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

ANNUAL REPORT
Sexually Transmitted Diseases/HIV Programs
January 1, 1991 - December 31, 1991

"The one who says it cannot be done should never interrupt the one who is doing it."

The Roman Rule

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"Most people reason dramatically, not quantitatively."

Oliver Wendell Holmes

INTRODUCTION

This document is principally a repository of dull numerical data. (No graphics, no pretty pictures.) If you are privy to a copy of the Report, it's because you asked for it; you were warned that it was dullsville. (We like to have a lot of numbers in one place so that we don't have to look in a zillion places to find basic information.) The strenghths of our program have traditionally been in data collection, trend interpretation, and fine disease control efforts, not in data presentation.

If you have little time, then focus on the narrative parts of the Chlamydia section (Part I) and on the Syphilis section (almost at the end).

All the numbers are impressive. They point to the enormous amount of work being done and attest to its quality. We're simply amazingly good. In fact, we're probably the goodest STD control people anywhere. And so, this Report is dedicated to the people who make it such a great control program: Perry Bethea, Nancy Brace, Lynn Drzewiczewski (is that a mouthful or what?), Tammy Maldonaldo, Elizabeth Mattas, Steve Muth (only because he is the boss' son), Christopher Pratts, Helen Rogers, Helen Zimmerman (last, but never least). These persons are the STD/HIV control Programs... We also recognize the hard work contributed by the STD Clinic staff and our colleagues at our local military bases, especially Jerry Taylor, Helen White, and Colonel Schaad.

PART I

Chlamydia Control

Through the 1960s, the control of venereal diseases principally meant syphilis control. In the 1970s, it was gonorrhea's turn. During the 1980s, viruses took center stage, first genital herpes, then HIV and papilloma virus. The 1990s ought to award STD pride of place to chlamydia. Hence, this Report is re-structured to reflect our new priority: chlamydia.

Not that we know much about the epidemiology of this insidious, usually asymptomatic, but eminently treatable, infection. We simply need to get serious about it. The first step is to obtain superior surveillance information: universal reporting by all medical providers and assiduous case-finding (screening and contact tracing) efforts. We need to dig out all the cases and treat exposed partners.

Chlamydia infection became reportable (by laboratories) September 1, 1991. During 1992 we will monitor compliance with this new regulation and obtain data about the magnitude of the chlamydia burden community-wide. In 1993, we intend to identify the chlamydia cases that are most important in its perpetuation and to elucidate the male's role in transmission. (We have examined many male contacts to women with positive chlamydia tests during the last four years and find relatively few to be positive on testing. Is this an artifact of our lousy tests?; of our specimen collection techniques?; of being months behind the epidemiologic events (i.e., by the time we get the male examined, he's experienced spontaneous cure?; or is it that the current male partner has immunity due to previous infections?)

We estimate that El Paso County hosts roughly 2500 cases of chlamydia annually, a datum we construct by assuming that there are about 3.5 times as many cases of chlamydia as of gonorrhea (and that this latter is close to completely detected and reported).

What we record below are some data collected during the four years since we began our chlamydia control efforts. Because most of the data are from the public sector (with some from the military) we don't have a reliable picture. We also don't know much about the artifacts the data contain. For example, why is the chlamydia male-to-female ratio so different from that of its fraternal twin sister, gonorrhea? And why does morbidity fluctuate as much as it seems to? We need to meticulously collect~~ed~~ surveillance information to begin to answer these questions. Suffice it to say for now that chlamydia seems to behave in less predictable ways than gonorrhea, no matter how similar these two are; the tried and true answers for gonorrhea may simply not apply. We begin by providing the (sketchy) historical data we do have.

Chlamydia cases by selected report source and gender
(1988-1991)

	H.D. Clinics		Fort Carson		Air Force	
	Men	Women	Men	Women	Men	Women
1988	243	268	250	197	84	150
1989	144	217	289	263	Unknown	
1990	195	443	213	222	151(both)	
1991	253	436	288	256	118(both)	

The Air Force data are ~~not~~ incomplete because of uneven recording, principally by us; we know that if we do a little digging, both installations (the Academy and Peterson AFB) will supply us with reliable information. What is remarkable is how many cases they have: roughly ten times more chlamydia than gonorrhea. This probably has to do with race and social class. People in the Air Force are more likely to be white and more likely to come from more fortunate socio-educational backgrounds. We have previously published a report showing that chlamydia is more frequently diagnosed in whites than in blacks, and that it is more diffusely distributed across income groups..

The Fort Carson data are notable because the male-to-female ratio is roughly 1:1. (In comparison, 80% of their gonorrhea cases are diagnosed in men, a 4:1 ratio.) Is this an artifact of testing? of selective screening? of less rigorous contact tracing efforts? or is it something about the disease itself (i.e., the female reproductive tract is a superior ecological niche for chlamydia than the male's)?

As for the Health Department cases, there are two notable features: 1) there are twice as many cases in women than in men over the last two years, and 2) there are 33% more cases in 1991 than in 1988. Do these large increases have much to do with contact tracing efforts ? With greatly expanded (nearly universal now) screening for chlamydia in H.D. clinics, where the majority of patients are women (even in STD Clinic)? Why is the male-to-female ratio so lopsided (It's close to 1:1 for gonorrhea in H.D. Clinics)?

If we add the 1991 cases from all three report sources in the above Table, we get about 1350; assuming that another 650 cases were diagnosed in the private medical sector (and not reported), the total is about 2000 cases detected for that year. The challenge we have now is to get the other 500 cases that are not detected. That calls for expanded screening efforts, especially in the private sector, more accurate tests, and stepped up contact tracing.

Chlamydia Screening in Women's Clinics
(1988-1991)

Year	Family Planning		Prenatal/CNM	
	Tests	Pos.(%)	Tests	Pos.(%)
1988	772	61 (7.9)	573	75 (13.1)!!!!
1989	259???	???	457	???
1990	1379	121 (8.8)	471	50 (10.6%)
1991	1559	114 (7.3)	537	39 (7.3%)

In 1988, the first full year of reasonably reliable testing, we were astounded by the very high rate of chlamydia positivity in Prenatal Clinic clients. We're pleased to note that this rate has been halved as of 1991. (Considering the damage that chlamydia can do to babies, principally pneumonia, we're tickled with these data; we would like to see the rate drop way below the FPC level, which hovers at about 8 percent.)

