EL PASO COUNTY HEALTH DEPARTMENT
501 North Foote Avenue
Colorado Springs, Colorado 80909-4598

ANNUAL REPORT

Venereal Disease Program

January 1, 1981 - December 31, 1981

INTERNAL DOCUMENT: NOT FOR PUBLIC USE

"The test of a vocation is the
love of the drudgery it involves."

L.P. Smith

PART I

Introduction

For calendar 1981 we report 1537 gonorrhea cases. For the fourth consecutive year no change in aggregate morbidity was recorded. No explanation can attenuate our disappointment. El Paso County's 1981 gonorrhea epidemiology was nonpareil. The failure to experience case reduction forms the basis for our disappointment.

Methods

Saturation gonorrhea case management comprised our approach: offering vigorous contact interviewing and contact tracing services to all gonorrhea patients. Traditional control activities (e.g. screening, clinic management, prostitution surveillance) were maintained.

Results

A. Nearly 96 percent (1475/1537) of cases were interviewed with 2950 contacts elicited (2 per case). Meticulous documentation was confined to the first six months. Intensive case management was neither abandoned nor relaxed during the year's second half, though funding constrictions precluded documentation.

B. 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 were cases detected? Men ordinarily present because of urethral symptoms. These are "Volunteers". Co-morbidity is another mechanism: they present with another STD and are screened for asymptomatic G.C. These are "Screenees". Finally, men 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 screening programs and "Contacts" are revealed by positive men.

Gonorrhea morbidity by gender and reason for presentation

1976 - 1981

MEN

	1976	1977	1978	1979	1980	1981	1982
Volunteers (usually symptomatic)	1119	1132	839	874	787	718	
Contacts/Screenees (usually asymptomatic)	147	152	125	128	131	210	
TOTAL	1266	1284	964	1002	918	928	

The number of symptomatic volunteers (718) continues to decline, probably because aggressive contact tracing curtails the duration of infection in women. The spectacular (60%) increase in contacts/screenees (from 131 to 210 cases) reflects aggressive contact tracing; about half the "excess" is attributed to superior detection of urethrally asymptomatic men and half to a furious outbreak in gay men (rectal/pharyngeal involvement). That nearly a quarter of the men (210/928) harbor, from whatever anatomical site, silent infection helps account for entrenched endemicity.

It is significant that although years 1978 - 1981 have similar aggregate case burdens (low 1500s), the symptomatic-asymptomatic proportions are so strikingly different; only superior contact tracing properly accounts for such differences.

1976 - 1981

WOMEN

	1976	1977	1978	1979	1980	1981
Volunteers (PID especially)	130	111	85	84	84	76
Screenees	225	214	178	153	150	127
Contacts	357	389	288	286	368	406
TOTAL	712	714	551	523	602	609

The impact of superior contact tracing is amply illustrated here. Traditionally only half the women present as contacts, as opposed to two-thirds in 1981. Removal of asymptomatic men has stimulated a steady decline in cases (PID and screenees) associated with such men. The major reason for the dramatic increase in "Contacts" since 1979 rests with the excellence of Fort Carson's case management efforts under Don Woodhouse's leadership. The substantial decline in symptomatic men described above is directly related: removing infected women quickly reduced the burden of infected men.

C. Epidemiologic circumstances surrounding street prostitution have changed considerably in the last five years. Intense and sustained police efforts at repression have torn the fabric of street prostitution. This campaign was raised to a feverish pitch under the direction of Sergeant Leonard ("Sergeant Satan") in 1980 and 1981. Many local prostitutes were pressured out of the life or area; more frequently, into marginal trade. This facilitated the influx of out-of-town prostitutes who were 1) unfamiliar with our health regulations and 2) frequently infected with gonorrhea. The data reflect the consequences of police pressure: reduced clinic attendance (fewer ladies around) and increase in gonorrhea cases and positivity rate (exogenous introduction).

Gonorrhea in Street Prostitutes

(1970 - 1981)

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	
1981		186		35		18.8	

Street prostitutes, despite case/rate increases, are not significantly involved in the endemicity or transmission of gonorrhea in El Paso County. Police pressure and Health Department surveillance stimulate rapid detection of infected ladies. Relaxation of either posture can effortlessly reverse the situation.

