

Lymphogranuloma venereum

Annual Epidemiological Report for 2022

Key facts

- Lymphogranuloma venereum (LGV) is a systemic sexually transmitted infection (STI) caused by *Chlamydia trachomatis* serovars L1, L2, or L3.
- In 2022, 2 059 cases of LGV were reported by 23 EU/EEA Member States, an increase by 58% in comparison with 2021 (when 1302 cases were reported in the 23 countries).
- Four countries (Spain, the Netherlands, France, and Belgium) accounted for 84% of all notified cases.
- Almost all the cases in 2022 were reported among men who have sex with men (MSM); among cases with known HIV status, 37% were HIV-positive.
- Between 2018 and 2022, the proportion of LGV cases with HIV-negative status increased, from 47% in 2018 to 69% in 2022. This is a likely indication of changes in clinical guidelines' recommendations and regular testing of MSM using pre-exposure prophylaxis for HIV.

Introduction

Lymphogranuloma venereum (LGV) is a systemic sexually transmitted infection (STI) caused by a specific type of *Chlamydia trachomatis* bacterium (serovars L1, L2, and L3). LGV is primarily seen among men who have sex with men (MSM) in the European Union/European Economic Area (EU/EEA) and is transmitted through anal sex and possibly through practices such as fisting and use of sex toys or enema use. LGV is more common among MSM living with HIV infection [1,2].

The primary clinical features among MSM include rectal ulcerations, bleeding, mucoid discharge, constipation, lower abdominal pain, and tenesmus. Complications or prolonged infection include perirectal abscesses and fissures. Systemic symptoms including fever, malaise, weight loss and fatigue can also be present. Reactive polyarthropathy with or without conjunctivitis can also occur [1,2].

Other manifestations of LGV can also occur, including a primary anogenital ulcer, inguinal adenitis, urethritis and bubo formation. These have traditionally been the classical manifestations of LGV seen among other populations, mainly outside Europe [1,2].

Methods

This report is based on data for 2022 retrieved from The European Surveillance System (TESSy) on 11 January 2024. TESSy is a system for the collection, analysis and dissemination of data on communicable diseases.

For a detailed description of methods used to produce this report, refer to the Methods of the 'ECDC Annual epidemiological report' [3].

An overview of the national surveillance systems is available online [4].

Suggested citation: European Centre for Disease Prevention and Control. Lymphogranuloma venereum. In: ECDC. Annual Epidemiological Report for 2022. Stockholm: ECDC; 2024.

Stockholm, March 2024

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A subset of the data used for this report is available through ECDC's online 'Surveillance atlas of infectious diseases' [5].

In 2022, the majority of reporting countries (17) used the standard EU case definitions [6]. Three countries reported using national case definitions, and three did not report which case definition was in use. Surveillance systems for lymphogranuloma venereum (LGV) in Europe vary: 16 countries reported having comprehensive surveillance systems. Four countries reported that they operate sentinel systems that only capture LGV diagnoses reported by a selection of healthcare providers, and three did not report the type of surveillance system. Reporting of LGV infections is compulsory in 17 countries, 16 of which have comprehensive surveillance systems; one country with compulsory reporting did not specify the coverage of the surveillance system.

In the four countries that have sentinel systems, reporting is voluntary. One country did not specify whether reporting of LGV is compulsory or not, nor the coverage of the surveillance system. In another country with voluntary LGV reporting, information was missing regarding the coverage of the surveillance system. Cases are analysed by date of diagnosis.

This report does not contain information on LGV infection rates because many LGV surveillance systems do not generate data that are considered representative of the national population. There are also significant differences in the availability of LGV diagnostics across Europe.

Epidemiology

In 2022, 23 countries provided LGV surveillance data. Fifteen countries reported a total of 2 059 cases, while the remaining eight countries reported no cases (Table 1). Four countries (Belgium, France, the Netherlands, and Spain) accounted for 84% of all notified cases (Table 1).