The 1989 data for Family Planning Clinic are probably wrong; we need to do a little more digging to find out what went awry. As for testing levels, more than 85% of Family Planning clients (1559 tests/1811 visits) are screened and virtually all PNC clients.

Chlamydia Cases in VD Clinic

The overall positivity rate declined dramatically from the first full-year of chlamydia screening in 1988 (we started in June of 1987) to 1991. How much is due to our inexperience with the test during the first 18 months (not likely to be a substantial distorter) and how much is due to better control efforts, particularly identifiying cases and removing infected sexual partners from the reservoir (likely) is not known. It is encouraging to note that we are testing more than twice the number of patients (4007: 1733= 2.3) and identifying roughly the same number of positives (405 vs. 534). The most encouraging trend is that we are identifying lots more positive women (from 175 to 275): most (about two-thirds) of this difference has to do with contact tracing, as shown below: from 63 women in 1988 to 145 in 1991 (Second part of the <u>second</u> Tablebelow:Women).

Chlamydia Cases in VD Clinic
(1988-1991)

	1988		1989		1990	
	Tests	Pos (%)	Tests	Pos (%)	Tests	Pos (%)
Men	921	230 (25)	1309	125 (9.5)	1574	163 (10.4)
Women	812	175 (21.6)	1393	151 (10.8)	1707	195 (11.4)
Total	1733	405 (23.4)	2702	276 (10.2)	3281	358 (10.9)

CONTINUED...

	1991	
	Tests	Pos (%)
Men	1852	259 (14)
Women	2155	275 (12.8)
Total	4007	534 (13.3)

Chlamydia: Reason for Presentation

Patients find out they have chlamydia because they are sexual partners of infected persons or because they are concerned (symptoms, other VD, etc); the former are classifed as contacts, while the latter as volunteers or screening detections.
The data below reflect STD, Family Planning, and Prenatal, Clinic patients.

Chlamydia Cases: Reason for Presentation:

MEN

Reason	1988	1989	1990	1991
Volunteer	138 (56.8%)	93 (64.6%)	123 (63%)	140 (55.3%)
Screen	24 (9.9%)	9 (6.2%)	9 (4.6%)	32 (12.7%)
Contact	81 (33.3%)	42 (29.2%)	63 (32.3%)	81 (32%)
	243 (100%)	144 (100%)	195 (100%)	253 (100%)

WOMEN

Volunteer/ Screen	205 (76.5%)	112 (51.6%)	313 (70.7)	291 (66.7%)
Contact	63 (23.5%)	105 (48.4%)	130 (29.3)	145 (33.3%)
	268 (100%)	217 (100%)	443 (100%)	436 (100%)

Thus, about a third of H.D. cases are identified through contact tracing (for men or women), about the same as for gonorrhea.

To develop a sense for the trend in reason for presentation (passive vs. active detection of cases) it is best to look at women with chlamydia in STD Clinic alone, since the STD Clinic is the site where women present as contacts and as volunteers or as screenees. About half of women have their chlamydia detected as a consequence of contact tracing, and every year, the absolute number goes up, reflecting our increased tracing efforts. Much of the increase in volunteer/screen cases has to do with the 25% increase in clinic attendance we experienced in 1991.

STD Clinic Women: Reason For Presentation
(All H.D. Clinics)

	1988	1989	1990	1991
Volunteer/ Screen	100(63%)	60(39%)	95(46%)	151 (52.6%)
Contact	59(37%)	95(61%)	113(54%)	136 (47.4%)
	159(100%)	155(100%)	208(100%)	287 (100%)

We have interviewed nearly 2000 civilian cases of chlamydia in the last four years, and obtained about 3300 contacts, with a consistent contact index of 1.7 for both men and women. Notable is the 34% increase in the number of interviews completed between 1990 and 1991 (from 523 to 703).

Chlamydia Contact Interviews
(All H.D. Clinics)

	1988		1989		1990	
	#	Contacts	#	Contacts	#	Contacts
Men	190	321 (1.7)	114	171 (1.5)	159	262 (1.65)
Women	229	379 (1.7)	176	309 (1.8)	364	659 (1.8)
Total	419	700 (1.7)	290	480 (1.7)	523	921 (1.76)

CONTINUED...

	#	1991 Contacts
Men	269	453 (1.68)
Women	434	753 (1.74)
Total	703	1206 (1.72)

The 703 interviews done in 1991 include some non-Health Department civilian cases. If we look, for comparability with previous years, at only Health Department cases (687), then we interviewed 91.5% (629 cases) in 1991, which is 10% higher than in previous years, and at the same level as gonorrhea interviewing. .

Proportion of Chlamydia Cases Interviewed
(Health Dept. Diagnosed Cases)

	1988	1989	1990	1991
Reported Cases	511	361	638	687
Interviewed	82%	80%	82%	91.5%

Fort Carson's Preventive Medicine folks have been doing a nice job of interviewing their chlamydia cases at least since 1988 (same as we).

Proportion of Chlamydia Cases Interviewed
(Fort Carson STD Clinic)

	1988	1989	1990	1991
Reported Cases	447	552	435	544
Interviewed/(%)	289 (65)	347 (63)	391 (90)	420 (77)

Thus, they have had about 2000 cases reported and interviewed about three-quarters (1447/1978). It is interesting to note the "A-B" pattern of reported cases (about 450 cases in one year and about 550 the next, and so on...Don't know why). If there is anything to this pattern, then Fort Carson will report about 450 cases in 1992. We'll see...

