

SUPPLEMENTARY TABLE 1. List of carriage isolates used.

ID	Isolate	Year of isolation	Month of isolation	Strain designation ^{a, b}	Number of contigs	Total length (bp)	N50 (bp) ^c	Mean contig size (bp)	ENA accession
51145	B003	2015	Nov	W: P1.5,2: F1-1: ST-11 (cc11)	191	2069896	26122	10838	
51146	B009	2015	Nov	W: P1.5,2: F1-1: ST-11 (cc11)	191	2081874	25501	10900	
51147	B021	2015	Nov	W: P1.5,2: F1-1: ST-11 (cc11)	191	2071957	25079	10848	
51148	B091	2015	Nov	W: P1.5,2: F1-1: ST-11 (cc11)	186	2077967	27187	11172	
51149	B100	2015	Nov	W: P1.18-1,3: F5-5: ST-ND (cc22)	203	2153766	26350	10610	
51150	B110	2015	Nov	W: P1.5,2: F1-1: ST-10651 (cc11)	197	2077385	24687	10546	
51151	B135	2016	Mar	W: P1.5,2: F1-1: ST-ND (cc11)	186	2076153	27186	11163	
51152	B139	2016	Mar	W: P1.5,2: F1-1: ST-11 (cc11)	211	2080759	23455	9862	
51153	B141	2016	Mar	W: P1.5,2: F1-1: ST-11 (cc11)	210	2081271	23008	9911	
51154	B167	2016	Mar	W: P1.5,2: F1-1: ST-11 (cc11)	189	2067195	25501	10938	
51155	B193	2016	Mar	W: P1.18,25-32: F4-1: ST-184 (cc22)	197	2153891	26080	10934	
51156	B214	2016	Mar	W: P1.5,2: F1-1: ST-11 (cc11)	187	2080077	24677	11124	
51157	B222	2016	Mar	W: P1.5,2: F1-1: ST-11 (cc11)	189	2071460	26796	10961	
51158	B227	2016	Mar	W: P1.5,2: F1-1: ST-11 (cc11)	180	2062011	25501	11456	
51159	B240	2016	Mar	W: P1.5,2: F1-1: ST-11 (cc11)	201	2068645	24560	10292	
51160	B243	2016	Mar	W: P1.5,2: F1-1: ST-11 (cc11)	192	2069733	24711	10780	
51161	B251	2016	Mar	W: P1.5,2: F1-1: ST-11 (cc11)	196	2068616	24158	10555	
51162	B253	2016	Mar	W: P1.5,2: F1-1: ST-11 (cc11)	184	2070420	26135	11253	
51163	B256	2016	Mar	W: P1.5,2: F1-1: ST-11 (cc11)	198	2068832	23580	10449	
51164	B264	2016	Mar	W: P1.5,2: F1-1: ST-11 (cc11)	186	2068824	24565	11123	
51165	B284	2016	Mar	W: P1.22,14: F1-7: ST-ND (cc213)	309	2155185	18804	6975	
51166	B285	2016	Mar	W: P1.5,2: F1-1: ST-11 (cc11)	186	2070325	26114	11131	
51167	B295	2016	Mar	W: P1.5,2: F1-1: ST-11 (cc11)	179	2066323	26195	11544	
51168	B346	2016	Mar	W: P1.5,2: F1-1: ST-11 (cc11)	190	2105439	25501	11082	
51169	B366	2016	Mar	W: P1.5,2: F1-1: ST-11 (cc11)	191	2071427	23663	10846	

51170	B394	2016	Mar	W: P1.5,2: F1-1: ST-11 (cc11)	191	2079939	24773	10890
51171	B396	2016	Mar	W: P1.5,2: F1-1: ST-11 (cc11)	193	2114396	28558	10956
51172	R001	2015	Sep	W: P1.5,2: F1-1: ST-11 (cc11)	190	2071405	26643	10903
51173	R191	2015	Sep	W: P1.5,2: F1-1: ST-11 (cc11)	201	2069880	23575	10298
51174	R258	2015	Sep	W: P1.5,2: F1-1: ST-11 (cc11)	178	2069447	26274	11627
51176	R558	2015	Sep	W: P1.5,2: F1-1: ST-10651 (cc11)	201	2076740	23455	10333
51177	R779	2015	Nov	W: P1.5,2: F1-1: ST-11 (cc11)	208	2081300	24194	10007
51178	R811	2015	Nov	W: P1.5,2: F1-1: ST-11 (cc11)	198	2070529	23563	10458
51179	R825	2015	Nov	W: P1.5,2: F1-1: ST-11 (cc11)	189	2076617	25944	10988
51180	R838	2015	Nov	W: P1.5,2: F1-1: ST-11 (cc11)	187	2070122	24983	11071
51181	R852	2015	Nov	W: P1.5,2: F1-1: ST-11 (cc11)	191	2067669	23579	10826
51182	R888	2015	Nov	W: P1.5,2: F1-1: ST-11 (cc11)	191	2108815	25501	11041
51183	R889	2015	Nov	W: P1.5,2: F1-1: ST-11 (cc11)	205	2079622	24677	10145
51184	R920	2015	Nov	W: P1.5,2: F1-1: ST-11 (cc11)	191	2077855	24677	10879
51185	R941	2015	Nov	W: P1.5,2: F1-1: ST-11 (cc11)	187	2069347	25501	11067
51186	R949	2015	Nov	W: P1.5,2: F1-1: ST-11 (cc11)	190	2069910	24697	10895
51187	R958	2015	Nov	W: P1.5,2: F1-1: ST-11 (cc11)	187	2070296	24560	11072
51188	R980	2015	Nov	W: P1.5,2: F1-1: ST-11 (cc11)	189	2067453	25501	10939
51189	R990	2015	Nov	W: P1.5,2: F1-1: ST-11 (cc11)	209	2122852	23237	10158
51190	R998	2015	Nov	W: P1.5,2: F1-1: ST-11 (cc11)	218	2083250	22376	9557
51215	B025	2015	Nov	NG: P1.18,25-44: F5-5: ST-823 (cc198)	130	2030344	30264	15619
51216	B044	2015	Nov	NG: P1.18,25-44: F5-5: ST-823 (cc198)	131	2027635	34417	15479
51221	B073	2015	Nov	NG: P1.22-1,14: F4-1: ST-35 (cc35)	177	2075071	28664	11724
51222	B081	2015	Nov	NG: P1.18,25-15: F5-5: ST-823 (cc198)	122	2032329	41027	16659
51223	B083	2015	Nov	NG: P1.17,9: F5-5: ST-2384 (cc198)	126	2036644	35320	16164
51226	B101	2015	Nov	NG: P1.22,9: F-ND: ST-1417 (cc35)	208	2115557	22671	10171
51229	B119	2015	Nov	Y: P1.5-2,10-29: F4-1: ST-23 (cc23)	198	2044067	21662	10324
51233	B125	2016	Mar	NG: P1.18,25-15: F5-5: ST-823 (cc198)	128	2033550	36562	15888
51234	B132	2016	Mar	NG: P1.18,25-44: F5-5: ST-823 (cc198)	132	2028131	30145	15365
51235	B133	2016	Mar	NG: P1.7,30: F1-2: ST-53 (cc53)	135	2043951	35837	15141