Table 1. Confirmed lymphogranuloma venereum cases by country and year, EU/EEA, 2018–2022

Country	2018	2019	2020	2021	2022
	Number	Number	Number	Number	Number
Austria	NDR	NDR	NDR	NDR	NDR
Belgium	87	145	88	91	143
Bulgaria	NDR	NDR	NDR	NDR	NDR
Croatia	0	0	0	0	0
Cyprus	0	0	0	0	0
Czechia	25	14	20	22	52
Denmark	63	70	24	16	79
Estonia	0	0	0	0	0
Finland	17	8	2	4	10
France	694	721	165	173	197
Germany	NDR	NDR	NDR	NDR	NDR
Greece	NDR	NDR	NDR	NDR	NDR
Hungary	41	49	23	31	33
Iceland	0	0	0	3	5
Ireland	29	38	13	14	27
Italy	21	8	4	13	26
Latvia	0	0	0	0	0
Liechtenstein	NDR	NDR	0	0	0
Lithuania	0	0	0	0	0
Luxembourg	0	0	0	0	0
Malta	0	6	0	2	1
Netherlands	235	353	267	213	470
Norway	44	27	14	10	36
Poland	0	2	0	0	0
Portugal	43	50	75	55	63
Romania	NDR	NDR	NDR	NDR	NDR
Slovakia	NDR	NDR	NDR	NDR	NDR
Slovenia	6	14	6	2	6
Spain	286	417	628	653	911
Sweden	NDR	NDR	NDR	NDR	NDR
EU/EEA (30 countries)	1 591	1 922	1 329	1 302	2 059
United Kingdom	805	1 202	NDR	NA	NA
EU/EEA (31 countries)	2 396	3 124	1 329	NA	NA

Source: Country reports. NDR: No data reported. NA: Not applicable.

No data for 2020 to 2022 were reported by the United Kingdom, due to its withdrawal from the EU on 31 January 2020.

Between 2013 and 2022, 18 294 cases of LGV were reported in 15 countries. An additional seven countries submitted reports for at least seven of the last 10 years but reported no cases.

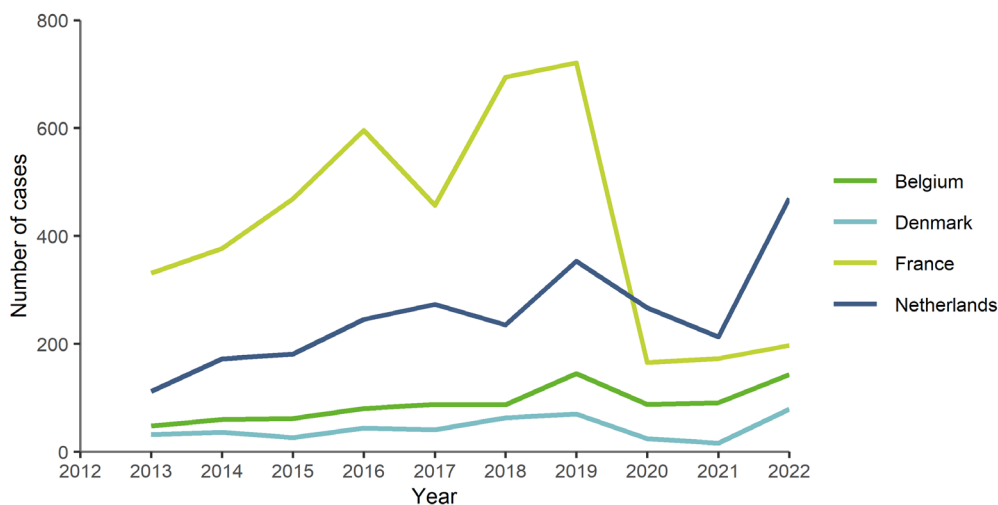
Excluding the UK, 13 101 cases were reported between 2013 and 2022, with the majority of cases reported in France (32%), the Netherlands (19%), and Spain (26%). The number of cases reported increased year on year from 567 in 2013 to 1 922 in 2019 (with the exception of 2017, when case numbers were similar to 2016). This overall increasing trend is partly due to an increase in the number of reporting countries, but mostly driven by an increase in case numbers in most of the reporting countries.

