

Report quarter: Quarter 4 of 2025

Reporting period: 01 January 2025 to 31 December 2025

Date of data extraction: 21 April 2026

Data are provisional as of the date data were extracted. Episodes of disease are reported by date of specimen collection. Data cleaning is ongoing, and this may result in some changes in subsequent reports. Refer to the end of the report for methodology and case definitions.

Highlights

- In 2025, up to the end of quarter 4, 1630 episodes of invasive *Streptococcus pneumoniae*, 292 episodes of invasive *Haemophilus influenzae*, 148 episodes of invasive *Neisseria meningitidis*, 818 episodes of invasive *Streptococcus agalactiae* and 633 cases of invasive *Streptococcus pyogenes* were reported to GERMS-SA.
- The proportion of episodes where no isolate/specimen was received ranged from 5% (8/148) for *N. meningitidis* to 49% (397/818) for *S. agalactiae*.
- A higher number of disease episodes of invasive *H. influenzae* was reported in June through August 2025 compared to the same months in historic years, and the number of disease episodes of invasive *N. meningitidis* has also been higher from July through November 2025 compared to historic years. We continue to monitor these trends closely.
- All microbiology laboratories are encouraged to submit isolates for serotyping.

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Number of cases detected, proportion without an isolate/specimen and organism viability by pathogen

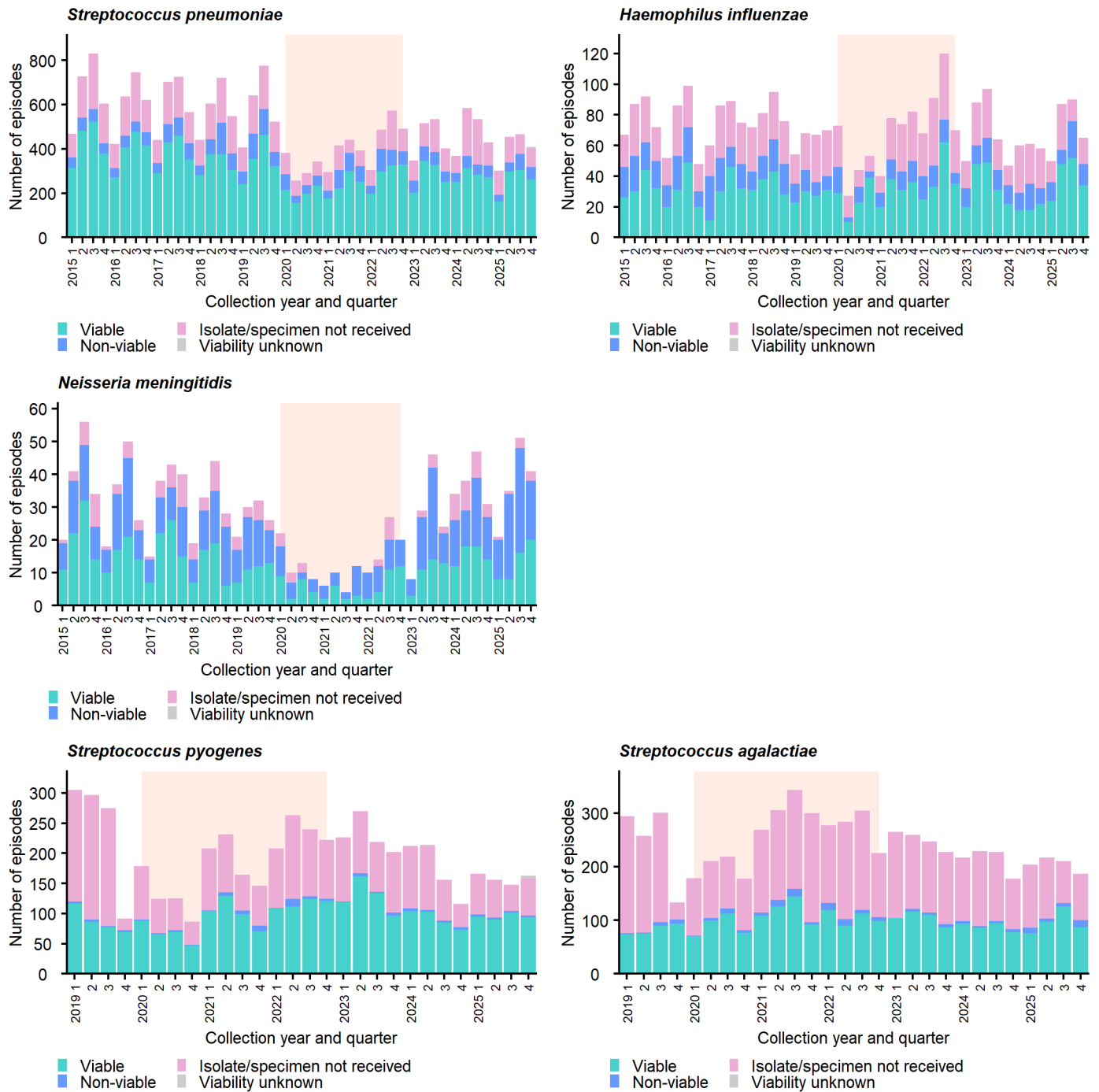


Figure 1: Number of cases detected, proportion where no isolate/specimen was received, and organism viability by pathogen, GERMS-SA laboratory-based surveillance, South Africa, 01 January 2015 to 31 December 2025. Surveillance for invasive *Streptococcus agalactiae* and invasive *Streptococcus pyogenes* began on 01 January 2019. Viability unknown: Cases reported to CRDM, but viability unknown due to capturing delays. The COVID-19 pandemic period is shaded in light orange.

Streptococcus pneumoniae

Table 1: Number of invasive *Streptococcus pneumoniae* disease episodes by viability, GERMS-SA laboratory-based surveillance, South Africa, 01 January 2015 to 31 December 2025.

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Viable	1697 (65)	1570 (65)	1530 (63)	1334 (58)	1381 (59)	801 (63)	951 (62)	1145 (62)	1126 (63)	1119 (58)	1024 (63)
Non-viable	207 (8)	198 (8)	282 (12)	327 (14)	346 (15)	188 (15)	269 (17)	272 (15)	222 (12)	192 (10)	201 (12)
Isolate/specimen not received	726 (28)	657 (27)	621 (26)	651 (28)	621 (26)	279 (22)	323 (21)	435 (23)	450 (25)	604 (32)	397 (24)
Viability unknown	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	8 (0)
Total	2630	2425	2433	2312	2348	1268	1543	1852	1798	1915	1630

Viability unknown: Cases reported to CRDM, but viability unknown due to capturing delays.

Table 2: Number of invasive *Streptococcus pneumoniae* disease episodes by province, GERMS-SA laboratory-based surveillance, South Africa, 01 January 2015 to 31 December 2025.

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Eastern Cape	231 (9)	207 (9)	207 (9)	258 (11)	271 (12)	146 (12)	198 (13)	222 (12)	234 (13)	269 (14)	184 (11)
Free State	132 (5)	145 (6)	109 (4)	105 (5)	84 (4)	62 (5)	70 (5)	62 (3)	62 (3)	77 (4)	53 (3)
Gauteng	966 (37)	854 (35)	889 (37)	759 (33)	772 (33)	381 (30)	462 (30)	513 (28)	537 (30)	576 (30)	508 (31)
KwaZulu-Natal	353 (13)	319 (13)	267 (11)	243 (11)	236 (10)	102 (8)	116 (8)	158 (9)	157 (9)	165 (9)	132 (8)
Limpopo	99 (4)	84 (3)	66 (3)	84 (4)	96 (4)	52 (4)	45 (3)	68 (4)	66 (4)	57 (3)	66 (4)
Mpumalanga	85 (3)	101 (4)	98 (4)	117 (5)	102 (4)	41 (3)	56 (4)	53 (3)	40 (2)	43 (2)	52 (3)
North West	108 (4)	73 (3)	70 (3)	70 (3)	67 (3)	37 (3)	31 (2)	47 (3)	56 (3)	62 (3)	44 (3)
Northern Cape	27 (1)	42 (2)	53 (2)	51 (2)	88 (4)	27 (2)	25 (2)	27 (1)	26 (1)	33 (2)	30 (2)
Western Cape	629 (24)	600 (25)	674 (28)	625 (27)	632 (27)	420 (33)	540 (35)	702 (38)	620 (34)	633 (33)	561 (34)
Total	2630	2425	2433	2312	2348	1268	1543	1852	1798	1915	1630

Table 3: Number of invasive *Streptococcus pneumoniae* disease episodes by patient age, GERMS-SA laboratory-based surveillance, South Africa, 01 January 2015 to 31 December 2025.