D. Gonorrhea Repeaters :

As noted in previous reports intensive contact tracing has only modest impact on repeater rates. Of 1537 cases 253 (16.5%) represent infections in 117 people. Historically the repeater rate fluctuates between 15-20%.

1973 - 17.7%	1977 - 20.2%
1974 - 19.5%	1978 - 16.8%
1975 - 14.5%	1979 - 18.4%
1976 - 15.7%	1980 - 16 %

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

a. 80 of 117 repeaters (68.4%) are men
b. 46 of 80 male repeaters (57.5%) are military
c. 43 of 52 military repeaters (82.7%) are black, with these 52 accounting for nearly half of all repeat episodes (115/253).
d. 18 of 34 civilian men repeaters (53%) are gay.
e. 3 prostitutes (8% of 37 women repeaters) accounted for 8 episodes
f. 37 of 117 repeaters are women (6 military); 14 black; 16 white; 7 hispanic

Of the 117 repeaters, 104 had 2 episodes, 8 had 3, 4 had 4 and one had 5 episodes.

E. Fort Carson and V.D. Control:

The casefinding improvements experienced in El Paso County since late 1979 can be largely attributed to the Fort Carson V.D. Program. It was simply splendid in 1981. Exemplary.

This enthusiastic endorsement is buttressed by the data. Prior to the assignment of Don Woodhouse in the fall of '79 the V.D. Clinic and Program were staffed with unprofessional enlisted military personnel. It took a professional (D.W.) to recruit the solid resources available on Post and to produce bumper harvests. None of it could have been realized without the enlightened Preventive Medicine Officer Corps at the hospital.

The Public Health Dimension

A. Contact Interviews:

There were 643 cases (528 men; 115 (!) women) of gonorrhea at Fort Carson in 1981, a 2 percent decrease over 1980. Six hundred and thirty two (98.3%) were contact interviewed, naming 1144 sex contacts (1.8 per interview). This represents nearly three times more contacts elicited than in interviews conducted by military personnel! Historically...

Fort Carson Gonorrhea Interviews

1978 - 1981

Year	# Interviews	Contacts Elicited	Contact Index
1978	570	419 (!)	0.74
1979	645	534	0.81
1980	574	865	1.5
1981	632	1144 (!)	1.8

Of the 1144 elicited contacts, incidentally, thirty percent (340/1144) were of exogenous origin - indirect evidence of the significant proportion of gonorrhea introduced into El Paso County from elsewhere (usually from the U.S. South and Southeast regions).

B. Contact Tracing:

Superior contact interviewing is reflected in three indices: the number of 1) newly discovered cases ("brought to treatment"), 2) "epi treatment" cases (exposed persons treated "preventively") and 3) "unable to locate" contacts.

1 and 2) The number of newly discovered and preventive treat cases has quadrupled. These cases are mostly women sex partners of soldiers, of whom quite a few are women soldiers. Exact data await computer printouts.

Brought to Treatment:

Year	New Cases of Gonorrhea	Preventive Treats
1978	53	42
1979	57	81
1980	119	82
1981	235 (!)	195 (!)

3) The proportion of elicited contacts that cannot be located declined dramatically since Mr. Woodhouse's arrival. The proportion in 1981 (25%) is not only similar to that of public cases, it's better! That's incredible. Historically...

Contacts to Fort Carson Troops Not Located	Contacts to Civilians
1973 - 44%	16%
1974 - 42%	23%
1975 - 38%	20%
1976 - 51%	24%
1977 - 37%	22%
1978 - 45%	22%
1979 - 50%	21%
1980 - 36%	23%
1981 - 25%	27%

No one will ever improve this 1981 Fort Carson performance. It is the standard against which all future efforts will be gauged.

F. Penicillinase Producing Neisseria Gonorrhea (PPNG):

Since the discovery of PPNG in the spring of 1976, one confirmed (1979), and 3 probable (2 in 1979 and 1 in 1977), PPNG cases have been reported in El Paso County. For 1981, seven cases were confirmed with five originating from Korea and one each from Louisiana and Chicago. All were Fort Carson soldiers.

PPNG is threatening to become endemic in the U.S., particularly on either coast. Korea has a significant burden. These two observations suggest that PPNG incidence will increase appreciably in the next few years. It's unlikely to become entrenched since contact tracing works so well in a community of moderate size. Exogenous introduction is expected to account for most future cases.

