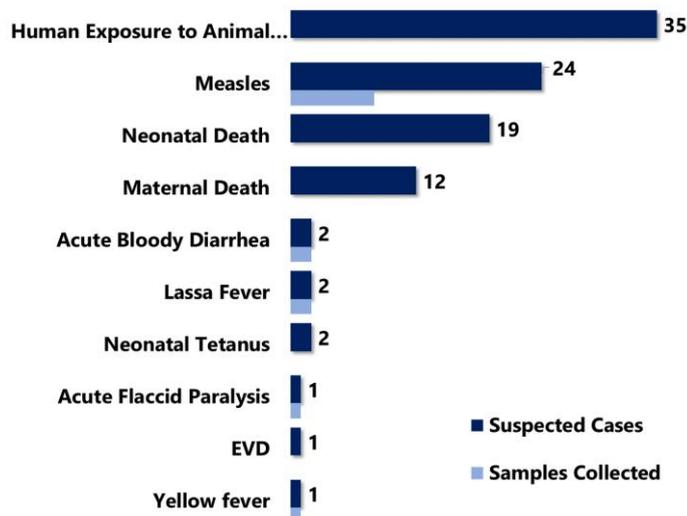


Country Population: 4,433,398 Volume 11, Issue 21 May 20–26, 2019 Data Source: CSOs from 15 Counties and Lab

Highlights

Figure 1. Public Health Events Reported during this week



Keynotes and Events of Public Health Significance

- A total of 99 events of public health importance including 32 deaths were reported
- Completeness and timeliness of health facility reports were both 97%
- Ongoing Measles outbreak in Nimba county
- Ongoing Lassa fever outbreak in Grand Bassa county

Reporting Coverage

Table 1. Health Facility Weekly IDSR Reporting Coverage, Liberia, Epi week 21, 2019

| County | Number of Expected Report from Health Facility | Number of Reports Received | Number Received on Time | Completeness (%) | Timeliness (%) |
|------------------|--|----------------------------|-------------------------|------------------|----------------|
| Bomi | 26 | 26 | 26 | 100 | 100 |
| Bong | 57 | 57 | 57 | 100 | 100 |
| Gbarpolu | 16 | 16 | 16 | 100 | 100 |
| Grand Bassa | 34 | 34 | 34 | 100 | 100 |
| Grand Cape Mount | 34 | 34 | 34 | 100 | 100 |
| Grand Gedeh | 24 | 24 | 24 | 100 | 100 |
| Grand Kru | 19 | 19 | 19 | 100 | 100 |
| Lofa | 59 | 59 | 59 | 100 | 100 |
| Margibi | 59 | 59 | 59 | 100 | 100 |
| Maryland | 26 | 26 | 26 | 100 | 100 |
| Montserrado | 351 | 333 | 331 | 95 | 94 |
| Nimba | 84 | 84 | 84 | 100 | 100 |
| Rivercess | 20 | 20 | 20 | 100 | 100 |
| River Gee | 20 | 18 | 18 | 90 | 90 |
| Sinoe | 37 | 37 | 37 | 100 | 100 |
| Liberia | 866 | 846 | 844 | 97 | 97 |

Legend:

≥80

<80

- The national target for weekly IDSR reporting is 80%
- Health facility timeliness is monitored at County level
- All Counties submitted their weekly IDSR report on time to the national level

846(97%)

Health facilities reported IDSR data

93(100%)

Health districts reported IDSR

844 (97%)

Health facilities out of 866 reported timely IDSR data

Vaccine Preventable Diseases

Measles

- Twenty-four (24) suspected cases were reported from Nimba (10), Montserrado (4), Lofa (4), Margibi (3), Bomi (1), River Gee (1), and Grand Kru (1) Counties
 - Eight specimens were collected and pending laboratory confirmation
- Gbehlay-Geh District, Nimba County is currently in outbreak phase
- Vaccination status:
 - Among suspected cases: 11 (45.8%) vaccinated, 2 (8.3%) not vaccinated and 11 (45.8%) unknown
- Age distribution
 - Among suspected cases: <1 year: 0 (0%), 1 – 4 years: 13 (54.1%), ≥5 years: 11 (45.8%)
- Cumulatively, since Epi-week one, 947 suspected cases have been recorded; Of these, 308 have been tested by the laboratory and results showed 72 positive, 231 negative and 6 indeterminate
- Epi-classification is as follows: 684 (72.2%) confirmed (72 lab confirmed, 559 clinically confirmed, 79 epi-linked), 231 (24.2%) negative and 6 (0.6%) indeterminate (*See Table 2*)
 - Of the 231 specimens tested negative for measles, 183 specimens were tested for Rubella; 88 positive, 85 negative and 10 indeterminate for rubella