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
<5 years	382 (15)	400 (16)	387 (16)	386 (17)	359 (15)	226 (18)	263 (17)	275 (15)	261 (15)	275 (14)	206 (13)
5-17 years	162 (6)	177 (7)	135 (6)	144 (6)	139 (6)	69 (5)	74 (5)	75 (4)	96 (5)	89 (5)	81 (5)
18-64 years	1750 (67)	1631 (67)	1683 (69)	1542 (67)	1616 (69)	842 (66)	1054 (68)	1300 (70)	1207 (67)	1292 (67)	1146 (70)
≥65 years	179 (7)	176 (7)	194 (8)	198 (9)	196 (8)	100 (8)	114 (7)	160 (9)	153 (9)	188 (10)	165 (10)
Unknown	157 (6)	41 (2)	34 (1)	42 (2)	38 (2)	31 (2)	38 (2)	42 (2)	81 (5)	71 (4)	32 (2)
Total	2630	2425	2433	2312	2348	1268	1543	1852	1798	1915	1630

Table 4: Number of invasive *Streptococcus pneumoniae* disease episodes by serotype, GERMS-SA laboratory-based surveillance, South Africa, 01 January 2015 to 31 December 2025.

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
PCV10	398 (15)	356 (15)	347 (14)	315 (14)	289 (12)	168 (13)	229 (15)	232 (13)	210 (12)	202 (11)	191 (12)
PCV13add	173 (7)	214 (9)	179 (7)	219 (9)	184 (8)	109 (9)	143 (9)	201 (11)	221 (12)	208 (11)	218 (13)
Other	1296 (49)	1168 (48)	1241 (51)	1100 (48)	1229 (52)	695 (55)	821 (53)	958 (52)	904 (50)	868 (45)	771 (47)
Unknown	763 (29)	687 (28)	666 (27)	678 (29)	646 (28)	296 (23)	350 (23)	461 (25)	463 (26)	637 (33)	450 (28)
Total	2630	2425	2433	2312	2348	1268	1543	1852	1798	1915	1630

PCV10: 1, 5, 6A, 6B, 7F, 9V, 14, 19A, 19F and 23F. PCV13 additional: 3, 4, 18C. Other: all serotypes not included in PCV10/13. Unknown: Characterisation pending, no isolate/specimen available, insufficient specimen for molecular assay or tested negative for all targets in molecular assay (cycle threshold too high / not included in assay).

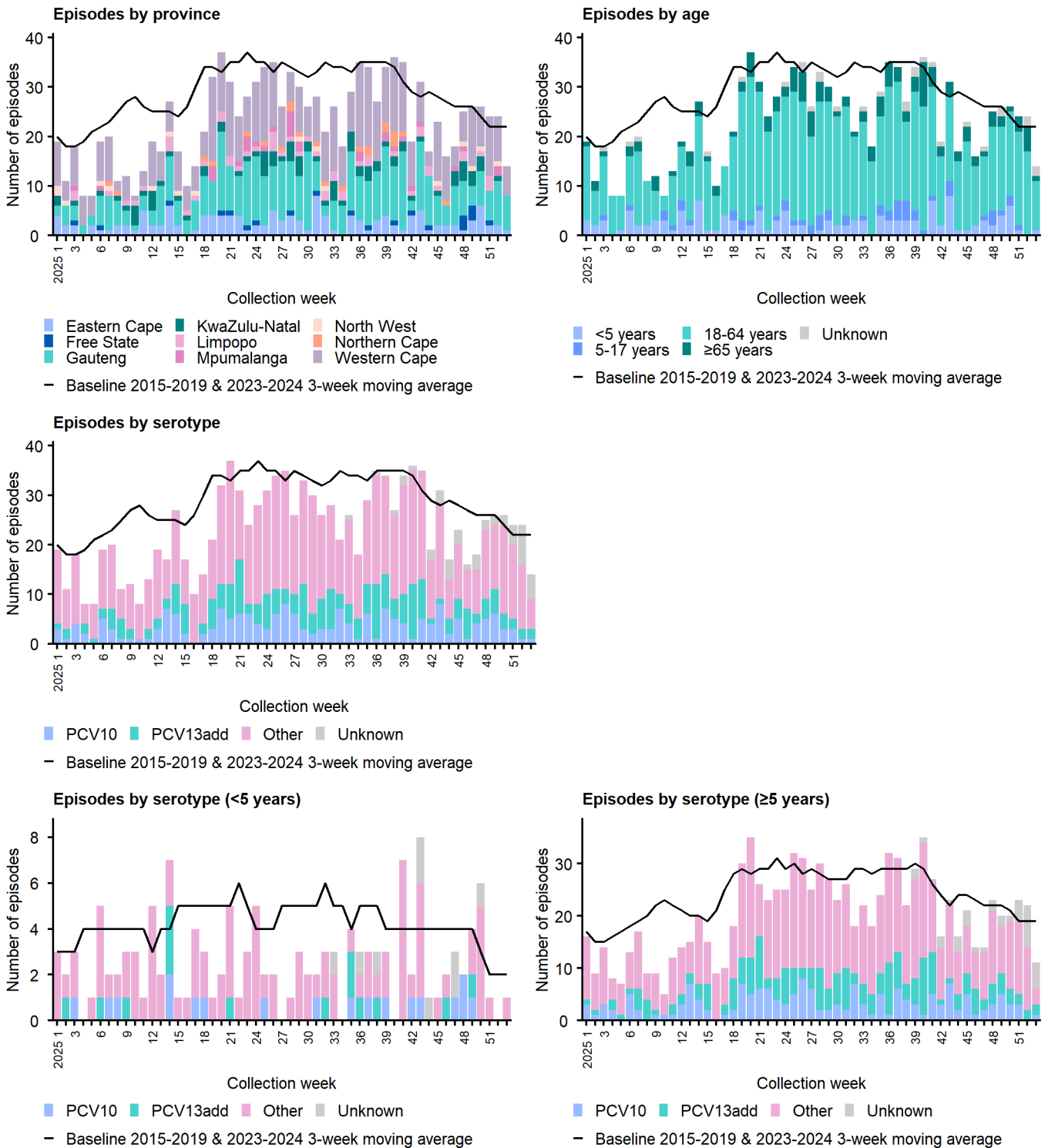


Figure 2: Disease episodes of invasive *Streptococcus pneumoniae* with viable isolates and those serotyped using molecular techniques, GERMSSA laboratory-based surveillance, South Africa, 01 January 2025 to 31 December 2025. PCV10: 1, 5, 6A, 6B, 7F, 9V, 14, 19A, 19F and 23F. PCV13 additional: 3, 4, 18C. Other: all serotypes not included in PCV10/13. Unknown: Characterisation pending, insufficient specimen for molecular assay or tested negative for all targets in molecular assay (cycle threshold too high / not included in assay).

