

CHAPTER 8

Notification & 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, the extent of their risk, and what they need to do. Incorporating notification into an outbreak response can be challenging, particularly when not all information has been collected or analyzed. Public health agencies and healthcare providers should consider this type of communication part of their missions to protect health and serve their populations. In this chapter, we describe the “who, what, when, how, and why” for notification of patients and other stakeholders, along with information on risk communication principles and strategies to be followed to support an effective healthcare outbreak response.

8.0 Introduction

8.0.1 Patients’ Stories

Patient A was first admitted to a small local hospital for treatment of a minor ankle fracture. He was readmitted to the same hospital just two days after his discharge, experienced a prolonged and complicated hospitalization, and died 3 months after the initial admission from 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 her father’s first admission. When Patient A’s daughter expressed questions to hospital staff about her findings, she felt frustrated and talked down to with no empathy; she said that the 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 contracts an infection in a hospital or other healthcare setting, it can be a shocking and frightening experience. When infections spread, the experience can become more frightening and confusing for patients and their families, and may be upsetting for the staff as well. During an outbreak, healthcare providers and staff understandably feel urgency to stop the outbreak. However, in that urgency, we should not forget to inform the people affected most by the incident.

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, Patient B delivered her baby, who was admitted to the neonatal intensive care unit (NICU). According to Patient B, she was not



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informed before delivery that the NICU was in the midst of an ongoing MRSA outbreak, which the hospital had not yet been able to control. She remained uninformed of the outbreak when told that her child tested positive for MRSA while still in the NICU.³

There is great emphasis today on patient-centered care. Nevertheless, the process of informing patients and others needing to know about outbreaks has not always kept up with the current prevailing philosophy of transparency. Neglecting to inform can lead to speculation, misinformation, and distrust in the hospital, healthcare setting, and healthcare providers. Not only is lack of transparency poor patient care, but it also neglects an important part of the outbreak response, specifically gaining the patient's perspective. When patients and families are informed about outbreaks during the hospital stay and following discharge, they can become active participants in the outbreak investigation and can help identify risk factors and reasons for the 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 people public health is entrusted to protect.

8.0.2 Considerations for Notification

Historically, there has been some debate about whether and when to notify patients, 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 by Dudzinski and colleagues⁴ on large-scale adverse events, which covers outbreaks and infection control breaches, described two ethical frameworks that often guide the decision to notify. Notifying patients at risk, even when the chance of physical harm is extremely low, is supported in both ethical frameworks.

The first framework, from the utilitarian perspective, focuses on minimizing risk and maximizing benefit.

Under the utilitarian framework, notifications can benefit stakeholders by informing and empowering them, and can help mitigate harm (e.g., by facilitating diagnosis and treatment). However, a healthcare facility may believe that disclosure of a low-risk event has the potential to result in net harm (such as worrying patients or undermining public confidence). Taking a broader perspective on benefits and harms can help in these situations. For example, disclosure can help with the epidemiologic process (to identify the cause and control the spread of disease) and/or with diagnostic interventions (to determine which patients may have been exposed or harmed). In addition, the utilitarian framework may also support notification to ensure that the institutions involved build or maintain trust.

The second ethical framework, from a duty-based perspective, focuses on the duty to notify. It takes the stand that patients have a right to know and an expectation that they will be notified when delivery of healthcare has placed them at risk. This framework 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 establishes or maintains trust.

Patients and other stakeholders should be provided information in a manner that helps them understand and manage risk. Keep in mind that the actual risk may not match other people's perception of risk and that different people can experience different levels of risk in the same situation. According to Peter Sandman,⁵ the amount of actual risk and the outrage experienced by people hearing about the risk do not always correlate. When

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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 messages of reassurance.
- High risk and high outrage: communication should include helping people cope with serious risks.
- Low risk and low outrage: communication may focus on providing information.⁵

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

8.1 Notification of Patients, Stakeholders, and the General Public

In this section, we discuss 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 three potential triggers to perform patient notifications: 1) when patients have experienced a healthcare-associated infection (HAI; including colonization with an antibiotic-resistant pathogen); 2) when patients need to be able to mitigate risks (e.g., by identifying symptoms of an infection that is incubating or already present, or receiving screening for a pathogen present without symptoms); and 3) when patients have experienced an alteration in care due to an outbreak or infection control breach (such as receipt of care they otherwise would not have received or application of additional infection control precautions).⁶

For additional details on topics described throughout 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 a 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 designated internal team members (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 on 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 this position when healthcare setting representatives do not or are unable to do so. It is best that the notification process begin as soon as possible—within 24 hours after an outbreak has been recognized. Sometimes notification must occur before all facts about the outbreak are known. In most cases, notification plans should prioritize infected patients, 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, at times, steps may occur simultaneously instead of sequentially. The same principles apply as new cases are identified.