51236	B147	2016	Mar	NG: P1.18-4,25: F4-1: ST-1136 (cc1136)	182	2090604	25115	11487
51237	B151	2016	Mar	NG: P1.7-1,1: F1-6: ST-2403 (cc865)	222	2125425	24202	9574
51238	B159	2016	Mar	NG: P1.18,25-44: F5-5: ST-823 (cc198)	130	2035562	29488	15659
51240	B166	2016	Mar	NG: P1.18-37,25: F1-5: ST-963 (-)	202	2092934	24643	10362
51241	B169	2016	Mar	NG: P1.18,25-44: F5-5: ST-823 (cc198)	129	2032519	32889	15756
51242	B170	2016	Mar	NG: P1.7-2,30: F1-2: ST-53 (cc53)	141	2047205	33006	14520
51243	B171	2016	Mar	Y: P1.5-1,10-1: F4-1: ST-12176 (cc23)	177	2044445	24694	11551
51244	B182	2016	Mar	Y: P1.5-1,10-4: F4-1: ST-1655 (cc23)	178	2047490	25326	11503
51246	B187	2016	Mar	Y: P1.5-1,10-46: F3-9: ST-4963 (cc103)	236	2082940	19558	8827
51247	B189	2016	Mar	Y: P1.5-2,10-2: F1-24: ST-23 (cc23)	178	2054737	26143	11544
51249	B195	2016	Mar	NG: P1.18-4,25-18: F1-2: ST-ND (cc53)	153	2095126	35891	13694
51250	B197	2016	Mar	W: P1.5,2: F1-1: ST-11 (cc11)	181	2078958	23577	11486
51251	B200	2016	Mar	NG: P1.18-1,3: F1-6: ST-865 (cc865)	231	2133434	20445	9236
51252	B201	2016	Mar	NG: P1.7,30-2: F1-2: ST-53 (cc53)	137	2042203	35780	14907
51253	B204	2016	Mar	NG: P1.7,30-2: F1-2: ST-53 (cc53)	148	2050366	35797	13854
51255	B208	2016	Mar	Y: P1.5-1,10-1: F4-1: ST-12176 (cc23)	172	2040768	24681	11865
51258	B218	2016	Mar	W: P1.5,2: F1-1: ST-11 (cc11)	203	2110672	25501	10398
51262	B237	2016	Mar	NG: P1.18,25-44: F5-5: ST-823 (cc198)	135	2033878	31568	15066
51263	B239	2016	Mar	Y: P1.5-1,10-1: F4-1: ST-1655 (cc23)	189	2046967	24572	10831
51265	B245	2016	Mar	NG: P1.18,25-44: F5-5: ST-823 (cc198)	136	2034961	35401	14963
51266	B246	2016	Mar	W: P1.5,2: F1-1: ST-11 (cc11)	188	2070377	26195	11013
51267	B250	2016	Mar	NG: P1.18,25-44: F5-5: ST-823 (cc198)	131	2030852	30102	15503
51268	B260	2016	Mar	NG: P1.18,25-44: F5-5: ST-823 (cc198)	138	2033244	29167	14734
51269	B261	2016	Mar	NG: P1.18,25-44: F5-5: ST-823 (cc198)	138	2034279	34438	14742
51271	B269	2016	Mar	NG: P1.18,25-44: F5-5: ST-823 (cc198)	126	2035010	35353	16151
51272	B276	2016	Mar	Y: P1.5-1,10-1: F5-2: ST-168 (cc167)	169	2056683	29370	12170
51273	B280	2016	Mar	NG: P1.18-4,25: F4-1: ST-1136 (cc1136)	161	2049423	28843	12730
51278	B289	2016	Mar	NG: P1.18,25-44: F5-5: ST-823 (cc198)	132	2034523	30397	15414
51279	B290	2016	Mar	NG: P1.18,25-44: F5-5: ST-823 (cc198)	131	2034883	36401	15534
51282	B293	2016	Mar	NG: P1.18,25-15: F5-5: ST-823 (cc198)	126	2034992	36631	16151

51285	B304	2016	Mar	Y: P1.5-1,10-8: F4-1: ST-1655 (cc23)	187	2052019	21692	10974
51289	B317	2016	Mar	NG: P1.7-2,4: F1-5: ST-41 (cc41/44)	180	2052875	25563	11405
51290	B325	2016	Mar	Y: P1.18-7,9: F3-9: ST-ND (cc103)	228	2085227	20163	9146
51293	B331	2016	Mar	NG: P1.7,30-5: F1-2: ST-53 (cc53)	142	2047324	32994	14418
51294	B340	2016	Mar	NG: P1.17,9: F5-5: ST-823 (cc198)	141	2031620	28408	14409
51297	B364	2016	Mar	NG: P1.18,25-44: F5-5: ST-823 (cc198)	136	2036857	28205	14977
51299	B369	2016	Mar	NG: P1.18-1,30-2: F3-7: ST-1117 (cc1117)	205	2066556	23006	10081
51300	B370	2016	Mar	NG: P1.7-2,30-2: F3-60: ST-ND (cc53)	145	2056304	35997	14182
51302	B377	2016	Mar	NG: P1.7,30-3: F1-2: ST-ND (cc53)	143	2045891	35838	14307
51303	B379	2016	Mar	NG: P1.18,25-44: F5-5: ST-823 (cc198)	139	2029069	26952	14598
51304	B380	2016	Mar	NG: P1.21-7,16: F5-36: ST-12582 (cc1157)	196	2073632	23673	10580
51307	B401	2016	Mar	NG: P1.7,30-3: F1-2: ST-ND (cc53)	143	2049940	33826	14336
51308	B402	2016	Mar	NG: P1.7-2,30-5: F1-2: ST-53 (cc53)	142	2041602	32256	14378
51309	B403	2016	Mar	NG: P1.18-4,25: F1-1: ST-1136 (cc1136)	161	2051188	31317	12741
51311	B411	2016	Mar	Y: P1.5-1,10-4: F4-1: ST-1655 (cc23)	183	2044178	24955	11171
51313	R011	2015	Sep	Y: P1.5-1,10-1: F4-1: ST-12176 (cc23)	185	2041328	24594	11035
51314	R023	2015	Sep	NG: P1.7,30-2: F1-2: ST-53 (cc53)	156	2050423	35926	13144
51316	R035	2015	Sep	NG: P1.7,30-6: F1-2: ST-ND (cc53)	161	2041596	30142	12681
51317	R048	2015	Sep	NG: P1.18,25-15: F5-5: ST-823 (cc198)	142	2033672	36631	14322
51318	R056	2015	Sep	NG: P1.18-1,3: F4-66: ST-1136 (cc1136)	179	2072947	28261	11581
51319	R062	2015	Sep	Y: P1.5-1,10-1: F4-1: ST-1655 (cc23)	179	2050176	27281	11454
51324	R109	2015	Sep	Y: P1.21,16-59: F5-36: ST-1157 (cc1157)	210	2040610	22087	9718
51326	R135	2015	Sep	NG: P1.7-1,1: F1-6: ST-865 (cc865)	228	2133963	20983	9360
51327	R136	2015	Sep	NG: P1.18,25-44: F5-5: ST-823 (cc198)	136	2036018	34438	14971
51328	R156	2015	Sep	NG: P1.18-4,ND: F4-1: ST-ND (cc1136)	156	2060189	28254	13207
51329	R164	2015	Sep	NG: P1.18-1,30: F3-7: ST-1117 (cc1117)	180	2067131	27729	11485
51331	R172	2015	Sep	NG: P1.17-1,23-2: F1-7: ST-269 (cc269)	228	2111608	25586	9262
51332	R174	2015	Sep	NG: P1.18-1,30-2: F3-7: ST-1117 (cc1117)	208	2063410	24535	9921
51333	R178	2015	Sep	NG: P1.22,14: F5-5: ST-213 (cc213)	251	2131987	19163	8494
51335	R192	2015	Sep	NG: P1.18,25-15: F5-5: ST-823 (cc198)	140	2028377	28716	14489