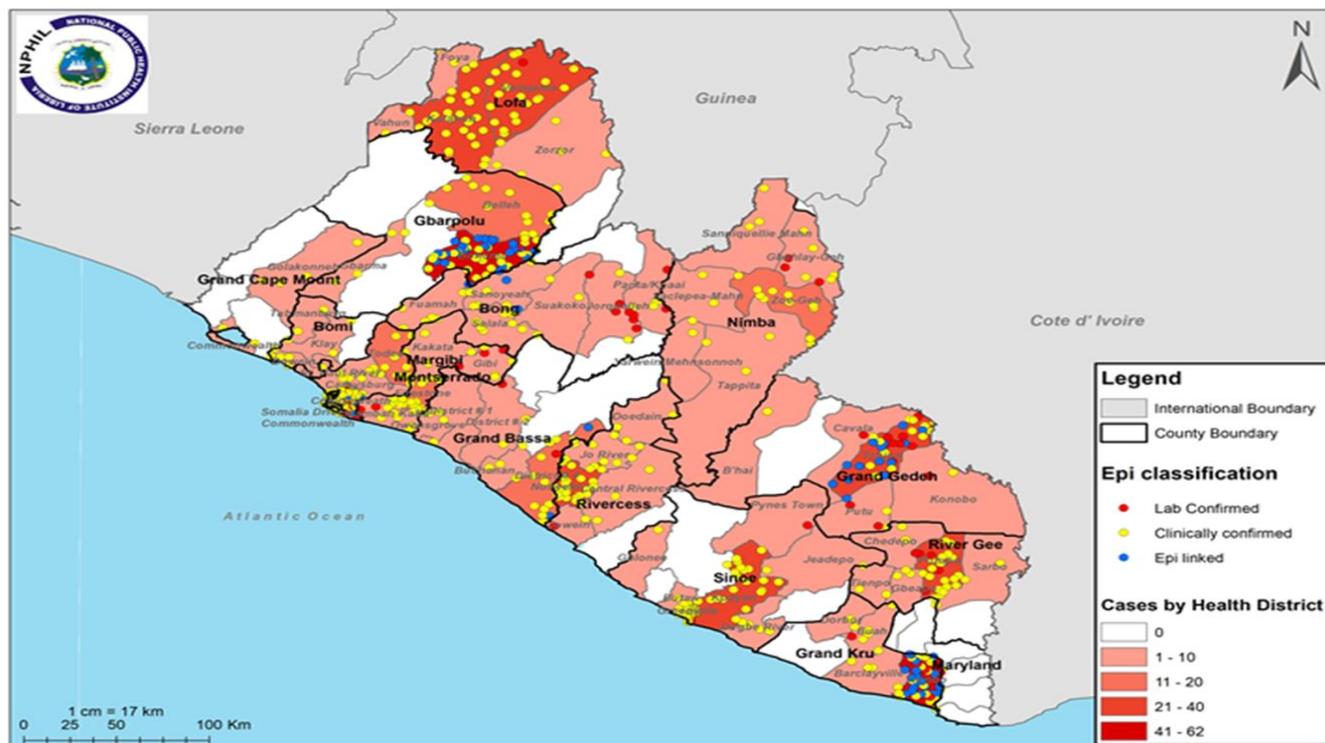
Public Health Action

- Case Management, active case search, health education, and community engagement are ongoing in districts that

