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

ANNUAL REPORT

Venereal Disease Program

January 1, 1976 - December 31, 1976

"No man manages his affairs as well as a tree does."

G. B. Shaw

INTRODUCTION

Annual reports reflect the past, illuminate the present and portend the future. They are of limited usefulness unless they provide historical perspective, detail current trends and anticipate tomorrow. The enclosed therefore describes the events of 1976, referenced to the preceeding three calendar years, and offers prognoses.

Meticulously cultivated with statistical data, it is a consumately boring document. Simply reporting facts is the refuge of those who have no imagination; imagination we have and it spawned the interpretations contained herein. Sometimes self-serving, more often consistent with the data, and always well intended, these interpretations are destined for controversy. We were, on the whole, guided by Samuel Butler's aphorism: " I do not greatly care whether I have been right or wrong on any point, but I care a good deal about knowing which of the two I have been."

Enjoy!

Respectfully submitted,

John Potterat	Christopher Pratts	Diane G. Richards
Director	Epidemiologist	Office Manager

Venereal Disease Program Annual Report 1976

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PART 1

El Paso County's 1976 Gonorrhea "Epidemic": Nostra Culpa

"I have made this letter longer than usual because I lack the time to make it shorter."
B. Pascal

"Most people reason dramatically, not quantitatively."
O.W. Holmes, Jr.

The burden of Part 1 of this report is twofold: to describe the spectacular increase in reported gonorrhea for calendar 1976 and to submit that said increase was occasioned by implementation, in early 1976, of singular venereal disease control strategies.

For 1976 we report 1978 cases of gonorrhea, a 17.7% increase over 1975, in context of Colorado's 2.5% decrease and the United States' minute 0.4% increase. The following Table graphically illustrates recent trends:

Reported Gonorrhea Cases 1972 - 1976

Year	El Paso County	% Change	Colorado	% Change	USA	% Change
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%	898,943	+ 6,7%
1975	1681	+ 3.1%	11,531	+11.9%	992,483	+10.4%
1976	1978	+17.7%	11,239	- 2.5%	996,468	+ 0.4%

Before analyzing El Paso County's remarkable morbidity change in 1976, a review of gonorrhea control strategy is in order. An important casefinding tool has traditionally been contact interviewing of infectees. For two reasons interviewing priority was historically focused on the male with urethral gonorrhea: 1) females were low priority because it was generally assumed that their male consorts would exhibit symptoms and thus be detected anyway, contact interview or no 2) the overwhelming caseload precluded interviewing everyone. El Paso County's Venereal Disease Control efforts were predicated on these tenets ever since a vigorous program was established in mid-1971. By late 1974 it became inescapably evident that males referred many of their own sex contacts, especially if properly counselled, <u>without</u> the controlled environment of contact interviewing, in which identifying and locating data on their partners was scrupulously solicited. It simultaneously dawned on us that certain male partners of female infectees harbored urethral gonorrhea without symptoms and that these women had difficulty motivating them to seek medical attention. It was hypothesized that even if the asymptomatic male gonorrhea burden was small in absolute numbers it might be disproportionately important in continued transmission in the community. In early 1976, therefore, our Program decided to place symptomatic males (excludes military) on a self-referral system and to focus contact interviewing as a strategy on <u>selected</u> females. Three catagories of female infectees seemed crucial: women who presented with Pelvic Inflammatory Disease (PID), those whose infection was detected as an incidental finding (i.e reason for presentation was <u>not</u> exposure to venereal disease) and repeaters. (Male repeaters were also targeted for contact interview, the assumption being that self-referral failed the first time.) The underlying

idea was that these women would lead us to the asymptomatic (or sub-symptomatic) males, whose clinical picture would not urge them to seek care and whose infective state, because of longer duration, was hypothesized to form the substrate of transmission in the community. By May of 1976 these strategies had harvested circa 40 asymptomatic males and we requested State assistance. Fortunately, a casefinder (Lynn Phillips) was authorized to aid us in field testing our hypotheses on a controlled basis. Since assignment in early August 1976, over 50 additional asymptomatic males have been identified.

At the onset of this essay we intimated that the dramatic increase in 1976 was largely due to our "singular venereal disease control strategies" Having just described these strategic changes, can we find statistical support for our assertion? It is evident that a strategy (in this case, contact interviewing selected females) designed to bring selected males to medical attention should yield an increase in reported male morbidity. In contrasting 1975 with 1976 reported cases, what patient categories reflect large increases? First, there are 297 more gonorrhea cases in 1976, of which 228 (76.7%) are male, 69 (23.3%) female. If we explore these data by reporting source we see that 169 (57%) of the 297 cases reported are military (heavily male), 99 (33.3%) by the public clinics and 29 (9.7%) by the private civilian sector. By race, 80% (!) of the case increase is Black, 19% Caucasian and 1% unknown. A cursory analysis of the data thus argues that the thrust of the 1976 increase was Black, male, military.

Refining the data, we find that reported cases among Caucasian males are up 7.3%, Caucasian females up 1.65%, Black males are up 40.4% and Black females up 46.6% over 1975: while this latter is not very significant in terms of

absolute numbers (54), the increase in Black males is (174 cases). Most (117) are Fort Carson soldiers, the remainder being reported by civilian public clinics.

Now, the large majority of women contact interviewed this year (data pending) are non-Black. If 174 (58.6%) of the 297 additional gonorrhea cases in 1976 are Black males, is it reasonable to ascribe the dramatic gonorrhea case increase to the strategy of contact interviewing non-Black females? In El Paso County over 50% of the female consorts of Black male gonorrhea infectees are Caucasian females. (This information was distilled in a 1975 study done in El Paso County). Although the data on Lynn Phillips' work are not tabulated and will not be for six months, we know anecdotally that Black, Fort Carson male soldiers account for a disproportionate share of contacts to these study females and that the large majority of asymptomatic males detected are Black males, most from Fort Carson. Additionally more and more Black males are being reached and educated about subclinical and asymptomatic gonorrhea by our strategies and (presumably) more cases are thus identified since they seek care more often than previously.