8.1.1.1 Affected and Exposed Patients

When cases have been identified, those patients with an infection or a condition of interest should be notified immediately, ideally by their own healthcare provider. The rationale behind immediate notification of this group (those “directly affected”) includes 1) fully informing patients of the event and implications for their health; 2) equipping patients with the knowledge to seek appropriate treatment; and 3) supporting the investigation and control of the outbreak. Affected patients can be notified verbally (in person or by phone, if they are no longer in the facility) or in writing, if verbal notification is not possible. If patients are incapacitated or have died, their designated healthcare proxies should be notified.

If other persons in the healthcare setting, such as healthcare workers or visitors, are deemed part of the outbreak, they should also be notified immediately with the same considerations described above for patients. Applicable counseling and information about the potential risk of transmission, infection, clinical illness, testing,



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treatment, and additional care measures should be clearly communicated. Regardless of 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 are not yet known to be infected or share the condition of interest) should be notified as soon as possible after patients who are directly affected. The methods for notification should be the same, with the same considerations, as patients directly affected. Messaging is likely to vary, and additional counseling information regarding the risk of infection after exposure and post-exposure prophylaxis may need to be considered in addition to the information communicated to affected patients.

Patients and other persons who may be at risk of exposure in the future should also be notified before any potential exposure occurs. This may include patients about to undergo a procedure or patients admitted to a unit or area in a healthcare setting currently experiencing an outbreak; it may include persons with an intrinsic increased risk for the condition under investigation (such as persons who are elderly or immunocompromised). The methods for notification can be the same as those used with affected and exposed persons but may also include notification via postings at strategic locations in the healthcare facility, such as at the entryway into a unit or at handwashing stations. The primary purpose is to decrease the risk of exposure for this group of persons, with the understanding that risk tolerance varies between different people, even though the actual risk of exposure may be the same.

If many people require notification or a large volume of inquiries is expected, consider establishing a dedicated call line (“hotline”) or other method to allow opportunities for questions. Ideally, the dedicated call line will be run by the facility since the facility is responsible for the direct care of the patients. However, in some circumstances, it may be beneficial for a public health agency to establish a line of communication, either in parallel to or in place of the facility (this typically occurs only when the facility does not have an established call line). A web page 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 (FAQs) document.

Additional details 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, preferably according to the same timeline as affected patients. Providers should be made aware of and understand the current situation and what outbreak information is available as well as their patients’ conditions and risk. In many cases, healthcare providers are the best persons to notify their patients, because a relationship between provider and patient already exists; providers can help answer their patients’ questions and offer a level of trust and confidence to support them. 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 may differ from routine clinical care. The method of provider notification may depend on internal processes, and may include direct communication with each provider or more general messaging to healthcare providers facility wide.

Other provider groups who should be notified include those at the same healthcare facility who do not provide direct care to affected or exposed patients, as well as community providers who do provide care to those patients. These providers should be notified as soon as possible and should be given complete information about the outbreak so that they can counsel patients and answer questions. There are many methods by which this information may be communicated; for example, during team meetings, by group emails, or in written postings. The exact method of communication depends on the severity of the situation, the need for broader communication, healthcare facility internal policies, and recommendations of public health agencies.

When the need arises, a health alert may be issued by the public health agency to alert many providers at once to the situation. This is valuable when there is potential for wide-spread exposures; providers can aid in the identification of cases and receive recommendations for the next steps in the care of affected patients in the community. One



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example showing the need for a health alert would be when a contaminated medication has been distributed broadly among healthcare facilities and providers.

It is important to note that employees in the healthcare facility who are not directly affected or exposed should also be notified of the outbreak. It is best to communicate early to ensure that all employees are accurately informed and feel safe, before rumors begin to circulate. Also, healthcare professionals and support staff often work in multiple settings, raising the prospect of exposure and spread to other healthcare settings (see section 8.1.1.4).

Finally, healthcare providers or other employees may themselves be affected or exposed persons or may have underlying illnesses placing them at risk for complications for the condition of interest. These people should be considered in a similar manner to affected and exposed patients discussed 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 to the healthcare facility should be informed when they may be at risk of exposure, when underlying illnesses may increase that risk, and how a change in their behavior may be necessary at the location of the outbreak (such as additional handwashing or use of personal protective equipment [PPE]). Visitors who may have been exposed should receive messaging similar to other exposed persons, as described above. Methods for communication may 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; they will have questions not only about any risk to them but also any risk to the patient. For visitors who need to make behavioral changes or institute safety precautions (e.g., transmission-based precautions), the required changes must be conveyed clearly and directly as necessary via educational materials or demonstrations.

Communication should occur as soon as possible and prior to exposure when possible. Under some

circumstances, suspension of visitation may need to be considered for a period of time if such visitation could 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

Information about an HAI outbreak may need to be shared with other healthcare facilities when affected or exposed patients receive care at multiple facilities or when other healthcare facilities' patients and healthcare workers could be exposed. Keep in mind that healthcare professionals and support staff sometimes move and work between facilities. Other facilities typically require notification when a patient at the primary affected 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 template transfer form is available from CDC at: <https://www.cdc.gov/healthcare-associated-infections/media/pdfs/Interfacility-IC-Transfer-Form-508.pdf>.