Table 2. Cumulative Measles Cases Reported by County and Epi-classification, Liberia, Epi-week 1 - 21, 2019

| Epi-classification | | | | | | Total | Annualized Non Measles Febrile Rash Illness Rate |
|--------------------|------------|----------------------|---------------------------|----------------------|------------|-------------|--|
| Lab confirmed | Epi-linked | Clinically confirmed | Indeterminate (Equivocal) | Discarded (Negative) | | | |
| 0 | 0 | 13 | 0 | 4 | 17 | 9.4 | |
| 9 | 2 | 31 | 1 | 11 | 54 | 6.2 | |
| 4 | 27 | 46 | 0 | 5 | 82 | 11.8 | |
| 2 | 2 | 22 | 1 | 15 | 42 | 13.3 | |
| 0 | 0 | 6 | 0 | 8 | 14 | 12.4 | |
| 14 | 14 | 17 | 0 | 14 | 59 | 22.0 | |
| 10 | 20 | 32 | 0 | 10 | 72 | 34.0 | |
| 1 | 0 | 71 | 0 | 7 | 79 | 5.0 | |
| 6 | 0 | 38 | 1 | 20 | 65 | 18.8 | |
| 0 | 0 | 0 | 0 | 1 | 1 | 1.4 | |
| 9 | 4 | 80 | 1 | 58 | 152 | 9.9 | |
| 7 | 10 | 30 | 1 | 27 | 75 | 11.5 | |
| 5 | 0 | 56 | 0 | 21 | 82 | 61.9 | |
| 1 | 0 | 44 | 0 | 24 | 69 | 66.1 | |
| 4 | 0 | 73 | 1 | 6 | 84 | 11.5 | |
| 72 | 79 | 559 | 6 | 231 | 947 | 12.9 | |
| >=2 | | Below Target | <2 | | | | |

Confirmed Measles Cases Reported by Health District, Liberia Epi-week 1 - 21, 2019



Acute Flaccid Paralysis (Suspected Polio)

- Two (2) suspected cases reported from Montserrado County
- Cumulatively, since Epi week one, 31 cases have been recorded, 22 tested negative and 8 pending laboratory confirmation and 1 pending shipment (See Table 3)

| County | < 15 years pop | # of AFP Cases Reported | # of Cases with Lab Result | Non-Polio AFP Rate | # of cases <14 days specimen collected | % of stool <14days | # of NPENTs | % of NPENT |
|---------------------------|----------------|-------------------------|----------------------------|------------------------------|--|--------------------|-------------|------------|
| Bomi | 47576 | 1 | 0 | 5.2 | 0 | 0% | 0 | 0% |
| Bong | 196480 | 2 | 2 | 2.5 | 2 | 100% | 0 | 0% |
| Gbarpolu | 47163 | 0 | 0 | 0.0 | 0 | 0% | 0 | 0% |
| Grand Bassa | 125386 | 3 | 2 | 5.9 | 2 | 67% | 0 | 0% |
| Grand Cape Mount | 71872 | 2 | 1 | 6.9 | 1 | 50% | 0 | 0% |
| Grand Gedeh | 70844 | 1 | 1 | 3.5 | 1 | 100% | 0 | 0% |
| Grand Kru | 32755 | 1 | 0 | 7.6 | 0 | 0% | 0 | 0% |
| Lofa | 156050 | 2 | 2 | 3.2 | 1 | 50% | 0 | 0% |
| Margibi | 118729 | 2 | 3 | 4.2 | 3 | 150% | 0 | 0% |
| Maryland | 76884 | 2 | 1 | 6.4 | 2 | 100% | 0 | 0% |
| Montserrado | 653849 | 7 | 6 | 2.7 | 7 | 100% | 0 | 0% |
| Nimba | 261314 | 4 | 1 | 3.8 | 4 | 100% | 0 | 0% |
| Rivercess | 40444 | 0 | 0 | 0.0 | 0 | 0% | 0 | 0% |
| River Gee | 37775 | 1 | 1 | 6.6 | 1 | 100% | 0 | 0% |
| Sinoe | 57910 | 3 | 2 | 12.8 | 3 | 100% | 0 | 0% |
| Liberia | 1995031 | 31 | 22 | 3.8 | 27 | 87% | 0 | 0% |
| Non-Polio AFP Rate | <2 | Stool adequacy | <80% | Non-Polio Enterovirus | <10% | Silent | | |
| | ≥ 2 | | ≥80% | | ≥10% | | | |



Liberia IDSR Epidemiology Bulletin

2019 Epi-week 21 (May 20 –26, 2019)



Neonatal Tetanus

- Two cases reported from Grand Bassa County
- Cumulatively, since Epi-week one, 18 clinically diagnosed cases have been recorded of which six were dead