A couple of other data prove interesting enough to mention. The male to female gonorrhea case ratio had traditionally been 1.6:1 for the last four years, very minor variations notwithstanding. For 1976 it is 1.78:1. Earlier we asserted that the new strategies identified circa 100 asymptomatic (or subsymptomatic) males in 1976. If we delete these from our 1976 morbidity (pretending, for a moment, that our Program did not assiduously pursue asymptomatic males in 1976) the male to female ratio is 1.64:1 !! Thus

YEAR	MALES	FEMALES	MALE TO FEMALE RATIO
1973	984	613	1.6 : 1
1974	1015	615	1.65: 1
1975	1038	643	1.61: 1
Actual 1976	1266	712	1.78: 1
* **1976	1166	712	1.64: 1

**(Delete 100 males)

* See footnote bottom of next page

Interpreting communicable disease trends is a treacherous endeavor at best. We claim no immunity from this condition. Out task is to explore reasons for the 1976 increase in reported gonorrhea. There are, to be sure, several other hypotheses that may account for the nearly 18% increase: Briefly:

1. Periodicity Hypothesis - Though unexplained, there are historically detectable cycles in the occurence of disease.
2. Strategic Error Hypothesis: It is conceivable that our gonorrhea control methods promote, rather than curtail, disease transmission.
3. Futility of Human Intervention Hypothesis: That disease (particularly gonorrhea) trends are unaffected by public health measures in any event.

Hypothesis number one is viable and may account for the behavior of gonorrhea in 1976 for El Paso County. If true, however, why did Colorado's morbidity drop 2.5% over 1975? (It would have declined 5% had El Paso County experienced the usual annual increase!) Additionally, U.S. morbidity stayed essentially, in 1976, the same as 1975 after over a decade of 10-15% increases. Hypothesis Number 3, anathema to our philosophical framework, is possible but highly unlikely. Though it defies rational analysis, it could correspond to reality. Hypothesis Number 2 is terribly improbable. We therefore subscribe to the theory that the strategic changes effected in 1976 generated much of the reported increase in gonorrhea cases. To further buttress our case, may we introduce one last set of data? It consists of a comparative review of cumulative gonorrhea cases by month since maintenance of mensual records in 1973. To preclude cluttering this Table, differential data (i.e. percent change) have been purposely omitted (promotes elegance?) in most cells.

* Footnote: Because of the military there is a disproportionate number of males in El Paso County. In the 15-29 age group there 61,178 males to 42,368 females. (1.45:1 ratio) This may help explain the relatively high gonorrhea male to female ratio of 1.6 to 1 despite vigorous control efforts.

EL PASO COUNTY

Reported Gonorrhea Cases, Cumulative Data, By Month and Year

1972 - 1976

	January	February	March	April	May	June	July	August	September	October	November	December	
Cases	175	325	427	520	642	764	898	1047	1235	1359	1505	1598	1973
Cases	110	189	297	430	568	711	914	1112	1239	1395	1496	1630	1974
Percent Change								(+6.2%)				(+2%)	
Cases	133	271	393	538	654	780	971	1157	1328	1452	1534	1681	1975
Percent Change								(+4%)				(+3%)	
Cases	140	259	413	551	709	864	1049	1223	1469	1600	1813	1978	1976
Percent Change								(+5.7%)				(+17.7%)	

We note, by August of each recorded year, a similar annual percentage increase (4-6%), reduced to a 2-3% increase by the end of each calendar year. The recent dramatic increase in cases occurs by September 1976 and climbs steeply thereafter. Our special epidemiologist assignee began her duties in early August 1976 and by September, her caseload was in high gear. This, to our view, defies coincidence. The future may force abdication of this (self-serving?) interpretation. Highly suggestive as our data may be, the test of our interpretation lies with future morbidity. If we are correct, then the recorded 17.7% increase in gonorrhea morbidity in 1976 reflects better detection on the part of our Program. This implies that removal of cases from the "reservoir" at an earlier stage than would have been occasioned by control strategies used in previous years should promote interrupted transmission, generate fewer future cases and thus create a reduction in our overall burden. This statement would hold true "all other things being equal" (whatever that means). The eventual manifestation of "resistant" strains in our midst, eminently more difficult to manage, may interfere with our anticipations and thus shatter our "proof". We anticipate the future: we do not predict or control it. History will judge. Meanwhile, critical comments are solicited.

Note: The following three Tables should augment the serious reader's frame of reference in his critical assessment of our interpretations. Though ponderous and inelegant, they record much useful data. The Tables dissect annual reported gonorrhea cases for 1973 through 1976 by age, race, sex and reporting source. All combinations of these parameters are included except age by race: age by sex, age by reporting source; race, race by sex, race by reporting source: sex, sex by reporting source. Age by race data are available but not in easily retrievable form. They would have required tabulating over 7,000 cards individually to obtain results of limited usefulness. Morbidity by time, (week, month) and geography (census tract) is available for several years and presently being collated by the Colorado Department of Health.

Cells contain number of cases and in parentheses, the percentage of each category for that specific year. To analyze the phenomenon of 1976 the data are more revelatory if read horizontally.

Caveat: Table Three includes gonorrhea and syphilis;
Tables 1 and 2 gonorrhea only.

