

Clinical manifestation of EHEC cases in Japan, according to bacterial serotype, 2021	105	Large-scale food poisoning due to <i>Escherichia coli</i> with enteroaggregative <i>E. coli</i> heat-stable enterotoxin gene (<i>astA</i>), Saitama Prefecture.....	117
Outbreaks of food poisoning caused by EHEC under the Food Sanitation Law in Japan, 2021.....	106	Characteristics of leptospirosis cases that occurred in Okinawa Prefecture, 2021.....	118
An outbreak of EHEC O172 in a child care facility, Maebashi City.....	107	Maternal antibody testing for infectious diseases and occurrence of infectious diseases during pregnancy, Osaka Prefecture	119
MLVA analysis of EHEC isolated in Japan, 2021.....	108	Determination of the influenza HA vaccine strains for the 2022/23 season	120
Geographically dispersed widespread occurrence of EHEC O156:H-/Hg25 in Japan.....	109	Association between a campaign that promoted dining out and COVID-19 case occurrence in restaurants, Asahikawa City.....	121
Hemolytic uremic syndrome among EHEC infection cases notified through NESID in Japan, 2021.....	110	Outbreaks of COVID-19 (Delta variant) at daycare facilities in multiple areas where transmission was primarily suspected to be from parents/guardians, Japan, October to November 2021.....	122
A widespread outbreak of EHEC attributed to a training facility in Shizuoka Prefecture.....	111	Pathogens detected in confirmed and suspected COVID-19 cases reported in the NESID Infectious Agents Surveillance System (January 2020 to May 2022)	124
EHEC food poisoning linked to facilities from the same restaurant chain, Tokyo Prefecture.....	112		
EHEC O157 food poisoning at a yakiniku restaurant in Kawasaki City.....	114		
Reports of EHEC outbreak investigations in 2021, United States.....	115		

<THE TOPIC OF THIS MONTH>

Enterohemorrhagic *Escherichia coli* (EHEC) infection in Japan, as at March 2022

Table 1. Number of notified cases of EHEC infection

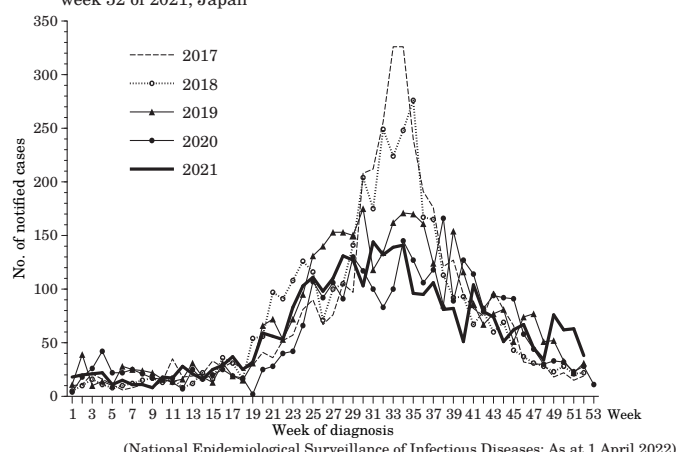
Year of diagnosis [Jan. 1- Dec. 31]	No. of notified cases*	(No. of symptomatic cases)	(%)
2011	3,939	(2,659)	(68)
2012	3,770	(2,363)	(63)
2013	4,045	(2,624)	(65)
2014	4,156	(2,839)	(68)
2015	3,568	(2,338)	(66)
2016	3,648	(2,247)	(62)
2017	3,904	(2,606)	(67)
2018	3,855	(2,584)	(67)
2019	3,745	(2,513)	(67)
2020	3,090	(1,985)	(64)
2021	3,236	(2,022)	(62)
2022**	177	(82)	(46)

*Including asymptomatic cases

**For 2022, data are from January 1 to April 1

(National Epidemiological Surveillance of Infectious Diseases:
As at 1 April 2022)

Figure 1. Weekly number of notified EHEC infection cases, week 1 of 2017 to week 52 of 2021, Japan