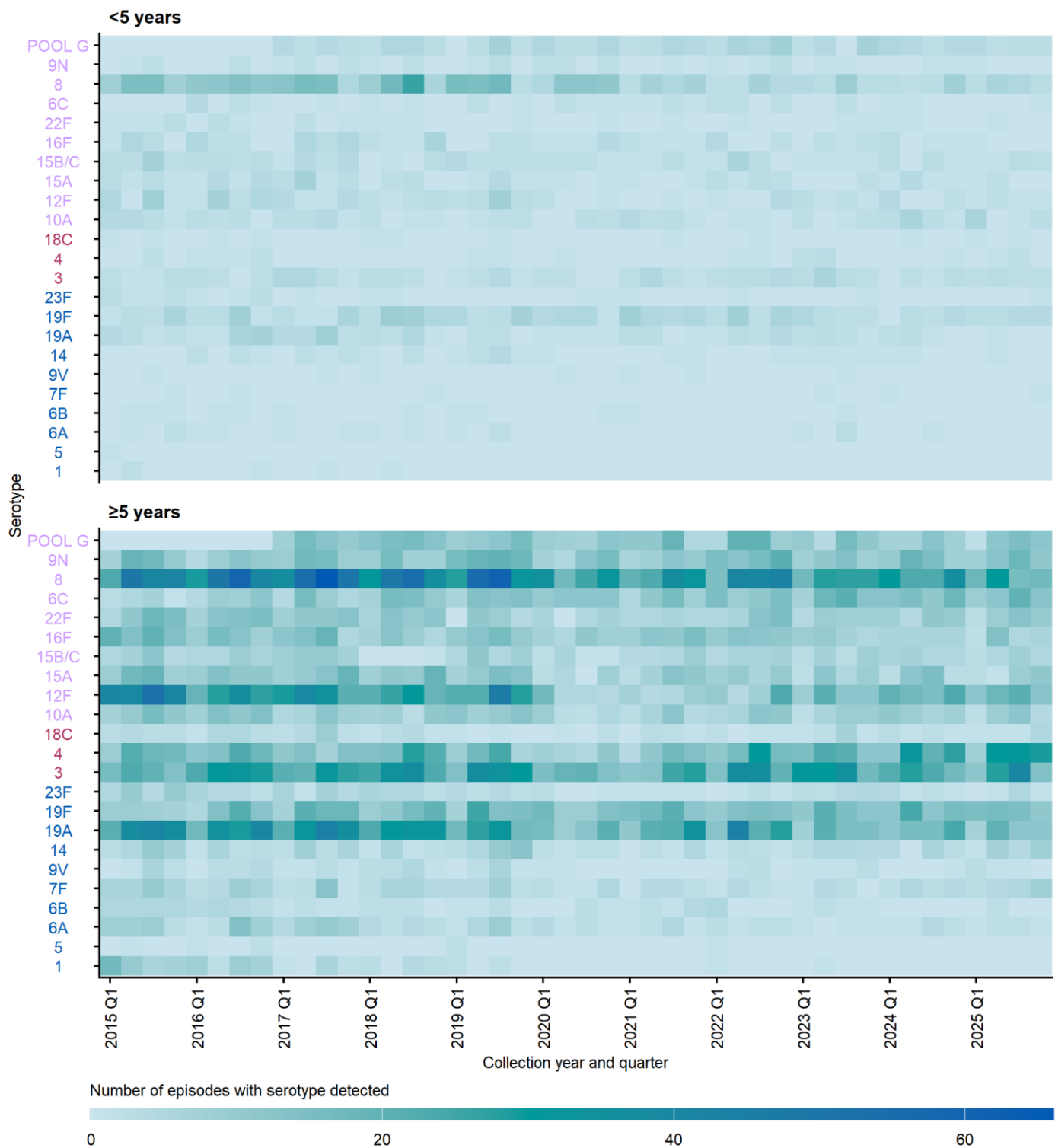


Figure 3: Serotypes identified in disease episodes of invasive *Streptococcus pneumoniae* with viable isolates and those serotyped using molecular techniques, GERMS-SA laboratory-based surveillance, South Africa, 01 January 2025 to 31 December 2025. Serotypes included in PCV 10 are shown in blue, those included in PCV13 but not PCV10 in maroon, and the top 10 serotypes identified in the previous year that are not included in PCV13 in purple. Pool G: Due to cross-reactions, we group serotypes 29, 34, and 42, and serogroups 35 and 47.

Haemophilus influenzae

Table 5: Number of invasive *Haemophilus influenzae* disease episodes by viability, GERMS-SA laboratory-based surveillance, South Africa, 01 January 2015 to 31 December 2025.

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Viable	132 (42)	120 (42)	119 (38)	140 (43)	111 (43)	101 (51)	125 (46)	155 (44)	148 (49)	80 (35)	158 (54)
Non-viable	79 (25)	69 (24)	80 (26)	68 (21)	44 (17)	34 (17)	48 (18)	51 (15)	53 (18)	50 (22)	59 (20)
Isolate/specimen not received	107 (34)	96 (34)	111 (36)	116 (36)	104 (40)	62 (31)	101 (37)	143 (41)	98 (33)	96 (42)	75 (26)
Viability unknown	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Total	318	285	310	324	259	197	274	349	299	226	292

Viability unknown: Cases reported to CRDM, but viability unknown due to capturing delays.

Table 6: Number of invasive *Haemophilus influenzae* disease episodes by province, GERMS-SA laboratory-based surveillance, South Africa, 01 January 2015 to 31 December 2025.

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Eastern Cape	26 (8)	23 (8)	33 (11)	44 (14)	26 (10)	19 (10)	27 (10)	41 (12)	22 (7)	24 (11)	36 (12)
Free State	9 (3)	12 (4)	12 (4)	7 (2)	8 (3)	12 (6)	10 (4)	15 (4)	7 (2)	11 (5)	11 (4)
Gauteng	111 (35)	101 (35)	86 (28)	93 (29)	88 (34)	57 (29)	86 (31)	108 (31)	89 (30)	66 (29)	96 (33)
KwaZulu-Natal	37 (12)	34 (12)	40 (13)	48 (15)	41 (16)	24 (12)	41 (15)	43 (12)	38 (13)	21 (9)	24 (8)
Limpopo	7 (2)	6 (2)	9 (3)	5 (2)	5 (2)	13 (7)	9 (3)	10 (3)	11 (4)	6 (3)	6 (2)
Mpumalanga	10 (3)	8 (3)	8 (3)	14 (4)	5 (2)	8 (4)	10 (4)	5 (1)	6 (2)	9 (4)	8 (3)
North West	3 (1)	6 (2)	8 (3)	10 (3)	5 (2)	5 (3)	6 (2)	7 (2)	3 (1)	6 (3)	5 (2)
Northern Cape	1 (0)	6 (2)	5 (2)	4 (1)	2 (1)	5 (3)	2 (1)	5 (1)	6 (2)	5 (2)	3 (1)
Western Cape	114 (36)	89 (31)	109 (35)	99 (31)	79 (31)	54 (27)	83 (30)	115 (33)	117 (39)	78 (35)	103 (35)
Total	318	285	310	324	259	197	274	349	299	226	292

Table 7: Number of invasive *Haemophilus influenzae* disease episodes by patient age, GERMS-SA laboratory-based surveillance, South Africa, 01 January 2015 to 31 December 2025.

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
<5 years	123 (39)	122 (43)	121 (39)	136 (42)	95 (37)	74 (38)	122 (45)	109 (31)	121 (40)	80 (35)	102 (35)
5-17 years	30 (9)	25 (9)	24 (8)	28 (9)	28 (11)	16 (8)	27 (10)	27 (8)	16 (5)	19 (8)	16 (5)
18-64 years	133 (42)	113 (40)	146 (47)	136 (42)	121 (47)	91 (46)	102 (37)	173 (50)	132 (44)	105 (46)	139 (48)
≥65 years	19 (6)	18 (6)	15 (5)	15 (5)	13 (5)	8 (4)	14 (5)	26 (7)	18 (6)	11 (5)	26 (9)
Unknown	13 (4)	7 (2)	4 (1)	9 (3)	2 (1)	8 (4)	9 (3)	14 (4)	12 (4)	11 (5)	9 (3)
Total	318	285	310	324	259	197	274	349	299	226	292

Table 8: Number of invasive *Haemophilus influenzae* disease episodes by serotype, GERMS-SA laboratory-based surveillance, South Africa, 01 January 2015 to 31 December 2025.

