

Food Safety in the News, 2019-2026: Attention, Geography and Tone of Global Food-Safety Coverage, and How It Compares with Research and Invention

Fliar BI · Prism Research Layer · Working paper, October 2026 · Dataset and code: github.com/fliarbi/prism-news-api · Licence CC BY-NC 4.0

Abstract

We measure how food safety was covered in a global news index from January 2019 to July 2026, using 94,346 de-duplicated food-safety articles, and set that coverage beside 16,598 research papers (2015–2025) and 3,301 patent families on the topic. Six results stand out:

1. **Attention.** Food safety took a 40.89% smaller share of news in 2020 than in 2019. Its share rose 1.37-fold from 2023 to 2024, to 7.36 per 10,000 articles, close to the 2019 level (7.41). Setting aside a loading artefact, the largest monthly share was October 2024, the month of the E. coli outbreak linked to McDonald's Quarter Pounders, at 11.33 per 10,000.
2. **Geography.** The United States holds 51.52% of located food-safety news, close to its weight in the index (lift 1.06). India holds 18.56% (lift 1.41). Indonesia (2.43) and New Zealand (1.91) are the most over-represented countries. Within India, Telangana (4.84), Kerala (2.58) and Andhra Pradesh (1.56) lead; within the United States, New Mexico (3.82), Virginia (3.36) and Arkansas (2.5).
3. **Shifting attention.** Indonesia's food-safety coverage rose 10.67-fold as a share of its news between 2023 and 2025. France's share fell by about half (6.48 to 3.12).
4. **Tone and urgency.** 55.6% of food-safety articles are negative in tone (all news: 33.6%), and 73.7% are rated critical priority (all news: 42.6%).
5. **Measurement.** 19.02% of raw matches for food-safety vocabulary were scientific abstracts, repeated marketing and training pages, or figurative uses. A bulk load of archived articles on 14 February 2025 doubles that month's share and must be set aside.
6. **Research and invention.** Food-safety papers grew from 1.95 to 3.2 per 10,000 papers between 2019 and 2025 (1.64 times). Patent families published per year rose from 114 in 2015 to a peak of 669 in 2021 and 408 in 2024; 91.8% of family filings were in China.

Findings stated for citation

- **F1.** Food safety took a 40.89% smaller share of news in 2020 than in 2019 (4.38 vs 7.41 per 10,000 articles).
- **F2.** Its share rose 1.37-fold from 2023 to 2024 (5.37 to 7.36 per 10,000).
- **F3.** Setting aside a loading artefact and the thin final month, October 2024 had the largest monthly share, 11.33 articles per 10,000.
- **F4.** The United States held 51.52% of located food-safety news (lift 1.06); India held 18.56% (lift 1.41).

- **F5.** Indonesia (lift 2.43) and New Zealand (1.91) were the most over-represented of the leading countries; Nigeria (0.39) and Spain (0.45) the most under-represented.
- **F6.** 55.6% of food-safety articles were negative in tone, 1.65 times the all-news share.
- **F7.** 73.7% were rated critical priority by a machine-assigned rating, 1.73 times the all-news share.
- **F8.** 36.39% of themed articles dealt with regulatory compliance and 11.51% with foodborne illness outbreaks.
- **F9.** Salmonella was named in 15,938 articles and listeria in 10,681.
- **F10.** 19.02% of raw food-safety matches were abstracts, marketing pages or figurative uses.
- **F11.** Food-safety papers rose 1.64-fold as a share of all papers between 2019 and 2025.
- **F12.** Measuring and testing (G01N) led food-safety patent families (2015–2024); 91.8% of family filings were in China, and families per year peaked at 669 in 2021.
- **F13.** Within India, Telangana (4.84), Kerala (2.58) and Andhra Pradesh (1.56) had the most over-represented coverage.
- **F14.** Within the United States, New Mexico (3.82), Virginia (3.36) and Arkansas (2.5) had the most over-represented coverage.
- **F15.** Indonesia's food-safety coverage rose 10.67-fold as a share of its news from 2023 to 2025.

1. Introduction

Unsafe food causes illness in every country, and most of what the public learns about it arrives through the news: an outbreak, a recall, a raid on an adulterated product, a new rule from a regulator. Coverage shapes which hazards people and policy-makers treat as urgent. Surveillance systems count illnesses and recalls. Bibliometric studies count research. Few sources count attention, meaning how much of the news food safety takes, when and where it takes it, and in what tone.

This paper and its dataset do that. They combine three records for one topic: a global news index, research papers and patents. Each comparison uses a denominator, so that growth in the index or in publishing is not mistaken for growth in interest. The companion dataset publishes an article-level sample (23,514 rows) and full coverage tables, so every figure here can be re-derived. The [Prism News API](#) serves the full history.

2. Data and methods

News. The Prism news index holds articles from outlets worldwide; non-English articles are indexed in English translation. Each article carries its opening text (the first few sentences), a primary location, a graded tone label, an editorial priority rating (1–9), themes, keywords and named organisations. We count unique article identifiers; repeated rows for the same article are removed. When this release was built, 92.88% of the index was readable, so all counts are lower bounds.

Matching. An article is about food safety when its opening text contains, as whole words, one of 19 reviewed terms: *food safety*, *FSSAI*, *food poisoning*, *foodborne* or *food-borne*, *food recall(s)*, *food adulteration*, *adulterated food*, *food contamination*, *contaminated food*, *food*

fraud, unsafe food, salmonella, listeria, E. coli outbreak, botulism, Food Standards Agency and food hygiene. Three families of matches are excluded:

- scientific abstracts that the index carries alongside news, recognised by their structure ("Background:", "Purpose:") and by laboratory vocabulary (isolates, biofilms, assays, biosensors);
- corporate marketing, webinar and training pages, many of them repeated word for word across dozens of country sites;
- figurative and negated uses ("does not affect food safety").

