

## 2015-16 Fresno County Grand Jury Report No. 1

# Report on Fresno County Department of Public Health

### INTRODUCTION

The California Penal Code §§ 925 and 933(a) require the Grand Jury to investigate and report on the operations, accounts, and records of at least one county officer, department or function. The Grand Jury chose to investigate the Fresno County Department of Public Health (FCDPH) in regard to its activities addressing the spread of sexually transmitted disease (STD) in Fresno County. The department consists of eight divisions and offices; the principal division responsible for activities to prevent the spread of STD is the Division of Community Health. The Fresno County Health Officer is empowered to manage communicable disease and health emergencies, and collects data from confidential morbidity reports on reportable diseases. As the reporting agency, the department receives all mandated information and reports to the California Department of Public Health.

The California Department of Public Health (CDPH) director and state health officer are responsible for all 58 counties. Responsibility for protection of the public health at the local level rests with the local governing body, which is the board of supervisors for Fresno County. Local jurisdiction flows from the State, and the local health officer is delegated responsibility for enforcement of public health laws and regulations. The CDPH advises local health authorities and may provide resources to counties in emergency situations.

As described below, STD is increasing nationwide, but this problem has been especially severe in Fresno County. California Assembly Bill 329, “Pupil instruction: sexual health education and HIV prevention education”, signed on October 1, 2015, mandates instruction in comprehensive sexual health education and HIV prevention. In recent years the Fresno Unified School District (FUSD) has not provided comprehensive sexual health courses. However, with advice from the California Department of Public Health, FUSD will be adding a Comprehensive Sexual Health Education program. To assess the FCDPH contribution to this important youth initiative, the Grand Jury also interviewed witnesses from the FUSD curriculum development office.

### BACKGROUND

The Fresno County Grand Jury’s investigation of the FCDPH was not initiated due to a complaint from any source. Instead, the Grand Jury purpose was to help Fresno County citizens understand this agency of government and to determine if it has effectively addressed the growing problems of STD in Fresno County. To get that information, the Grand Jury focused on FCDPH data gathering, analysis, and outreach to medical providers, educators, and the community as a whole.

Fresno County has an estimated population of 972,297.<sup>1</sup> The U.S. Census Bureau’s “Fresno County Quick Facts (2014)” reported 51.9 percent of residents identified as Hispanic/Latino, 30.9 percent as white non-Hispanic, 10.7 percent as Asian, 5.9 percent as black/African American and 3 percent American Indian/Alaskan Native.<sup>2,3</sup>

The county faces many challenges. Among 58 California counties, Fresno County ranks 49<sup>th</sup> in health outcomes, as reported by the University of Wisconsin Population Health Institute. The data include premature birth and deaths, low birth weights, access to exercise activities, obesity, physician to resident ratio, rate of uninsured residents, and numerous other factors.<sup>4</sup>

Fresno County exceeds California and much of the nation in poverty, which limits access to health care. Fresno County’s median household income was \$45,201 in the Census Bureau’s 2014 estimate (the latest available), while California as a whole averages \$61,489 and the nation \$53,482. An estimated 27.5 percent of Fresno County residents live in poverty compared to the nation’s 14.8 percent.<sup>5</sup>

In Fresno County 20.3 percent of people under age 65 lacked health insurance, compared with 12 percent nationwide and 14 percent for California.<sup>6</sup>

Other challenges include the multiplicity of cultures and languages. In Fresno County, 44 percent of residents age 5 and older speak a language other than English at home, which mirrors California’s 43.8 percent, but is more than double the national 20.9 percent.<sup>7</sup>

There are more people in the average Fresno County household (3.18) than in California (2.95) or the U.S. (2.63).<sup>8</sup>

Of Fresno County’s population, 64% live in the Fresno-Clovis metropolitan area, 18% live in smaller cities, and the remaining 18% live in rural areas with more limited access to health care and transportation.<sup>9</sup>

The FCDPH is concerned with ongoing care, such as the TB Outreach and Clinic program, with strengthening of prevention (immunization and education) for diseases such as measles and pertussis, and with prevention of new threats such as chikungunya and Zika which can both be carried by a mosquito now found in the Central Valley. The federal Centers for Disease Control

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<sup>1</sup> Available on California Department of Finance web site [www.dof.ca.gov](http://www.dof.ca.gov)

<sup>2</sup> Available on U.S. Census Bureau’s web site [www.census.gov](http://www.census.gov)

<sup>3</sup> Please note that the total exceeds 100 percent because Hispanic origin is not a race, and persons of Hispanic origin may be of any race.