Viral Hemorrhagic Diseases

Ebola Virus Disease (EVD)

- One (1) alert was reported from Lofa County
- Cumulatively, since Epi-week one, 10 EVD alerts have been recorded with negative results

Lassa fever

- Two (2) suspected cases were reported from Grand Bassa (1) and Montserrado (1dead) Counties
 - Specimens were collected and pending testing
- Cumulatively, since Epi week one, 64 suspected cases have been recorded including thirteen deaths
- Epi-classification is as follows: 22 positive, 39 negative and 3 pending laboratory confirmation

Yellow fever

- One (1) suspected case was reported from Rivercess County
 - Specimen was collected and pending laboratory confirmation
- Cumulatively, since Epi-week one, 42 suspected cases have been recorded. Of these, 38 have been tested negative, specimens were not collected for three and one pending laboratory confirmation

Monkeypox

- Zero case was reported
- Cumulatively, since Epi week one, 50 suspected cases have been reported and no specimen has been shipped

Meningitis

- Zero case was reported
- Cumulatively, since Epi-week one, 24 suspected cases have been recorded with one death, 21 tested negative, two specimens not collected due to lack of specimen collection kits and one pending laboratory confirmation

Events of Public Health Importance

Maternal Mortality

- Twelve (12) deaths were reported from Montserrado (6), Nimba (3), Maryland (1), Sinoe (1) and Bong (1) Counties
- Reported causes: post-partum hemorrhage (6), eclampsia (3), septic abortion (1), congestive heart failure (1) and one (1) is ongoing investigation
- Ten deaths were reported to have occurred in health facilities while two occurred in communities
- Cumulatively, since Epi-week one, 108 maternal deaths have been recorded (*See Table 4*)

Table 4. Annualized and Cumulative Maternal Deaths Reported by Counties, Liberia, Epi-week 1 - 21, 2019

| County | Estimated Annual Live birth (4.3%) | Current week | Cumulative | % of Cumulative Maternal deaths | Annualized Maternal Mortality Ratio/100,000 |
|---------------------------|------------------------------------|--------------|------------|---------------------------------|---|
| Maryland | 7347 | 1 | 7 | 6 | 236 |
| Grand Gedeh | 6770 | 0 | 6 | 6 | 219 |
| Bong | 18775 | 1 | 17 | 16 | 224 |
| Nimba | 24970 | 3 | 20 | 19 | 198 |
| Margibi | 11345 | 0 | 9 | 8 | 196 |
| Sinoe | 5534 | 1 | 3 | 3 | 134 |
| Rivercess | 3865 | 0 | 2 | 2 | 128 |
| Montserrado | 62479 | 6 | 29 | 27 | 115 |
| Gbarpolu | 4507 | 0 | 2 | 2 | 110 |
| Bomi | 4546 | 0 | 2 | 2 | 109 |
| Grand Bassa | 11981 | 0 | 5 | 5 | 103 |
| Grand Cape Mount | 6868 | 0 | 2 | 2 | 72 |
| River Gee | 3610 | 0 | 1 | 1 | 69 |
| Lofa | 14911 | 0 | 3 | 3 | 50 |
| Grand Kru | 3130 | 0 | 0 | 0 | 0 |
| Liberia (National) | 190636- | 12 | 108 | 100 | 140 |

Neonatal Mortality

- Nineteen (19) deaths were reported from Montserrado (12), Rivercess (2), Bong (2), Grand Cape Mount (1), Grand Gedeh (1) and Nimba (1) Counties
- Reported causes of deaths: sepsis (12), asphyxia (5), and preterm (2)
- Eighteen deaths were reported to have occurred in health facilities while one in the community
- Cumulatively, since Epi-week one, 284 neonatal deaths have been reported (*See Table 5*)