51337	R199	2015	Sep	NG: P1.18,ND: F5-5: ST-823 (cc198)	143	2032197	27321	14212
51343	R265	2015	Sep	NG: P1.7,30-3: F1-2: ST-53 (cc53)	150	2048320	35788	13656
51348	R286	2015	Sep	Y: P1.5-1,10-1: F4-1: ST-1655 (cc23)	198	2046015	21510	10334
51350	R297	2015	Sep	Y: P1.5-1,10-10: F4-1: ST-1655 (cc23)	187	2043837	22281	10930
51351	R300	2015	Sep	Y: P1.5-1,10-1: F4-1: ST-1655 (cc23)	187	2047631	24909	10950
51358	R346	2015	Sep	Y: P1.5-1,10-1: F4-1: ST-1655 (cc23)	183	2041331	24160	11155
51362	R383	2015	Sep	Y: P1.5-1,10-8: F4-1: ST-1655 (cc23)	199	2055223	21692	10328
51365	R424	2015	Sep	Y: P1.5-2,10-2: F4-1: ST-183 (cc23)	167	2066583	27902	12375
51368	R477	2015	Sep	Y: P1.5-1,10-4: F4-1: ST-1655 (cc23)	182	2037205	22862	11194
51369	R488	2015	Sep	NG: P1.19-3,15: F5-2: ST-2380 (cc35)	200	2135793	26285	10679
51371	R504	2015	Sep	NG: P1.17,9: F1-82: ST-823 (cc198)	146	2038843	27797	13965
51373	R513	2015	Sep	NG: P1.7-2,30: F1-2: ST-ND (cc53)	146	2048839	35778	14034
51374	R531	2015	Sep	NG: P1.12-6,13-13: F5-5: ST-7129 (-)	214	2037343	21740	9521
51375	R534	2015	Sep	Y: P1.5-1,10-4: F4-1: ST-23 (cc23)	200	2037781	21662	10189
51376	R542	2015	Sep	NG: P1.21-7,16: F5-36: ST-1157 (cc1157)	209	2116553	23052	10128
51379	R570	2015	Sep	NG: P1.22-1,14: F4-1: ST-457 (cc35)	208	2081403	21112	10007
51380	R575	2015	Sep	W: P1.5,2: F1-1: ST-11 (cc11)	192	2065298	26195	10757
51382	R581	2015	Sep	NG: P1.7,30-3: F1-2: ST-ND (cc53)	155	2043670	33169	13185
51385	R589	2015	Sep	NG: P1.18-1,30-2: F3-7: ST-1117 (cc1117)	207	2061655	25860	9960
51386	R598	2015	Sep	NG: P1.7-1,1: F1-6: ST-865 (cc865)	229	2086794	19899	9113
51389	R621	2015	Sep	NG: P1.18,25-44: F5-5: ST-823 (cc198)	140	2029827	27644	14499
51392	R640	2015	Sep	NG: P1.18-1,3-4: F5-36: ST-3655 (cc1157)	198	2018737	23073	10196
51393	R642	2015	Sep	NG: P1.18,25-15: F5-5: ST-10042 (cc198)	133	2030207	36173	15265
51394	R663	2015	Sep	Y: P1.5-1,10-10: F4-1: ST-1655 (cc23)	182	2046055	21510	11243
51400	R683	2015	Sep	NG: P1.18,25-15: F5-5: ST-823 (cc198)	135	2025594	34436	15005
51403	R704	2015	Sep	NG: P1.7,30-3: F1-2: ST-53 (cc53)	162	2043850	27067	12617
51406	R741	2015	Sep	NG: P1.18,ND: F-ND: ST-823 (cc198)	145	2032357	27508	14017
51407	R747	2015	Sep	NG: P1.18,14: F5-2: ST-ND (-)	185	2049122	31700	11077
51409	R765	2015	Sep	Y: P1.5-1,10-4: F3-4: ST-1624 (cc167)	206	2069736	24999	10048
51410	R769	2015	Sep	Y: P1.5-1,10-4: F4-1: ST-23 (cc23)	206	2041260	22163	9910

51411	R777	2015	Nov	Y: P1.5-1,10-4: F4-1: ST-23 (cc23)	217	2039021	20667	9397
51415	R788	2015	Nov	NG: P1.7,30-5: F1-2: ST-53 (cc53)	153	2043607	32146	13357
51417	R796	2015	Nov	NG: P1.18-1,30-2: F3-7: ST-1117 (cc1117)	185	2068237	26645	11180
51419	R803	2015	Nov	NG: P1.18,25-15: F5-5: ST-823 (cc198)	132	2032236	34667	15396
51420	R805	2015	Nov	Y: P1.5-8,10-4: F5-2: ST-168 (cc167)	197	2060202	25009	10458
51421	R808	2015	Nov	NG: P1.7-1,1: F1-6: ST-2403 (cc865)	241	2119880	20656	8797
51422	R814	2015	Nov	NG: P1.7-1,1: F1-6: ST-2403 (cc865)	229	2122788	24207	9270
51423	R815	2015	Nov	Y: P1.5-1,10-4: F4-1: ST-23 (cc23)	220	2043849	20400	9291
51424	R822	2015	Nov	Y: P1.5-1,10-4: F4-1: ST-23 (cc23)	197	2039343	21510	10352
51426	R832	2015	Nov	NG: P1.18-4,25: F4-1: ST-1136 (cc1136)	189	2087295	24563	11044
51427	R839	2015	Nov	NG: P1.18-4,25-18: F1-2: ST-ND (cc53)	153	2089235	32921	13656
51430	R850	2015	Nov	NG: P1.7,30-2: F5-25: ST-53 (cc53)	138	2111079	35817	15298
51431	R855	2015	Nov	NG: P1.7-1,4-1: F5-2: ST-4237 (cc865)	228	2047220	22527	8980
51432	R856	2015	Nov	NG: P1.7,30-3: F1-2: ST-53 (cc53)	160	2041759	33827	12761
51433	R866	2015	Nov	NG: P1.18,14: F5-2: ST-ND (-)	184	2049094	33356	11137
51434	R872	2015	Nov	Y: P1.5-1,10-1: F4-1: ST-12176 (cc23)	183	2043592	24626	11168
51438	R892	2015	Nov	NG: P1.18-1,3: F1-6: ST-865 (cc865)	240	2132112	18928	8884
51439	R910	2015	Nov	NG: P1.18,25-44: F5-5: ST-823 (cc198)	135	2025876	29151	15007
51442	R914	2015	Nov	NG: P1.7-2,30-2: F3-60: ST-ND (cc53)	149	2050408	33791	13762
51443	R915	2015	Nov	NG: P1.7,30-3: F1-2: ST-53 (cc53)	152	2043368	27203	13444
51446	R937	2015	Nov	NG: P1.7-2,4: F1-5: ST-41 (cc41/44)	180	2051233	25965	11396
51449	R950	2015	Nov	Y: P1.18-7,9: F3-9: ST-ND (cc103)	218	2081824	19553	9550
51450	R951	2015	Nov	NG: P1.18,25-15: F5-5: ST-823 (cc198)	135	2066617	36398	15309
51452	R953	2015	Nov	NG: P1.7,30-2: F1-2: ST-53 (cc53)	156	2045840	32004	13115
51456	R962	2015	Nov	NG: P1.18-1,30: F3-7: ST-1117 (cc1117)	183	2065535	27700	11288
51458	R965	2015	Nov	NG: P1.7,30-5: F1-2: ST-53 (cc53)	144	2047474	36185	14219
51462	R973	2015	Nov	NG: P1.7,30-5: F1-2: ST-53 (cc53)	157	2052889	32148	13076
51929	R837	2015	Nov	NG: P1.18,25-15: F5-5: ST-823 (cc198)	125	2035242	36398	16282
51933	R902	2015	Nov	Y: P1.5-1,10-4: F1-1: ST-1655 (cc23)	204	2041631	22281	10008

^a Derived from genome sequence data.

^b ND = not determined.

^c Weighted median statistic indicating that 50% of the entire assembly is contained in contigs equal to, or larger than, this value.

SUPPLEMENTARY TABLE 2. Details of previously assigned MenW:cc11 isolates used in this study (*n*=60).

