



Chapter 8: Notification and Communication

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Preface

When patients are placed at risk as a result of an outbreak in a healthcare setting, a serious infection control breach, or another situation that jeopardizes their health, they have a right to know what happened, what their risk is, and what they need to do. Incorporating notification into an outbreak response can be challenging, particularly when not all the information has been collected or analyzed. However, public health agencies and healthcare providers should consider this type of communication part of their missions to protect health and serve their populations. This chapter describes the rationale and “who/what/how/when” for notification of patients and other stakeholders, along with information on risk communication principles and strategies, to support effective healthcare outbreak response.

8.0 Introduction

8.0.1 Patients’ Stories

Patient A went into his small local hospital for treatment of a minor ankle fracture in 2008. He was readmitted to the hospital, had prolonged and complicated hospitalization, and died three months after the initial admission from a diagnosis of pneumonia caused by methicillin-resistant *Staphylococcus aureus* (MRSA). Patient A’s daughter reported discovering two other deaths at the hospital related to MRSA infections in the month prior to his admission. When Patient A’s daughter had questions, she felt frustrated and talked down to with no empathy; hospital staff responded with “expressed helplessness and ‘I don’t know’ answers.” Patient A’s family was left with unanswered questions, making the traumatic loss of a loved one even more difficult.^{1,2}

When a patient gets an infection in a hospital or other healthcare setting, it can be a shocking and frightening experience. When infections spread, it may become more frightening and confusing for



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patients and their families and may be upsetting for the staff as well. Early in an outbreak, healthcare providers and staff feel an understandable urgency to stop it. However, in that urgency, we ought not forget to inform the very people who are affected the most.

As in Patient A's case, patients and their families can be left in the dark in the midst of a known outbreak or similar situation. At a large hospital in 2017, Patient B delivered her baby who was admitted to the neonatal intensive care unit (NICU). According to Patient B, she was not informed prior to delivery that the NICU was in the midst of an ongoing MRSA outbreak, which the hospital had not yet been able to control. She was not even informed about the outbreak when she was told that her child tested positive for MRSA while still in the NICU.³

There is a great emphasis today on patient-centered care. However, informing patients and others who need to know about outbreaks has not always kept up with the current prevailing philosophy of transparency. Neglecting to inform can lead to speculation, disinformation, and distrust of the hospital, healthcare setting, and healthcare providers. Not only is lack of transparency poor patient care, but it also neglects what can be an important part of outbreak response: gaining the patient's perspective. By informing patients and families, including discharged patients, of the outbreak and investigation, they can become active participants who can help identify risk factors and reasons for an outbreak.

The framework presented in this chapter acknowledges the importance of informing patients, families, providers, and in some cases the general public when outbreaks occur in healthcare settings. Considerations for notification of patients, their families, and the public should always include the experiences of the people public health is entrusted to protect.

8.0.2 Considerations for Notification

Historically, some debate has existed about when and if to notify patients and their families, and the public, of suspected and confirmed outbreaks. More recent experience of public health agencies and healthcare facilities and providers has shifted the tide on the debate toward early notification.

A paper on large-scale adverse events, which cover outbreaks and infection control breaches, described two ethical frameworks that often guide the decision to notify. In both ethical frameworks, notifying patients at risk, even when the chance of physical harm is extremely low, is supported.⁴

The first framework, utilitarian, focuses on minimizing risk and maximizing benefit. Under the utilitarian framework, notifications can benefit stakeholders by informing and empowering them, helping mitigate harms (e.g., facilitate diagnosis and treatment). However, a healthcare facility may believe that the disclosure of a low-risk event has the potential to result in net harm (e.g., patient worry, undermining public confidence). Taking a broader perspective on benefits and harms can help in these situations. For example, disclosure can help with epidemiologic process (to identify the cause and control spread) and/or diagnostic interventions (to determine which patients might have been exposed or harmed). In



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In addition, the utilitarian framework might also support notification to ensure that the institutions involved build or maintain trust.

The second ethical framework, duty-based, focuses on the duty to notify; patients have a right to know, and an expectation that they will be notified, when the delivery of healthcare has put them at risk. This applies to situations in which the increased risk was not anticipated or was not recognized at the time of the incident. This duty-based framework is tied closely to transparency and supports disclosure in most situations.

The duty of public health agencies is to protect the health of the public. A part of this duty is to maintain the trust of the public; when the public senses that information is being withheld, this trust is undermined. It is critical to employ risk communication strategies, described later in this chapter, to convey information effectively and maintain trust. This is true for public health and healthcare alike. Difficulty in how to communicate messages should not be a barrier to the decision to communicate. Ensuring timely and accurate communication helps prevent misinformation from filling voids and to establish or maintain trust.

Patients and other stakeholders should be given information in a manner that helps them understand and manage risk. Keep in mind that the actual risk might not match the perception of risk and that different people will experience different levels of risk to the same situation. According to Peter Sandman, the amount of actual risk and the outrage of people hearing about the risk do not always correlate. When preparing for a patient notification, consider the following categories of risk and outrage:

- High risk and low outrage: communication should include messaging to alert people to potentially serious risks;
- Low risk and high outrage: communication should include messaging for reassurance;
- High risk and high outrage: communication should include helping people cope with serious risks;
- Low risk and low outrage: communication might focus on providing information.⁵

Additional considerations for notification and risk communication are discussed throughout this chapter.

8.1 Notification of Patients, Stakeholders, and General Public

In this section we will discuss the notification of affected and exposed patients, stakeholders such as providers and healthcare facilities, and the general public both during and after an outbreak. CDC authors have described 3 potential triggers to perform patient notifications: (1) when patients have experienced a healthcare associated infection (including colonization with an antibiotic-resistant pathogen), (2) when patients need to be able to mitigate risks (e.g., identify symptoms of an infection incubating or already present, receive screening for a pathogen present without symptoms), and (3)



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when patients have experienced an alteration in care due to an outbreak or infection control breach (e.g., receipt of care they would not have otherwise received, use of additional infection control precautions).⁶

For additional detail described in this section, please refer to Table 8.1. For examples of how to apply the table, see the examples in Box 8.3 (*Legionella pneumophila*) and Box 8.4 (New-Delhi metallo-beta-lactamase-producing carbapenem-resistant Enterobacteriaceae).

8.1.1 Immediate Notification

Immediate notification refers to the set of initial and critical communications that occur when an outbreak is first suspected. Healthcare providers should immediately report a suspected outbreak or infection control breach to the designated internal team members (e.g., infection preventionists, hospital epidemiologists, patient safety officers, etc.) and to public health authorities, following local, state and/or federal requirements, where applicable. Refer to Chapter 4 for additional information on cluster and outbreak definitions and reporting to public health agencies. Pathogen-specific outbreak definitions can be found on CORHA's website at www.corha.org/resources-and-products/.

Ideally, representatives of healthcare settings should take the lead on immediate notification. Public health staff may need to take the lead when healthcare setting representatives do not or are unable to do so. As best possible, the notification process should be initiated as soon as possible, within 24 hours of recognition of an outbreak. Notification may have to occur before all facts about the outbreak are known. In most cases, notification plans should prioritize patients who have been infected, ensuring that they are notified and counseled promptly (by their healthcare providers whenever possible). Notification to other groups should follow as soon as possible, and steps may occur simultaneously instead of sequentially. The same principles will apply as new cases are identified.

8.1.1.1 Affected and Exposed Patients

When cases are identified, these patients (those with the infection or condition of interest) should be notified immediately, ideally by their healthcare provider. The rationale for immediate notification of this group (those "directly affected") includes (a) fully informing them of the event and implications for their health and (b) equipping them to seek appropriate treatment, and (c) supporting the investigation and control of the outbreak. Affected patients can be notified verbally (in person or by phone if no longer in the facility), or if unable to notify verbally, in writing. If patients are incapacitated or have died, their designated healthcare proxy should be notified.

If others in the healthcare setting, such as healthcare workers or visitors, are determined to be part of the outbreak, they should also be immediately notified with the same considerations described here for patients. Applicable counseling and information about potential risk of transmission, infection, clinical illness, testing, treatment, and additional care measures should be clearly communicated. Regardless of



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the initial method of communication, patients and other affected persons will benefit from receiving information in writing.

Patients and other persons who have been exposed (but not yet determined to be infected or have the condition of interest) should be notified as soon as possible after the patients directly affected. The methods for notification should be the same, with the same considerations, as the patients directly affected. The messaging is likely to vary, and additional counseling information regarding risk of infection after exposure and post-exposure prophylaxis need to be considered in addition to the information communicated to affected patients.