Additionally, health alerts may be sent by the public health agency to notify multiple healthcare facilities and providers, often when there is potential for wide-spread exposures, for the 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 grows to include additional units or additional healthcare settings. Previously notified individuals should also receive updated communications, as appropriate.



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Coordination and frequent communications among involved partners is critical during this phase. As coordination and message timing become more complicated, public health may need to assume a coordinating 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 primary affected healthcare setting to perform individual notifications whenever possible, unless surge capacity is needed or the facility is closed, uncooperative, or lacks capacity (as in the case of a small or outpatient facility).

8.1.2.1 Affected and Exposed Patients

Additional affected and exposed patients may be detected throughout the course of the investigation. Transparency and open communication remain critical in this context. These additional patients (or their designated healthcare proxies) should be notified as soon as the patients have been identified, ideally within 24 hours after identification or as soon as possible; do not wait for the investigation to be completed. All information discussed in section 8.1.1.1 on methods of notification and considerations apply to additional affected and exposed patients; consider providing additional information as to why notification may be coming later than for other patients who already have been 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 or exposed patients and other people are identified, consider notifying their providers as soon as possible, as outlined in section 8.1.1.2. Often during the expanded notification stage, additional personnel (such as facility employees, facility providers who are not directly involved in care 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 may 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 may be posted in strategic locations within these units. If additional risk factors are identified during the investigation, these may have implications for visitors and should be communicated as appropriate to assist with prevention efforts. More details can be found in section 8.1.1.3 and Table 8.1, step 2.

8.1.2.4 Other Healthcare Facilities

During the expanded notification stage, additional healthcare facilities may need to be notified; for example, when other healthcare facilities care for affected or exposed patients, or when their own patients and healthcare workers may be at risk. The methods and considerations for notifying other healthcare facilities are described in section 8.1.1.4 and in Table 8.1, step 2.

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 in which potentially exposed persons cannot be reached through other means. Public notification may also be required when the outbreak is located 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.

8.1.3.1 When to Notify the Public

Notification of the public can be beneficial under certain circumstances. 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

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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 infection or disease spread to others.
- For outbreaks limited to a specific unit (e.g., NICU, ICU, Hematology-Oncology ward):
 - Postings can be placed at entry doors to the unit, nursing stations, handwashing stations, waiting rooms, and staff break rooms.
 - Postings in patient rooms may indicate precautions to take, but one needs to be mindful of Health Insurance Portability and Accountability Act (HIPAA) regulations.
- For outbreaks that affect multiple floors/units (e.g., legionellosis or a pathogen affecting several units):
 - Postings can be placed in the lobby, at the visitor check-in desk, in elevators to floor(s) that are affected, and in 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 content to the targeted audience, consider there may be language challenges, making sure communication is available in multiple languages; 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 within the facility may be inadequate if the outbreak is located in areas that patients cannot avoid accessing once they are admitted to the facility; these include the emergency room, ICU, or operating room. In this case, notification may have to occur before the person decides to seek services at the healthcare facility (see 8.1.3, Public Notification).

- To assist an active investigation by helping identify additional affected and exposed persons outside the current healthcare setting where the original 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 that people should receive 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 may place them at risk

- When a novel pathogen is identified or emerging, or when an 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 that 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 preferable that 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, such as when the healthcare provider refuses or is unable to do so, or the outbreak



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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 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 areas) 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 what are the planned next steps.
- 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 or 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 correct information gets communicated in a way that reaches the intended audience. In the above sections, we discussed notification of patients, persons at risk, healthcare providers, and the public. Although a full discussion of risk communication is outside the scope of this guidance document, we describe the basic principles in this section.

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

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

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

It is important to plan what needs to be communicated in advance. As messages are developed for targeted audiences (affected patients, exposed persons, healthcare providers, and the public), think about



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communicating the following three things:

- What happened
- What you are doing to correct it
- What the audience needs to know, including steps people 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 many patients are involved, the condition is new or rare, the persons affected are vulnerable, or the “story” may carry an emotional impact. Often public health can help the healthcare setting anticipate and plan for media coverage. In some circumstances, it may be necessary to approach the media proactively, such as when a wider audience needs to be notified. On the other hand, the media may 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 information to convey to the news media
- Determining when to convey that information
- Determining with whom you wish to coordinate to convey that information
- Being prepared if information is leaked to the media before it is formally announced⁸

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., those related to notification of patients and families prior to public notification) can go awry if information is leaked to the media. Having on hand 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.

8.2.2 Managing Differing Opinions Between Public Health Agencies and Healthcare Facilities

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 fallout.⁵ Both public health and healthcare facilities have interest in protecting involved patients and staff, but public health also needs to consider 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 facilities.

