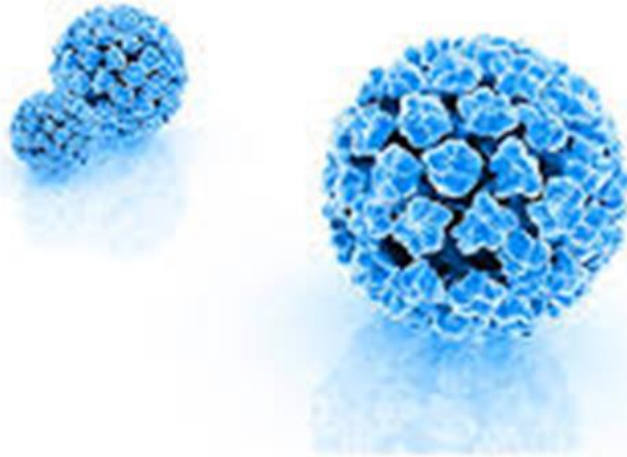


STI surveillance in Northern Ireland 2021

An analysis of data for the calendar year 2020



STI surveillance in Northern Ireland

An analysis of data for the calendar year 2020

<http://www.publichealthagency.org/directorate-public-health/health-protection/sexually-transmitted-infections>

Surveillance arrangements and sources of data

GUMCAD collects anonymised patient-level data on all STI tests and diagnoses made in GUM clinics in Northern Ireland.

Laboratory data represent an important complementary source to clinician-initiated surveillance arrangements.

Enhanced syphilis surveillance for infectious syphilis in Northern Ireland have been in place since 2001.

Data from home STI testing (SH24) is included in the 2020 report for the first time.

Interpretation of 2020 data

The numbers of STI diagnoses are influenced by access to services.

The COVID-19 pandemic caused major service disruptions, therefore caution is required in making any comparisons to different time periods.



STI surveillance in Northern Ireland

Summary Points

- There was a 72% decrease in STI testing in GUM clinics in 2020 when compared with 2019.
- There was a 43% decrease in the number of new STIs reported through Northern Ireland GUM clinics in 2020 when compared with 2019.
- Decreases were seen in new diagnoses of chlamydia, gonorrhoea, herpes simplex (first episode), and genital warts; but there was an increase in infectious syphilis.
- There was a 61% increase in home STI testing in 2020 when compared with 2019.

STI surveillance in Northern Ireland GUM Clinics

Summary Points

- New diagnoses of chlamydia decreased by 58%; 775 diagnoses in 2020 compared with 1,863 in 2019.
- New diagnoses of gonorrhoea decreased by 52%; 455 in 2020 compared with 951 in 2019.
- New diagnoses of genital herpes simplex (first episode) decreased by 40%; 293 in 2020 compared with 487 in 2019.
- New diagnoses of genital warts (first episode) decreased by 32%; 929 in 2020 compared with 1,367 in 2019.
- New diagnoses of infectious syphilis **increased** by 15%; 76 in 2020 compared with 66 in 2019.

Trends : 2006-2020

- Between 2006 and 2011 the number of **new STI diagnoses** remained relatively stable. Between 2011 and 2017, the numbers have decreased reflecting a steep decline in new diagnoses of complicated and uncomplicated non-specific genital infection (NSGI) (figure 2). This decrease is likely to be due to the change in test technology within GUM clinics, whereby the more sensitive dual platform PCR test for gonorrhoea and chlamydia has largely replaced the invasive urethral culture in asymptomatic patients. This has resulted in more detections of organisms with proven pathogenicity, particularly gonorrhoea and thus NSGI diagnoses have fallen (figure 1). However, diagnoses of new STIs have been increasing again since 2015, with a further 2% increase in 2019 when compared to 2018 (figure 1), (table 1).
- During 2020 there was a decrease of 43% in new STI diagnoses, 20% in other STI diagnoses and 15% decrease in other GUM clinic diagnoses when compared to 2019 (figure 1), (table 1).

Figure 1: Trends in diagnoses and sexual health screens made in Northern Ireland GUM Clinics, 2006-2020

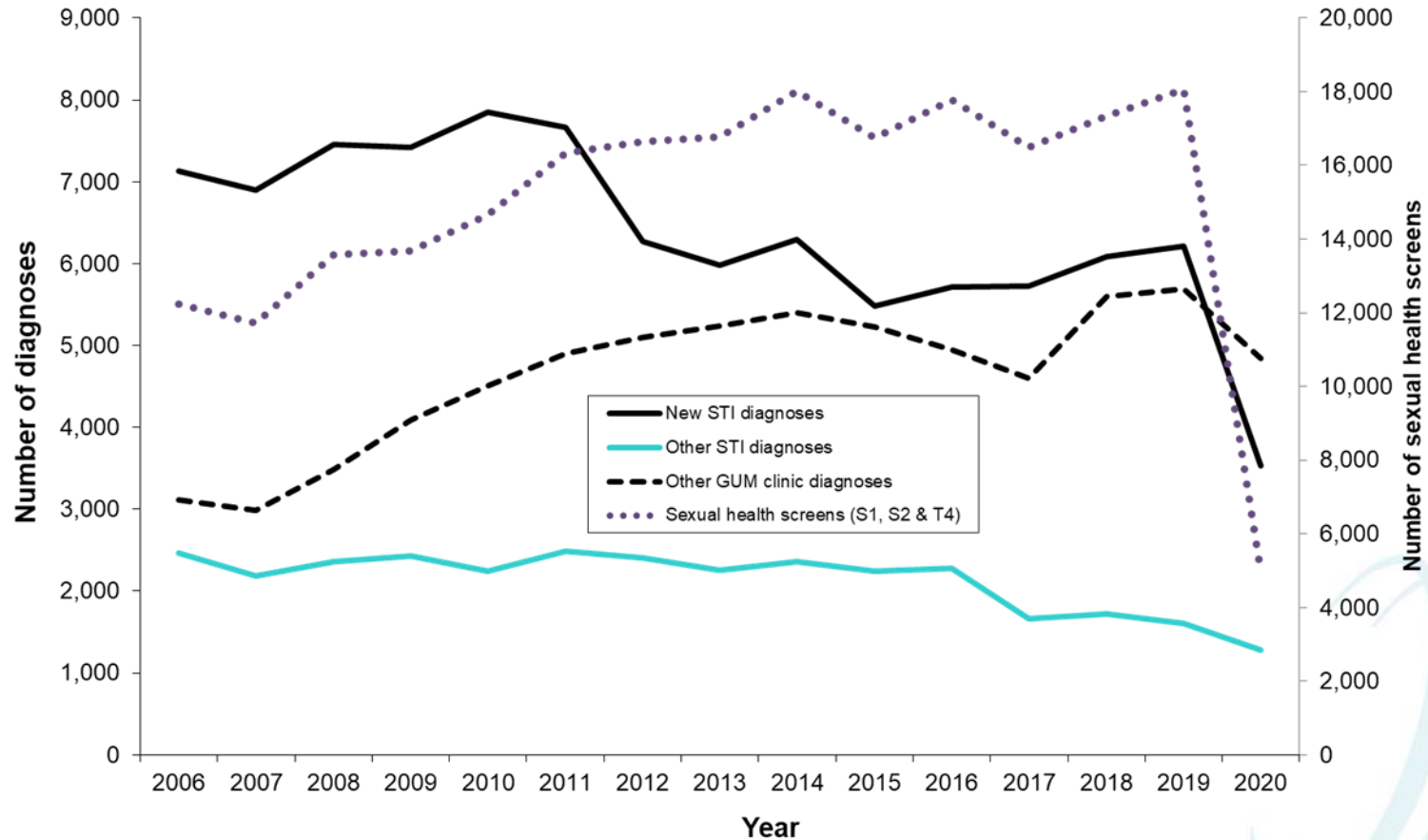
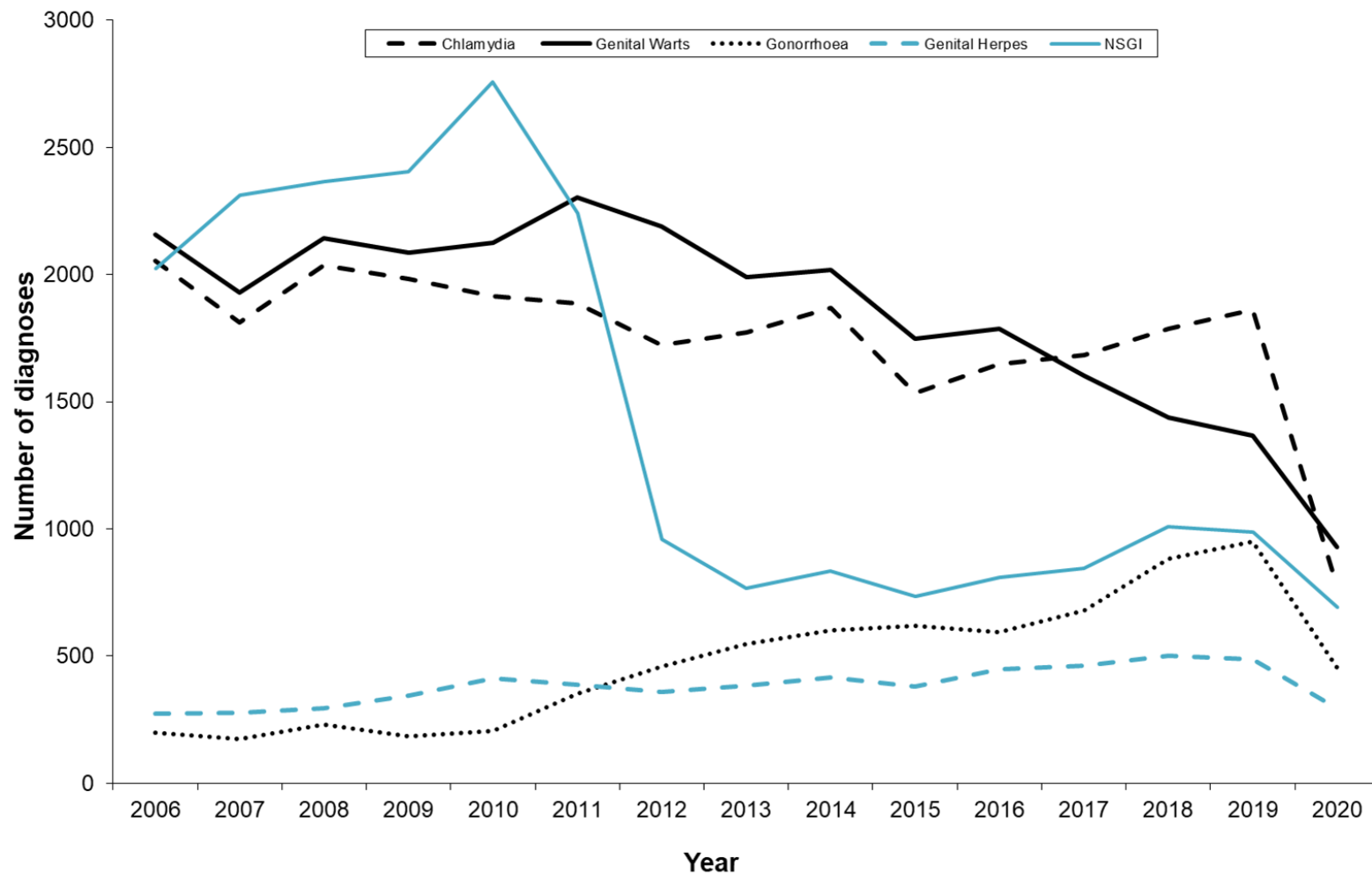


Table 1: Trends in diagnoses made in GUM clinics in Northern Ireland, 2006-2020

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
New STI diagnoses	7,129	6,897	7,452	7,417	7,850	7,661	6,267	5,977	6,292	5,477	5,719	5,726	6,086	6,208	3,534
Other STI diagnoses	2,464	2,187	2,355	2,426	2,245	2,485	2,410	2,260	2,363	2,242	2,279	1,663	1,725	1,610	1,282
Other GUM clinic diagnoses	3,110	2,991	3,480	4,094	4,507	4,900	5,095	5,233	5,400	5,224	4,953	4,600	5,600	5,693	4,845



Figure 2: Trends in new diagnoses of STIs in Northern Ireland GUM clinics, 2006-2020



Sexual health screens

In 2020 the number of sexual health screens in GUM clinics decreased 72% when compared to 2019, with a decrease seen in all groups.

