1992

EL PASO COUNTY DEPARTMENT OF HEALTH AND ENVIRONMENT
301 South Union Boulevard.
Colorado Springs, Colorado 80910

ANNUAL REPORT
Sexually Transmitted Diseases/HIV Programs
January 1, 1992 - December 31, 1992

T W E N T I E T H A N N I V E R S A R Y I S S U E

"Yesterday don't matter 'til it's gone" *

*Andrew Loog Oldham's clever modification of the Rolling Stones's "Yesterday don't matter if it's gone..." lyric in Ruby Tuesday.

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Number of newspapers/magazine articles by year
(1976-1992)

1976:	1	1982:	2	1988:	9
1977:	2	1983:	2	1989:	3
1978:	1	1984:	2	1990:	8
1979:	3	1985:	2	1991:	9
1980:	0	1986:	8	1992:	9
1981:	2	1987:	17	---	---
				Ttl:	80

(Almost half of the articles reflect the media's interest in heterosexual HIV transmission and/or prostitute women.)

Appendix A is a list of the scientific publications and commentaries that have appeared (about 40) or will soon be completed (about 10). More than 75% have appeared in respected, refereed journals. Considering that we are simply county disease control officers, rather than researchers, this is also pretty amazing.

All the numbers in this Report are impressive. They point to the enormous amount of work done and attest to its quality. It is people who are responsible for our manifold successes...so, these pages are dedicated to those who make it such a terrific control program: Nancy Brace, Lynn Drzewiczewski (is that a mouthful or what?), Tammy Maldonaldo, Elizabeth Mattas, Steve Muth (only because he is the boss' son), Joy Peterson, Captain Outrageous (John Potterat), Christopher Pratts, Helen Rogers, Don Woodhouse, Helen Zimmerman (never least). These people are the STD/HIV control Programs... We also recognize the hard work contributed by the STD Clinic staff; by Nancy Spencer (a special favorite of ours who toils for the Colorado Department of Health); by our colleagues at our local military bases; and by all the supportive folks at the national Centers for Disease Control and Prevention, especially Rich Rothenberg and Bill Darrow.

Finally, we owe a biggie to Dr. Muth for tolerating our unorthodox style and for nurturing the atmosphere that allows us to succeed. (It is rumored that he went to high school with G.K. Chesterton, the Captain Outrageous of his day!)

"I believe in getting into hot water. I think it keeps you clean."

Chesterton

1992

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. Not that we know enough 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) 1 September 1991. Thus 1992 was the first full year of reporting. There are currently at least three obstacles to obtaining an accurate surveillance picture: 1) although reporting is required of laboratories, doctors are not yet expected to follow suit (Estimated shortfall, about 500 cases annually), 2) under-detection of cases is probably as prevalent as under-reporting (500 cases annually?), and 3) of the 1600 cases reported during 1992, a fifth do not have age information, two-thirds lack race/ethnicity, and about half have neither address nor census tract information. (The operational energy needed to obtain complete information on person, place, time, diagnosis and treatment for all cases, or even a representative sample, is considerable, and not yet available. It's like being in a tunnel with a flashlight rather than with a searchlight: the epidemiologic picture ain't as clear as we'd like it to be. Yet clarity is crucial to make defensible decisions in the allocation of resources to contain this widespread infection. We're not blind, but we are myopic.

Another important obstacle is the commercial test for chlamydia; in a word, it's barely adequate (roughly 70% accurate). For example, we have examined many male contacts to infected women during the last four years and find relatively few to be positive on testing. Is this an artifact of the lousy tests we're using, or of our specimen collection techniques? Is it a consequence 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 infection)?

We estimate that El Paso County hosts somewhere between 2000 and 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 five 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 unpredictably as it seems to? We need to meticulously collect surveillance information to explore 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.

Laboratory reported chlamydia cases: 1992

	Men	Women	Ratio
Private providers	45	264	1: 5.9
STD Clinic	185	216	1: 1.2
FPC/PNC/CHC*		186	N/A
Planned Parenthood		22	N/A
Ft. Carson	277	289	1: 1
Air Force	45	76	1: 1.7
Total	552	1053	1: 1.9

*Family Planning, Prenatal, Community Health Center, clinics

A bit over three-quarters of the cases for whom age information is available are younger than 25; 90% are under age 30.

Chlamydia cases by selected report source and gender

1988-1992

(Excludes private sector cases)

	H.D. Clinics		Fort Carson		Air Force		Total
	Men	Women	Men	Women	Men	Women	
1988	243	268	250	197	84	150	1192
1989	144	217	289	263	Unknown		N/A
1990	195	443	213	222	151(both)		1224

1991	253	436	288	256		118(both)	1351
1992	185	327	277	289	45	63	1186

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 roughly twice as many cases in women than in men over the last two years. Is this an artifact of greatly expanded (nearly universal now) screening for chlamydia in H.D. clinics, where the majority of patients are women? Probably.

Chlamydia screening in Women's Clinics
1988-1992

Year	Family Planning		Prenatal/CNM	
	Tests	Pos.(%)	Tests	Pos.(%)
1988	772	61 (7.9)	573	75 (13.1)!!!
1989	259*	30 (11.6)	410	30 (7.3)
1990	1379	121 (8.8)	471	50 (10.6)
1991	1559	114 (7.3)	537	39 (7.3)
1992	1701	65 (3.8)	586	45 (7.8)

* Only high-risk clients were tested in 1989

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 is considerably lower for the last two years. (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 to the current FPC level (3.8%).

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 1992. 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 (4134: 1733= 2.4) and identifying roughly the same number of positives (405 vs. 401).

Chlamydia cases in VD Clinic
1988-1992

	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		1992	
	Tests	Pos (%)	Tests	Pos (%)
Men	1852	259 (14)	1924	185 (9.6)
Women	2155	275 (12.8)	2210	216 (9.8)
Total	4007	534 (13.3)	4134	401 (9.7)

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%)

MEN: CONTINUED...