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 public’s perception of and trust in the healthcare facility can suffer, even if disclosure is made at a later time. Paradoxically, a healthcare facility’s concern about loss of trust or reputation, which can cause it to delay or withhold notification, can create just the situation that it wishes to avoid: a state of 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 opinions differ 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 provide best practice information to healthcare facilities, as described above, to support notification if there are concerns about unduly worrying patients with low risk or concerns about the facility’s reputation. Public health may be able to provide options that are acceptable to the facility that support public health’s goals. When healthcare facilities and public health continue to maintain different perspectives, it is important to ensure that the public health agency is familiar with and 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 those working at CDC. In advance

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

- The method of notification: When the communication will be issued by the health department, methods to consider can include phone calls, letters, press releases, media statements, and a combination of methods. When possible, notification in writing can be helpful so that patients have information at hand to refer to and take to their healthcare provider.
- Where patients can obtain 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 public health is unable to do so directly, or they can provide instructions for patients to take to their own healthcare providers. Logistics need to be carefully considered.

8.2.3 Tailoring Communication to the Audience and Setting

When crafting communication messages, consider with whom you are communicating (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 whom you want to

reach will determine the content, method, and wording of the message. Audience characteristics to consider include demographics, language, educational level, and cultural considerations. Issues of health equity should also be considered; more information on this topic can be obtained from the following web page: 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 PIO for input.

Here are some important **audience** considerations:

- If the population is highly mobile (e.g., persons who move frequently with frequent changes of address, those experiencing homelessness, or those in temporary residential care), a letter may not be the best method of communication.
- Elderly and some other patients may have a caretaker or health care proxy who needs to receive the information. Similarly, with younger populations, parents need to be notified.
- All communication to patients and caregivers should be in plain language—written 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, and 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 and caregivers will go to obtain more information and have their questions answered, such as a website or phone number. Include this information in the notification.
- Remember that 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 the person can refer back to the written information in hand.
- 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 may 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 unable to reach specific groups or specific individuals, or when broader communication to the general public is required, a press release can be considered.

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

- Remember to show empathy in the message, because people will be concerned about their risk of infection or may have experienced the infection already.
- Provide information that allows the audience to understand what happened as well as how it happened and where. If details are still unknown, communicate that the situation is still under investigation. Often communication is distributed before complete information has been procured. Notification should not be postponed until all information is known, but it is important to be clear and acknowledge when findings are not complete.
- Include information on corrective actions already taken to mitigate the current risk and any planned actions to mitigate future risks.
- Provide information on who is being contacted and why, including an assurance that the correct patients are being contacted.
- Include any instructions about what patients or others need 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 may experience that would prompt them to contact their healthcare provider.
 - If evaluation by a healthcare provider is needed, make sure the audience has information to communicate to their provider.
 - If testing is needed, make sure the audience has all information required prior to testing, such as where to go to a specific laboratory or healthcare facility, and whether or not the cost of the test will be covered.
- Ensure there is a method by which additional questions can be answered, such as a website and/or a 24-hour contact number. Be prepared for many calls during the first 1 to 2 weeks at least.
 - Include information on the planned next steps and what the audience can expect including any information on future updates.
 - Make sure the 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.
 - 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 address their 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.

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, serious infection control breach, or other situation placing them at risk directly from their healthcare provider or facility. Ideally, the communication will come from someone they trust.

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Box 8.2 | Tools and Materials to Develop When Planning for a Patient Notification

- Patient notification letters (including the disease transmission identified [e.g., outbreak] or no disease transmission identified [e.g., infection control breach], and their test results): Examples can be found in the CDC Patient Notification Toolkit, section 1, <https://www.cdc.gov/healthcare-associated-infections/hcp/patient-notification-toolkit/developing.html>
- Healthcare provider notification of testing recommendations letter: An example can be found in the CDC Patient Notification Toolkit, section 1 (see previous link)
- 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, <https://www.cdc.gov/healthcare-associated-infections/hcp/patient-notification-toolkit/communication.html>

Though not ideal, in some situations, notification from a public health agency is necessary.

Patients do not want to hear about a problematic issue that involves or impacts their health first from the media. This can create a feeling of distrust in the healthcare facility as well as distrust in those in authoritative positions. Patients may feel like the facility was trying to hide the issue rather than inform the public. In one example of this, families of children who were part of a devastating mucormycosis outbreak were unaware of the outbreak for several years prior to publication of the incident 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 in which the healthcare 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. For the majority of situations, however, 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

There are two broad types of media:

- Traditional media: newspapers, online news platforms, television, and 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 a reactive communication
- Press release: a method of providing information to the media to communicate information you want the public to know, generally a proactive communication
- Interview: involving a reporter from a media outlet and a spokesperson from the healthcare facility or public health; the interview may be live or recorded (for use in television or radio) or published in print media
- Press conference: a live statement or series of statements from the spokesperson or others involved communicated to the media; generally convened in high profile situations or for very large outbreaks

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8.3.2 Engaging the Media

How you engage the media and how you craft your message determines 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. Involve your communications staff and PIO as early as possible when a patient notification is first considered. If you do not 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.