REPORTED GONORRHEA MORBIDITY - EL PASO COUNTY

Calendar Years 1973, 1974, 1975, 1976

Case and Percentage Distribution by Sex and Reporting Sour

Reporting Source	Male				Female		
	1973	1974	1975	1976	1973	1974	1975
Private Doctors	(10.3) 102	(10.4) 106	(7.3) 76	(7.58) 96	(34.3) 210	(32.2) 198	(29.7) 1
V.D. Clinic	(30.7) 302	(34.3) 347	(38.7) 401	(34) 430	(45.8) 281	(54.1) 333	(52.6) 3
Military	(59) 580	(55.3) 562	(54) 561	(58.5) 740	(9.2) 56	(4.4) 27	(6.8)
PPC, OB, HH	N/A	N/A	N/A	N/A	(10.7) 66	(9.3) 57	(10.9)
Totals	(100) 984	(100) 1015	(100) 1038	(100) 1266	(100) 613	(100) 615	(100) 64

Number in parentheses are percentages of each morbidity category for that specific

Legend: PPC - Planned Parenthood
O.B. - O.B. Clinic
H.H. - Health Holds (arrested prostitutes)

REPORTED GONORRHEA MORBIDITY - EL PASO COUNTY

Calendar Years 1973, 1974, 1975, 1976

Case and Percentage Distribution by Age and Sex, and by Age and Reporting Source

	AGE GROUP															
	14-19				20-24				25-29				30 plus			
x	1973	1974	1975	1976	1973	1974	1975	1976	1973	1974	1975	1976	1973	1974	1975	
le	(43.5) 167	(45) 209	(42) 176	(48) 262	(65.5) 534	(68) 521	(69) 572	(70.3) 663	(73.4) 193	(66.8) 181	(62.5) 190	(67) 219	(67) 90	(80) 104	(77) 100	
male	(56.5) 217	(55) 256	(58) 244	(52) 284	(34.5) 281	(32) 242	(31) 255	(29.7) 280	(26.6) 70	(33.2) 90	(37.5) 114	(33) 108	(33) 45	(20) 27	(23) 30	
tal	(100) 384	(100) 465	(100) 420	(100) 546	(100) 815	(100) 763	(100) 827	(100) 943	(100) 263	(100) 271	(100) 304	(100) 327	(100) 135	(100) 131	(100) 130	
porting urce																
ivate ctors	(18.5) 71	(16.3) 76	(15) 63	(15.2) 83	(16.2) 132	(14.2) 108	(11.5) 95	(11.8) 111	(22.8) 60	(26.6) 72	(24.6) 75	(18.7) 61	(36.3) 49	(36.6) 48	(25.4) 33	
D. inic	(41.1) 158	(45.1) 210	(45.4) 191	(42.1) 230	(35.6) 290	(39.3) 300	(39.6) 328	(35.4) 334	(36.9) 97	(46.5) 126	(50.4) 153	(51.7) 169	(28.2) 38	(33.6) 44	(51.5) 67	
litary	(32) 123	(33) 153	(32) 134	(35.4) 193	(45) 366	(42.8) 327	(44.9) 371	(48.3) 455	(38) 100	(25.8) 70	(24) 73	(27.2) 89	(34.8) 47	(29.8) 39	(21.6) 28	
P.C., B., H.H.	(8.4) 32	(5.6) 26	(7.6) 32	(7.3) 40	(3.2) 27	(3.7) 28	(4) 33	(4.5) 43	(2.3) 6	(1.1) 3	(1) 3	(2.4) 8	(.7) 1	(0) 0	(1.5) 2	
tals	(100) 384	(100) 465	(100) 420	(100) 546	(100) 815	(100) 763	(100) 827	(100) 943	(100) 263	(100) 271	(100) 304	(100) 327	(100) 135	(100) 131	(100) 130	

TABLE 2

REPORTED VENEREAL DISEASE MORBIDITY - EL PASO COUNTY

Calendar Years 1973, 1974, 1975, 1976

Case and Percentage Distribution by Race and Sex, and by Race and Reporting Source

Race	Caucasian					Black					Totals				
Sex	1973	1974	1975	1976	1977	1973	1974	1975	1976	1977	1973	1974	1975	1976	1977
Male	(55) 572	(55) 653	(55) 657	(56) 705		(72.6) 474	(78.4) 403	(78.8) 431	(78) 605		(61.7) 1046	(62) 1056	(62.2) 1088	(64.4) 1310	
Female	(45) 470	(45) 532	(45) 545	(44) 554		(27.4) 179	(21.6) 111	(21.2) 116	(22) 170		(38.3) 649	(38) 643	(37.8) 661	(35.6) 723	
Totals	(100) 1042	(100) 1185	(100) 1202	(100) 1259		(100) 653	(100) 514	(100) 547	(100) 775		(100) 1695	(100) 1699	(100) 1749	(100) 2034	
Reporting Source															
Private Doctors	(27.4) 286	(23) 273	(19) 229	(18.5) 233		(10.9) 71	(10) 51	(10.6) 58	(10.2) 79		(21) 357	(19) 324	(16.4) 287	(15.3) 312	
V.D. Clinic	(41.2) 429	(46.9) 555	(50) 600	(48) 605		(26.1) 171	(30) 154	(30.2) 165	(30.5) 236		(35.1) 600	(41.7) 709	(43.8) 765	(41.4) 841	
Military	(25.7) 268	(25.7) 305	(26) 312	(27.2) 342		(62) 404	(59) 304	(57.6) 315	(57.5) 446		(40) 672	(35.8) 609	(35.8) 627	(38.7) 788	
PPC, OB. HH	(5.7) 59	(4.4) 52	(5) 61	(6.3) 79		(1) 7	(1) 5	(1.6) 9	(1.8) 14		(3.9) 66	(3.5) 57	(4) 70	(4.6) 93	
Totals	(100) 1042	(100) 1185	(100) 1202	(100) 1259		(100) 653	(100) 514	(100) 547	(100) 775		(100) 1695	(100) 1699	(100) 1749	(100) 2034	

Venereal Disease = Gonorrhea and Syphilis

TABLE 3

PART II

The remainder of this document highlights trends in overall Program activities for 1976. The skeletal framework consists of the composite of the twelve mensual statistical reports, accompanied by interpretive commentaries based on comparisons with previous years (those for which adequate records exist).