Together these removed 22,161 of 116,507 raw matches (19.02%). One reviewer read 40 randomly drawn matched openings, and a second reviewer re-judged them. 36 were about food safety (precision 90%), and in 33 (82.5%) food safety was the main subject. The four misses were a business column that used "food poisoning" as a metaphor, a laboratory study of listeria cell biology, a plant-biology abstract on cadmium in rice and a list of bilateral agreements that named food safety in passing. The phrase *food safety* itself appears in 51.2% of matched openings.

A loading artefact. On 14 February 2025 the index took in a bulk archive of older trade-press articles, all filed under that day. February 2025 therefore shows 22.45 articles per 10,000, twice any other month. We keep these articles in the dataset, because they are about food safety, but do not use February 2025 or the year 2025 for trends. Items with an unknown date are filed on 1 January, which inflates January in every year, so no seasonal pattern is reported.

Measures. Coverage over time is expressed per 10,000 articles in the index that month or year, because the index grew from 11,807,177 articles in 2019 to 23,311,896 in 2024. Geography, tone, priority and themes use January 2023 – July 2026. Geography is expressed as lift: a place's share of food-safety articles divided by its share of all located articles. Place tags derived from ordinary words ("Congress", "Earth", "Winter", "Cloud", "Mobile", "Hurricane") were treated as unlocated in every location field, which removed 15.3% of city-tagged articles from the location tables.

Research and patents. Research papers are de-duplicated articles and reviews (2000–2025) with *food safety, foodborne, food-borne, food poisoning, food contamination, food adulteration* or *food fraud* in the title; repository deposits are excluded. Patent families (2005–2024) use the same title rule and are counted once per filing office.

3. Results

3.1 How much and when

The index holds 94,346 food-safety articles from January 2019 to July 2026. Raw counts rose from 8,744 in 2019 to 17,158 in 2024, but the share of all news moved much less (Table 1). It fell from 7.41 per 10,000 in 2019 to 4.38 in 2020, 40.89% lower, in the first year of the COVID-19 pandemic; the link is not tested here. It stayed near 5 per 10,000 until 2023 (5.37), then rose 1.37-fold to 7.36 in 2024, close to the 2019 level. The 2025 figure (8.49) is inflated by the February load described in §2.

Year	Food-safety articles	All articles in index	Per 10,000
2019	8,744	11,807,177	7.41
2020	7,114	16,230,014	4.38
2021	7,896	17,281,220	4.57
2022	9,749	19,115,515	5.1
2023	11,002	20,484,506	5.37
2024	17,158	23,311,896	7.36
2025	22,904	26,990,006	8.49

Table 1. Food-safety articles per year and as a share of the index. 2025 includes the February bulk load of archived articles; 2026 (January–July) is partial and omitted.

Apart from the February 2025 artefact, the highest monthly share was October 2024, at 11.33 per 10,000 (Figure 1). That was the month of the *E. coli* outbreak linked to McDonald's Quarter Pounder hamburgers in the United States. The quietest stretch was the spring of 2020, at about 4 per 10,000 (3.92 in May 2020).

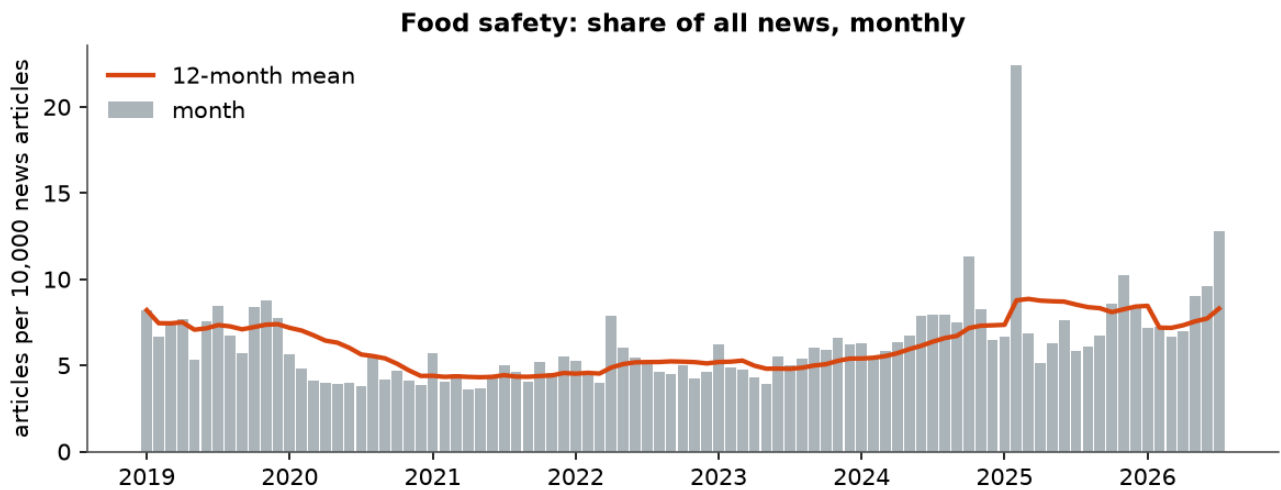


Figure 1. Food-safety coverage as articles per 10,000 news articles, monthly, January 2019 – July 2026. Bars are months; the line is the 12-month mean. The February 2025 spike is a bulk load of archived articles, and July 2026 rests on a thin base.