Patients and other persons who might be at risk of exposure in the future should also be notified before the potential exposure occurs. This might include patients undergoing a procedure or patients admitted to a unit or area in a healthcare setting currently experiencing an outbreak, or it might include persons with an intrinsic increased risk for the condition under investigation (e.g., elderly, immunocompromised). The methods for notification can be the same as affected and exposed persons but might also include notification via postings at strategic locations, such as at the entry of a unit or at handwashing stations. The primary purpose is to decrease the risk of exposure for this group of persons understanding that the risk tolerance will vary by different people for the same actual risk of exposure

If there are many persons requiring notification or if there is likely to be a large volume of inquiries, consider establishing a dedicated call line (“hotline”) or other method to allow opportunities for questions; ideally the dedicated call line is conducted by the facility, since the facility is responsible for the direct care of the patients. However, in some circumstances it might be beneficial for a public health agency to establish a line of communication, either in parallel to or in place of the facility (typically only when the facility does not establish one). A webpage with the same information can be considered when inquiries are likely to be of high volume. Whenever possible, information should be presented in an easy-to-understand format, such as a frequently asked questions document.

Additional detail and considerations can be found in Table 8.1, Step 1.

8.1.1.2 Healthcare Providers and Personnel

Affected patients’ healthcare providers should be notified as soon as possible and preferably on the same timeline as the affected patients. Providers should understand the current situation and outbreak and their patients’ condition and risk. Healthcare providers may be able to help contact their patients. In many cases the healthcare provider is the best person to notify the patient, as they have an existing relationship; the provider can also help answer their patients’ questions and offer a level of trust and confidence to support the patient. It is important to give providers full information about the outbreak and condition, and not assume that they know how to proceed in an outbreak situation, which might differ from routine clinical care. The method of provider notification might depend on internal processes, and might include direct communication with each provider, or more general messaging to healthcare providers facility wide.



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Other providers to consider notifying include providers at the same facility who are not direct providers of affected/exposed patients or community providers who provide care to these same patients. These providers should be notified as soon as possible and should be given complete information about the outbreak to be able to counsel their patients and answer questions. There are many methods by which this information might be communicated, including during team meetings, group emails, or written postings; the exact methodology will depend on the severity of the situation, the need for broader communication, healthcare facility internal policies, and recommendations of public health agencies.

In some cases, a health alert might be sent by the public health agency to make many providers aware of the situation; this should occur when there is a need to do so, such as the potential for wide-spread exposures for purposes of case-finding and recommendations for next steps to providers who might care for these patients in the community. A contaminated medication distributed broadly among healthcare facilities and providers is one example of when a health alert might be needed.

Note that other employee types not directly affected or exposed should also be notified of the outbreak when they might hear about it from other employees; it is better to communicate early to ensure that all employees are informed and feel safe and before rumors begin to circulate. In addition, healthcare professionals and support staff may often work in other settings, raising the prospect of exposure and spread to other health care settings (see 8.2.1.4).

Finally, healthcare providers or other employees might themselves be affected or exposed persons or might have underlying illnesses that put them at risk for complications for the condition of interest. These persons should be considered in a similar manner to affected and exposed patients in the previous section. Employee health should be consulted and involved in the communication to and management of these employees.

See Table 8.1, Step 1, for more information about communication with healthcare providers and employees.

8.1.1.3 Visitors

Visitors should be informed when they might be at risk of exposure, including those who might have underlying illnesses increasing their risk, and when they might need to change behavior at the location of the outbreak (e.g., PPE use, additional handwashing). Visitors who might have been exposed should receive similar messaging to other exposed persons as described above. Methods for communication might include written postings, in person communication at the time of a visit, or written or verbal communication prior to a visit. Remember that visitors are often family or friends, and they will have questions not only about any risk to them, but also any risk to the patient. For visitors that need to make behavioral changes or institute safety precautions (e.g., transmission-based precautions), the changes must be communicated clearly, and taught directly as necessary via education or demonstrations.



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Communication should occur as soon as possible and prior to any exposure when possible. Under some circumstances, cessation of visitation might need to be considered for a period of time if visitation might pose a risk to patients or visitors.

Refer to Table 8.1, Step 1, for more information about communication with visitors.

8.1.1.4 Other Healthcare Facilities

Other healthcare facilities might need information about an outbreak at another facility when they might care for affected/exposed patients when receiving care at multiple facilities, or when their own patients and healthcare workers might be exposed. Keep in mind that healthcare professionals and support staff may move and work between facilities. Other facilities typically require notification when a patient at the primary facility is transferred and could pose a risk to healthcare workers and patients at the receiving facility. Public health should encourage thorough communication and documentation (e.g., in medical records) when transferring patients, especially when there is a risk for communicable disease spread and a need to implement transmission-based precautions. Resources such as transfer forms can be helpful for communicating this kind of key information. A sample template is available from CDC at: www.cdc.gov/hai/pdfs/toolkits/Interfacility-IC-Transfer-Form-508.pdf. Additionally, health alerts might be sent by the public health agency to notify multiple healthcare facilities and providers, often when there is the potential for wide-spread exposures, for purposes of case-finding, and when making recommendations to providers in the community.

More information on notifying other healthcare facilities can be found in Table 8.1, Step 1.

8.1.2 Expanded Notification

As an investigation progresses and more information becomes available, notification procedures should be updated and may require expansion to other individuals, groups, or partners. This is especially true if the investigation expands to additional units or to additional healthcare settings. Additionally, previously notified individuals should receive updated communications, as appropriate.

Coordination and frequent communications among involved partners is critical during this phase. As coordination and message timing become more complicated, public health might need to assume a coordination role. This may include helping coordinate notification timelines or developing a shared media communication plan for healthcare facilities, public health and other government agencies, and other partners.

Anticipate media and public attention (see section 8.3). Public health staff should continue to defer to representatives of the healthcare settings to perform individual notifications whenever possible, unless surge capacity is needed or the facility is closed, not cooperative, or lacks capacity (e.g., smaller/ outpatient facility).



8.1.2.1 Affected and Exposed Patients

Additional affected and exposed patients might be detected during the course of the investigation. Transparency and open communication remain critical in this context. These additional patients, or their designated proxies, should be notified as soon as they are identified, ideally within 24 hours of identification or as soon as possible; do not wait for the investigation to be completed. All information discussed above in Section 8.2.1.1 related to methods for notification and considerations apply to additional affected/exposed patients; consider giving additional information related to why notification might be coming later than for other patients already notified. Additional details and considerations for expanded notification can be found in Table 8.1, Step 2.

8.1.2.2 Healthcare Providers and Personnel

As additional affected/exposed patients and persons are identified, consider notifying their providers as soon as possible, as outlined in Section 8.2.1.2. It is often during the expanded notification stage that additional personnel, such as facility employees and providers at the same facility who are not direct providers of affected patients, or community providers, might become more involved and benefit from being notified. See Table 8.1, Step 2, for more information.

8.1.2.3 Visitors

Additional visitors beyond those targeted during the immediate notification phase might be identified and require outreach as the investigation progresses. For example, if during the outbreak investigation additional units are identified as being affected, additional signage might be posted in strategic locations within these units. If there are additional risk factors identified during the investigation, these might have implications for visitors and should be communicated as appropriate to assist with prevention efforts. More details can be found in Section 8.2.1.3 and Table 8.1, Step 2.

8.1.2.4 Other Healthcare Facilities

During the expanded notification stage, additional healthcare facilities might need to be notified. For example, when other healthcare facilities care for affected/exposed patients, or when their own patients and healthcare workers might be at risk. The methods and considerations for notifying other healthcare facilities are described in Section 8.2.1.4 and in Table 8.1, Step 2.



Box 8.1. Additional Considerations for Immediate and Expanded Notification and Communication

- Include language on what is known, what is not yet known, who is at risk, who is not at risk, how individuals can protect themselves, and how they can prevent spread to others.
- For outbreaks limited to a specific unit (e.g., NICU, ICU, Hematology-Oncology ward):
 - Postings can be at entry doors to unit, nursing stations, handwashing stations, waiting rooms, staff break rooms.
 - Postings in patient rooms may indicate precautions to take but need to be mindful of HIPAA.
- For outbreaks that affect multiple floors/units (e.g., legionellosis, pathogen affecting several units):
 - Postings can be in lobby, visitor check-in desk, elevators to floor(s) that are affected, each potentially affected unit, etc.
- Provide information on actions the healthcare setting is taking to prevent spread and future outbreaks.
- To ensure the quality and effectiveness of the content to the target audience, consider language challenges, making sure communication is available in multiple languages as well as determine the need for translators.
- Where applicable, refer to state or federal reporting and notification policies, which may require a more immediate notification and reporting timeline.
- NOTE: postings in the facility may be inadequate when the outbreak is in areas that the patient may not have a choice about accessing once they are admitted to the facility such as the emergency room, ICU or operating room. Then notification may have to occur prior to the person deciding to seek services at the health care facility (see 8.2.3 public notification).