	1992
Volunteer	111 (57.2%)
Screen	27 (13.9%)
Contact	56 (28.9%)
	194 (100%)

WOMEN

	1988	1989	1990	1991
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%)

WOMEN: CONTINUED...

	1992
Volunteer/ Screen	260 (75%)
Contact	87 (25%)
	347 (100%)

Thus, about a quarter of H.D. cases are identified through contact tracing (for men or women), lower than it is for gonorrhea (about 30%), probably an artifact of the test's relative inaccuracy.

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 (490/1031) of women had their chlamydia detected as a consequence of contact tracing since 1988; the 1992 yield was below expectation (40%).

STD Clinic women with chlamydia: 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%)

...CONTINUED...

	1992
Volunteer/ Screen	135 (60.8%)
Contact	87 (39.2%)
	222 (100%)

Chlamydia contact interviews
(All H.D. Clinics)

We have interviewed about 2500 civilian cases of chlamydia in the last five years, and obtained about 4300 contacts, with a consistent contact index of 1.7 for both men and women.

	1988		1989		1990	
	No.	Contacts	No.	Contacts	No.	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		1992	
	No.	Contacts	No.	Contacts
Men	269	453 (1.68)	220	352 (1.6)
Women	434	753 (1.74)	351	646 (1.84)
Total	703	1206 (1.72)	571	998 (1.73)

We are interviewing almost 90% of public sector chlamydia cases...

Proportion of chlamydia cases interviewed
(Health Dept. diagnosed cases)

	1988	1989	1990	1991	1992
Reported Cases	511	361	638	689	512

Interviewed	82%	80%	82%	91.5%	86.5%

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	1992
Reported Cases	447	552	435	544	566
Interviewed/(%)	289 (65)	347 (63)	391 (90)	420 (77)	481 (85)

Thus, they have also had about 2500 cases reported and have interviewed three-quarters (1928/2544).

Chlamydia contact tracing

The number of contacts to chlamydia sought locally since contact tracing efforts began in 1988 has increased substantially. The low proportion of positives and greater proportion of uninfected contacts either has to do with testing (low sensitivity, especially from the male urethra) or with the possibility that chlamydia is not a tenacious infection in men (lots of spontaneous cure?). 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)

...CONTINUED...

	1992
Infected (New cases)	184 (21.1)
Not infected	564 (64.6)
Not examined	125 (14.3)
	873 (100)

Thus, more than 3600 contacts have been sought locally in four years, of whom more than 700 (20%) were newly identified cases; about 2300 others were treated preventively but had negative tests. We bet that about 350 of these 2300 were really positive, but the relatively insensitive tests did not show positive results.

Summary

We need to investigate the community form of this disease in a comprehensive way, the way we did for gonorrhea during the 1970s. Chlamydia is to serious and widespread of an infection to be attacked as a public health after-thought. During 1993 we will explore funding sources for a planned community-wide attack starting in 1994. Especially important will be resources to offer screening in many (selected) private, and quasi-private, sector medical settings, especially those that routinely do pelvic examinations on very young women.

Part II

HUMAN IMMUNODEFICIENCY VIRUS INFECTION

AIDS proper: a brief profile

At least 215 persons with full-blown AIDS have lived in El Paso County since the first reported case in the summer of 1982. An astonishing three-quarters are known to be dead. (State-wide, the death rate is significantly lower than ours: %.) One hundred forty nine cases were counted locally, while 66 (almost a third) were diagnosed and counted elsewhere. Four out of five cases counted locally are known to be dead, while "only" three of five counted elsewhere are; this is probably an artifact of follow-up information being better for locally diagnosed cases. During 1993, we will ask the Colorado Department of Health for assistance in ascertaining death (and other HIV end-points) of cases "counted elsewhere".

Adult AIDS cases having resided locally

	Counted locally			Counted elswhere			Total		
Yr.	No.	Dead	(%)	No.	Dead	(%)	No.	Dead	(%)
1982	1	1	(100)				1	1	(100)
1983	2	2	(100)	3	3	(100)	5	5	(100)
1984	1	1	(100)				1	1	(100)
1985	7	7	(100)	1	1	(100)	8	8	(100)
1986	13	10	(77)	6	2	(33)	19	12	(63)
1987	9	8	(89)	10	8	(80)	19	16	(84)
1988	23	21	(91)	9	9	(100)	32	30	(94)
1989	31	25	(81)	13	8	(62)	44	33	(75)
1990	21	15	(71)	10	3	(30)	31	18	(58)
1991	29	23	(79)	8	3	(38)	37	26	(70)
1992	12	5	(42)	6	3	(50)	18	8	(45)
Ttl:	149	118	(79)	66	40	(61)	215	158	(74)

** One case is missing from this table (Dead= yes)

The above table shows year of diagnosis and whether the person diagnosed that year is known to be dead (i.e., the person may not have died in that year). Therefore,if we simply look at each year and ask how many people with AIDS (full-blown) died each year, the picture looks a bit different:

AIDS (full-blown) in the stated interval

1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
1	1	2	4	6	9	24	15	28	37	32

Here are the same data for all (Incl. AIDS) adult HIV patients:

1	1	2	4	9	11	28	15	31	35	34

Thus about 12 more deaths occurred (171) in adults with HIV as opposed to (strictly) AIDS patients (159 deaths).

AIDS (Full-blown) cases: risk factor classification
(1982-1992)

	Men	Women	Total
Gay/bi-sexual	136	N/A	136
Gay/ I.V. user	29	N/A	29
I.V. user	16	7	23
Sex with I.V./Hetero		9	9
Transfusion	4	4	8
Other/Unknown	10	1	11*
Total	195 (90%)	21 (10%)	216 (100%)

* These 11 have the classic (suspected,yet unconfirmed) risks.