<sup>4</sup> Available on University of Wisconsin Population Health Institute web site [www.countyhealthrankings.org](http://www.countyhealthrankings.org)

<sup>5</sup> Available on U.S. Census Bureau’s web site [www.census.gov](http://www.census.gov)

<sup>6</sup> Available on U.S. Census Bureau’s web site [www.census.gov](http://www.census.gov)

<sup>7</sup> Available on U.S. Census Bureau’s web site [www.census.gov](http://www.census.gov)

<sup>8</sup> Available on U.S. Census Bureau’s web site [www.census.gov](http://www.census.gov)

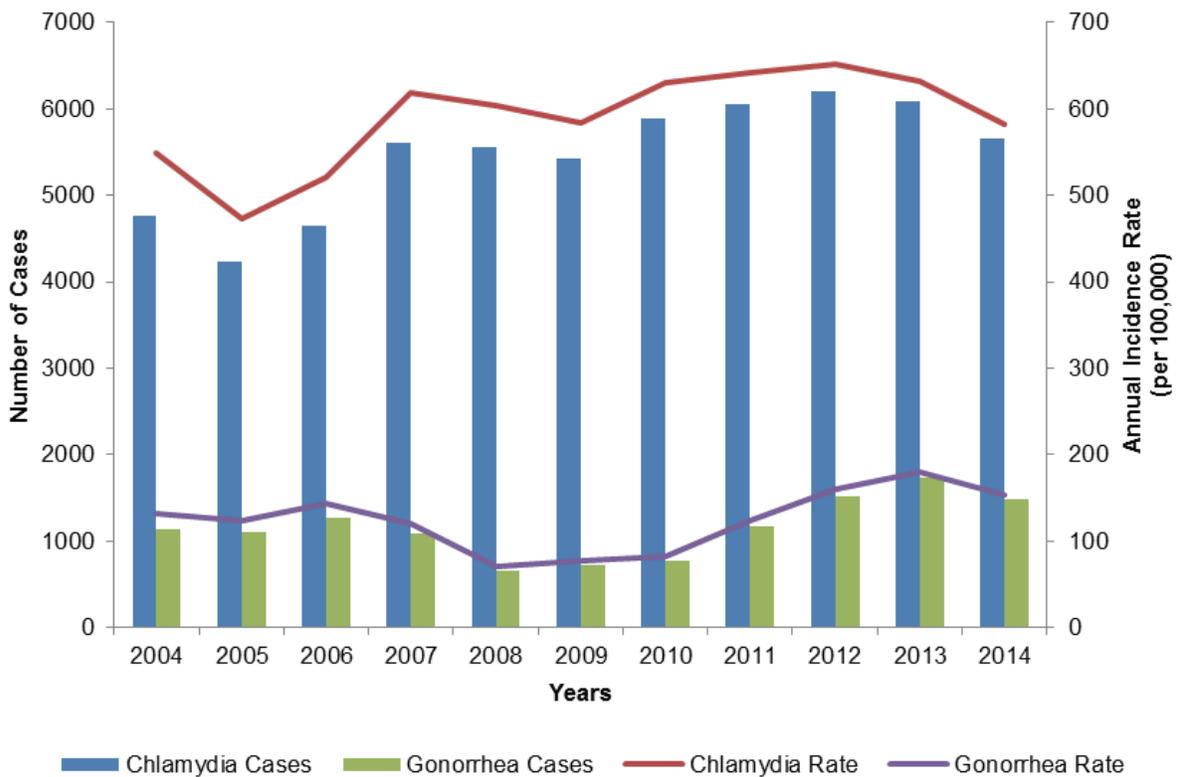
<sup>9</sup> Available on U.S. Census Bureau’s web site [www.census.gov](http://www.census.gov)

and Prevention (CDC) has very recently confirmed that the Zika virus can be spread through sexual contact.<sup>10</sup>

We chose to investigate the department's response to the high rates of STD, specifically gonorrhea, chlamydia, and syphilis, in Fresno County. This response encompasses case investigation, demographic monitoring, and community outreach and education to prevent new cases.