From March 2020, asymptomatic service users were directed to home testing (SH24), including those on PrEP.

In 2020 the number of home STI testing kits issued increased by 61% when compared to 2019, with 22,228 home testing kits issued and 15,738 returned for testing (70%). Demand for home testing exceeded commissioned capacity at times.



Figure 3a: Trends in sexual health screen activity in Northern Ireland GUM clinics, by male sexual orientation, 2008, 2014-2020

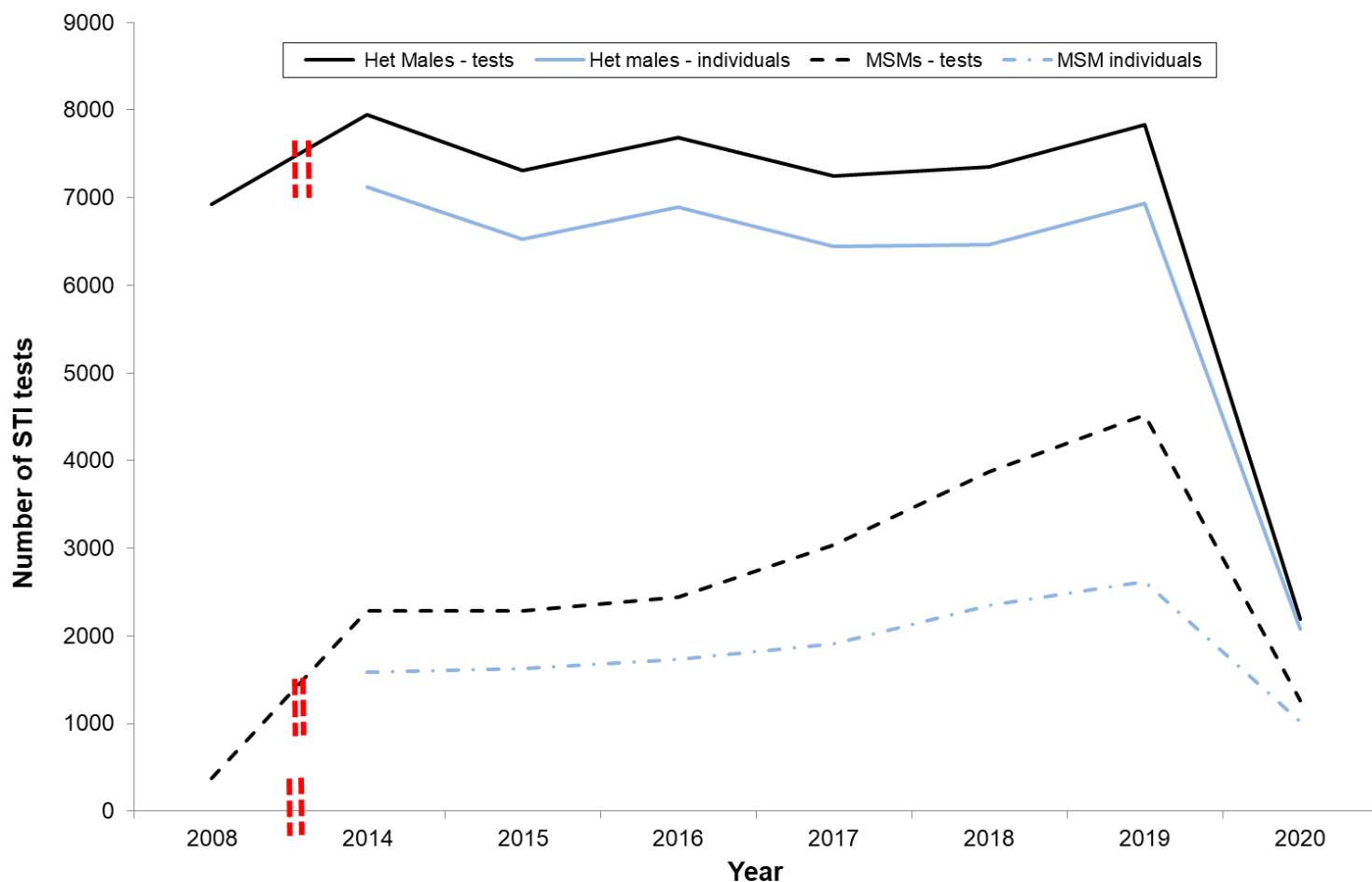
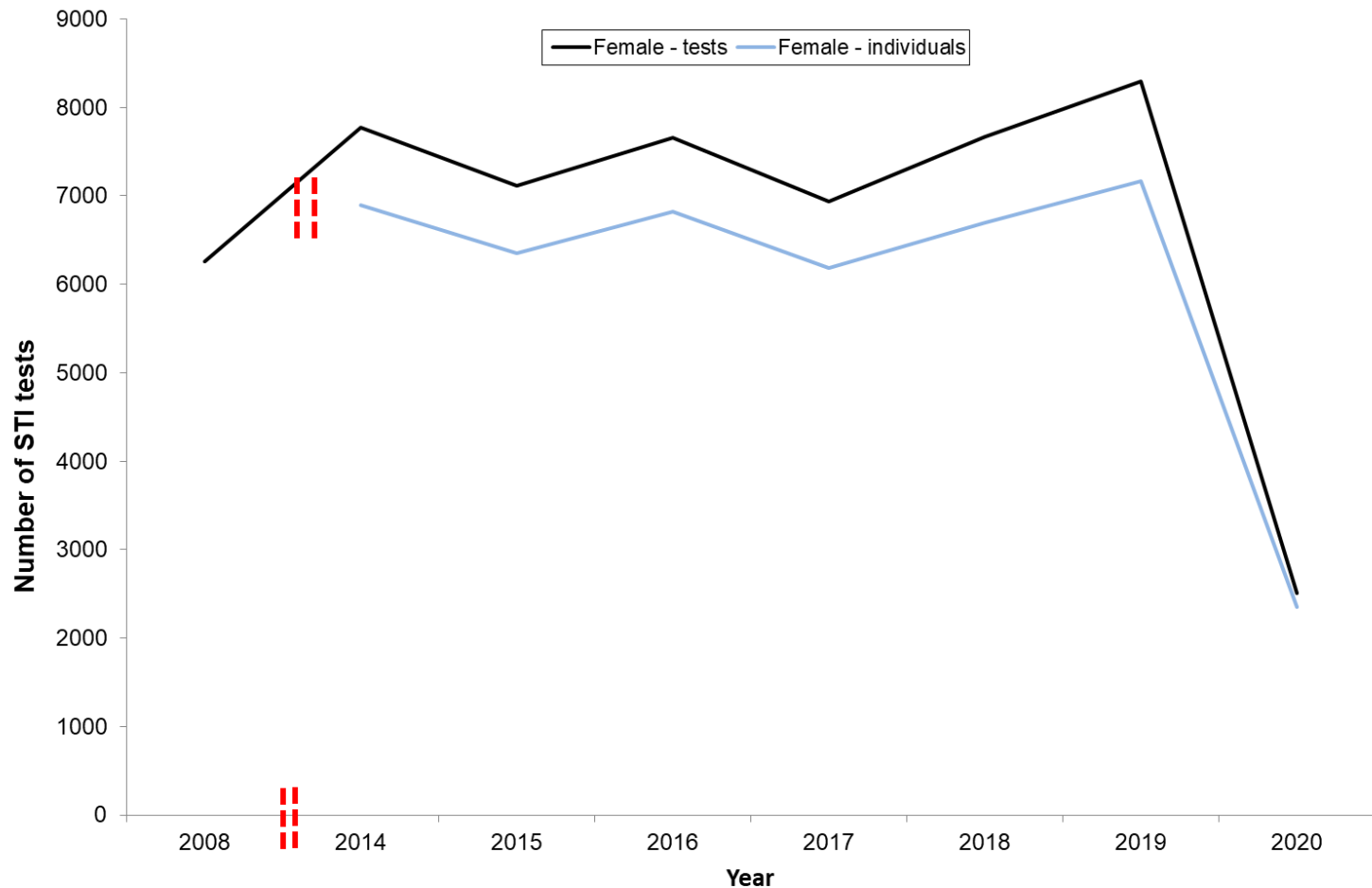