Table 5. Annualized and Cumulative Neonatal Deaths Reported by Counties, Liberia, Epi-week 1 - 21, 2019

| County | Estimated Annual Live birth (4.3%) | Current Week | Cumulative | % of Cumulative Neonatal deaths | Annualized Neonatal Mortality Rate/1000 |
|---------------------------|------------------------------------|--------------|------------|---------------------------------|---|
| Grand Kru | 3130 | 0 | 20 | 7 | 15.8 |
| Grand Gedeh | 6770 | 1 | 23 | 8 | 8.4 |
| Margibi | 11345 | 0 | 24 | 8 | 5.2 |
| Rivercess | 3865 | 2 | 8 | 3 | 5.1 |
| Bong | 18775 | 2 | 39 | 14 | 5.1 |
| Montserrado | 62479 | 12 | 102 | 36 | 4.0 |
| Sinoe | 5534 | 0 | 9 | 3 | 4.0 |
| Maryland | 7347 | 0 | 11 | 4 | 3.7 |
| River Gee | 3610 | 0 | 4 | 1 | 2.7 |
| Lofa | 14911 | 0 | 16 | 6 | 2.7 |
| Gbarpolu | 4507 | 0 | 4 | 1 | 2.2 |
| Bomi | 4546 | 0 | 3 | 1 | 1.6 |
| Nimba | 24970 | 1 | 16 | 6 | 1.6 |
| Grand Cape Mount | 6868 | 1 | 2 | 1 | 0.7 |
| Grand Bassa | 11981 | 0 | 3 | 1 | 0.6 |
| Liberia (National) | 190636 | 19 | 284 | 100 | 3.7 |

Other Reportable Diseases

Animal Bites (Human Exposure to Rabies)

- Thirty-five (35) cases were reported from Montserrado (17), Bong (8), Nimba (3), Margibi (2), Grand Bassa (2), River Gee (2), and Grand Cape Mount (1) Counties
- Cumulatively, since Epi-week one, 789 cases of animal bites have been recorded including one death

Acute Bloody Diarrhea (Suspected Shigellosis)

- Two (2) cases were reported from Montserrado and Sinoe Counties
 - one (1) specimen was collected from Montserrado, pending laboratory confirmation
- Cumulatively, since Epi-week one, 114 acute bloody diarrhea cases have been recorded with 65 stool specimens collected and tested. Result: 9 positive and 56 negative. One specimen from Sinoe County did not reach the laboratory

Severe Watery Diarrhea (Cholera)

- Zero case was reported
- Cumulatively, since Epi-week one, 54 suspected cases have been recorded with 43 specimens collected out of which; 39 negative, 5 rejected by laboratory, while 10 specimens were not collected

Unexplained Cluster of Health Events

- Zero case reported
- Cumulatively, since Epi-week one, eleven cases of unexplained death has been reported

Points of Entry

- Zero IDSR alert detected and verified
- A total of 5471 travelers were recorded for the week (See Table 6)

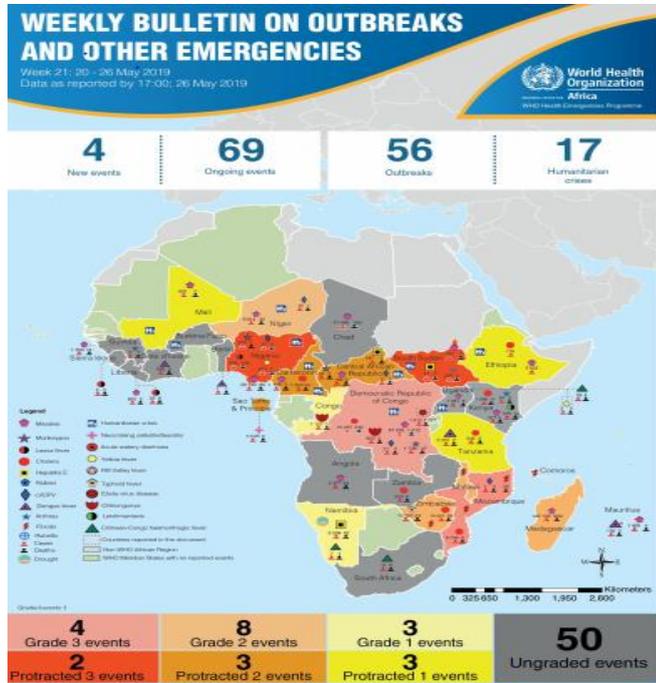
Table 6. Total Travelers, IDSR Alerts Detected and Verified at Points of Entry, Liberia, Epi-week 21, 2019

