

Focus Area 10 Worksheet: Control of Source

Focus Area 10: Control of Source

To help you understand what is included in this Focus Area, review the following goals and keys to success.

GOALS FOR CONTROL OF SOURCE AT IMPLICATED FACILITY:

Agency/jurisdiction works with the facility or production site implicated in an outbreak to ensure that actions are taken to quickly stop the spread of infection through the current source and to prevent similar food safety problems at the facility or site in the future.

KEYS TO SUCCESS FOR CONTROL SOURCE AT IMPLICATED FACILITY:

“Keys to success” are activities, relationships, and resources that are believed to be critical to achieving success in a Focus Area. Determining whether an agency/jurisdiction has a particular key to success in place is somewhat subjective. Metrics, such as measures of time (e.g., rapidly, timely, and quickly), have not been defined. Your Workgroup should provide its own definitions for these terms, as is appropriate for your agency/jurisdiction, and use its best judgment in deciding whether a particular key to success is fully or partially in place.

Control measures

- 0 Agency/jurisdiction works with the facility or production site, appropriate regulatory agency, and industry representatives in determining the desired control measures.
- 0 Agency/jurisdiction has legal authority to require the desired control measures.
- 0 Staff consider a variety of control measures to address the food safety problem (e.g., removing the vehicle from consumption, cleaning the environment, educating food workers, modifying food preparation, excluding ill staff).
- 0 Staff implement control measures as soon as sufficient information is available to do so.

Communication

- o Outbreak response team members share information from the outbreak response with each other in a timely fashion.
- o Staff communicate effectively control measures to facility manager, facility workers, and others involved in the implementation of control measures and provide education, as needed.

Monitoring

- 0 Staff monitor the implementation of control measures at the implicated facility and the effectiveness of those control measures.
- 0 Staff monitor the population at risk to ensure the outbreak has ended and the source has been eliminated

Making changes

- o Agency/jurisdiction conducts a debriefing among investigators following each outbreak response and refines outbreak response protocols based on lessons learned.
- o Agency/jurisdiction has performance indicators related to control of the source at the implicated facility and routinely evaluates its performance in this Focus Area.

List the persons participating in the discussion of this Focus Area and list their affiliations

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Population (millions)	7.5	7.6	7.7	7.8	7.9	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9	9.0	9.1	9.2	9.3	9.4	9.5
GDP (trillion USD)	15.0	16.0	17.0	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
Life expectancy (years)	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95
Urban population (%)	55	57	59	61	63	65	67	69	71	73	75	77	79	81	83	85	87	89	91	93	95
Renewable energy (%)	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50
Carbon emissions (Gt CO2e)	15.0	16.0	17.0	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
Forest cover (%)	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10
Water stress (%)	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50
Healthcare expenditure (USD/billion)	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300
Education expenditure (USD/billion)	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150
Research & Development (USD/billion)	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60
Unemployment (%)	5.5	5.8	6.1	6.4	6.7	7.0	7.3	7.6	7.9	8.2	8.5	8.8	9.1	9.4	9.7	10.0	10.3	10.6	10.9	11.2	11.5
Income inequality (Gini index)	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
Digital literacy (%)	60	65	70	75	80	85	90	95	100	100	100	100	100	100	100	100	100	100	100	100	100
Gender equality index	0.75	0.76	0.77	0.78	0.79	0.80	0.81	0.82	0.83	0.84	0.85	0.86	0.87	0.88	0.89	0.90	0.91	0.92	0.93	0.94	0.95
Trust in government (%)	65	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49	48	47	46	45
Public debt (GDP %)	60	62	64	66	68	70	72	74	76	78	80	82	84	86	88	90	92	94	96	98	100
Immigration (net, million)	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.4	2.5
Trade share of GDP (%)	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
Foreign direct investment (USD/billion)	100	110	120	130	140	150	160	17													

1. DESCRIBE YOUR CURRENT ACTIVITIES AND PROCEDURES IN THIS FOCUS AREA.

Considering the keys to success on the previous page, describe your agency's/jurisdiction's current activities and procedures in this Focus Area. Refer to written protocols, if available, and materials related to ongoing efforts in capacity development or quality improvement (e.g., FDA Retail and Manufactured Food Regulatory Program Standards). As you list current activities and procedures related to this Focus Area, indicate those that might need work to improve your agency's/jurisdiction's response to foodborne disease outbreaks.