ID	Isolate	Country	Year	Lineage	Sub-lineage	Cluster/Strain	Reference
29337	1356	South Africa	2005	11.1	Hajj	Endemic South African	[1]
29422	3025	South Africa	2005	11.1	Hajj	Endemic South African	[1]
29397	7313	South Africa	2006	11.1	Hajj	Endemic South African	[1]
29327	14983	South Africa	2007	11.1	Hajj	Endemic South African	[1]
29357	15279	South Africa	2007	11.1	Hajj	Endemic South African	[1]
21573	SA_serogroup W_NM1	South Africa	2008	11.1	Hajj	Endemic South African	[1]
29367	24204	South Africa	2009	11.1	Hajj	Endemic South African	[1]
29369	34873	South Africa	2012	11.1	Hajj	Endemic South African	[1]
29707	M07 240118	UK	2007	11.1	Hajj	Endemic South African	[1]
20424	M11 240389	UK	2011	11.1	Hajj	Endemic South African	[1]
30080	2001076	Algeria	2001	11.1	Hajj	Anglo-French Hajj	[1]
30086	2001068	Chad	2001	11.1	Hajj	Anglo-French Hajj	[1]
30075	2000081	Senegal	2000	11.1	Hajj	Anglo-French Hajj	[1]
29932	M00 241380	UK	2000	11.1	Hajj	Anglo-French Hajj	[1]
29942	M00 241445	UK	2000	11.1	Hajj	Anglo-French Hajj	[1]
29954	M00 241675	UK	2000	11.1	Hajj	Anglo-French Hajj	[1]
29966	M00 242531	UK	2000	11.1	Hajj	Anglo-French Hajj	[1]
29680	M01 242591	UK	2001	11.1	Hajj	Anglo-French Hajj	[1]
30016	M01 240915	UK	2001	11.1	Hajj	Anglo-French Hajj	[1]
31167	M14 240446	France	2014	11.1	Hajj	Anglo-French Hajj	[1]
30106	2001215	Burkina Faso	2001	11.1	Hajj	Burkina Faso/North African	[1]
30088	2002019	Niger	2001	11.1	Hajj	Burkina Faso/North African	[1]
30095	2003035	Niger	2003	11.1	Hajj	Burkina Faso/North African	[1]
30180	M98 251534	UK	1998	11.1	Hajj	Burkina Faso/North African	[1]
30076	2000175	Cameroon	2000	11.1	Hajj	Burkina Faso/North African	[1]
30077	2000176	Cameroon	2000	11.1	Hajj	Burkina Faso/North African	[1]

27087	LNP19995	Burkina Faso	2002	11.1	Hajj	Burkina Faso/North African	[1]
30083	2002021	Cameroon	2001	11.1	Hajj	Burkina Faso/North African	[1]
29679	M01 242679	UK	2001	11.1	Hajj	Burkina Faso/North African	[1]
29705	M06 240459	UK	2006	11.1	Hajj	Burkina Faso/North African	[1]
26898	12002_2013	Ireland	2013	11.1	South American-UK	Original UK	[1, 2]
20196	M11 240035	UK	2011	11.1	South American-UK	Original UK	[1, 2]
21446	M12 240240	UK	2012	11.1	South American-UK	Original UK	[1, 2]
28125	M12 240774	UK	2012	11.1	South American-UK	Original UK	[1, 2]
28142	M13 240114	UK	2013	11.1	South American-UK	Original UK	[1, 2]
28152	M13 240251	UK	2013	11.1	South American-UK	Original UK	[1, 2]
28158	M13 240457	UK	2013	11.1	South American-UK	Original UK	[1, 2]
30138	M13 240649	UK	2013	11.1	South American-UK	Original UK	[1, 2]
30152	M13 240730	UK	2013	11.1	South American-UK	Original UK	[1, 2]
30164	M14 240043	UK	2014	11.1	South American-UK	Original UK	[1, 2]
30153	M13 240732	UK	2013	11.1	South American-UK	2013-strain	[1, 2]
30161	M14 240029	UK	2014	11.1	South American-UK	2013-strain	[1, 2]
30167	M14 240054	UK	2014	11.1	South American-UK	2013-strain	[1, 2]
28153	M13 240269	UK	2013	11.1	South American-UK	2013-strain	[1, 2]
37717	M14 240556	UK	2014	11.1	South American-UK	2013-strain	[2]
40399	LNP28371	France	2015	11.1	South American-UK	2013-strain	[2]
37798	M15 240011	UK	2015	11.1	South American-UK	2013-strain	[2]
35731	M14 240351	UK	2014	11.1	South American-UK	2013-strain	[2]
29722	M13 240530	UK	2013	11.1	South American-UK	2013-strain	[1, 2]
29737	M13 240553	UK	2013	11.1	South American-UK	2013-strain	[1, 2]
31148	M14 240411	Argentina	2008	11.1	South American-UK	South American	[1, 2]
31149	M14 240412	Argentina	2010	11.1	South American-UK	South American	[1, 2]
31151	M14 240414	Argentina	2011	11.1	South American-UK	South American	[1, 2]
31152	M14 240415	Argentina	2012	11.1	South American-UK	South American	[1, 2]

20057	M10 240671	UK	2010	11.1	South American-UK	South American	[1, 2]
31168	M14 240447	France UK tourist	2014	11.1	South American-UK	South American	[1, 2]
31156	M14 240417	Brazil	2011	11.1	South American-UK	South American	[1, 2]
31158	M14 240419	Brazil	2010	11.1	South American-UK	South American	[1, 2]
38024	M15 240310	UK	2015	11.1	South American-UK	South American	[2]
37845	M15 240066	UK	2015	11.1	South American-UK	South American	[2]

References:

1. Lucidarme J, Hill DM, Bratcher HB, et al. Genomic resolution of an aggressive, widespread, diverse and expanding meningococcal serogroup B, C and W lineage. *J Infect* **2015**; 71:544-52.
2. Lucidarme J, Scott KJ, Ure R, et al. An international invasive meningococcal disease outbreak due to a novel and rapidly expanding serogroup W strain, Scotland and Sweden, July to August 2015. *Euro Surveill* **2016**; 21: pii = 30395.

SUPPLEMENTARY TABLE 3. Details of the 200 MenW invasive isolates used in this study. All were isolated during the epidemiological year 2015-16 in England, Wales, Scotland and Northern Ireland. Further details can be found in the Meningitis Research Foundation Meningococcus Genome Library database.