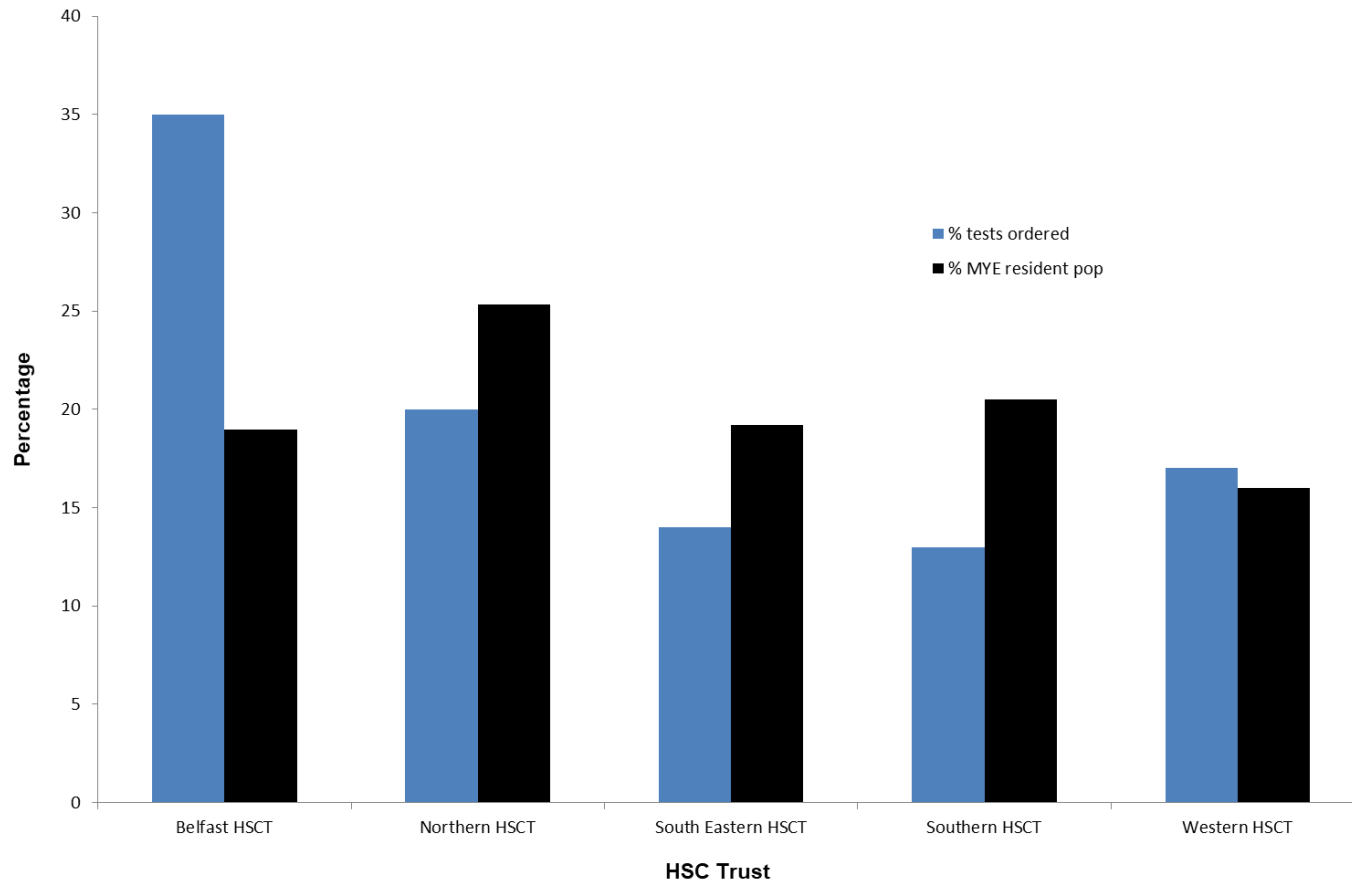
Figure 3b: Trends in sexual health screen activity in Northern Ireland GUM clinics, by females, 2008, 2014-2020



SH24 : Home testing

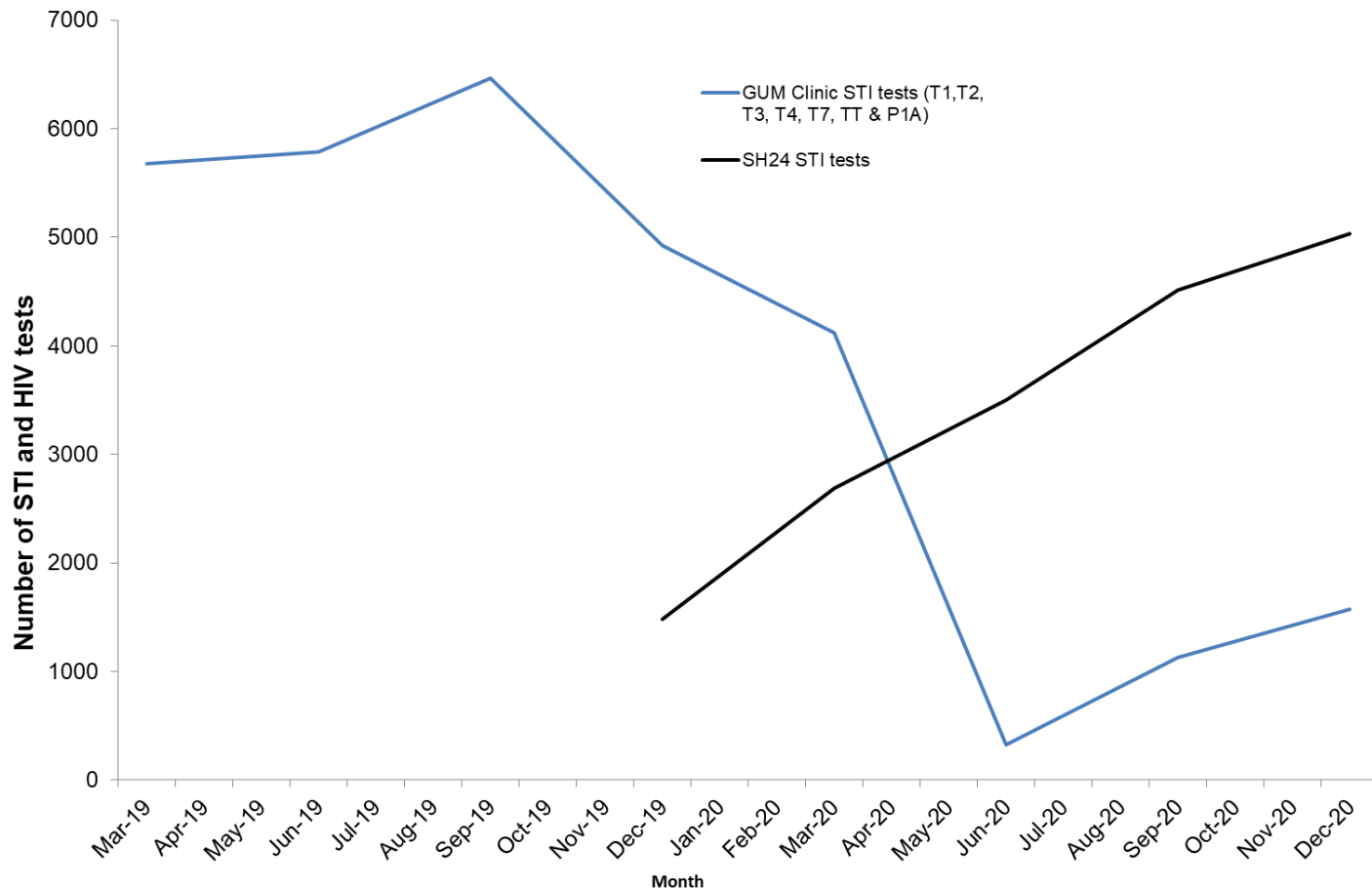
- SH24 is a sexual health testing service that provides confidential home-testing for chlamydia, gonorrhoea, syphilis and HIV. The service became available to residents in Northern Ireland in October 2019. It is targeted at people who are asymptomatic, and is free at the point of delivery.
- The number of STI and HIV tests issued per month increased by 61% from January 2020 (1,430) to December 2020 (2,308).
- People aged between 20-29 years of age accounted for 59% of tests issued.
- SH24 is used across all Trust areas, with residents of Belfast Trust accounting for over one third of all test kits issued (figure 4).

Figure 4: Percentage of home tests issued by SH24 and population MYEs by HSC Trust, 2020



Source: SH24 & NISRA mid year estimates (MYE)

Figure 5: Number of SH24* and GUM clinic STI and HIV tests Northern Ireland, March 2019 - December 2020



Source: SH24

SH24 testing results 2020

Positive Results	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sept	Oct	Nov	Dec	Total
Chlamydia	84	68	96	101	79	107	137	166	72	150	175	156	1391
<i>Diagnostic Rate</i>	<i>9.0</i>	<i>7.7</i>	<i>10.9</i>	<i>10.2</i>	<i>6.9</i>	<i>7.9</i>	<i>7.9</i>	<i>8.7</i>	<i>8.3</i>	<i>8.8</i>	<i>9.7</i>	<i>10.2</i>	<i>8.8</i>
Gonorrhoea	22	9	11	18	8	9	21	11	10	17	29	21	186
<i>Diagnostic Rate</i>	<i>2.4</i>	<i>1.0</i>	<i>1.3</i>	<i>1.8</i>	<i>0.7</i>	<i>0.7</i>	<i>1.2</i>	<i>0.6</i>	<i>1.2</i>	<i>1.0</i>	<i>1.6</i>	<i>1.4</i>	<i>1.2</i>

Source: SH24

There is a 10% overall diagnostic rate, that is 1 in 10 samples sent have a reactive result for chlamydia, gonorrhoea, syphilis or HIV.

There were 1,391 diagnoses of chlamydia made by SH:24 during 2020.

Service users with uncomplicated chlamydia infection are offered treatment with Doxycycline by postal delivery. Approximately 80% of those with chlamydia opt for postal treatment, and therefore do not attend GUM clinics, and are not represented in the GUM surveillance data.

SH24 – testing results 2020

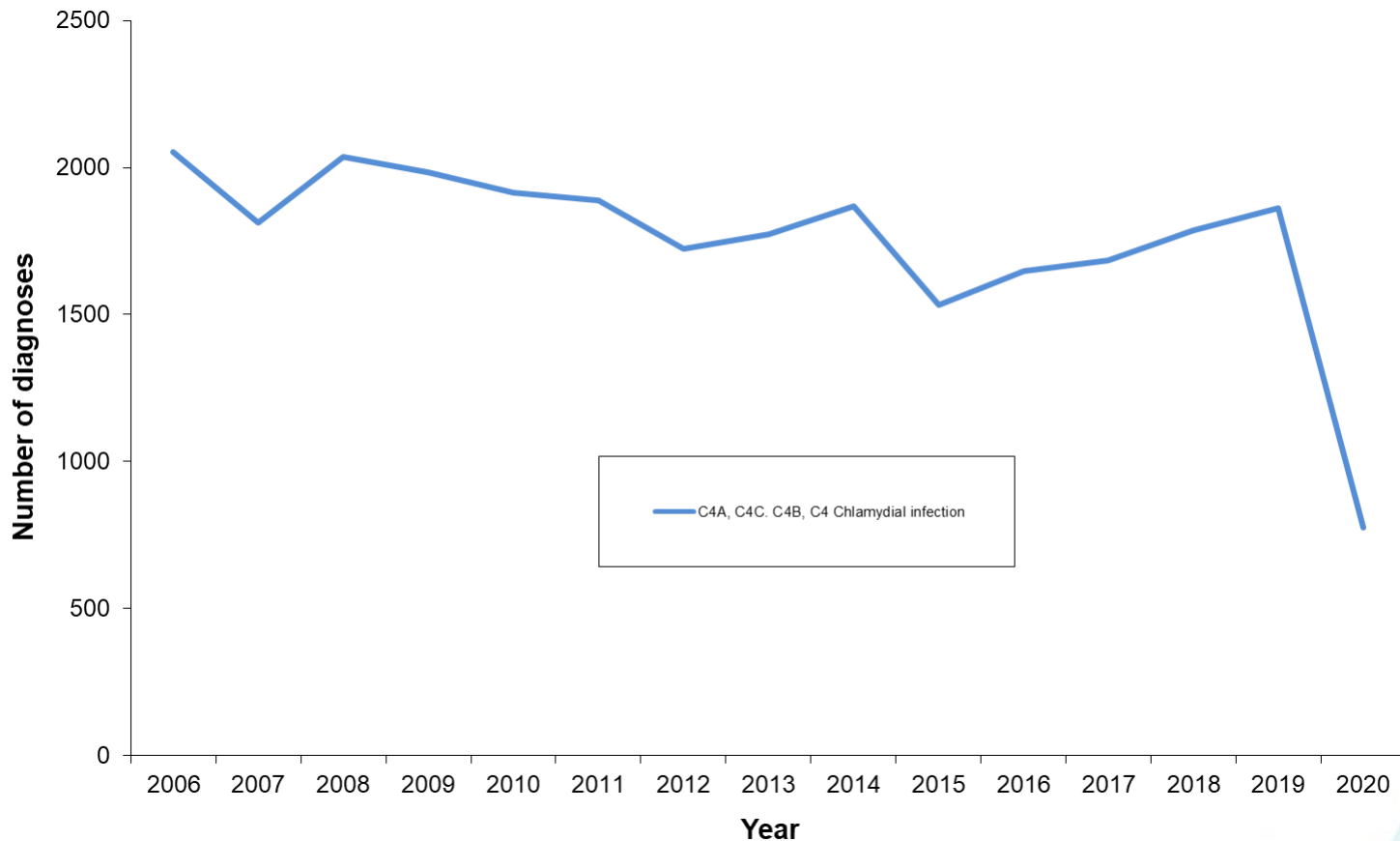
- Service users who receive a positive gonorrhoea result from SH24 should attend GUM for treatment, and therefore should be represented in the GUM surveillance data.
- Service users with a reactive result for HIV are advised to attend GUM for further testing. If they are confirmed to have HIV, they will be represented in the annual HIV report.
- A minority of syphilis reactive results represents true untreated syphilis. The remainder of the reactive results do not confirm on further testing, or represent past treated syphilis. The true untreated syphilis should be represented in the GUM surveillance data.

