

* Before I begin, I must thank Dr. Mervyn Silverman and members of his staff in the SF Health Dept., esp. Dr. Erwin Braff, Dr. Selma Dritz, and Mr. Paul O'Malley, for helping me prepare this report. I also want to thank Dr. Steve Hadler, CDC, and Mary Felker for the graphics.

Darrow
11/10/83
as read.

The San Francisco Cohort
AIDS Priorities Meeting November 10, 1983

Introduction. In the mid-1970's, an experimental vaccine was developed for the prevention of hepatitis B virus (HBV) infections. Field studies were launched in NYC in 1977 and CDC began to plan for a series of studies of hepatitis B among homosexual men in 5 other cities. These studies were to be conducted with the cooperation of:

1. The Howard Brown Memorial Clinic (Chicago),
2. The St. Louis Sexually Transmitted Disease Center,
3. The Denver Metropolitan Health Clinic,
4. The Gay and Lesbian Community Services Ctr. (Los Angl),
5. The San Francisco City Clinic.

In January, 1978, a study of consecutively admitted homosexual male clinic patients was begun to determine the prevalence of HBV infections in each of the 5 cooperating clinics.

I. Prevalence of Hepatitis B. Here are the results of the prevalence study:

- A. Of 831 consecutively admitted gay men in the San Francisco City Clinic, 75.8% had serological evidence of past or current HBV infection.
- B. The prevalence of hepatitis B in other clinics ranged from 65.2% to 50.5%.
- C. The prevalence of HBV was clearly highest among gay men tested in S.F.

II. Incidence of Hepatitis B. Those who were seronegative when first tested for HBV were eligible for follow-up studies if they agreed to be retested at three 4-month intervals. As was the case in the prevalence study, men in San Francisco were found to be at highest risk of acquiring hepatitis B.

- A. As shown here, 385 men in S.F. agreed to participate in the incidence study and returned to City Clinic for at least one additional test. Some returned at 2 months, some at 3 and some at 4, and of these, some also returned at 6, 7, and 8 months, etc., so that life-table analysis could be performed to project the trend (actuarial method, see Kleinbaum).
- B. As we see here, approximately 11% seroconverted at 4 months, 24% at 8 months, and 35% at 12 months of observation. By the 13th month, 40% of homosexual male clinic patients in San Fran had developed serologic markers for HBV infection.
- C. If we continued this trend, we might predict that just about every man in this cohort of clinic patients would be exposed to HBV within 3 years (and, in the absence of vaccine, might have acquired hepatitis B).

III. Cumulative Incidence of AIDS in San Francisco. Now, what has this study of hepatitis B have to do with the outbreak of AIDS in the United States? We know that New York City has the highest cumulative incidence of AIDS (11.4 per 100,000) and San Francisco ranks second (10.2 per 100,000). However, as of June 30, 1983, rates among white men in San Fran County and the Borough of Manhattan were identical (122 per 100,000) and all 224 cases of AIDS reported from the SF SMSA were among men.

(10.2) as
of Nov.
7, 1983

- A. This histogram shows the cumulative incidence of AIDS as of June 30, 1983, among three groups of men in San Francisco: all residents of the 5-county SMSA, residents of San Francisco County only, and residents who participated in studies of hepatitis B at City Clinic during the years 1978-80.
- B. As is obvious, the incidence as of June 30, 1983, was 14.1 per 100,000 male residents, 65.1 per male residents of SF County, and 800.0 per male clinic patient who participated in previous studies of hepatitis B.
- C. As of November 4, 1983, the number of cases diagnosed among the 6,875 members of the HBV study cohort had increased from 55 to 76, for a cumulative incidence of 1105.5 per 100,000.