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
a	14 (4)	14 (5)	9 (3)	19 (6)	8 (3)	13 (7)	22 (8)	12 (3)	11 (4)	11 (5)	9 (3)
b	36 (11)	44 (15)	41 (13)	34 (10)	41 (16)	45 (23)	48 (18)	42 (12)	44 (15)	25 (11)	62 (21)
c	2 (1)	2 (1)	4 (1)	2 (1)	2 (1)	1 (1)	3 (1)	0 (0)	2 (1)	0 (0)	2 (1)
d	1 (0)	2 (1)	1 (0)	4 (1)	1 (0)	2 (1)	2 (1)	0 (0)	0 (0)	3 (1)	5 (2)
e	3 (1)	5 (2)	1 (0)	2 (1)	0 (0)	1 (1)	2 (1)	2 (1)	6 (2)	5 (2)	3 (1)
f	13 (4)	8 (3)	10 (3)	11 (3)	14 (5)	9 (5)	9 (3)	9 (3)	14 (5)	9 (4)	18 (6)
Non-typeable	131 (41)	104 (36)	118 (38)	128 (40)	84 (32)	56 (28)	60 (22)	112 (32)	103 (34)	57 (25)	104 (36)
Unknown	118 (37)	106 (37)	126 (41)	124 (38)	109 (42)	70 (36)	128 (47)	172 (49)	119 (40)	116 (51)	89 (30)
Total	318	285	310	324	259	197	274	349	299	226	292

Unknown: Characterisation pending, no isolate/specimen available, insufficient specimen for molecular assay or tested negative for all targets in molecular assay (cycle threshold too high).

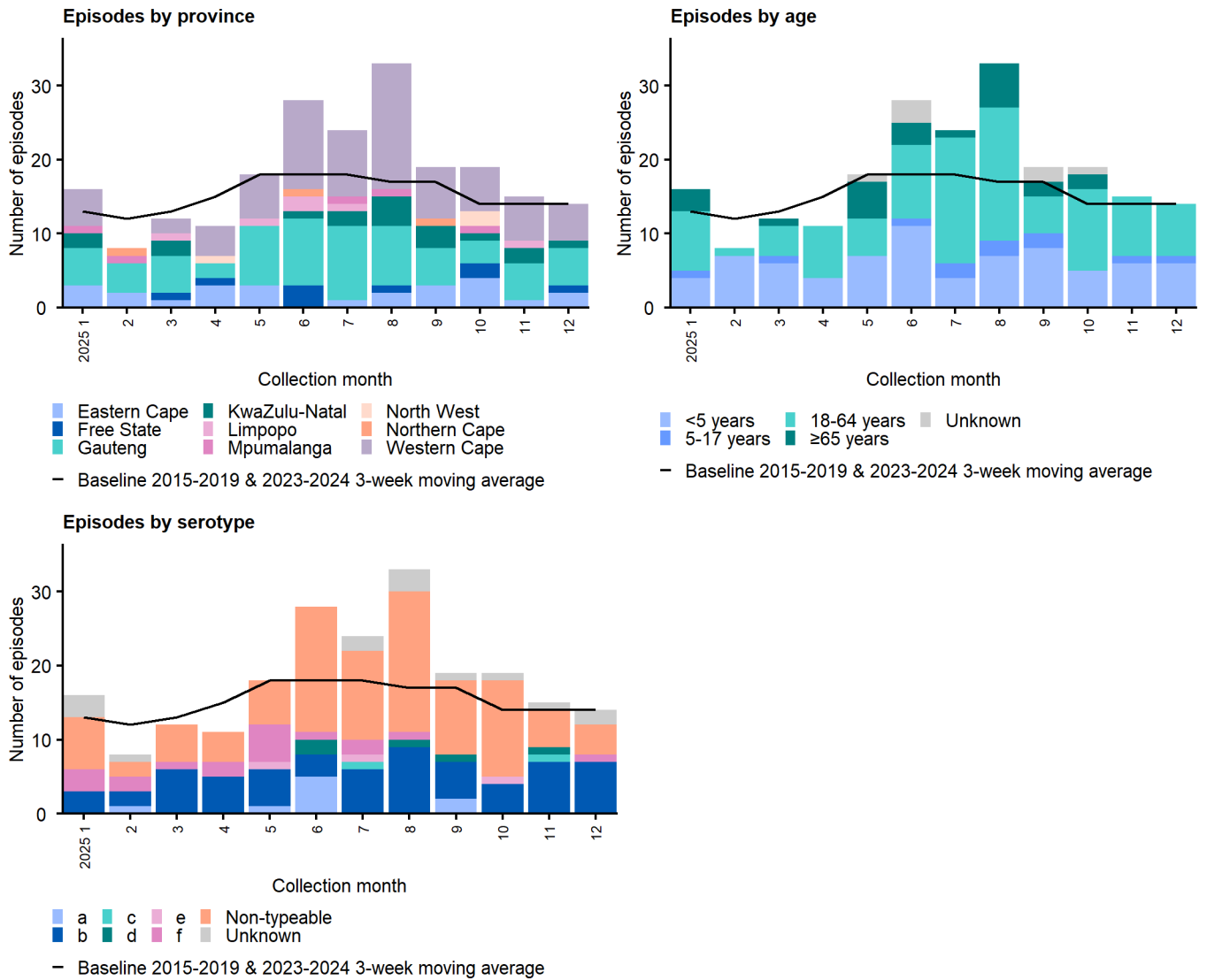


Figure 4: Disease episodes of invasive *Haemophilus influenzae* with viable isolates and those serotyped using molecular techniques, GERMS-SA laboratory-based surveillance, South Africa, 01 January 2025 to 31 December 2025. Unknown serotype: Characterisation pending, insufficient specimen for molecular assay or tested negative for all targets in molecular assay (cycle threshold too high).

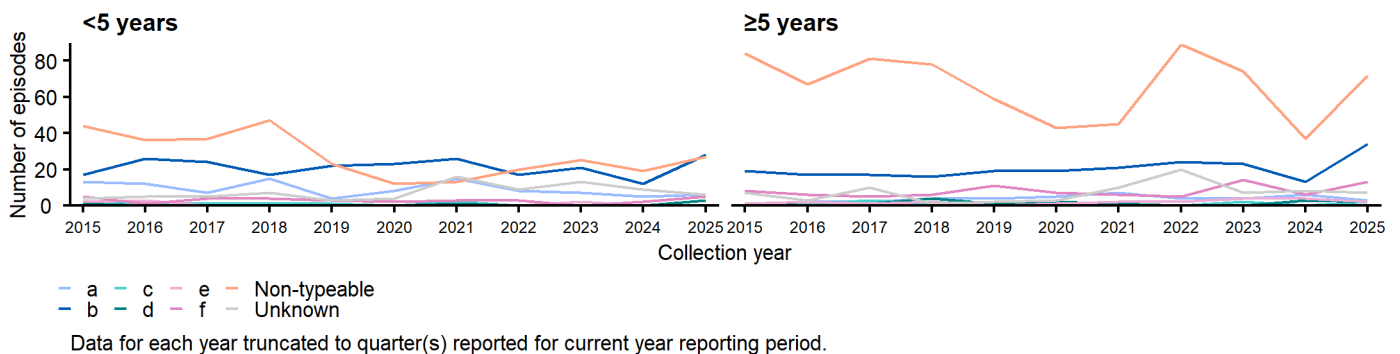


Figure 5: Serotypes identified in disease episodes of invasive *Haemophilus influenzae* by age and year with viable isolates and those serotyped using molecular techniques, GERMS-SA laboratory-based surveillance, South Africa, 01 January 2015 to 31 December 2025, up to quarter 4 for each year. Unknown serotype: Characterisation pending or tested negative for all targets in molecular assay (cycle threshold too high).

Neisseria meningitidis

Table 9: Number of invasive *Neisseria meningitidis* disease episodes by viability, GERMS-SA laboratory-based surveillance, South Africa, 01 January 2015 to 31 December 2025.

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Viable	79 (52)	62 (47)	70 (51)	49 (40)	43 (39)	23 (43)	13 (41)	29 (41)	41 (38)	62 (41)	52 (35)
Non-viable	51 (34)	57 (44)	43 (32)	53 (43)	50 (46)	20 (38)	19 (59)	33 (46)	58 (54)	59 (39)	88 (59)
Isolate/specimen not received	21 (14)	12 (9)	23 (17)	22 (18)	16 (15)	10 (19)	0 (0)	9 (13)	8 (7)	29 (19)	8 (5)
Viability unknown	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Total	151	131	136	124	109	53	32	71	107	150	148

Viability unknown: Cases reported to CRDM, but viability unknown due to capturing delays.

Table 10: Number of invasive *Neisseria meningitidis* disease episodes by province, GERMS-SA laboratory-based surveillance, South Africa, 01 January 2015 to 31 December 2025.