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 about 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 via press releases and media statements, ensure that the information communicated is accurate. Once a story has been distributed 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 HIPAA regulations need to be followed. Public health agencies need to balance confidentiality with ensuring accurate and complete information, which may necessitate releasing more information than normal.

Methods of engaging with the media can vary depending on the circumstances. Considerations include the following:

- A press release can be used when there is concern about incomplete notification (e.g., due to an inability to locate affected or at-risk persons) or when there is concern that the media may release the story ahead of patient notification. A press release should contain the same information as the patient notification letter.

- A media statement is generally a response to an inquiry from the press. Remember that this is an opportunity to get vital messaging out to the public that can extend beyond the specific question that was posed by the press.
- 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 for 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 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 typically are only used for rapidly evolving situations (such as the COVID-19 pandemic or natural disasters). Patient notifications are generally not the best situations to hold press briefings.

8.3.3 Proactive versus Reactive Media Communication

Proactive media communication 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 that provided in a patient notification letter. If the disclosure is initiated by the healthcare facility, a public health representative will likely be asked to comment; thus public health needs to be prepared and, ideally, coordinate with the health facility in developing public messages. Be inclusive with the information shared; this will decrease the possibility that the public perceives a withholding of information. The benefits of proactive media interactions include the ability to control the message in relating the story and ensuring that accurate information is disseminated.

Reactive media communication refers to healthcare's response to a story told first by the media. In general, reactive media communication is not ideal; instead, early disclosure (getting ahead of the story) is recommended.

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With reactive media communication, it is difficult for healthcare facilities or public health agencies to control the message. Inaccurate or misleading information can be presented and may be difficult to correct, particularly if it appears that, previously, information was withheld.

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

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 proxies 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; provide the opportunity to ask questions. A written descriptive statement and FAQ responses 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 web page 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 administered).	<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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Table 8.1. | Framework for Healthcare-Associated Infection Outbreak Notifications: Immediate and Expanded Notifications

STEP 1: IMMEDIATE NOTIFICATION

Patients who have been exposed or potentially exposed (or their designated healthcare proxies 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; provide opportunity to ask questions. A written descriptive statement and FAQ responses 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 web page 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 administered).</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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Table 8.1. | Framework for Healthcare-Associated Infection Outbreak Notifications: Immediate and Expanded Notifications

STEP 1: IMMEDIATE NOTIFICATION

Patients who may be at risk for future exposure (or their designated healthcare proxies if appropriate) including the following:

- 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. A written descriptive statement and FAQ responses 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 web page that provides the same vetted information communicated in other correspondence, with FAQs and links to additional resources.</p>	Notify before the potential exposure.	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 administered).	<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>

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 agencies may consider sending a health alert.	As soon as possible.	The patient's risk or exposure.	<p>To assist with questions from patients, for follow up and support.</p> <p>To assist with contacting patients who are difficult to reach.</p>

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

STEP 1: IMMEDIATE NOTIFICATION

Healthcare Personnel (HCP) including the following:

- 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 who are employed by the healthcare setting but are not directly affected by the incident, including HCP who provide care to at-risk 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 during team huddles/meetings/rounds, and written postings (e.g., on patient units, at handwashing stations, and in breakrooms).</p> <p>Involve Employee Health Services to communicate with staff and offer testing or treatment if necessary.</p>	<p>As soon as possible.</p>	<p>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).</p> <p>HCP may alert internal team and public health agency if they work in multiple healthcare settings.</p> <p>Healthcare setting may refer HCP to Employee Health Services (especially those persons who may be at risk due to health complications and underlying illness).</p>	<p>To prevent and control transmission and assist with outbreak investigation activities.</p> <p>To engage Employee Health Services to support HCP.</p> <p>To fully inform and support HCP about the event and implications for their health.</p> <p>To allow HCP to seek appropriate treatment.</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>

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

STEP 1: IMMEDIATE NOTIFICATION

Visitors including the following:

- a. Visitors who may have been exposed or need to make behavioral changes when present at the location(s) of the outbreak.
- b. Visitors who have underlying illness(es) placing them at increased risk from a potential exposure.