Diagnoses provided in Northern Ireland GUM clinics in 2020

During 2020:

- 3,534 new STI diagnoses were made, an decrease of 43% compared with 2019 (6,208);
- 65% (2,292/3,534) of new STI diagnoses were in males;
- Three types of infection accounted for 68% of **new STI diagnoses** – chlamydia (22%), genital warts (first episode) (26%) and non-specific genital infection (20%);
- 1,282 other STI diagnoses were made;
- 4,845 other diagnoses made at GUM clinics.

Figure 6: Diagnoses of chlamydial infection in Northern Ireland GUM clinics, 2006-2020



A further 1391 cases were diagnosed via SH24 and treated

Figure 7: Rates of diagnosis of chlamydial infection in Northern Ireland GUM clinics by gender and age group, 2006-2020

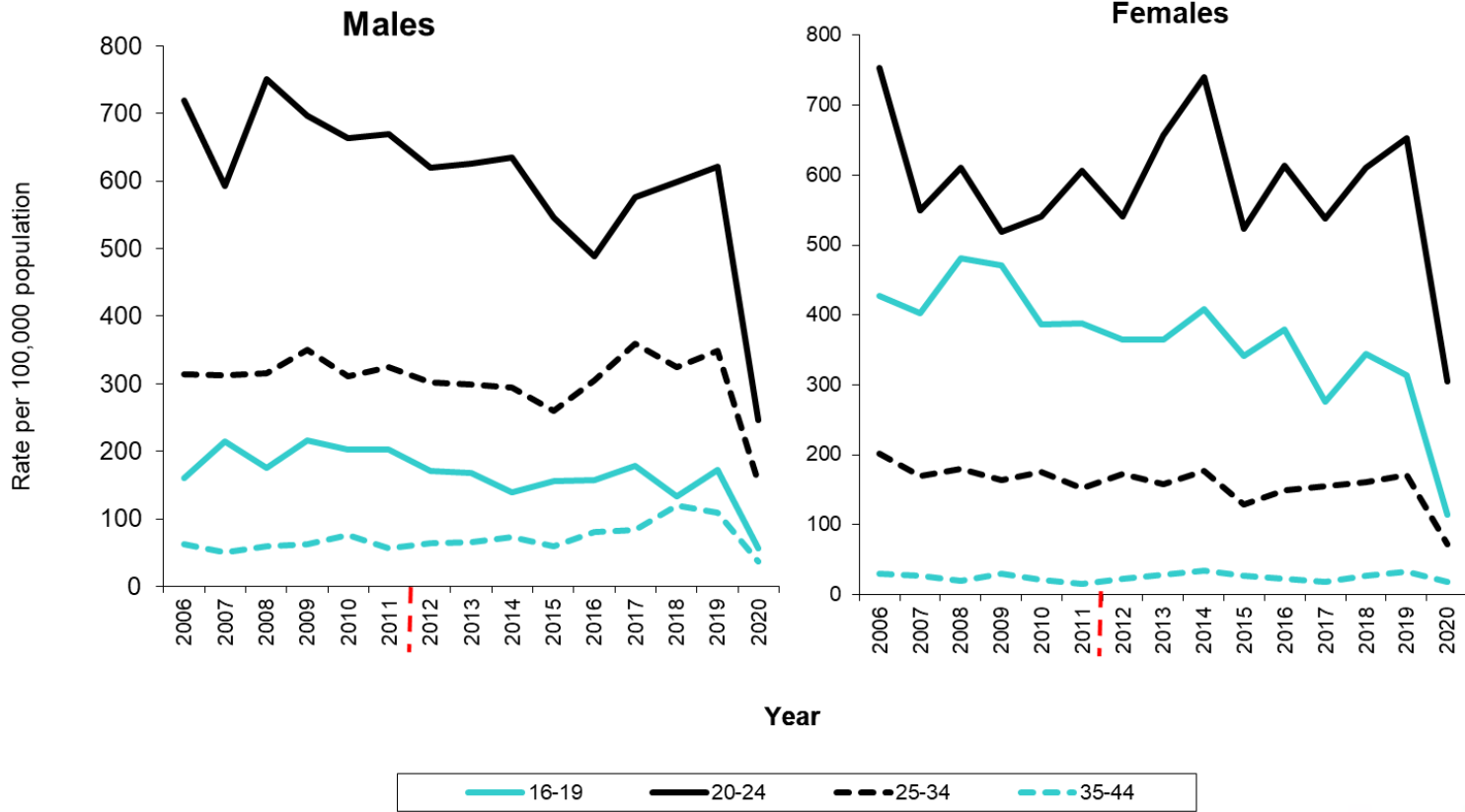
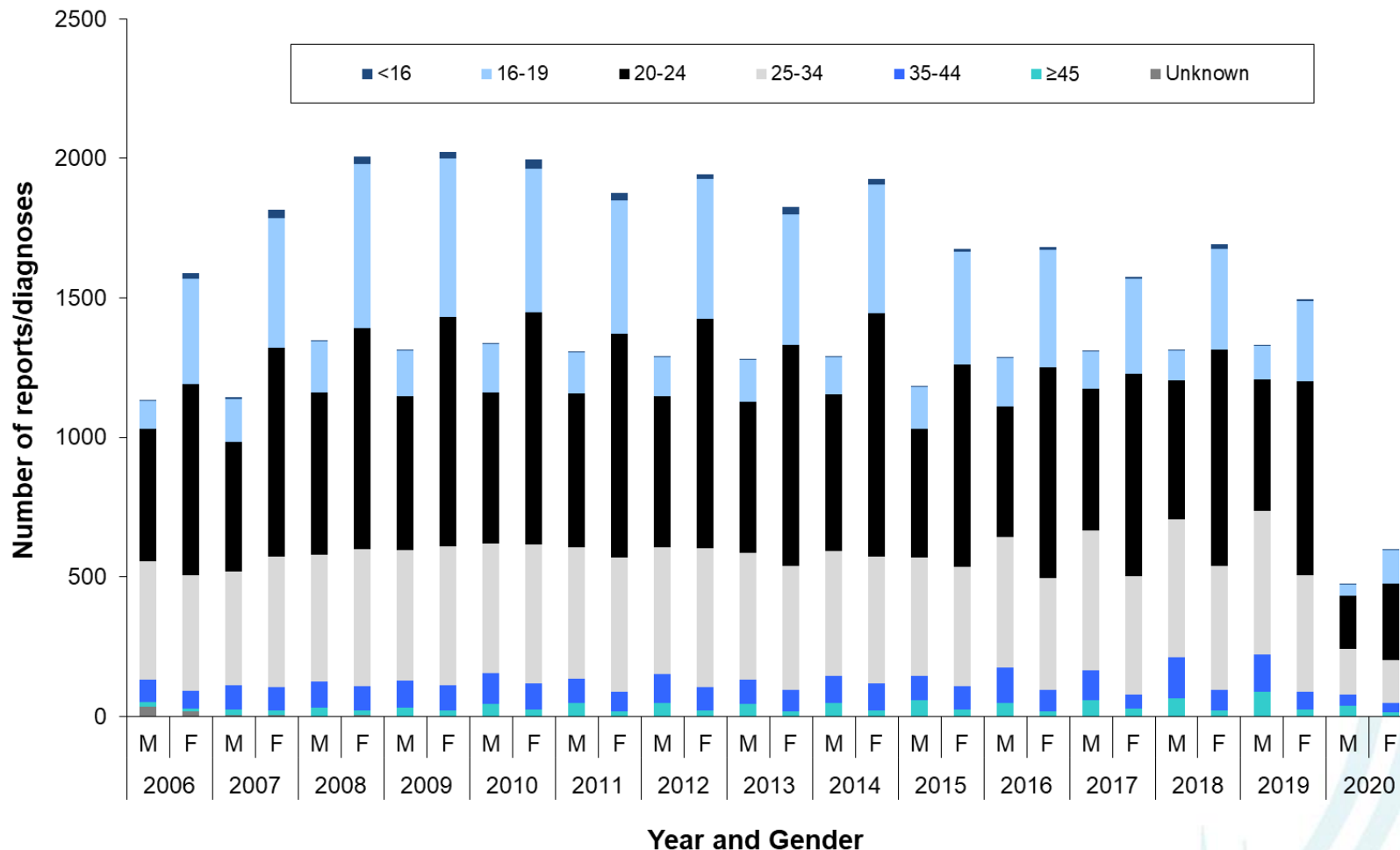


Table 2: Referral source of genital *Chlamydia trachomatis* specimens, 2010–2020

Referral Source	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	TOTAL
GP Number (%)	1124 (33.5)	1096 (34.3)	1207 (37.1)	1102 (35.2)	1093 (33.9)	1028 (35.8)	977 (32.8)	968 (33.5)	911 (29.7)	881 (28.8)	438 (39.1)	10,825
Other	2,231	2,104	2,044	2,023	2,130	1,836	1,998	1,921	2,152	2,173	682	21,294
Total	3,355	3,200	3,251	3,125	3,223	2,864	2,975	2,889	3,063	3,054	1,120	32,119

Source: Northern Ireland Laboratory Information System (NILIS)

Figure 8: Laboratory reports of genital *Chlamydia trachomatis*, by age and gender, 2006–2020



Source: Northern Ireland Laboratory Information System (NILIS)