8.1.3 Public Notification

Public notification in the context of a healthcare investigation should be considered when there is a need to communicate ongoing risks or advocate actions to a broader audience. Examples include very large-scale notification events or circumstances when potentially exposed persons cannot be reached through other means. This may also be required when the outbreak is within a defined area of the healthcare setting and patients may have limited ability to make informed decisions once they have begun care, elsewhere in the facility. For example, a woman entering a hospital to deliver a baby may not be aware of an outbreak in the NICU until after delivery, at which point, notification does not allow her to decide whether to have her child cared for in that NICU.



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8.1.3.1 When to Notify the Public

Notification of the public can be beneficial under certain circumstances, including the following situations. The decision for public notification should be considered when any of the following apply:

- If the outbreak has already, or is likely to, become public through other channels
- To proactively provide accurate information, to clarify or correct wrong or misleading information already in the public sphere, and to more effectively communicate risks.
- To assist an active investigation by helping to identify additional affected and exposed persons outside the current healthcare setting where the cases were identified.
- To inform healthcare providers in the community for the purposes of adjusting patient care, assisting with identifying cases, assisting with other aspects of an investigation, and preventing further transmission.
- To advise the public and potential patients when the at risk population is very large.
- To provide information people should take to protect their health and prevent transmission to others. This could include notifying patients who were exposed but who have not been reached through other means. Often this includes specific recommendations and actions to take, such as clinical evaluation, testing, symptom watch, or contacting the local public health authority.
- To provide information to people considering visitation to affected healthcare settings when visitation might put them at risk.
- When a novel pathogen is identified or emerging, or if the outbreak involves unusual or rare multidrug-resistant organisms for which there is limited treatment.
- If the illness is severe or there are many cases or associated deaths.
- To demonstrate commitment to transparency and ensure the organization's perspective is accurately represented in the media.
- When the outbreak occurs in an area of a hospital or other healthcare setting that provides services patients may require but cannot predict in advance of being admitted.

8.1.3.2 How to Notify the Public

Public notification often depends on collaboration between public health and healthcare. In general, it is preferred that the healthcare providers take the lead in notifying the public; ideally, they will inform public health and seek input on the messaging. Public health may need to take the lead in notifying the public in some circumstances (e.g., the healthcare provider refuses or is unable to; the outbreak involves multiple facilities, settings or communities). Considerations include the following (see sections 8.2 and 8.3 for expanded information on this topic):

- Message content and timing should be jointly developed or reviewed by the healthcare and public health stakeholders.
- Designate a spokesperson to identify resources and staff to handle inquiries and follow up.
- Consider giving key stakeholders (e.g., neighboring public health jurisdictions) advance notice, as appropriate.
- Present as much relevant detail as possible regarding what is known and not known, who is at risk and who is not, what has been done so far, and planned next steps.



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- Show empathy: people will be concerned about their risk or may have experienced harm.
- Include action(s) that persons can take for protection.
- Describe where to find additional information, such as a website or call line.
- Prevent identification of affected persons (confidentiality breach). Establish clear guidelines with the media regarding privacy of individual information and what is protected health information.
- Acknowledge when investigation findings are not yet final, to avoid drawing erroneous conclusions, such as implicating the wrong source or prematurely assigning blame.
- Clarify misinformation.
- Prevent stigmatization of persons/groups affected by the outbreak or investigation.
- Have a plan to communicate updates, frequently if necessary, as knowledge expands.

8.2 Communication Techniques

It is critical that the right information gets communicated in a way that reaches the audience you are trying to reach. In the above sections, notification of patients, persons at risk, healthcare providers, and the public was discussed. Although a full discussion of risk communication is outside the scope of this guidance, the basic principles are described in this section.

Public health agencies should involve their communication experts and public information officers as soon as a notification event is considered; the assumption throughout this section is that these experts are already involved.

The reader should also be aware of two important resources that are referenced throughout this section:

- For more information on communication during a crisis, see CDC's Crisis and Emergency Risk Communication (CERC) Manual: emergency.cdc.gov/cerc/.
- For more information to guide health departments and healthcare settings during notification events, see CDC's Patient Notification Toolkit: www.cdc.gov/injectionsafety/pntoolkit/index.html.

8.2.1 Risk Communication Principles

To help craft effective messages we need to understand how the situation might be perceived. People's perceptions of risk vary depending on the type of information being conveyed and how that information is conveyed; not all risks are perceived equally. Risks that tend to be more accepted include those that are perceived to be voluntary, be under an individual's control, have clear benefits, be naturally occurring, be generated by a trusted source, be familiar, or affect adults. Less accepted risks include those that are perceived to be imposed, be controlled by others, have little or no benefit, be manmade, be generated by an untrusted source, be exotic, or affect children.⁷



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CDC's Crisis and Emergency Risk Communication (CERC) Manual lists five key components of trust and credibility that make up the foundation of risk communication principles.⁷

- Empathy and caring
- Competence and expertise
- Honesty and openness
- Commitment and dedication
- Accountability

A spokesperson, trained on these risk communication principles, should be identified and chosen early, based on their ability to develop trust and credibility. The spokesperson should be involved in determining the information to be communicated and developing key messages.⁸ Refer to the CERC Manual for more information on selection of a spokesperson and risk communication principles: emergency.cdc.gov/cerc/

It is important to plan what needs to be communicated in advance. As messages are developed for the target audiences (e.g., affected patients, exposed persons, healthcare providers, the public), think about communicating the following three things:

- What happened;
- What you are doing to correct it; and
- What the audience needs to know, including steps they can take to protect themselves.

When considering communications for the news media, it is important to plan as much as possible in advance. Anticipate possible media coverage when there are many patients involved, the condition is new or rare, the persons affected are vulnerable, or there might be an emotional impact. Often public health can help the healthcare setting to anticipate and plan for media coverage. In some circumstances it might be necessary to approach the media proactively, such as when needing to notify a wider audience. On the other hand, the media might be notified through other sources and approach public health agencies or the facility.

Considerations for planning for media communications include the following:

- Determining the extent of the information to convey to the news media;
- Determining when to convey that information;
- Determining who to coordinate with to convey that information;
- Being prepared if information is leaked to the media before it is formally announced.⁸

The last item cannot be underestimated. When planning the timing of communication to patients and other affected parties as described in earlier sections of this chapter, keep in mind that your timelines and plans (e.g., notification of patients and families prior to public notification) can go awry if information is leaked to the media. Talking points, press releases, media statements, and messaging created ahead of a media leak are critical. For more information on the media, see Section 8.3 below.



8.2.2 Managing Differing Opinions Between Public Health and Healthcare

It is not uncommon with notification events, which can be highly charged and stressful situations, to encounter differing opinions among public health agencies and healthcare facilities. Healthcare facilities and providers often have concerns about reputation, privacy, and potential legal fall-out.⁵ Both public health and healthcare have the interest of protecting involved patients and staff, but public health also needs to consider the implications for the public's health at large. The media also has its own focus, which does not always match the focus of public health and healthcare.

Reasons for not disclosing errors leading to outbreaks or risk of outbreaks include potential for psychological harm among patients when the risk is low, and, as mentioned above, facility concerns for harmed reputation. However, in a study looking at low-risk errors, 94% of patients reported wanting to know about an error, even when the risk of harm was low.⁹ Additionally, when patient notifications are delayed, the perception and trust of the healthcare facility by the public can suffer, even if the disclosure is made at a later time. Paradoxically, the very concern about loss of trust and healthcare's reputation are damaged by the rationale to delay or withhold notification for fear of creating distrust or loss of reputation. Disclosure is often the better approach when concerns about public perception and trust are raised as a reason not to disclose.

When there are differing opinions about the need to notify patients or other stakeholders, it is best practice to seek an agreement and approach the notification jointly. Public health agencies should give best practice information to healthcare facilities, as described above, to support notification if there are concerns about unduly worrying patients with low risk or if there are concerns about reputation. Public health might be able to provide options that are acceptable to the facility that support public health's goals. When healthcare facilities and public health still maintain different perspectives, ensure that the public health agency is familiar with and is following federal and state guidelines and recommendations. Consider using the opportunity to strengthen relationships. A successful example from Los Angeles involved the appointment of specific public health/healthcare facility liaisons to improve healthcare outbreak reporting, strengthen surveillance infrastructure, and enhance communication.¹⁰ Also consider consultation with experts, such as CDC. In advance of notification events and outbreak investigations, it is important to develop relationships with healthcare facilities, infection preventionists, and other partners (See Chapter 3, CORHA Keys to Success: Developing Relationships Prior to an Outbreak).