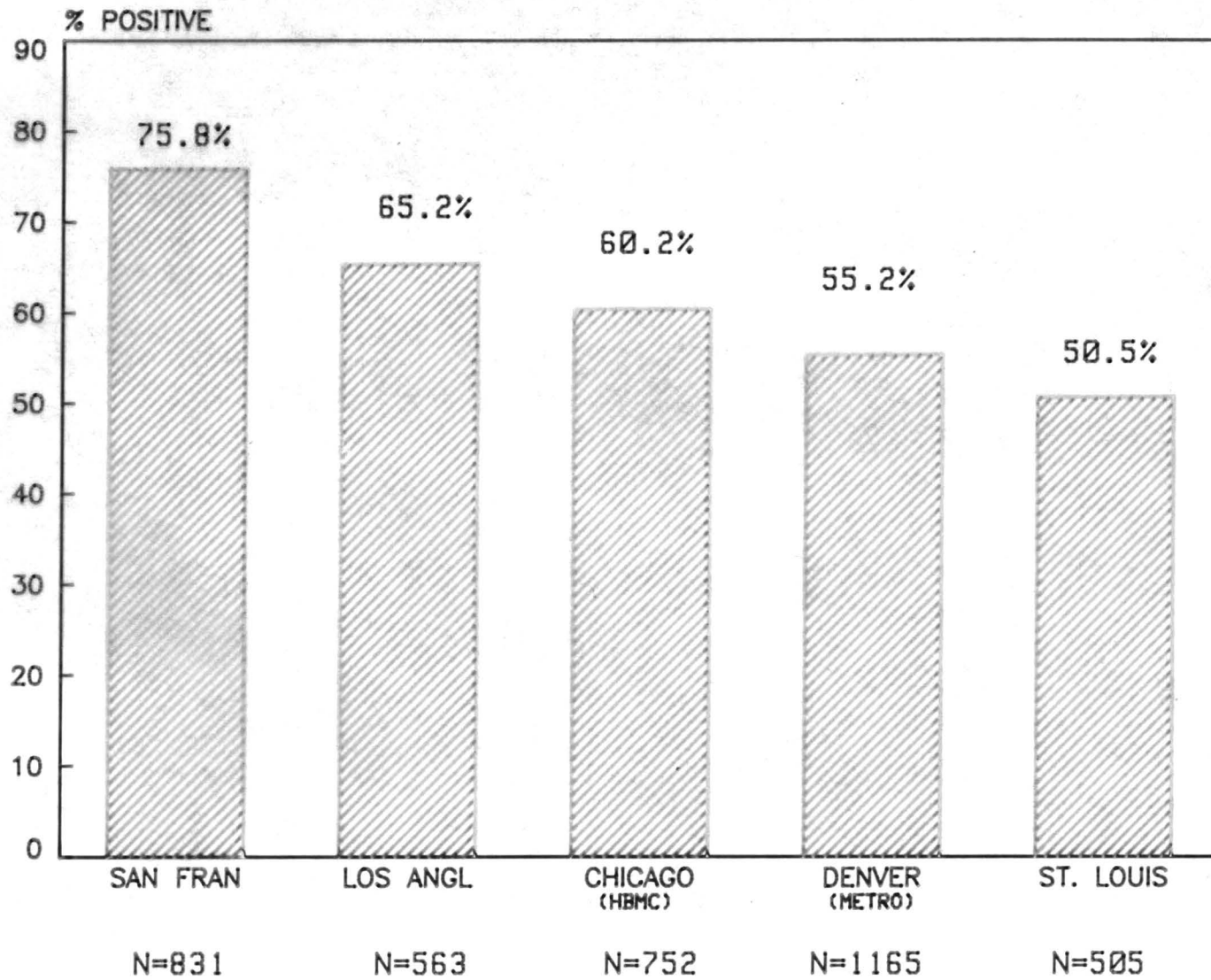
- IV. Characteristics of AIDS in San Francisco. Members of the cohort who have been reported with AIDS are remarkably similar to other residents of San Francisco with AIDS. All are men, most are homosexual or bisexual and white (89 %), and few in either group used drugs intravenously (13 %). The only statistically significant difference between the two groups is age at date of diagnosis: cohort members tend to be younger.
- A. Although members of the cohort are, on the average, three years younger than others in SF with AIDS, the cumulative incidence among cohort members tends to increase with age.
 - B. As we see here, the rate increases from 308 per 100,000 for clinic patients 21 thru 25 to 1996 per 100,000 among those 36 years of age and older. In fact, two percent, or 11 out of 551 cohort study participants over 35 years of age had been reported with AIDS as of June 30, 1983
 - C. Among other men in SF with AIDS, no one is under 21 years of age and the 31 thru 35 year-old group appears to be at highest risk.
- V. Trends in San Francisco. To this point, we have looked at the cumulative incidence of AIDS in San Francisco. By breaking the cumulative incidence down into 4 reporting periods we can gain some insight into the trend by the dates persons were diagnosed with AIDS. Among the earliest cases diagnosed were several members of the hepatitis B study cohort.
- A. Before 1982, 32 cases of AIDS were diagnosed among residents of San Francisco, and 13 of these men had participated in studies of hepatitis B at City Clinic.
 - B. In the first six months of 1982, the number of cases diagnosed increased to 41, then 58 in the last six months of 1982, and to 93 in the first half of 1983, plus 3 residents of NYC and 1 from Mendocino Cty. in the cohort.
 - C. As the number of cases continues to increase in San Francisco, the number of cases occurring among members of the cohort appears to remain relatively constant. Since June 30, 1983, ~~21~~ additional cases of AIDS have been reported among members of the cohort, suggesting that about 30 cases of AIDS will be reported between June 30, and December 31, 1983, in the cohort.