Chlamydia Contact Tracing

The number of contacts to chlamydia sought locally since contact tracing efforts began in 1988 doubled by 1991. Although the data fluctuate a bit, both an increasing number and percentage of sought contacts are newly identified infections. If we compare these outcomes with those of gonorrhea, we notice that the major difference is with the "Not infected" category; the percentage is much higher for chlamydia (about 60%; with GC it's about 40%). The percentage "Not examined" is much lower for chlamydia (about 15%; with GC, it's about 25%). As for the newly "Infected" category, it's lower for chlamydia (23%; with GC it's about 30%).

Two explanations are offered. People in chlamydia socio-sexual networks are easier to locate and thus a greater percentage are eventually examined. The low proportion of positives and greater proportion of uninfected contacts either has to do with testing (relatively lousy sensitivity, especially from the male urethra) or with the possibility that chlamydia is not a tenacious infection in men (lots of spontaneous cures?). The first explanation is likelier to be the case, but we're guessing.

Local Contacts to Chlamydia: Outcomes

	1988	1989	1990	1991
Infected (New Cases)	97 (18.5)	87 (19.8)	118 (15.2)	229 (23)
Not Infected	279 (53.3)	268 (60.1)	553 (71.2)	613 (61.6)
Not Examined	147 (28.1)	85 (19.3)	106 (13.6)	153 (15.4)
Total:	523 (100)	440 (100)	777 (100)	995 (100)

Thus, more than 2700 contacts have been sought locally in four years, of whom more than 500 were newly identified cases; about 1700 others were treated preventively but had negative tests. We bet that about 250-300 of these 1700 were really positive, but the relatively insensitive tests did not show positive results.

During 1992 and 1993, we will try to answer some of questions we raised above, by obtaining better data and by more comprehensive control efforts. Up until now, we have basically attacked chlamydia as time and resources permitted. We need to meke a commitment based on priority. Chlamydia is too serious of a disease to be a public health after-thought.

Part II

HUMAN IMMUNODEFICIENCY VIRUS INFECTION

We have recently completed an analysis of the epidemiology of AIDS/HIV in our county for the decade 1982 through 1991. The manuscript, which contains much detail, is being sent to a medical journal for publication. This Report will provide only a few data not recorded in the manuscript. In next year's Report, we will again have a detailed, up to date section on the salient features of HIV epidemiology locally. We do not attach a copy of the manuscript in an appendix, because it is in the process of being reviewed. Since the manuscript only deals with adult infection and provides only marginal information on the Counseling and Testing Center's activities, we focus on these "missing" data below.

AIDS-virus infection in children:

Eight children have been reported to us as being AIDS-virus infected since the beginning of the epidemic; half are known to have died. Curiously, 4 of the 5 infected as a consequence of gestation are boys. ("Age" means age at diagnosis, not current age.)

Gender	Age	Status	Route of infection	Year reported
Male	3 yrs	Alive*	Infected mother (IV); birth	1988
Male	10 yrs	Dead	Transfusion (Hemophiliac)	1985
Male	17 yrs	Dead	Transfusion (Hemophiliac)	1986
Male	Newborn	Dead	Inf. mother (transfusion); birth	1985
Male	3 yrs	Alive**	Inf. mother (transfusion); birth	1985
Female	Newborn	Alive	Inf. mother (Ct. to IV); birth	1990
Male	13 yrs	Dead	Transfusion (Hemophiliac)	1990
Male	Newborn	Alive	Inf. mother (Ct. to IV); birth	1991

* Attending school locally (age 7 now)
** No longer residing in this State

Health Department Antibody Testing:

HIV testing began to be offered in other clinics during 1988, principally the VD Clinic and, to a lesser degree, the Family Planning and Prenatal Clinics. Heretofore, testing had been confined to our Counseling/Testing clinic and our Drug Treatment Clinic. (About one-third of all HIV(Ab) testing is done in VD Clinic.)

We have performed about 10,000 tests for serologic evidence of AIDS-virus infection since June 1, 1985. About 2600 of these tests were done in 1991, with approximately 3% being positive (81/2582). Although the reader may assume that Magic's announcement of his HIV infection in late Fall of 1991 had much

to do with the high level of testing in 1991, the data suggest otherwise: Strong demand for the test occurred throughout the year, and began to increase remarkably in early summer, peaking during the last two months (That was Magic's doing).

To develop a sense for trend in positivity, it is best to simply look at tests done in the CTS (Counseling and Testing Center) alone, since this is where the high risk people are likeliest to seek the test.

HIV (Ab) Testing In the CTS (1985-1991)

	up to 1986	1987	1988	1989	1990	1991
No. of tests	878	764	784	658	835	1409
No. positive	68	18	19	14	17	9
Percent positive	7.7	2.4	2.4	2.1	2.0	0.6

Note: Ninety percent of the positives in the CTS are in men who have sex with men.

During the initial testing period (last 6 months of 1985 through 1986), 7.7% (68 of 878 tested) were positive for HIV antibody, versus 0.6% currently (Calendar 1991). Moreover, the absolute number of positives declined spectacularly during this 6-year interval. It is now an infrequent event to identify an HIV-positive person through testing in our counseling center. Most of the positives are identified in the private sector, principally hospitals (when the patient gets sick) and donor centers (usually plasma donors). These data are supportive of our contention that relatively little HIV is being newly transmitted in El Paso County.

Testing for HIV antibody in STD Clinic reveals a similar pattern, even though testing is far from universal. We estimate that we see about 3500 different bodies annually in STD Clinic; we thus test about every sixth person, mostly those with worrisome risk factors.

HIV (Ab) Testing in STD Clinic

	1988	1989	1990	1991
No. of Tests	181	290	384	584
No. Positive	2	5	8	3
Percent Positive	1.1	1.7	2.2	0.5

We see that while the number of persons tested tripled since 1988, the positivity rate declined by a factor of two. All of the 18 positive persons revealed recognized risk factors: 13 are men who have sex with men, 4 are injecting drug users (one woman), and one woman is the steady sex partner of an IDU.