When the public health agency and the healthcare setting continue to hold different opinions, an agreement cannot be reached, and the public health agency determines that patients and others affected still need to be notified, the public health agency might need to perform the notification directly or pursue legal orders for disclosure. This will require early and close collaboration with the legal resources available to the public health agency. Considerations the public health agencies need to plan for include:

- The method of notification: When the communication will be coming from the health department, methods to consider can include phone calls, letters, press releases, media statements, and combination methods. When possible, notifying in writing can be helpful so patients have information to refer to and take to their healthcare provider.



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- Where patients can go for more information: Public health agencies should consider a hotline and a website where patients can receive more information.
- Instructions for follow-up: This information should be communicated to patients when they are notified. This can be more difficult for public health agencies if additional medical care is needed, such as laboratory testing or treatment. Public health agencies can consider setting up an agreement with a laboratory or healthcare provider to provide the service, if they are unable to do so directly, or they can provide instructions for the patients to take to their own healthcare provider. Logistics need to be carefully considered.

8.2.3 Tailoring Communication to Audience and Setting

When crafting communication messages, consider who you are communicating with (the **audience**), how you will communicate (the **method**), and what information needs to be included (the **content**).

Before crafting any communication message, it is critical to consider the audience. Knowing who you want to reach will determine the content, method, and wording of the message. Audience characteristics to consider include demographics, language, education level, and cultural considerations. Issues of health equity should be considered; more information can be found here: www.cdc.gov/coronavirus/2019-ncov/community/health-equity/index.html. Apply audience characteristics and health equity considerations when developing a message as well as when selecting a spokesperson. When tailoring communications to a specific audience, involve the public health communication experts and public information officer for input.

Here are some important **audience** considerations:

- If the population is highly mobile (e.g., moves frequently with frequent changes of address, persons experiencing homelessness, persons in temporary residential care), a letter might not be the best method of communication.
- Elderly and other patients may have a caretaker or health care proxy who need to receive the information. Similarly, with younger populations, parents need to be notified.
- All communication to patients and caregivers should be in plain language at no more than a seventh-grade reading level and easily understandable.
- Information should be provided via channels and in formats and languages suitable for diverse audiences, including people with disabilities, limited English proficiency, low literacy, or people who face other challenges accessing information.
- Information should be provided in a manner that is culturally and linguistically appropriate.
- When notifying a demographic that may be difficult to reach through traditional methods, consider engaging with community leaders, religious leaders, and other trusted sources.
- Consider where patients/caregivers will go to get more information and to have their questions answered, such as a website or a phone number. Include this information in the notification.
- The audience may experience stress which makes understanding the notification more difficult.



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Additional considerations for the **method** of communication include the following:

- When notifying someone in person or by phone, consider following up with a handout or mailed letter so they have the information in writing to refer back to.
- When communicating in writing, consider including a letter that the patient can take to their primary care provider. This will make it easier for the patient to explain what happened and any next steps their provider might need to take.
- Think about how the audience (patient) receives information. Is there a patient portal set up electronically that can help with disseminating information?
- Social media groups can be another avenue to reach certain groups or difficult to reach persons.
- Although not the preferred option, when there is an inability to reach specific groups or specific individuals, or a larger communication is needed to the general public, a press release can be considered.

Consider the following when developing your communication **content**:

- Remember to show empathy in the message as people will be concerned about their risk of infection or may have experienced infection already.
- Provide information that allows the audience to understand what happened, as well as how and where. If details are still unknown, communicate that the situation is still under investigation. Often communication is sent out prior to having complete information, and notification should not wait until all information is known but it is important to be clear and acknowledge when findings are not complete.
- Any corrective actions already taken to mitigate the current risk and any planned actions to mitigate risks in the future.
- Information on who is being contacted and why, including assurance that the correct patients are being contacted.
- Any instructions for what the audience needs to do to protect themselves, such as symptoms to watch out for, seeing their provider for an evaluation, or being tested.
 - The audience should understand what symptoms to expect, including any warning signs they might experience that would prompt them to contact their provider.
 - If a provider evaluation is needed, make sure the audience has information to communicate to their provider.
 - If testing is needed, make sure the audience has all of the information they need to be tested, such as going to a specific laboratory or healthcare facility, and whether or not the cost will be covered.
- A method to have any additional questions answered, such as a website and a 24-hour contact number. Be prepared for many calls during at least the first 1-2 weeks.
- Information on the planned next steps and what the audience can expect including any information on future updates.
- Make sure content is consistent. Since messages may be repeated across multiple sources (e.g., the healthcare facility and the public health agency) or via multiple communication platforms, coordination among communicating entities is critical.



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- When preparing reactive messaging, such as talking points in preparation for a media interview, consider the tough questions that patients may have and be prepared to speak to those concerns. This can include clarifying any misinformation associated with the event.

8.2.4 Tools

Similar to developing investigation materials ahead of an outbreak, as described in Chapter 3, it can be very helpful to develop template materials prior to a patient notification event. Box 8.2 provides a list of tools and materials to consider developing in advance.

Box 8.2. Tools and Materials to Develop when Planning for a Patient Notification

- Patient notification letters (including disease transmission identified [e.g., outbreak] and no disease transmission identified [e.g., infection control breach]); examples can be found in the CDC Patient Notification Toolkit, Section 1, here: www.cdc.gov/injectionsafety/pntoolkit/section1.html
- Healthcare provider notification of testing recommendations letter; an example can be found in the CDC Patient Notification Toolkit, Section 1
- Patient testing result letter; an example can be found in the CDC Patient Notification Toolkit
- Media talking points (general talking points can be crafted with space to add disease- and situation-specific information; press releases and media statements for previous similar situations also can be recycled and revised)
- Media statement (general media statement with space to add disease- and situation-specific information; press releases and media statements for previous similar situations also can be recycled and revised)
- Frequently asked questions documents for posting on websites or use by hotline operators (disease-specific questions are often reusable across multiple events); examples can be found in the CDC Patient Notification Toolkit, Example Q/A Resources, here: www.cdc.gov/injectionsafety/pntoolkit/section3qa.html

8.3 Media

Anticipate and prepare ahead of time for possible media attention. Patients and individuals affected or at risk should hear about an outbreak (or serious infection control breach or other situation that places them at risk) directly from their healthcare provider or facility. Ideally the communication will come from someone they trust. Though not ideal, in some situations, notification from a public health agency is necessary.



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Patients do not want to initially hear about an issue that involves or impacts them from the media. This can create a feeling of distrust in the facility and of those in authoritative positions. Patients may feel like the facility was trying to hide the issue rather than inform the public. In one example, the families of children who were part of a devastating mucormycosis outbreak were unaware of the outbreak for several years prior to its publication in a medical journal.^{11,12}

In certain situations, media-based notification may be the only viable option. Examples include very large scale notification events or situations where the provider, facility or public health agencies cannot identify or contact at risk individuals (e.g., due to poor record keeping or incidents involving over-the-counter medical products). Under those circumstances, healthcare and public health partners should plan carefully and proactively engage media. However, for the majority of situations, individuals at risk can be notified by the provider or facility and it is important to do so as soon as possible, ensuring that the media is not the first to inform.

8.3.1 Types of Media

Types of media include:

- Traditional media: newspapers, online news platforms, television, radio;
- Social media: communication platforms and applications that allow persons to create and share content and communicate.

Types of media communication:

- Media statement: a response to an inquiry from the media, generally reactive communication;
- Press release: a method of providing information to the media to communicate information you want the public to know, generally proactive;
- Interview: involving a reporter from a media outlet and a spokesperson and the media outlet (reporter) that might be live or recorded (on television or radio) or for print media;
- Press conference: a live statement or series of statements from the spokesperson or others involved given to the media; generally used in high profile situations or very large outbreaks.

8.3.2 Engaging the Media

How you engage the media and how you craft your message determine whether the audience builds trust, understands, and accepts the message or becomes distrustful, suspicious and angry. Some individuals in the media may start out distrustful of government messages. Be aware of this and do not inadvertently contribute to their distrust. For these reasons, involve your communications staff and public information officer (PIO) as early as possible, when a patient notification is first considered. If you don't have a PIO on staff, consider using an outside consultant. These subject matter experts have the knowledge, relationships, and ability to guide epidemiologists and healthcare providers during their interactions with the media.



