**Supplemental Methods**

All reported outbreak etiologies were reviewed and classified as “enteric” based on whether gastroenteritis symptoms occur due to reproduction or replication in the gastrointestinal tract or a direct effect (e.g., increasing intestinal secretions) or damage to gastrointestinal cells. A full listing of reported outbreak etiologies, their classification, and supporting references is available in **Supplemental Table 1**. Etiologies that cause diarrhea and/or vomiting as a result of effects on non-gastrointestinal sites in the body (e.g., hepatitis A) or due to reproduction or replication in the stomach or intestines incidental to primary pathogenesis in non-gastrointestinal sites (e.g., influenza) were not considered enteric. Some pathogens may have multiple, distinct types of primary presentation, such as *Clostridium botulinum* leading to adult intestinal toxemia botulism. Such pathogens were considered enteric etiologies for this analysis. Outbreaks with multiple etiologies reported were included if at least one reported etiology was classified as enteric. Finally, some reported etiologies, such as “cleaning agents” and “mushroom poisoning,” were considered too general to effectively categorize as enteric or non-enteric. These outbreaks as well as those without any reported etiology were included in this study on an individual basis if any patients reported diarrhea, vomiting, bloody stools, or unspecified acute gastroenteritis. These are noted in Supplemental Table 1 as “symptom-based.”

