testing performed by this laboratory corporation during June 2008—July 2010.

Results The dataset contained 3.26 million specimen records. Among those tested, 86.2% were women, 41.0% were aged 15—24 years, 73.5% had commercial insurance, 21.8% had Medicaid insurance, and 56.6% resided in the South. The most frequently used type of chlamydia test was a nucleic acid amplification test (77.5%). Among women, 59.7% of specimens were cervical, 21.1% vaginal, and 18.8% urine. Overall, 4.0% of tests were positive. Positivity rates were highest in persons aged 15—19 years, and higher in men than women for all age groups. Rates also were higher in women with Medicaid insurance than women with private insurance.

Conclusions Systematically collected laboratory data can fill a critical gap in monitoring US chlamydia testing and positivity trends. These data are more representative of the US population by geographic distribution and insurance type than other data sources. The analysis of laboratory testing data might be useful for national surveillance that would not be dependent on provider or health department reporting. Our findings underscore the importance of screening young women for chlamydia, especially adolescents in whom screening rates are low. Men had higher positivity rates probably because they sought treatment for symptoms or were referred by an infected partner. Further analysis is needed to assess if testing of persons older than 25 years was according to guidelines, such as pregnant women, at-risk persons, or symptomatic persons.

P1-S6.34 EVALUATION OF RISK-SCORE ALGORITHMS FOR THE DETECTION OF HIV INFECTION AND SYPHILIS IN NORTH CAROLINA COUNTY JAILS

doi:10.1136/sextrans-2011-050108.258

[1]L A Sampson, [2]W C Miller, [1]P A Leone. *[1]NC Division of Public Health, Raleigh, USA; [2]University of North Carolina, Chapel Hill, USA*

Background In North Carolina, the funding environment for jail screening has shifted from a syphilis-centred model to one based on integrating HIV and STI testing. We developed and evaluated risk score algorithms for HIV screening with and without the addition of syphilis screening in North Carolina county jails.

Methods This study included 3610 inmates screened for both syphilis and HIV in two North Carolina jails, 2002—2005. We verified reactive syphilis tests against surveillance records to identify new syphilis cases. We created logistic regression models to predict two different outcomes: HIV only and HIV or syphilis. We created risk scores by rounding the β coefficients from the final models. Cut-offs were chosen based on testing 50% of the available inmate population. We calculated the sensitivity and specificity for each of the risk scores for three outcomes: HIV only, syphilis only, HIV or syphilis. Analyses were conducted using Stata.

Results The final model for the HIV-only outcome included sex, age, ever tested for HIV, and race/ethnicity. The lowest scoring individual type would be a heterosexual man, age 18—24, never tested for HIV, with a race/ethnicity in the referent group (total score=0). The highest scoring individual would be MSM, age 25 or older, previously tested for HIV, and of Hispanic or Black non-Hispanic race/ethnicity (total score=6). A risk score cutoff of three or above will lead to screening <50% of the available inmate population. The weighted risk scores from the HIV-only outcome model had better sensitivity for the detection of HIV (82.6, 95% CI 71.2—to 94.0) than the combined-outcome model (65.2 95% CI 50.9—to 79.5). If inmates are selected for screening based on the HIV model, the sensitivity for detection of new syphilis cases is also good (73.3, 95% CI 56.5—to 90.1) and is only slightly inferior to the HIV or syphilis model (80.0 95% CI 64.8—to 95.2).

Conclusions We believe that the screening algorithm will perform well in the county from which the sample was drawn. Generalisation to other communities in the Southern USA with similar demographics and rates of HIV and syphilis is also possible. More generally, we recommend targeting HIV jail screening efforts based on HIV data. In communities with incident syphilis infections, we recommend adding syphilis screening to the HIV protocol.

P1-S6.35 ONE FINGER STICK, TWO TESTS: INTEGRATING SYPHILIS AND HIV RAPID TESTS FOR ANTENATAL CARE AND REPRODUCTIVE HEALTH SERVICES

doi:10.1136/sextrans-2011-050108.259

M Valderrama, M Chiappe. *Universidad Peruana Cayetano Heredia, Lima, Peru*

Background Mother-to-Child Transmission of HIV and Congenital Syphilis are two important public health problems in many developing countries. In Peru, coverage of syphilis screening is suboptimal, test results can take weeks and a high proportion of women screened are not treated, much less their sex partners. The objective of this study was to demonstrate the feasibility of implementing syphilis and HIV rapid tests at antenatal care and reproductive health services and to measure its effect on coverage of maternal syphilis screening and treatment coverage.

Methods We trained midwives from 16 health centers, to offer syphilis rapid tests (Syphilis 3.0 BioLine) to women 16 to 55 years old receiving antenatal care (ANC) and seen at the delivery or miscarriage services, and to integrate it with HIV rapid tests already in place at the health network, but which were until then done from venous blood by laboratory technicians and with results given in 15 to 30 days.

Results 4497 women were screened, from January to November 2010. Prevalence of syphilis (RPR reactive, TPPA(+)) was 0.9% in ANC, 0.7% in delivery services and 1.9% at the miscarriage services. The prevalence of HIV by rapid test was 0.3%. The overall coverage for syphilis and HIV rapid tests was 93% during the study, compared to the 35% coverage of RPR testing reported for 2009 (Abstract P1-S6.35 figure 1). Previous coverage of HIV testing was not documented. Test results were given to 100% of women within 20 min of finger stick blood collection during the first contact with health providers, compared to a 27 days delay found in 2009. Treatment rates for syphilis also improved from 51% in 2009 to 93% in 2010. Whereas previously there was no system in place for registering partner treatment, our data shows that 59% of partners of positive women received treatment for syphilis during the study period. Key factors in the success of implementation in Callao-Peru; were ongoing training, monitoring, and supervision of health providers who performed the rapid tests.