Figure 9: Diagnoses of gonorrhoea in Northern Ireland GUM clinics, 2006–2020

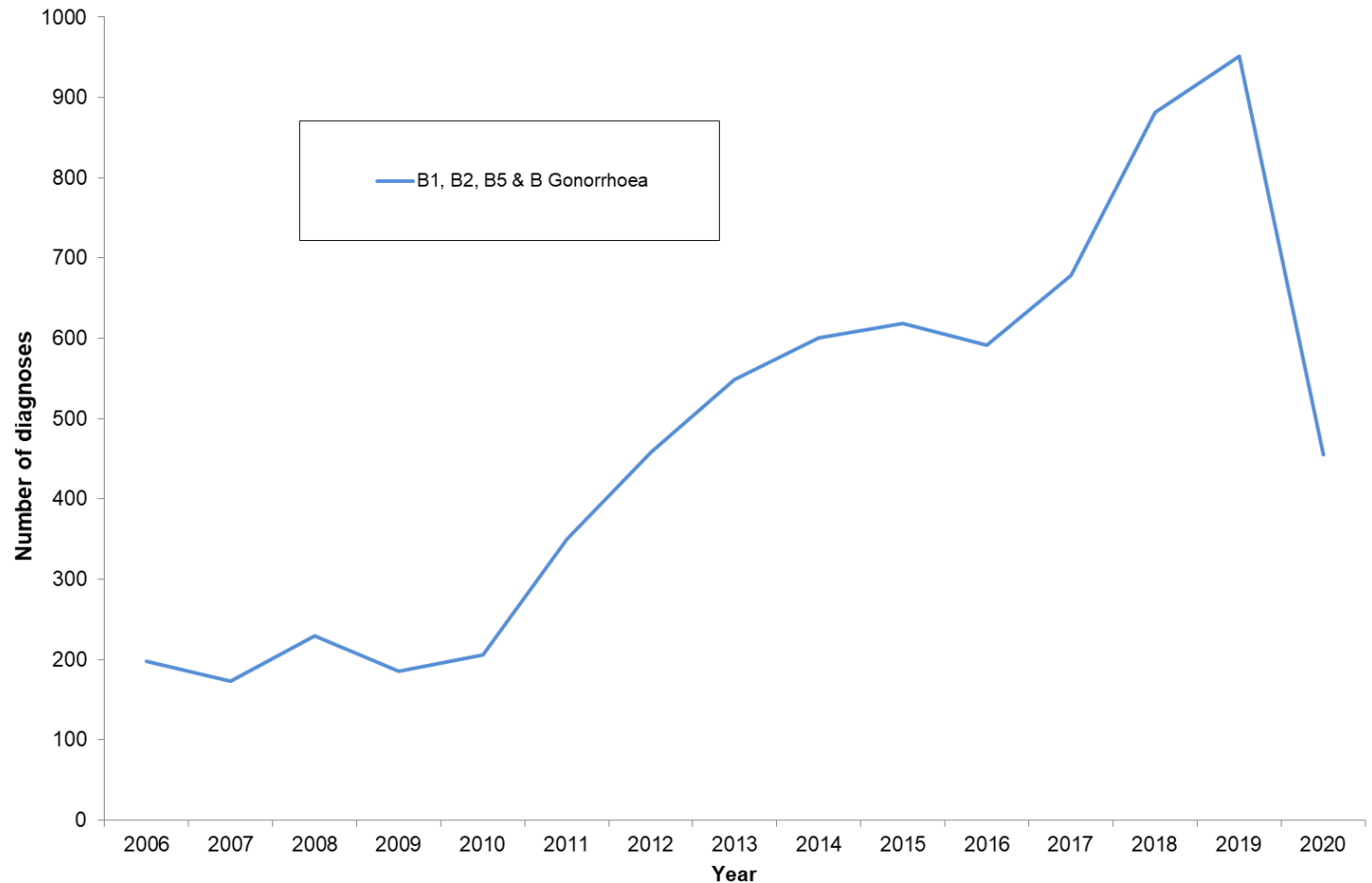
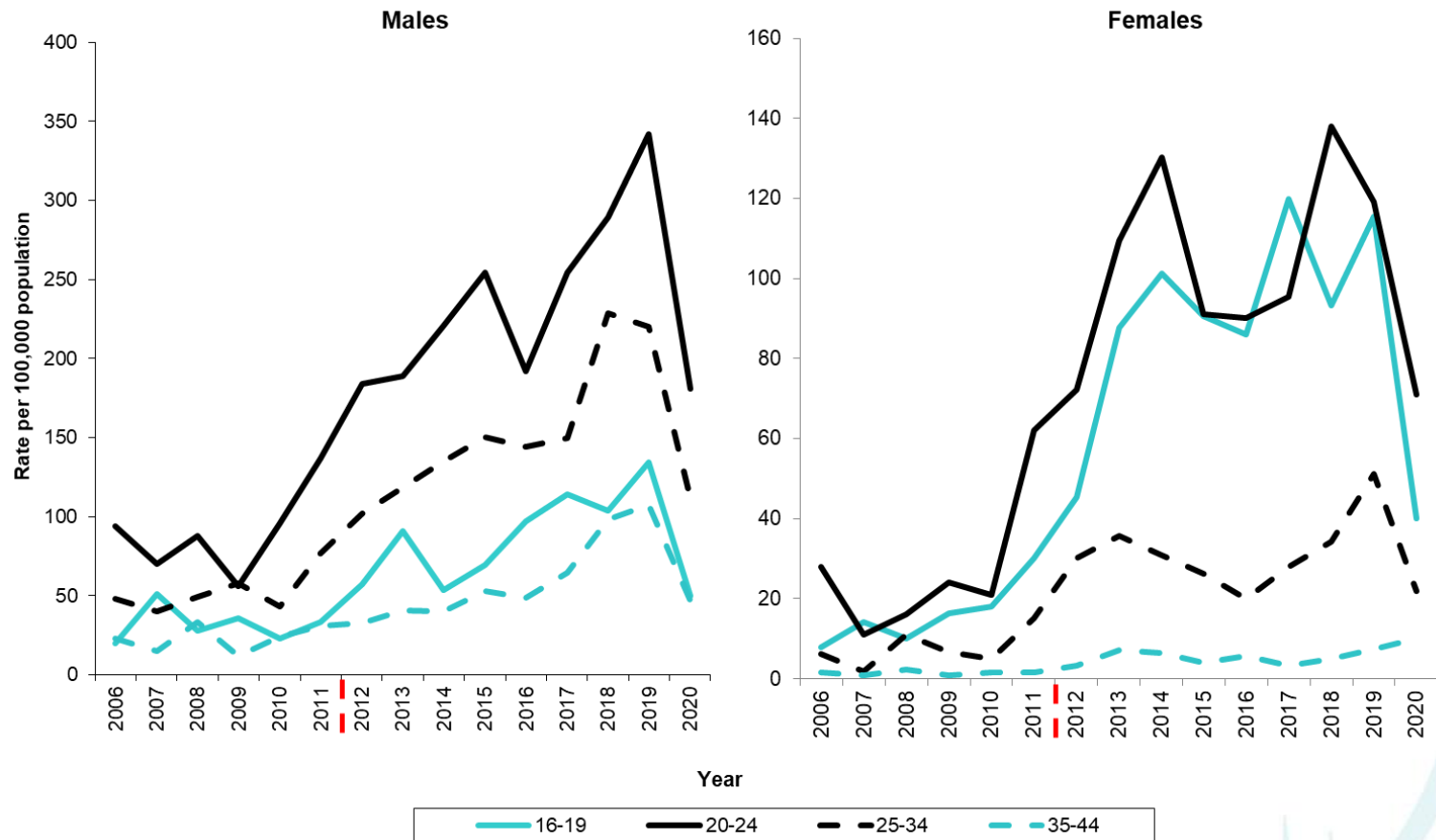


Figure 10: Rates of diagnosis of gonorrhoea in Northern Ireland, GUM clinics by gender and age group, 2006–2020



Rates have been recalculated from 2012 t as a result of new coding within GUM clinic

Figure 11: Number of diagnoses of gonorrhoea by sexual orientation in Northern Ireland GUM clinics, 2006-2020

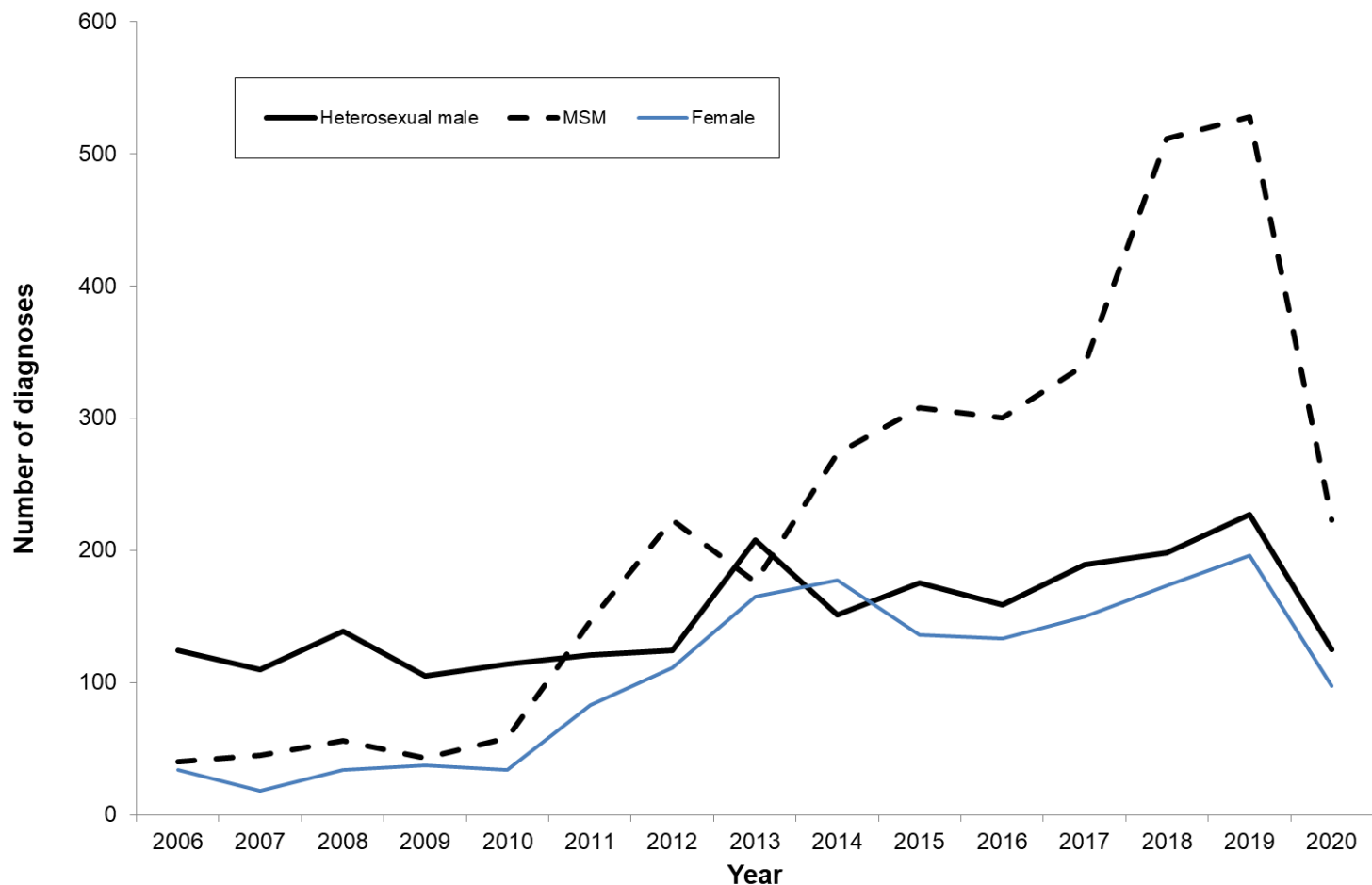


Table 3: *Neisseria gonorrhoeae* antibiotic susceptibility reported activity for antibiotics, 2020

