Adverse Outcomes of Travel-Related Cosmetic Procedures among US Residents, 2014–2024

[Announcer] This program is presented by the Centers for Disease Control and Prevention.

[Matt Kuehnert] Hello, I'm Dr. Matt Kuehnert, Editor in Chief of the journal *Emerging Infectious Diseases*. EID is an open access, high impact, peer reviewed scientific journal published by CDC. EID publishes articles on new and re-emerging infectious diseases that occur around the world, with the mission of improving the understanding of pathogen emergence, control, and prevention. We are pleased to present selected EID articles to you, brought to life in new and interesting ways through this podcast series.

[Candice Hoffmann] Welcome to the *Emerging Infectious Diseases* podcast. I'm Candice Hoffmann. In this episode, we'll discuss an article on adverse outcomes of travel-related cosmetic procedures from the June 2026 issue. Medical tourism, or traveling for medical procedures, is becoming increasingly popular. State and local health departments have been reporting infections linked to these procedures to CDC, and CDC experts summarized findings from 10 years of these reports. Let's hear from them now.

[Kiara McNamara] My name is Kiara McNamara. I am a nurse practitioner, and I work as a nurse epidemiologist at CDC and I'm based in Atlanta, Georgia.

[Rhett Stoney] My name is Rhett Stoney. I'm an epidemiologist and the lead for medical tourism in the Division of Global Migration Health.

[Candice Hoffmann] Kiara describes the study, and CDC's role in helping to combat infections incurred from travel-related procedures, both abroad and in the U.S.

[Kiara McNamara] We did a study looking at the adverse outcomes of travel-related cosmetic procedures among people who are seeking these procedures in the U.S. using the data that we had from health departments. I think it's interesting because it's a way for us to kind of describe the information that's been given to us, and it gives us a more complete perspective of what we've been hearing and helps us describe the risks associated with these travel-related procedures.

So, in the Division of Healthcare Quality Promotion at CDC we regularly receive requests from across the country from different state and local health departments to support ongoing investigations where there may be breaches in healthcare infection prevention and control that's contributing to patient harm. I think over time with our experiences, we started to notice a recurring pattern involving people who were traveling for cosmetic procedures both internationally and within the United States. And so, to describe this, I think it's always helpful to put some data behind what we're seeing, we reviewed our internal records of consultations from health departments, again, across the country. And I think ultimately our goal was to describe the risks associated with travelling for cosmetic procedures among us residents between 2014 and 2024.

[Candice Hoffmann] What are some reasons people might travel for a medical procedure?

[Rhett Stoney] So, cost is a big one. The prospect of getting a surgery, treatment, or procedure for less money drives many people to travel for care. Another reason is that people may travel to receive care from a provider who shares their culture or language. And finally, another major

driver of traveling for medical care is to get a procedure or therapy or treatment that's just not available or approved in the place where they live.

[Candice Hoffmann] This analysis looked at CDC consultations. But what defines a consultation?

[Kiara McNamara] So, for this analysis we defined a consultation as a verbal or written request from a health department or a healthcare facility for CDC 's technical assistance with an investigation. There’s quite a range. Requests for consultations are completely voluntary, and they're conducted on a as needed basis. And they can look like a lot of different things. And to give you kind of an example, or to kind of like bookmark or bookend what this could be on like one end of the spectrum, a consultation can be as simple as answering like a few technical questions. They can be quick, they can be brief, they can be resolved pretty quickly. On the other side of the spectrum, they can be really complex. They can involve extensive epidemiologic support. There might be lab testing, and sometimes there's even on-site infection prevention and control of specimens that are completed as a part of the investigation. As you can imagine, that type of investigation can take months to resolve.

[Candice Hoffmann] By analyzing these consultations, the authors were able to describe risks associated with traveling for cosmetic procedures among U.S. residents. They had three main findings.

[Kiara McNamara] I think there are three core findings of our study. The first is approximately a third of the consultations involve multiple patients from more than one state. At the upper end of this range there was one outbreak consultation that described multiple infections among patients residing in 20 different states. As you can imagine, this makes public health investigations challenging to coordinate across different partners; there are several different health departments that are involved, as well as centralizing information for public health action. In addition, it makes it increasingly difficult to link affected patients from different states to a single outbreak source, so things like a common clinic or the same provider or the same medical product.

[Candice Hoffmann] The second main finding was that more than half of the investigations the researchers looked at involved a class of bacteria called nontuberculous mycobacteria.