AIDS cases by race/ethnicity

Full-blown AIDS cases tend to be white (78.3%), with blacks accounting for 14.6% and Hispanics, 7%.

Whereas non-white minorities account for about 22% of AIDS cases, they account for about 32% of cases with HIV who are not known to have AIDS yet. What this means is that white homosexuals, who bore the brunt of the epidemic in the early days, are no longer as well represented in the more recent wave of infectees, who seem to be increasingly from populations of color (injecting drug users and their partners... AND men who have sex with men but are either not gay-identified or who come from the socio-sexual networks of minority populations).

HIV control program

This program consists of two parts: the Counseling/Testing site and the Control Program proper (e.g., outreach efforts). What follows is a potpourri of data and observations that help paint an impressionistic picture of what is happening locally with HIV infection.

HIV infection by source of report and gender
(1982-1992)

HIV testing has been available since June of 1985. The following represents the distribution of all 752 infected adults (including full-blown AIDS cases) reported locally, and where they were identified. Note that nearly three-quarters (73%) are detected outside of health department clinics. Note as well how few of our Drug clinic clients are infected.

	Cases/(%)	Men	Women
1. Counseling/Testing Site (Health Dept.)	154	146	8
2. V.D. Clinic	34	29	5
3. VSR (Prostitution)	11	2	9
4. Drug Clinic	4	3	1
5. Donor centers	102	95	7
6. Military*	134	122	12
7. Doctors/hospitals/other	313	278	35
Total:	752	675 (90%)	77 (10%)

* Actually, military doctors have reported 150 cases, of whom 134 are in uniform and 16 are retired or dependents...the latter are lumped in category #7 above.

HIV cases by race/ethnicity

Of infected persons not known to have proceeded to AIDS, the race/ethnic distribution for the 561 with known race (8 are unknown) is: white= 68.6%, black= 19.8%, Hispanic= 10%, and other= 1.6%. Blacks are clearly over-represented, almost by a factor of three, based on their representation in the general population locally.

HIV infection by age: a datum or two

HIV infection is clearly not a problem of teen-agers, despite all the propaganda. The average age for an HIV/AIDS case at time of diagnosis is early thirties and the average age at disease acquisition is mid to late twenties.

Four out of five (77.5%) HIV cases were born in the two decades separating 1950 and 1969 (90% between 1945 and 1972). Two-thirds (65%) are baby-boomers (1946-1964). This is a disease that should be studied as an age-cohort phenomenon, particularly since folks today are acquiring HIV at rates far lower than "boomers" rates.

HIV infected persons by risk factor/gender
(1982-1992)

Category	Men	Women	Total (%)
Homosexual	350 (incl. 72 I.V.)	N/A	350 (63.5)
Bisexual	72	N/R	72 (13.1)
Hetero I.V. user	55	29	84 (15.2)
Transfusion	9	7	16 (2.9)
Sex with high-risk	1	28	29 (5.3)
Total:	487	64	551 (100)

The above table excludes military cases (N= 150), and also about 50 cases for whom risk factor information is unavailable.

HIV infection by reason for presentation

A person's infection status is ordinarily detected via screening, or spontaneous presentation with symptoms (or curiosity), or contact tracing. Monitoring changes in presentation trends is important to assess the usefulness of screening or contact tracing efforts. The question we ask is: how did the HIV-infected person initially find out about his infection status ("Reason for presentation")?

...viewed annually, since the test became available (percentages are shown):

Reason	Thru 1986	1987	1988	1989	1990	1991	1992
Volunteer	20.5	20.9	13.4	15.8	23	15	27.2
Screen	62.5	72.1	80	71	64.8	76.2	62.9
Contact	17	7	6.6	13.2	12.2	8.8	9.9
100 percent							

Overall, 19.6% are volunteers, 69% are screening discoveries, and 11.4% are contacts. Thus, only one out of five of all HIV cases discover infection as a consequence of wanting to know; fully four of five are informed as a consequence of screening or partner notification.
(Note: "Red-date" was used as baseline date for these data.)

HIV contact interviews
(1985-1992)

Many health jurisdictions in the United States do not interview HIV patients for sexual and needle-sharing partner information; they consider the procedure ineffectual or politically incorrect. We dissent; we have successfully conducted such "partner notification" (contact tracing) interviews on positive clients since the late fall of 1985.

Year	No. Interviews	No. Contacts	Contact Index
1985*	28	56	2
1986	95	182	1.9
1987	45	78	1.7
1988	61	126	2.1
1989	64	130	2
1990	60	128	2.1
1991	43	80	1.9
1992	53	70	1.3
Ttl:	449	850	1.9

* Last quarter of 1985 only (when we officially began)

The vast majority of HIV cases NOT interviewed were 1) not located (N= 120 cases, mostly transient donors) or died at time of diagnosis, or 2) not eligible (because counselled/interviewed in the jurisdiction that originally diagnosed the case, N= 98), or 3) we missed the opportunity (N= 30). We also have incompleted information on 43 cases: this is a data-base coding problem that should be solved by next year's Report.

Between 20 and 25% of cases name no identifiable partners and one-third name only one; about 40% name two or more partners (range 2-18).

On HIV seroconverters

Persons who initially test negative for HIV antibody and who are subsequently (weeks to months later) positive are classified as seroconverters - true public health failures, because it is easy, with modest effort, to avoid getting infected. HIV is very difficult to transmit in all but rare cases.

Seroconverters by year of conversion

Year	Civilians	Military	Total
1986	6	1	7
1987	5	1	6
1988	9	1	10
1989	7	2	9
1990	14 !!!	2	16
1991	8	5 !!!	13
1992	3	1	4
Ttl:	52 (80%)	13 (20%)	65 (100%)

Not all seroconversions are observed. These data, however, are useful as a trend indicator. The relatively small annual burden (perhaps a dozen to 20 seroconversions actually occur in EL Paso County) and the accelerating annual HIV death burden (about 30 to 40 currently) argues for declining prevalence over time (implosion idea).