ID	Isolate	Strain designation ^a
38306	15.8705948	W: P1.5,2: F1-1: ST-11 (cc11)
38307	15.8706012	W: P1.5,2: F1-1: ST-11 (cc11)
38308	15.8706090	W: P1.5,2: F1-1: ST-11 (cc11)
38309	15.8706113	W: P1.5,2: F1-1: ST-11 (cc11)
38520	M15 240722	W: P1.5,2: F1-1: ST-11 (cc11)
39001	15.8705087	W: P1.5,2: F1-1: ST-11 (cc11)
39320	M15 240629	W: P1.5,2: F1-1: ST-11 (cc11)
39326	M15 240638	W: P1.5,2: F1-1: ST-11 (cc11)
39327	M15 240639	W: P1.18-7,9-5: F4-1: ST-184 (cc22)
39328	M15 240640	W: P1.5,2: F1-1: ST-11 (cc11)
39331	M15 240643	W: P1.5,2: F1-1: ST-11 (cc11)
39333	M15 240645	W: P1.18-1,3: F3-9: ST-ND (cc22)
39335	M15 240648	W: P1.5,2: F1-1: ST-11 (cc11)
39337	M15 240651	W: P1.5,2: F1-1: ST-11 (cc11)
39340	M15 240657	W: P1.5,2: F1-1: ST-11 (cc11)
39341	M15 240658	W: P1.5,2: F1-1: ST-11 (cc11)
39342	M15 240659	W: P1.5,2: F1-1: ST-11 (cc11)
39344	M15 240661	W: P1.5,2: F1-1: ST-11 (cc11)
39345	M15 240662	W: P1.5,2: F1-1: ST-11 (cc11)
39346	M15 240664	W: P1.5,2: F1-1: ST-11 (cc11)
39349	M15 240699	W: P1.5,2: F1-1: ST-ND (cc11)
39352	M15 240704	W: P1.5,2: F1-1: ST-11 (cc11)
39356	M15 240718	W: P1.5,2: F1-1: ST-11 (cc11)
39358	M15 240720	W: P1.5,2: F1-1: ST-11 (cc11)
39365	M15 240730	W: P1.5,2: F1-1: ST-11 (cc11)
39368	M15 240740	W: P1.5,2: F1-1: ST-11 (cc11)
39369	M15 240742	W: P1.5,2: F1-1: ST-11 (cc11)
39373	M15 240746	W: P1.18,25-15: F1-146: ST-11 (cc11)
39385	M15 240762	W: P1.5,2: F1-1: ST-11 (cc11)
39387	M15 240765	W: P1.18-1,3: F4-1: ST-1286 (cc22)
39395	M15 240778	W: P1.5,2: F1-1: ST-11 (cc11)
39396	M15 240779	W: P1.5,2: F1-1: ST-11 (cc11)
39398	M15 240782	W: P1.5,2: F1-1: ST-11 (cc11)
39401	M15 240785	W: P1.5,2: F5-12: ST-11 (cc11)
39404	M15 240788	W: P1.5,2: F1-146: ST-11 (cc11)
39408	M15 240794	W: P1.5,2: F1-1: ST-11 (cc11)
39410	M15 240796	W: P1.5,2: F1-1: ST-11 (cc11)
39411	M15 240797	W: P1.5,2: F1-146: ST-11 (cc11)
39412	M15 240798	W: P1.5,2: F1-1: ST-11 (cc11)
39416	M15 240803	W: P1.22,14: F4-1: ST-1281 (cc22)

39421	M15 240816	W: P1.5,2: F1-1: ST-11 (cc11)
39422	M15 240818	W: P1.5,2: F1-1: ST-11 (cc11)
39423	M15 240819	W: P1.5,2: F1-1: ST-11 (cc11)
39424	M15 240820	W: P1.5-2,10-1: F5-8: ST-9316 ()
39427	M15 240826	W: P1.5,2: F1-1: ST-11 (cc11)
39429	M15 240829	W: P1.5,2: F1-1: ST-11 (cc11)
39430	M15 240830	W: P1.5,2: F1-1: ST-11 (cc11)
39431	M15 240831	W: P1.5,2: F1-1: ST-11 (cc11)
39433	M15 240833	W: P1.5,2: F1-1: ST-11 (cc11)
39435	M15 240844	W: P1.5,2: F1-1: ST-11 (cc11)
39436	M15 240845	W: P1.5,2: F1-1: ST-11 (cc11)
39438	M15 240848	W: P1.5,2: F1-1: ST-11 (cc11)
40322	M15 240852	W: P1.22,2: F1-1: ST-11 (cc11)
41451	M15 240753	W: P1.5,2: F1-146: ST-11 (cc11)
41455	M15 240856	W: P1.5,2: F1-146: ST-11 (cc11)
41458	M15 240860	W: P1.5,2: F1-1: ST-11 (cc11)
41460	M15 240862	W: P1.18-1,3: F4-1: ST-ND (cc22)
41462	M15 240864	W: P1.5,2: F1-1: ST-11 (cc11)
41463	M15 240866	W: P1.5,2: F1-1: ST-11 (cc11)
41467	M15 240871	W: P1.5,2: F1-1: ST-11 (cc11)
41469	M15 240873	W: P1.5,2: F1-1: ST-11 (cc11)
41470	M15 240876	W: P1.5,2: F1-146: ST-11 (cc11)
41473	M15 240879	W: P1.5,2: F1-1: ST-11 (cc11)
41478	M15 240885	W: P1.5,2: F1-1: ST-11 (cc11)
41481	M15 240888	W: P1.5,2: F1-1: ST-11 (cc11)
41486	M15 240896	W: P1.5,2: F1-1: ST-11 (cc11)
41489	M15 240900	W: P1.5,2: F1-1: ST-ND (cc11)
41494	M15 240905	W: P1.5,2: F1-1: ST-11 (cc11)
41501	M15 240918	W: P1.5,2: F1-1: ST-11 (cc11)
41502	M15 240919	W: P1.5,2: F1-1: ST-11 (cc11)
41515	M15 240936	W: P1.5,2: F1-1: ST-11 (cc11)
41516	M15 240937	W: P1.5,2: F1-1: ST-11 (cc11)
41519	M15 240940	W: P1.5,2: F1-146: ST-11 (cc11)
41522	M15 240946	W: P1.5,2: F1-1: ST-11 (cc11)
41524	M15 240949	W: P1.5-2,10-1: F4-1: ST-ND (cc23)
41525	M15 240952	W: P1.5,2: F1-1: ST-11 (cc11)
41530	M15 240958	W: P1.5,2: F1-1: ST-11 (cc11)
41531	M15 240960	W: P1.5,2: F1-1: ST-11 (cc11)
41533	M15 240963	W: P1.5,2: F1-1: ST-10651 (cc11)
41536	M15 240968	W: P1.5,2: F1-1: ST-ND (cc11)
41539	M15 240974	W: P1.18-1,3: F4-1: ST-1281 (cc22)
41543	M15 240978	W: P1.5,2: F1-1: ST-11 (cc11)
41546	M15 240981	W: P1.5,2: F1-1: ST-11 (cc11)
41547	M15 240983	W: P1.5,2: F1-1: ST-11 (cc11)
41549	M15 240985	W: P1.5,2: F1-1: ST-11 (cc11)
41552	M15 240988	W: P1.5,2: F1-1: ST-10651 (cc11)

41558	M15 240995	W: P1.5,2: F1-1: ST-11 (cc11)
42475	M16 240003	W: P1.5,2: F1-1: ST-11 (cc11)
42476	M16 240005	W: P1.5,2: F1-1: ST-10651 (cc11)
42478	M16 240008	W: P1.5,2: F1-1: ST-11 (cc11)
42480	M16 240010	W: P1.5,2: F1-1: ST-11 (cc11)
42481	M16 240011	W: P1.5,2: F1-146: ST-11 (cc11)
42482	M16 240013	W: P1.5,2: F1-1: ST-11 (cc11)
42483	M16 240014	W: P1.5,2: F1-1: ST-11 (cc11)
42484	M16 240015	W: P1.5,2: F1-1: ST-11 (cc11)
42485	M16 240016	W: P1.5,2: F1-1: ST-11 (cc11)
42486	M16 240017	W: P1.5,2: F1-1: ST-11 (cc11)
42489	M16 240020	W: P1.5,2: F1-1: ST-11 (cc11)
42491	M16 240022	W: P1.5,2: F1-1: ST-ND (cc11)
42492	M16 240024	W: P1.5,2: F1-1: ST-11 (cc11)
42493	M16 240026	W: P1.5-1,10-1: F4-1: ST-1655 (cc23)
42494	M16 240027	W: P1.5,2: F1-1: ST-11 (cc11)
42497	M16 240031	W: P1.5,2: F1-1: ST-10651 (cc11)
42504	M16 240039	W: P1.5,2: F1-1: ST-ND (cc11)
42505	M16 240040	W: P1.5,2: F1-1: ST-ND (cc11)
42506	M16 240041	W: P1.5,2: F1-1: ST-ND (cc11)
42512	M16 240047	W: P1.5,2: F1-1: ST-ND (cc11)
42517	M16 240052	W: P1.5,2: F1-1: ST-11 (cc11)
42519	M16 240055	W: P1.5,2: F1-1: ST-11 (cc11)
42525	M16 240065	W: P1.5,2: F1-1: ST-10651 (cc11)
42526	M16 240066	W: P1.5,2: F1-1: ST-11 (cc11)
42530	M16 240070	W: P1.5,2: F1-1: ST-11 (cc11)
42532	M16 240072	W: P1.5,2: F1-1: ST-11 (cc11)
42533	M16 240073	W: P1.5,2: F1-1: ST-11 (cc11)
42534	M16 240074	W: P1.5,2: F1-1: ST-ND (cc11)
42535	M16 240075	W: P1.5,2: F1-1: ST-11 (cc11)
42545	M16 240088	W: P1.5,2: F1-1: ST-11 (cc11)
42549	M16 240092	W: P1.5,2: F1-1: ST-11 (cc11)
42551	M16 240108	W: P1.5,2: F1-1: ST-11 (cc11)
42552	M16 240111	W: P1.5,2: F1-1: ST-11 (cc11)
42553	M16 240112	W: P1.5,2: F1-1: ST-11 (cc11)
42555	M16 240116	W: P1.5,2: F1-1: ST-11 (cc11)
42556	M16 240117	W: P1.5,2: F1-1: ST-11 (cc11)
42561	M16 240123	W: P1.5,2: F1-1: ST-10651 (cc11)
42564	M16 240126	W: P1.5,2: F1-1: ST-11 (cc11)
42568	M16 240131	W: P1.5,2: F1-1: ST-11 (cc11)
42572	M16 240136	W: P1.5,2: F1-1: ST-11 (cc11)
42573	M16 240138	W: P1.Δ,2: F1-1: ST-10651 (cc11)
42576	M16 240141	W: P1.5,2: F1-1: ST-11 (cc11)
42585	M16 240152	W: P1.5,2: F1-1: ST-11 (cc11)
42586	M16 240154	W: P1.5,2: F1-1: ST-10651 (cc11)
42595	M16 240163	W: P1.5,2: F1-1: ST-11 (cc11)