The overall number of cases reported decreased in 2020 (1 329) and 2021 (1 302). This decline was observed in the majority of countries.

In the four countries reporting a high number of cases consistently between 2013 and 2022, LGV cases reported reached a peak in 2019, followed by a decline between 2020 and 2021 (Figure 1). The substantial reduction in the

number of cases reported by France is attributed to a change in the reporting system implemented in 2020¹. A rebound in the number of reported LGV cases was observed in all four countries in 2022.

Figure 1. Number of confirmed lymphogranuloma venereum cases in the four EU/EEA Member States with the highest number of cases in 2022, 2013–2022



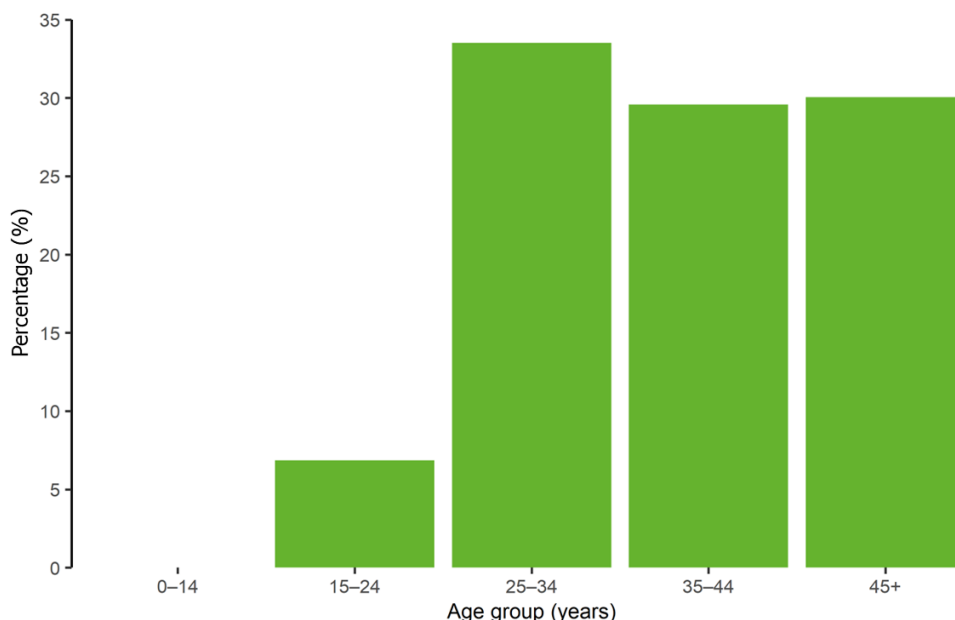
The substantial reduction in the number of cases reported by France is due to a change in the reporting system in 2020.

Age and gender

Gender was reported for 2 053 cases (99%). Most LGV cases reported in 2022 were among men, with only 32 cases reported among women.

Age was reported for >99% of cases, with 63% of cases reported among 25- to 44-year-olds (Figure 2).

Figure 2. Lymphogranuloma venereum cases by age group, EU/EEA, 2022



Source: Country reports from Belgium, Czechia, Denmark, Finland, France, Hungary, Iceland, Ireland, Italy, Malta, Netherlands, Norway, Portugal, Slovenia, and Spain

¹ Since 2020, LGV data in France have been collected from voluntarily contributing laboratories for a three-month period annually (ANACHLA survey) compared to a full-year collection prior to this. There was also a transition from selectively testing anorectal samples positive for *C. trachomatis* in patients with HIV-positive status or those presenting with symptoms before 2020 to universally testing *C. trachomatis* positive anorectal samples, regardless of the patient’s HIV status or the presence of symptoms.