Supplemental Table 1. Enteric classification of reported etiologies, 2009–2019, N=40,865\*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | Outbreaks Excluded | | Outbreaks Included | |  |
| Etiology | Classification | Single Etiology | Multiple Etiologies | Single Etiology | Multiple Etiologies | Reference(s) |
| *None reported* | Symptom-based | 1,899 | - | 7,343 | - |  |
| Acanthamoeba | Non-enteric | 1 | - | - | - | [1] |
| Adenovirus | Enteric | - | - | 4 | 16 | [2] |
| Aeromonas | Enteric | - | - | 1 | 3 | [3] |
| Amnesic shellfish poison | Enteric | - | - | 1 | - | [4] |
| Anatoxin-a | Non-enteric | - | - | - | 1 | [5] |
| Aniline | Non-enteric | 1 | - | - | - | [6] |
| Astrovirus | Enteric | - | - | 13 | 19 | [7] |
| Avian schistosomes | Non-enteric | 9 | - | - | - | [8] |
| Bacillus | Enteric | - | - | 140 | 75 | [9] |
| Benzene | Enteric | - | - | 1 | - | [10] |
| Blastocystis | Enteric | - | - | - | 2 | [11] |
| Brucella | Enteric | - | - | 2 | - | [12] |
| Calcium chloride | Enteric | - | - | 1 | - | [13] |
| Calcium proprionate | Enteric | - | - | 1 | - | [14] |
| Campylobacter | Enteric | - | - | 634 | 64 | [15] |
| Chloramines | Non-enteric | 9 | - | - | - | [16] |
| Chlorine | Non-enteric | 24 | 1 | - | 0 | [17] |
| Chlorine gas | Non-enteric | 13 | 1 | - | 0 | [17] |
| Ciguatoxin | Enteric | - | - | 172 | 1 | [18] |
| Citrobacter | Enteric | - | - | - | 1 | [19] |
| Cleaning agents | Symptom-based | - | - | 4 | - |  |
| Clostridioides | Enteric | - | - | 121 | 58 | [20] |
| Clostridium | Enteric | - | - | 461 | 77 | [20, 21] |
| Copper | Enteric | - | - | 3 | - | [22] |
| Coxiella | Non-enteric | 1 | - | - | - | [23] |
| Cryptosporidium | Enteric | - | - | 512 | 47 | [24] |
| Cyanotoxin | Enteric | - | - | 12 | - | [5] |
| Cyclospora | Enteric | - | - | 98 | 3 | [25] |
| Diarrhetic shellfish toxin | Enteric | - | - | 1 | - | [26] |
| Edwardsiella | Enteric | - | - | - | 1 | [27] |
| Endolimax | Non-enteric | - | - | - | 1 | [11] |
| Entamoeba | Enteric | - | - | - | 1 | [11] |
| Enterobacter | Non-enteric | 1 | - | - | 2 | [28] |
| Enterococcus | Non-enteric | 1 | - | - | - | [29] |
| Escherichia | Enteric | - | - | 797 | 101 | [30] |
| Fiddlehead fern toxin | Enteric | - | - | 1 | - | [31] |
| Francisella | Non-enteric | 1 | - | - | - | [32] |
| Gempylotoxin | Enteric | - | - | 2 | - | [33] |
| Giardia | Enteric | - | - | 170 | 14 | [24] |
| Glacial acetic acid | Enteric | - | - | 1 | - | [34] |
| Grimontia | Enteric | - | - | 1 | - | [35] |
| Haff disease | Non-enteric | 6 | - | - | - | [36] |
| Hepatitis | Non-enteric | 33 | - | - | - | [37] |
| Human metapneumovirus | Non-enteric | - | - | - | 1 | [38] |
| Influenza | Non-enteric | - | - | - | 1 | [39] |
| Lectin | Enteric | - | - | 1 | - | [40] |
| Legionella | Non-enteric | 429 | - | - | 1 | [41] |
| Leptospira | Non-enteric | 1 | - | - | - | [42] |
| Liquid nitrogen | Enteric | - | - | 1 | - | [43] |
| Listeria | Enteric | - | - | 75 | 1 | [44] |
| Methomyl | Non-enteric | 1 | - | - | - | [45] |
| Microcystis | Enteric | - | - | 8 | 1 | [5] |
| “Multiple pathogens” | Symptom-based | - | - | 1 | - |  |
| Mushroom poisoning | Symptom-based | - | - | 17 | - |  |
| Mycobacterium | Non-enteric | 6 | - | - | - | [46] |
| Mycotoxins | Symptom-based | - | - | 3 | - |  |
| Naphthalene | Non-enteric | 1 | - | - | - | [47] |
| Neurotoxic shellfish poison | Enteric | - | - | 1 | - | [26] |
| Niacin | Non-enteric | 1 | - | - | - | [48] |
| Nitrite | Enteric | - | - | 1 | - | [49] |
| Norovirus | Enteric | - | - | 22,820 | 244 | [50] |
| “Other“ | Symptom-based | 6 | - | 16 | 2 |  |
| Pantoea | Non-enteric | 1 | - | - | - | [51] |
| Paralytic shellfish poison | Non-enteric | 8 | - | - | - | [5] |
| Pesticides | Symptom-based | - | - | 1 | - |  |
| Phenol | Enteric | - | - | - | 1 | [52] |
| Plant/Herbal toxins | Symptom-based | 1 | - | 1 |  |  |
| Plesiomonas | Enteric | - | - | 1 | 6 | [53] |
| Proteus | Enteric | - | - | - | 1 | [54] |
| Pseudomonas | Enteric | - | - | 31 | 1 | [55] |
| Puffer fish tetrodotoxin | Enteric | - | - | 3 | - | [56] |
| Rabies | Non-enteric | 1 | - | - | - | [57] |
| Rhinovirus/enterovirus | Non-enteric | - | - | - | 1 | [58] |
| Rotavirus | Enteric | - | - | 147 | 38 | [59] |
| Salmonella | Enteric | - | - | 2,449 | 58 | [60] |
| Sapovirus | Enteric | - | - | 122 | 72 | [50] |
| Scombroid toxin | Enteric | - | - | 173 | - | [61] |
| Shigella | Enteric | - | - | 1,171 | 35 | [62] |
| Shiitake dermatitis | Non-enteric | 2 | - | - | - | [63] |
| Sodium | Non-enteric | - | - | - | 1 | [64] |
| Sodium hydroxide | Enteric | - | - | 3 | - | [65] |
| Spoilage bacteria | Symptom-based | - | - | 1 | - |  |
| Staphylococcus | Enteric | - | - | 162 | 50 | [66] |
| Streptococcus | Non-enteric | 5 | - | - | - | [29] |
| Sulfite | Non-enteric | 1 | - | - | - | [67] |
| THC | Non-enteric | 3 | - | - | - | [68] |
| Toxoplasma | Non-enteric | 3 | - | - | - | [69] |
| Trichinella | Enteric | - | - | 15 | - | [70] |
| Unspecified bacterial toxin | Enteric | - | - | 59 | 1 | [71] |
| Unspecified fish poisoning | Symptom-based | - | - | 3 | - |  |
| Vibrio | Enteric | - | - | 140 | 7 | [72] |
| Whitefish allergy | Enteric | - | - | 1 | - | [73] |
| Yersinia | Enteric | - | - | 11 | 3 | [32] |
| Total |  | 2,469 | 2 | 37,935 | 1,013 |  |

\*461 outbreaks were reported with multiple etiologies, and each outbreak is represented multiple times in the table above.

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