Part II of this report may be skipped by the busy reader. The information recorded is designed as a useful barometer for our department's planning needs (e.g. budget preparation, assignment of priorities, analysis of Program shortcomings, news releases etc.)

Monthly Venereal Disease Morbidity Report

Month CALENDAR 1976

Reporting Source	Morbidity				Age Group										Race			Pro	Ex
	Syphilis			Gon	14-19		20-24		25-29		30-39		40+		Cav	Blk	Unk	Syph	Gon
Categories	P&S	E.L.	Other		Syph	Gon	Syph	Gon	Syph	Gon	Syph	Gon	Syph	Gon					
Private Physician Men	4	2	5	96	1	13		34	3	23	1	16	6	10	66	38	3		
Women		2	4	199		70	1	77	1	38		13	4	1	160	41	4		
V.D. Clinic Men	2	14	5	430	3	70	4	191	6	111	7	50	1	8	311	139	1	14	276
Women	1	4		385	4	160		143		58	1	22		2	290	97	3	3	386
O.B. Clinic				0															
Planned Parenthood				82		37		38		5		2			74	8			
Health Hold				11		3		5		3					5	6			
Fort Carson Men	3	4	2	663	1	165	2	388	3	81	2	25	1	4	278	394			
Women		1		29		9		16		4			1		12	17	1		
Ent Air Base Men	1		1	32		2		23		2		5	2		12	22			
Women				6		5		1							5	1			
Air Academy Men		1		45		12	1	27		2		2		2	34	12			
Women				0															
Totals	11	28	17	1978	9	546	8	943	13	327	11	135	15	27	1247	775	12	17	662

Clinic Attendance 5356 ($2963.00)
New 2988
Return 2368

Treatment Failure 4 (Clinic) Males; 2 (Clinic) Females

Above includes 1) 4 cases of Disseminated gonorrhea (2 male, 2 female)
2) 6 cases of Prepubertal gonorrhea: (5 female, 1 male)

E.R. Males: 38
E.R. Females: 98

COMMENTARY ON "VENEREAL DISEASE MORBIDITY REPORT" TABLE

A. 1. Gonorrhea Morbidity by Age:

For all four years, 92% of gonorrhea rests in the 14-29 age group; and 75% of total gonorrhea burden is recorded in the 14-24 age group.

2. Overall Venereal Disease (includes syphilis) Morbidity by Race:

RACE	1973		1974		1975		1976	
	Cases	%	Cases	%	Cases	%	Cases	%
Caucasian	1035	61 %	1172	69 %	1200	68.6%	1247	61.3%
Black	653	38.6%	514	30 %	547	31.3%	775	38.1%
Other	7	0.4%	13	0.8%	2	0.1%	12	0.6%
Totals	1695	100 %	1699	99.8%	1749	100 %	2034	100 %

Note the striking percentage similarity of 1973 and 1976. Blacks, incidentally constitute 5% of El Paso County's population and nearly 40% of cases.

3. Gonorrhea Morbidity: Proportion of military share of overall burden.

1969	93.8%	1973	32.6%
1970	88.9%	1974	34.5%
1971	60 %	1975	32.0%
1972	48.9%	1976	39.1%

It is likely that the 1969 - 1971 years reflect diligent reporting on the part of the military sector in light of substandard civilian efforts. A vigorous, orchestrated civilian control program bore fruit starting in 1972, placing the military's direct share in better perspective (about one-third of reported cases; most of these are males since the military seldom cares for civilian females).

4. Civilian Gonorrhea Treatment Failures

In 1976, six cases of gonorrhea (4 males, 2 females) stood assessed as genuine treatment failures. Military figures are excluded due to paucity of information. Treatment failure criterion: no coitus between treatment and test of cure culture. All other cases are categorized as reinfections, (see below).

Civilians (1976)	PMD Males	PMD Females	Clinic Males	Clinic Females
Total Morbidity	96	199	430	478
Tested for Cure	12 (12.5%)	62 (31.2%)	279 (65%)	401 (83.9%)
Positive on Recheck	0	0	17 (6%)	37 (9.2%)
Treatment Failures	0	0	4 (1.4%)	2 (0.5%)

Civilians	1973		1974		1975		1976	
	Cases	%	Cases	%	Cases	%	Cases	%
Total Morbidity	972		1041		1075		1203	
Total Tested for Cure	488	(50%)	657	(63%)	668	(62%)	754	(62.7%)
Total Positive on Recheck	16	(3.3%)	45	(6.8%)	40	(6%)	54	(7.2%)
Total Treatment Failures	9	(1.8%)	1	(0.15%)	2	(0.3%)	6	(0.8%)

Thus 2567 civilian patients were tested for cure (1973-1976) with 18 treatment failures for a 0.7% failure rate. What will happen given the introduction of "resistant" strains, no one can predict and we're not anxious to invite these penicillinase producing Neisseria Gonorrhea (PPNG) in our County,

Note on Test of Cure Trends in Venereal Disease Clinic Patients

Our office devotes no effort beyond counseling to induce Venereal Disease Clinic patients (Special Study females excepted) to return for test of cure. That 65% of males and 84% of females did so largely of their own accord speaks well of our clinic's receptive atmosphere. Its epidemiologic importance is buttressed by the data: 9.2% of females and 6% of males are positive on test of cure.

5. Gonorrhea Repeaters

We report 1978 cases of gonorrhea for calendar 1976, a rate of 664 per 100,000 (assuming County population of 298,000). This rate was 560/100,000 in 1973; 572/100,000 in 1974 and 590/100,000 in 1975.

Of the 1978 cases, 310 (15.7%) represent infections in 140 people, a moderate rate of recidivism. This rate was 17.7% in 1973, 19.5% in 1974 and 14.5% in 1975.