Health Department HIV antibody testing

HIV testing began in the summer of 1985 in the Counselling/Testing Site (CTS) and to be offered in other clinics, principally the STD clinic, in 1988. (Drug clinic

clients were tested via the generic testing site since the fall of 1985.) The data below are aggregated to reflect total H.D. activity, irrespective of clinic.

We have collected about 13,143 specimens for testing since 1 June 1985, with 3776 (about 30%) being done in 1992 alone.

To develop a sense for trend in positivity, it is best to simply look at tests done in the CTS alone, since this is where the high-risk people are likeliest to seek testing. The data clearly show that what we increasingly have is an epidemic of testing, rather than of HIV.

HIV testing in the CTS: 1985-1992

	1985-1986	1987	1988	1989	1990	1991	1992
Tests	878	764	784	658	835	1814	2777
No. positive	68	18	19	14	17	12	12
% positive	7.7	2.4	2.4	2.1	2.0	0.7	0.4

Thus while testing tripled, the positivity rate declined 95% !!! A simply wonderful inverse relationship!

HIV (Ab) testing in STD Clinic

	1988	1989	1990	1991	1992
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 . All of the 1..positive persons revealed recognized risk factors: 1.. are men who have sex with men, .. are injecting drug users (one woman), and one woman is the steady sex partner of an ...

HIV testing in prostitute women
(1985-1992)

A total of women with histories of prostitution have been seen at our department since the summer of 1985, of whom have been tested for HIV antibody. With we were unable to obtain blood (collapsed veins) and slipped through our Drug Clinic testing program.

Twelve? (%) are infected with HIV. Of these are known to have worked locally and had worked elsewhere and have not been observed working here.

Testing is periodic and frequent on prostitute women who remain in our area. Of the ever tested

Importantly no positive test has been obtained on a prostitute woman in years, since

Only one prostitute who was negative on the initial test has seroconverted: on her fifth test (1987) in two years (risk factor: sharing injecting drug use needles).

AIDS-virus infection in children:

----- 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.)

Need to look up ATS no. 8044, 8129, 8795, 10027, 10423, 10789 and others exposed but no known yet (loss to follow-up or awaiting final determination: 4 cases?)

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	Unknown**	Inf. mother (transfusion); birth	1985
Female	Newborn	Dead	Inf. mother (Ct. to IV); birth	1990
Male	13 yrs	Dead	Transfusion (Hemophiliac)	1990
Male	Newborn	Dead	Inf. mother (Ct. to IV); birth	1991

* Attending school locally (age 8 now)
** Presumed dead; no longer residing in this State

Part III

Gonorrhea control

Sustained behavior changes in our community are continuing to decrease gonorrhea's reproductive success; for calendar 1992, we report yet another decline, from 776 in 1991 to 635 (-18.2%) in 1992. Gonorrhea morbidity has been in the three-digit category five years in a row now. (The last time it was in the three-digit range was in the 1960s.)

Case-finding highlights: gonorrhea

1992 was a good year. We interviewed most GC cases (92.1%) and obtained a high contact index (1.81).

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	1992
Interviewed	95.2%	92.1%
Contacts per case	1.73	1.81

A notable shift occurred in gonorrhea case distribution during 1992: away from the military, remarkably enough. Fort Carson saw its morbidity decline a notable 21.3%, the second consecutive year of substantial annual decline. Civilian and military cases are at about two-thirds their 1987 level.

Gonorrhea case distribution
(El Paso County 1987-1992)

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	1992
Civilian	440 (56.7%)	368 (58%)
Fort Carson	324 (41.8%)	255 (40.1%)
USAF	12 (1.5%)	12 (1.9%)
Total:	776	635

Gonorrhea case distribution by major age group
(1973, 1982, 1992)

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%
1992	32.6%	45%	16.4%	4.6%	1.4%

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 1992 are in teen-agers.

In 1973, most cases were being diagnosed in whites; by 1992, 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.)

Gonorrhea contact tracing

A total of 222 gonorrhea cases were newly identified in 1992 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 virtually the lowest "not examined" rate on record (20.4%, 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	1992
Infected (New cases)	239 (30%)	214 (29.7%)	222 (31.1%)
Not infected	389 (49%)	361 (50.1%)	347 (48.5%)
Not examined	166 (21%)	145 (20.1)	146 (20.4%)
Total sought	894 (100%)	720 (100%)	715 (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	1992
Volunteer	426 (54.9%)	344 (54.2%)
"Screenee"	122 (15.7%)	107 (16.8%)
Contact	228 (29.4%)	184 (29%)

Total cases	776 (100%)	635 (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	1992
Volunteer	54.9	54.2
"Screenee"	15.7	16.8
Contact	29.4	29

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

CONTINUED...	1992
Cases	71
Percent	25

The notable datum is the percentage recorded for the last four 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. 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
1992	61	354	17.2

Gonorrhea repeat cases

The contribution to the gonorrhea burden made by repeaters is now at an all-time low.

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
1992	29	4.6

In terms of bodies, 28 persons (18 men) were repeaters; 27 had 2 episodes, and 1 had 3. Thus these 28 persons generated 57 cases in all.

Ethnically, 22 (78.6) of the 28 repeaters are black; occupationally, 14 (50%) of all repeaters are in the Army.

As we look at gonorrhea case distribution since 1985, we see that the absolute number of cases in blacks has declined substantially since 1985, especially in the last year, even though the overall proportion of all gonorrhea cases is still very high (60%, and declining as well). Blacks are increasingly paying attention to safer sex messages, we believe. We couldn't be more pleased that our campaign to targets condom use to high-risk populations is apparently working.

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)

...CONTINUED...