G. Prepubertal Gonorrhea:

Active search for the asymptomatic man since late 1975 has had a salutary effect on the incidence of premenarcheal G.C. (As previously reported, prepubertal females are probably molested by asymptomatic adult men.)

Year	Cases (all female)
1976	6
1977	1
1978	0
1979	1
1980	1
1981	0

H. Gonorrhea by Quarter (See Table, rear of report):

The expected quarterly distribution of gonorrhea cases in El Paso County is:

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
(Average)	23%	23%	30%	24%

A substantial (+30 percent) increase is usually noted during late summer/early fall. During the last decade this trend was altered twice, in 1977 and 1981. The heavier burden was experienced in the second, rather than third, quarter. In 1977 this phenomenon preceded the substantial decline observed in 1978. We wonder whether a decline will be repeated in 1982. Coincidence or not, we'll know next year!

I. Say "Good-bye" to Syphilis:

Syphilis, infectious and late, continues to decline. Modest endemicity existed in the early 70s, none since the middle of the decade.

Infectious (Primary/Secondary) Syphilis Cases:

1973	1974	1975	1976	1977	1978	1979	1980	1981
50	52	48	39	20	26	19	23	16

Late (non-infectious) Cases:

47	17	20	17	12	19	8	4	3

None of us is sorry to see it disappear.

Discussion - Conclusions

Saturation gonorrhea case management failed to produce incidence reduction, at least in the short run. No doubt the interventions registered impact. As described in Results the complexion of cases (see "B") was affected, as was the disease's temporal distribution ("H"). Though epidemiologically advantageous it is not as satisfying as case decline. What happened?

There is little doubt that gonorrhea case-finding is a powerful tool; in a "closed" community it would work remarkably well. Just shy of panacea, probably. Anecdotal observation has long supported the hypothesis that continual exogenous introduction accounts for much replenishment of the local gonorrhea reservoir. Data from the meticulously documented 1981 study will be analyzed to buttress this assertion.

It is a sensible assertion.

Consider:

a. Virtually fifty percent of the 1981 venereal disease burden in El Paso County is reported in blacks (749/1556; see Table, rear).

b. Blacks comprise only six percent (19,058 of 309, 424 people) of the County's population.

c. Consequently the crude attack rate is nearly 4000 cases per 100,000 (3930 exactly).

This staggering attack rate is associated with huge metropolitan centers. These register rates in the 1000 - 3500 per 100,000 range.

The local black population is much too small, and our control program much too vigilant, to permit the generation of its nearly 750 cases from a local reservoir. It makes much more sense to postulate continuous introduction from other areas.

The 1981 data are undergoing detailed computer-aided scrutiny to demonstrate this phenomenon. We are confident they will underscore the primacy of the Fort Carson V.D. Control Program.

In light of exogenous introduction, significant reduction in El Paso County case levels is probably not realizable until the advent of safe immunologic measures (vaccines). In the absence of quality contact tracing services at Fort Carson, much higher case levels can be expected. Adequate gonorrhea control (containment) is realistic, and it depends in the last analysis on Fort Carson.

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PART II

The Tables

EL PASO COUNTY GONORRHEA MORBIDITY

1973 - 1981

By Quarter

	First Quarter (%)	Second Quarter (%)	Third Quarter (%)	Fourth Quarter (%)	Annual Total	Monthly Average
1973	427 (26.7)	337 (21)	471 (29.5)	363 (22.7)	1598	133
1974	297 (18.2)	414 (25.4)	528 (32.4)	390 (24)	1629	135
1975	393 (23.4)	387 (23)	548 (32.6)	352 (21)	1680	140
1976	413 (20.9)	451 (22.8)	605 (30.6)	509 (25.7)	1978	165
1977	443 (22.1)	558 (28) *	476 (23.8) *	521 (26)	1998	167
1978	365 (24)	374 (24.7)	384 (25.3)	392 (25.9)	1515	126
1979	364 (23.9)	328 (21.5)	471 (30.9)	362 (23.7)	1525	127
1980	386 (25.4)	349 (23)	424 (28)	361 (23.8)	1520	127
1981	363 (23.6)	432 (28.1) *	384 (25) *	358 (23.3)	1537	128