(National Epidemiological Surveillance of Infectious Diseases: As at 1 April 2022)

Enterohemorrhagic *Escherichia coli* (EHEC) infection is caused by *E. coli* that produces Verotoxin/Shiga toxin (VT/Stx) and/or possesses VT-encoding genes. The main signs and symptoms of EHEC infection include abdominal pain, watery diarrhea, and bloody stools. Vomiting and/or fever ($\geq 38^{\circ}\text{C}$) are occasionally observed. VT-producing EHEC can cause hemolytic uremic syndrome (HUS), which involves thrombocytopenia, hemolytic anemia, and acute kidney injury. Complications, such as encephalopathy, may also occur, with potentially fatal outcomes.

In Japan, EHEC infections are classified as a Category III notifiable infectious disease under the Infectious Diseases Control Law. Physicians who diagnose an EHEC infection must immediately notify the local public health center (PHC) (<https://www.mhlw.go.jp/bunya/kenkou/kekkaku-kansenshou11/01-03-03.html>). The information collected by the PHC is then reported to the National Epidemiological Surveillance of Infectious Diseases (NESID) system. When an EHEC infection is classified as food poisoning by a physician or the director of the PHC, the local government investigates the incident and submits a report to the Ministry of Health, Labour and Welfare (MHLW) in compliance with the Food Sanitation Law. Prefectural and municipal public health institutes (PHIs) perform isolation/identification of EHEC, serotyping of the isolate, and typing of the VT (VT or VT gene), and report the laboratory results to the Infectious Agents Surveillance System under the NESID (Table on p.105). The Department of Bacteriology I of the National Institute of Infectious Diseases (NIID) conducts confirmatory tests upon request and conducts molecular epidemiologic analysis of EHEC using multiple-locus variable-number tandem-repeat analysis (MLVA), pulsed-field gel electrophoresis (PFGE), and whole genome sequencing analysis [molecular epidemiological assessment based on single nucleotide polymorphism (SNP) analysis] (see pp.107, 108, and 109 of this issue). The results of the analyses are returned to the PHI and, when necessary, to local governments through the National Epidemiological Surveillance of Foodborne Disease (NESFD) system.

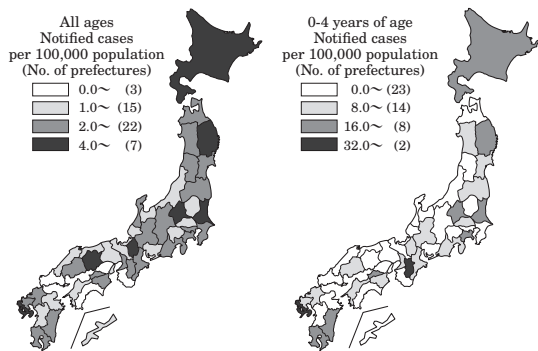
Cases notified under the NESID system: Based on NESID, in 2021, a total of 3,236 cases of EHEC infection were reported, including 2,022 symptomatic cases and 1,214 asymptomatic cases (asymptomatic cases are detected during active epidemiologic investigations or routine stool specimen screening of food handlers) (Table 1). The total number of cases reported in 2021 was 84.1% (80.3% in 2020) of the average number of cases reported between 2011 and 2019. Consistent with previous years, the number of cases peaked in summer (Fig. 1), but there were more reported cases in 2021 than in 2017-2020 during weeks 49-52. Reports from the 10 prefectures with the most notifications, Tokyo, Kanagawa, Hokkaido, Osaka, Fukuoka, Aichi, Saitama, Chiba, Ibaraki, and Hiroshima, accounted for 56% of all notified cases (including asymptomatic cases). The annual number of notified cases per 100,000 population was highest in Iwate Prefecture (6.4), followed by Nagasaki (6.3) and Shiga (5.4) prefectures (Fig. 2 on p.104). The notification rate per 100,000 population among 0-4-year-olds was highest in Nara (43.2), Nagasaki (40.8), and Kagoshima (30.6) Prefectures (Fig. 2 on p.104). The proportion of symptomatic cases among notified cases was high among the <20-year-old and ≥ 70 -year-old age groups in both males and females (Fig. 3 on p.104).