	1992
Number	381 (Half what it was in 1985!)
Percent	(60)

Gonorrhea in street prostitutes

Since 1970, about 1500 (estimated) women have engaged in prostitution locally; between 75% and 80% have been examined at our clinic (most of the remainder did not stay in the area long enough to become guests of our clinic or, less often, they were clandestine hookers).

The relatively low number of visits during the last three years emphasizes 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. The ladies are increasingly using them and the customers are likelier than ever to accept their use.

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
1992	150	4	2.7
23-yr total:	4524	754	16.7%

*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 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)
	1992	150	148 (98.7)	7 (4.7)

For comparison, the current positivity rate for non-prostitute women in VD Clinic is 9.8%!

Gonorrhea in homosexual men

Although many gay men may not adhering to safer sex practices, generally, things are going well. Of the 361 gonorrhea cases in men, 7 were in gay men (6 in 1991).

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%
1992	2.0%

Gonorrhea case rates

(Assumes a 1992 population of about 410,000): We have the lowest rate ever...and about one fifth the 1977 rate (apogee)!

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

CONTINUED...	1991	1992
	192	155

These data are nothing short of spectacular, and provide the most persuasive evidence for the sustained sexual habit changes noted in previous reports and for the efficacy of our gonorrhea control measures over time.

PPNG (penicillinase-producing N. gonorrhoeae) cases:

During 1992 we recorded 15 cases; we are thus back to our "background noise" levels of pre-1990. (The 1990-1991 period witnessed an 18-month long self-sustaining PPNG epidemic in the socio-sexual networks of crack cocaine gangs.)

Since the introduction of PPNG into the USA in the spring of 1976, 198 cases have been diagnosed in El Paso County. They occurred in context of 21,977 gonorrhea cases, a 0.9% rate (198 cases divided by 21,977):

PPNG cases

1976	1977	1978	1979	1980	1981	1982	1983	1984
0	1	0	3	0	7	21	5	2

1985	1986	1987	1988	1989	1990	1991	1992
4	20	15	16	13	44	32	15

Male-to-female ratio: gonorrhea

This ratio is the lowest ever, due to the decline of military GC cases, where about 80 percent of cases are in men.

Year	Men	Women	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
1992	361	274	1.32:1

Part IV

Other STD Program data/miscellaneous

STD contact interviews: 1973- 1992

Yr	Civilian Gonorrhea	Ft.Carson Gonorrhea	Syphilis (All)	Civilian Chlamydia	Ft.Carson Chlamydia	HIV/ AIDS
'73	339	420 (Est.)	47			
'74	316	400 (Est.)	49			
'75	334	404 (Est.)	46			
'76	309	554 (Est.)	38			
'77	424	520 (Est.)	20			
'78	382	570	25			
'79	693	645	19			
'80	759	574	23			
'81	843	632	16			
'82	617	620	18			
'83	693	552	15			
'84	780	644	27			
'85	749	619	29			28
'86	671	467	30			95
'87	556	355	13			45
'88	442	395	9	419	234	61
'89	418	358	17	290	355	64
'90	424	357	21	523	336	60
'91				703	421	43
'92				571		53
Ttl:				2506		449

Outreach: field investigations

During 1992 we performed more than 3000 field investigations in support of STD/HIV control, a 12% decrease over 1991 (yet a still much higher workload than that done during the 1980s; and 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 1100 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
1992	854	68	979	900	249	3050
Total:	24065	1181	4148	11398	1993	42785

* 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

Newly identified STD cases
(1973-1992)

STD patient interviewing and the tracing of named partners occasioned the identification of new cases (called "broughts", short for brought to treatment in DIS jargon)

Year	Broughts	Year	Broughts
1973		1984	
1974		1985	
1975		1986	
1976		1987	
1977		1988	
1978		1989	
1979		1990	
1980		1991	
1981		1992	
1982			
1983			

VD Clinic attendance...stabilized during 1992...

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
1992	2664	2304	4968
		Twenty year total:	88523

(Mean = 4426 per year)

Note: Table excludes the approximately 6600 HIV Testing Center visits in 1992. For the last two years we have recorded clinic attendance levels we experienced during 1977, the highest year for reported cases of venereal disease, and at similar levels when we had 4 clinic sessions per week (mid-1970s).

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 in v.warts (both in men) during the last few years. No data are given for Herpes in 1991-92 because they were not rigorously kept, but we know that case levels are very low. 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	1992
NGU/Chlamydia	667	696
Herpes	N/A	N/A
V. Warts	228	292
Scabies	20	29
P. Pubis	43	43
Totals:	958	1060

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	1992
Chlamydia	275	216
Trichomoniasis	101	97
Monilia	315	320
NSV	633	685
Herpes	N/A	N/A
V. Warts	115	181
Scabies	13	11
P.Pubis	30	31

Totals: 1482 1541

Syphilis

Control of infectious STD in the socio-sexual networks of crack-cocaine folks pushed infectious syphilis levels to their normal "background noise" levels...

In the early 1970s, the rate was about 22 cases/100,000 population; the current rate is seven times lower (about 3 cases per 100,000).

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
1992	13	15	28

Presentations

About 128 formal presentations were recorded, with a total audience of 5358 (excluding radio/television audiences). Thus, about 2.5 presentations a week, with an average audience of 42, were done in 1992. About half of audiences are students and about a fifth are health-care workers. The major shift over time has been the sustained interest on the part of health-care workers, and the declining interest on the part of employers and trainers.