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As described in previous sections, a trained spokesperson with the ability to develop trust and credibility should be identified early. Have a spokesperson who is well-spoken and knowledgeable on the topic. Being prepared and able to answer questions with confidence helps build credibility. For considerations in choosing a spokesperson, refer to the CERC Manual: emergency.cdc.gov/cerc/. When engaging the media through a spokesperson or press releases and media statements, ensure that the information communicated is accurate. Once a story is online in any format, it is difficult to get it changed or edited if there is inaccurate information.

The amount of information shared with the media varies and depends on a few factors. Personal health information must be protected and Health Insurance Portability and Accountability Act (HIPAA) needs to be followed. Public health agencies need to balance confidentiality with ensuring accurate and complete information, which may necessitate releasing more information than normal.

The method of engaging with the media might vary depending on the circumstances. Considerations include:

- A press release can be used when there is a concern about incomplete notification (e.g., due to an inability to locate), or when there is a concern that the media might release the story ahead of patients being notified. A press release should have the same information as a patient notification letter.
- A media statement is generally a response to an inquiry from the press. Remember that this is also an opportunity to get vital messaging out to the public, even if the specific question is not asked.
- Performing a phone or on-camera interview often depends on receiving a request from the media, the situation's severity, and the spokesperson's availability.
- Sometimes a request from the media to do a phone or on-camera interview can be modified to a written response if the severity of the situation does not warrant an interview, or if the spokesperson is unavailable.
- On-camera interviews can be challenging when the spokesperson is untrained in responding to the media. Note that just-in-time training may not work for on-camera media interviews, and a crisis situation is not the time to provide this training.
- Press briefings are typically only used for rapidly evolving situations (e.g., COVID-19 pandemic, natural disasters). Patient notifications are not generally the best situations to hold press briefings.

8.3.3 Proactive versus Reactive Media

Proactive media refers to contacting the media before they are aware of the story. As described in previous sections, an announcement (e.g., via a press release) should ideally come from the facility (or public health agency when indicated) and include information similar to a patient notification letter. If the disclosure is initiated by the healthcare facility, public health will likely be asked to comment, so public health needs to be prepared and, ideally, coordinating with the health facility in developing public messages. Be inclusive with information shared; this will decrease the possibility that the public



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perceives a withholding of information. Benefits of proactive media interactions include the ability to control the message and tell the story and ensuring that accurate information is disseminated.

Reactive media refers to the response to a story that the media is telling. In general, reactive media is not ideal and why disclosure early (getting ahead of the story) is recommended. With reactive media it is difficult to control the message. Inaccurate information or misleading information can be presented which can be difficult to overcome, particularly if it appears that information was withheld.

In this chapter, considerations for notification of patients, families and the public were reviewed, as well as methods for conducting a successful patient notification. For additional information, please see the CDC Patient Notification Toolkit: <https://www.cdc.gov/injectionsafety/pntoolkit/index.html>.



The Council for Outbreak Response: Healthcare-Associated Infections and Antimicrobial-Resistant Pathogens

Table 8.1. Framework for Healthcare-Associated Infection Outbreak Notifications: Immediate and Expanded Notifications

STEP 1: IMMEDIATE NOTIFICATION			
Case patients who have been infected (or their designated healthcare proxy and, if patients are deceased, their closest family member)			
How to Notify <i>(one or more of the following, as appropriate)</i>	When to Notify	What to Notify <i>(public health agency to be involved on an ongoing basis to ensure accuracy)</i>	Justification <i>(one or more of the following)</i>
<p>Verbally, in person or by phone calls if the patient has already been discharged, with the opportunity to ask questions. Written FAQs and descriptive statement should also be given or sent.</p> <p>If unable to reach patients = in person or by phone, a written communication should be sent.</p> <p>Depending on the situation, consider establishing a hotline or other opportunity for questions.</p> <p>With guidance from your legal team, consider establishing a central location such as an easily accessible 508 compliant webpage that provides the same vetted information communicated in other correspondence, with FAQs and links to additional resources.</p>	First tier.	Applicable counseling and information about potential risk of transmission, infection, clinical illness, testing, treatment and additional care measures may need to be communicated and implemented (e.g., isolation, personal protective equipment [PPE], cohorting, screening, and/or changes in antibiotics).	<p>To prevent and control transmission and assist with outbreak investigation activities.</p> <p>To fully inform patients about the event and implications for their health.</p> <p>To allow patients to seek appropriate treatment.</p>



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Patients who have been exposed or potentially exposed (or their designated healthcare proxy and, if patients are deceased, their closest family member)			
How to Notify <i>(one or more of the following, as appropriate)</i>	When to Notify	What to Notify <i>(public health agency to be involved on an ongoing basis to ensure accuracy)</i>	Justification <i>(one or more of the following)</i>
<p>Verbally, in person or by phone calls if the patient has already been discharged, with opportunity to ask questions. Written FAQs and descriptive statement should also be given or sent. If unable to reach patients in person or by phone, a written communication should be sent.</p> <p>Depending on the situation, consider establishing a hotline or other opportunity for questions.</p> <p>With guidance from your legal team, consider establishing a central location such as an easily accessible 508 compliant webpage that provides the same vetted information communicated in other correspondence, with FAQs and links to additional resources.</p>	<p>After patients have been infected or colonized, but then as soon as possible.</p>	<p>Applicable counseling and information about potential risk of transmission, infection, clinical illness, testing, treatment, post-exposure prophylaxis, and additional care measures may need to be communicated and implemented (e.g., isolation, PPE, cohorting, screening, and/or changes in antibiotics).</p>	<p>To prevent and control transmission and assist with outbreak investigation activities.</p> <p>To fully inform patients about the event and implications for their health.</p> <p>To allow patients to seek appropriate treatment.</p>



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Patients who may be at risk for future exposure (or their designated healthcare proxy) including: <ul style="list-style-type: none"> a) Patients undergoing a procedure or admitted to a ward or area in a healthcare setting experiencing an outbreak. b) Immunocompromised and frail elderly patients. 			
How to Notify <i>(one or more of the following, as appropriate)</i>	When to Notify	What to Notify <i>(public health agency to be involved on an ongoing basis to ensure accuracy)</i>	Justification <i>(one or more of the following)</i>
<p>Verbally in person or by phone call, or written posting. Written FAQs and descriptive statement should also be given or sent where possible. If unable to reach patients in person or by phone, a written communication should be sent.</p> <p>Postings (e.g., in the lobby, patient units, handwashing stations, restrooms, and admission packets).</p> <p>Depending on the situation, consider establishing a hotline or other opportunity for questions.</p> <p>With guidance from your legal team, consider establishing a central location such as an easily accessible 508 compliant webpage that provides the same vetted information communicated in other correspondence, with FAQs and links to additional resources.</p>	<p>Notify before the potential exposure.</p>	<p>Applicable counseling and information about potential risk of transmission, infection, clinical illness, testing, post-exposure prophylaxis, alternate options for elective procedures, treatment, and additional care measures may need to be communicated and implemented (e.g., isolation, PPE, cohorting, screening, and/or changes in antibiotics).</p>	<p>To prevent and control transmission and assist with outbreak investigation activities.</p> <p>To fully inform patients about the event and implications for their health.</p> <p>To allow patients to seek appropriate treatment.</p>



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Patient's Primary Healthcare Provider(s) (as appropriate)			
How to Notify <i>(one or more of the following, as appropriate)</i>	When to Notify	What to Notify <i>(public health agency to be involved on an ongoing basis to ensure accuracy)</i>	Justification <i>(one or more of the following)</i>
By confidential institutional email or by phone; public health agency may consider sending a health alert.	As soon as possible.	The patient's risk or exposure.	To assist with questions from patients, for follow up and support. To assist with contacting patients who are difficult to reach.
Healthcare Personnel (HCP) including the following: <ul style="list-style-type: none"> a) HCP who need to make behavioral changes at the location(s) of the outbreak. b) HCP who have underlying illnesses that place them at risk for complications if infected or colonized. c) Other HCP in the healthcare setting who are not directly affected by the incident, including HCP who provide care to at-risk patients and are employed by the healthcare setting. 			
How to Notify <i>(one or more of the following, as appropriate)</i>	When to Notify	What to Notify <i>(public health agency to be involved on an ongoing basis to ensure accuracy)</i>	Justification <i>(one or more of the following)</i>
Verbally in person or during team huddles/meetings/rounds, and written postings (e.g., on patient units, at handwashing stations, and in breakrooms). Involve Employee Health Services to communicate with staff and offer testing or treatment if necessary.	As soon as possible.	Applicable counseling and information about potential risk of transmission, infection, clinical illness, testing, treatment, modification of personal behaviors associated with risk for infections, and additional care measures may need to be communicated and implemented to prevent and control transmission (e.g., isolation, PPE, cohorting, screening, enhanced surveillance, more frequent cleaning/disinfection of surfaces, and/or environmental testing).	To prevent and control transmission and assist with outbreak investigation activities. To engage Employee Health Services to support HCP. To fully inform and support HCP about the event and implications for their health. To allow HCP to seek appropriate treatment.