Part III

Gonorrhea Control

Sustained behavior changes in our community are continuing to decrease gonorrhea's reproductive success; for calendar 1991, we report yet another decline, from 840 in 1990 to 776 (-7.6%) in 1991. Gonorrhea morbidity has been in the three-digit category four years in a row now. The last time it was in the three-digit range was in the 1960s.

A. Case-finding highlights: Gonorrhea

1991 was a superb year. We interviewed most GC cases (95.2%) and obtained a high contact index (1.73).

Contact Interviewing Activity

	'77-'79 (Averages)	'80-'82 (Averages)	1983	1984	1985	1986	1987	1988	1989	1990
Interviewed	70%	93%	97%	94%	89%	90%	91%	90%	90%	93%
Contacts per Case	1.35	1.87	1.8	1.8	1.7	1.8	1.7	1.5	1.6	1.65

CONTINUED...	1991
Interviewed	95.2%
Contacts per case	1.73

A notable shift occurred in gonorrhea case distribution during 1991: away from the military, remarkably enough. Fort Carson saw its morbidity decline a notable 18.4%; that should tickle the public health folks there! Civilian cases are at about the same level as they have been since 1988.

Gonorrhea Case Distribution
(El Paso County 1987-1991)

Cases	1987	1988	1989	1990
Civilian	592 (59.1%)	477 (51.5%)	449 (52.1%)	425 (50.6%)
Fort Carson	385 (38.4%)	428 (46.2%)	394 (45.8%)	397 (47.3%)
USAF	25 (2.5%)	22 (2.4%)	18 (2.1%)	18 (2.1%)
Total:	1002	927	861	840

CONTINUED...	1991
Civilian	440 (56.7%)
Fort Carson	324 (41.8%)
USAF	12 (1.5%)
Total:	776

Gonorrhea Case Distribution By Major Age Group
(1973, 1982, 1991)

Year	14-19	20-24	25-29	30-39	40++
1973	24%	51%	16.5%	7.2%	1.3%
1982	22.2%	46%	21.7%	8.5%	1.6%
1991	30.5%	42.9%	16.4%	8.6%	1.6%

In 1973, most cases were being diagnosed in whites; by 1991, most occurred in blacks. (The shift in case distribution from principally white to principally black occurred in the late 1970s: by 1980 it was roughly 50-50.)

There isn't much difference in age distribution between 1973 and 1982 (It's a little older, on average in 1982, because the late twenties group picked up 5 percentage points from the early twenties group). What's notable is that almost a third of all cases in 1991 are in teen-agers. (We suspect that substance abuse, particularly crack cocaine, lurks behind much of the impulsive sexual behavior that puts these kids at high risk.)

Gonorrhea Contact Tracing

A total of 214 gonorrhea cases were newly identified in 1991 as a consequence of contact tracing. The indices in the awkward Table below reflect the high quality of contact tracing efforts: a high percentage of newly identified cases per contact sought and the lowest "not examined" rate on record (20.1%, which is extraordinarily low for gonorrhea contacts).

Local Contacts to Gonorrhea: Outcomes

	1980-1982 (Average)	1983	1984	1985
Infected (New Cases)	380 (29.6%)	357 (25.9%)	475 (29.8%)	375 (23.5%)
Not Infected	500 (38.9%)	567 (41.1%)	637 (40%)	593 (37.2%)
Not Examined	405 (31.5%)	456 (33%)	481 (30.2%)	627 (39.3%)
Total Sought	1285 (100%)	1380 (100%)	1593 (100%)	1595 (100%)

CONTINUED...	1986	1987	1988	1989
Infected (New Cases)	276 (22.4%)	226 (25.6%)	197 (30.1%)	150(23.7%)
Not Infected	490 (39.7%)	427 (48.3%)	269 (41.1%)	312(49.3%)
Not Examined	468 (37.9%)	231 (26.1%)	188 (28.8%)	171(27.0%)
Total Sought	1234 (100%)	884 (100%)	654 (100%)	633(100%)

CONTINUED...	1990	1991
Infected (New Cases)	239 (30%)	214 (29.7%)
Not Infected	389 (49%)	361 (50.1%)
Not Examined	166 (21%)	145 (20.1)
Total Sought	794 (100%)	720 (100%)

That the quality of GC case-finding remains high is illustrated in the following Table: a continually strong proportion of cases are actively identified (Contacts).

Gonorrhea: Reason for Presentation (Epidemiologic category)

	1984	1985	1986
Volunteer	838 (55%)	870 (56.9%)	680 (53.8%)
"Screenee"	170 (11.1%)	210 (13.7%)	192 (15.2%)
Contact	517 (33.9%)	450 (29.4%)	393 (31%)
Total Cases	1525 (100%)	1530 (100%)	1265 (100%)

CONTINUED...	1987	1988	1989	1990
Volunteer	537 (53.6%	502 (54.2%)	485(56.3%)	498 (59.3%)
"Screenee"	159 (15.9%)	140 (15.1%)	133(15.5%)	118 (14%)
Contact	306 (30.5%)	285 (30.7%)	243(28.2%)	224 (26.7%)
Total Cases	1002 (100%)	927 (100%)	861 (100%)	840 (100%)

CONTINUED...	1991
Volunteer	426 (54.9%)
"Screenee"	122 (15.7%)
Contact	228 (29.4%)
Total Cases	776 (100%)

And, historically (percentages only):

	1976	1977	1978	1979	1980	1981	1982	1983
Volunteer	63.1	62.2	61	62.8	57.3	51.7	58	55.6
"Screenee"	11.4	10.7	11.7	10.1	9.9	8.3	8	11.9
Contact	25.5	27.1	27.3	27.1	32.8	40	34	32.5

CONTINUED...	1984	1985	1986	1987	1988	1989	1990
Volunteer	55	56.9	53.8	53.6	54.2	56.3	59.3
"Screenee"	11.1	13.7	15.2	15.9	15.1	15.5	14
Contact	33.9	29.4	31	30.5	30.7	28.2	26.7

CONTINUED...	1991
Volunteer	54.9
"Screenee"	15.7
Contact	29.4

Gonoccocal Pelvic Inflammatory Disease

	1976	1977	1978	1979	1980	1981	1982	1983
Cases	130	111	85	84	84	76	79	108
Percent	18.3	15.5	15.4	16	14	12	17	21

CONTINUED...	1984	1985	1986	1987	1988	1989	1990	1991
Cases	75	123	98	73	73	73	87	74
Percent	12.7	19.7	17.7	16.3	18.6	20.2	25.4	23.6

The notable datum is the percentage recorded for the last three years: somewhere between a fifth and a quarter of all women with gonorrhea have PID signs or symptoms. We suspect this has to do with the kind of woman who is currently getting gonorrhea: very young, non-white, and living a rough life. (As Don Woodhouse would say: the creme de la core.) All of these variables probably make for a lousy set of host defenses.