Even though there was a slight decrease in the number of cases in 2014, the state ranked Fresno County second worst out of 58 counties for rates of chlamydia infection among both males and females. Figure 1 below shows case counts and rates for chlamydia and gonorrhea in Fresno County [4]:

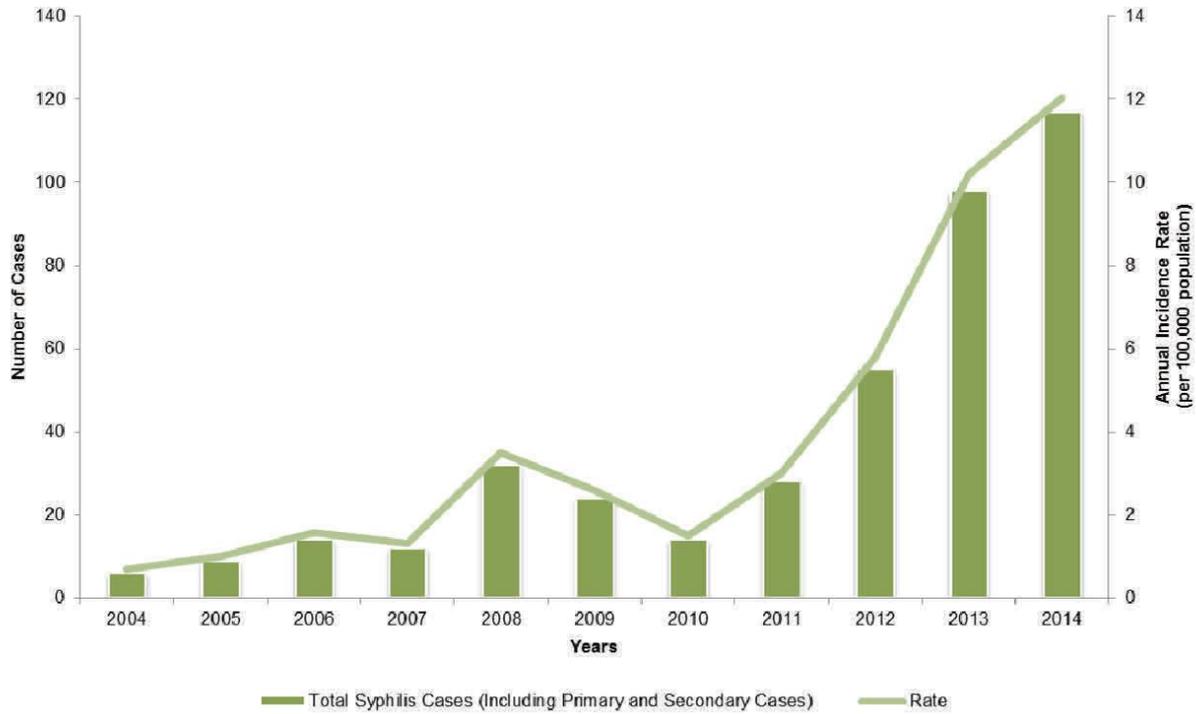
**Figure 1**



<sup>10</sup> [www.cdc.gov/zika/transmission/sexual-transmission.html](http://www.cdc.gov/zika/transmission/sexual-transmission.html)

The dramatic increase in syphilis is shown in Figure 2 below [4]:

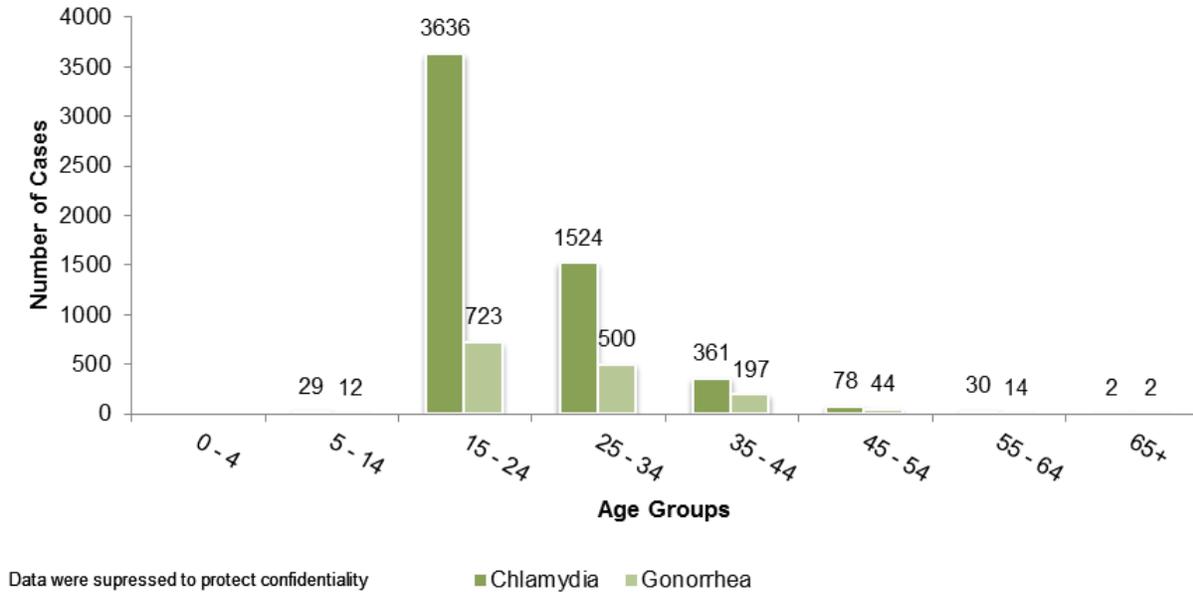
Figure 2



Chlamydia, gonorrhea, and syphilis are affecting the health and well-being of more and more people as well their potential children. Chlamydia is often called the "silent" STD, because many people have no idea that they are infected until they find that it has caused sterility. It can cause pelvic inflammatory disease in women, sterility, ectopic pregnancy, and long-term pelvic pain. Gonorrhea can be symptomless or mistaken for a bladder infection. Untreated gonorrhea can also cause pelvic inflammatory disease, ectopic pregnancy, long-term pelvic pain, and sterility in both women and men. Symptoms of syphilis mimic many other diseases. If not treated it can cause organ damage, blindness, paralysis and death. It can be transmitted by pregnant women to their babies (congenital syphilis).

Studies by the CDC have shown that sexually active adolescents and young adults are at highest risk for getting STD. For Fresno County this risk is illustrated by Figure 3, below [4]:

**Figure 3**



The relatively long lag time between infection and complications increases the risk of spread of the diseases. Stigma associated with particular sexual behavior, drug abuse and lack of access to health care exacerbate the community risks of untreated STD.

This report focuses on activities within the Community Health Division to monitor, analyze and assist in combating the rise in STD in Fresno County.

## **METHODOLOGY**

The Grand Jury conducted a six-month investigation including five interviews with high-ranking Fresno County Department of Public Health officials as well as with curriculum officials of the Fresno Unified School District. Additionally, the Grand Jury reviewed the Communicable Disease Annual Reports from 2011-2014 (see Bibliography) and the quarterly Communicable Disease reports of 2015. The Grand Jury also reviewed publications from the federal Centers for Disease Control and Prevention as well as the California Department of Public Health.

## DISCUSSION

The high rates of STD in California and Fresno County continue to receive state-wide attention. Recently, on November 19, 2015, the Los Angeles Times wrote:<sup>11</sup>

“According to state data, L.A. County’s rates of chlamydia and gonorrhea are among the top six of the state’s 58 counties. San Francisco, Kern and Fresno counties have higher rates of both diseases.

“STDs are a substantial health challenge facing the United States,” a CDC report summary says. “Each of these infections is a potential threat to an individual’s immediate and long-term health and well-being.”

Chlamydia and gonorrhea are common and curable diseases, but if not treated can cause serious problems such as infertility in women. Officials estimate that undiagnosed STDs cause 20,000 women in the country to become infertile each year.

More than half of chlamydia and gonorrhea cases occur among people ages 15 to 24. Officials recommend that sexually active women younger than 25 be tested annually for these diseases.

Syphilis, which is also curable, can lead to complications such as blindness if allowed to progress. It has been of particular concern recently in California, where early cases of the sexually transmitted disease among women more than doubled from 248 to 594 from 2012 to 2014.

That has led to a worrisome increase in cases of congenital syphilis, in which a mother infects her child during pregnancy. From 2012 to 2014, those cases shot up dramatically to 100 from 30. Most of the congenital cases occurred in Los Angeles County and the Central Valley, according to state health officials.”

The Fresno County Department of Public Health (FCDPH) collects data on STD occurrence in accordance with mandated reporting procedures. In 2011 the department published a comprehensive communicable disease annual report, and has updated this report annually since. STD data, analysis and recommendations have been provided in each year’s report, based on the epidemiological findings and the federal Centers for Disease Control and Prevention (CDC) suggestions.

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<sup>11</sup> <http://www.latimes.com/local/lanow/la-me-ln-2014-std-rates-20151118-story.html>

Several zip codes were identified by the department as disproportionately affected by STD. In the latter half of 2013, the FCDPH, in collaboration with the California Department of Public Health (CDPH), had designed a program for targeted zip codes to ensure that gonorrhea patients were treated and their partners notified of their STD status. An 18 month pilot program in one zip code led to a measurable drop in the target zip code and Fresno County as a whole. Even though the FCDPH staffing for gonorrhea and chlamydia outreach, treatment followup, and partner notification was limited to only 0.25 full-time equivalent, the pilot program demonstrated the effectiveness of the department's targeted outreach. The Communicable Disease Annual Report for 2014 showed a 14 percent decrease in gonorrhea cases and 7.9 percent decrease in chlamydia cases from the prior year. The frequency of co-infections (cases of both chlamydia and gonorrhea diagnosed in the same visit) and multiple infections over the course of a calendar year did remain high.