Activity/Procedure	Needs Improvement? ✓
	☐
	☐
	☐
	☐
	☐
	☐
	☐
	☐
	☐
	☐
	☐
	☐
	☐

2. PRIORITIZE CIFOR RECOMMENDATIONS TO ADDRESS NEEDED IMPROVEMENTS.

Having identified activities and procedures in need of improvement, review the CIFOR recommendations related to this Focus Area (listed below). Rate the priority for implementing each recommendation based on its likely impact on foodborne outbreak response at your agency/jurisdiction and available resources. Use a scale of 1 to 5 to rate each recommendation (1 = Low priority for implementation and 5 = High priority for implementation). If a recommendation is already in place in your agency/jurisdiction, check the appropriate box. If a recommendation is not relevant to your agency/jurisdiction, select N/A. **Refer to the hyperlinked section number following each recommendation to view the recommendation as it appears in the CIFOR Guidelines.**

	Already in place	Priority for Implementation or Improvement					
		LOW			HIGH		
Control measures							
Initiate control measures at the implicated facility or production site as soon as possible, concurrent with ongoing investigations. (6.1.1)	☐	1	2	3	4	5	N/A
Before a specific food is implicated, implement non-specific control measures based on good public health practice, suspicions about the likely pathogen, and the history of the establishment. (6.2.1.2)	☐	1	2	3	4	5	N/A
Ask that the owner discard or hold and discontinue serving all implicated food. If no specific food has been implicated, ask that the owner discard or hold and discontinue serving all food for which a link to the outbreak is biologically plausible. (6.2.2.1.1)	☐	1	2	3	4	5	N/A
If the owner will not discard or hold the food voluntarily, consider issuing a public health order to require action. (6.2.2.1.1)	☐	1	2	3	4	5	N/A
Ensure that the facility and all equipment is thoroughly cleaned and sanitized, followed by microbial verification of the effectiveness of the cleaning and sanitizing processes. (6.2.2.1.2)	☐	1	2	3	4	5	N/A
In a norovirus outbreak, ensure that the implicated facility uses chlorine solutions or other approved sanitizers or methods rather than standard cleaning chemicals. (6.3.4)	☐	1	2	3	4	5	N/A
Ensure that staff at the implicated facility are trained/retrained on proper cleaning and maintenance procedures for all equipment. (6.2.2.1.2)	☐	1	2	3	4	5	N/A
Require that staff at the implicated facility be trained/retrained on general practices of safe food preparation including thorough hand washing, not working when ill, no bare-hand contact with ready-to-eat foods, proper use of gloves and utensils, proper holding temperatures, proper procedures for rapid cooling, and thorough cooking and reheating of foods. (6.2.2.1.3) (6.3.4)	☐	1	2	3	4	5	N/A
If the pathogen is known, educate staff at the implicated facility about the disease (e.g., symptoms, mode of transmission, and prevention) and practices specific to control of that pathogen. (6.2.2.1.3)	☐	1	2	3	4	5	N/A
Customize training at the facility to support the desired behavioral changes among staff. (6.5.3)	☐	1	2	3	4	5	N/A