Fifty-nine cases had HUS complication (2.9% of symptomatic cases), and EHEC was isolated from 38. The O-serogroup was O157

(Continued on page 104')

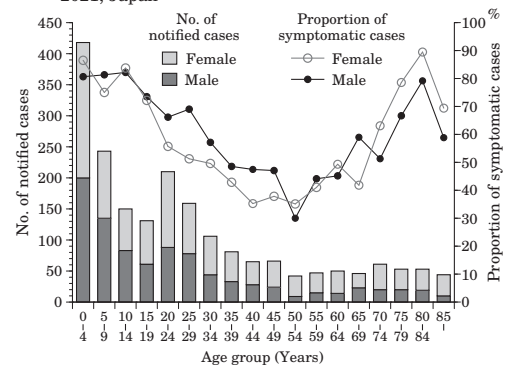
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Figure 2. Notification rate of EHEC infection by prefecture, 2021, Japan



(National Epidemiological Surveillance of Infectious Diseases: As at 1 April 2022)

Figure 3. Age distribution of notified EHEC infection cases, 2021, Japan



(National Epidemiological Surveillance of Infectious Diseases: As at 1 April 2022)

Table 2. Outbreaks of EHEC infection in 2021

No.	Prefecture or City	Period	Suspected route of infection	Setting of outbreak	Serotype	VT type	No. of symptomatic cases	No. of consumers	No. of positives/ examined	Familial infection*	Reference
1	Maebashi C.	Jun. 4 - Jun. 25	Person-to-person or foodborne	Nursery school	O172:H25	VT2 VT NT	48	208	12 / 215	N.D.	p.107 of this issue
2	Yokohama C.	May 22 - Jun. 18	Person-to-person	Nursery school	O111:H-	VT1	49	...	63 / 271	Yes (18)	
3	Nara P.	Jun. 29 - Aug. 25	Person-to-person	Nursery school	O157:H7	VT1&VT2	20	...	20 / 230	Yes (7)	
4	Iwate P.	Aug. 28 - Sep. 10	Person-to-person	Nursery school	O157:H-	VT2	4	...	10 / 68	Yes (5)	
5	Fukushima P.	Dec. 13 - Jan. 1, 2022	Person-to-person	Nursery school	O26:H11	VT1	15	...	13 / 68	Yes (6)	
6	Sakai C.	Aug. 2 - Aug. 15	Person-to-person	Nursery school	O157:HNT	VT1&VT2	25	...	26 / 201	Yes (8)	
7	Siga P.	Jun. 26 - Jul. 4	Foodborne	Restaurant	O157:H7	VT1&VT2	2	5	2 / 2	N.D.	
8	Siga P.	Jul. 1 - Jul. 2	Foodborne	Restaurant	O157:H7	VT1&VT2	2	6	4 / 4	N.D.	
9	Siga P.	Jun. 28 - Jul. 8	Foodborne	Restaurant	O157:H7	VT1&VT2	6	10	7 / 10	N.D.	
10	Nagasaki P.	Dec. 8 - Dec. 20	Person-to-person	Nursery school	O157:H-	VT1&VT2	12	...	12 / 178	Yes (5)	

Outbreaks with 10 or more EHEC-positive cases, P.: Prefecture, C.: City, N.D.: No data, ...: Not applicable because person to person infection was suspected

*Secondary transmission within a family. The numbers in parentheses refer to infections from secondary transmission

(Infectious Agents Surveillance System: As at 21 February 2022 from prefectural and municipal public health institutes)

in 29 cases, and the toxin type was VT2 (VT2 alone or VT1 & VT2) in 23 cases, with six isolates of unknown VT type (see p.111 of this issue). Among the symptomatic cases, the proportion of cases with HUS was highest in 5-9-year-olds (5.8%), followed by 0-4-year-olds (4.5%) (see p.111 of this issue). In 30-40% of HUS cases, EHEC was not isolated; detection of toxins in the stool or detection of agglutinating antibodies against the major O serogroup of EHEC in the blood by serodiagnosis confirms the diagnosis of HUS due to EHEC infection (see p.111 of this issue).