Effective management of STD requires treatment of diagnosed patients (by their physician or clinic) as well as their sexual partners. Since people do not develop immunity to STD, they can be easily reinfected unless their partners are treated. The ideal approach is for partners to receive treatment directly from a physician or clinic. However, since some may be reluctant to seek medical care, extended partner therapy may reach out to them. This could be with field-delivered treatment, where a trained nurse or case investigator makes direct contact with the partner to provide appropriate therapy. Due to limited personnel, an alternative is to ask the diagnosed patient to bring a Partner Pak (antibiotics provided without charge by the California Family Health Council) to his/her partners. The FCDPH supports extended partner therapy with "Dear Colleague" letters on July 1, 2013, and Sept. 2, 2014, and by distributing Partner Paks ([www.cfhc.org/pdpt](http://www.cfhc.org/pdpt)).

Witnesses confirmed that sexual transmission of HIV among men who have sex with men (MSM) accounts for most new HIV infections in Fresno County. Consequently, in 2011 FCDPH began the MSM Task Force which conducted focus group studies with self-identified MSM community members. However witnesses stated that, due to stigma, the focus groups had abysmal attendance. They stated that the task force is assessing barriers to HIV/AIDS testing, social pressures, adherence to therapy and other issues related to HIV care. In addition, syphilis continues to increase among MSM, and recent syphilis outbreaks among MSM have been marked by high rates of HIV co-infection.

Witnesses stated that the risk of acquiring syphilis in Fresno County is highest among drug users, MSM and sex industry workers. A spike in syphilis statistics occurred in 2013, overwhelming the 3 specially trained investigators handling all syphilis cases in Fresno County. These investigations are among the most difficult and, like HIV cases, take 90-120 days to close. Disease Investigation Specialists, who conduct syphilis investigations, require training courses which are only offered four times a year, followed by three months internship before certification as an investigator. Witnesses stated that FCDPH has quickly adapted to the increase in syphilis cases and started to train additional Disease Investigation Specialists to assist with investigations. The volume of syphilis cases has spiked state-wide. Fresno now is third in the state for syphilis cases, after Los Angeles and Orange counties.

The Fresno Bee reported recently that county health officials have requested help from the federal Centers for Disease Control and Prevention in seeking solutions to this syphilis crisis.<sup>12</sup> Witnesses testified that in 2015 the FCDPH had one full-time investigator in training, plus assistance of 2 FTE from the CDPH STD Control Branch staff to manage syphilis investigations. In February 2016 the CDPH STD Control Branch requested additional assistance from the CDC Division of STD Prevention to help the FCDPH manage the outbreak of syphilis among heterosexuals, which has resulted in increased congenital syphilis cases in the Central Valley and Fresno County. Specific on-site assistance was requested for:

1. Epidemiology support to analyze reported syphilis cases identifying sexual and social networks and opportunities to intervene in the spread of disease.
2. Front-line disease intervention to work through the case back-log as well as new syphilis cases.
3. Assessment support to gain a better understanding of the factors potentially influencing increases of syphilis among women and the negative health outcomes related to congenital syphilis diagnoses.

Witnesses stated that CDC conducted an on-site assessment and has proposed an initial action plan in support of the request.

The increase in syphilis is accompanied by an increase in congenital syphilis, in which infected mothers infect newborns. In 2014 Fresno County had 18 cases of congenital syphilis, increasing to over 35 in 2015. The department issued a Health Alert<sup>13</sup> on June 3, 2014, about the congenital syphilis increase with treatment recommendations. This was followed by a Health Alert<sup>14</sup> on March 13, 2015, stating that California has experienced an increase in syphilis among women over the last two years and designating Fresno County as an area with high syphilis morbidity. On March 19, 2015, the FCDPH issued a Health Alert<sup>15</sup> as a Clinical Advisory Regarding Ocular Syphilis in California, and issued a follow-on Health Alert<sup>16</sup> on August 12, 2015, detailing resources available to providers for screening, diagnosis and treatment of syphilis cases. On November 12, 2015, the CDC issued a “Dear Colleague” letter detailing its analysis and recommendations resulting from the increase in congenital syphilis between 2012 and 2014. On September 2, 2015, the CDPH held a Statewide Congenital Syphilis Prevention meeting in Fresno. Participants, including the FCDPH, developed detailed recommendations for local and state actions. The state’s STD Control Branch published a draft version of the summary recommendations January 15, 2016.