Monthly Venereal Disease Morbidity Report

CALENDAR, 1981

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	4		66		7	2	23	2	20	1	10		6	43	19	9		
Women			1	101		29		46		15		9	1	2	59	33	10		
V.D. Clinic Men	2	1	2	306		39		105	1	107	2	42	2	13	161	105	45	6	313
Women				317		99		144		48		22		4	150	107	60	2	309
CHC/Pren/Family P.		1		29		6		10	1	8		5			14	6	10		
Planned Parenthood				28		9		11		7		1			22	3	3		
Health Hold				9		3		6							5	3	1		
Fort Carson Men	6	1		528	2	92	3	336	1	74	1	25		1	102	404	29		
Women				115		44		47		17		7			50	56	9		
Ent Air Base Men				18		1		11		6					9	8	1		
Women				2		2									1	1			
Air Academy Men				10		3		6						1	8	2			
Women				8		2		4		1				1	4	2	2		
Totals	9	7	3	1537	2	336	5	749	5	303	4	121	3	28	628	749	179	8	622

Clinic Attendance: 4547 ($2915.00)
New: 2471
Return: 2076

ER Males: 18
ER Females: 48

Above includes 6 cases of DGI:
all 17-26 y/o; 1 white; 5 black;
3 males.

Treatment Failure: 6 Clinic Males, 2 Clinic Femal
10 Military Males (7PPNG)
2 Clinic Cases-gender unavaila

Summary of Investigative and Interviewing Activities

CALENDAR, 1981

Originating Agency	Investigations	Disposition of Persons Examined										Totals	Number of Interviews	Contacts Obtained	CT Inde
		0	1	2	3	6	7	8	9	X	Y				
Armed Forces	Contact To: 1. Primary & Secondary Syph.	2	1			3		1		1		8	8	28	3.50
	2. Early Latent Syphilis	3				1		2				6	1	3	3.00
	3. Other Syphilis														
	4. Gonorrhea	7	235		166	95	11	92	1	195	2	804	670	1213	1.81
Private Physicians	1. Primary & Secondary Syph.	1				3						4	1	3	3.00
	2. Early Latent Syphilis	2	1		2	2				3		10	4	12	3.00
	3. Other Syphilis														
	4. Gonorrhea	4	44		35	31	5	32	4	102		257			
Public Cases (Clinic)	1. Primary & Secondary Syph.	2			1	2				2		7	3	6	2.00
	2. Early Latent Syphilis	2				2				2		6	2	4	2.00
	3. Other Syphilis														
	4. Gonorrhea	19	201		288	145	33	123	13	292	8	1122	805	1737	2.16
Armed Forces Public & Private	Positive S.T.S. Follow-Up	15	12		32	3			1			63			
Clinic	Clinic Patient Field Follow-Up (Rechecks)	55	173		134	37	11		7	3		420			
Totals		112	667		658	324	60	250	26	600	10	2707	1494	3006	2.0

# of Personal Visits with Private Physicians 10 # of Laboratory Visits 17 Contacts & Follow-Up Open at end of Month

1. Syphilis
2. Gonorrhea
3. Other

Monthly Venereal Disease Laboratory Testing Report

CALENDAR, 1981

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)	3273	78	2.4%				1978	1305							
VDRL(Pre-Marital)	0														
FTA	57	39	68.4%												
Darkfield	14	4	28.6%												
GC Smear	2065	232	11.2%												
GC Culture	15651	820	5.2%				2744 (363)	1623 (333)	279 (28)	6133 (53)	541 (2)	0	3347 (21)	68 (13)	916 (7)
Trichamonas	494	96	19.4%												
Monilia	473	73	15.4%												
Gravindex	2	1	50%												
Urinalysis	3	0													
Pap	212	1	0.5%		Class 4										
Profiles															
Rechecks	545	28	5.1%				261 (19)	275 (8)	9 (0)	13 (1)					