EHEC detection reported by PHIs: In 2021, PHIs detected 1,430 isolates of EHEC (Table on p.105). This figure is lower than the number of notified cases of EHEC infection (Table 1 on p.103) because this number represents the number of detected strains submitted by medical facilities and commercial laboratories upon request by the PHCs. The most frequently detected O-serogroup was O157 (47.1%), followed by O26 (18.2%) and O111 (9.3%) (Table on p.105). In terms of toxin types, in 2021, VT1 & VT2-positive was the most common for O157 as in previous years, accounting for 60.4% of O157, and VT2-positive accounted for 38.1%. For O26 and O103, VT1-positive was the most common as in previous years, accounting for 96.9% and 93.7%, respectively; for O111 VT1-positive accounted for 70.7%. The main clinical signs/symptoms among the 674 cases in which O157 was isolated were diarrhea (63.8%), abdominal pain (58.8%), bloody stool (43.6%), and fever (21.2%).

Outbreaks: As in previous years, EHEC outbreaks in nursery schools and other locations occurred in 2021 and were presumed to be due to person-to-person transmission (Table 2). In June 2021, an outbreak of O172 VT2 infection was reported (see p.107 of this issue). Additionally, nine outbreaks of food poisoning events due to EHEC, with a total of 42 patients (including EHEC isolation-negative cases), were reported under the Food Sanitation Law (32 outbreaks involving 456 cases in 2018; 20 outbreaks involving 165 cases in 2019; five outbreaks involving 30 cases in 2020) (Table on p.106, see pp.112 and 114 of this issue). Analysis by the Department of Bacteriology I of the NIID revealed that strains exhibiting the same MLVA type or SNP among sporadic cases of unknown epidemiologic association were isolated from a wide geographic area (see pp.108 and 109 of this issue).

Prevention and measures to be implemented: In response to food poisoning events caused by raw beef, the MHLW revised the standards for beef sold for raw consumption (MHLW notice No. 321, October 2011). Furthermore, upon the detection of EHEC O157 from the inner section of cattle liver, the MHLW banned the sale of beef liver for raw consumption (notice No. 404 in July 2012). In 2012, in response to O157-based food poisoning outbreaks attributed to contaminated pickles, the MHLW revised the hygiene code for processing pickles (food safety inspection notice 1012, No. 1, October 2012).

As EHEC can cause infections at bacterial counts as low as ~100, it can easily spread via person-to-person transmission or person-to-food ingredients/products. EHEC-associated food poisoning events attributed to restaurants occurred in 2021 as in previous years (Table on p.106). To prevent EHEC infections, it is essential to observe the basic principles of proper food hygiene (prevention of bacterial contamination, growth, and survival) and continue to remind people not to eat raw or undercooked meat (<https://www.gov-online.go.jp/useful/article/201005/4.html>, https://www.mhlw.go.jp/stf/seisakunitsuite/bunya/kenkou_iryuu/shokuhin/syokuchu/index.html).

Furthermore, EHEC outbreaks continue to occur in large numbers in nursery schools. To prevent such outbreaks, appropriate hygienic practices, such as routine hand washing and hygiene management when using portable swimming pools, should be implemented ("Infection Control Guidelines for Nurseries" revised in 2018) (<https://www.mhlw.go.jp/file/06-Seisakujouhou-11900000-Koyoukintoujidokateikyoku/0000201596.pdf>). When a case of EHEC infection is detected within a household or care facility, the PHC should ensure that appropriate measures are strictly implemented to prevent further transmission.

The statistics in this report are based on 1) the data concerning patients and laboratory findings obtained by the National Epidemiological Surveillance of Infectious Diseases undertaken in compliance with the Act on the Prevention of Infectious Diseases and Medical Care for Patients with Infectious Diseases, and 2) other data covering various aspects of infectious diseases. The prefectural and municipal health centers and public health institutes (PHIs), the Department of Environmental Health and Food Safety, the Ministry of Health, Labour and Welfare, and quarantine stations, have provided the above data.