The within-year pattern is flat (Figure 2). No month holds more than 9.73% of a year's articles on average, against 8.3% for an even spread, and the two highest months (January and February) are the two affected by the dating issues in §2. Food-safety news follows outbreaks and recalls, not a calendar.

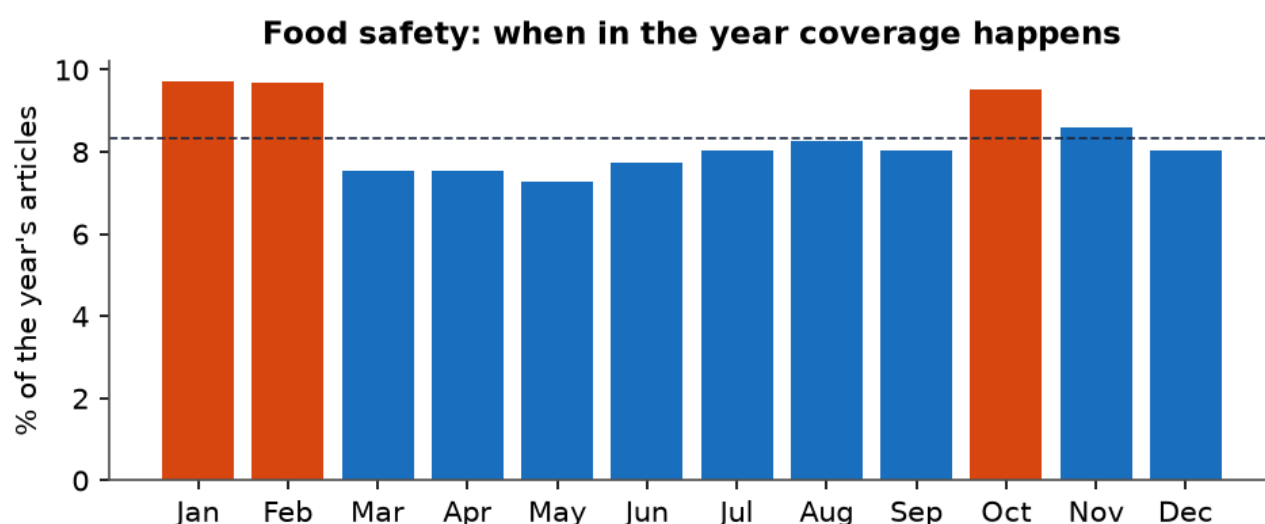


Figure 2. Share of each year's food-safety articles published in each month, averaged over 2019–2025. Dashed line = an even spread (8.3% per month). January and February are inflated by dating issues.

3.2 Where

Between January 2023 and July 2026, 27,729 food-safety articles carried a primary location. The United States holds 51.52% of them, with a lift of 1.06: food safety takes about the same share of American news as of news overall. India's share (18.56%) comes with a lift of 1.41. The most over-represented countries are Indonesia (2.43), New Zealand (1.91), Canada (1.45), and India and Singapore (both 1.41). The country tag "turkey" shows a higher lift (3.32), but in the article sample only 5 of 68 Turkey-tagged rows name a Turkish city; most are US holiday advice about cooking the bird, so Turkey is not compared. Nigeria (0.39), Spain (0.45), Japan (0.49), China (0.53), Germany (0.54) and France (0.55) are under-represented (Table 2, Figure 3).

Country	Located food-safety articles	Share %	Lift vs all news
United States	14,285	51.52	1.06
India	5,147	18.56	1.41
United Kingdom	1,446	5.21	0.89
Canada	865	3.12	1.45
China	385	1.39	0.53
Australia	363	1.31	0.61
Singapore	349	1.26	1.41
New Zealand	343	1.24	1.91
France	303	1.09	0.55
Turkey*	292	1.05	3.32
United Arab Emirates	250	0.9	1.38
Italy	223	0.8	0.83
Indonesia	187	0.67	2.43

Table 2. Leading countries in located food-safety news, January 2023 – July 2026, with lift against all located news.

*Most "turkey" tags refer to the bird, not the country; not interpreted.