Thus 1808 people accounted for 1978 episodes in 1976. Reinfection rates by race, sex and reporting source are: 35% military, 65% civilian; 55% Black, 45% caucasian; 64% male, 36% female. This is essentially similar to the previous three years, except that races are reversed this year for the first time. (It is usually 45% Black, 55% caucasian).

One hundred seventeen patients had two episodes each, sixteen three episodes each and seven suffered four episodes each.

It is instructive to compare percentage distribution of gonorrhea cases by sex, race and reporting source with rates of recidivism for the same parameters. The ensuing Table illustrates that the tendency to repeat infection is decidedly most pronounced in Blacks and least for Caucasians, other indices showing no appreciable difference. (Figures are rounded off).

CATEGORY	PERCENT MORBIDITY	PERCENT RECIDIVISM
Civilian	61%	65%
Military	39%	35%
Black	39%	55%
Caucasian	60%	45%
Male	64%	64%
Female	36%	36%

6. Venereal Disease Clinic Gonorrhea: Prophylactic Treatment

Laboratory tests for gonorrhea are circa 85% accurate in the presence of the disease. Thus perhaps 15% of infections remain undetected due to this relative insensitivity. Undetected does not imply untreated. Exposed to gonorrhea a patient is ordinarily treated irrespective of culture results. This is called prophylactic treatment. "Pro treats" are counted only if they receive the appropriate therapeutic regimen and the tests fail to isolate Neisseria.

Gonorrhea Prophylactic Treatment

	1973	1974		1975		1976	
Sex	Cases	Cases	% Change	Cases	% Change	Cases	% Change
Males	111	117	+5.4%	166	+42%	276	+66%
Females	170	213	+25%	302	+41%	386	+78%
Totals	281	330	+17%	468	+42%	662	+42%

Earlier in this Report we detailed our strategy of interviewing females for their male contacts. The 66% increase in male "Pro treats" recorded (above) for 1976 reflects our new direction. That we did not achieve this result at the expense of the female is evident: since 1973 there has been a 148% increase in male and a 127% increase in female "pro treats".

7. The bottom left of "Monthly Venereal Disease Morbidity Report - Calendar 1976" Table has a new category: "E.R. males and E.R. females". Since the Table itself (for Private Physician Categories) does not specify the type of private physician setting, it was deemed useful to keep separate statistics on E.R. (Hospital Emergency Room) presentations. Thus 38 of the 96 males presented at E.R.s as did 98 (nearly 50%) of the 199 females. Most of these 98 constitute PID presentations. We are presently testing the hypothesis that E.R. PID gonorrhea cases are disproportionally important in the process of (interrupting) disease transmission.

Commentary of "Summary of Investigative and Interviewing Activities" Table

1. FIELD INVESTIGATIONS:

Totals	Examined	Unable to Examine	Brought to Treatment
GONORRHEA			
976	630 (65%)	346 (35%)	151 (15.5%)
Note: 268 (27%) patients were pro treated for gonorrhea exposure.			
SYPHILIS			
78	62 (80%)	16 (20%)	5 (6.4%)
Note: 21 (27%) patients were pro treated for syphilis exposure.			
POSITIVE SEROLOGIES			
225	210 (93.3%)	15 (6.7%)	32 (14.2%)
CLINIC PATIENT (follow-ups)			
491	399 (81%)	92 (19%)	151 (30%)
Grand Totals			
1770	1301 (73.5%)	469 (26.5%)	339 (19%)

Summary of Investigative and Interviewing Activities

~~XXXXX~~ CALENDAR 1976

Originating Agency	Investigations	Disposition of Persons Examined										Totals	Number of Interviews	Contacts Obtained	Contac Index
		0	1	2	3	6	7	8	9	X	Y				
Armed Forces	Contact To: 1. Primary & Secondary Syph.	1			2			1	1	1		6	4	6	1.5
	2. Early Latent Syphilis	1						3		1		5	2	4	2.0
	3. Other Syphilis														
	4. Gonorrhea	7	45		44	123	18	46	1	81		365			
Private Physicians	1. Primary & Secondary Syph.	1			2	3				3		9	3	7	2.33
	2. Early Latent Syphilis	3								1		4	2	2	1
	3. Other Syphilis														
	4. Gonorrhea	5	21		25	26	9	11	3	54		154	29	52	1.8
Public Cases (Clinic)	1. Primary & Secondary Syph.	4	3		2	6			1	7		23	2	19	9.5
	2. Early Latent Syphilis	11	2		4	2	1		3	8		31	13	43	3.3
	3. Other Syphilis														
	4. Gonorrhea	17	84	1	103	69	18	25	6	133	1	457	280	752	2.7
Armed Forces Public & Private	Positive S.T.S.Follow-Up	62	32		104	10	3		3	9	2	225			
Clinic	Clinic Patient Field Follow-Up (Rechecks)	96	151		127	52	40		12	13		491			
Totals		208	338	1	413	291	89	86	30	311	3	1770	335	885	2.64

# of Personal Visits with Private Physicians 20 # of Laboratory Visits 27 Contacts & Follow-Up Open at end of Month

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

1. Observations - This constitutes nearly 150 closed investigations per month, up 20% over 1975. Much of that increase can be attributed to the arrival of our short term contract casefinder in August of 1976 (Lynn Phillips). Note the low gonorrhea "Brought" yield (15.5%).

2. Military Gonorrhea:Investigations

Contacts obtained (during interviews) by the military are considerably more difficult to locate than those obtained in civilian interviews.

Percentage of Gonorrhea Contacts NOT Located

Agency	1973	1974	1975	1976
Military	44%	42%	38%	51%
Civilian	16%	23%	20%	24%

3. Military Gonorrhea:Interviewing

Military personnel interview the vast majority of gonorrhea cases detected at their respective installations. Of 692 cases (633 male; 29 female) reported at Fort Carson, for example, 637 (92%) were contact interviewed with 448 contacts initiated or 0.7 contacts per interview. This contact index is essentially constant for the last four years. Parenthetically, our Venereal Disease Clinic staff usually obtains close to 2.0 contacts per interview, nearly three times better.