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<特集関連資料1> 腸管出血性大腸菌検出例の血清型別臨床症状, 2021年

Clinical manifestation of EHEC cases in Japan, according to bacterial serotype, 2021

(NESID病原体検出情報: 2022年4月1日現在報告数)

Serotype	臨床症状* Clinical manifestation*											No. of cases	%
	無症状 ¹⁾	発熱 ²⁾	下痢 ³⁾	嘔気嘔吐 ⁴⁾	血便 ⁵⁾	腹痛 ⁶⁾	意識障害 ⁷⁾	脳症 ⁸⁾	HUS ⁹⁾	腎機能障害 ¹⁰⁾	その他 ¹¹⁾		
Total	567	231	709	107	397	598	1	—	14	15	9	1430	100.0
O157:H7:VT1	2	—	—	—	—	—	—	—	—	—	—	2	0.1
O157:H7:VT2	51	48	133	23	93	122	—	—	4	3	—	207	14.5
O157:H7:VT1&2	48	60	200	40	143	191	1	—	7	9	4	286	20.0
O157:H10:VT1&2	—	—	1	—	—	—	—	—	—	—	—	1	0.1
O157:H-:VT1	3	1	2	1	2	4	—	—	—	—	—	7	0.5
O157:H-:VT2	12	2	5	—	1	5	—	—	—	—	—	20	1.4
O157:H-:VT1&2	26	18	60	12	37	47	—	—	—	—	—	98	6.9
O157:HUT:VT2	3	—	1	—	—	1	—	—	—	—	—	5	0.3
O157:HNT:VT2	13	4	10	—	7	11	—	—	—	—	—	25	1.7
O157:HNT:VT1&2	4	9	17	3	10	15	—	—	2	—	—	22	1.5
O157**	—	1	1	—	1	—	—	—	1	1	—	1	0.1
O157 subtotal	162	143	430	79	294	396	1	—	14	13	4	674	47.1
O26:H11:VT1	101	22	99	7	30	70	—	—	—	—	1	212	14.8
O26:H11:VT2	2	2	1	1	—	2	—	—	—	—	—	4	0.3
O26:H11:VT1&2	1	—	1	1	1	1	—	—	—	—	—	2	0.1
O26:H-:VT1	10	1	5	—	3	6	—	—	—	—	—	19	1.3
O26:H-:VT2	—	—	—	—	1	—	—	—	—	—	—	1	0.1
O26:HUT:VT1	1	—	—	—	—	—	—	—	—	—	—	1	0.1
O26:HUT:VT1&2	—	1	1	—	1	1	—	—	—	—	—	1	0.1
O26:HNT:VT1	8	—	10	1	3	8	—	—	—	—	—	20	1.4
O26 subtotal	123	26	117	10	39	88	—	—	—	—	1	260	18.2
O111:H8:VT1	1	—	2	1	—	2	—	—	—	—	—	3	0.2
O111:H21:VT1	—	—	1	—	—	—	—	—	—	—	—	1	0.1
O111:H-:VT1	20	26	46	2	7	22	—	—	—	—	1	85	5.9
O111:H-:VT2	—	2	4	1	1	3	—	—	—	—	—	4	0.3
O111:H-:VT1&2	5	9	24	4	17	23	—	—	—	2	1	34	2.4
O111:HNT:VT1	5	—	—	—	—	—	—	—	—	—	—	5	0.3
O111:HNT:VT1&2	—	—	1	—	1	1	—	—	—	—	—	1	0.1
O111 subtotal	31	37	78	8	26	51	—	—	—	2	2	133	9.3
O103:H2:VT1	22	8	18	2	5	11	—	—	—	—	1	43	3.0