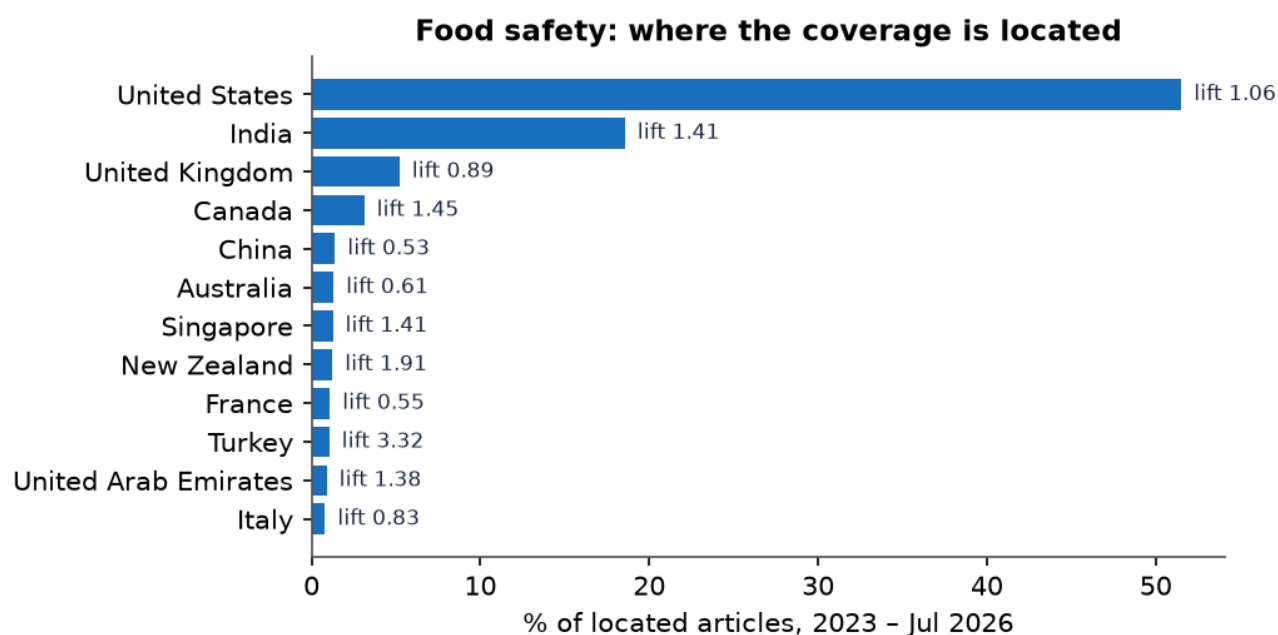


Figure 3. Leading countries by share of located food-safety articles, 2023 – Jul 2026, labelled with lift against all located news.

3.3 Geo intelligence: continents, states and shifting attention

The world map (Figure 4) shows the pattern at a glance. Most countries carry fewer than 100 located food-safety articles and are grey. Among those that remain, food safety is over-represented in Indonesia, India, New Zealand and Canada (Turkey's red shading comes from the bird, not the country), and under-represented in China, Japan, Australia, Nigeria and the large countries of western Europe. By continent, North America (1.11) and Asia (1.09) are slightly over-represented. Oceania (0.93), Africa (0.77) and Europe (0.7) are under-represented, and South America (0.33) most of all (Figure 7, left).

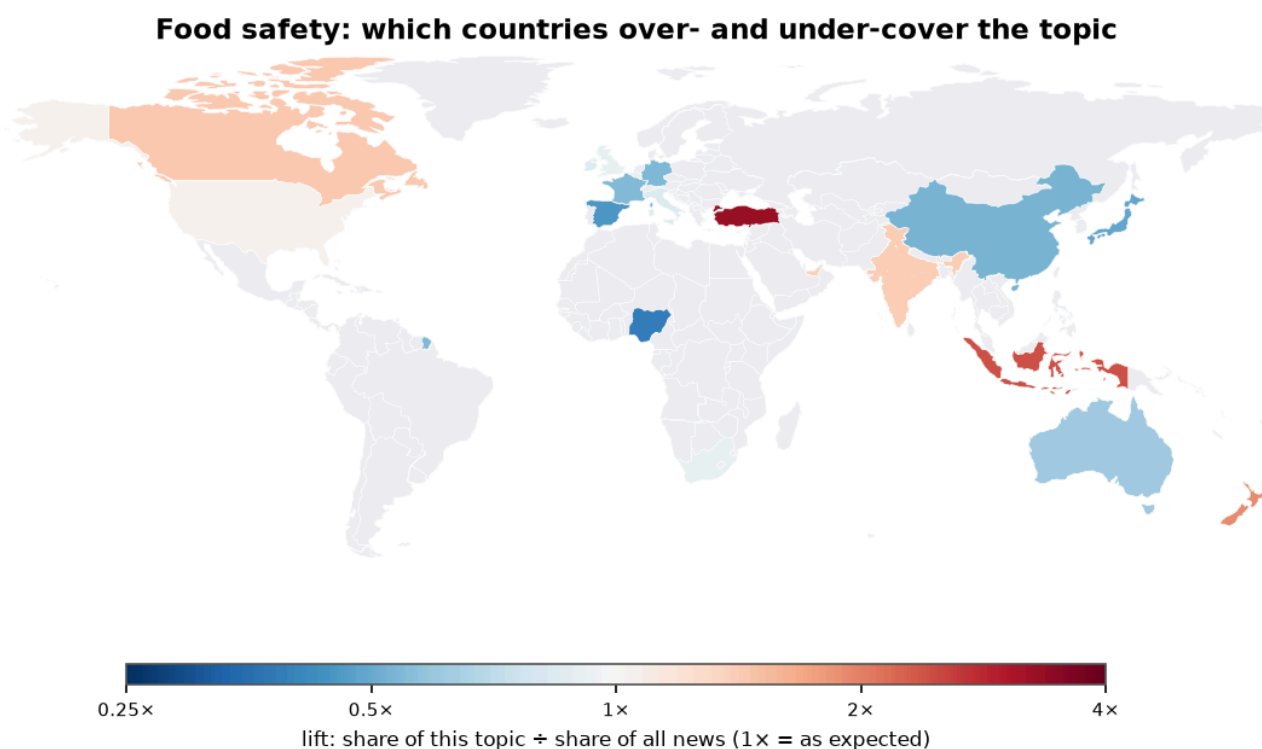


Figure 4. Lift of each country's share of located food-safety articles, January 2023 – July 2026 (red = over-represented, blue = under-represented, grey = fewer than 100 articles). India is drawn with its official outline.

Within countries, the picture is sharper (Table 3). In India, food-safety coverage concentrates in the south. Measured against each state's share of Indian news, Telangana (4.84), Kerala (2.58) and Andhra Pradesh (1.56) are the most over-represented; Telangana alone holds 16.8% of the 4,303 located Indian food-safety articles. Bihar (0.37), Delhi (0.41), Odisha (0.63) and Maharashtra (0.66) are under-represented (Figure 5). In the United States, New Mexico (3.82), Virginia (3.36), Arkansas (2.5) and Wyoming (2.3) lead by lift among 12,167 located articles. New Jersey (0.14), Tennessee (0.34), Massachusetts (0.54), Alabama (0.55), and Florida and Mississippi (both 0.67) are below their weight in American news (Figure 6). Idaho, which ranked third in an earlier build, kept only 47 articles once place tags from ordinary words were removed and is no longer compared. The state tag "washington" (3.46) cannot be separated from Washington, D.C., the seat of the federal food-safety agencies, and is left out of the comparison.