Transmission category and HIV status

The transmission category was reported for 872 cases in 2022 (42%). All but 32 cases were reported among MSM.

In 2022, information on HIV status was available for 47% of all reported LGV cases (971 cases). Of these cases, 37% were HIV positive. Between 2013 and 2022, HIV status was reported and known for 7432 cases (57% of all reported cases). Of these cases, 4 243 (57%) were HIV positive. In the three countries (Czechia, Hungary, The Netherlands) reporting HIV status consistently between 2018 and 2022, the proportion of LGV cases with HIV-negative status has increased from 48% in 2018 to 73% in 2022.

Discussion

After experiencing an overall decline in the number of reported cases in 2020 and 2021, likely due to the impact of the COVID-19 pandemic on availability and/or access to STI care services, changes in sexual behaviour, reduced testing opportunities, and a decrease in STI surveillance capacity [7], a noticeable increase in LGV cases was seen in the majority of reporting countries in 2022. The surge in reported LGV cases in 2022 can be primarily attributed to an increased number of reported cases in Spain and in the Netherlands. France and Belgium also contributed significantly to the number of reported cases in 2022. In France, the abrupt decrease in number of reported cases in 2020 compared to 2019 primarily reflects a change in the surveillance system, which since 2020 is based on a three-month period of data collection ([ANACHLA survey](#)). A slight increase in the number of reported cases by the new system in France can be noted for 2022.

Across the EU/EEA, there has been a notable inversion of LGV trends. Before 2019, the majority of cases were reported among HIV-positive MSM, whereas since 2020 there has been a shift, with most cases now reported in HIV-negative MSM. This change in the epidemiological distribution of LGV cases can be attributed to changes in testing recommendations and public health response measures, moving from a testing approach more focused on HIV-positive MSM or individuals with symptoms towards more comprehensive testing strategies, such as universal testing for LGV among all MSM regardless of HIV status, resulting in a higher proportion of cases identified in this group [8].

Increasing trends of LGV among HIV-negative and asymptomatic MSM in the Netherlands is related to changes in testing recommendations in 2015, from selective to universal rectal chlamydia testing for all MSM and universal LGV testing in all rectal *C. trachomatis* positive MSM [9]. A similar rise in LGV diagnoses among HIV-negative and/or asymptomatic MSM was reported from Belgium, where testing for LGV on all chlamydia-positive samples from MSM, irrespective of their HIV status, was indicated as a public health response measure to control an LGV outbreak [10].

In line with changes in testing practices in European countries, in 2019 the updated European guidelines on the management of LGV recommended that all MSM with anorectal samples positive for *C. trachomatis* should be tested for LGV irrespective of symptoms, and HIV-positive MSM and those who are eligible for HIV pre-exposure prophylaxis (PrEP) should be considered a priority for testing [8].

The number of cases described in this report is likely to be an underestimation, as many countries do not have a national surveillance system for LGV and, in certain countries, confirmation of LGV infection through molecular diagnostics is not widely available. Substantial underdiagnosis of LGV was identified by an ECDC-funded pilot study in the following participating countries: Austria, Croatia, and Slovenia [11]. The updated European guidelines on the management of LGV published in 2019 highlighted the need for appropriate LGV molecular diagnostics in all European countries [8]. The lack of appropriate diagnostics means that it is impossible to conduct effective surveillance, provide effective treatment, and implement adequate prevention activities.

Public health implications

Increasing proportions of LGV cases among HIV-negative MSM can indicate an increased vulnerability to transmission within this population group. This trend also illustrates the impact of changes in clinical guidelines and more frequent testing of MSM using PrEP for HIV. The shift in epidemiological trends highlights the importance of adapting strategies to effectively control and monitor LGV outbreaks. Effective interventions need to be identified and targeted at groups of MSM with high levels of condomless sex. In addition, clinical suspicion and early diagnosis is essential to prevent severe complications. In many parts of Europe, there continues to be limited diagnostic capacity for LGV infection, which makes control of the infection difficult and limits the availability of surveillance data.

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