O103:H2:VT1&2	—	2	4	—	—	4	—	—	—	—	—	4	0.3
O103:H11:VT1	1	1	1	—	1	3	—	—	—	—	—	4	0.3
O103:H-:VT1	2	—	4	—	3	4	—	—	—	—	—	6	0.4
O103:HNT:VT1	3	1	3	—	3	1	—	—	—	—	—	6	0.4
O103 subtotal	28	12	30	2	12	23	—	—	—	—	1	63	4.4
O156:H25:VT1	22	—	5	2	3	3	—	—	—	—	—	28	2.0
O156:H-:VT1	3	—	1	—	1	—	—	—	—	—	—	4	0.3
O156 subtotal	25	—	6	2	4	3	—	—	—	—	—	32	2.2
O91:H14:VT1	3	—	—	—	—	—	—	—	—	—	—	3	0.2
O91:H14:VT1&2	2	—	—	—	—	—	—	—	—	—	—	2	0.1
O91:H-:VT1	9	—	—	—	—	—	—	—	—	—	—	10	0.7
O91:H-:VT1&2	4	—	—	—	—	—	—	—	—	—	—	4	0.3
O91:HUT:VT1	—	—	1	—	—	1	—	—	—	—	—	1	0.1
O91:HUT:VT1&2	2	—	—	—	—	—	—	—	—	—	—	2	0.1
O91:HNT:VT1	1	—	—	—	—	—	—	—	—	—	—	1	0.1
O91 subtotal	21	—	1	—	—	1	—	—	—	—	—	23	1.6
O145:H-:VT1	—	—	2	—	1	2	—	—	—	—	—	3	0.2
O145:H-:VT2	5	1	2	1	1	2	—	—	—	—	—	13	0.9
O145:HUT:VT1	1	—	—	—	—	—	—	—	—	—	—	1	0.1
O145 subtotal	6	1	4	1	2	4	—	—	—	—	—	17	1.2
O8:H7:VT2	1	—	—	—	—	—	—	—	—	—	—	1	0.1
O8:H9:VT2	3	—	—	—	—	—	—	—	—	—	—	3	0.2
O8:H19:VT2	3	—	1	—	—	—	—	—	—	—	—	4	0.3
O8:H28:VT2	4	—	—	—	—	—	—	—	—	—	—	4	0.3
O8:H-:VT2	1	—	—	—	—	—	—	—	—	—	—	1	0.1
O8:HNT:VT2	1	—	—	—	—	—	—	—	—	—	—	1	0.1
O8 subtotal	13	—	1	—	—	—	—	—	—	—	—	14	1.0
O128:H2:VT1&2	10	—	—	—	—	1	—	—	—	—	—	12	0.8
O128:HNT:VT1&2	1	—	—	—	—	—	—	—	—	—	—	1	0.1
O128 subtotal	11	—	—	—	—	1	—	—	—	—	—	13	0.9
O121:H11:VT2	—	—	1	—	1	1	—	—	—	—	—	1	0.1
O121:H19:VT2	—	1	9	2	5	8	—	—	—	—	—	11	0.7
O121 subtotal	—	1	10	2	6	9	—	—	—	—	—	12	0.8
O1:H7:VT1	1	—	—	—	—	—	—	—	—	—	—	1	0.1
O3:H8:VT1	1	—	—	—	—	—	—	—	—	—	—	1	0.1
O3:H21:VT1	2	—	—	—	—	—	—	—	—	—	—	2	0.1
O5:H-:VT1	1	3	6	—	2	3	—	—	—	—	—	7	0.5
O6:HUT:VT1&2	1	—	—	—	—	—	—	—	—	—	—	1	0.1
O9:H7:VT2	1	—	—	—	—	—	—	—	—	—	—	1	0.1
O9:H-:VT2	1	—	—	—	—	—	—	—	—	—	—	1	0.1
O15:H18:VT2	1	—	—	—	—	—	—	—	—	—	—	1	0.1
O21:H21:VT1	1	—	—	—	—	—	—	—	—	—	—	1	0.1
O21:H25:VT1	—	—	—	—	—	—	—	—	—	—	—	1	0.1