India: state	Articles	Lift	United States: state	Articles	Lift
Telangana	723	4.84	New Mexico	163	3.82
Kerala	271	2.58	Virginia	400	3.36
Andhra Pradesh	153	1.56	Arkansas	121	2.5
Madhya Pradesh	176	1.39	Wyoming	67	2.3
Uttar Pradesh	693	1.27	Colorado	396	1.68
Tamil Nadu	264	1.22	Oregon	204	1.68
Rajasthan	174	1.17	Illinois	516	1.61
Delhi	230	0.41	Tennessee	93	0.34
Bihar	77	0.37	New Jersey	313	0.14

Table 3. States with the highest and (last two rows) lowest lift in food-safety coverage, January 2023 – July 2026. Lift = the state's share of the country's located food-safety articles ÷ its share of all located news from that country. States with fewer than 50 articles are omitted, and "washington" is left out because it mixes the state and the federal capital.

Food safety: states of India by lift

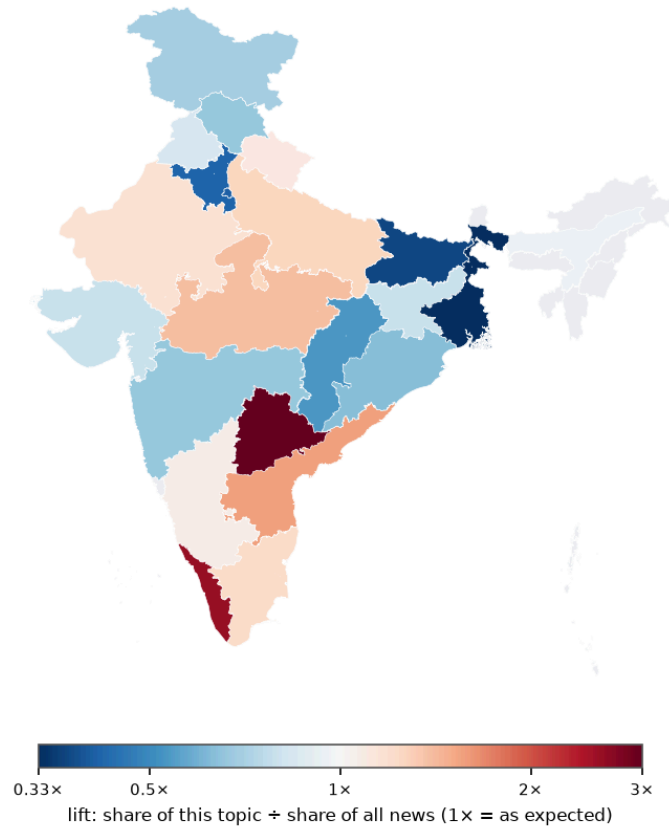


Figure 5. Lift of each Indian state's share of located food-safety articles against its share of all located Indian news, January 2023 – July 2026. Official outline; Ladakh is drawn within Jammu and Kashmir in the boundary file used.