The FCDPH receives mandated reports of syphilis, HIV and AIDS cases and investigates all new cases. The department has focused on provider education, making sure they are up to date on all

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<sup>12</sup> <http://www.fresnobee.com/news/local/article65850927.html>

<sup>13</sup> Available from FCDPH Public Health Communication at (559)-600-3200.

<sup>14</sup> Available on FCDPH web site [www.co.fresno.ca.us/publichealth](http://www.co.fresno.ca.us/publichealth)

<sup>15</sup> Available on FCDPH web site [www.co.fresno.ca.us/publichealth](http://www.co.fresno.ca.us/publichealth)

<sup>16</sup> Available on FCDPH web site [www.co.fresno.ca.us/publichealth](http://www.co.fresno.ca.us/publichealth)

guidelines and directives, and follows up with providers to ensure that syphilis patients are treated.

Syphilis is curable by injections of long-acting penicillin. The CDC recommends screening of all pregnant women for syphilis, with multiple screens for high-risk women. Prompt treatment of the expectant mother (two injections of penicillin one week apart) is essential to prevent congenital syphilis in the fetus/baby, which can cause death or serious injury. However, screening for disadvantaged women continues to be a challenge. Women need to be told that they can receive free prenatal care.

In 2010 a FCDPH clinic that provided STD and HIV care was closed due to lack of funding, and patients were referred to other providers. Planned Parenthood and the Community Regional Medical Center Specialty Clinic provide STD and HIV/AIDS treatment. Free or low-cost care is also provided by Federally Qualified Health Centers (non-profit organizations receiving Federal grants). In Fresno County these include Clinica Sierra Vista Health Centers, United Health Centers of the San Joaquin Valley, and Valley Health Team.

Although HIV is not solely an STD (shared use of intravenous drugs is a very large contributor) we also surveyed the department's services for clients diagnosed with HIV/AIDS. These include testing, which can be anonymous or confidential, and assistance to clients applying for the California Aids Drug Assistance Program (ADAP). Clients pick up their prescriptions at local pharmacies that are contracted with ADAP to provide the medications. The FCDPH also assists clients who are at risk of becoming homeless apply for the Housing Opportunities for Persons With Aids program. Additionally, the department assists with entry into medical care and with partner support services: education to HIV/AIDS infected persons and their sex and/or needle-sharing partners with access to individualized counseling, HIV testing, medical evaluation, treatment and other prevention services. The department continues to hold meetings to provide continuing education on the epidemiology of STD within the county.

The county's Core STD Program focuses on developing and enhancing local capacity for prevention, awareness, and control of STD. The department participates in education and outreach events conducted by community partners including Bringing Broken Neighborhoods Back to Life, Planned Parenthood, faith-based organizations, and Barrios Unidos.

The department also promotes web-based sexual health programs (e.g., [www.TeenSource.org](http://www.TeenSource.org), [www.TalkWithYourKids.org](http://www.TalkWithYourKids.org)) with local schools, parents, providers, community-based organizations and other agencies supporting at-risk populations. In addition, the department has made available a new STD web page designed to target the youth population, which includes links to the condom Home Mailer Program ([www.co.fresno.ca.us/DivisionPage.aspx?id=49842](http://www.co.fresno.ca.us/DivisionPage.aspx?id=49842)).

Witnesses also stated that the FCDPH participates in meetings of the West Fresno Adolescent Health Collaborative, facilitated by the state and the Fresno County Office of Education, to provide STD and HIV updates. Witnesses stated that the county provides STD program outreach, incentives and testing at numerous youth-focused community events. In 2014 and 2015 the county supported events at Fresno City College, Fresno State, Clovis Community

College, at the Fulton Mall, the West Fresno Youth Health Collaborative, Fresno County Juvenile Justice Facility's Teen Girls Unit, West Hills Community College and the Economic Opportunity Commission's Family Planning Clinic youth programs.

The department has distributed a number of pamphlets in English and Spanish aimed at young people produced by ETR Associates ([www.etr.org](http://www.etr.org)). The Grand Jury has reviewed these and felt that they were straightforward, easy to read, and seem to be accurate and helpful. They are currently available at the Specialty Clinic area and in the HIV Prevention/STD Program office in the health department building; the LGBT Community Center 1067 N. Fulton Ave., and at Community Events such as Kids Day at the Fresno Fair, STD Awareness Month events, and the LGBT Pride Festival.