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Eastern Cape	25 (17)	15 (11)	18 (13)	26 (21)	12 (11)	6 (11)	5 (16)	5 (7)	12 (11)	25 (17)	21 (14)
Free State	9 (6)	2 (2)	8 (6)	2 (2)	3 (3)	0 (0)	0 (0)	3 (4)	4 (4)	5 (3)	2 (1)
Gauteng	45 (30)	36 (27)	42 (31)	37 (30)	36 (33)	11 (21)	8 (25)	23 (32)	33 (31)	39 (26)	50 (34)
KwaZulu-Natal	22 (15)	11 (8)	8 (6)	8 (6)	12 (11)	5 (9)	3 (9)	6 (8)	9 (8)	8 (5)	6 (4)
Limpopo	1 (1)	1 (1)	4 (3)	4 (3)	2 (2)	1 (2)	0 (0)	3 (4)	2 (2)	3 (2)	2 (1)
Mpumalanga	3 (2)	5 (4)	4 (3)	2 (2)	1 (1)	1 (2)	1 (3)	2 (3)	0 (0)	0 (0)	5 (3)
North West	2 (1)	5 (4)	5 (4)	6 (5)	4 (4)	1 (2)	1 (3)	2 (3)	2 (2)	2 (1)	1 (1)
Northern Cape	2 (1)	2 (2)	0 (0)	1 (1)	1 (1)	0 (0)	0 (0)	1 (1)	3 (3)	7 (5)	3 (2)
Western Cape	42 (28)	54 (41)	47 (35)	38 (31)	38 (35)	28 (53)	14 (44)	26 (37)	42 (39)	61 (41)	58 (39)
Total	151	131	136	124	109	53	32	71	107	150	148

Table 11: Number of invasive *Neisseria meningitidis* disease episodes by patient age, GERMS-SA laboratory-based surveillance, South Africa, 01 January 2015 to 31 December 2025.

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
<5 years	53 (35)	45 (34)	48 (35)	47 (38)	26 (24)	26 (49)	17 (53)	33 (46)	31 (29)	57 (38)	52 (35)
5-17 years	35 (23)	31 (24)	23 (17)	29 (23)	35 (32)	12 (23)	5 (16)	13 (18)	26 (24)	31 (21)	38 (26)
18-64 years	59 (39)	49 (37)	60 (44)	42 (34)	47 (43)	15 (28)	9 (28)	25 (35)	49 (46)	56 (37)	50 (34)
≥65 years	1 (1)	2 (2)	2 (1)	5 (4)	1 (1)	0 (0)	1 (3)	0 (0)	1 (1)	5 (3)	5 (3)
Unknown	3 (2)	4 (3)	3 (2)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (1)	3 (2)
Total	151	131	136	124	109	53	32	71	107	150	148

Table 12: Number of invasive *Neisseria meningitidis* disease episodes by serogroup, GERMS-SA laboratory-based surveillance, South Africa, 01 January 2015 to 31 December 2025.

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
B	48 (32)	48 (37)	45 (33)	42 (34)	35 (32)	28 (53)	13 (41)	15 (21)	47 (44)	39 (26)	48 (32)
C	11 (7)	15 (11)	14 (10)	11 (9)	5 (5)	2 (4)	1 (3)	3 (4)	11 (10)	10 (7)	17 (11)
W	42 (28)	30 (23)	27 (20)	24 (19)	24 (22)	8 (15)	4 (12)	11 (15)	15 (14)	26 (17)	29 (20)
Y	23 (15)	20 (15)	21 (15)	21 (17)	27 (25)	3 (6)	4 (12)	16 (23)	11 (10)	26 (17)	17 (11)
Other	1 (1)	1 (1)	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	2 (2)	0 (0)	1 (1)
Non-groupable	1 (1)	3 (2)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (1)	3 (2)	1 (1)
Unknown	25 (17)	14 (11)	28 (21)	26 (21)	17 (16)	12 (23)	10 (31)	26 (37)	20 (19)	46 (31)	35 (24)
Total	151	131	136	124	109	53	32	71	107	150	148

Other: Serogroup A, E, H, X or Z. Unknown: Characterisation pending, no isolate/specimen available, insufficient specimen for molecular assay or tested negative for all targets in molecular assay (cycle threshold too high).

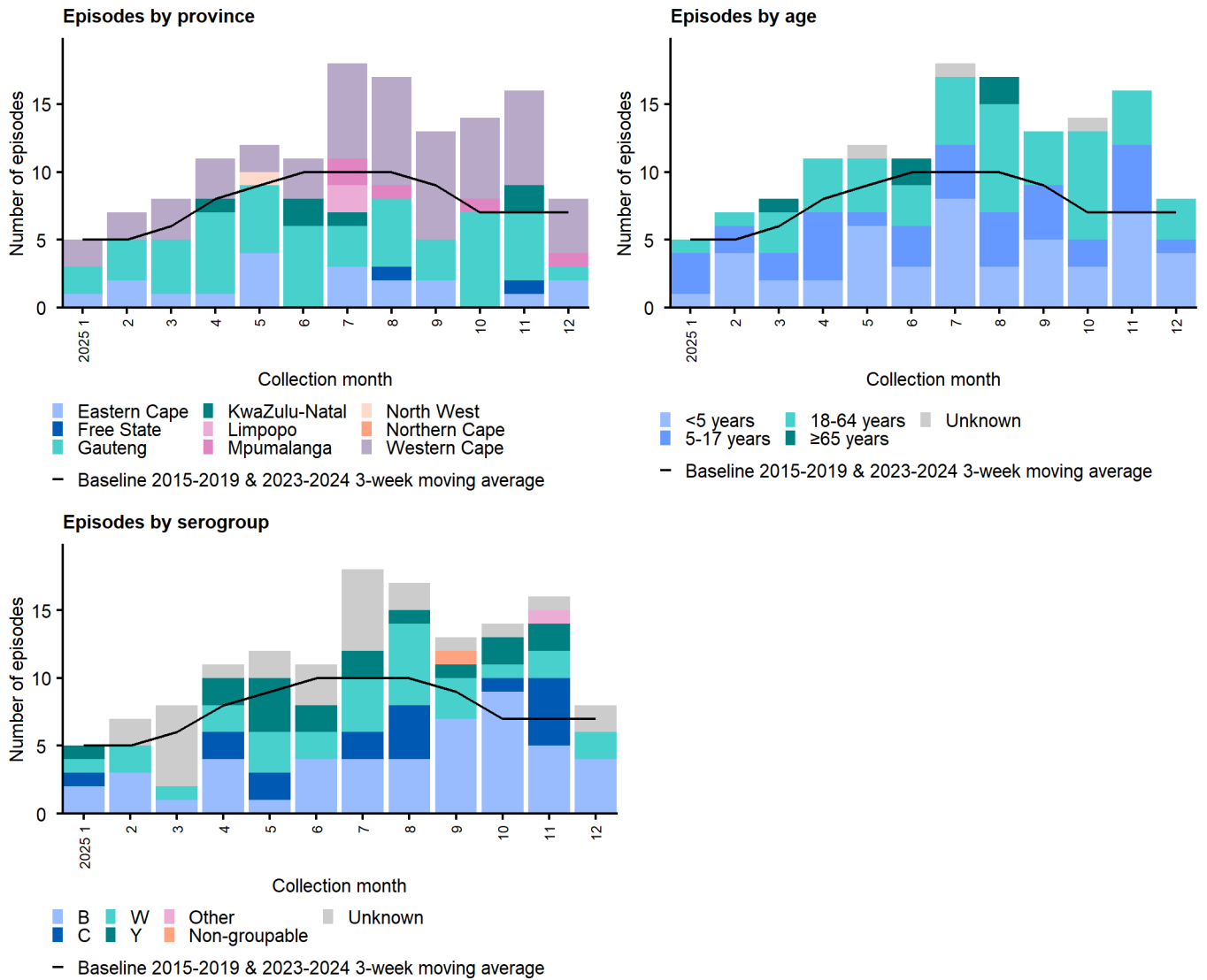


Figure 6: Disease episodes of invasive *Neisseria meningitidis* with viable isolates and those serogrouped using molecular techniques, GERMS-SA laboratory-based surveillance, South Africa, 01 January 2025 to 31 December 2025. Other serogroup: Serogroup A, E, H, X or Z. Unknown serogroup: Characterisation pending, insufficient specimen for molecular assay or tested negative for all targets in molecular assay (cycle threshold too high).