Food safety: states of United States by lift

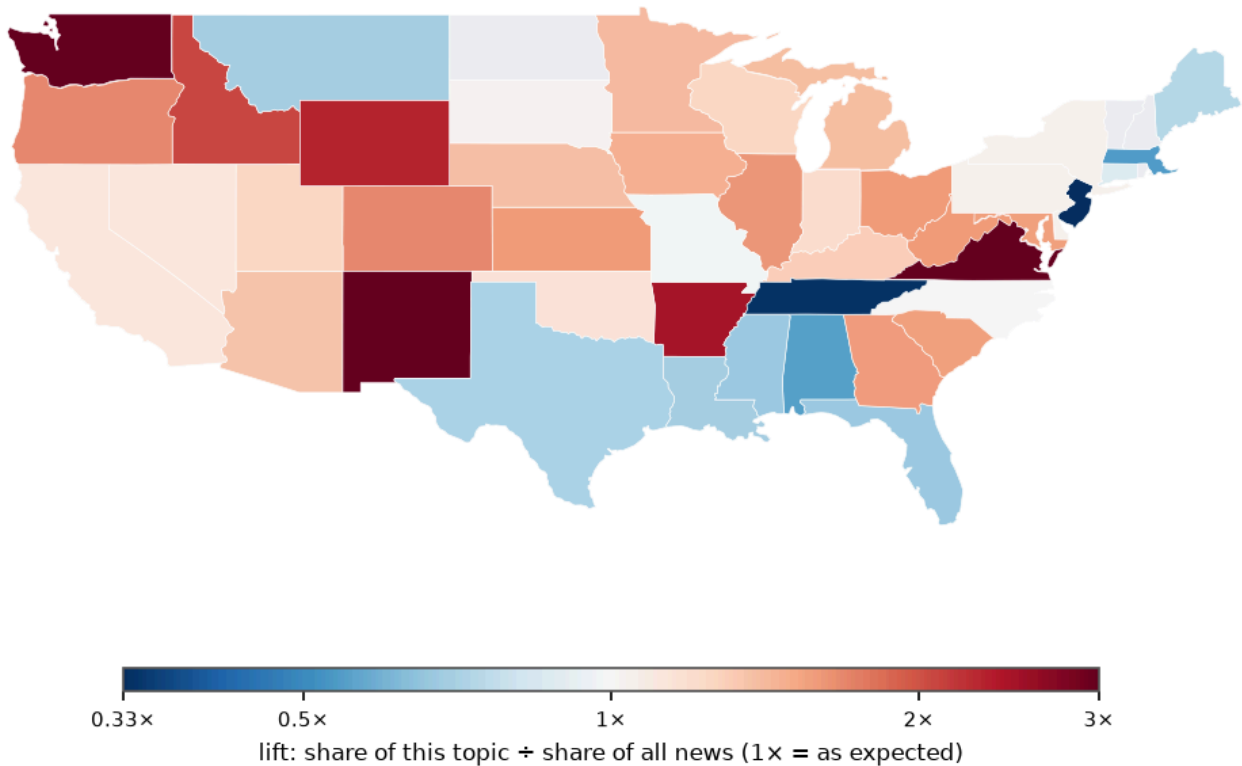


Figure 6. Lift of each US state's share of located food-safety articles against its share of all located US news, January 2023 – July 2026.

Attention also moves between countries from year to year (Figure 7, right; Table 4). Measured as food-safety articles per 10,000 of each country's located news, Indonesia rose from 4.04 in 2023 to 43.09 in 2025 (10.67 times). That was the year mass food poisoning cases were reported under Indonesia's Free Nutritious Meals programme; the link is one of timing and is not tested here. Italy (2.58 times), Canada (1.79 times) and New Zealand (1.57 times) also rose. France fell from 6.48 to 3.12 (0.48 times), while Australia (0.96) and China (1.01) were flat. India's share peaked at 12.58 in 2024. The United States also shows a rise (2.72 times), but most of it comes from the February 2025 load and is not interpreted.

Country	2023	2025	Change
Indonesia	4.04	43.09	10.67×
Italy	4.08	10.54	2.58×
Canada	6.48	11.6	1.79×
New Zealand	10.58	16.64	1.57×
United Kingdom	5.39	7.31	1.36×
India	7.62	9.67	1.27×
China	3.76	3.78	1.01×
Australia	4.81	4.6	0.96×
France	6.48	3.12	0.48×

Table 4. Food-safety articles per 10,000 of each country's located news, 2023 and 2025, for countries with at least 100 food-safety articles in 2025. The United States (2.72×, February 2025 load) and Turkey (bird, not country) are omitted.

Food-safety coverage is more negative than the news around it in every leading country, but the gap varies. Measured against each country's own news, it is widest in Canada (75.7% negative against 27.1%, 2.79 times) and Singapore (61.9% against 24.5%, 2.53 times), and narrower in India (62.5% against 41.2%, 1.52 times). The United Arab Emirates has the least negative food-safety coverage (41.0%).

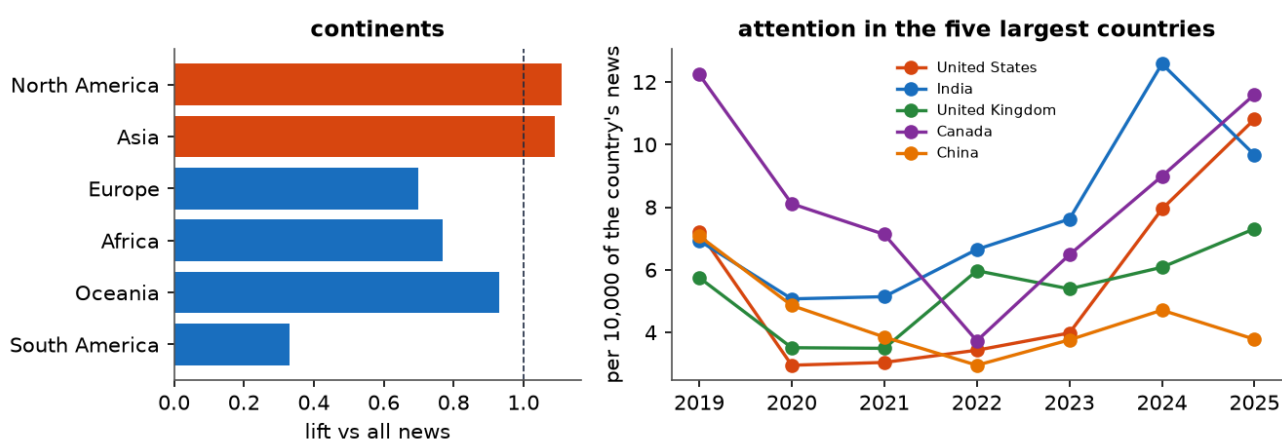


Figure 7. Left: lift by continent, January 2023 – July 2026. Right: food-safety articles per 10,000 of each country's located news, 2019–2025, for the five countries with the most articles.

3.4 Tone, urgency and themes

Food-safety coverage is more negative and more urgent than news in general (Figure 8). Among articles with a tone label, 55.6% are negative, against 33.6% across the index (1.65 times). A machine-assigned priority rating puts 73.7% of food-safety articles at critical level (7 or higher), against 42.6% of all news (1.73 times).