4. Venereal Disease Clinic Gonorrhea Contact Interviewing:

Most Venereal Disease Clinic males, starting January 1, 1976, were placed on the self-referral system in accordance with the findings of our 1975 study (pending publication in the Journal of the American Public Health Association). Interviews for 1976 were conducted on selected patients, mostly

female, as outlined in Part 1 of this document. Nevertheless, 309 interviews (331 in 1975) were performed, yielding 804 contacts for a 2.6 contact index. Thus, even though most clinic patients are trusted with self-referral based on counselling, our office conducted nearly as many interviews as in 1975.

Monthly Venereal Disease Laboratory Testing Report — CALENDAR YEAR 1976

Tests	No.	Pos.	% Pos.	RX	Disp.	Pndg	V.D.Clinic Men	V.D.Clinic Women	private Physicians Men	private Physicians Women	O.B.Clinic	P.P.C.	Health Hold
VDRL(Routine)	3529	126	3.6 %										
VDRL(Pre-Marital)	454	4	0.88%										
FTA	151	70	46.4 %										
Darkfield	16	0	0										
GC Smear	1921	298	15.5 %										
GC Culture	19124	1014	5.3 %				(404) 2338	(357) 1665	(39) 364	(110) 7636	(0) 62	(82) 6610	(14) 59
Trichamonas	456	115	25.2 %										
Monilia	279	58	20.8 %										
Gravindex	33	12	36.4 %										
Urinalysis	55	6	10.9 %										
Pap	308	1	0.32%										
Profiles	25	-	-										
Rechecks	754	54	7.16%				(17) 279	(37) 401	(0) 12	(0) 62			

added

CHC 390 (8)

Numbers in parentheses refer to positives

Commentary on "Venereal Disease Laboratory Testing Report" Table

1. A comparison of this Table with that of 1975 shows little difference. The structuring of a vigorous Venereal Disease Clinic and Control Program in 1971 spawned rapid growth for the ensuing four years. These and other indices suggest that, given our population base and our community's STD (Sexually Transmitted Diseases) burden, we are close to "saturation" levels for laboratory testing requests. That is, our demand for lab services should grow little in the near future.

Laboratory Tests Performed in Support of Venereal Disease Clinic

Tests	1973	1974	1975	1976
For Syphilis	3212	3843 (+20%)	4508 (+17%)	3921 (-13%)
For Gonorrhea	15829	19029 (+20%)	22720 (+19%)	22078 (-2.8%)
For Other STDs	735	923 (+26%)	1014 (+10%)	1156 (+14%)
Totals	19776	23795 (+20%)	28242 (+19%)	27155 (-3.8%)

2. Gonorrhea Testing: Females

Excluding test of cure cultures, 16,422 (16,890 in 1975) cultures were collected on females in 1976. El Paso County's female population in the 15-44 group numbers nearly 90,000; these attempts represents nearly 19% of this population undergoing testing.

3. Private Physician Screening Program

The proposed modifications outlined in the 1975 Annual Report were translated into reality in 1976. For the five years preceeding June 1976 a full time venereal disease diagnostic specimen pick-up and delivery service

accomodated the needs of some fifty medical practices in El Paso County. Soaring costs and steadily declining yields in gonorrhea detection demanded that this service be curtailed. Starting in early August of 1976, private physician gonorrhea specimens could be deposited for processing at the Doctors' Lounges of the five civilian hospitals, thus reducing the pick-up route to 25 miles (2 hours per day). This procedure occasioned a substantial savings and promoted cost-benefit results more commensurate with our Calvinistic leanings. Private physicians, then, were inconvenienced in that it became their burden to obtain venereal disease diagnostic tools at the Health Department and to transport the specimen to the pick-up points.

Did these modifications impair the aims of the Screening Program? The following Table suggests that gonorrhea detection is as viable as before, if not more. (The pick-up service was discontinued July 31, 1976.)

	FEMALES			MALES		
Month	Attempts	Number Positive	Percent Positive	Attempts	Number Positive	Percent Positive
January	872	4		35	1	
February	768	2		39	4	
March	1006	7		39	1	
April	813	11		32	2	
May	596	8		34	2	
June	621	8		26	3	
July	710	15		29	4	
SUBTOTAL	5386	55	(1.02%)	234	17	(7.26%)
August	411	13		18	5	
September	536	20		37	7	
October	444	8		22	6	
November	458	5		28	3	
December	401	9		25	1	
SUBTOTAL	2250	55	(2.44%)	130	22	(16.92%)
GRAND TOTAL	7636	110	(1.44%)	364	39	(10.7%)

The new system apparently provoked two desirable results: a 41% decrease in culture attempts and a doubling of productivity. That is, before implementation of the new system an average of 770 females and 33 males were cultured monthly and, after implementation, this average fell to 450 females and 26 males per month. And yet in absolute numbers, the positives detected remained essentially the same (nay, we did better with the new system !)

Our explanation is that the greater inconvenience generated by the new pick-up system for the private physician all but eliminated the marginal user (low-yield physician) and curtailed use by the higher-yield physician. The more difficult a service is to obtain, the more likely the promotion of its judicious use.

4. Private Physician Sector and Female Gonorrhea: Observations

For 1976, 199 cases of female gonorrhea were reported by the Private sector. As stated earlier 98 (close to 50%) presented at Hospital Emergency Rooms, most with lower abdominal pains (PID). What of the remaining 101? During the latter five months of 1976 information regarding reason for presentation was obtained for every positive PMD female (E.R. presentations excepted).