[Kiara McNamara] I'll call it NTM for short. Infections caused by NTM can be difficult to diagnose and treat and they have important public health implications that can point to upstream causes of infection and the delivery of the healthcare process. And what I mean by that is it can point to signals of contaminated medical products, it can point to potential exposures to non-sterile water ice or poor infection control practices, all of which could benefit from public health action. It's a large group and includes more than 190 species of mycobacteria. Most NTM 's cause an infection in the lungs, but NTM 's can also cause other infections. We call these extrapulmonary, or you can think of it as outside the lung infections, like skin and soft tissue infections. NTMs can be challenging to detect for a number of reasons. I think there can be a long time between patient exposure and presentation of symptoms and then when patients do present, they can have nonspecific signs and symptoms that may not be an immediate signal for a clinician to think about in NTM 's. I think that it's not easy to pinpoint specific signs and symptoms with these infections. I think that you can see a variety of presentations, and I think that's why it's hard to diagnose because there's not like an immediate red flag telling you, “Oh this is definitely NTM.” It may just look like a standard surgical site infection that's just not

healing. And I think that part is probably more key than others is that like these things can be sturdy. They can be hard to treat without knowing exactly what it is. Clinicians need to be thinking about NTM 's in order to order the right diagnostic tests to really know that it's NTM and I think that's why oftentimes many of these infections go undetected and unrecognized.

[Rhett Stoney] I'll add too, just from the patient's perspective, you know, they may not know what it is, that they have an NTM infection, or how serious it is or how serious it can get.

[Candice Hoffmann] Healthcare facilities can take steps to prevent NTM infections.

[Kiara McNamara] One is establishing a water management plan. So, a water management plan helps identify at risk conditions that facilitate growth and spread of these different organisms, and it also identifies corresponding control measures that healthcare facilities can take to help protect patients. Another thing is enforcing strong sink hygiene principles which is really about minimizing splashes and sprays from water onto patient care items. I think preventing potential nonsterile water contamination of these items is important to help prevent transmission of these infections. Third is evaluating and emphasizing the importance of infection control and water management practices, and then lastly, collaborating with health departments so that these infections get reported and these cases are investigated.

[Candice Hoffmann] Going back to the main findings of the study, here's a third takeaway.

[Kiara McNamara] The third is that people travel to a variety of destinations for cosmetic procedures, including within the United States or abroad. And while there's always a degree of risk that comes with medical and surgical procedures, I think our analysis does a good job at highlighting how lapses in infection prevention and control can increase the risk for transmission regardless of where the care is delivered.

[Candice Hoffmann] Some of the reports from state and local health departments were missing information about individual patients, so we don't always know which procedures they had. However, there were some procedures that showed up frequently in the reports.

[Kiara McNamara] We don't always receive complete information about the individual patient. In our analysis we found that the top three procedures that were reported to us include liposuction, abdominoplasty or a tummy tuck, or gluteal augmentation which is like a butt lift.

[Candice Hoffmann] Some cases were isolated, but some were part of outbreaks, including a large multistate one.

[Kiara McNamara] There's one outbreak consultation that we looked at that described investigating multiple infections across multiple patients residing in at least 20 different states.

[Candice Hoffmann] Detecting and tracking down the source of these outbreaks can be challenging.

[Kiara McNamara] I think these outbreaks are difficult to detect and underreported for a lot of different reasons but thinking through it, you know patients often return home after procedures, and they seek care in different healthcare systems all over the country. Even then, the infection might not be reported to the state or local health department which creates barriers for the health department, right? So, they won't know about it, and they can't do anything about it in that case. So, I think that's why we often see that these outbreaks are underreported and under detected.

[Candice Hoffmann] Another challenge has been a lack of standardized information from state and local health departments, but CDC is working to improve this.

[Rhett Stoney] To address this challenge, CDC has recently developed a medical tourism surveillance system which is like a central hub where health departments can submit cases of complications related to medical tourism and we can see all of those cases from across the country from every jurisdiction. And our team will look at those cases and assess them for possible links that may be suggestive of a larger outbreak, and then we can notify those health departments very quickly. So, it's something that really, we've lacked for a while but it will help us to track these events and also, it will allow us to manage like a repository of historic event data, so we can describe relationships and trends over time and we can use this information then to inform evidence-based guidance for travelers, clinicians, and our partners.

[Kiara McNamara] I think, too, coming from the outbreak response perspective, I'm really excited about this because I think it will help us respond quicker. I think we'll have more information available that will enable us to act faster and hopefully prevent more infections.

[Candice Hoffmann] With this new tracking system, CDC will continue to work with state and local health departments to detect and respond to outbreaks.

[Rhett Stoney] We felt it was very important to establish this mechanism, this medical tourism surveillance system, where, again, it can serve as a central hub where health departments can report cases of adverse health outcomes to CDC. And I'll add too that the system also has these electronic case report forms that are standardized that can be used, and there's also PDF versions of those forms available. So, health departments can give those to clinicians upon request.

[Candice Hoffmann] Sometimes adverse outcomes after surgery aren’t discovered right away. Occasionally, stigma may contribute to delays in diagnosis.