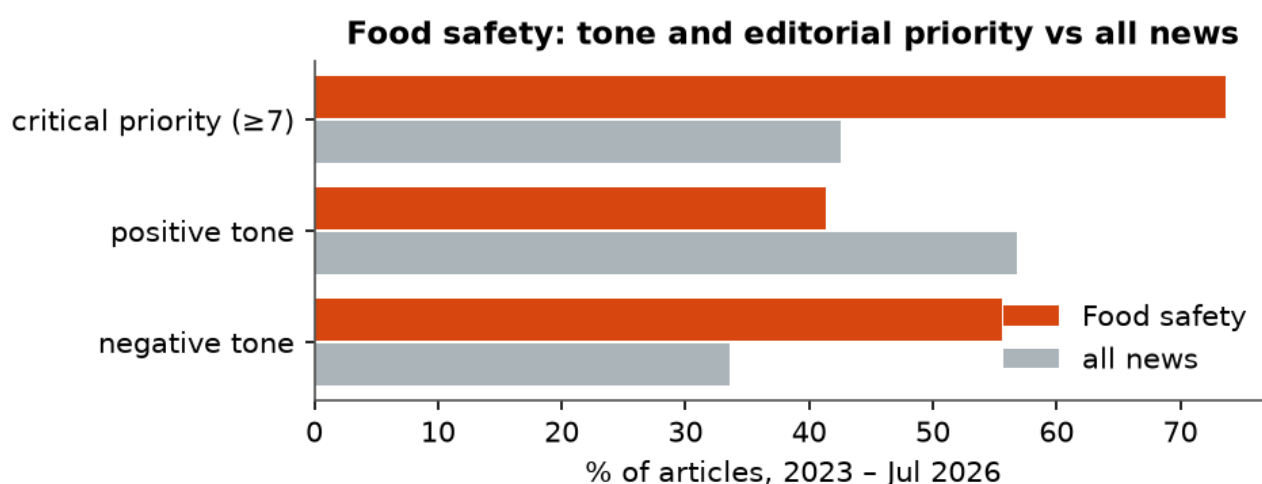


Figure 8. Tone and the share rated critical priority, food-safety articles vs all news, 2023 – Jul 2026.

Themes show what food-safety stories are about (Table 5). Regulatory compliance is the most common (36.39% of themed articles), followed by foodborne illness outbreaks (11.51%) and product safety and recall notices (7.61%). Smaller themes, such as raw milk regulation and recall traceback systems, are highly specific to the topic.

Theme	Articles	Share %	Lift
food safety regulation compliance	11,584	36.39	671.12
consumer health and safety standards	1,110	3.49	494.54
meat and seafood safety guidelines	829	2.6	384.54
recall management & product traceback systems	103	0.32	361.55
pasteurization and dairy safety standards	203	0.64	309.0
product safety and recall notices	2,421	7.61	271.23
raw milk regulations and controversies	115	0.36	241.69
foodborne illness outbreaks	3,665	11.51	215.88

Table 5. Themes most specific to food-safety coverage (lift against all themed news), January 2023 – July 2026.

Pathogens dominate the vocabulary. Across the whole window, salmonella appears in the opening of 15,938 articles and listeria in 10,681, against 1,783 for botulism and 1,426 for the phrase "E. coli outbreak". The organisations named most often are regulators: the US Department of Agriculture (4,652 articles), its Food Safety and Inspection Service (3,222), India's food regulator (2,967), the Food Standards Agency in the United Kingdom (991) and the Canadian Food Inspection Agency (604). Retailers named in recalls follow: Walmart (1,270), Kroger (741), Costco (638) and Aldi (627).

3.5 Research attention and invention

Research on food safety grew faster than the scientific literature in recent years. Papers with a food-safety term in the title fell from 2.33 per 10,000 papers in 2015 to 1.95 in 2019, then rose to 3.2 in 2025: 1.64 times the 2019 share and 1.37 times the 2015 share. The total literature in the corpus grew by a factor of 1.0 over 2015–2025. Between 2015 and 2025, 16,598 such papers were published. The most-cited estimate the burden of foodborne illness in the United States and worldwide [1–4].

News attention does not track research attention (Figure 9). Both fell to a low around 2019–2020 and both rose from 2023, but news fell harder in 2020 and recovered later.

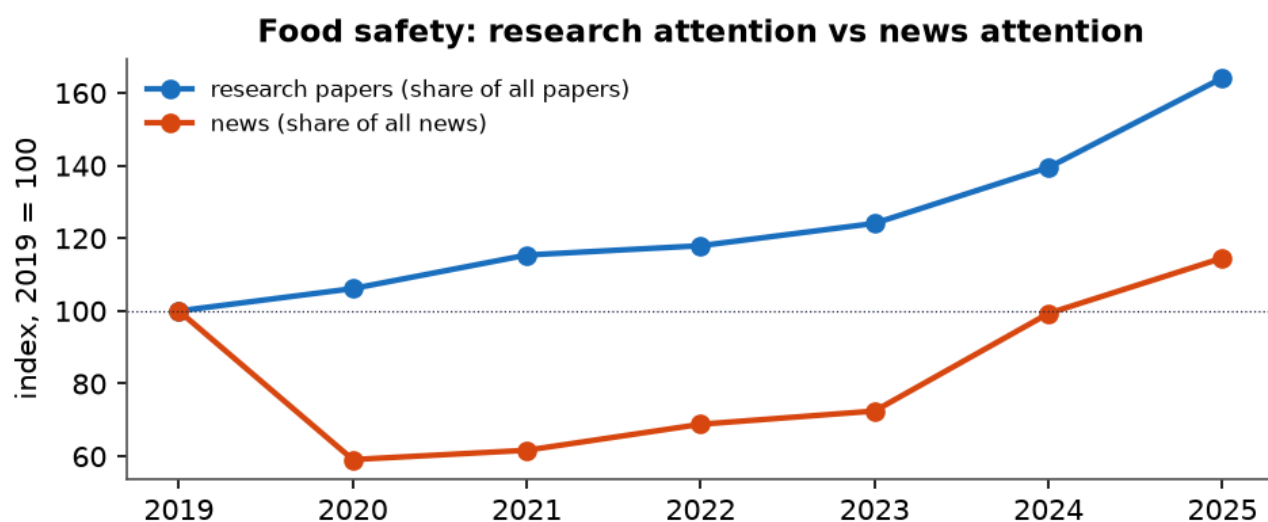


Figure 9. Research papers with food-safety terms in the title (share of all papers) and food-safety news (share of all news), each indexed to 2019 = 100.