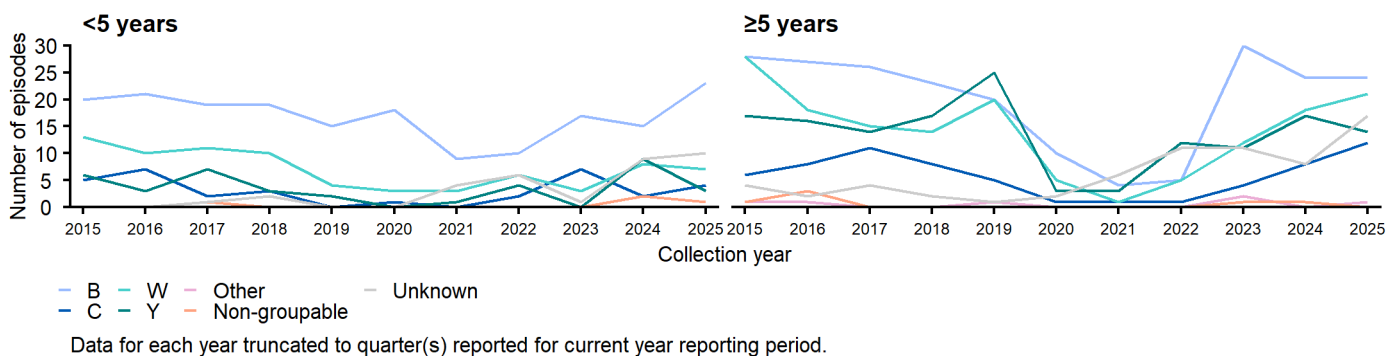


Figure 7: Serogroups identified in disease episodes of invasive *Neisseria meningitidis* by age and year with viable isolates and those serogrouped using molecular techniques, GERMS-SA laboratory-based surveillance, South Africa, 01 January 2015 to 31 December 2025, up to quarter 4 for each year. Other serogroup: Serogroup A, E, X or Z. Unknown serogroup: Characterisation pending, insufficient specimen for molecular assay or tested negative for all targets in molecular assay (cycle threshold too high).

Streptococcus agalactiae (Group B Streptococcus)

Table 13: Number of invasive *Streptococcus agalactiae* disease episodes by viability, GERMS-SA laboratory-based surveillance, South Africa, 01 January 2019 to 31 December 2025.

	2019	2020	2021	2022	2023	2024	2025
Viable	333 (34)	358 (46)	471 (39)	419 (38)	417 (42)	353 (42)	386 (47)
Non-viable	17 (2)	20 (3)	36 (3)	40 (4)	15 (2)	15 (2)	35 (4)
Isolate/specimen not received	635 (64)	406 (52)	710 (58)	631 (58)	566 (57)	482 (57)	397 (49)
Viability unknown	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Total	985	784	1217	1090	998	850	818

Viability unknown: Cases reported to CRDM, but viability unknown due to capturing delays.

Table 14: Number of invasive *Streptococcus agalactiae* disease episodes by province, GERMS-SA laboratory-based surveillance, South Africa, 01 January 2019 to 31 December 2025.

	2019	2020	2021	2022	2023	2024	2025
Eastern Cape	64 (6)	49 (6)	71 (6)	55 (5)	54 (5)	54 (6)	55 (7)
Free State	30 (3)	26 (3)	42 (3)	41 (4)	39 (4)	40 (5)	22 (3)
Gauteng	419 (43)	341 (43)	593 (49)	475 (44)	475 (48)	371 (44)	344 (42)
KwaZulu-Natal	198 (20)	135 (17)	215 (18)	236 (22)	181 (18)	153 (18)	150 (18)
Limpopo	36 (4)	27 (3)	52 (4)	39 (4)	29 (3)	37 (4)	36 (4)
Mpumalanga	36 (4)	21 (3)	57 (5)	63 (6)	36 (4)	23 (3)	36 (4)
North West	12 (1)	6 (1)	14 (1)	16 (1)	24 (2)	24 (3)	26 (3)
Northern Cape	7 (1)	6 (1)	3 (0)	4 (0)	5 (1)	7 (1)	2 (0)
Western Cape	183 (19)	173 (22)	170 (14)	161 (15)	155 (16)	141 (17)	147 (18)
Total	985	784	1217	1090	998	850	818

Table 15: Number of invasive *Streptococcus agalactiae* disease episodes by patient age, GERMS-SA laboratory-based surveillance, South Africa, 01 January 2019 to 31 December 2025.

	2019	2020	2021	2022	2023	2024	2025
<5 years	588 (60)	503 (64)	779 (64)	647 (59)	536 (54)	459 (54)	436 (53)
5-17 years	19 (2)	14 (2)	21 (2)	12 (1)	16 (2)	22 (3)	15 (2)
18-64 years	287 (29)	169 (22)	335 (28)	355 (33)	343 (34)	291 (34)	309 (38)
≥65 years	58 (6)	39 (5)	47 (4)	29 (3)	40 (4)	44 (5)	44 (5)
Unknown	33 (3)	59 (8)	35 (3)	47 (4)	63 (6)	34 (4)	14 (2)
Total	985	784	1217	1090	998	850	818

Table 16: Number of invasive *Streptococcus agalactiae* disease episodes by serotype, GERMS-SA laboratory-based surveillance, South Africa, 01 January 2019 to 31 December 2025.

	2019	2020	2021	2022	2023	2024	2025
Ia	94 (10)	93 (12)	130 (11)	126 (12)	135 (14)	98 (12)	55 (7)
Ib	24 (2)	23 (3)	27 (2)	29 (3)	36 (4)	31 (4)	21 (3)
II	26 (3)	30 (4)	27 (2)	22 (2)	39 (4)	26 (3)	26 (3)
III	134 (14)	167 (21)	193 (16)	157 (14)	139 (14)	112 (13)	124 (15)
IV	9 (1)	4 (1)	12 (1)	18 (2)	12 (1)	5 (1)	19 (2)
V	45 (5)	40 (5)	75 (6)	54 (5)	43 (4)	42 (5)	38 (5)
VI	0 (0)	0 (0)	0 (0)	0 (0)	1 (0)	0 (0)	0 (0)
VIII	1 (0)	0 (0)	2 (0)	4 (0)	2 (0)	0 (0)	0 (0)
IX	0 (0)	0 (0)	2 (0)	4 (0)	3 (0)	1 (0)	0 (0)
Non-typeable	2 (0)	1 (0)	3 (0)	5 (0)	7 (1)	38 (4)	1 (0)
Unknown	650 (66)	426 (54)	746 (61)	671 (62)	581 (58)	497 (58)	534 (65)
Total	985	784	1217	1090	998	850	818

Unknown: Characterisation pending or no isolate available.