	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	1992
Total presentations	117	128
Total audience	5065	5358
Students	41.6%	52.8%
Health Care Workers	30%	21.1%
Employers	0.8%	1.7%
Trainers	3.6%	5.5%
General audience	14.1%	14.8%
High risk persons	11%	4.1%

Presentations by person

	1987	1988	1989	1990	1991	1992
Potterat	64	74	66	65	67	52
Muth	26	19	10	10	4	5
Woodhouse	0	17	20	8	5	10
Latimer/Sears	18	13	15	16	9	10
Castle	0	5	15	8	0	13
Drzewiczewski	2	2	0	2	3	1
Rogers	0	2	1	3	5	0
Bethea				1	21	15
Zimmerman					1	0
Pratts					2	0
Brace						22

Presentations represent a substantial investment in Program energy: each requires an average of 2 hours for preparation, travel, and delivery.

Summary of medications used
(1992)

VD Clinic

Bicillin (1.2 m.u.)	116	syringes
Spectinomycin (2g)	35	vials
Benemid (500mg)	0	tablets
Ampicillin (500mg)	2510	capsules
Benadryl (50mg)	672	capsules
Erythromycin (250mg)	3212	tablets
Rocephin (250mg)	91	vials
Doxycycline	32790	capsules
E-Mycin (333)	9830	tablets
Suprax (440mg)	481	tablets

PART V

The traditional tables

Monthly Venereal Disease Morbidity Report

Calendar 1992

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			42		12		17		9		4	1		13	26	4		
Women	1	1	3	84	1	38	1	32		8	2	4	1	2	51	24	14		
V.D. Clinic Men		1	2	111	1	32	1	42	1	23		9		5	21	82	11	8	114
Women		3		116		58		31	1	23	2	4			46	53	20	13	186
CHC/Pren/Family P.			2	11		6	1	3		1	1			1	6	3	4		
Planned Parenthood				3		2		1								2	1		
Health Hold				1						1							1		
Fort Carson Men	1	2	4	201		27	3	139	2	29		5	2	1	28	171	9		
Women	2	1	4	54	1	30	3	17	2	6	1	1			20	35	6		
Ent Air Base Men				6				1		3		2			1	5			
Women				1				1							1				
Air Academy Men				1		1										1			
Women				4		1		2		1					2	2			
Totals	5	8	15	635	3	207	9	286	6	104	6	29	4	9	189	404	70	21	300

Clinic Attendance: 4968
New: 2664
Return: 2304

(Above includes B/Male Neonate with GC)

Treatment Failure None

ER Males: 18
ER Females: 51

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	54	65	72	40	53	35	52	60	39	78	32	54	53	634
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	World Max 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

MONTHLY G.C. INVESTIGATIONS REPORT: EL PASO COUNTY HEALTH DEPARTMENT, 1992

Combined

CONTACTS TO GONORRHEA: OUTCOME

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	CY92	PCT/TL
NOT INFECTED	3	0	1	0	0		0	0	1	1	0	1	7	0.8
BROUGHT - TX	21	24	19	7	20		26	34	23	22	18	8	222	26
PREVIOUS TX	15	13	7	4	8		31	22	14	6	7	2	129	15.1
NOT FOUND	6	6	8	5	16		12	5	3	9	13	0	83	9.7
REFUSED EXAM	1	1	1	0	2		0	0	0	0	1	0	6	0.7
UNLOCATABLE	7	8	1	2	8		10	1	5	6	7	2	57	6.7
TRANSFERRED	2	0	0	1	0		1	3	0	0	1	2	10	1.2
EPI TREATED	25	27	16	24	38		54	35	43	37	33	8	340	39.8
OTHER	0	0	0	0	0		0	0	0	0	0	0	0	0
TOTAL	80	79	53	43	92		134	100	89	81	80	23	854	100%

MONTHLY CHLAMYDIA INVESTIGATIONS REPORT: EL PASO COUNTY HEALTH DEPARTMENT, 1992

Combined

CONTACTS TO CHLAMYDIA: OUTCOME

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	CY 92	PCT/TL
NOT INFECTED	1	0	0	0	0		0	0	5	1	0	0	7	0.7
BROUGHT - TX	22	33	14	18	19		38	10	4	11	12	3	184	18.8
PREVIOUS TX	12	21	11	7	10		29	4	3	4	5	0	106	10.8
NOT FOUND	5	9	4	8	9		6	12	2	9	5	1	70	7.2
REFUSED EXAM	0	1	0	1	0		0	0	0	2	1	1	6	0.6
UNLOCATABLE	6	2	4	3	2		6	0	7	4	10	3	47	4.8
TRANSFERRED	1	0	0	0	0		0	1	0	0	0	0	2	0.2
EPI TREATED	67	59	53	33	59		124	32	41	42	32	15	557	56.8
OTHER	0	0	0	0	0		0	0	0	0	0	0	0	0
TOTAL	114	125	86	70	99		203	59	62	73	65	23	979	99.9%

MONTHLY V.D. CLINIC AND LABORATORY REPORT: EL PASO COUNTY HEALTH DEPARTMENT, 1992

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	CY92	POS.	PCT+
TESTING:															
HIV (Ab)	363	284	330	479	332	346	333	269	305	247	242	246	3776	99	2.6
HIV (CUMULATIVE)													13143	601	4.6
RPR	302	276	298	326	319	317	287	316	351	330	225	276	3623	70	1.9
FTA	2	3	2	3	6	2	3	2	9	5	2	4	43	30	69.8
DF	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GC SMEAR	181	136	150	198	131	164	160	174	156	157	110	152	1869	68	3.6
GC CULTURE:															
VDC MEN	188	150	155	198	145	167	161	177	158	160	111	152	1922	117	6.1
VDC WOMEN	193	173	205	216	207	227	174	210	246	287	127	189	2454	91	3.7
PNC WOMEN	39	48	45	71	47	55	50	53	33	40	49	38	568	3	0.5
FPC WOMEN	157	139	153	159	120	134	163	172	128	120	83	153	1681	6	0.35
PMD WOMEN	6	5	10	7	2	3	4	1	8	10	12	8	76	0	0
CHLAMYDIA: MEN	170	144	160	197	152	183	168	175	164	149	117	145	1924	191	9.9
CHLAMYDIA: FE	188	163	202	197	209	191	142	190	211	209	137	171	2210	208	9.4
TREATMENT:															
GC TREAT	21	31	33	17	22	15	23	31	25	26	17	16	277	n/a	
GC PRO-TREAT	26	19	24	20	27	20	26	23	30	34	15	28	292	n/a	
LUES TREAT	1	1	0	1	4	4	0	0	4	7	1	1	24	n/a	
LUES PRO-TREAT	1	1	2	1	0	3	0	4	6	1	1	0	20	n/a	
NON-V.D. TREAT	302	242	277	294	269	288	262	297	341	326	241	263	3402	n/a	
CLINIC: NO.	13	12	13	13	12	13	13	13	13	13	11	12	151	n/a	