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		<p>HCP may alert internal team and public health if they work in multiple healthcare settings.</p> <p>Healthcare setting may refer HCP to Employee Health Services (especially those who may be at risk due to health complications and underlying illness).</p>	<p>To inform or alert all HCP about the event so that they are prepared to share accurate information and adequately respond to or direct questions to the appropriate parties.</p>
<p>Visitors including the following:</p> <ul style="list-style-type: none"> a) Visitors who may have been exposed or need to make behavioral changes at the location(s) of the outbreak. b) Visitors who have underlying illness(es) placing them at increased risk from a potential exposure. 			
<p>How to Notify <i>(one or more of the following, as appropriate)</i></p>	<p>When to Notify</p>	<p>What to Notify <i>(public health agency to be involved on an ongoing basis to ensure accuracy)</i></p>	<p>Justification <i>(one or more of the following)</i></p>
<p>Written postings displayed in areas in the proximity of the outbreak and common areas such as the lobby, nurse desk/station, patient units, restrooms, and handwashing stations.</p> <p>Direct notification through patient visited.</p> <p>Public notification.</p> <p>With guidance from your legal team, consider establishing a central location such as an easily accessible 508 compliant webpage that provides the same vetted information communicated in other correspondence, with FAQs and links to additional resources.</p>	<p>As soon as possible in common areas and where appropriate.</p> <p>Upon entry to unit/location(s) of the outbreak (e.g., the NICU).</p>	<p>Applicable information about potential risk of transmission, testing, additional care measures, or modification of personal behaviors associated with risk for infections may need to be communicated and implemented to prevent and control transmission (e.g., handwashing, PPE, and testing).</p>	<p>To prevent and control transmission and assist with outbreak investigation activities.</p> <p>To prevent the spread of inaccurate information.</p> <p>To fully inform visitors about their healthcare risk.</p>



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<p>Healthcare settings may offer education and demonstrations on safety precautions visitors should take when visiting infected or colonized patients.</p>			
Other Healthcare Settings Involved in the Care of Exposed Patients			
How to Notify <i>(one or more of the following, as appropriate)</i>	When to Notify	What to Notify <i>(public health agency to be involved on an ongoing basis to ensure accuracy)</i>	Justification <i>(one or more of the following)</i>
<p>Patient status should be verbally communicated to appropriate HCP at the healthcare setting (HCS) and documented and flagged in patient transfer documents (e.g., a symbol or label prominently placed on the chart), especially when there is risk for pathogen transmission.</p> <p>Encourage documentation in electronic health records about the presence of a transmissible agent.</p> <p>Public health agency may consider sending a health alert.</p>	<p>In preparation for and at the time of transfer.</p>	<p>Applicable information about additional care measures may need to be communicated and implemented to prevent and control transmission (e.g., isolation, surveillance, PPE, cohorting, and/or handwashing).</p>	<p>To alert healthcare settings in order to prevent and control transmission and assist with outbreak investigation activities.</p>



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STEP 2: EXPANDED NOTIFICATION			
Case patients who have been infected but have not yet been notified (or their designated healthcare proxy and, if patients are deceased, the closest family member)			
or			
Patients who have been infected and identified as a result of additional case-finding activity			
How to Notify <i>(one or more of the following, as appropriate)</i>	When to Notify	What to Notify <i>(public health agency to be involved on an ongoing basis to ensure accuracy)</i>	Justification <i>(one or more of the following)</i>
<p>Verbally, in person or by phone calls if the patient has already been discharged, with the opportunity to ask questions. Written FAQs and descriptive statement should also be given or sent.</p> <p>If unable to reach patients in person or by phone, written communication should be sent.</p> <p>Depending on the situation, consider establishing a hotline or other opportunity for questions.</p> <p>With guidance from your legal team, consider establishing a central location such as an easily accessible 508 compliant webpage that provides the same vetted information communicated in other correspondence, with FAQs and links to additional resources.</p>	<p>Initiate the process within 24 hours after the risk is identified, for example, during the outbreak investigation, when updated laboratory results indicate the presence of infection on another floor or unit (e.g., in the case of a respiratory pathogen).</p>	<p>Applicable counseling and information about potential risk of transmission, infection, clinical illness, testing, treatment, and additional care measures may need to be communicated and implemented (e.g., isolation, PPE, cohorting, screening, and/or changes in antibiotics).</p>	<p>To prevent and control transmission, limit any further spread, and assist with outbreak investigation activities.</p> <p>To fully inform patients about the event and implications for their health.</p> <p>To allow patients to seek appropriate treatment.</p>



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Patients who have been exposed or potentially exposed (or their designated healthcare proxy) but are not known to be infected			
How to Notify <i>(one or more of the following, as appropriate)</i>	When to Notify	What to Notify <i>(public health agency to be involved on an ongoing basis to ensure accuracy)</i>	Justification <i>(one or more of the following)</i>
<p>Verbally, in person or by phone calls if the patient has already been discharged, with the opportunity to ask questions. Written FAQs and a descriptive statement should also be given or sent.</p> <p>If unable to reach patients in person or by phone, written communication should be sent.</p> <p>Depending on the situation, consider establishing a hotline or other opportunity for questions.</p> <p>With guidance from your legal team, consider establishing a central location such as an easily accessible 508 compliant webpage that provides the same vetted information communicated in other correspondence, with FAQs and links to additional resources.</p>	<p>Initiate the process within 24 hours once the risk is identified, for example, during the outbreak investigation, when updated laboratory results indicate the presence of infection on another floor or unit (e.g., in the case of a respiratory pathogen).</p> <p>Priority should be given to those who are still in the risk period for exposure.</p>	<p>Applicable counseling and information about potential risk of transmission, infection, clinical illness, testing, post-exposure prophylaxis, alternate options for elective procedures, treatment, and additional care measures may need to be communicated and implemented (e.g., isolation, PPE, cohorting, screening, and/or changes in antibiotics).</p>	<p>To prevent and control transmission, limit any further spread, and assist with outbreak investigation activities.</p> <p>To fully inform patients about the event and implications for their health.</p> <p>To allow patients to seek appropriate treatment.</p>



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Patients who may be at risk for future exposure (or their designated healthcare proxy) Including: a) Patients undergoing a procedure or admitted to a ward or area in a healthcare setting that is experiencing an outbreak b) Immunocompromised and frail elderly patients <i>As the outbreak is contained, this group will become smaller.</i>			
How to Notify <i>(one or more of the following, as appropriate)</i>	When to Notify	What to Notify <i>(public health agency to be involved on an ongoing basis to ensure accuracy)</i>	Justification <i>(one or more of the following)</i>
<p>Verbally, in person or by phone call. Written FAQs and a descriptive statement should also be given or sent. If unable to reach patients in person or by phone, written communication should be sent.</p> <p>Postings (e.g., in lobby, patient units, handwashing stations, restrooms, and admission packets.)</p> <p>Depending on the situation, consider establishing a hotline or other opportunity for questions.</p> <p>With guidance from your legal team, consider establishing a central location such as an easily accessible 508 compliant webpage that provides the same vetted information communicated in other correspondence, with FAQs and links to additional resources.</p>	<p>Notify before the potential exposure.</p>	<p>Applicable information about potential risk of transmission, alternate options for elective procedures, post-exposure prophylaxis, additional care measures, or modification of behaviors may need to be communicated and implemented (e.g., isolation, PPE, cohorting, and/or screening).</p>	<p>To fully inform patients about the event and implications for their health; patients may need testing or treatment.</p> <p>To prevent and control transmission, limit any further spread, and assist with outbreak investigation activities.</p> <p>To allow patients to seek appropriate treatment.</p>



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Patient's Primary Healthcare Provider(s) (as appropriate)			
How to Notify <i>(one or more of the following, as appropriate)</i>	When to Notify	What to Notify <i>(public health agency to be involved on an ongoing basis to ensure accuracy)</i>	Justification <i>(one or more of the following)</i>
By confidential institutional email or by phone. Public health may consider sending a health alert.	As soon as possible.	The patient's risk of exposure. Applicable information about potential risk of transmission, alternate options for elective procedures.	To assist with questions from patients, follow up, and support. To assist with contacting patients who are difficult to reach.
Other Healthcare Personnel (HCP) including: <ul style="list-style-type: none"> a) HCP who need to make behavioral changes at the location(s) of the outbreak (e.g., specific PPE and handwashing). b) HCP who have underlying illnesses that make them at risk for complications if infected or colonized; involve Employee Health Services as needed. c) Other HCP in the healthcare setting not directly affected by incident, including HCP providing care to at-risk patients and employed by the healthcare setting. 			
How to Notify <i>(one or more of the following, as appropriate)</i>	When to Notify	What to Notify <i>(public health agency to be involved on an ongoing basis to ensure accuracy)</i>	Justification <i>(one or more of the following)</i>
Verbal announcement, mass email, notices in break/locker room. Involve Employee Health Services to communicate with staff and offer testing or treatment if necessary.	As soon as possible. Consider actions already taken. Urgency greater if action can be taken.	Applicable counseling and information about potential risk of transmission, infection, clinical illness, testing, treatment, modification of personal behaviors associated with risk for infections, and additional care measures may need to be communicated and implemented to prevent and control transmission (e.g., isolation, PPE, cohorting, screening, enhanced surveillance, more frequent cleaning/disinfection of surfaces, and/or environmental testing)	To prevent and control transmission and assist with outbreak investigation activities. To engage Employee Health Services to support HCP. To fully inform and support HCP about their healthcare risk. To allow HCP to seek appropriate treatment.