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Serotype	臨床症状* Clinical manifestation*											No. of cases	%
	無症状 ¹⁾	発熱 ²⁾	下痢 ³⁾	嘔気嘔吐 ⁴⁾	血便 ⁵⁾	腹痛 ⁶⁾	意識障害 ⁷⁾	脳症 ⁸⁾	HUS ⁹⁾	腎機能障害 ¹⁰⁾	その他 ¹¹⁾		
O28ac:H25:VT1	1	—	—	—	—	—	—	—	—	—	—	1	0.1
O38:H26:VT1	1	—	—	—	—	—	—	—	—	—	—	1	0.1
O49:H10:VT2	1	—	—	—	—	—	—	—	—	—	—	1	0.1
O54:H45:VT2	1	—	—	—	—	—	—	—	—	—	—	1	0.1
O54:H-VT1&2	1	—	—	—	—	—	—	—	—	—	—	1	0.1
O55:H7:VT1	2	—	—	—	—	—	—	—	—	—	—	2	0.1
O55:H-VT1	1	—	—	—	—	—	—	—	—	—	—	1	0.1
O55:HUT:VT1	1	—	—	—	—	—	—	—	—	—	—	1	0.1
O61:H-VT1	1	—	—	—	—	—	—	—	—	—	—	1	0.1
O63:H6:VT2	1	—	—	—	—	—	—	—	—	—	—	1	0.1
O64:H20:VT2	1	—	—	—	—	—	—	—	—	—	—	1	0.1
O76:H19:VT1	1	—	—	—	—	—	—	—	—	—	—	1	0.1
O76:H19:VT1&2	6	—	—	—	—	—	—	—	—	—	—	6	0.4
O77:H39:VT2	1	—	—	—	—	—	—	—	—	—	—	1	0.1
O78:H16:VT1	1	—	—	—	—	—	—	—	—	—	—	1	0.1
O78:H-VT1	1	—	—	—	—	—	—	—	—	—	—	1	0.1
O81:H21:VT1&2	1	—	—	—	—	—	—	—	—	—	—	1	0.1
O93:H28:VT2	1	—	—	—	—	—	—	—	—	—	—	1	0.1
O98:H-VT1	1	—	—	—	—	—	—	—	—	—	—	1	0.1
O100:H-VT2	2	—	—	—	—	—	—	—	—	—	—	3	0.2
O101:H9:VT2	1	—	—	—	—	—	—	—	—	—	—	1	0.1
O101:H-VT1	1	—	—	—	—	—	—	—	—	—	—	1	0.1
O105:H7:VT2	1	—	1	—	—	2	—	—	—	—	—	3	0.2
O108:H25:VT2	1	—	—	—	—	—	—	—	—	—	—	1	0.1
O112:H2:VT1	1	—	—	—	—	—	—	—	—	—	—	1	0.1
O112:H-VT2	—	—	—	—	—	1	—	—	—	—	—	1	0.1
O112ac:H16:VT2	2	—	—	—	—	—	—	—	—	—	—	2	0.1
O113:H21:VT2	2	—	—	—	—	—	—	—	—	—	—	2	0.1
O113:H-VT2	1	—	—	—	—	—	—	—	—	—	—	1	0.1
O115:H10:VT1	10	—	1	—	—	1	—	—	—	—	—	11	0.8
O116:H-VT1	1	—	—	—	—	—	—	—	—	—	—	1	0.1
O117:H12:VT1	1	—	—	—	—	—	—	—	—	—	—	1	0.1
O123:H2:VT2	—	—	—	—	—	1	—	—	—	—	—	1	0.1
O125:H19:VT1	1	—	—	—	—	—	—	—	—	—	—	1	0.1
O136:H12:VT2	—	—	1	—	—	—	—	—	—	—	—	1	0.1
O146:H21:VT2	2	—	—	—	—	—	—	—	—	—	—	2	0.1
O146:H-VT2	1	—	—	—	—	—	—	—	—	—	—	1	0.1
O148:H8:VT2	1	—	—	—	—	—	—	—	—	—	—	1	0.1
O148:H18:VT1&2	1	—	—	—	—	—	—	—	—	—	—	1	0.1
O150:H-VT1&2	1	—	—	—	—	—	—	—	—	—	—	1	0.1
O165:H-VT2	1	—	2	1	2	1	—	—	—	—	—	3	0.2
O166:H28:VT1	1	—	—	—	—	—	—	—	—	—	—	1	0.1
O166:H49:VT2	—	—	1	—	—	1	—	—	—	—	—	1	0.1
O168:H8:VT2	2	—	—	—	—	—	—	—	—	—	—	2	0.1
O169:H20:VT2	—	—	—	—	1	1	—	—	—	—	—	1	0.1
O172:H-VT2	3	2	7	1	1	2	—	—	—	—	—	11	0.8
O174:H8:VT1&2	2	—	—	—	—	—	—	—	—	—	—	2	0.1
O174:H21:VT2	3	—	—	—	—	—	—	—	—	—	—	3	0.2
O174:H-VT1&2	2	—	—	—	—	—	—	—	—	—	—	2	0.1
O175:H15:VT1	1	1	1	—	—	—	—	—	—	—	—	2	0.1
O176:H-VT1	1	—	—	—	—	—	—	—	—	—	—	1	0.1
O177:H-VT2	—	1	2	—	—	1	—	—	—	—	—	2	0.1
O178:H7:VT1	1	—	—	—	—	—	—	—	—	—	—	1	0.1
O178:H-VT1	1	—	—	—	—	—	—	—	—	—	—	1	0.1
O181:H16:VT2	1	—	—	—	—	—	—	—	—	—	—	1	0.1
O182:H25:VT2	1	—	—	—	—	—	—	—	—	—	—	1	0.1
O183:H18:VT1	2	—	—	—	—	—	—	—	—	—	—	2	0.1
O186:H-VT1	1	—	—	—	—	—	—	—	—	—	—	1	0.1
Other	2	—	1	—	1	1	—	—	—	—	—	3	0.2
O untypable	56	4	9	1	7	7	—	—	—	—	1	68	4.8

