**Supplementary Online Content**

**eTable 1.** Baseline demographics of all eligible pediatric travelers and MMR-eligible pediatric travelers attending GTEN sites from 2009-2018.

**eTable 2.** Baseline demographics of MMR-eligible travelers attending GTEN sites 2009-2018, stratified by age group.

**eTable 3.** MMR-eligibility, vaccination, and reasons for nonvaccination among pediatric travelers at academic sites and nonacademic sites, stratified by region of GTEN site.

**eFigure 1.** Assessment of MMR eligibilityamong pediatric travelers at pretravel consultations at GTEN sites 2009-2018. Abbreviations: GTEN, Global TravEpiNet; MMR, measles-mumps-rubella.

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| eTable 1. Baseline demographics of all eligible pediatric travelers and MMR-eligible pediatric travelers attending GTEN sites from 2009 through 2018.a |
|  | **All pediatric travelers** | **Infant travelers** | **Preschool-aged travelers** | **School-aged travelers** |
| **Characteristics** | **All****travelers****N=14 602** | **MMR-eligible travelers****N=2864** | **All travelers****N=398** | **MMR-eligible travelers****N=365** | **All travelers****N=3623** | **MMR-eligible travelers****N=2161** | **All****travelers****N=10 581** | **MMR-eligible travelers****N=338** |
|  | **N (Col %)** | **N (Col %)** | **N (Col %)** | **N (Col %)** |
| **Sex** Female Male | 7897 (54)6705 (46) | 1389 (49)1475 (52) | 208 (52)190 (48) | 187 (51)178 (49) | 1749 (48)1874 (52) | 1023 (47)1138 (53) | 5940 (56)4641 (44) | 179 (53)159 (47) |
| **Age group** Infants (6 to <12mo) Preschool-aged (1 to <6y) School-aged (6 to <18y) | 398 (3)3623 (25)10 581 (73) | 365 (13)2161 (76)338 (12) | --- | --- | --- | --- | --- | --- |
| **Past MMR vaccinations** 0 MMR 1 MMR 2 MMR | 1158 (8)2001 (14)11 413 (78) | 891 (31)1973 (70)0 (0) | 398 (100)0 (0)0 (0) | 365 (100)0 (0)0 (0) | 589 (16)1863 (51)1171 (32) | 298 (14)1863 (86)0 (0) | 233 (2)110 (1)10 238 (97) | 228 (67)110 (33)0 (0) |
| **Region of travelb** Africa Americas Eastern Mediterranean Europe Southeast Asia Western Pacific | 6541 (45)3980 (27)537 (4)387 (3)2336 (16)1696 (12) | 1634 (57)469 (16)136 (5)59 (2)463 (16)223 (8) | 213 (54)59 (15)21 (5)9 (2)84 (21)28 (7) | 192 (53)57 (16)17 (5)8 (2)77 (21)28 (8) | 2028 (56)583 (16)180 (5)81 (2)608 (17)333 (9) | 1271 (59)326 (15)105 (5)48 (2)343 (16)164 (8) | 4300 (41)3338 (32)336 (3)297 (3)1644 (16)1335 (13) | 171 (51)86 (25)14 (4)3 (1)43 (13)31 (9) |
| **Duration of travel**<14 days ≥14 days | 3882 (27)10 720 (73) | 386 (14)2478 (87) | 29 (7)369 (93) | 29 (8)336 (92) | 484 (13)3139 (87) | 245 (11)1916 (89) | 3369 (32)7212 (68) | 112 (33)226 (67) |
| **Reason for travel** VFRLeisure Service or education Other | 5010 (34)5438 (37)3292 (23)862 (6) | 1752 (61)782 (27)132 (5)198 (7) | 263 (66)107 (27)4 (1)24 (6)  | 243 (67)98 (27)3 (1)21 (6) | 2191 (61)1099 (30)63 (2)270 (8)  | 1404 (65)573 (27)25 (1)159 (7) | 2556 (24)4232 (40)3225 (31)568 (5) | 105 (31)111 (33)104 (31)18 (5) |
| **Time to departure**<14 days≥14 days | 4630 (32)9972 (68) | 1236 (43)1628 (57) | 173 (44)225 (57) | 152 (42)213 (58) | 1612 (45)2011 (56) | 978 (45)1183 (55) | 2845 (27)7736 (73) | 106 (31)232 (69) |
| eTable 1 (Continued). Baseline demographics of all eligible pediatric travelers and MMR-eligible pediatric travelers attending GTEN sites from 2009 through 2018.a |
|  | **All pediatric travelers** | **Infant travelers** | **Preschool-aged travelers** | **School-aged travelers** |
| **Characteristics** | **All****travelers****N=14 602** | **MMR-eligible travelers****N=2864** | **All travelers****N=398** | **MMR-eligible travelers****N=365** | **All travelers****N=3623** | **MMR-eligible travelers****N=2161** | **All****travelers****N=10 581** | **MMR-eligible travelers****N=338** |
|  | **N (Col %)** | **N (Col %)** | **N (Col %)** | **N (Col %)** |
| **Type of site** Academic center Nonacademic center | 11 628 (80)2974 (20) | 2046 (71)818 (29) | 343 (86)55 (14) | 316 (87)49 (13) | 2661 (73)962 (27) | 1583 (73)578 (27) | 8624 (82)1957 (19) | 147 (44)191 (57) |
| **GTEN clinic site** Northeast Midwest South West | 7694 (53)347 (2)3147 (22)3414 (23) | 1652 (58)44 (2)858 (30)310 (11) | 299 (75)7 (2)61 (15)31 (8) | 277 (76)6 (2)54 (15)28 (8) | 2128 (59)59 (2)1027 (28)409 (11) | 1287 (60)30 (1)632 (29)212 (10) | 5267 (50)281 (3)2059 (20)2974 (28) | 88 (26)8 (2)172 (51)70 (21) |