| Type of Ports | Point of Entry | Weekly total | Arrival | Departure | Yellow Book Issued | Yellow Book Damage/Card Replaced | Travelers Vaccinated | IDSR Alerts | Alerts Verified |
|------------------------------------|------------------------------|--------------|-------------|-------------|--------------------|----------------------------------|----------------------|-------------|-----------------|
| Airport | James S. Paynes | 126 | 63 | 63 | 0 | 0 | 0 | 0 | 0 |
| | Robert International Airport | 3605 | 1794 | 1811 | 41 | 25 | 16 | 0 | 0 |
| Seaport | Freeport of Monrovia | 158 | 79 | 79 | 0 | 0 | 0 | 0 | 0 |
| | Buchanan Port | 40 | 20 | 20 | 0 | 0 | 0 | 0 | 0 |
| Ground Crossing | Bo Water Side | 742 | 262 | 480 | 45 | 19 | 26 | 0 | 0 |
| | Ganta | 322 | 144 | 178 | 33 | 33 | 0 | 0 | 0 |
| | Yekepa | 55 | 34 | 21 | 0 | 0 | 0 | 0 | 0 |
| | Loguatu | 303 | 210 | 93 | 15 | 15 | 0 | 0 | 0 |
| | Nursing Division | 120 | 120 | 0 | 120 | 32 | 88 | 0 | 0 |
| Total Traveler for the Week | | 5471 | 2726 | 2745 | 254 | 124 | 130 | 0 | 0 |

Note: Yellow book issue for both arrival and departure; Vaccination coverage for both arrival and departure

AFRO Public Health Events

The National Public Health Institute of Liberia continues to monitor acute public health emergencies and outbreaks occurring in the African Region in order to ensure preparedness and preventive measures are implemented



During this week, 73 events are being monitored through WHO Health Emergencies Program in the African Region. Key events highlighted during the week include the following:

- Anthrax outbreak in Guinea
- Ebola virus disease in the Democratic Republic of the Congo
- Humanitarian crisis in Central Africa Republic
- Humanitarian crisis in Nigeria
- Yellow fever in Uganda

Outbreak

Lassa fever

Buchanana District, Grand Bassa County

- One confirmed case was reported from Buchanan District
- Age 29 years male from Kpandy town in Buchanan city
- Risk assessment was done for ten contacts

Low risk:

Two health workers
 Seven family members

High risk:

One family member (Wife)

- Thirteen contacts are being followed up but have shown no sign of symptoms.
- Safe and dignified burial was conducted on May 11, 2019 under the supervision of the District Health Team

Suspected Measles

Gbeapo and Putupo, River Gee County

- Reported one new case
- Case was treated and discharged
- Six (6) contacts have been line listed and followed up daily
- Community engagement and health education ongoing



Liberia IDSR Epidemiology Bulletin

2019 Epi-week 21 (May 20-26, 2019)



Public Health Measures

National level

- Providing technical remote support to Counties
 - Heighten surveillance in affected and surrounding communities

County level

- Case management for all reported cases ongoing
- Active case searches ongoing in affected communities for Measles and Lassa fever

Notes

- *Completeness* refers to the proportion of expected weekly IDSR reports received (target: $\geq 80\%$)
- *Timeliness* refers to the proportion of expected weekly IDSR reports received by the next level on time (target: $\geq 80\%$). Time requirement for weekly IDSR reports:
 - Health facility - required on or before 5:00pm every Saturday to the district level
 - Health district - required on or before 5:00pm every Sunday to the county level
 - County - required on or before 5:00pm every Monday to the national level
- *Non-polio AFP rate* is the proportion of non-polio AFP cases per 100,000 among the estimated population under 15 years of age in 2017 (annual target: $\geq 2/100,000$)
- *Non-measles febrile rash illness rate* refers to the proportion of Negative measles cases per 100,000 population
- *Annualized maternal mortality rate* refers to the maternal mortality rate of a given period less than one year and it is the number of maternal deaths per 100,000 live births
- *Annualized neonatal mortality rate* refers to the neonatal mortality ratio of a given period less than one year and it is the number of neonatal deaths per 1,000 live births
- *Epi-linked* refers to any suspected case that has not had a specimen taken for serologic confirmation but is linked to a laboratory confirmed case
- *Confirmed case* refers to a case whose specimen has tested positive or reactive upon laboratory testing, or has been classified as confirmed by either epidemiologic linkage with a confirmed case, or clinical compatibility with the disease or condition
- *Case Fatality Rate (CFR)* is the proportion of deaths among confirmed cases

For comments or questions, please contact

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