Starting in 2011, the FCDPH started publishing disease maps to illustrate areas that are affected disproportionately from diseases. Witnesses confirmed that in addition to disease maps, the department also conducts demographic analysis and risk factor analysis for selected communicable diseases including HIV/AIDS, syphilis, chlamydia and gonorrhea. Although published disease maps are by zip code (for confidentiality requirements), internal health department demographic analysis occurs at a detail level capable of identifying the street address (known as Heat Maps), which supported the pilot gonorrhea program.

Demographic analysis allows the department to target interventions such as their Mobile Testing Facility to high-risk populations to increase their access to health services. Witnesses provided examples of targeted intervention including the increased testing for HIV/AIDS and hepatitis C with the FCDPH Mobile Testing facility. Additionally, through the chlamydia and gonorrhea Screening Project, the department screens and treats female youth booked into juvenile hall. The department partners with the Fresno County Jail's medical providers to give appropriate information on screening, identification and treatment of inmates at high risk of STD. Since 2014 the department has added two epidemiologist positions and created a senior epidemiologist position to better carry out these analyses.

Many of the County areas with the highest rate of STD are served by the Fresno Unified School District (FUSD). The extent and quality of sex education has varied among school districts over time. In recent years, FUSD had only limited discussion of HIV and no comprehensive sex education program. FUSD has now developed a robust sex health education program in compliance with AB 329, The California Healthy Youth Act.

Witnesses told the Grand Jury that this program should improve community awareness and understanding of STD prevention and treatment. FUSD has worked extensively with the state health department on comprehensive sexual health education under a 5-year memorandum with the California Department of Education. Witnesses stated that their work with the state health department was begun significantly prior to the passage of AB 329, but that the choice of the new curriculum aligns well with the new law.

Although the interaction of the FUSD with the county health department has been limited to statistical data, witnesses stated that neither FUSD staff nor FCDPH staff were concerned that

the school district's primary relationship regarding sex education was with the state office and not the local office of public health.

As we completed our report, the Fresno County Health Officer has written an article on syphilis in Fresno County, available at:

<http://www.co.fresno.ca.us/DepartmentPage.aspx?id=68264>.

## **FINDINGS**

- F1. The Fresno County Department of Public Health was found to be competent, creative, well educated, committed to promoting, preserving and protecting the well-being of the community and ensuring the optimal health of the public.
- F2. The FCDPH is aggressively reaching out to the Fresno community at risk for STD to provide assistance and information including providing outreach material in English and Spanish.
- F3. The FCDPH does an excellent job analyzing patterns of STD occurrence and can target areas of high incidence.
- F4. While the FCDPH participates in many youth-focused community events, FCDPH was not included in the development of the sex education curriculum by FUSD. The FUSD curriculum has largely been developed in liaison with the California DPH.
- F5. Congenital syphilis has increased dramatically in Fresno County in recent years, and the FCDPH has requested additional help from the CDPH and Federal CDC.

## **RECOMMENDATIONS**

- R1. FCDPH should support the implementation of AB 329, the new sex education law, in all Fresno County school districts. (F4)
- R2. FCDPH should strengthen outreach to all expectant mothers, especially those in hard-to-reach groups, to emphasize the availability and importance of prenatal care including screening and treatment for STD. (F2, F3, F5)

## REQUEST FOR RESPONSES

Pursuant to Penal Code section 933 (c), the grand jury requests responses as follows:

From the following individuals:

- Chairman, Board of Supervisors, Fresno County (R1, R2)
- Director, Fresno County Department of Public Health (R1, R2)
- Public Health Officer, Fresno County Department of Public Health (R1, R2)

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[7] Centers for Disease Control and Prevention. Sexually Transmitted Diseases Treatment Guidelines, 2015. Morbidity and Mortality Weekly Report (MMWR), Recommendations and Reports / Vol. 64 / No. 3 June 5, 2015.

[8] Centers for Disease Control and Prevention. Sexually Transmitted Diseases Treatment Guidelines, 2015. Morbidity and Mortality Weekly Report (MMWR), Recommendations and Reports; / Vol. 63 / No. 2 March 14 2014.

## APPENDIX A

### GLOSSARY

A primer on sexually transmitted diseases (STD):

Definition: Bacterial or viral diseases spread prominently by contact between genital organs or genital organs and throat or anus. Some of these diseases are also spread by contact with blood (for example, sharing of needles). Many cases are diagnosed with symptoms involving the penis/urethra, vagina or cervix, but localized infections can also involve the skin, throat, anus, or other pelvic organs, and disease can spread to distant sites or be life-threatening. Diseases 1-6 must be reported by health-care providers to the county and state.