Patenting rose faster still: 114 food-safety patent families were published in 2015 and 408 in 2024 (3.58 times), with a peak of 669 in 2021. China's office holds 91.8% of family filings (family-office pairs) from 2015 to 2024, followed by South Korea (2.5%) and the United States (2.0%) (Figure 10). The leading technology classes are measuring and testing (G01N, 414 families), data processing for business and traceability (G06Q, 247) and microbiological testing (C12Q, 122).

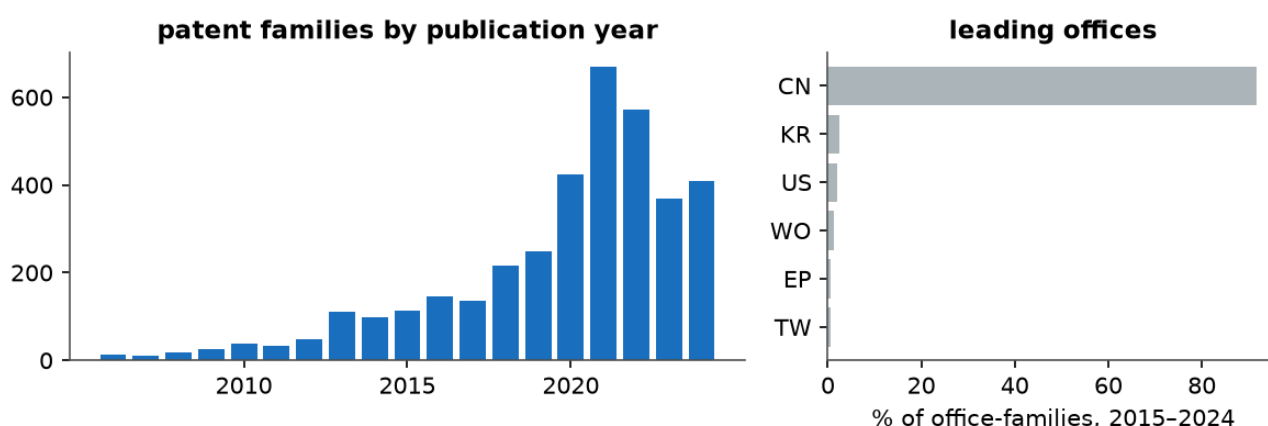


Figure 10. Food-safety patent families by publication year (left) and the leading filing offices, 2015–2024 (right).

4. Discussion

Three points matter for anyone who uses news as a record of food safety. First, coverage measures attention, not risk. The 2020 trough coincides with the first pandemic year, and the October 2024 peak coincides with one outbreak at a fast-food chain with national reach; neither link is tested. Second, geography in raw shares misleads. The United States produces more than half of located food-safety news, but only about its weight in the index. The places where food safety takes an outsized share of attention are elsewhere: Indonesia and New Zealand among countries, Telangana and Kerala within India, and New Mexico and Virginia within the United States. Third, keyword counts need cleaning. Nearly a fifth of raw matches were not journalism, and one bulk load of archived articles on a single day would, if left in, make February 2025 look like the largest food-safety story of the period.

Research, invention and news run on different clocks. Research share has grown steadily since 2019. Patent families grew fastest from 2015, peaked in 2021, and are concentrated in

one office, mostly in testing and traceability technology. News follows outbreaks and recalls. The dataset lets researchers link the three, for example to test whether outbreaks with heavy coverage are followed by regulation or by testing patents.

5. Limitations

- **Index availability.** 92.88% of the index was readable at build time, so counts are lower bounds. Shares and lifts are less affected, because the missing part is spread across topics.
- **Dating.** A bulk load of archived articles is filed under 14 February 2025, and items with an unknown date under 1 January. February 2025, the year 2025 and seasonality are not interpreted.
- **Turkey.** The country tag "turkey" mostly records the bird in holiday food-safety advice, so Turkey's lift and attention trend are not interpreted.
- **Coverage after May 2026.** The index thins after May 2026, so 2026 is partial and is excluded from year comparisons.
- **Matching.** Matching uses the article opening. Articles that mention food safety only later are missed, and about 10% of matches are not about food safety. Some scientific abstracts remain.
- **Machine labels.** Location, tone, priority, themes and organisations are machine-labelled. The city field is noisy and is not analysed. The state tag "washington" mixes the state and the federal capital.
- **Place words.** Place tags derived from ordinary words were treated as unlocated (15.3% of city-tagged articles). This lowers located counts and removed one US state (Idaho) from the state comparison; other ordinary-word tags may remain.
- **Outlet mix.** The index over-represents English-language outlets, which shapes the geography.
- **Research and patent counts.** These match titles only. Office shares reflect filing practice; utility models are numerous in China.

Data availability

The dataset (article sample, monthly, country and state tables, research and patent tables, all metrics) is released under CC BY-NC 4.0 with this paper. The sample holds 23,514 of 94,318 matched articles to 31 July 2026. Full article text, headlines, publishers, later articles and other topics are served by the Prism News API: <https://github.com/fliarbi/prism-news-api> (base URL <https://radar-api.fliarbi.com/news>). A worked query: `prism-news trends "food safety" --since 2019-01-01 --until 2026-07-31 --granularity monthly`.

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