Urethrally Asymptomatic Men

Men with inapparent infection have traditionally been vigorously pursued in El Paso County: the consistency in the trend is best viewed from the column at the far right.

Year	Asymptomatic	All men	Pct. Asymptomatic
1981	143	927	15.4
1982	116	814	14.3
1983	131	777	16.9
1984	139	936	14.9
1985	126	907	13.9
1986	106	712	14.9
1987	101	554	18.2
1988	92	534	17.2
1989	82	500	16.4
1990	78	513	15.2
1991	57	451	12.6

Gonorrhea Repeat Cases

Although the contribution to the gonorrhea burden made by repeaters is now low, its composition shows that of all people, minorities (especially young blacks) have not practiced safer sex as much as whites have since the turning point year of 1985.

This is worrisome because black heterosexuals are at elevated risk for AIDS-virus infection to begin with and because VD probably facilitates infection with HIV once exposure occurs.

Year	Repeat cases	Percent of all cases
1973	159	9.9
1974	180	11.0
1975	129	7.7
1976	170	8.6
1977	229	11.5
1978	138	9.1
1979	156	10.2
1980	129	8.5
1981	136	8.8
1982	86	6.8
1983	89	6.9
1984	132	8.6
1985	92	6.0
1986	73	5.8
1987	48	4.8
1988	61	6.6
1989	47	5.6
1990	51	6.1
1991	50	6.4

In terms of bodies, 42 persons (26 men) were repeaters; 35 had 2 episodes, 6 had 3 each, and 1 had 4 cases. Thus these 42 persons generated 92 cases in all.

Ethnically, an astounding 36 (85.7% --the highest ever!) of the 42 repeaters are black; occupationally, 24 (57%) of all repeaters are in the Army. No prostitute or gay man was a repeater in 1991.

As we look at gonorrhea case distribution since 1985, we see that the absolute number of cases in blacks has remained very high even though the overall gonorrhea burden has dramatically declined, from 1530 cases in 1985 to 776 in 1991:

Gonorrhea Cases in Blacks

	1985	1986	1987	1988	1989	1990	1991
Number	743	637	519	542	532	576	546
percent	(48.6)	(50.4)	(52)	(58.5)	(61.8)	(68.6)	(70.3)

The trend is clear (bottom line): Gonorrhea is now a disease of black socio-sexual networks. For a fine review explaining this nation-wide phenomenon, see the lead article in Scientific American (Feb, 1991).

Gonorrhea in Street Prostitutes

During the last two decades, about 1300 prostitute women have worked locally; about 80% have been examined at our clinic since 1970 (the other 20% did not stay in the area long enough to become guests of our clinic!).

The relatively low number of visits in 1991 reflects the trend since the mid-1980s: the fear of viruses has reduced demand for prostitution and, consequently, fewer ladies are in the trade. The wonderfully low venereal disease rate since 1990 reflects the impact of relentless safer-sex initiatives: we're distributing condoms continuously where and when they work; the ladies are increasingly getting accustomed to using them; and the customers are likelier now than ever to accept their use. The information in the next two tables was edited and published in the February 14 (VD Day!), 1992 issue of the MMWR.

Year	Original Visits*	Gonorrhea Cases	% Positive
'70-'75(Avg)	133(Average)	39	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
1982	197	27	13.6
1983	214	31	14.5
1984	258	23	8.9
1985	254	27	10.6
1986	174	33	19.0
1987	169	19	11.2
1988	195	21	10.8
1989	192	24	12.5
1990	157	4	2.5
1991	148	7	4.7
22-yr total:	4374	750	17.1%

*Original visits excludes "follow-up" visits.

Screening for chlamydia in prostitute women started June 1, 1987 and was not universally applied until mid-1989. In addition, until early 1989, there were some diagnostic ("indeterminate" results) problems. Specimen collection is also affected by menstruation. The following data, then, are not as rigorous as the gonorrhea data, but they are pretty good trend indicators.

Chlamydia in Prostitute Women

	Visits	Tests(%)	Positive (% Pos)
Second Half of 1987	86	65 (76)	4 (6.2)
1988	195	145 (75)	19 (13.1)
1989	192	141 (73)	14 (10)
1990	157	144 (92)	7 (4.9)
1991	148	148 (100)	11 (7.4)

For comparison, the current positivity rate for non-prostitute women in VD Clinic is 12.8%!

Gonorrhea in Homosexual Men

Although many gay men may not adhering to safer sex practices, generally, things are going well. Of the 451 gonorrhea cases in men, 6 were in gay men (as opposed to 2 in 1990).

Percent of male gonorrhea cases in gay men

Before AIDS (1-6/'81)	16.2%
AIDS reported (7/'81-12/'81)	9.4%
1982	6.9%
1983	7.2%
1984	6.5%
1985	5.4%
1986	2.0%
1987	0.2%
1988	1.7%
1989	1.2%
1990	0.04%
1991	1.3%

Gonorrhea Case Rates

(Assumes a 1991 population of about 405,000): We have the lowest rate ever (and the first ever under 200 per 100,000). Nice.