UT: Untypable, NT: Not typed, *2 つ以上の臨床症状が報告された例を含む, **O抗原凝集抗体検出

*Includes cases for whom two or more symptoms were reported, **Detection of antibodies against *Escherichia coli* O groups

1) no symptoms, 2) fever, 3) diarrhea, 4) nausea/vomiting, 5) bloody diarrhea, 6) abdominal pain, 7) disturbance of consciousness, 8) encephalopathy, 9) hemolytic uremic syndrome, 10) renal failure, 11) other

(Infectious Agents Surveillance System: Data based on reports from public health institutes and health centers received before April 1, 2022)

<特集関連資料2> 腸管出血性大腸菌による食中毒発生事例, 2021年

No.	発生地	発生日	原因食品	原因施設	摂食者数	患者数	死者数
1	東京都港区	3月22日	牛ハラミ丼	飲食店	5	3	0
2	川崎市	5月19日	不明 (5月16日、21日、24日に当該施設において提供された食事)	飲食店	13	5	0
3	滋賀県	6月26日	不明 (6月22日および26日に提供された食事)	飲食店	5	2	0
4	滋賀県	6月28日	不明 (6月25日、29日、7月2日および3日に提供された食事)	飲食店	10	6	0
5	滋賀県	6月30日	不明 (6月26日および27日に提供された食事)	飲食店	6	2	0
6	石川県	7月21日	不明 (7月18日に提供された食品)	飲食店	5	5	0
7	東京都港区	8月14日	当該店舗にて調理提供された食品	飲食店	10	4	0
8	徳島県	8月27日	不明 (8月23日、25日および28日に原因施設で調理、提供された食事)	飲食店	91	6	0
9	静岡県	11月24日	不明 (11月22日夕食から24日昼食に提供された食事)	飲食店	32	9	0

厚生労働省・食中毒統計資料「令和3年(2021年)食中毒発生事例」より改変

https://www.mhlw.go.jp/stf/seisakunitsuite/bunya/kenkou_iryou/shokuhin/syokuchu/04.html