Abbreviations: MMR: Measles-mumps-rubella, mo: months, y: years, VFR: Visiting friends and relatives, GTEN: Global TravEpiNet

aData are number (percentage) of pediatric travelers. Percentages may not equal 100 because of rounding.

bColumn percentages may not equal 100 because more than one selection was allowed.

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| eTable 2. Baseline demographics of MMR-eligible travelers attending GTEN sites from 2009 through 2018, stratified by age groupa |
|  | **MMR-eligible travelers** | **MMR-eligible travelers not vaccinated** |
| **Characteristics** | **Vaccinated** | **Not vaccinated** | **P valueb** | **Provider decision** | **Guardian refusal** | **Referred to another providerc** | **P valueb** |
|  | **N (Col %)** |  | **N (Col %)** |  |
| **Sex**Infants (n=365)FemaleMale | 204103 (51)101 (50) | 16184 (52)77 (48) | 0.56 | 34 (49)36 (51) | 16 (59)11 (41) | 34 (53)30 (47) | 0.73 |
| Preschool-aged (n=2,161)FemaleMale | 939453 (48)486 (52) | 1222570 (47)652 (53) | 0.12 | 232 (47)265 (53) | 178 (45)220 (55)  | 160 (49)167 (51) | 0.43 |
| School-aged (n=338)FemaleMale | 3920 (51)19 (49) | 299159 (53)140 (47) | 0.74 | 29 (54)25 (46) | 102 (55)85 (46) | 28 (48)30 (52) | 0.61 |
| **Past MMR vaccinations**Preschool-aged (n=2,161) 0 MMR 1 MMR | 939108 (12)831 (89) | 1222190 (16)1032 (85) | 0.01 | 25 (5)472 (95) | 115 (29)283 (71) | 50 (15)277 (85) | <0.001 |
| School-aged (n=338) 0 MMR 1 MMR | 3922 (56)17 (44) | 299206 (69)93 (31) | 0.84 | 25 (46)29 (54) | 143 (77)44 (24) | 38 (66)20 (35) | <0.001 |
| **Region of traveld**Infants (n=365) Africa Americas Eastern Mediterranean Europe Southeast Asia Western Pacific | 117 (57)34 (17)5 (3)6 (3)37 (18)11 (5) | 75 (47)23 (14)12 (8)2 (1)40 (25)17 (11) | 0.330.890.040.160.710.57 | 29 (41)11 (16)9 (13)0 (0)18 (26)9 (13) | 13 (48)3 (11)1 (4)1 (4)6 (22)3 (11) | 33 (52)9 (14)2 (3)1 (2)16 (25)5 (8) | 0.360.730.130.691.000.89 |
| Preschool-aged (n=2,161) Africa Americas Eastern Mediterranean Europe Southeast Asia Western Pacific | 601 (64)125 (13)41 (4)18 (2)141 (15)51 (5) | 670 (55)201 (16)64 (5)30 (3)202 (17)113 (9) | 0.020.010.850.560.040.04 | 264 (53)92 (19)25 (5)11 (2)85 (17)45 (9) | 281 (71)42 (11)18 (5)4 (1)43 (11)19 (5) | 125 (38)67 (21)21 (6)15 (5)74 (23)49 (15) | 0.410.530.590.530.450.41 |
| School-aged (n=338) Africa Americas Eastern Mediterranean Europe Southeast Asia Western Pacific | 21 (54)7 (18)0 (0)0 (0)5 (13)6 (15) | 150 (50)79 (26)14 (5)3 (1)38 (13)25 (8) | 0.610.170.340.390.710.10 | 31 (57)10 (19)0 (0)1 (2)6 (11)6 (11) | 98 (52)47 (25)14 (8)2 (1)24 (13)13 (7) | 21 (36)22 (38)0 (0)0 (0)8 (14)6 (10) | 0.090.110.100.380.590.97 |
| **Duration of travel** Infants (n=365) <14 days ≥14 days | 15 (7)189 (93) | 14 (9)147 (91) | 0.80 | 6 (9)64 (91) | 1 (4)26 (96) | 7 (11)57 (89) | 0.47 |
| eTable 2 (Continued). Baseline demographics of MMR-eligible travelers attending GTEN sites from 2009 through 2018, stratified by age groupa |
|  | **MMR-eligible travelers** | **MMR-eligible travelers not vaccinated** |
| **Characteristics** | **Vaccinated** | **Not vaccinated** | **P valueb** | **Provider decision** | **Guardian refusal** | **Referred to another providerc** | **P valueb** |