Gonorrhea Rates (cases/100,000)

1970	1973	1977	1980	1981	1982	1983	1984
667	700	735	468	471	383	385	438

CONTINUED...	1985	1986	1987	1988	1989	1990
	420	333	255	232	213	208

Year	Males	Females	Ratio
1973	984	613	1.6:1
1974	1015	615	1.65:1
1975	1033	643	1.61:1
1976	1266	712	1.78:1
1977	1284	714	1.8:1
1978	964	551	1.75:1
1979	1002	523	1.91:1
1980	918	602	1.52:1
1981	928	609	1.52:1
1982	807	456	1.77:1
1983	775	505	1.53:1
1984	936	589	1.59:1
1985	907	623	1.46:1
1986	712	553	1.29:1
1987	554	448	1.23:1
1988	534	393	1.36:1
1989	500	361	1.38:1
1990	513	327	1.57:1
1991	451	325	1.39:1

Part IV

Other STD Program Data/Miscellaneous

Outreach: Field Investigations

During 1991 we performed almost 3500 field investigations in support of STD/HIV control, an increase of 12.6% over 1990, and a spectacular increase of 66% since 1989. (None of the data below reflects the enormous amount of outreach energy invested to interview study subjects for CDC's Project 90; since 1988, we have done about 900 extensive interviews on 600 persons.)

Note: The categories "Gonorrhea, Syphilis, and Chlamydia" include only contacts (sexual partners) to these diseases.

Year	Gonorrhea	Syphilis	Chlamydia	Other*	HIV**	Total
1973	892	114	N/A	405	N/A	1411
1974	805	114		441		1360
1975	719	124		633		1476
1976	979	78		718		1775
1977	1199	53		530		1782
1978	870	92		580		1542
1979	1032	33		583		1648
1980	1256	46		572		1874
1981	2205	41		483		2729
1982	1307	29		446		1782
1983	1754	41		449		2244
1984	2078	45		472		2595
1985	2038	49		532	25	2644
1986	1519	59		538	307	2423
1987	1042	24	7	456	96	1625
1988	757	32	570	577	246	2182
1989	792	36	498	446	320	2092
1990	1051	37	946	716	331	3081
1991	916	66	1148	921	419	3470
Total:	23211	1113	3169	10498	1744	39735

* Follow-up for positive syphilis serologies, positive GC and chlamydia tests, and test-of-cure follow-ups.

** Contacts to HIV and positive ELISA test follow-ups

The decline in gonorrhea contacts reflects declining morbidity. The doubling in chlamydia contacts sought reflects our increased attention to chlamydia since getting a decent test in 1987. The increase in syphilis contacts (to pre-1979 levels) reflects the doubling of syphilis cases during 1991 (see below). The increase in Other reflects the large increase in our pursuing persons with positive chlamydia tests. Finally, the increase in HIV follow-ups reflects our determination to follow-up all contacts, suspects, and positive antibody tests in the county, despite the decline in HIV incidence; we're not gonna give HIV any breathing room.

VD Clinic attendance...increased about 13% during 1991 and 25% in the last two years, a probable consequence of the large number of medically uninsured people, and of increased contact tracing and referral activities (We acquired an additional case-finder, courtesy of the State Health Department, in late 1989).

Year	New Visits	Return Visits	Total
1973	2449	2039	4488
1974	2938	2224	5162
1975	3508	2267	5775
1976	2988	2368	5356
1977	2546	2497	5043
1978	2316	2114	4430
1979	2201	2166	4367
1980	2209	1959	4168
1981	2471	2076	4547
1982	2135	1721	3856
1983	2218	1691	3909
1984	2234	1650	3884
1985	2301	1565	3866
1986	2250	1562	3812
1987	2042	1350	3392
1988	2323	1675	3998
1989	2319	1733	4052
1990	2223	2211	4434
1991	2387	2629	5016
		Nineteen Year Total:	83555

Note: Table excludes the approximately 4500 (AIDS-virus) Counseling/Testing Center visits in 1991, a 50% (!) increase over the 3000 in 1990. Thus our small clinic area hosted close to ten thousand visits during 1991, excluding visitors and persons merely wanting to obtain condoms, or about one visitor every ten minutes. We estimate that 15,000 telephone calls are annually received by our small staff, or about 60 per working day, or about one call every 7.5 minutes! We need more space and more help to receive calls. We can only guess at how many clients simply give up because our phone lines are tied up so much.

We are now at clinic attendance levels we experienced in 1977, the highest year for reported cases of venereal disease, and at similar levels when we had 4 clinic sessions per week.

Non-reportable STDs in V.D. Clinic

Data for non-reportable STDs were first recorded in a systematic way during calendar 1982. These data are not catholic, because only STD Clinic information is included. They are presented mainly as a trend indicator. Please note the strong upward trend for NGU/Chlamydia and the decline in v.warts (both in men) during 1991. No data are given for Herpes in 1991 because they were not rigorously kept. Note also the spectacular decline in trichomoniasis and the increase in NSV (Gardnerella) in women since the early 1980s.

Infection	Men								
	1982	1983	1984	1985	1986	1987	1988	1989	1990
NGU/Chlamydia	569	552	512	447	419	416	489	383	477
Herpes (1st Episode)	70	83	34	32	59	49	42	28	3
Venereal warts	131	185	127	132	172	119	244	252	310
Scabies	17	21	15	10	19	21	15	25	10
Phithirus pubis	56	59	44	50	41	54	40	43	38
Totals:	843	900	732	671	710	659	830	731	838

CONTINUED	Men
	1991
NGU/Chlamydia	667
Herpes	N/A
V. Warts	228
Scabies	20
P. Pubis	43
Totals:	958

Infection	Women								
	1982	1983	1984	1985	1986	1987	1988	1989	1990
Chlamydia		Not	Available		here		175	151	195
Trichomoniasis	461	492	390	275	112	115	103	99	79
Monilia	456	463	391	318	110	188	231	284	279
NSV	250	279	257	233	297	240	337	435	474
Herpes (1st Episode)	51	59	25	18	38	33	35	25	13
Venereal warts	55	62	49	76	72	61	117	88	112
Scabies	4	4	3	4	9	4	10	11	6
Phithirus pubis	29	31	22	17	29	24	22	36	31
Totals:	1306	1390	1137	941	667	665	1030	1129	1189

CONTINUED	Women
	1991
Chlamydia	275
Trichomoniasis	101
Monilia	315
NSV	633
Herpes	N/A
V. Warts	115
Scabies	13
P.Pubis	30
Totals:	1482

Syphilis

1991 saw a recrudescence of local transmission of infectious syphilis cases (to early 1970s patterns) and we are not amused. Its epidemiologic picture is ominous; it differs in important ways from that of previous years.