42605	M16 240180	W: P1.5,2: F1-1: ST-11 (cc11)
42606	M16 240181	W: P1.5,2: F1-1: ST-11 (cc11)
42612	M16 240189	W: P1.5,2: F1-1: ST-11 (cc11)
44636	M16 240226	W: P1.5,2: F1-1: ST-11 (cc11)
44638	M16 240232	W: P1.5,2: F1-1: ST-11 (cc11)
44640	M16 240234	W: P1.5,2: F1-1: ST-11 (cc11)
44684	M16 240195	W: P1.5,2: F1-1: ST-11 (cc11)
44685	M16 240196	W: P1.5,2: F1-1: ST-11 (cc11)
44686	M16 240197	W: P1.5,2: F1-1: ST-11 (cc11)
44687	M16 240198	W: P1.5,2: F1-1: ST-11 (cc11)
44697	M16 240200	W: P1.5,2: F1-146: ST-ND (cc11)
44699	M16 240208	W: P1.5,2: F1-1: ST-ND (cc11)
44704	M16 240214	W: P1.5,2: F1-1: ST-11 (cc11)
44708	M16 240219	W: P1.5,2: F1-1: ST-11 (cc11)
44714	M16 240231	W: P1.5,2: F5-5: ST-8621 (cc11)
44718	M16 240238	W: P1.5-1,10-1: F1-1: ST-11 (cc11)
44719	M16 240239	W: P1.5,2: F1-1: ST-11 (cc11)
44721	M16 240242	W: P1.5,2: F1-1: ST-11 (cc11)
44724	M16 240246	W: P1.5,2: F1-1: ST-11 (cc11)
44725	M16 240247	W: P1.5,2: F1-1: ST-11 (cc11)
44726	M16 240248	W: P1.18-1,3: F4-1: ST-22 (cc22)
44727	M16 240249	W: P1.5,2: F1-1: ST-10651 (cc11)
44730	M16 240252	W: P1.5,2: F1-1: ST-11 (cc11)
44733	M16 240255	W: P1.5,2: F1-1: ST-11 (cc11)
44736	M16 240260	W: P1.5,2: F1-1: ST-11 (cc11)
44739	M16 240267	W: P1.5,2: F1-1: ST-11 (cc11)
44740	M16 240268	W: P1.5,2: F1-1: ST-11 (cc11)
44742	M16 240271	W: P1.5,2: F1-1: ST-12208 (cc11)
44753	M16 240290	W: P1.5,2: F1-1: ST-11 (cc11)
44759	M16 240361	W: P1.5,2: F1-1: ST-11 (cc11)
44763	M16 240365	W: P1.5,2: F1-1: ST-11 (cc11)
44765	M16 240368	W: P1.5,2: F1-1: ST-11 (cc11)
44767	M16 240370	W: P1.5,2: F1-1: ST-11 (cc11)
44768	M16 240381	W: P1.5,2: F1-1: ST-11 (cc11)
44769	M16 240382	W: P1.5,2: F1-1: ST-11 (cc11)
44773	M16 240386	W: P1.5,2: F1-1: ST-11 (cc11)
44777	M16 240391	W: P1.5,2: F1-5: ST-11 (cc11)
44782	M16 240399	W: P1.5,2: F1-1: ST-ND (cc11)
44784	M16 240401	W: P1.5,2: F1-1: ST-ND (cc11)
44785	M16 240402	W: P1.5,2: F1-1: ST-ND (cc11)
44786	M16 240403	W: P1.5,2: F1-1: ST-ND (cc11)
44788	M16 240406	W: P1.5,2: F1-1: ST-ND (cc11)
44790	M16 240409	W: P1.5,2: F1-1: ST-ND (cc11)
44798	M16 240419	W: P1.5,2: F1-1: ST-ND (cc11)
44802	M16 240424	W: P1.5,2: F1-146: ST-ND (cc11)
44820	M16 240451	W: P1.5,2: F1-1: ST-11 (cc11)

44828	M16 240499	W: P1.5,2: F1-1: ST-11 (cc11)
44829	M16 240500	W: P1.5,2: F1-1: ST-ND (cc11)
44833	M16 240506	W: P1.5,2: F1-1: ST-ND (cc11)
44835	M16 240510	W: P1.5,2: F1-1: ST-ND (cc11)
47016	M16 240253	W: P1.5,2: F1-146: ST-11 (cc11)
47019	M16 240296	W: P1.5,2: F1-1: ST-11 (cc11)
47262	M16 240513	W: P1.5,2: F1-1: ST-11 (cc11)
47263	M16 240514	W: P1.5,2: F1-1: ST-11 (cc11)
47265	M16 240516	W: P1.5,2: F1-1: ST-11 (cc11)
52845	15.8707666	W: P1.5,2: F1-1: ST-11 (cc11)
52846	15.8708749	W: P1.5,2: F1-1: ST-11 (cc11)
52847	15.8708877	W: P1.5,2: F1-1: ST-11 (cc11)
52848	15.8709301	W: P1.5,2: F1-1: ST-11 (cc11)
52850	16.8700070	W: P1.5,2: F1-1: ST-11 (cc11)
52851	16.8700175	W: P1.5,2: F1-1: ST-11 (cc11)
52856	16.8701581	W: P1.5,2: F1-1: ST-11 (cc11)
52857	16.8701660	W: P1.5,2: F1-1: ST-11 (cc11)
52858	16.8701752	W: P1.5,2: F1-1: ST-11 (cc11)
52859	16.8703048	W: P1.5,2: F1-1: ST-11 (cc11)
52860	16.8703541	W: P1.5,2: F1-1: ST-11 (cc11)
52862	16.8704391	W: P1.5,2: F1-1: ST-11 (cc11)
52866	16.8705683	W: P1.5,2: F1-1: ST-ND (cc11)