|  | **N (Col %)** |  | **N (Col %)** |  |
| Preschool-aged (n=2,161) <14 days ≥14 days | 86 (9)853 (91) | 159 (13)1063 (87) | 0.03 | 61 (12)436 (88) | 45 (11)353 (89) | 53 (16)274 (84) | 0.28 |
| School-aged (n=338) <14 days ≥14 days | 10 (26)29 (74) | 102 (34)197 (66) | 0.97 | 8 (15)46 (85) | 78 (42)109 (58) | 16 (28)42 (72) | 0.001 |
| **Purpose of travel**Infants (n=365)VFRLeisureService or educationOther | 153 (75)40 (20)0 (0)11 (5) | 90 (56)58 (36)3 (2)10 (6) | 0.04 | 43 (61)21 (30)2 (3)4 (6) | 10 (37)14 (52)1 (4)2 (7) | 37 (58)23 (36)0 (0)4 (6) | 0.17 |
| Preschool-aged (n=2,161)VFRLeisureService or educationOther | 682 (73)194 (21)5 (1)58 (6) | 722 (59)379 (31)20 (2)101 (8) | 0.06 | 307 (62)144 (29)6 (1)40 (8) | 259 (65)110 (28)6 (2)23 (6) | 156 (48)125 (38)8 (2)38 (12) | 0.28 |
| School-aged (n=338)VFRLeisureService or educationOther | 13 (33)13 (33)8 (21)5 (13) | 92 (31)98 (33)96 (32)13 (4) | 0.63 | 23 (43)21 (39)9 (17)1 (2) | 53 (28)63 (34)61 (33)10 (5) | 16 (28)14 (24)26 (45)2 (3) | 0.01 |
| **Time to departure** Infants (n=365)<14 days ≥14 days | 87 (43)117 (57) | 65 (40)96 (60) | 0.20 | 35 (50)35 (50) | 15 (56)12 (44) | 15 (23)49 (77) | <0.001 |
| Preschool-aged (n=2,161)<14 days≥14 days | 404 (43)535 (57) | 574 (47)648 (53) | 0.07 | 232 (47)265 (53) | 225 (57)173 (44) | 117 (36)210 (64) | <0.001 |
| School-aged (n=338)<14 days≥14 days | 12 (31)27 (69) |  94 (31)205 (69) | 0.29 | 20 (37)34 (63) | 57 (31)130 (70) | 17 (29)41 (71) | 0.32 |
| **Type of site**Infants (n=365)Academic centerNonacademic center | 194 (95)10 (5) | 122 (76)39 (24) | <0.001 | 49 (70)21 (30) | 17 (63)10 (37) | 56 (88)8 (13) | <0.001 |
| Preschool-aged (n=2,161)Academic centerNonacademic center | 900 (96)39 (4) | 683 (56)539 (44) | <0.001 | 326 (66)171 (34) | 78 (20)320 (80) | 279 (85)48 (15) | <0.001 |
| School-aged (n=338)Academic centerNonacademic center | 30 (77)9 (23) | 117 (39)182 (61) | <0.001 | 29 (54)25 (46) | 43 (23)144 (77) | 45 (78)13 (22) | <0.001 |
| eTable 2 (Continued). Baseline demographics of MMR-eligible travelers attending GTEN sites from 2009 through 2018, stratified by age groupa |
|  | **MMR-eligible travelers** | **MMR-eligible travelers not vaccinated** |  |
| **Characteristics** | **Vaccinated** | **Not vaccinated** | **P valueb** | **Provider decision** | **Guardian refusal** | **Referred to another providerc** | **P valueb** |
|  | **N (Col %)** |  | **N (Col %)** |  |
| **GTEN clinic Sitee**Infants (n=365)NortheastMidwestSouthWest | 185 (91)3 (2)13 (6)3 (2) | 92 (57)3 (2)41 (26)25 (16) | <0.001 | 40 (57)3 (4)12 (17)15 (21) | 14 (52)0 (0)13 (48)0 (0) | 38 (59) 0 (0)16 (25)10 (16) | <0.001 |
| Preschool-aged (n=2,161)NortheastMidwestSouthWest | 833 (89)11 (1)69 (7)26 (3) | 454 (37)19 (2)563 (46)186 (15) | <0.001 | 252 (51)19 (4)153 (31)73 (15) | 65 (16)0 (0)327 (82)6 (2) | 137 (42)0 (0)83 (25)107 (33) | <0.001 |
| School-aged (n=338)NortheastMidwestSouthWest | 26 (67)4 (10)5 (13)4 (10) | 62 (21)4 (1)167 (56)66 (22) | <0.001 | 33 (61)3 (6)11 (20)7 (13) | 4 (2)1 (1)142 (76)40 (21) | 25 (43)0 (0)14 (24)19 (33) | <0.001 |