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		<p>HCP may alert internal team and public health if they work in multiple healthcare settings.</p> <p>Healthcare setting may refer HCP to Employee Health Services (especially those who may be at risk due to health complications and underlying illness).</p>	<p>To inform or alert all HCP about the event so that they are prepared to share accurate information and adequately respond to or direct questions to the appropriate parties.</p>
<p>Visitors including:</p> <p>a) Visitors who may have been exposed or need to make behavioral changes at the location(s) of the outbreak</p> <p>b) Visitors who have underlying illness(es) placing them at increased risk from a potential exposure</p>			
<p>How to Notify <i>(one or more of the following, as appropriate)</i></p>	<p>When to Notify</p>	<p>What to Notify <i>(public health agency to be involved on an ongoing basis to ensure accuracy)</i></p>	<p>Justification <i>(one or more of the following)</i></p>
<p>Written postings displayed in areas in the proximity of the outbreak and common areas such as the lobby, nurse desk/station, patient units, handwashing stations.</p> <p>Healthcare settings may offer education and demonstrations on safety precautions visitors should take when visiting infected or colonized patients.</p> <p>Direct notification through patient visited.</p> <p>Public notification.</p> <p>With guidance from your legal team, consider establishing a central location such as an easily accessible 508 compliant webpage that</p>	<p>As soon as possible in common areas and where appropriate.</p> <p>Upon entry to unit/location(s) of the outbreak (e.g., NICU).</p> <p>Consider actions already taken. Urgency greater if action can be taken.</p>	<p>Applicable information about potential risk of transmission, testing, additional care measures, or modification of personal behaviors associated with risk for infections may need to be communicated and implemented to prevent and control transmission (e.g., handwashing, PPE, and/or testing).</p>	<p>To prevent and control transmission and assist with outbreak investigation activities.</p> <p>To prevent the spread of inaccurate information.</p> <p>To fully inform visitors about the event and implications for their health.</p>



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provides the same vetted information communicated in other correspondence, with FAQs and links to additional resources.			
Other Healthcare Settings Involved in Care of Exposed Patients			
How to Notify <i>(one or more of the following, as appropriate)</i>	When to Notify	What to Notify <i>(public health agency to be involved on an ongoing basis to ensure accuracy)</i>	Justification <i>(one or more of the following)</i>
<p>Patient status should be verbally communicated to appropriate HCP at the HCS and documented and flagged in patient transfer documents (e.g., symbol or label, prominently placed on the chart), especially when there is risk for pathogen transmission.</p> <p>Encourage documentation in electronic health records about the presence of a transmissible agent.</p> <p>Public health agency may consider sending a health alert.</p>	In preparation for and at the time of transfer.	Applicable information about additional care measures may need to be communicated and implemented to prevent and control transmission (e.g., isolation, surveillance, PPE, cohorting, and/or handwashing).	To alert healthcare settings to prevent and control transmission, and to assist with outbreak investigation activities.



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Box 8.3. Example of patient notification: *Legionella* outbreak in a general medicine ward

An example of notification is presented for a *Legionella* outbreak in a hospital setting. This example can be a model for other conditions and settings, with consideration for how the investigation might proceed, the characteristics of the pathogen and method of transmission, and the specifics of the setting of the outbreak. For infection control breaches, the immediate notification might include all groups listed in the table below, except for affected patients; often in infection control breach investigations there are not yet infected or colonized patients identified (for more information see CORHA Principles and Practices, [Supplement B](#)).

The situation: The infection preventionist in a large hospital identifies two patients that meet the case definition for hospital-acquired legionellosis within the same month. He calls the epidemiologist at the local public health agency to report a concern that they might have a *Legionella* outbreak. Patient 1 was positive for *L. pneumophila* 1 (Lp1) by urine antigen 21 days after admission. Patient 2 was positive for Lp1 nine days after admission. Both patients had stayed in the same single occupancy hospital room 7 days apart from each other.

Step 1: Immediate Notification

Patients	Patients 1 and 2 should be notified immediately of their diagnosis of <i>L. pneumophila</i> infection and the suspicion that there might be a common source for their infections indicating a possible outbreak. They should be notified that an investigation will occur and the steps that will be taken, including a review and testing of water systems, beginning with the patient room. Ideally notification would be done by the treating provider in person or over the phone if already discharged. Affected patients should be kept informed of major investigation findings, including the final results of the investigation and mitigation measures put into place.
Exposed and potentially exposed patients	All patients who shared same room within a period of time should be notified as soon as possible and given information about <i>Legionella</i> , their risk of infection, and symptoms to watch out for. The time period might depend on information known; for example, if construction was done on the water system supplying the room two months ago, the initial notification might involve patients that stayed in the room over the last two months since construction. Notification of potentially exposed patients will also help with additional case finding, and patients should be asked about any symptoms when notified. Patients might be past the incubation period, but it is possible that patients might have developed the infection previously and recovered. Even patients who are exposed but no longer at risk should be notified for transparency. Ideally notification of exposed patients would be done by the treating provider in person or over the phone if already discharged.



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	<p>If the water supply to the entire unit may be of concern for <i>Legionella</i>, patients on same ward should also be notified using the same method of notification.</p> <p>They should be notified that there is a possible outbreak and an ongoing investigation and kept informed of major investigation findings, including the final results of the investigation, similar to affected patients.</p>
Patients who may be at future risk	Patients that will be admitted to the area of concern (e.g., ward if water supply is shared) should be notified of the investigation and possible outbreak. They should be informed of their risk. Mitigation of this risk, such as closing the ward affected, should be considered; if this is done, there might not be patients at future risk. They should be kept informed of major investigation findings, including the final results of the investigation.
Patients' healthcare providers	<p>Healthcare providers who provide care to the affected patients in the affected area should be notified that there were multiple patients with hospital-acquired Legionellosis identified leading to a suspicion of an outbreak. Information communicated should include where the patients were located, what has been determined so far, initial mitigation measures, and what the facility is doing to investigate.</p> <p>Healthcare providers who provide care to potentially exposed patients should also be notified and given the same information.</p> <p>Healthcare providers can be informed on rounds and via larger communication, such as an email. Providers should be provided information about Legionellosis, including what they should do when the diagnosis is suspected (e.g., diagnostic testing available at the facility, reporting to infection control).</p>
Healthcare personnel	<p>If the water supply might affect multiple locations or it is not clear if there might be other exposed patients in the facility in other areas, healthcare providers at all potentially affected locations in the facility should be notified. Providers should be provided information about Legionellosis, including what they should do when the diagnosis is suspected (e.g., diagnostic testing available at the facility, reporting to infection control).</p> <p>Healthcare providers and staff who need to make behavioral changes at the locations of the outbreak should be notified since patient rooms may be closed, sinks or drinking water fountains may be tested or closed off, or other changes. Decisions might be made to install filters on faucets, and other control measures may be implemented that healthcare providers should be aware of.</p>