Antibiotics	Susceptible		Resistant		Intermediate		Total specimens Reported	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Azithromycin	119	95.2	5	4.0	1	0.8	125	100
Cefixime	9	100	0	0	0	0	9	100
Ceftriaxone	143	100.0	0	0.0	0	0	143	100
Ciprofloxacin	97	71.3	38	27.9	1	0.7	136	100
Doxycycline	68	90.7	6	8.0	1	1.3	75	100
Penicillin	25	23.4	15	14.0	67	62.6	107	100

Source: Northern Ireland Laboratory Information System (NILIS)



Figure 12: Diagnoses of genital herpes in Northern Ireland GUM clinics, 2006–2020

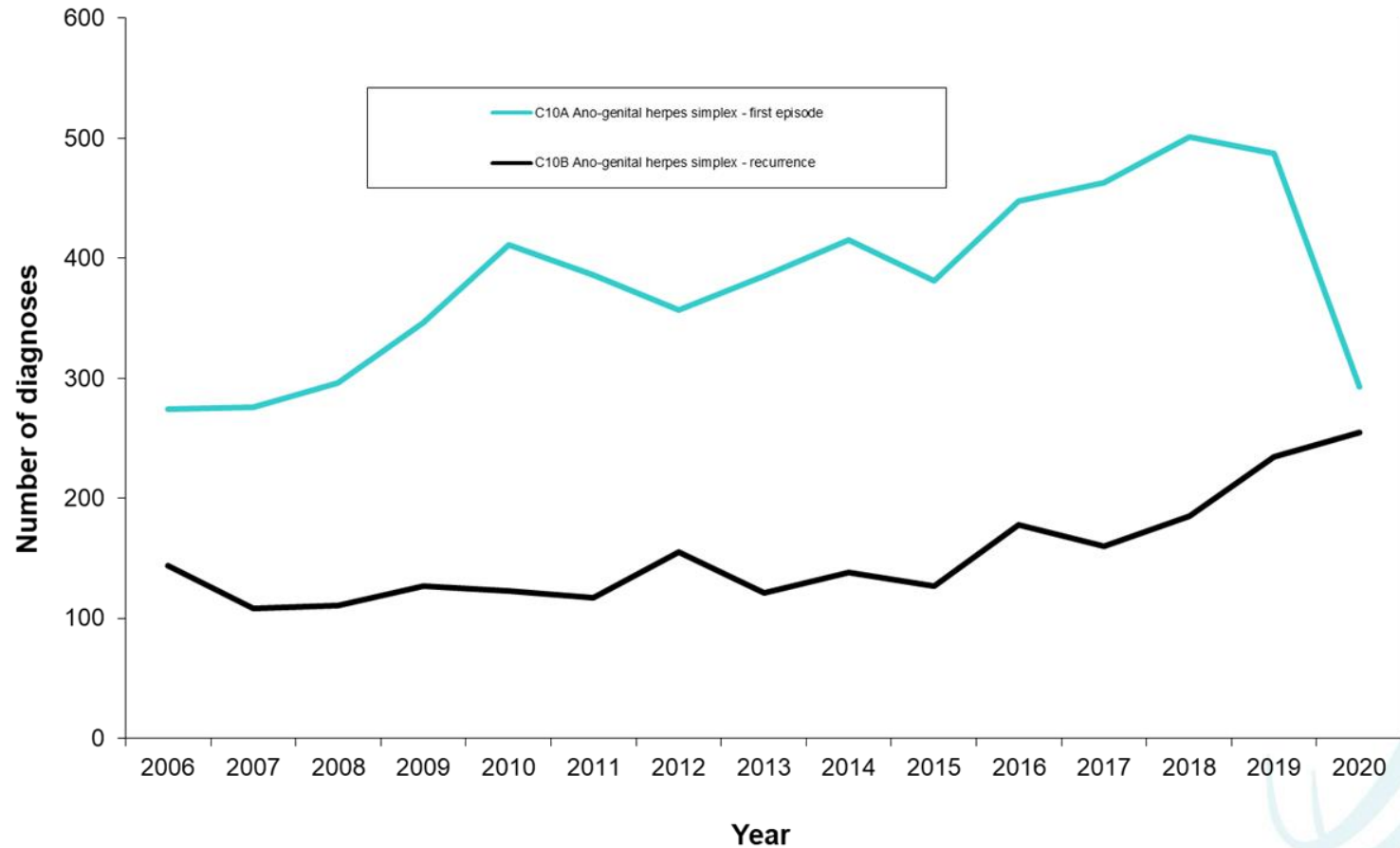


Figure 13: Rates of diagnosis of genital herpes (first episode) in Northern Ireland GUM clinics, by age and gender, 2006–2020