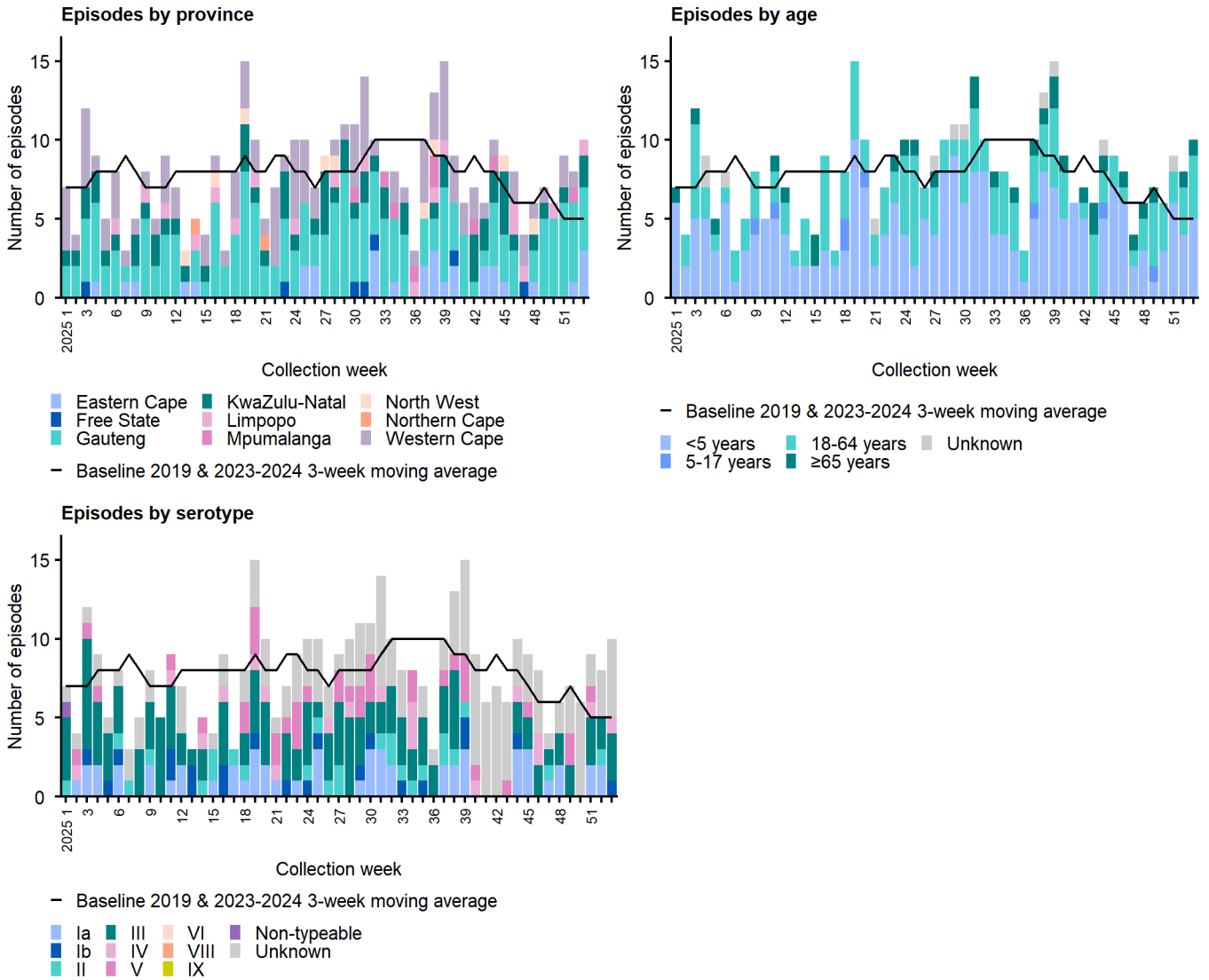


Figure 8: Disease episodes of invasive *Streptococcus agalactiae* with viable isolates, GERMS-SA laboratory-based surveillance, South Africa, 01 January 2025 to 31 December 2025. Unknown serotype: Characterisation pending

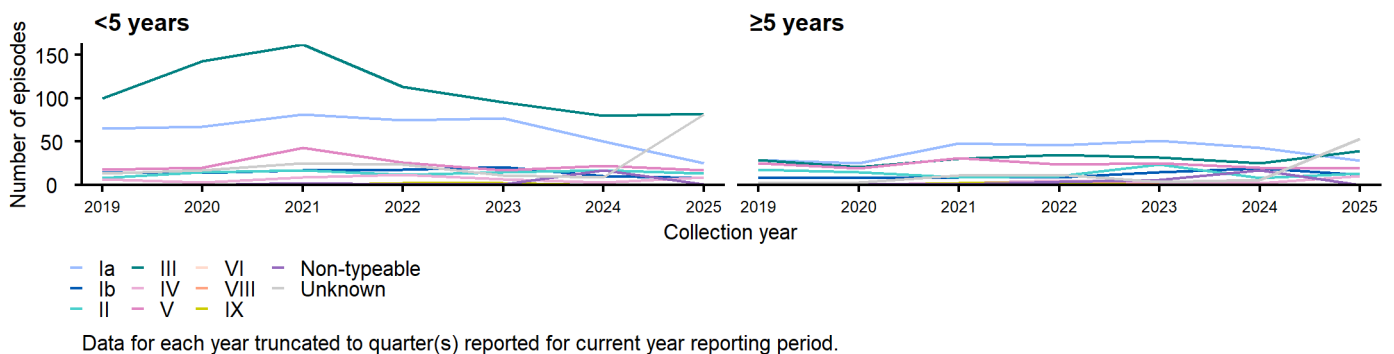


Figure 9: Serotypes identified in disease episodes of invasive *Streptococcus agalactiae* by age and year with viable isolates, GERMS-SA laboratory-based surveillance, South Africa, 01 January 2019 to 31 December 2025, up to quarter 4 for each year. Unknown serotype: Characterisation pending.

Streptococcus pyogenes (Group A Streptococcus)

Table 17: Number of invasive *Streptococcus pyogenes* disease episodes by viability, GERMS-SA laboratory-based surveillance, South Africa, 01 January 2019 to 31 December 2025.

	2019	2020	2021	2022	2023	2024	2025
Viable	350 (36)	270 (52)	403 (54)	465 (50)	512 (56)	365 (52)	381 (60)
Non-viable	11 (1)	7 (1)	22 (3)	20 (2)	13 (1)	14 (2)	11 (2)
Isolate/specimen not received	608 (63)	238 (46)	324 (43)	448 (48)	392 (43)	319 (46)	236 (37)
Viability unknown	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	5 (1)
Total	969	515	749	933	917	698	633

Prior to 2024 case definition included detection from a non-sterile site with an accompanying diagnosis of septic shock, necrotising fasciitis, or necrotic tissue. Viability unknown: Cases reported to CRDM, but viability unknown due to capturing delays.

Table 18: Number of invasive *Streptococcus pyogenes* disease episodes by province, GERMS-SA laboratory-based surveillance, South Africa, 01 January 2019 to 31 December 2025.

	2019	2020	2021	2022	2023	2024	2025
Eastern Cape	143 (15)	72 (14)	150 (20)	120 (13)	75 (8)	72 (10)	64 (10)
Free State	22 (2)	11 (2)	21 (3)	35 (4)	25 (3)	33 (5)	22 (3)
Gauteng	200 (21)	95 (18)	175 (23)	258 (28)	328 (36)	235 (34)	176 (28)
KwaZulu-Natal	162 (17)	49 (10)	92 (12)	96 (10)	72 (8)	81 (12)	64 (10)
Limpopo	7 (1)	5 (1)	10 (1)	19 (2)	25 (3)	13 (2)	29 (5)
Mpumalanga	11 (1)	9 (2)	23 (3)	20 (2)	19 (2)	16 (2)	12 (2)
North West	2 (0)	3 (1)	9 (1)	10 (1)	10 (1)	10 (1)	8 (1)
Northern Cape	7 (1)	7 (1)	3 (0)	2 (0)	6 (1)	3 (0)	4 (1)
Western Cape	415 (43)	264 (51)	266 (36)	373 (40)	357 (39)	235 (34)	254 (40)
Total	969	515	749	933	917	698	633

Prior to 2024 case definition included detection from a non-sterile site with an accompanying diagnosis of septic shock, necrotising fasciitis, or necrotic tissue.

Table 19: Number of invasive *Streptococcus pyogenes* disease episodes by patient age, GERMS-SA laboratory-based surveillance, South Africa, 01 January 2019 to 31 December 2025.

	2019	2020	2021	2022	2023	2024	2025
<5 years	139 (14)	52 (10)	102 (14)	122 (13)	127 (14)	108 (15)	66 (10)
5-17 years	69 (7)	31 (6)	51 (7)	57 (6)	62 (7)	55 (8)	46 (7)
18-64 years	640 (66)	333 (65)	505 (67)	633 (68)	575 (63)	453 (65)	436 (69)
≥65 years	106 (11)	69 (13)	68 (9)	90 (10)	92 (10)	68 (10)	79 (12)
Unknown	15 (2)	30 (6)	23 (3)	31 (3)	61 (7)	14 (2)	6 (1)
Total	969	515	749	933	917	698	633

Prior to 2024 case definition included detection from a non-sterile site with an accompanying diagnosis of septic shock, necrotising fasciitis, or necrotic tissue.