^a Derived from genome sequence data

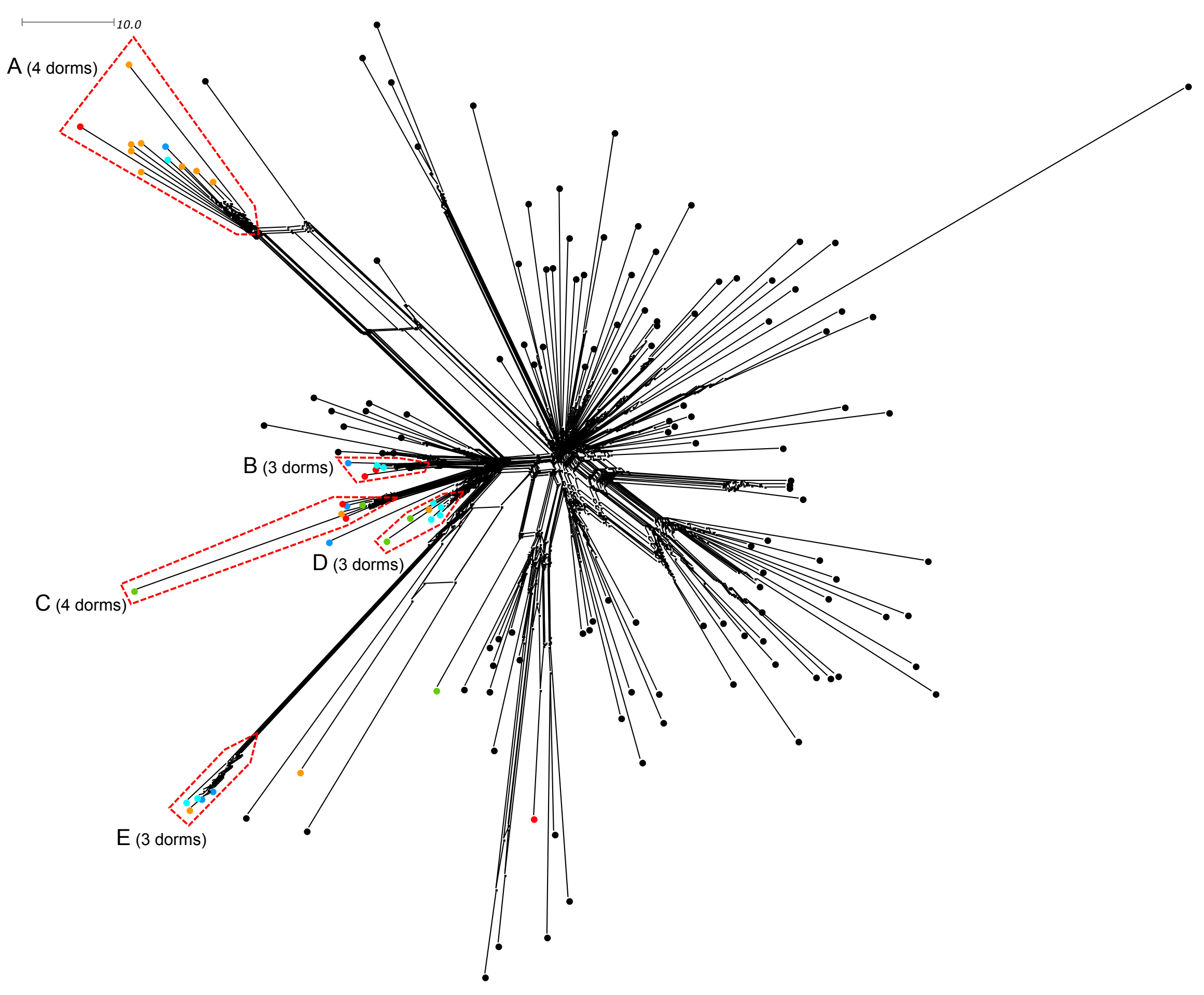
SUPPLEMENTARY TABLE 4. Details of the 104 MenY invasive isolates used in this study. All were isolated during the epidemiological year 2015-16 in England, Wales, Scotland and Northern Ireland. Further details can be found in the Meningitis Research Foundation Meningococcus Genome Library database.

ID	Isolate	Strain designation ^a
39323	M15 240635	Y: P1.5-1,10-1: F4-1: ST-ND (cc23)
39330	M15 240642	Y: P1.5-2,10-1: F4-1: ST-23 (cc23)
39332	M15 240644	Y: P1.5-1,10-1: F4-1: ST-1655 (cc23)
39334	M15 240646	Y: P1.5-1,10-1: F4-1: ST-ND (cc23)
39339	M15 240653	Y: P1.5-2,10-2: F2-13: ST-9253 (cc23)
39343	M15 240660	Y: P1.5-1,10-1: F4-1: ST-ND (cc23)
39347	M15 240697	Y: P1.5-1,10-1: F4-1: ST-11754 (cc23)
39359	M15 240723	Y: P1.5-1,10-4: F4-1: ST-23 (cc23)
39363	M15 240728	Y: P1.5-1,10-1: F4-1: ST-1655 (cc23)
39376	M15 240749	Y: P1.5-1,10-1: F4-1: ST-1655 (cc23)
39377	M15 240750	Y: P1.21,16: F3-7: ST-1466 (cc174)
39379	M15 240752	Y: P1.5-1,10-1: F4-1: ST-1655 (cc23)
39419	M15 240807	Y: P1.5-1,10-1: F4-1: ST-1655 (cc23)
39420	M15 240808	Y: P1.5-1,10-1: F4-1: ST-1655 (cc23)
39426	M15 240822	Y: P1.5-1,10-1: F4-1: ST-11754 (cc23)
39432	M15 240832	Y: P1.5-1,10-1: F4-1: ST-1655 (cc23)
39437	M15 240847	Y: P1.5-1,10-1: F4-1: ST-1655 (cc23)
39440	M15 240850	Y: P1.5-1,10-1: F4-1: ST-1655 (cc23)
41466	M15 240870	Y: P1.5-1,10-1: F4-1: ST-1655 (cc23)
41476	M15 240882	Y: P1.5-2,10-1: F4-1: ST-23 (cc23)
41480	M15 240887	Y: P1.5-1,10-1: F4-1: ST-1655 (cc23)
41495	M15 240911	Y: P1.5-1,10-1: F4-1: ST-1655 (cc23)
41497	M15 240913	Y: P1.5-2,10-1: F4-1: ST-23 (cc23)
41498	M15 240914	Y: P1.5-1,10-1: F4-1: ST-1655 (cc23)
41499	M15 240915	Y: P1.5-1,10-1: F4-1: ST-1655 (cc23)
41504	M15 240922	Y: P1.5-1,10-4: F4-1: ST-ND (cc23)
41508	M15 240926	Y: P1.5-1,10-1: F4-1: ST-1655 (cc23)
41514	M15 240935	Y: P1.5-1,10-4: F4-1: ST-1655 (cc23)
41517	M15 240938	Y: P1.5-1,10-1: F4-1: ST-1655 (cc23)
41520	M15 240941	Y: P1.5-1,10-1: F4-1: ST-ND (cc23)
41521	M15 240945	Y: P1.5-1,10-1: F4-1: ST-1655 (cc23)
41529	M15 240957	Y: P1.18-1,30-2: F4-1: ST-23 (cc23)
41534	M15 240965	Y: P1.5-1,10-1: F4-1: ST-1655 (cc23)
41535	M15 240967	Y: P1.5-2,10-1: F4-1: ST-23 (cc23)
41551	M15 240987	Y: P1.21,16: F3-7: ST-1466 (cc174)
41553	M15 240989	Y: P1.5-1,10-1: F4-1: ST-1655 (cc23)
41556	M15 240992	Y: P1.5-1,10-4: F4-1: ST-23 (cc23)
41557	M15 240994	Y: P1.5-1,10-1: F4-1: ST-1655 (cc23)
42474	M16 240002	Y: P1.5-1,10-4: F4-1: ST-23 (cc23)
42479	M16 240009	Y: P1.5-1,10-1: F4-1: ST-1655 (cc23)