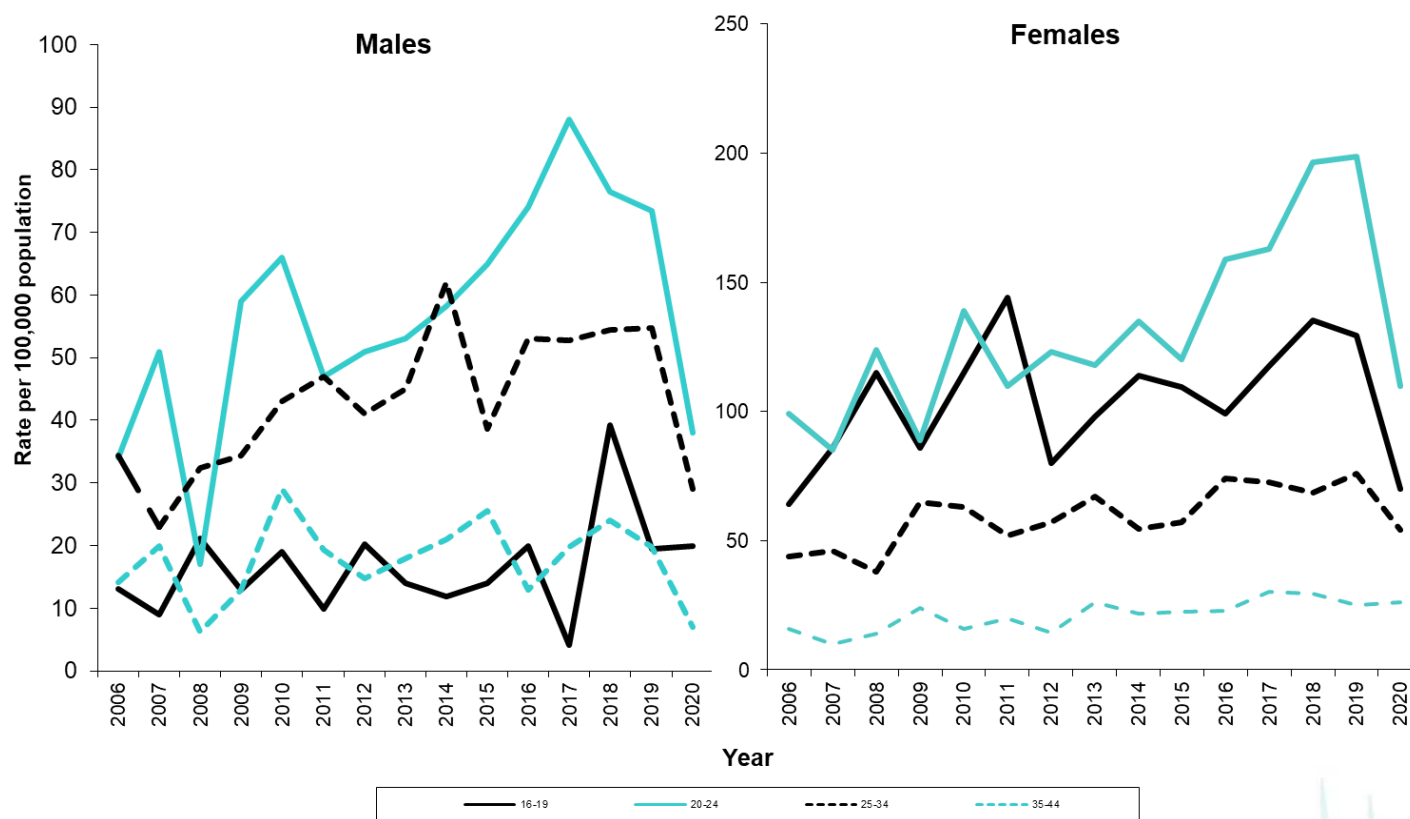


Figure 14: Diagnoses of genital warts in Northern Ireland GUM clinics, 2006–2020

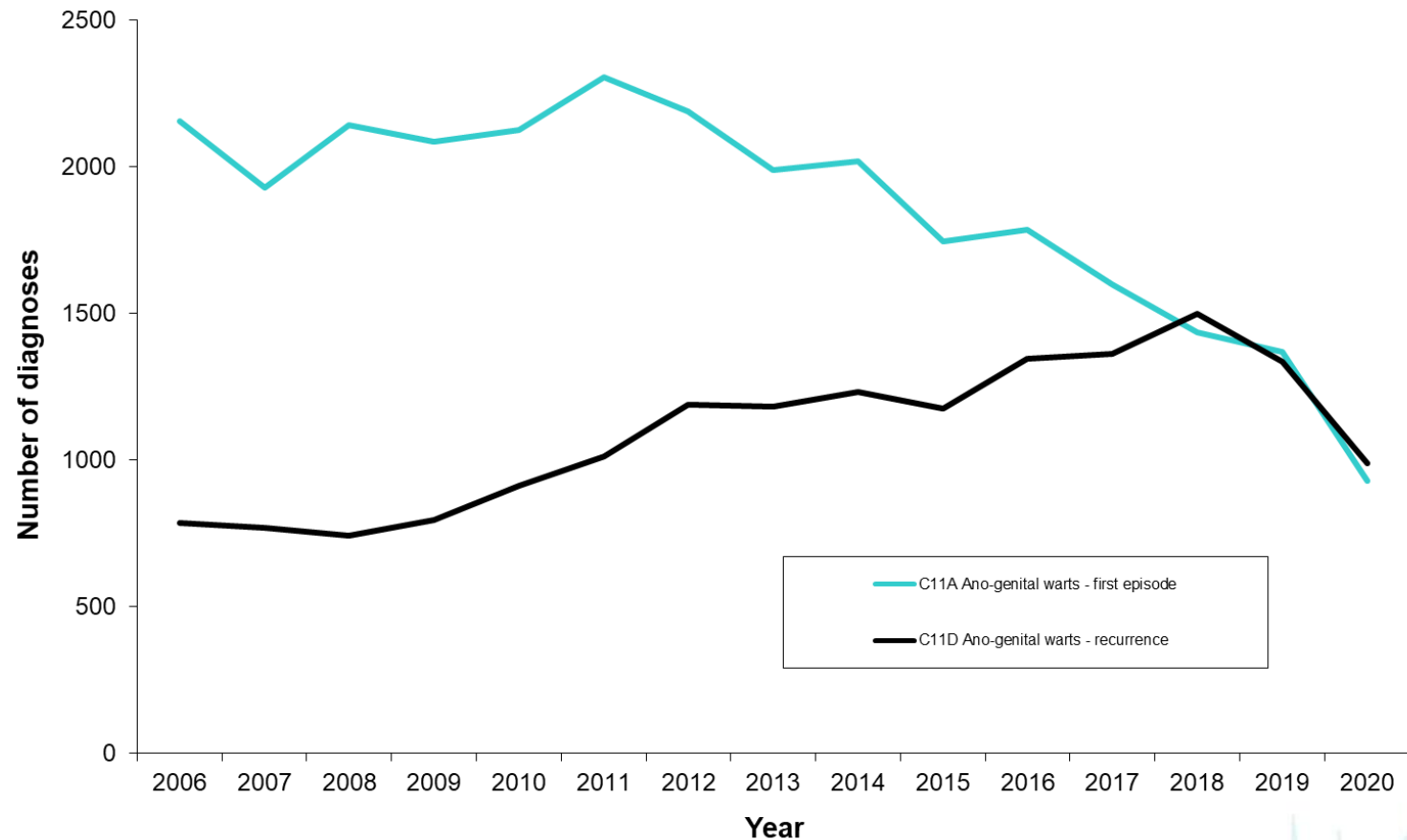


Figure 15: Rates of diagnosis of genital warts (first episode) in Northern Ireland GUM clinics, by age and gender, 2006–2020

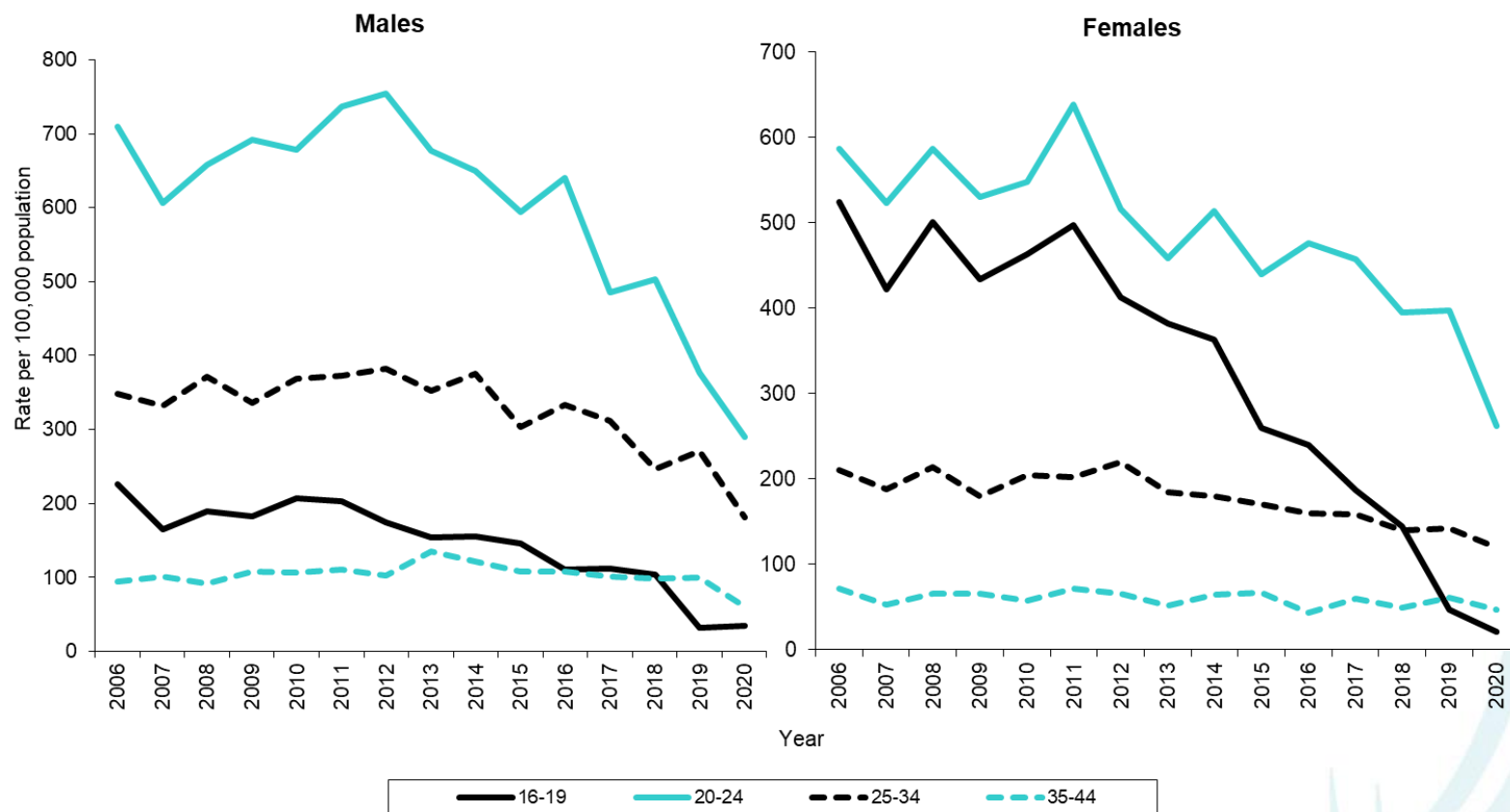
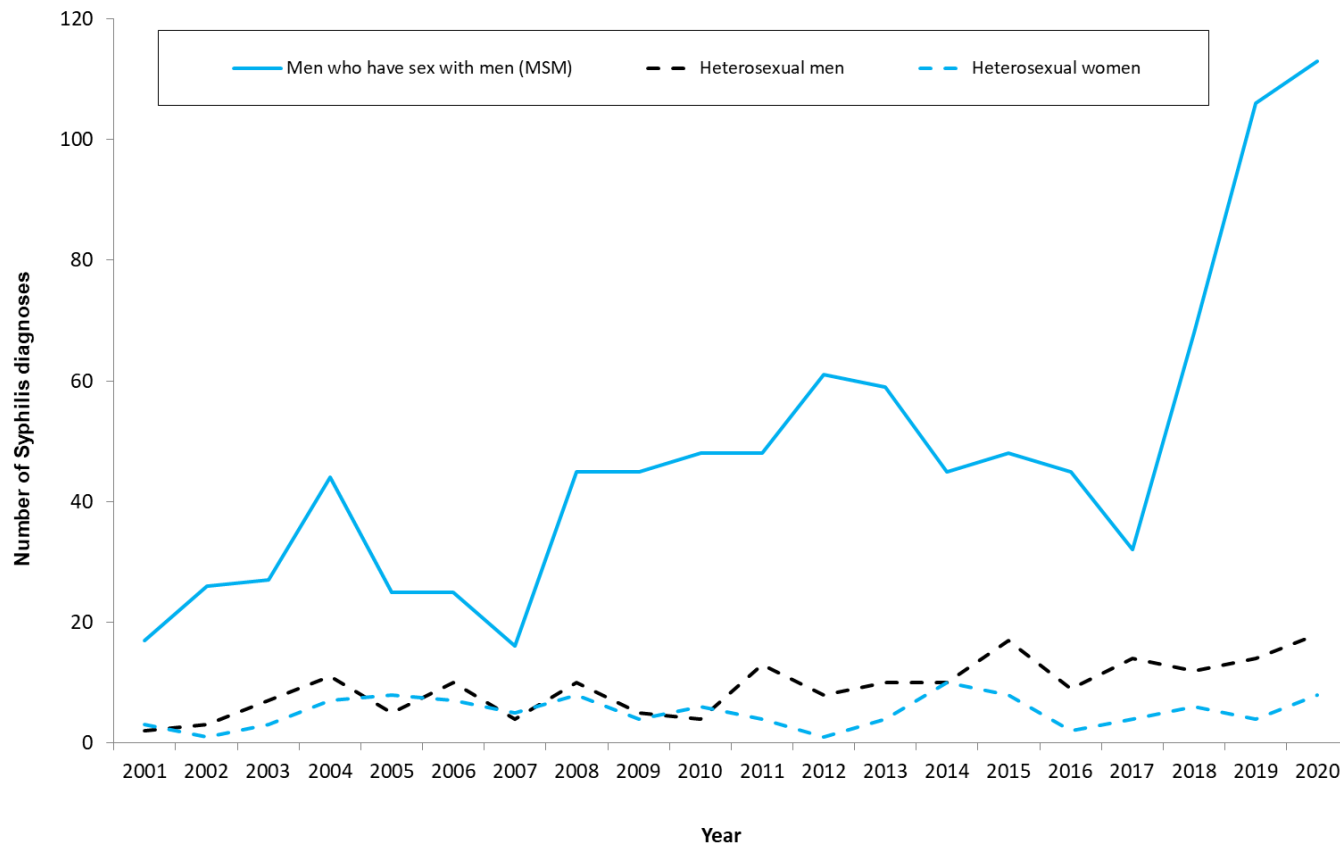


Figure 16: Number of syphilis* diagnoses in Northern Ireland GUM clinics, by gender and sexual orientation, 2001-2020



*Primary, secondary and early latent syphilis

Figure 17: Age distribution of syphilis* diagnoses in Northern Ireland GUM clinics, by gender and sexual orientation, 2001–2020