Some important STD:

1. Chlamydia is the most common bacterial infection, frequently causing urethral symptoms or vaginal discharge, but often no obvious symptoms. Untreated, this can cause pelvic infections, sterility, and occasionally more serious disease. Current treatment with a single dose of antibiotics (azithromycin) is usually curative, but repeat infections are common.
2. Gonorrhea: The second most common bacterial infection, with symptoms and risks similar to chlamydia, but a higher risk of spread to distant sites. Treatment requires two antibiotics, and there is a growing world-wide risk of antibiotic resistance. Repeat infections are also common.
3. Syphilis: A bacterial infection which caused widespread devastation before the antibiotic era, presenting initially with genital sores (chancres), later with rash and many symptoms when the disease spreads (secondary syphilis), and sometimes with severe late (tertiary) symptoms (brain, heart, soft tissue) or death. An infection with no symptoms is called latent syphilis. A child born to a mother with syphilis can be infected at birth (congenital syphilis), resulting in deformities and other symptoms. This can be prevented if the mother is adequately treated (two doses of long-acting benzathine penicillin G at one-week intervals). Treatment of early or secondary syphilis requires one injection. The incidence of syphilis had declined markedly since the 1950s but has recently risen. Congenital syphilis is considered a “never” event, meaning that it should never occur in babies whose mothers have had adequate prenatal care, including screening (blood test) and treatment for syphilis. Unfortunately, Fresno County has seen a dramatic increase in babies born with syphilis in the past two years.
4. HIV/AIDS (Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome): A currently incurable viral disease which can destroy the body’s immune system, spread by sexual contact or contact with infected blood (especially needle-sharing). This used to be a death sentence, but current antiviral regimens can usually prevent progression to severe

- immune destruction. However, these drugs are expensive, must be taken for life, and can have side effects, which makes prevention preferable. Diagnosis is usually by blood test.
5. Hepatitis B: Like HIV, a life-long viral disease which is spread by sexual contact or blood, diagnosed by a blood test. This may lead to cirrhosis, liver cancer, and death. However, this can be entirely prevented by immunization (three shots, now usually given to infants). Anyone who has not had these shots should receive them from his/her health provider.
  6. Hepatitis C: Like hepatitis B, but no available vaccination, more likely spread by contact with blood than by sex. An expensive new drug treatment is now available.
  7. Human papilloma virus (HPV): The most common viral disease spread by sex, with many different strains. Symptoms may include genital warts, but infection is often asymptomatic and may be lifelong. Late effects can include cancer of the uterine cervix, vagina, vulva, throat, anus and penis. There is no cure for the infection, but many of these cancers can be treated. Besides avoiding sexual contact (including oral), the best prevention is vaccination of boys and girls by age 12 (three shots). Older children and young adults who are not already infected should also receive vaccinations.
  8. Herpes simplex virus, usually type 2. Lifelong, often asymptomatic but may have repeat outbreaks of blisters. Its sibling, herpes type 1, causes most “cold sores” on the lips. Both types can occasionally cause serious infections in other parts of the body, such as eye or brain. Treatment with antiviral antibiotics can usually control outbreak symptoms but does not prevent recurrence.
  9. Trichomoniasis (“trich”), a protozoan infection of the vagina or penile urethra, often causing discharge or itching, treatable with oral antibiotics.
  10. Candida (yeast): Usually localized itching, common even without sex, treatable with topical or oral antibiotics.
  11. Many other less common diseases.

Screening: Testing for disease in people who may not have symptoms. Patients with symptoms, sexual contacts of patients with STD, or others at high risk should always be tested. In addition, the CDC (U. S. Centers for Disease Control and Prevention) recommends that all sexually active women under 25 and all men who have sex with men (MSM) be screened at least annually. The CDC also recommends screening on incarceration (prison, jail, juvenile detention) for women under 35 and men under 30, and for all incarcerated MSM. Chlamydia and gonorrhea screening can be done easily on urine samples or swabs from urethra, vagina, or other areas. Syphilis, HIV, and hepatitis can be detected by blood tests.

Incidence: Reported rates of STD may underestimate the true rate of STD. For example, although there were 1.4 million cases of chlamydia reported in the U.S. in 2013, the CDC estimates that due to undetected and unreported cases, the true rate is 3 million. Congenital syphilis cases have tripled in California from 2012 to 2014, from 7 to 20 per 100,000 births. The Fresno County rate is higher.

Much of the data for this addendum is taken from the U.S. Centers for Disease Control and Prevention website [www.cdc.gov/std/](http://www.cdc.gov/std/) and from their Morbidity and Mortality Weekly Reports MMWR Recommendation Reports 2015; 64(RR-03): 1-137 and 2014; 63 (RR-02): 1-19.