Reason for Presentation	Percentage
1. Contact to Gonorrhea	23.5%
2. Lower abdominal pain	28.6%
3. Vaginal Symptoms/dysuria	33.3%
4. Premarital Testing	4.8%
5. Routine Gonorrhea Screening	9.5%

It may thus be argued that the P.M.D. (excludes Planned Parenthood) Screening Program probably detected 15 (categories 4 and 5) of the 101 P.M.D. positive females. Presumably, females in categories 1 - 3 above would have been detected anyway, assuming availability of diagnostic media and appropriate

clinical acumen. The latter is often a more difficult assumption than the former!

Examining medical specialty, 55% of these detections were by GYNs, 36% GPs or Family Practice, 9% by internists.

5. Prostitutes and the Health Hold Order

The 1976 shift in Program focus to female gonorrhea infectees is reflected in our growing concern for prostitution's contribution to disease transmission in El Paso County. After months of negotiations with police and district attorneys, a system expecting street prostitutes to submit to mensual venereal disease examinations was forged. A constitutionally delicate process, it is presently undergoing review by attorneys, police and our department. A protocol "requiring" street prostitutes to carry (Venereal Disease Clinic) health cards is contemplated to "encourage" monthly venereal disease testing and obviate excessive incarceration.

Pressure on street prostitution, aimed at obtaining compliance for monthly venereal disease checks, began in August 1976. For the 18 weeks spanning August 9 and December 20, 1976 there were 118 prostitution-visits (excludes test of cure visits) to our Clinic. Forty-four (37.3%) cases of gonorrhea were detected during these visits. Additionally, 17 pimps presented for care; 15 were positive (one refused testing); eight of the 15 positives proved urethrally asymptomatic, 4 subsymptomatic (no dysuria).

By race, 60% of these prostitutes are Caucasian, 28% Black, 12% Hispano. The pimps are all Black, except one.

Because of these high rates of gonococcal carriage, our office decided to study prostitutes retrospectively. We are currently assessing data from 291 prostitute Venereal Disease Clinic medical charts. This information will be the subject of a subsequent report. Preliminary data indicates that close to 30% of prostitute visits in our clinic during the last 7 years yielded gonococcal isolates.

CITY-COUNTY HEALTH DEPARTMENT COLORADO SPRINGS, COLORADO

ACTIVITIES REPORT

Clinic or Division Venereal Disease Program Month _____ Year 1976

Section _____ MONTHLY DATA

TYPE OF ACTIVITY	JAN	FEB	MAR	APR	MAY	JUN	JLY	AUG	SEP	OCT	NOV	DEC
Clinic Attendance	430	395	475	544	513	462	417	462	465	339	416	438
Number Clinics	17	14	19	17	16	18	16	18	17	14	17	17
GC Testing	1896	1772	2187	1955	1746	1643	1998	1466	2260	1526	1734	1895
Syphilis Testing	332	331	400	434	415	357	307	344	342	245	313	330
Non VD Testing	107	81	86	98	90	83	86	118	103	126	78	100
Syphilis Treatment	3	2	5	4	3	3	2	2	0	5	3	5
GC Treatment	81	50	62	81	66	95	83	96	91	57	75	75
Pro Syphilis	5	1	3	0	0	1	0	0	0	2	3	1
Pro GC	40	33	42	61	47	69	61	63	74	46	54	72
Non VD Rx	108	75	112	79	100	107	91	102	91	118	104	108
Syphilis Morbidity	6	5	8	3	5	6	3	1	1	5	3	10
GC Morbidity	140	119	154	138	158	155	185	174	246	131	213	165
GC Interviews	9	6	17	19	23	26	23	46	45	21	43	31
Syphilis Interviews	2	0	4	0	2	4	2	0	1	3	1	7
GC Investigations	15	11	54	33	82	71	71	66	111	130	215	120
Syphilis Investigations	6	5	6	3	8	4	10	3	2	10	10	11
Rechecks & Pos. Bloods	42	51	78	49	71	72	72	75	76	37	52	43
TOTAL ACTIVITIES												

CITY-COUNTY HEALTH DEPARTMENT COLORADO SPRINGS, COLORADO

ACTIVITIES REPORT

Clinic or Division Venereal Disease Program Month _____ Year 1976

Section _____ CUMULATIVE DATA

TYPE OF ACTIVITY	JAN	FEB	MAR	APR	MAY	JUN	JLY	AUG	SEP	OCT	NOV	DEC
Clinic Attendance	430	825	1300	1844	2357	2819	3236	3698	4163	4502	4918	5356
Number Clinics	17	31	50	67	83	101	117	135	152	166	183	200
GC Testing	1896	3668	5855	7810	9556	11199	13197	14663	16923	18449	20183	22078
Syphilis Testing	332	663	1063	1497	1912	2269	2576	2920	3262	3507	3820	4150
Non VD Testing	107	188	274	372	462	545	631	749	852	978	1056	1156
Syphilis Treatment	3	5	10	14	17	20	22	24	24	29	32	37
GC Treatment	81	131	193	274	340	435	518	614	705	762	837	912
Pro Syphilis	5	6	9	9	9	10	10	10	10	12	15	16
Pro GC	40	73	115	176	223	292	353	416	490	536	590	662
Non VD Rx	108	183	295	374	474	581	672	774	865	983	1087	1195
Syphilis Morbidity	6	11	19	22	27	33	36	37	38	43	46	56
GC Morbidity	140	259	413	551	709	864	1049	1223	1469	1600	1813	1978
GC Interviews	9	15	32	51	74	100	123	169	214	235	278	309
Syphilis Interviews	2	2	6	6	8	12	14	14	15	18	19	26
GC Investigations	15	26	80	113	195	266	337	403	514	644	859	979
Syphilis Investigations	6	11	17	20	28	32	42	45	47	57	67	78
Rechecks & Pos. Bloods	42	93	171	220	291	363	435	510	586	623	675	718
TOTAL ACTIVITIES												

Commentary on "Activities Report" Tables

These two Tables constitute a crazy salad of overall Venereal Disease Program activities - the first on a monthly, the second on a cumulative basis. Hence monthly trends can be quickly visualized while maintaining periodic totals.