From the early 1970s to the early 1980s, most cases were diagnosed in gay men, most of whom acquired it elsewhere. Few case-contact pairs were linked locally. Starting in the mid-1980s, infectious syphilis cases were increasingly diagnosed in heterosexuals, most of whom were non-white.

The 15 or so excess cases recorded in 1991 reflect the contribution of the crack-cocaine trade (much like PPNG did during 1990). Some highlights will convey the flavor of its epidemiologic context:

About 40 percent of 1991 syphilis cases (we looked at 36 cases that were deemed to be of less than two years' duration) are in people known to be affiliated with gangs. Eighty percent occurred in non-whites (mostly blacks). The male-to-female ratio is like that of another disease of black heterosexuals (gonorrhea), 1.4 : 1. (Only one case was diagnosed in a gay man; he is a prostitute.) Two-thirds are civilian; one third military. More than half (53%) of cases are linkable to cases or contacts locally; thus, local transmission is occurring, a rare phenomenon with infectious syphilis during the last two decades. Sixty percent of infectious cases are symptomatic, again a rare phenomenon; syphilis has long been a largely serological (absence of clinical symptoms) disease locally. Five cases were diagnosed in teen-agers --this for a disease that usually is acquired by people in their mid to late twenties (gang stuff again); 47% are in their twenties and 39% thirty or older. (The mean age of all cases is 27.8). Two cases were diagnosed in prostitute women (one of whom is associated with gangs), and one of whom is HIV-infected. (Syphilis has been a rare disease in Colorado Springs prostitute women for the last two decades.) One-quarter of cases were identified by contact tracing, 45% because of Luetic symptoms, and 30% by screening. Two-thirds were diagnosed during the summer.

We are currently testing all gang members and their affiliates for syphilis and encouraging them to be HIV tested. Above all, we are preaching self-defense stuff and encouraging condom use. If HIV gets into this core group, we're gonna have some local transmission, particularly from men to women. We're worried and watchful. They are getting a disproportionate share of our attention...indefinitely.

Year	Infectious Syphilis	Late Syphilis	Total
1973	50	47	97
1974	52	17	69
1975	48	20	68
1976	39	17	56
1977	20	12	32
1978	26	19	45
1979	19	8	27
1980	23	4	27
1981	16	3	19
1982	18	7	25
1983	15	9	24
1984	26	4	30
1985	27	12	39
1986	31	10	41
1987	13	6	19
1988	11	8	19
1989	11	5	16
1990	14	3	17
1991	29	11	40

Presentations

About 117 formal presentations were recorded, with a total audience of 5065 (excluding radio/television audiences). Thus, about 2.25 presentations a week, with an average audience of 43, were done in 1991. About 40% of audiences are students and about 30% are health-care workers. The major shift over time has been the increasing interest on the part of health-care workers, and declining interest on the part of employers.

	1987	1988	1989	1990
Total presentations	110	132	127	113
Total audience	3683	6847	5462	5165
Students	45%	38%	56%	39%
Health care workers	23%	23%	20%	25%
Employers	10%	5%	2%	4%
Trainers	10%	16%	7%	3%
General audience	11%	17%	8%	22%
High risk persons	3%	1%	6%	7%

CONTINUED	1991
Total presentations	117
Total audience	5065
Students	41.6%
Health Care Workers	30%
Employers	0.8%
Trainers	3.6%
General audience	14.1%
High risk persons	11%

Presentations by person

	1987	1988	1989	1990	1991
Potterat	64	74	66	65	67
Muth	26	19	10	10	4
Woodhouse	0	17	20	8	5
Latimer	18	13	15	16	9
Castle	0	5	15	8	0
Drzewiczewski	2	2	0	2	3
Rogers	0	2	1	3	5
Bethea				1	21
Zimmerman					1
Pratts					2

Presentations represent a substantial investment in Program energy: each requires an average of 2 hours for preparation, travel, and delivery. For example, in Potterat's case, about 130 hours were devoted to them, or almost a month of work-time (3.25 weeks).

Summary of Medications Used
(1991)

VD Clinic			Given to CHC/WHC
Bicillin (1.2 m.u.)	160	syringes	0
Spectinomycin (2g)	11	vials	0
Benemid (500mg)	200	tablets	200
Ampicillin (500mg)	2410	capsules	0
Benadryl (50mg)	0	capsules	0
Erythromycin (250mg)	8600	tablets	288
Rocephin (250mg)	418	vials	10
Doxycycline	34130	capsules	740
E-Mycin (333)	8287	tablets	863

PART V

The traditional Tables

Monthly Venereal Disease Morbidity Report

Calendar 1991

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	58		8		27		10	1	7		6	16	37	6		
Women	1		1	91		44		30		11	1	6	1		40	41	12		
V.D. Clinic Men	10	2	2	127		42	4	39	3	27	3	17	4	2	21	114	6	4	121
Women	4		3	132	1	57	3	39		20	1	15	2	1	41	64	34	10	202
CHC/Pren/Family P.				21		9		6		4		1		1	10	10	1		
Planned Parenthood				7		1		3		1		2			5	2			
Health Hold				4				2		2					3	1			
Fort Carson Men	9	2		257	1	47	6	153	3	42		14	1	1	26	241	1		
Women		1	2	67		25		29	2	8		4	1	1	14	52	4		
Ent Air Base Men				7				5		2					1	5	1		
Women				3		2						1				3			
Air Academy Men			1	2		2			1							3			
Women			1						1							1			
Totals	24	5	11	776	2	237	13	333	10	127	6	67	9	12	177	574	65	14	323

Clinic Attendance: 5,016
New: 2,387
Return: 2,629

Treatment Failure None

ER Males: 41
ER Females: 65

Above includes a 6 y/o case of prepubertal vulvovaginitis.