HIV TESTING EXCLUDES THE 150 MILITARY POSITIVES SINCE JULY 1985 AND 26 POSITIVE DONORS LOST TO FOLLOW-UP

APPENDIX A

These publications are unified in that they all have to do with the epidemiology and/or control of STD/HIV. Some highlights:

We...

...demonstrated (twice!) that gonorrhea incidence can be substantially reduced, in the absence of a vaccine, using conventional control strategies, especially contact tracing (References 6 and 8).

...showed that social structures are the fundamental units of STD propagation -- the idea that, ecologically, the true niche for STD is more likely to be social networks than sexual organs. These have been dubbed "Potterat structures" (Refs 10 and 19).

...provided the earliest (and some of the best) empirical evidence for the concept of "core groups" (Refs 3,4,10,13; the best in the literature is Ref 39).

...contributed to elucidating the epidemiology of AIDS. Specifically:

...were among the first to provide evidence that genital ulcers facilitated HIV transmission (Ref 33).

...showed that HIV epidemiology is no different in the armed forces than in the civilian sector (much to the dismay of embarrassed Walter Reed researchers and the Pentagon) (Ref 31).

...predicted that AIDS would not cause an heterosexual tsunami (Ref 22) and that implosion was a likelier future for the HIV epidemic in the U.S. than explosion (Ref 24).

...were among the first to do partner notification with HIV (Ref 23).

...showed that prostitute women were at risk to <u>acquire</u> rather than to <u>transmit</u> HIV (Ref 32).

...reminded health care workers that the risk of transmission is bi-directional, irrespective of its magnitude difference -- <u>before</u> Dr. Acer infected Kim Bergalis (Ref 35).

...provided evidence that epidemic HIV transmission is the province of the major epicenters, not of peripheral areas (Ref 43).

...showed that although the CDC estimates of national gonorrhea incidence were correct quantitatively, they were incorrect qualitatively (i.e., the case gender mix was the inverse (Ref 12).

...provided the first empiric estimate of the number of prostitute women in the U.S. (Ref 15).

...showed that prostitute women were epidemiologically significant in the endemicity of gonorrhea in society (Ref 3) and that their community norms could be positively influenced (Ref 38), leading to substantial declines in the STD burden.

...provided evidence that community STD case distribution is fractal (Ref 19).

...showed that asymptomatic male carriers was the group most responsible for gonorrhea's entrenched endemicity (Ref 4 and 6) and for tissue damage in women (Ref 5).

...showed that clinically similar diseases have a different community form (Ref 16).

...elucidated the epidemiology of gonorrhea in prepubertal girls (sexual abuse rather than fomites; Ref 2) and reported the first documented case of asymptomatic urethral GC in a prepubertal boy, showing as well that children can sexually transmit GC to other children (Ref 11).

...helped prove that "heterosexual" transmission of hepatitis-B is most closely associated with anal intercourse (Ref 17).

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(Presented at the International Society for STD Research, 6th Meeting, Brighton, England, August, 1985.)

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(Presented at the Third International Symposium on Hepatitis-C, Strassbourg, France, September, 1991.)

48. *Drug abuse as a predictor of entry into prostitution.*

(Submitted as Abstract for oral presentation at International AIDS/STD conference, Berlin, June 1993.)

49. *An observational study of men who use prostitutes: who, how and why.*

50. *Patterns of sexual and drug partner selection in high-risk heterosexual populations.*

51. *The influence of core groups on secular trends and on the seasonality of gonorrhea incidence.*

52. *The fractal nature of community gonorrhea/PPNG case distribution.*

APPENDIX B

STD/HIV PROGRAMS: PRINTED MEDIA ARTICLES

NATIONAL MAGAZINES

U.S. News and World Report. Sex, with care. June 2, 1986, p.55.

U.S. News and World Report. AIDS: At the dawn of fear. January 12, 1987, p.65.

Playboy. A calm look at AIDS. July, 1987, p.162.

NON-LOCAL NEWSPAPERS

Heterosexuals' risk of AIDS downplayed. The Buffalo News. April 3, 1987.

Fears on heterosexual AIDS risk "exaggerated," expert says. The Atlanta Journal. April 3, 1987.

Heterosexual AIDS. Atlanta Constitution. April 20, 1987, p.1-A.

Colorado Springs hookers consent to AIDS testing. Winfield (Kansas) Daily Courier. June 4, 1987, p.7.

AIDS "contact tracing" gains support. The Philadelphia Inquirer. November 1, 1987, B-1.

Rights vs. duty: Colorado's efforts to trace AIDS victims' contacts. The Washington Post. September 13, 1988, A-3.

Legalize prostitution? How to control problem subject of pointed debate. The Arizona Republic. April 16, 1991, A-8.

Female prostitutes not major source of AIDS. The Palm Beach Post. December 27, 1992.

AIDS patients' partners tracked, informed: Colorado says its program fights spread of disease while protecting privacy. The Boston Globe. February 1, 1993, p.1.

REGIONAL NEWSPAPERS

ROCKY MOUNTAIN NEWS

Springs tests prostitutes for AIDS virus. April 30, 1986.