	Already in place	Priority for Implementation or Improvement					
		LOW			HIGH		
Control measures (cont'd)							
Require the facility manager to document training of both current and newly hired staff. (6.2.2.1.3)	☐	1	2	3	4	5	N/A
Work with the facility to modify food-production or food-preparation processes, if needed, to reduce risk, such as changing a recipe, changing a process, reorganizing preparation processes, changing storage temperatures, or modifying instructions to consumers. Base decisions on the scientific evidence of the effectiveness of the changes to control the pathogen linked to the outbreak. (6.2.2.1.4)	☐	1	2	3	4	5	N/A
Work with the facility to put in place a Hazard Analysis and Critical Control Point system or other preventive controls at the facility. (6.2.2.1.4)	☐	1	2	3	4	5	N/A
Eliminate implicated foods from the menu until control measures are in place. (6.2.2.1.5)	☐	1	2	3	4	5	N/A
Ensure that infected food workers are restricted to areas at the facility and tasks that provide minimal risk for transmitting the disease. (6.3.3)	☐	1	2	3	4	5	N/A
If restricting the individual is not possible, exclude him or her from the facility until no further risk of transmission of the disease exists. The risk of transmission is agent-dependent. For pathogen-specific guidance and other information about restriction and exclusion of food workers, consult the latest version of the FDA Food Code. http://www.cfsan.fda.gov/~dms/fc05-toc.html . (6.3.3)	☐	1	2	3	4	5	N/A
Exclude both symptomatic and asymptomatic infected food workers from the facility as is consistent with the agency's legal authority. Consult local ordinances and state statutes to understand the agency's legal authorities. If the outbreak response team believes a public health threat exists, the team should strongly recommend exclusion of infected food workers regardless of the legal authorities. (6.3.3)	☐	1	2	3	4	5	N/A
Identify and dispose of or embargo all food potentially contaminated by the ill or infected worker. When determining which food is at risk, consider food-preparation procedures, dates the food worker worked, and dates the food worker probably was able to transmit disease. (6.3.3)	☐	1	2	3	4	5	N/A
If the facility has multiple food safety problems, and if the owner is unable or unwilling to take immediate corrective action, consider closing the facility, following local regulations. (6.2.2.1.7)	☐	1	2	3	4	5	N/A
If the facility owner will not act voluntarily to close the premises, employ other control measures, such as cease-and-desist orders, permit action, and hearing in front of a judge. (6.2.2.1.7)	☐	1	2	3	4	5	N/A

	Already in place	Priority for Implementation or Improvement					
		LOW			HIGH		
Control measures (cont'd)							
If the implicated facility provides food for an institution in which residents have no alternative food sources, work with institution staff to identify options for bringing in food or leave the facility open but eliminate high-risk items from the menu. (6.2.2.1.7)	☐	1	2	3	4	5	N/A
Remove restrictions at facility when risk factors have been eliminated and testing indicates the problem has been eliminated. (6.2.2.1.7) (6.5.2)	☐	1	2	3	4	5	N/A

Additional ideas:

Communication with the implicated facility

Understand the agency's legal framework so you know how to interact with personnel from the facility implicated in the outbreak. (6.4.4)	☐	1	2	3	4	5	N/A
Determine when and how to share outbreak information with the owner and/or manager of the implicated facility. Make contact as soon as possible and share as much information as possible. (6.4.4) (3.5.2.1)	☐	1	2	3	4	5	N/A
Notify owners or managers of the implicated facility that they must share any new reports of illness or other new information that could affect the investigation. (6.4.1)	☐	1	2	3	4	5	N/A
Maintain communication with owner and/or manager of the implicated facility throughout and after the investigation, and tell them if additional information becomes available. (6.5.3)							
Work with the facility operator to create a risk-control plan or consent agreement so the operator knows what steps need to be taken and has committed to control the situation and prevent future outbreaks. (6.3.4)	☐	1	2	3	4	5	N/A
Guide agency staff on responding to and communicating with upset food-service workers and managers. (3.6.2.5)	☐	1	2	3	4	5	N/A

Additional ideas:

Communication with the public

If the outbreak involves only one facility, determine whether public notification is necessary. Factors that support public notification include the following:							
- Medical treatment is needed by persons exposed to the etiologic agent, - Public reporting of suspected illness is important to the investigation, and - The risk of exposure still exists. (6.2.2.1.8)	☐	1	2	3	4	5	N/A