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>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 the 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 web page that provides the same vetted information communicated in other correspondence, with FAQs and links to additional resources.</p> <p>Healthcare settings may offer education and demonstrations on safety precautions visitors should take when visiting infected or colonized patients.</p>	<p>As soon as possible in common areas and where appropriate.</p> <p>Upon entry to the 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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Table 8.1. | Framework for Healthcare-Associated Infection Outbreak Notifications: Immediate and Expanded Notifications

STEP 1: IMMEDIATE NOTIFICATION

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 other healthcare setting and documented and flagged in patient transfer documents (e.g., a symbol or label prominently placed on the medical 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 agencies 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 to prevent and control transmission as well as to assist with outbreak investigation activities.</p>

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

STEP 2: EXPANDED NOTIFICATION

Case patients who have been infected but have not yet been notified (or their designated healthcare proxies and, if patients are deceased, the closest family member), including 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; provide the opportunity to ask questions. A written descriptive statement and FAQ responses 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 web page 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 administered).</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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Table 8.1. Framework for Healthcare-Associated Infection Outbreak Notifications: Immediate and Expanded Notifications

STEP 2: EXPANDED NOTIFICATION

Patients who have been exposed or potentially exposed but are not known to be infected (or patients' designated healthcare proxies if 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>
<p>Verbally, in person or by phone calls if the patient has already been discharged; provide the opportunity to ask questions. A written descriptive statement and FAQ responses 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 web page 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 administered).</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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Table 8.1. Framework for Healthcare-Associated Infection Outbreak Notifications: Immediate and Expanded Notifications

STEP 2: EXPANDED NOTIFICATION

Patients who may be at risk for future exposure (or their designated healthcare proxies if appropriate), including the following:

- 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

As the outbreak is contained, this group will become smaller.

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. A written descriptive statement and FAQ responses should also be given or sent. 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 web page that provides the same vetted information communicated in other correspondence, with FAQs and links to additional resources.</p>	Notify before the potential exposure.	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>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>

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 agencies may consider sending a health alert.	As soon as possible.	<p>The patient's risk of exposure.</p> <p>Applicable information about potential risk of transmission, alternate options for elective procedures.</p>	<p>To assist with questions from patients, follow up, and support.</p> <p>To assist with contacting patients who are difficult to reach.</p>

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

STEP 2: EXPANDED NOTIFICATION

Other Healthcare Personnel (HCP) including the following:

- 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 place them at risk for complications if infected or colonized; involve Employee Health Services as needed
- c. Other HCP who are employed by the healthcare setting but are not directly affected by incident, including HCP providing care to at-risk 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>Verbal announcement, mass email, notices in break/locker room.</p> <p>Involve Employee Health Services to communicate with staff and offer testing or treatment if necessary.</p>	<p>As soon as possible. Consider actions already taken.</p> <p>Urgency is greater if an action can be taken.</p>	<p>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).</p> <p>HCP may alert internal team and public health agency if they work in multiple healthcare settings.</p> <p>Healthcare setting may refer HCP to Employee Health Services (especially those persons who may be at risk due to health complications and underlying illness).</p>	<p>To prevent and control transmission and assist with outbreak investigation activities.</p> <p>To engage Employee Health Services to support HCP.</p> <p>To support HCP and fully inform them about their healthcare risk.</p> <p>To allow HCP to seek appropriate treatment.</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>

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

STEP 2: EXPANDED NOTIFICATION

Visitors including the following:

- a. Visitors who may have been exposed or need to make behavioral changes when present at the location(s) of the outbreak
- b. Visitors who have underlying illness(es) placing them at increased risk from a potential exposure

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>Written postings displayed in areas in the proximity of the outbreak and common areas such as the lobby, nurse desk/station, patient units, and 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 the 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 web page 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 the unit/ location(s) of the outbreak (e.g., NICU).</p> <p>Consider actions already taken.</p> <p>Urgency is greater if an 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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Table 8.1. Framework for Healthcare-Associated Infection Outbreak Notifications: Immediate and Expanded Notifications

STEP 2: EXPANDED NOTIFICATION			
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 other healthcare setting and documented and flagged in patient transfer documents (e.g., symbol or label, prominently placed on the medical 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 to prevent and control transmission, and to assist with outbreak investigation activities.</p>

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Box 8.3 | Example of Patient Notification: *Legionella* Outbreak in a General Medicine Ward

An example of notification is presented below illustrating a *Legionella* outbreak in a hospital setting. This example can be used as a model for other conditions and settings, bearing in mind how the investigation may proceed, the characteristics of the pathogen and method of transmission, and the specifics of the setting of the outbreak. For infection control breaches, immediate notification may include all groups listed in the table below, except for affected patients; in infection control breach investigations, there are often no infected or colonized patients thus far identified (for more information see CORHA Principles and Practices, Supplement B).

The situation: The infection preventionist in a large hospital identified two patients who met 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 the hospital may have a *Legionella* outbreak. Patient 1 was found positive for *L. pneumophila* 1 (Lp1) by a urine antigen test 21 days after admission. Patient 2 was found positive for Lp1 9 days after admission. Both patients had stayed in the same single-occupancy hospital room 7 days apart from each other.