Springs, Atlanta seek prostitutes for AIDS tests. September 3, 1986.

Tracking potential killer in Springs. November 10, 1986, p.7.

Editorial. A quarantine of AIDS carriers should be option in rare cases. November 23, 1986, p. 86.

AIDS study disputes heterosexual risk. March 27, 1987, p.24.

County stuck as prostitute spreads AIDS. January 11, 1990.

DENVER POST

The myth of heterosexual AIDS. March 1,1991, p.7-B.

VD busters: gangs help health dept. January 28, 1993, p.1.

Editorial. El Paso County doctors showed creative spirit. February 12, 1993, p.10-B.

OUTFRONT

Colorado Springs gays consider their potential. March 15, 1985, p.1.

SPEAKOUT

Playing it safe. May 1988, p.10.

LOCAL PRESS

COLORADO SPRINGS SUN

Area gonorrhea rate drops. February 11, 1979.

VD control director honored. July 18, 1979.

Cases of syphilis in County decline. January 28, 1982.

Effort have cut VD risk. August 5, 1984, p.7.

22 percent rise in County VD cases reported. September 13, 1984.

GAZETTE-TELEGRAPH

Clinic claims VD incidence lower in El Paso County. May 30, 1976.

Prostitution, military linked to high rate of gonorrhea. December 18, 1977.

VD incidence down 25 percent in County. November 11, 1978.

Potterat wins state award. June 21, 1979, p. 7-A.

Officials still learn about herpes. August 20, 1981.

VD expert criticizes crackdown on city prostitutes' customers. June 18, 1981.

County reports drop in number of VD cases. January 28, 1982.

Two AIDS deaths reported in City. June 22, 1983.

Fear of AIDS changes lives of homosexuals. August 22, 1983.

Health risk of sex rises in county. August 31, 1985.

Springs' prostitutes to be part of AIDS study. January 3, 1986.

Test confirm AIDS-like virus in prostitutes: El Paso County health officials document area's first case. November 4, 1986.

"Dr. John" trusted on the street: AIDS infiltrates hookers' world. November 30, 1986, p.1.

AIDS-exposed inmate denied family visits. January 8, 1987.

AIDS victims fear children will get virus. January 10, 1987.

Gonorrhea cases drop in county: health officials credit fear of AIDS. January 29, 1987.

Lawmaker wants victims of AIDS advised, monitored. February 11, 1987, p.1.

AIDS test advice "nonsense", official says: carrier of AIDS arrested, suspected of protitution. March 20, 1987, B-1.

A brush with infection: dental experts warn of susceptiblity to spreading diseases. May 2, 1987, p.1.

Doctors say over-reaction has caused a rush for testing. April 26, 1987.

Legislature sends AIDS bill to Romer. May 22, 1987, B-1.

AIDS complicating treatment of VD, TB. June 19, 1987, B-1.

Spread of AIDS slows drastically: Fewer cases identified in 1987. January 30, 1988, p.1.

Woman hopes to someday have that "middle-class life": AIDS virus just one battle to fight. January 31, 1988, B-1.

New virus makes surprise appearance in County: affliction may be transmitted like AIDS. February 2, 1988. p.1.

Answers ease tension about AIDS: fears reminiscent of the polio panic. February 9, 1988, F-1.

AIDS-related illnesses focus of March of Dimes campaign. February 20, 1988, B-1.

El Paso County records 19 new AIDS infections. November 29, 1988, B-1.

Two lesser known venereal diseases increasing rapidly. February 9, 1989.

The forgotten victims: County shows shift in groups being affected. July 30, 1989, p.F-1.

Spring enhances medical care to come to meet expanding need. January 1, 1990, B-2.

Rare viruses found in prostitutes from Newark to Springs. January 5, 1990, B-8.

AIDS in the military. January 7, 1990. F-1.

Publicity about AIDS carriers at issue. July 22, 1990, B-1.

Study shows U.S. had 100,000 female prostitutes in 1980's: County officials figure can be used to fight AIDS. June 2, 1990, p.B-7.

Gay men turn back clock, risk infection: some abandoning safe-sex practices. July 22, 1990, B-1.

Florida AIDS case fuels controversy. July 27, 1991, B-1.

Out of the closet: gays seek acceptance in conservative community. June, 2 1991, D-1.

GIs are no longer hooker's best friend: illegal sex not a problem, officials say. September 1, 1991, B-1.

City takes aim at prostitution: new sweeps net sex-sale suspects--and surprises. October 16, 1991, B-1.

Magic powerful new symbol: AIDS virus carriers in Springs area take heart from Johnson. November 9, 1991, p.1.

HIV testing doubles in wake of Magic's announcement: High-risk group remains out of reach. December 8, 1991, B-1.

HIV positive prostitute faces prison: arrest is test of new state law. December 17, 1991, p.1.

Survey says half of teens sexually active: County officials track disease. January 4, 1992, p.1.

HIV infected prostitute pleads guilty: conviction is states first. January 18, 1992, B-1.

AIDS risk remote, County official says. January, 30, 1992, p.1.

Potterat sets his own terms: sex-related ills battled. March 22, 1992, p.1.

Prostitute sentenced under AIDS new law: Springs woman knew she had virus. April 28, 1992, B-1.

Editorial. Straight talk on AIDS risk. February 2, 1992, F-2.

Springs AIDS official pans plan for anonymous testing. December 19, 1992, B-1.

New AIDS defintion may prove expensive. December 31, 1992, B-1.

Potterat wages war on venereal disease. January 3, 1993, F-2.

Street work stops disease: officials, gang members form healthy alliance. January 29, 1993, B-1.

Program tracks sad trail of AIDS. February 7, 1993, B-1.

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Soldier VD blamed on mobility. February 11, 1977. (Thought Forum Section).

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