[Rhett Stoney] Oftentimes, especially with medical tourism, there's a perceived stigma that can be associated with getting these procedures that patients will experience, so it may result in them just delaying getting seen in the U.S. for care and it could also hinder them from disclosing their medical history to healthcare providers when they present for care.

[Candice Hoffmann] It’s important for patients who travel for medical procedures to seek medical care right away if they have any complications after they return home.

[Rhett Stoney] That's one of our recommendations for travelers that experience any kind of illness or symptoms from infection or complications from anything. If you feel unwell, please, please, when you return, even if it's months later, seek medical care immediately and be honest about your recent travel and medical history.

[Kiara McNamara] I think for patients, I would say that anyone considering cosmetic procedures should understand that these procedures can lead to serious infections regardless of where the procedure is performed, and people who travel to another state or country for these procedures should seek follow up care once they're home if they're feeling unwell.

[Rhett Stoney] A couple of things they can do before they decide to travel for procedures is to discuss their surgery that they're thinking of getting with their doctor and learn more about the risks and how they can minimize complications of surgery. They should also seek out information about the surgeon that's going to be performing the procedure, including information

about their certifications, training, and if they have a history of patients with surgical complications, and they should research information about the healthcare facility as well.

[Candice Hoffmann] For clinicians treating patients experiencing adverse outcomes after traveling for procedures, CDC offers this advice.

[Kiara McNamara] Clinicians should consider recent travel-related cosmetic procedures when evaluating patients with post-surgical infections or other complications, particularly these difficult to treat infections such as those caused by NTM.

[Rhett Stoney] Clinicians can help public health authorities detect and mitigate the spread of outbreaks in medical tourists by identifying patients that are medical tourists when they present for care and reporting the event to their health department. And then, of course clinicians and healthcare facilities should follow all disease reporting requirements for their jurisdiction but also report suspected or confirmed cases of antimicrobial resistance or drug-resistant pathogens to public health authorities. This will facilitate testing and infection control measures to prevent further transmission. CDC has developed case report forms that clinicians may use to report cases of adverse health outcomes in medical tourists, and currently these are available to clinicians in PDF format and available on request from their health department. They will then take these reports that they receive, and they can submit these to CDC through the medical tourism surveillance system. I'll say really, it's a whole village, one team effort. Through vigilance and reporting and sharing information, we think that this system really strengthens the collaboration between CDC, health jurisdictions, and clinicians because it provides actual high-quality data to identify outbreaks among medical tourists earlier. And you know this is important because detecting outbreaks earlier enables more timely investigations and faster implementation of targeted interventions, helping us to prevent additional cases and reduce the overall scope of an outbreak.

[Candice Hoffmann] So, after this study, what’s next?

[Rhett Stoney] For the medical tourism surveillance system, it's getting the word out about this system, socializing it with our partners at healthcare associated infection programs, at state and local health departments, also getting word out to clinicians and professional societies, and as well here at CDC at the different programs, like there are surveillance systems that may incidentally pick up cases of medical tourism and, you know, working to look at those systems, and if there may be possible ways to collaborate, are all things that we're looking at.

[Kiara McNamara] I think we're interested to learn more about like the infection prevention and control in these settings. I think that where cosmetic surgery is performed is variable. I feel like that was somewhat surprising for me as I've kind of encountered these consultations and because there are variable settings I think the regulation also varies, and I think understanding what standards exist to guide practice will be informative, and I think it would be helpful to kind of see how this care is delivered and like what processes and procedures are in place at baseline to really see how we can enhance the IPC that's being used. Overall, I think that's kind of one area that I'm more interested to learn more about.

[Rhett Stoney] Over time as we collect more data as it comes into the system, we'll be able to describe relationships and trends that can really help to inform our evidence-based guidance that we give to travelers, clinicians, and partners. Both in like the outbreaks sense, you know in a specific outbreak scenario, but also just in general.

[Candice Hoffmann] In addition to this study in EID, you can find more information about medical tourism in CDC's Yellow Book.

[Rhett Stoney] Yellow Book, or *CDC Health Information for International Travel*, is a reference book for clinicians and patients that are planning to participate in international travel or activities while they travel. It's also available on our website for free, which is cdc.gov/travel.

[Candice Hoffmann] Thanks for listening to our podcast. You can learn more in the full article, "Adverse Outcomes of Travel-Related Cosmetic Procedures among US Residents, 2014–2024" in the June 2026 issue. And we hope you'll become a regular reader of EID like Kiara and Rhett.

[Kiara McNamara] I am a regular of EID. I feel like, of the papers that I've written, I frequently cite papers from EID, and I think that we chose EID because we thought that it would be a great fit for the audience that we were trying to reach.

[Rhett Stoney] Absolutely. We think that this is a great addition to the journal and a really important topic that we need to get out there.

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