MONTHLY V.D. CLINIC AND LABORATORY REPORT: EL PASO COUNTY HEALTH DEPARTMENT, 1991

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	CY 91	POS.	PCT+
TESTING:															
HIV (Ab)	175	168	173	156	169	217	205	184	199	241	355	340	2582	81	3.1
HIV (CUMULATIVE)													9367	518	5.5
RPR	258	235	283	296	286	275	346	296	322	380	290	295	3562	113	3.2
FTA	8	2	7	4	5	2	8	5	2	14	4	6	67	38	56.7
DF	0	1	1	2	0	1	1	0	0	0	1	1	8	2	25.0
GC SMEAR	139	127	146	157	149	137	191	145	143	158	162	147	1801	79	4.4
GC CULTURE:															
VDC MEN	143	134	162	162	162	148	199	148	147	164	166	155	1890	127	6.7
VDC WOMEN	144	147	175	182	182	174	196	236	191	237	148	182	2194	132	6.0
PNC WOMEN	55	48	65	54	41	44	52	43	31	4	27	36	500	2	0.4
FPC WOMEN	133	112	143	108	127	152	142	136	113	130	82	89	1467	9	0.6
PMD WOMEN	4	6	0	8	8	0	2	0	13	6	0	7	54	0	0
TOC: ALL PTS	21	26	18	10	26	17	16	14	11	12	4	11	186	0	0
CHLAMYDIA: FE	151	144	179	173	187	171	190	207	202	208	162	181	2155	275	12.8
TREATMENT:															
GC TREAT	21	26	22	18	15	33	25	28	26	27	20	23	284	N/A	
GC PRO-TREAT	24	22	42	32	26	24	31	20	25	25	27	25	323	N/A	
LUES TREAT	4	5	2	3	5	5	9	3	4	5	4	5	54	N/A	
LUES PRO-TREAT	0	0	0	2	0	1	4	1	3	2	0	1	14	N/A	
NON-V.D. TREAT	228	221	250	277	293	250	289	296	271	276	290	273	3214	N/A	
CLINIC: NO.	13	12	13	13	14	12	14	13	13	13	12	12	154	N/A	

HIV TESTING EXCLUDES THE 119 MILITARY POSITIVES SINCE JULY 1985 AND 22 POSITIVE DONORS LOST TO FOLLOW-UP

MONTHLY G.C. INVESTIGATIONS REPORT: EL PASO COUNTY HEALTH DEPARTMENT, 1991

CONTACTS TO GONORRHEA: OUTCOME

Combined Combined

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	CY 91	PCT/TL
NOT INFECTED				2	2	1							5	0.5
BROUGHT - TX	15	17		45	22	25	10		25	18	11	26	214	23.4
PREVIOUS TX	19	21		30	19	26	13		27	15	8	18	196	21.4
NOT FOUND	9	11		15	5	4	9		13	10	7	8	91	9.9
REFUSED EXAM				2		1			1	2		1	7	0.7
UNLOCATABLE	7	5		4	1	6	2		4	7	4	7	47	5.1
TRANSFERRED				1		1			1				3	0.3
EPI TREATED	41	35		72	31	44	26		43	24	20	17	353	38.5
OTHER														
TOTAL	91	89		171	80	108	60		114	76	50	77	916	100

MONTHLY CHLAMYDIA INVESTIGATIONS REPORT: EL PASO COUNTY HEALTH DEPARTMENT, 1991

CONTACTS TO CHLAMYDIA: OUTCOME

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	CY 91	PCT/TL
			Combined					Combined						
NOT INFECTED				2	1				1		1	1	6	0.5
BROUGHT - TX	5	11		45	22	18	11		47	18	28	24	229	20.0
PREVIOUS TX	10	12		24	14	8	11		25	7	17	25	153	13.3
NOT FOUND	5	6		15	5	5	6		11	6	7	7	73	6.3
REFUSED EXAM		1					1		3		1	1	7	0.6
UNLOCATABLE	3	11		9	4	7	5		9	10	8	4	70	6.1
TRANSFERRED				1		2							3	2.6
EPI TREATED	38	45		126	57	35	43		85	38	60	80	607	52.9
OTHER														
TOTAL	61	86		222	103	75	77		181	79	122	142	1148	100

REPORTED GONORRHEA CASES BY MONTH 1991-

YEAR	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC	MONTHLY AVERAGE	ANNUAL TOTAL
1991	70	60	66	52	63	86	49	52	88	80	58	52	65	776
1992														
1993														
1994														
1995														
1996														
1997														
1998														
1999														
2000														
2001														
2002														
2003														
2004														
2005														
2006														
2007														
2008														
2009														
2010														
2011														
2012														

Reported Gonorrhea Cases, By Month, 1973-1990

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	L. Hill 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
1979	161	106	97	106	105	117	130	175	Wordhouse 166	117	136	109	127	1525
1980	164	149	73	118	109	122	156	170	98	118	126	117	127	1520
1981	117	120	126	118	140	174	137	148	99	144	128	86	128	1537
1982	95	96	98	83	94	127	115	149	118	97	94	97	105	1263
1983	113	97	108	97	87	98	118	110	128	148	90	86	107	1280
1984	96	115	161	127	105	113	153	142	113	133	131	136	127	1525
1985	98	96	98	138	132	127	179	155	127	157	97	126	128	1530
1986	97	96	96	98	94	99	99	148	119	124	97	98	105	1265
1987	79	80	98	93	98	98	99	92	73	67	58	66	83	1001
1988	92	75	72	58	79	79	59	86	86	88	94	58	77	926
1989	56	40	59	75	66	79	77	93	85	81	80	70	72	861
1990	69	35	39	67	76	62	68	97	71	87	85	84	70	840