals		114	501		295	268	53	56	22	457	4	1770	777	1510

# of Personal Visits with Private Physicians 17 # of Laboratory Visits 16 Contacts & Follow-Up Open at end of Month

1. Syphilis
2. Gonorrhea
3. Other

Monthly Venereal Disease Laboratory Testing Report

Month CALENDAR, 1980

Tests	No.	Pos.	% Pos.	RX	Disp.	Pndg	V.D.Clinic Men	V.D.Clinic Women	private Physicians Men	private Physicians Women	Pren	CHC	P.P.C.	Health Hold	F.P.
VDRL(Routine)	3116	74	2.37%				1764	1352							
VDRL(Pre-Marital)	0														
FTA	66	40	60.6%												
Darkfield	15	7	46.6%												
GC Smear	1819	209	11.5%												
GC Culture	14049	692	4.9%				2282 (298)	1541 (281)	238 (23)	6642 (61)	699 (0)		1642 (9)	62 (8)	943 (12)
Trichamoras	422	92	21.8%												
Monilia	425	83	19.5%												
Gravindex	1														
Urinalysis	7														
Pap	208	4	2%		3 Class III 1 Class IV										
Profiles															
Rechecks	477	23	4.8%				202 (14)	247 (8)	9 (1)	19 (0)					

14 reinfections
9 Treatment Failures

Summary of Investigative and Interviewing Activities

Month: CALENDAR, 1980

Originating Agency	Investigations	Disposition of Persons Examined										Totals	Number of Interviews	Contacts Obtained
		0	1	2	3	6	7	8	9	X	Y			
Armed Forces	Contact To: 1. Primary & Secondary Syph.	1	1			1		1				4	5	10
	2. Early Latent Syphilis												2	2
	3. Other Syphilis													
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Private Physicians	1. Primary & Secondary Syph.	1								1		2		
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Profiles															
Rechecks	477	23	4.8%				202 (14)	247 (8)	9 (1)	19 (0)					

14 reinfections
9 Treatment Failures

Summary of Drugs Used in V.D. Clinic: 1980

I.	Procaine Penicillin G	219 Vials
	Bicillin (Tubex)	150 (1.2 m.u.) syringes
	Trobicin	160 (2g.) vials
	Benemid	2550 (500 mg.) caps
	Ampicillin	8950 (500 mg.) caps
	Tetracycline (State)	1000 (500 mg.) caps
	Tetracycline (CHD)	21,000 (500 mg.) caps
	Benadryl	350 (50 mg.) caps
	Erythromycin	400 (250 mg.) caps
	Miscellaneous	Not listed

II. (1980) Drugs supplied to PMDs: (Included in above list) — 16 Trobicin/ 5 Pro Pen Vials/500 Ampicillin/300 Probenecid/200 TCN/6 Bicillin syringes

III. (1980) Total Cost to CHD: $427.69

John Potterat
Director, V.D. Control