STEP 1: IMMEDIATE NOTIFICATION

Affected patients	Patients 1 and 2 should be notified immediately of their diagnosis of <i>L. pneumophila</i> infection and the suspicion that there may be a common source for their infections, indicating a possible outbreak. They should be notified that an investigation will occur and what steps will be taken, including a review and testing of water systems, beginning with the patient room. Ideally, notification will be given by the treating provider in person or over the phone if the patient has already been discharged. Affected patients should be kept informed of major investigation findings, including the final results of the investigation and the mitigation measures put into place.
Exposed and potentially exposed patients	All patients who shared the same room within a specific period of time should be notified as soon as possible and given information about <i>Legionella</i> , patients' risk of infection, and symptoms to watch out for. The time period may depend on the information known. If construction was undertaken on the water system supplying the room 2 months ago, for example, the initial notification may involve patients who stayed in the room over the last 2 months since the construction commenced. Notification of potentially exposed patients will also help with additional case finding, and, when notified, patients should be asked about any symptoms they may have experienced. Patients may be past the incubation period, but it is possible that they could have developed the infection previously and recovered. Even patients who are exposed but no longer at risk should be notified for the sake of transparency. Ideally, notification of exposed patients will be made by the treating provider in person or over the phone if the patient has already been discharged. If the water supply to the entire unit may be of concern for <i>Legionella</i> , patients on the same ward should also be notified using the same method of notification. They should be told that a possible outbreak occurred and there is an ongoing investigation; they should be kept informed of major investigation findings, including the final results of the investigation, similar to affected patients.
Patients who may face future risk	Patients who will be admitted to the area of concern (e.g., a ward if the 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 may be no patients at future risk. Patients should be kept informed of major investigation findings, including the final results of the investigation.

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Box 8.3 | Example of Patient Notification: *Legionella* Outbreak in a General Medicine Ward

STEP 1: IMMEDIATE NOTIFICATION

<p>Patients' healthcare providers</p>	<p>Healthcare providers who provide care to affected patients in the affected area should be notified that multiple patients were identified with hospital-acquired legionellosis, leading to 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 during rounds and via larger communication, such as by an email. Providers should be given information about legionellosis, including what they should do when such a diagnosis is suspected (e.g., diagnostic testing available at the facility and reporting to infection control).</p>
<p>Healthcare personnel</p>	<p>If the water supply affects multiple locations or it is unclear whether additional exposed patients in the facility may be found in other areas, healthcare providers at all potentially affected locations in the facility should be notified. Providers should be given information about legionellosis, including what they should do when the diagnosis is suspected (e.g., diagnostic testing available at the facility and reporting to infection control).</p> <p>Healthcare providers and staff who need to make behavioral changes at locations of the outbreak should be notified because some patient rooms may be closed, sinks or drinking water fountains may be tested or closed off, or other changes may be made. Decisions may be made to install filters on faucets, and other control measures may be implemented about which healthcare providers should be made aware.</p> <p>Healthcare providers and staff who could themselves be at risk, such as those with underlying illnesses that place them at risk for complications (persons who are smokers or have chronic lung disease, cancer, diabetes, etc.) should be notified to allow them to modify their behavior to keep themselves safe, if applicable.</p> <p>Healthcare providers should be notified as soon as possible and can be informed during rounds and via larger communication, such as by an email. Keep in mind that healthcare providers and staff may themselves develop the condition under investigation, and messaging should include any case findings for affected providers and staff.</p>

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Box 8.3 | Example of Patient Notification: *Legionella* Outbreak in a General Medicine Ward

STEP 1: IMMEDIATE NOTIFICATION

<p>Visitors</p>	<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 when present at locations of the outbreak. • When visitors need to be aware of room closures, closed drinking fountains, closed ice machines, or other changes resulting in changes to their behavior. • When visitors may have an increased risk of becoming sick with the condition under investigation, which for legionellosis would be due to some visitors' health-related 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 the lobby and at the check-in desk can help notify visitors on entry into the facility. In some circumstances, consideration could be given to notifying visitors ahead of a visit, when it is logistically feasible to do so. Messages should include what visitors should do to keep themselves as safe as possible.</p> <p>Visiting families may also need to be informed if patients have requested that their health information be shared. Family members may need to know the same information as their ill, exposed, or at-risk family member patient, as well as information provided to visitors.</p>
<p>Other healthcare facilities</p>	<p>When patients who have been exposed or are at risk are transferred to another facility, the transferring affected facility should communicate with the receiving facility directly about the outbreak. Healthcare personnel at receiving facilities need to know that legionellosis should be listed in the differential diagnosis if the patient remains within the incubation period to develop disease and could develop signs and symptoms of legionellosis while in their care. Ideally, this communication is done at each individual patient transfer by the transferring affected facility during regular reporting.</p>

STEP 2: EXPANDED NOTIFICATION

<p>Patients</p>	<p>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 using the same information and methods outlined in Step 1, Immediate Notification.</p>
<p>Exposed and potentially exposed patients</p>	<p>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 may indicate that other units on the same floor as well as floors above and below where case patients 1 and 2 stayed also share the risk for <i>Legionella</i> exposure. When additional exposed patients have been identified, they should be immediately notified using the same methods and information outlined during Step 1, Immediate Notification.</p>

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Box 8.3 | Example of Patient Notification: *Legionella* Outbreak in a General Medicine Ward