Abbreviations: MMR: Measles-mumps-rubella, VFR: Visiting friends and relatives, GTEN: Global TravEpiNet.

aData are number (percentage) of pediatric travelers. Percentages may not equal 100 because of rounding.

bFor the categorical variables: P values obtained from Cochran-Mantel-Haenszel test. This indicates whether the association of the characteristic and the outcome is statistically significant after adjusting for clinic site. For continuous variables, P values were obtained from the Wilcoxon/Kruskal-Wallis Test. This indicates whether the distribution of the variable is significantly different in the outcome groups.

cThe 16 pediatric travelers not vaccinated due to vaccine unavailability were included with those referred to another provider for demographic analysis.

dColumn percentages may not equal 100 because more than one selection was allowed.

eThe Midwest was excluded from statistical analysis due to low sample size.

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| eTable 3. MMR-eligibility, vaccination, and reasons for nonvaccination among pediatric travelers at academic sites and nonacademic sites, stratified by region of GTEN sitea |
|  | **Northeast** | **Midwest** | **South** | **West** |
|  | **Academic centers** | **Nonacademic centers** | **Academic centers** | **Nonacademic centers** | **Academic centers** | **Nonacademic centers** | **Academic centers** | **Nonacademic centers** |
| Number of sites | 7 | 2 | 1 | 1 | 6 | 4 | 5 | 3 |
| All pediatric travelers | 7586 | 108 | 104 | 243 | 880 | 2267 | 3058 | 356 |
|  | N (Col%) |
| Not MMR-eligible | 5955 (78) | 87 (81) | 104 (100) | 199 (82) | 736 (84) | 1553 (69) | 2787 (91) | 317 (89) |
| MMR-eligible | 1631 (22) | 21 (19) | 0 (0) | 44 (18) | 144 (16) | 714 (31) | 271 (9) | 39 (11) |
| Vaccinated | 1044 (64) | 0 (0) | - | 18 (41) | 66 (46) | 21 (3) | 14 (5) | 19 (49) |
| Not vaccinated | 587 (36) | 21 (100) | - | 26 (59) | 78 (54) | 693 (97) | 257 (95) | 20 (51) |
| Provider failure | 310 (53) | 15 (71) | - | 25 (96) | 15 (19) | 161 (23) | 79 (31) | 16 (80) |
| Guardian refusal | 82 (14) | 1 (5) | - | 1 (4) | 11 (14) | 471 (68) | 45 (18) | 1 (5) |
| Referred to another provider | 195 (33) | 5 (24) | - | 0 (0) | 52 (67) | 61 (9) | 133 (52) | 3 (15) |

Abbreviations: MMR: measles, mumps, rubella; GTEN, Global TravEpiNet.

a Data are number (percentage) of pediatric travelers unless otherwise indicated. Percentages may not equal 100 because of rounding



**eFigure 1. Assessment of MMR eligibility among pediatric travelers at pretravel consultations at GTEN sites from 2009 through 2018.**

**Abbreviations: GTEN, Global TravEpiNet; MMR, measles-mumps-rubella**