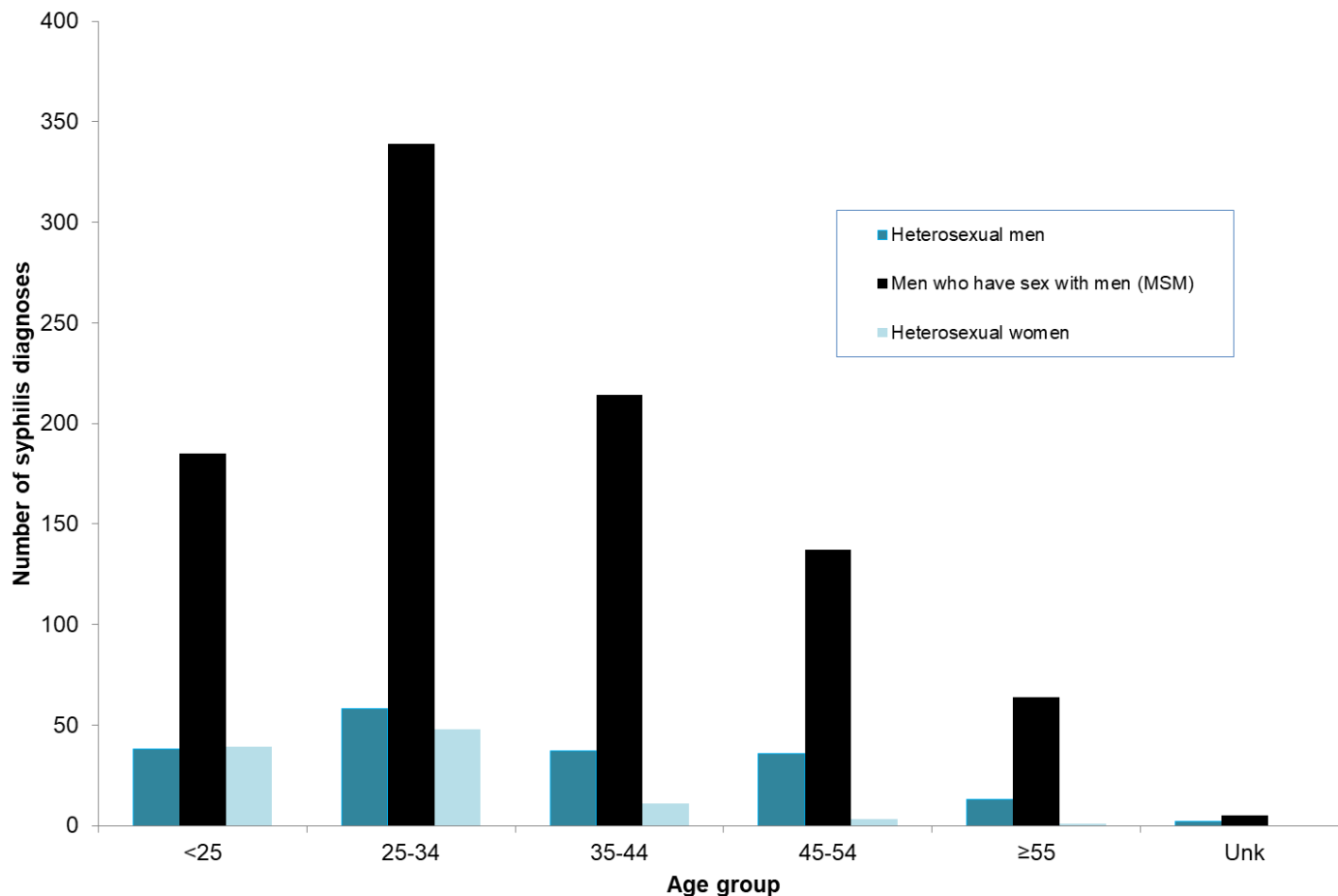
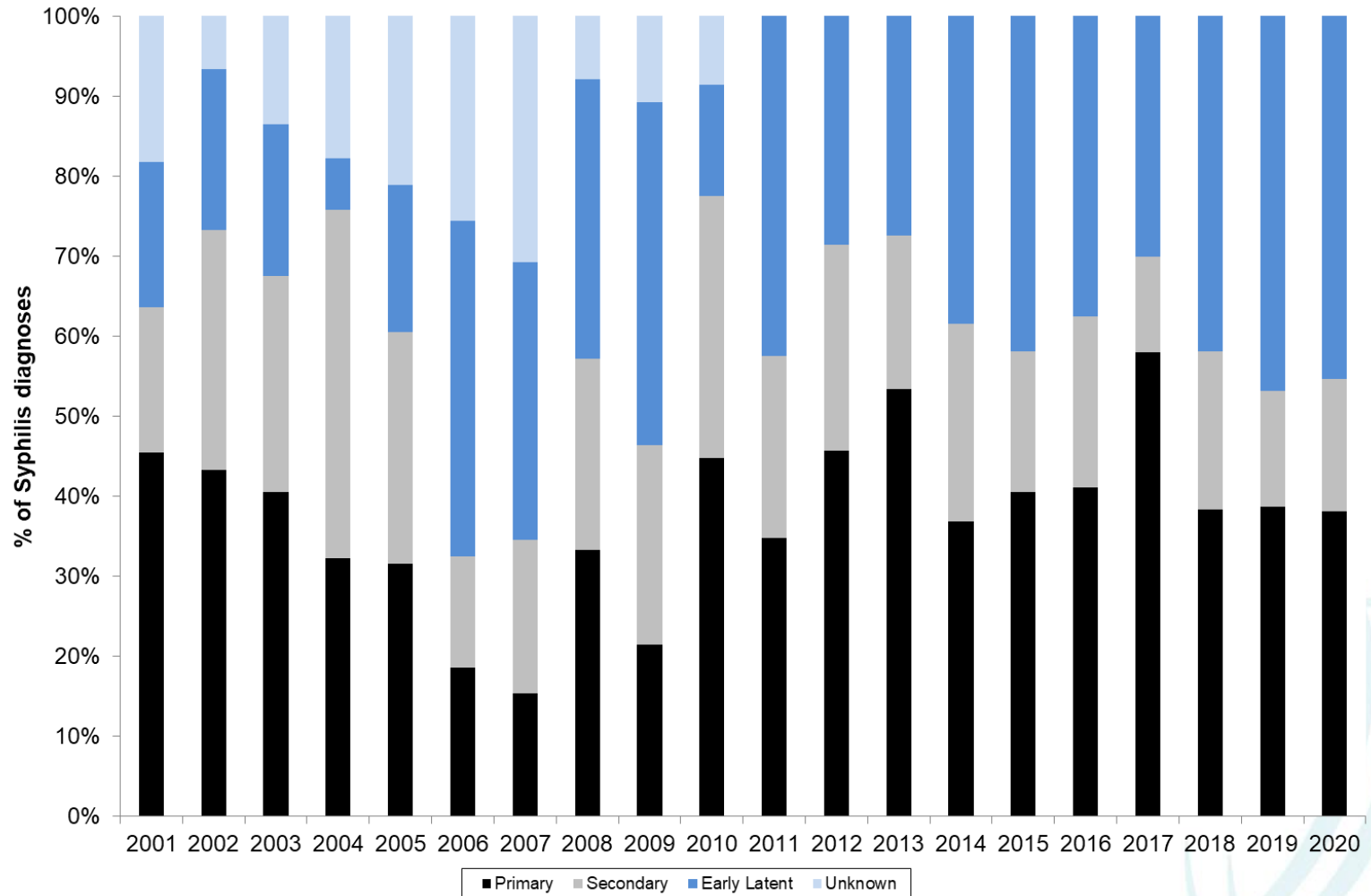


Figure 18: Stage of disease, by year of diagnosis, 2001-2020



Summary and conclusions

- The reduction in diagnoses of STIs in GUM clinics in 2020 is likely to reflect restricted access to services during the COVID-19 pandemic. The restrictions on social mixing put in place for COVID-19 may have also had some impact.
- The reduction in GUM clinic testing was proportionately greater than the reduction in diagnoses, suggesting that the capacity was appropriately targeted by the triage systems put in place.
- Home self-testing for STIs (SH24) was an important route for testing, with a large number of individuals using the service, and a 10% diagnostic rate.
- There were 1,391 diagnoses of chlamydia made by SH24, and 775 made via GUM clinics (not de-duplicated).

Summary and conclusions

- The highest diagnostic rates of the common STIs occur in 16-24 year old females and 20-34 year old males.
- People aged 16-34 year old account for approximately 80% of new STIs.
- MSM are at disproportionate risk of contracting some STIs accounting for 87% of male infectious syphilis, 65% of male gonorrhoea, 18% of male herpes and 32% of male chlamydia infections.
- MSM have accounted for the majority of the increase seen in syphilis diagnoses during 2020.

Summary and conclusions

- Despite the reduction in testing, and overall reduction in new diagnoses in GUM clinics, increases were seen in
 - Infectious syphilis (15%, increase of 10 diagnoses)
 - Genital herpes (recurrence) (9%, increase of 20 diagnoses)
- The increase in infectious syphilis is largely in MSM. A rise in syphilis has also been reported in England, and ROI declared a national outbreak in June 2021, suggesting this is likely to represent a true increase in syphilis incidence.
- Genital herpes is likely to be symptomatic, which may explain why a reduction was not observed.

Summary and conclusions

- There was a further 32% decline in first episodes of genital warts in 2020 when compared with 2019.
- This sustained decline is seen in young females, due to the human papilloma virus (HPV) vaccine, and a similar but smaller effect seen in similar aged males due to herd immunity.
- The decline in 2020 is greater than expected, and likely to represent under-reporting, similar to for some other STIs.

Recommendations

- Safer sex messages should continue to be promoted to the general population, young people and MSM.
- The risks to health of unprotected casual sex, both within and outside Northern Ireland, need to be reinforced.
- The reduction of STI testing and diagnosis in 2020 may mean an increase in people who are living in Northern Ireland with undiagnosed STIs and at risk of complications, and of onward transmission to others. There should be communications encouraging STI testing to the general population, young people and MSM.

Recommendations

Individuals can reduce their risk of acquiring or transmitting an STI by:

- Always using a condom when having sex with casual and new partners;
- Getting tested if at risk, as these infections are frequently asymptomatic;
- MSM having unprotected sex with casual or new partners should have an HIV/STI screen at least annually, and every three months if changing partners regularly;
- Reducing the number of sexual partners and avoiding overlapping sexual relationships.

Recommendations

- Commissioners should continue to seek to expand access to STI testing opportunities. Home self-testing offers an opportunity to expand access to testing to under-served areas, and higher risk populations.
- The increase in infectious syphilis during 2020 requires further investigation.



Appendix 1: STI groupings

New STI diagnoses
Chlamydial infection (uncomplicated and complicated)
Gonorrhoea (uncomplicated and complicated)
Infectious and early latent syphilis
Genital herpes simplex (first episode)
Genital warts (first episode)
New HIV diagnosis
Non-specific genital infection (uncomplicated and complicated)
Chancroid/lymphogranuloma venereum (LGV)/donovanosis
Molluscum contagiosum
Trichomoniasis
Scabies
Pediculus pubis
Other STI diagnoses
Congenital and other acquired syphilis
Recurrent genital herpes simplex
Recurrent and re-registered genital warts
Subsequent HIV presentations (including AIDS)
Ophthalmia neonatorum (chlamydial or gonococcal)
Epidemiological treatment of suspected STIs (syphilis, chlamydia, gonorrhoea, non-specific genital infection)
Other diagnoses made at GUM clinics
Viral hepatitis B and C
Vaginosis and balanitis (including epidemiological treatment)
Anogenital candidiasis (including epidemiological treatment)
Urinary tract infection
Cervical abnormalities
Other conditions requiring treatment at a GUM clinic



Appendix 2: References

- Increases in Early Infectious Syphilis in Ireland (newsweaver.ie)
- <https://www.gov.uk/government/publications/syphilis-public-health-england-action-plan>