

### 008.2 CAN A RAPID STI SEXUAL HEALTH SERVICE REDUCE GONOCOCCAL CULTURE TESTING WITHOUT REDUCING CULTURE SENSITIVITY? A SERVICE EVALUATION

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**Background** The Panther (Hologic Inc) was introduced to our specialist sexual health service at point-of-care, which could provide a rapid gonorrhoea (GC) and chlamydia (CT) nucleic acid amplification test (NAAT) result within 4 hours. GC-culture testing was limited to those testing GC NAAT-positive and/or to those who received treatment before the NAAT result was available. We hypothesised that this would reduce the number of cultures and cost, but not reduce the sensitivity of GC-culture. GC isolates are required for susceptibility testing to optimise antimicrobial therapy and for Anti-microbial Resistance surveillance.

**Methods** We obtained and compared data on NAATs taken 12 months before and 12 months after the introduction of rapid testing in November 2019. We linked GC-cultures taken within 2 weeks of the NAAT. Chi-square was used to compare proportions.

**Results** 23,588 CT/GC NAATs were taken before and 21,588 after the introduction of the new rapid STI service of which 684(2.9%) and 766(3.5%) were GC-positive respectively. GC cultures dropped from 10881 to 6022 after November 2019 with the proportion of cultures to NAATs decreasing from 0.46 to 0.28 ( $p < 0.0001$  Chi-square). This proportion decreased over each 4-month period after November 2019: 0.46(3472/7531), 0.29(1999/6950); and 0.08(551/7107) ( $p < 0.0001$  Chi-square). There was no significant difference between the proportions of GC NAAT-positive and culture-positive specimens before and after the introduction of the new service: 0.35 (237/684) against 0.35 (265/7660) respectively ( $p = 1.0$  Chi-square). The proportion of culture-positive specimens was not significantly different in each 4-month period after Nov-2019: 0.36(91/256); 0.38(102/267) and 0.30 (72/243) ( $p = 0.12$  Chi-square). 86% of NAAT-positive sites had a culture swab taken in the last 4 months compared to >95% in previous 8 months.

**Conclusions** Implementation of the rapid STI service resulted in fewer GC-culture specimens being taken which reduced the cost of GC-culture but with no loss in GC-culture sensitivity overall.

### 008.3 DISSEMINATED GONOCOCCAL INFECTION (DGI) IN SEATTLE-KING COUNTY, WASHINGTON (WA), 2006–2020

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**Background** DGI occurs through hematogenous bacterial spread in 0.5–3% of gonorrhoea cases. We present a contemporary epidemiologic analysis of DGI in Seattle, King County, WA, USA.

**Methods** We used STI surveillance data to identify cases of DGI diagnosed 2006–2020 in King County, WA, USA, and abstracted medical records on 27 cases hospitalized in the University of Washington (UW) system.

**Results** Over 15 years we identified 44 cases. After an outbreak of 19 cases in 2006, Zero-three cases were reported annually except in 2007 and 2020 (5 cases each). Overall, 70% were male (N=31). Diagnosis was established by NG culture of synovial fluid (66%, n=29), blood (16%, n=7), aortic tissue (2%, n=1), lymph tissue (2%, n=1), and unspecified site (14%, n=6). There were no cases of meningitis, infection during pregnancy, or death. Among the 27 cases hospitalized at UW, 78% were male (n=21); 59% (n=16) presented with polyarthralgia, 85% (n=23) with arthritis, 37% (n=10) with tenosynovitis; 30% (n=8) had fever, 18% (n=5) had dermatitis, and 15% (n=4) had urogenital symptoms. Most (78%, n=21) had NG-positive and purulent (74%) synovial fluid or facial/tendon culture (WBC IQR=54,550–118,000); bacteremia was uncommon (18%, 5/18). Less than half (41%, n=11) had urogenital NG testing with few positive (18%, n=2). Three of 4 tested had pharyngeal infection and zero of three tested had rectal gonorrhoea. Medical management of DGI was highly variable: Although 77% (n=17, 5 missing) had at least 3 days of 1–2g IV ceftriaxone initially; the range was wide (0–28 days, IQR 2–6 days). Subsequent IV and/or oral antibiotic class and total antibiotic duration also widely varied (0–60 days, IQR 2–14 days).

**Conclusion** King County experienced a 2006 DGI outbreak with sporadic cases of uncertain relatedness occurring since. Marked variations in the use of diagnostics and clinical management suggest the need for more consistent management.

### 008.4 STRENGTHENING THE U.S. RESPONSE TO RESISTANT GONORRHEA (SURRG): A PROGRAM TO ENHANCE LOCAL ANTIBIOTIC RESISTANT GONORRHEA PREPAREDNESS CAPACITY

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**Background/Purpose** In 2016 the U.S. Centers for Disease Control and Prevention (CDC) initiated Strengthening the U.S. Response to Resistant Gonorrhoea (SURRG) in local jurisdictions to enhance antibiotic resistant gonorrhoea (ARGC) rapid detection and response infrastructure and evaluate the impact of key strategies.

**Approach** Eight jurisdictions were funded for five years to establish or enhance local specimen collection for gonococcal cultures in STD and community clinics, conduct rapid antibiotic susceptibility testing (AST) using Etest® in local public