STEP 2: EXPANDED NOTIFICATION

Patients who may face future risk	As additional locations are identified that may have <i>Legionella</i> in their water supply, patients newly admitted to those locations 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 the providers may have already received notification during Step 1, it is important to ensure that no healthcare provider caring for additional patients has not been notified and updated if appropriate.
Healthcare personnel	<p>As additional locations that may place patients, staff, and providers at risk are identified, additional healthcare providers and staff will need to be notified.</p> <p>Information provided and methods for notification can be the same as those outlined in Step 1. However, if the locations identified are numerous or widespread, consideration should be given to notifying providers and staff facility-wide; in some situations this may be simpler because there may be confusion among providers and staff over what areas are affected and who may be at risk.</p> <p>Continue to keep in mind that healthcare providers and staff may also be at risk in any newly affected areas that are identified, and messaging these groups as per Step 1 should continue as new locations are identified. Being clear about who is at risk as well as who is not at risk can help alleviate concerns.</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 affected 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 a local public health agency identified three patients with CRE in the same long-term care facility. All CRE were found to harbor NDM. The epidemiologist calls the director of nursing to notify the facility as well as to obtain 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

Affected residents (patients)	All affected residents (in long-term care settings patients are called residents) or their healthcare proxies should be notified immediately about the positive culture for NDM-CRE. Residents/proxies should be notified that an investigation will occur and what steps will be taken, including determining commonalities among patients and an evaluation of infection control practices. Ideally, notification will be done by the treating provider in person or over the phone if the resident has already been discharged to home or 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 what mitigation measures have been put into place.
Exposed and potentially exposed residents	Depending on information shared by the Director of Nursing, in some situations it may be possible to quickly identify initially exposed residents. If it is not possible to identify that population initially, which is more likely, exposed and potentially exposed persons should be notified immediately after they have been identified. 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 may 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 the sake of transparency; this may 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 the resident has already been discharged from the facility. Exposed and potentially exposed residents should be notified about 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.
Residents who may face future risk	Residents who will be admitted to the area of concern (e.g., an affected unit or a facility) or their healthcare proxies should be notified of the possible outbreak and investigation, as well as informed of the risk to the resident. These residents should also be kept informed of major investigation findings, including the final results of the investigation.

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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

STEP 1: IMMEDIATE NOTIFICATION

Residents' healthcare providers	<p>Healthcare providers who provide care to affected residents in the affected area should be notified that there are multiple residents with NDM-CRE, leading to the suspicion of an outbreak. Information communicated should include where the residents are located, what has been determined so far, what are the initial mitigation measures, and what the facility is doing to investigate. Any affected residents should immediately be treated using transmission-based precautions (specifically, contact precautions), 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 can include providers in the unit and those within the entire facility.</p> <p>Healthcare providers can be informed via larger communication, such as by an email, as well as by in-person communication when providers enter the facility. Providers should be given information about NDM-CRE, including information on infection versus colonization and what the provider should do when a culture returns the result of NDM-CRE (e.g., reporting the finding to infection control).</p>
Healthcare personnel	<p>For a suspected outbreak of NDM-CRE in a long-term care setting, all providers offering care in the facility should be notified and given the same information as providers treating affected and exposed residents.</p>
Visitors	<p>Visitors and others who enter the facility and 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 should be informed of any precautions they need to take, such as washing their hands.</p>
Other healthcare facilities	<p>When initiating the transfer of an affected, exposed, or at-risk resident, which for this type of outbreak could include any resident in the entire facility, the affected long-term care facility should communicate with the receiving facility directly about the outbreak and state whether the resident being transferred has an infection or colonization with NDM-CRE. Receiving facilities need to know that transmission-based precautions should be continued.</p>

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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

STEP 2: EXPANDED NOTIFICATION

Affected residents (patients)	During the investigation, additional cases of NDM-CRE may 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 using the same information and methods specified in Step 1, Immediate Notification.
Exposed and potentially exposed residents	Additional exposed and potentially exposed residents may be identified over the course of the investigation. When additional exposed residents have been identified, they should be immediately notified using the same methods and information outlined during Step 1, Immediate Notification.
Residents who may face future risk	If additional residents are admitted to the facility, they may also be at risk and should be notified using the same methods as those used for exposed and potentially exposed residents.
Residents' healthcare providers	As additional affected, exposed, and at-risk residents become identified, their healthcare providers should also be notified as per Step 1, Immediate Notification. Although these providers may already have been notified during Step 1, it is important to ensure that no healthcare provider caring for additional patients has not been notified and updated if appropriate.
Healthcare personnel	As additional healthcare providers are notified, other healthcare personnel should also be notified.
Visitors	Visitors should continue to be notified in the same way specified in Step 1, Immediate Notification.
Other healthcare facilities	Until the outbreak is considered to be resolved, the affected long-term care facility should continue to notify receiving facilities when affected, exposed, or at-risk residents are being transferred, including providing information directly about the outbreak and whether 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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