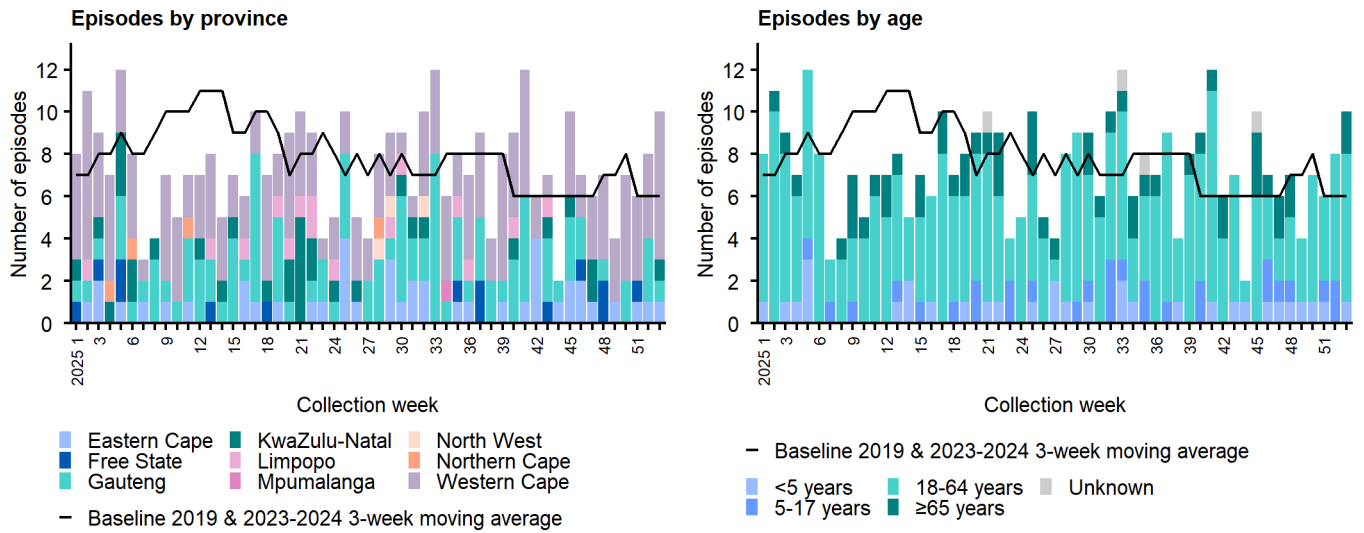


Figure 10: Disease episodes of invasive *Streptococcus pyogenes* with viable isolates and those confirmed using molecular techniques, GERMS-SA laboratory-based surveillance, South Africa, 01 January 2025 to 31 December 2025. Prior to 2024 case definition included detection from a non-sterile site with an accompanying diagnosis of septic shock, necrotising fasciitis, or necrotic tissue.

Methods

GERMS-SA is a national, active, laboratory-based surveillance system initiated in 2003, in which public and private laboratories send reports and isolates. As part of GERMS-SA, laboratories at the National Institute for Communicable Diseases (NICD) receive clinical isolates and specimens from both private and public laboratories across South Africa, based on specified case definitions. Duplicate results from the same patient within a 21-day period were excluded through the matching of patient demographics. In addition to the specimens received at NICD, the Surveillance Data Warehouse (SDW) of the National Health Laboratory Service (NHLS) was searched for any positive laboratory results for pathogens under surveillance to identify any cases not reported to NICD. These cases, referred to as “Audit” cases, would not have any serotyping data available.

Case definitions:

Streptococcus pneumoniae, *Haemophilus influenzae*, and *Neisseria meningitidis*: culture and/or PCR positive OR culture negative but latex antigen positive, corresponding Gram stain and/or PCR from any normally sterile body site.

Streptococcus agalactiae: culture and/or PCR positive from any normally sterile body site OR non-sterile body site specimen obtained from a patient with intrauterine sepsis (uterine tissue, endocervical tissue/fallopian tubes/placenta/ products of conception/ foetus).

Streptococcus pyogenes: culture and/or PCR positive from any normally sterile body site. Prior to 2024, the case definition included detection from a non-sterile site with an accompanying diagnosis of septic shock, necrotising fasciitis, or necrotic tissue.

Serotyping of *Streptococcus pneumoniae*:

Pneumococcal isolates were serotyped by Quellung reaction using specific antisera (2003-2016: Statens Serum Institute, Copenhagen, Denmark; 2017 onwards: SSI Diagnostica A/S, Hillerød, Denmark). Culture-negative/bacterial antigen detection test positive clinical specimens, or isolates that lost viability, were confirmed positive using real-time PCR (Wang *et al.* 2012) and serotyped using an adaptation from methods described previously (Azzari *et al.* 2010 and Pimenta *et al.* 2013). This molecular assay includes targets for 38 serotypes (42 serotypes prior to 2014) and covers all serotypes included in PCV13. Only samples with an initial *lytA* PCR ct value of ≤ 35 were included. Where ct value was ≤ 35 , but no serotype could be identified by including the 38 targets (42 targets prior to 2014), the serotype was classified as a non-vaccine type. Where *lytA* PCR ct value was ≥ 36 , serotype was classified as unknown and was not included in graphs. Where the PCR target could not distinguish between vaccine and non-vaccine serotype, serotype was classified as unknown and not included in the figures (targets: 18ABC, 18ABCF, 7AF, 9ALVN and 9AV). From the 1st January 2023, the pneumococcal molecular serotyping method changed to the use of a TaqMan Array card (Spn TAC). The TaqMan Array Card (TAC) system, designed and validated by the United States Centers for Disease Control and Prevention (CDC) (Atlanta, USA) and manufactured by Life Technologies (New York, USA), is a semi-quantitative multi-target real-time PCR platform for the simultaneous detection of a range of targets (be it multiple pathogens or multiple serotypes) in a single specimen (Pholwat *et al.* 2016). The cards consist of multiple singleplex and/or duplex PCR reactions in 1 μ l reaction wells pre-spotted with the target-specific primers and probes on a 384-well array card. Nucleic acids and reagents are mixed and loaded onto the card through individual sample ports, centrifuged at high speed for distribution of the reaction mix into reaction wells and then loaded onto a dedicated block on a ViiA7 or QS7 real-time PCR instrument (Life Technologies). The TAC system was pioneered by the CDC and has subsequently been used in several studies for screening a variety of pathogens (Pholwat *et al.* 2016). The Spn TAC card has 95 targets. The targets can identify *S. pneumoniae* (*lytA* and *piaB*) and 99 *S. pneumoniae* serotypes.

Serotyping of *Haemophilus influenzae*:

Isolates were serotyped by slide agglutination to detect serotypes a, b, c, d, e, and f using antisera from Remel, Biotech Limited, Dartford, United Kingdom (prior to December 2023) and Mast Group Limited, Merseyside, United Kingdom (December 2023 onwards). Non-reactive isolates were classified as non-typeable. PCR serotyping was also performed on all isolates and clinical specimens to detect serotypes a, b, c, d, e and f using a method developed by the (CDC) (Atlanta, USA) (unpublished) and implemented in Nov 2019 (NIC1188). Prior to 2019, PCR serotyping was

Data are provisional as of the date data were extracted. Episodes of disease are reported by date of specimen collection. Data cleaning is ongoing, and this may result in some changes in subsequent reports.

performed according to methods adapted from Maaroufi *et al.* (2007) and Sandstedt *et al.* (2008) (NIC0598).

Serogrouping of *Neisseria meningitidis*:

Isolate serogroups were determined by slide agglutination using polyclonal antiserum followed by capsule-specific monoclonal antiserum (Remel, Biotech Limited, Dartford, United Kingdom) against serogroups A, C, X, Y, Z, and W, and monoclonal antibodies to polysaccharide B (Remel, Biotech Limited, Dartford, United Kingdom). Non-reactive isolates were classified as non-groupable (NG). Genogroup for cultures and clinical specimens was also determined using PCR by detection of *csaB*, *csb*, *csc*, *csw*, *csxB*, and *csy* genes, corresponding to serogroups A, B, C, W, X, and Y, respectively (Wang *et al.* 2012).

Serotyping of *Streptococcus agalactiae*:

Capsular serotyping of isolates was determined by slide agglutination using Immulex™ Group B Streptococcus antisera (SSI Diagnostica A/S, Hillerød, Denmark) for serotypes Ia, Ib, II, III, IV, V, VI, VII, VIII and IX as previously described (Slotved *et al.* 2003). Isolates that were non-reactive to all the type-specific antisera were classified serologically as non-typeable.

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