1. Clinic Attendance -

Note: Effective June 30, 1976 the Venereal Disease Clinic assigned all Premarital testing to other Health Department Clinics.

Visits	1973	1974	1975	1976
Venereal Disease Clients	4218	4643 (+10%)	4843 (+4.3%)	4902 (+1.2%)
Premaritals	270	519 (+92%)	932 (+80%)	454
Total Attendance	4488	5162 (+15%)	5775 (+12%)	5356

Since unloading the burden of premaritals our clinic has been able to focus its energies more productively. Again one notices stabilization in Venereal Disease Clients attendance; we may expect a similar number (circa 5,000) in 1977.

2. Clinic Fee System

A fee of $1.00 for Venereal Disease Clinic has been levied since the Fee System's inception January 1, 1976. Patients are charged for an episode rather than per visit. No fee is assessed for test of cure, completion of therapy or treatment failure visits. No patient is ever denied service due to insufficient funds, though the client is diplomatically encouraged to contribute his fee when he can.

The following Table describes total client visits, number eligible to pay fee, number eligible who paid and absolute amount collected.

	Total Visits	Eligible Visits	Paid Visits	Total Collected
January	400	333 (83%)	230 (70%)	$285.00
February	330	249 (75.5%)	193 (77.5%)	231.00
March	369	278 (75%)	217 (78%)	283.00
April	423	295 (70%)	226 (76.6%)	262.00
May	351	263 (75%)	223 (85%)	301.00
June	474	322 (68%)	242 (75%)	270.00
July	410	301 (73.4%)	237 (78.7%)	234.00
August	472	358 (75.8%)	237 (66.2%)	218.00
September	462	327 (70.7%)	237 (72.5%)	262.00
October	339	225 (66.4%)	166 (73.7%)	122.00
November	414	294 (71%)	215 (73%)	261.00
December	442	286 (64.7%)	231 (80.7%)	234.00
TOTALS	4886	3531 (72.26%)	2654 (75%)	$2963.00

Thus approximately three quarters of visits prove eligible and three quarters of eligibles pay. Five percent of patients who owe fees return to contribute their venereal disease tithe.

3. Treatment in Venereal Disease Clinic

A. Thirty seven patients were treated for syphilis in our clinic in 1976. Considering that total syphilis for the County was 58 cases, 13 of which were military, our clinic thus treated 86% (37 of 43) of reported civilian syphilis (90% in 1975).

B. Treatment administered in clinic in support of S.T.D.s break down as follows:

Treatment	1973	1974	1975	1976
Syphilis and Pro Syphilis	43	77	75	53
Gonorrhea and Pro gonorrhea	944	1085	1299	1574
Other S.T.D.s	940	1189	1114	1195
TOTALS	1927	2351	2488	2822

Thus:

1. 1627 patients (33.2% of total visits) were treated for venereal disease or exposure to venereal disease (28% in 1975; 25% in 1974; 23% in 1973).

2. 2822 patients (57.6%) were administered treatment for some STD category (51% in 1975; 50% in 1974; 45% in 1973).

3. Some 12,091 tests were performed on 5127 visits (2.3 tests per visit), of which 90% were for classic venereal diseases.

Summary of Medications Used in Venereal Disease Clinic 1976

Some medications are supplied free of charge by the Colorado Department of Health, others are purchased by our department.

Thus,

Colorado Department of Health Medications

Procaine Penicillin (6 m.u. vials)	573 vials
Spectinomycin (2 gram vials)	154 vials
Benemid (500 mg capsules)	2100 capsules
Erythromycin (250 mg capsules)	550 capsules
Ampicillin (3.5 and 1 g. packs)	452 packs
Tetracycline (250 mg capsules)	4800 capsules
Bicillin (3 m.u. vials)	59 vials
Vibramycin (100 mg capsules)	108 capsules

County Health Department Medications

Tubex Procaine Penicillin (4.8 m.u. packs)	8 packs
Tubex Bicillin (1.2 m.u. syringes)	20 syringes
Ampicillin (500 mg capsules)	6230 capsules
Ampicillin (3.5 and 1 g Trojacillin doses)	54 doses
Benedryl	700 capsules
Gantonol	1000 capsules
Tetracycline (250 mg capsules)	30,900 capsules

Total cost to County Health Department: $1322.87 ($1681.00 in 1975; $1600.00 in 1974; $1452.00 in 1973), the lowest in four years!

Note: 450 (100 mg) capsules of Vibramycin and 30 (1.2 m.u. syringes) of Bicillin were destroyed due to expiration date.

MISCELLANEOUS

Certain activities and observations not reflected thus far are recorded below:

1. The Manitou Springs Clinic was discontinued due to poor attendance in mid-1976, after six months of operation.

2. Multifarious Venereal Disease presentations were delivered to schools, paraprofessional, and professional organizations - part of our education program. No figures are maintained.

3. In conjunction with the laboratory, Colorado Department of Health, our County Health Department laboratory and Venereal Disease Control unit, a study was conducted to field test the effect of mailing Jembec (bag and pill method) gonorrhea transport medium to Denver. Seventy-five specimens were mailed during the summer and seventy-five in winter. Preliminary results suggest 90% concordance for summer and 85% for winter. This will be the subject of a separate report.

4. Epidemiologic follow-up of several cases of premenarcheal gonococcal infections proved interesting enough to record. A formal report is presently being submitted for publication.

5. Special studies designed to study the epidemiologic behavior of gonorrhea in selected patients (P.I.D., positive female screenes, recent repeaters and asymptomatic males) are at the mid-completion point. Formal reports are due in late 1977.