18 Reinfections
10 Treatment Failures

CITY-COUNTY HEALTH DEPARTMENT COLORADO SPRINGS, COLORADO

ACTIVITIES REPORT

Clinic or Division _____ Month _____ Year 1981

Section _____ MONTHLY DATA

TYPE OF ACTIVITY	JAN	FEB	MAR	APR	MAY	JUN	JLY	AUG	SEP	OCT	NOV	DEC
Clinic Attendance	391	318	359	388	398	427	410	390	399	406	363	298
Number Clinics	13	12	13	13	13	13	14	13	13	13	13	12
GC Testing	1858	1704	1673	1699	1720	2037	1896	1777	1159	1060	990	890
Syphilis Testing	300	211	271	291	286	306	296	292	304	290	269	228
Non VD Testing	105	55	98	108	97	96	95	83	120	110	107	110
Syphilis Treatment	0	1	2	2	2	2	1	4	3	0	1	0
GC Treatment	55	69	64	71	67	78	77	63	78	79	56	41
Pro Syphilis	0	0	1	2	0	0	0	3	1	0	0	1
Pro GC	52	34	47	53	62	58	65	58	53	59	44	37
Non VD Rx	134	91	117	129	119	151	166	116	136	123	138	129
Syphilis Morbidity	3	1	1	0	0	1	2	4	5	1	0	1
GC Morbidity	117	120	126	118	140	174	137	148	99	144	128	86
GC Interviews	104	118	130	122	135	178	132	Will	228	120	127	81
Syphilis Interviews	2	0	1	0	0	2	2	be	9	1	1	1
GC Investigations	148	215	242	226	261	330	188	done	209	124	137	125
Syphilis Investigations	1	0	10	1	2	1	5	next	10	5	1	5
Rechecks & Pos. Bloods	34	48	35	44	34	38	63	month	75	45	25	42
TOTAL ACTIVITIES												

CITY-COUNTY HEALTH DEPARTMENT COLORADO SPRINGS, COLORADO

ACTIVITIES REPORT

Clinic or Division _____ Month _____ Year 1981

Section _____ CUMULATIVE DATA

TYPE OF ACTIVITY	JAN	FEB	MAR	APR	MAY	JUN	JLY	AUG	SEP	OCT	NOV	DEC
Clinic Attendance	391	709	1068	1456	1854	2281	2691	3081	3480	3886	4249	4547
Number Clinics	13	25	38	51	64	77	91	104	117	130	143	155
GC Testing	1858	3562	5235	6934	8654	10691	12587	14364	15523	16583	17573	18463
Syphilis Testing	300	511	782	1073	1359	1665	1961	2253	2557	2847	3116	3344
Non VD Testing	105	160	258	366	463	559	654	737	857	967	1074	1184
Syphilis Treatment	0	1	3	5	7	9	10	14	17	17	18	18
GC Treatment	55	124	188	259	326	404	481	544	622	701	757	798
Pro Syphilis	0	0	1	3	3	3	3	6	7	7	7	8
Pro GC	52	86	133	186	248	306	371	429	482	541	585	622
Non VD Rx	134	225	342	471	590	741	907	1023	1159	1282	1420	1549
Syphilis Morbidity	3	4	5	5	5	6	8	12	17	18	18	19
GC Morbidity	117	237	363	481	621	795	932	1080	1179	1323	1451	1537
GC Interviews	104	222	352	474	609	787	919	Will	1147	1267	1394	1475
Syphilis Interviews	2	2	3	3	3	5	7	be	16	17	18	19
GC Investigations	148	363	605	831	1092	1422	1610	done	1819	1943	2080	2205
Syphilis Investigations	1	1	11	12	14	15	20	next	30	35	36	41
Rechecks & Pos. Bloods	34	82	117	161	195	233	296	month	371	416	441	483
TOTAL ACTIVITIES												

SUMMARY OF DRUGS USED IN V.D. CLINIC: 1981

I.	Procaine Penicillin G. (6 m.u. vials)	273 vials
	Bicillin (Tubex) (1.2 m.u.)	98 syringes
	Trobicin (2g. vials)	153 vials
	Benemid	4050 (500mg.) tablets
	Ampicillin	11,050 (500mg.) capsules
	Tetracycline (State)	900 (500mg.) capsules
	Tetracycline (CHD)	26,000 (500mg.) capsules
	Benadryl	200 (50mg.) capsules
	Erythromycin	350 (250mg.) tablets
	Miscellaneous	Not listed
II.	Drugs supplied to PMDs: (included in above list)	APPG (30 vials); TCN (1200 caps); Trobicin (8 vials); Bicillin (10 syringes); Probenecid (200); Ampicillin (100).
III.	Total Cost to CHD (1981)	circa $750.00