Conclusion.

If we assume that AIDS is caused by a sexually transmissible agent, and if we assume that the epidemiologic characteristics of AIDS closely resemble the epidemiologic characteristics of HBV infections among homosexual men, and if we assume, as we have just seen, that just about all the members of the cohort of clinic patients in San Francisco were exposed to HBV within 3 years of observation, then it might not be unreasonable for us to speculate that a large proportion of men studied initially in 1978, 79 and 80 in San Fran have already been exposed to the putative agent that causes AIDS. Therefore, longitudinal studies of these men who voluntarily enrolled in clinical and epidemiological studies of problems affecting the gay community should be continued. With the cooperation of ~~one of our consultants,~~ Dr. Mervyn Silverman, and his staff, we are now engaged in a follow-up study of AIDS in the San Francisco cohort. The results of this study should help to clarify risk factors, establish trends, and describe the natural history of AIDS in a ~~clearly~~ defined population.

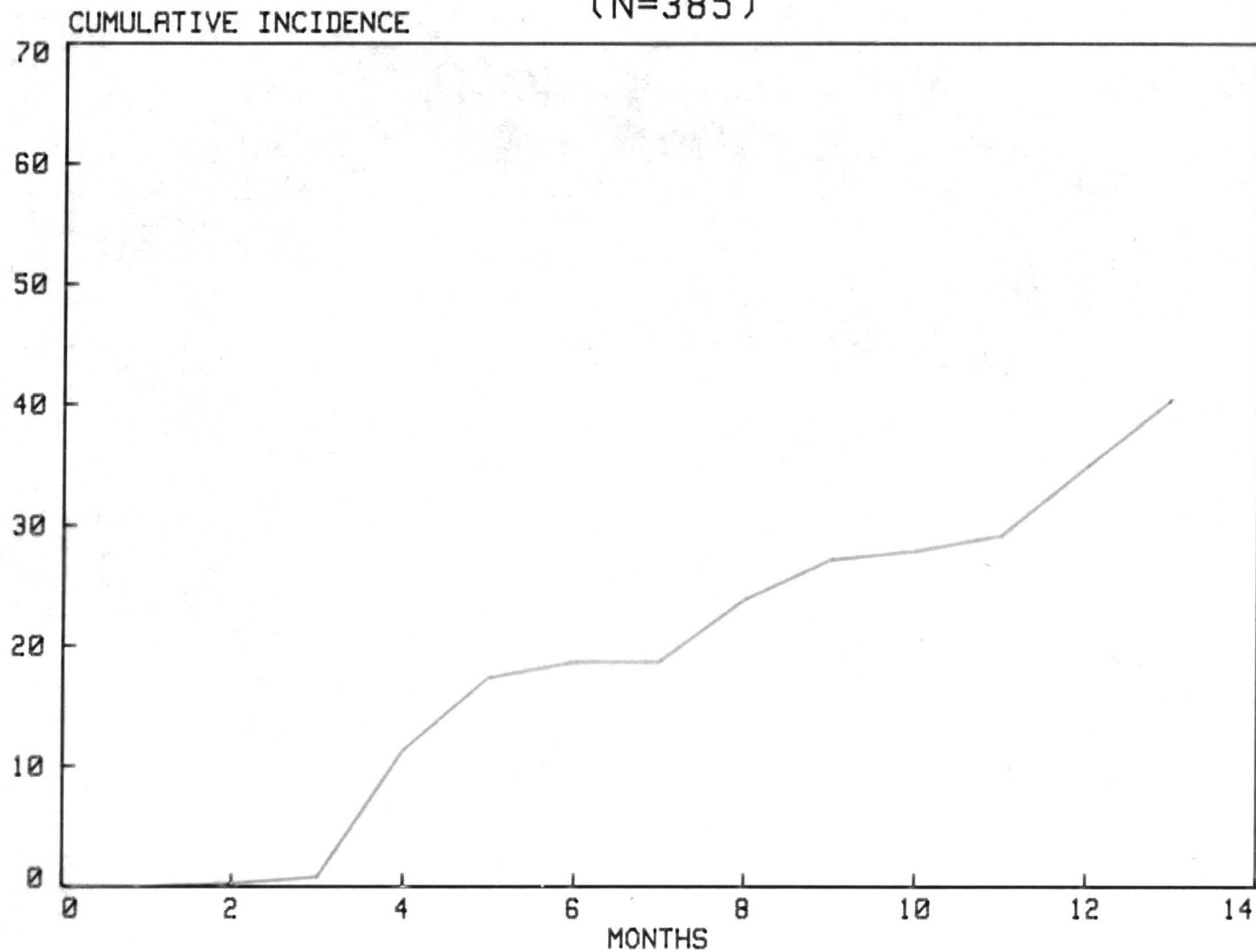
well

PREVALENCE OF HEPATITIS B INFECTIONS
AMONG HOMOSEXUAL MALE CLINIC PATIENTS

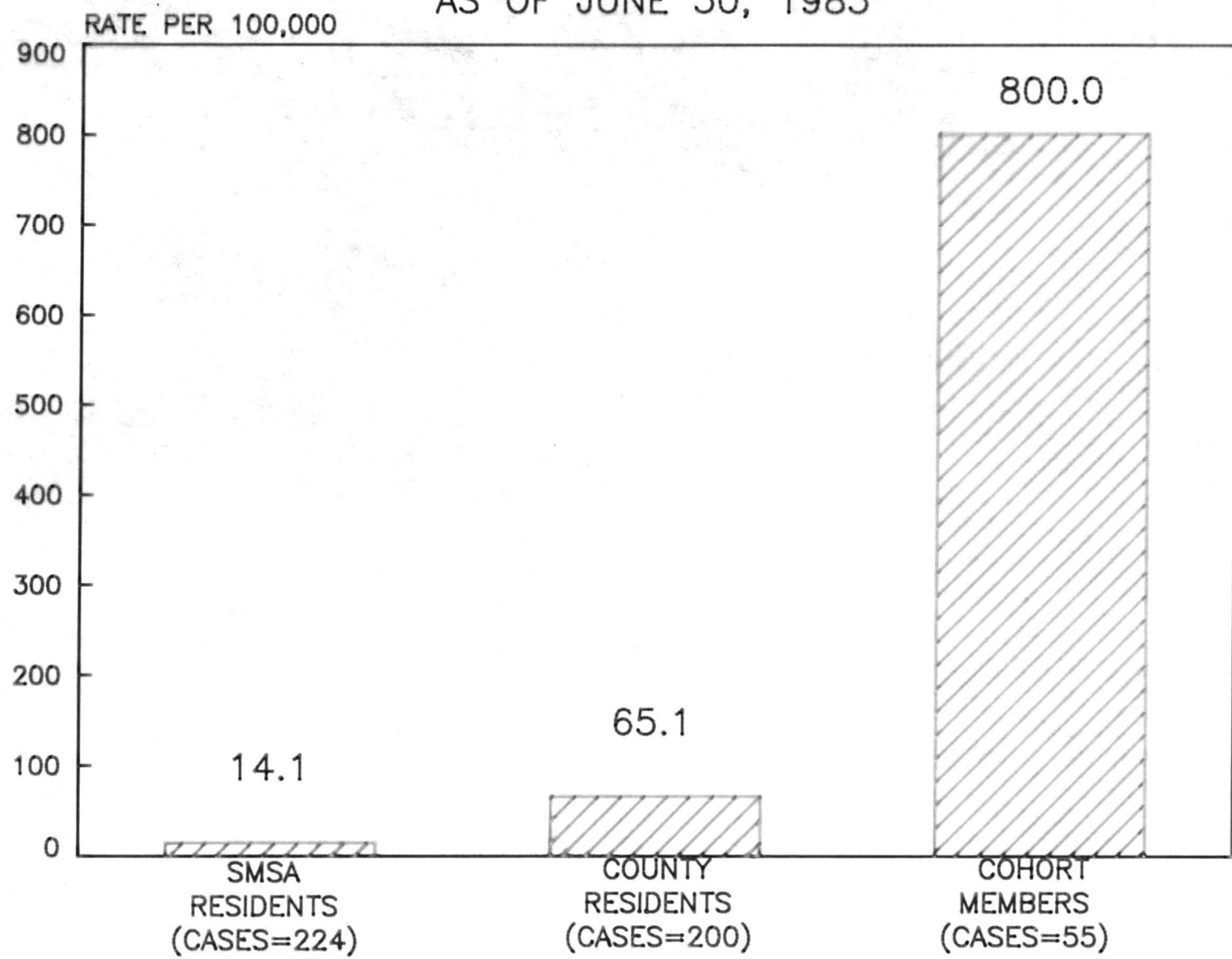


INCIDENCE OF HEPATITIS B IN SAN FRANCISCO AMONG HOMOSEXUAL MALE CLINIC PATIENTS

(N=385)