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	<p>Healthcare providers and staff who might themselves be at risk, such as underlying illnesses that make them at risk for complications (e.g., smokers, chronic lung disease, cancer, diabetes) should be notified to allow them to modify behavior to keep themselves safe, if applicable.</p> <p>Healthcare providers should be notified as soon as possible and can be informed on rounds and via larger communication, such as an email. Keep in mind that healthcare providers and staff might themselves develop the condition under investigation, and messaging should include any case finding for affected providers and staff.</p>
Visitors	<p>Visitors and others who enter the hospital could be at risk until water system control measures are in place. Visitors should be notified as soon as possible, considering the following circumstances:</p> <ul style="list-style-type: none"> • When visitors need to make behavioral changes at the locations of the outbreak. • When visitors need to be aware of room closures, closed drinking fountains, closed ice machines, or other changes that might result in changes to their behavior. • When visitors might have an increased risk of becoming sick with the condition under investigation, which for Legionellosis might include conditions such as smoking, lung disease, cancer, diabetes, etc. <p>Visitors can be informed via information sheets posted in key locations or provided to each visitor. Written posting in lobby and at check-in desk can help to notify those upon entry into the facility. In some circumstances consideration could be given to notifying visitors ahead of a visit, when logistically feasible to do so. Messages should include what visitors should do to keep themselves as safe as possible.</p> <p>Families that are visiting might also need to be informed if patients have requested their health information be shared. Family members might need to know the same information as their ill, exposed, or at-risk family member patient, as well as information provided to visitors.</p>
Other healthcare facilities	<p>When patients exposed or at-risk are transferred, the affected facility should communicate with the receiving facilities directly about the outbreak. Receiving facilities might need to know that Legionellosis should be in the differential diagnosis if the patient is still within incubation period to develop disease and develops signs and symptoms of Legionellosis while in their care. Ideally this is done upon each individual patient transfer by the transferring affected facility during regular report.</p>



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Step 2: Expanded Notification	
Patients	During the investigation, it is critical to identify additional cases of hospital-acquired Legionellosis. See Chapter 5 for more information about case detection as part of an outbreak investigation. As cases are identified, patients should immediately be notified with the same information and methodology used in Step 1, Immediate Notification.
Exposed and potentially exposed patients	Additional exposed and potentially exposed patients are likely to be identified over the course of the investigation. For example, a review of building water systems and water sample testing might indicate that other units on the same floor as well as floors above and below where case patients 1 and 2 stayed also have risk for Legionella exposure. When additional exposed patients are identified, they should be immediately notified using the same methodology and information as during Step 1, Immediate Notification.
Patients who may be at future risk	As additional locations are identified that might have Legionella in their water supply, patients that will be admitted to any additional areas of concern should also be notified and informed of their risk. They should be kept informed of major investigation findings, including the final results of the investigation as per Step 1, Immediate Notification.
Patients' healthcare providers	As additional patients, exposed patients, and at risk patients are identified, their healthcare providers should also be notified as per Step 1, Immediate Notification. Although these providers might have already been notified during Step 1, it is important to make sure there are no healthcare providers caring for additional patients identified that were not in the original notification.
Healthcare personnel	<p>As additional locations are identified that might place patients, staff, and providers at risk, additional providers and staff will need to be notified.</p> <p>Information provided and methods for notification can be the same as in Step 1. However, if the locations identified are widespread, consideration should be given to notifying providers and staff facility-wide, as in some situations this might be simpler, and there might be confusion among providers and staff over what areas are affected and who might be at risk. Being clear about who is at risk as well as who is not at risk can be helpful to alleviate concerns.</p> <p>Continue to keep in mind that healthcare providers and staff might also be at risk in any new affected areas identified, and messaging to these groups as per Step 1 should continue as new locations are identified.</p>
Visitors	As additional locations at risk for Legionellosis are identified, visitors to those areas should be informed in the same manner as described in Step 1.
Other healthcare facilities	As additional patients at risk are identified during the investigation, additional information will need to be communicated upon those patients' transfer to other facilities. It is important to make sure the transferring facility is communicating with receiving facilities for these patients as well as those initially identified in Step 1.



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Box 8.4. Example of patient notification: New Delhi metallo-beta-lactamase-producing carbapenem resistant Enterobacteriaceae (NDM-CRE) in a long-term care facility

An example of notification is presented for an outbreak of NDM-CRE in a long-term care facility setting.

The situation: The epidemiologist at the local public health agency identifies three patients with CRE at the same long-term care facility. All CRE are found to harbor NDM. She calls the director of nursing to notify the facility as well as to get more information. All three patients are in the same unit of the facility and all have wounds for which they are receiving wound care.

Step 1: Immediate Notification

Patients	All patients (in long-term care settings they are called residents) or their healthcare proxies should be notified immediately that they have a positive culture for NDM-CRE. They should be notified that an investigation will occur and the steps that will be taken, including determining commonalities among the patients and an evaluation of infection control practices. Ideally notification would be done by the treating provider in person or over the phone if already discharged or if they have been transferred to another facility. Affected residents or their healthcare proxies should be kept informed of major investigation findings, including the final results of the investigation and mitigation measures put into place.
Exposed and potentially exposed patients	Depending on the information shared by the Director of Nursing, in some situations it might be possible to quickly identify the initial exposed residents. If it is not possible initially to identify these populations, which is most likely, when exposed and potentially exposed persons are identified they should be notified right away. If an outbreak is suspected based on initial information, consideration should be given to notifying all residents or their healthcare proxies in the unit or in the facility that there might be an outbreak and that the investigation is ongoing. Under most circumstances for an NDM-CRE outbreak, the entire facility should be considered to be potentially exposed since this pathogen is primarily transmitted via contact. Even those who are exposed but no longer at risk should be notified for transparency, which might include former residents of the facility. Ideally notification of exposed residents would be done by the treating provider or a representative of the facility in person or over the phone if already discharged from the facility. They should be notified that there is a possible outbreak and an ongoing investigation and kept informed of major investigation findings, including the final results of the investigation, similar to affected residents.



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Patients who may be at future risk	Residents or their healthcare proxies that will be admitted to the area of concern (e.g., affected unit, or facility) should be notified of the investigation and possible outbreak. They should be informed of their risk. They should be kept informed of major investigation findings, including the final results of the investigation.
Patients' healthcare providers	<p>Healthcare providers who provide care to the affected residents in the affected area should be notified that there are multiple residents with NDM-CRE leading to a suspicion of an outbreak. Information communicated should include where the residents are located, what has been determined so far, initial mitigation measures, and what the facility is doing to investigate. Any affected residents should immediately be placed into transmission-based precautions (contact), and healthcare providers should be notified as to their role in adhering to these precautions, with education provided on the rationale for PPE and how to use it appropriately.</p> <p>Healthcare providers who provide care to potentially exposed patients should also be notified and given the same information; this might be providers in the unit or in the entire facility.</p> <p>Healthcare providers can be informed via larger communication, such as an email, as well as in person communication when providers enter the facility. Providers should be provided information about NDM-CRE, including information on infection versus colonization and what they should do when a culture returns a result of NDM-CRE (e.g., reporting to infection control).</p>
Healthcare personnel	For a suspected outbreak of NDM-CRE in a long-term care setting, all providers that provide care in the facility should be notified and provided the same information as the providers that treat affected and exposed residents.
Visitors	Visitors and others who enter the facility that interact with affected residents, including family members, should understand their role in transmission-based precautions. All visitors should be aware that there is a suspected outbreak and informed of any precautions they need to take, such as washing their hands.
Other healthcare facilities	When residents affected, exposed or at-risk are transferred, which for this type of outbreak should be any resident in the entire facility, the long-term care facility should communicate with the receiving facilities directly about the outbreak and if the resident being transferred has an infection or colonization with NDM-CRE. Receiving facilities need to know that transmission-based precautions should be continued.



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Step 2: Expanded Notification	
Patients	During the investigation, additional cases of NDM-CRE might be identified. See Chapter 5 for more information about case detection as part of an outbreak investigation. As cases are identified, residents should immediately be notified with the same information and methodology used in Step 1, Immediate Notification.
Exposed and potentially exposed patients	Additional exposed and potentially exposed patients might be identified over the course of the investigation. When additional exposed patients are identified, they should be immediately notified using the same methodology and information as during Step 1, Immediate Notification.
Patients who may be at future risk	If additional residents are admitted to the facility, they might also be at risk and should be notified using the same methodology as exposed and potentially exposed residents.
Patients' healthcare providers	As additional residents, exposed residents, and at risk residents are identified, their healthcare providers should also be notified as per Step 1, Immediate Notification. Although these providers might have already been notified during Step 1, it is important to make sure there are no healthcare providers caring for additional residents identified that were not in the original notification.
Healthcare personnel	As additional healthcare providers are notified, other healthcare personnel should also be notified.
Visitors	Visitors should continue to be notified as during Step 1, Immediate Notification.
Other healthcare facilities	Until the outbreak is considered to be resolved, the long-term care facility should continue to notify the receiving facilities when residents affected, exposed or at-risk are transferred, including providing information directly about the outbreak and if the resident being transferred has an infection or colonization with NDM-CRE. Receiving facilities need to know that transmission-based precautions should be continued.



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