42487	M16 240018	Y: P1.5-1,10-1: F4-1: ST-1655 (cc23)
42490	M16 240021	Y: P1.5-1,10-1: F4-1: ST-1655 (cc23)
42496	M16 240030	Y: P1.5-1,10-1: F4-1: ST-1655 (cc23)
42502	M16 240037	Y: P1.5-1,10-1: F4-1: ST-ND (cc23)
42508	M16 240043	Y: P1.5-1,10-22: F5-1: ST-ND (cc22)
42513	M16 240048	Y: P1.5-1,10-1: F3-4: ST-ND (cc167)
42515	M16 240050	Y: P1.5-1,10-1: F4-1: ST-ND (cc23)
42516	M16 240051	Y: P1.5-1,10-1: F4-1: ST-ND (cc23)
42518	M16 240053	Y: P1.5-1,10-1: F4-1: ST-12176 (cc23)
42527	M16 240067	Y: P1.5-1,10-1: F5-91: ST-1655 (cc23)
42529	M16 240069	Y: P1.5-1,10-1: F4-1: ST-1655 (cc23)
42538	M16 240081	Y: P1.7-2,30: F4-1: ST-1655 (cc23)
42539	M16 240082	Y: P1.5-1,2-2: F5-8: ST-3582 (cc23)
42543	M16 240086	Y: P1.18-1,3: F3-4: ST-5436 ()
42550	M16 240107	Y: P1.5-1,10-4: F4-1: ST-ND (cc23)
42557	M16 240118	Y: P1.5-2,10-1: F5-8: ST-23 (cc23)
42574	M16 240139	Y: P1.5-1,10-1: F4-1: ST-1655 (cc23)
42575	M16 240140	Y: P1.5-1,10-1: F4-1: ST-ND (cc23)
42582	M16 240148	Y: P1.5-1,10-1: F4-1: ST-1655 (cc23)
42590	M16 240158	Y: P1.5-1,10-1: F4-1: ST-ND (cc23)
42593	M16 240161	Y: P1.5-2,10-1: F4-1: ST-23 (cc23)
42596	M16 240165	Y: P1.5-1,10-4: F3-4: ST-10730 (cc167)
42599	M16 240170	Y: P1.5-1,2-2: F5-8: ST-23 (cc23)
42600	M16 240173	Y: P1.5-1,10-4: F4-1: ST-1655 (cc23)
42607	M16 240182	Y: P1.5-1,10-4: F4-1: ST-1655 (cc23)
42608	M16 240184	Y: P1.5-1,10-1: F4-1: ST-1655 (cc23)
42609	M16 240185	Y: P1.5-1,10-1: F4-1: ST-1655 (cc23)
42613	M16 240190	Y: P1.5-2,10-1: F4-1: ST-23 (cc23)
42614	M16 240192	Y: P1.18-1,3: F3-4: ST-3015 ()
44639	M16 240233	Y: P1.5-1,10-4: F4-1: ST-1655 (cc23)
44698	M16 240206	Y: P1.5-1,10-1: F4-1: ST-ND (cc23)
44706	M16 240217	Y: P1.5-1,10-1: F4-1: ST-11754 (cc23)
44716	M16 240236	Y: P1.5-1,10-1: F4-1: ST-1655 (cc23)
44720	M16 240241	Y: P1.5-1,10-1: F4-1: ST-1655 (cc23)
44732	M16 240254	Y: P1.5-1,10-4: F4-1: ST-ND (cc23)
44738	M16 240264	Y: P1.5-1,10-4: F4-1: ST-23 (cc23)
44747	M16 240278	Y: P1.5-1,10-4: F4-1: ST-23 (cc23)
44748	M16 240280	Y: P1.5-1,10-1: F4-1: ST-1655 (cc23)
44751	M16 240286	Y: P1.5-1,10-4: F4-1: ST-23 (cc23)
44760	M16 240362	Y: P1.5-2,10-1: F4-1: ST-23 (cc23)
44761	M16 240363	Y: P1.5-1,10-22: F5-1: ST-114 (cc22)
44762	M16 240364	Y: P1.5-1,10-22: F5-1: ST-ND (cc22)
44775	M16 240389	Y: P1.5-1,10-1: F4-1: ST-1655 (cc23)
44789	M16 240407	Y: P1.5-1,10-4: F5-9: ST-ND (cc23)
44793	M16 240413	Y: P1.5-1,10-1: F4-1: ST-1655 (cc23)
44796	M16 240416	Y: P1.5-1,10-4: F4-1: ST-ND (cc23)

44804	M16 240429	Y: P1.5-1,10-4: F4-1: ST-ND (cc23)
44810	M16 240435	Y: P1.5-1,10-1: F4-1: ST-ND (cc23)
44814	M16 240439	Y: P1.5-1,10-4: F4-1: ST-23 (cc23)
44817	M16 240445	Y: P1.5-1,2-2: F5-8: ST-1625 (cc23)
44818	M16 240446	Y: P1.5-1,10-3: F4-1: ST-ND (cc23)
44822	M16 240492	Y: P1.5-1,10-1: F4-1: ST-1655 (cc23)
44836	M16 240511	Y: P1.5-1,10-1: F4-1: ST-ND (cc23)
47259	M16 240213	Y: P1.5-1,10-1: F4-1: ST-1655 (cc23)
47260	M16 240240	Y: P1.5-1,10-1: F4-1: ST-1655 (cc23)
47264	M16 240515	Y: P1.5-1,10-4: F3-4: ST-10730 (cc167)
52842	15.8705782	Y: P1.5-1,10-1: F4-1: ST-1655 (cc23)
52843	15.8706232	Y: P1.5-1,10-1: F4-1: ST-1655 (cc23)
52844	15.8706311	Y: P1.5-2,10-1: F4-1: ST-23 (cc23)
52852	16.8700215	Y: P1.5-2,10-1: F4-1: ST-23 (cc23)
52853	16.8700255	Y: P1.5-1,2-2: F5-8: ST-6800 (cc23)
52854	16.8700257	Y: P1.5-1,10-1: F4-1: ST-1655 (cc23)
52855	16.8700381	Y: P1.5-1,10-1: F4-1: ST-11280 (cc23)
52864	16.8705113	Y: P1.21,16: F3-7: ST-1466 (cc174)

^a Derived from genome sequence data



SUPPLEMENTARY TABLE 5. Prevalence of capsule-expressing carried MenW and MenY by isolation time-point.

Isolation time-point (no. of participants)	Genogroup									
	All MenW		MenW:cc11 only		MenW:cc11 2013-strain only		All MenY		MenY:cc23 only	
	No. of isolates	% of all participants (95% CI)	No. of isolates	% of all participants (95% CI)	No. of isolates	% of all participants (95% CI)	No. of isolates	% of all participants (95% CI)	No. of isolates	% of all participants (95% CI)
September (n=769)	2	0.3 (0.0 - 0.6)	2	0.3 (0.0 - 0.6)	0	0	9	1.2 (0.4 – 1.9)	8	1.0 (0.3-1.8)
November (n=353)	12	3.4† (1.5 - 5.3)	11	3.1† (1.3 – 4.9)	9	2.5 (0.9 – 4.2)	3	0.8 (0.0 – 1.8)	1	0.3 (0.0 – 0.8)
March (n=268)	17	6.3† (3.4 – 9.3)	17	6.3† (3.4 – 9.3)	17	6.3 †† (3.4 – 9.3)	4	1.5 (0.0 -2.9)	4	1.5 (0.0 -2.9)

† Statistically significant difference compared to genogroup-specific capsule expression rate in September ($p \leq 0.001$)

†† Statistically significant difference compared to genogroup-specific capsule expression rate in November ($p \leq 0.01$)