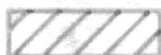


CUMULATIVE INCIDENCE OF AIDS
AMONG MEN IN SAN FRANCISCO
AS OF JUNE 30, 1983

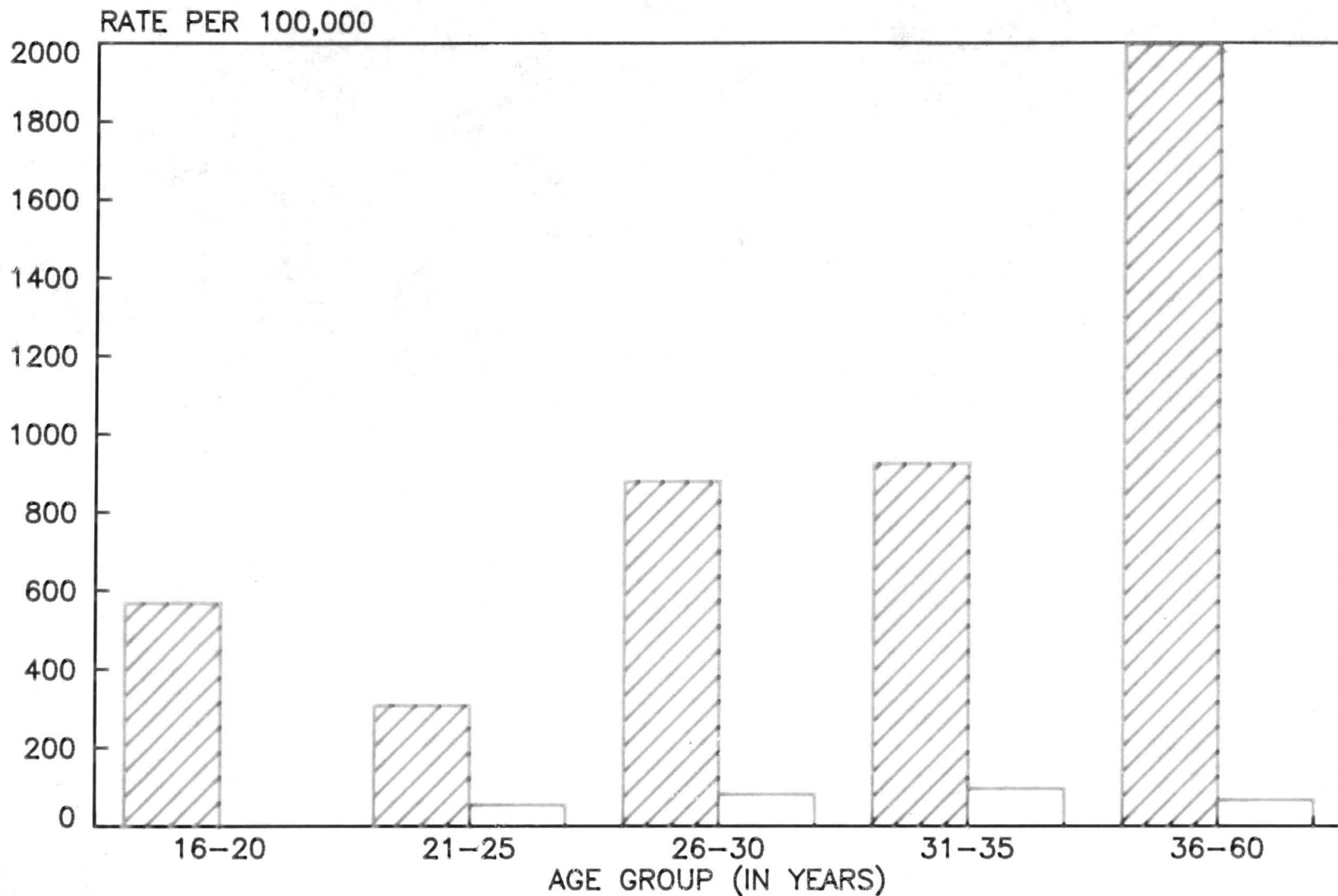
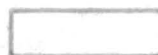


AGE-SPECIFIC RATES OF AIDS IN SAN FRANCISCO (AS OF JUNE 30, 1983)

MEN IN
COHORT



OTHER
MEN



AIDS IN SAN FRANCISCO BY DATE OF DIAGNOSIS