	Already in place	Priority for Implementation or Improvement					
		LOW			HIGH		
Communication with the public (cont'd)							
If the outbreak involves a distributed product, notify the public. (6.2.2.2.2)	☐	1	2	3	4	5	N/A
Prepare messages for the public following the agency's communication protocols and established formats. The message should describe the problem and provide clear actions for the public (e.g., how to handle the suspected product, actions to take if illness occurs). (6.2.2.1.8) (6.4.3)	☐	1	2	3	4	5	N/A
Seek assistance from the agency's Public Information Officer or the Public Information Officer at another agency (if the agency does not have this resource) to help in developing messages for the public. (6.2.2.1.8)	☐	1	2	3	4	5	N/A
Use standardized scripts for reporting complex procedural or technical information to the public and actions the public should take during an outbreak. (6.4.3)	☐	1	2	3	4	5	N/A
Use established channels of communication with the public. (3.6.2.5)	☐	1	2	3	4	5	N/A
Use other sources to disseminate information (e.g., the Internet, television, radio, newspapers) depending on the public health risk associated with the outbreak. (6.4.3)	☐	1	2	3	4	5	N/A
Test messages to the public with representatives of the target population before releasing them. (6.4.3)	☐	1	2	3	4	5	N/A
Guide agency staff on responding to and communicating with upset members of the public. (3.6.2.5)	☐	1	2	3	4	5	N/A

Additional ideas:

Monitoring

Follow established agency/jurisdiction protocols for monitoring the implicated facility. (3.7.2)	☐	1	2	3	4	5	N/A
Monitor implicated foods or facilities to make sure no further contamination is occurring, that modified processes have been implemented and are effective, and that long-term behavioral changes have occurred. (6.2.2.1.4) (6.5.3)	☐	1	2	3	4	5	N/A
Increase the number of routine inspections at the implicated facility to ensure they comply with all required procedures. If the inspection program is fee-based, consider charging more for additional inspections needed when a facility is implicated in an outbreak. (6.5.3)	☐	1	2	3	4	5	N/A

	Already in place	Priority for Implementation or Improvement					
		LOW			HIGH		
Monitoring (cont'd)							
Conduct post-outbreak monitoring of the population at risk for signs and symptoms of the illness under investigation to ensure the outbreak has ended and the source has been eliminated. (6.5.3)	☐	1	2	3	4	5	N/A
Consider conducting active surveillance, working with health-care providers to increase their vigilance for cases and collecting stool samples from the population at risk, to ensure that the outbreak has ended and the source has been eliminated. (6.5.3)	☐	1	2	3	4	5	N/A

Additional ideas:

Making changes

Arrange a debriefing with all investigators following each outbreak investigation to assess the effectiveness of outbreak control measures and difficulties implementing them, identify measures to prevent future outbreaks at the implicated facility and other facilities, and identify long-term and structural control measures and plan their implementation. (6.6) (3.2.3) (5.2.8)	☐	1	2	3	4	5	N/A
Prepare summary reports for all outbreaks consistent with the size and complexity of the response. Use the reports as a continuous quality improvement opportunity. (6.7)	☐	1	2	3	4	5	N/A
Identify concerns that need follow-up research (e.g., the need for new measures to control certain pathogens in certain foods). (6.8.1)	☐	1	2	3	4	5	N/A
Identify the need for broad education of the public, the food-service and food-processing industries, or health-care providers to prevent similar outbreaks in the future. (6.8.3)	☐	1	2	3	4	5	N/A
Identify the need for new public health or regulatory policy at the local, state, or federal level. (6.8.4)	☐	1	2	3	4	5	N/A
Consult with other public health, environmental health, and food regulatory agencies on the need for new policy before presenting to the appropriate jurisdictional authority. (6.8.4)	☐	1	2	3	4	5	N/A

Additional ideas:

3. MAKE PLANS TO IMPLEMENT SELECTED CIFOR RECOMMENDATIONS.

For each CIFOR recommendation selected in the previous step (or idea formulated by the Workgroup), identify who might take the lead in implementing the recommendation and the timeframe for implementation (e.g., a specific completion date or whether the change is likely to require short-, mid- or long-term efforts). If certain actions must precede others, make a note of this and adjust the timeframe. In addition, consider factors that might positively or negatively influence implementation of the recommendation and ways to incorporate the recommendation into your agency's/jurisdiction's standard operating procedures.

CIFOR recommendations or other ideas from previous step	Lead person	Timeframe for implementation	Notes (e.g., necessary antecedents, factors that might influence implementation, ways to incorporate the recommendation into standard operating procedures)

Date worksheet completed _____