



Lessons in Public (Mis)communication about the Laboratory from the COVID-19 Pandemic

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ABSTRACT The coronavirus disease 2019 (COVID-19) pandemic has put the clinical laboratory in the spotlight. The news media is regularly seeking out interviews with microbiologists, infectious disease specialists, and pathologists. Increased public exposure offers opportunities to improve how laboratory professionals communicate our insights. We can emphasize what is new, unusual, or controversial about our knowledge; utilize social media effectively; and improve relationships with journalists by understanding their workflow and traditions. While public engagement has risks and must be considerate of institutional policies, it also validates our value to patients, policy makers, and employers.

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The coronavirus disease 2019 (COVID-19) pandemic has put the clinical laboratory in the spotlight. One of the essential aspects of this disease is its widespread asymptomatic and presymptomatic transmission (1). This epidemiologic challenge has made rapid, accurate laboratory diagnosis of infection central to controlling the spread of the virus. Major news outlets now run daily stories on diagnostic testing. Microbiologists, infectious disease specialists, and pathologists are being interviewed regularly. Our work as reported in the press has been equally impressive and frustrating. The COVID-19 pandemic is an era-defining event that allows an opportunity for laboratory professionals to effectively communicate our insights to patients, policy makers, and the public. If managed correctly, the media experiences and relationships that laboratory professionals are developing during this time will pay dividends for years to come.

With that context, I offer the following suggestions for more effective public communication from clinical laboratory professionals.

THE METAPHOR IS THE MESSAGE

For most people, the inner workings of a laboratory are opaque, dull, and irrelevant. The public can recognize in the abstract that making medical diagnoses is important, but our work remains abstract unless we actively bring the process to life.

When journalists call an expert, they often want to understand how a technical process works. More importantly, though, they want to understand what these processes mean—how these tasks influence patient care and public health. It is easy for us to get bogged down in the nuances of our job. The result is that the journalist is left to paraphrase our work for us. Even good journalists can lose the narrative if overwhelmed with detail.

Laboratory experts can make the journalist's job easier and ensure accurate communication by providing clear, concise descriptions. Journalists may not want to provide exact questions in advance, but they are usually happy to provide the topic of the interview. A naturally flowing conversation is enjoyable—and journalists may try to bring out your human side with surprising questions—but it is worth remembering

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your take-home messages while still building rapport. In the course of the interview, the laboratory expert could provide a few short, punchy descriptions that can be cited directly in the article. If the interview is televised, brief “sound bites” are even more important. It may be helpful to write these essential talking points down beforehand. Try the quotes out on a friend without laboratory experience to see if they understand what you’re trying to say.

One of the easiest ways to do this is through the use of metaphor. You can almost be guaranteed that the reporter will try to relate an obscure technical matter to a more commonly understood phenomenon. By providing this metaphor yourself, you better control the narrative. Here are a couple of effective examples. In describing how “cytokine storms” can hurt COVID-19 patients, immunologist Jessica Hamerman likened the attack to “when the smoke alarm never goes off—you’re going to keep calling the firefighters over and over again and you’re going to have too many there” (2). Journalist Katherine Wu has explained positive predictive values to the public with a metaphor that testing symptomatic COVID-19 patients is “like dusting for fingerprints at the scene of a crime that’s already occurred”—you are more likely to find evidence that way (3). Metaphors may not be biologically literal, but they can communicate essential facts in an entertaining and understandable way.

CONTROVERSY GETS THE MICROPHONE

The news has to be new and has to be of interest. As readers, this is what keeps us clicking on links and turning the page. However, as experts, we sometimes find that the news is not accurate. It is difficult to see established truths questioned or undermined.

Journalists refer to their habit of seeking out these unusual or countervailing narratives as “man bites dog” stories (4). Journalists take their role of questioning power seriously. It can also become boring to hear the same facts over and over again. Once we as experts recognize this, we can enable accurate information about the lab to be communicated in a more compelling manner.

During interviews, we should emphasize what’s new or unusual about the topic being discussed, even if it seems old hat to us. Here are some phrases that you can use to help frame the narrative tension:

“The twist here is. . .”

“I was surprised to see that. . .”

“What makes this finding unique is. . .”

If your expertise leads you to hold an unorthodox view about a topic receiving a lot of attention, don’t be afraid to share that view. Professional contrarians can be just as dangerous as professional yes-men, but the truth is that science is rarely settled. The public deserves to know when our knowledge is still being actively debated. At the same time, it is important to make clear when and why a fact is well established. This can prevent fringe ideas from being given too much credibility.

THE EXPERT IS WHOEVER TAKES THE CALL

Journalists have deadlines. They move at a pace that would leave the average academic in the dust. Most articles are written in hours instead of months. The expert who provides the quotes is the one who can work within the writer’s deadline. If a journalist reaches out for an interview, try to respond immediately. See if you can make yourself available based on their schedule.

In my experience, journalists prefer to talk over the phone or video, not in writing. Sometimes you can provide e-mail responses, but it is usually quicker and more engaging to hear an expert speak extemporaneously. Offer up your personal cell phone number and encourage them to text or call.

Journalists today often find their sources on social media, particularly Twitter (5). Social media allows reporters to get a feel for the expert’s background, ideas, and perspective before reaching out to us. If you are interested in working with the media,

create and use a Twitter account. You can even tweet directly to journalists. (Remember to keep it polite!)

Twitter, like other forms of social media, is both a knowledge dissemination and networking tool. A detailed exploration of how to use Twitter is beyond the scope of this commentary, but resources are available (6–8). Communicating to the public and communicating to journalists are distinct but related activities. In both cases, information should be accurate but persuasive. Internet communication has evolved a unique dialect, which takes time to learn (9). Its tone can rapidly shift from serious to sarcastic; there are inside jokes. In the beginning, it's probably safest to stick to factual information. Share your professional views on recent mainstream and academic articles. While Twitter is not an ideal medium for nuanced, long-form commentary, you are not limited to a single tweet. It is popular to thread multiple tweets together in a "tweetorial" (10). Tweetorials are often used to explore scientific questions or to walk readers through a new scientific paper. Describing moving personal experiences will also capture the attention of the public and journalists, but the risks are greater. The utmost care should be taken to ensure that patient privacy is protected (11). Finally, it is also popular to use social and traditional media to "debunk" rampant medical and scientific misinformation (12). It is a difficult balancing act to correct others while remaining respectful, but this controversy and conversation attract media attention.

The Twitter-to-mainstream-media pipeline has intensified during the COVID-19 pandemic. With social-distancing requirements, there is more reliance on remote interviews for media appearances. Whereas before, in-person interviews favored the convenience of local experts, often in major media markets like New York City or Los Angeles, this change now favors the digitally connected expert. It is unclear whether this trend will continue after the pandemic.

Social media can be an entry point into a traditional interview with a journalist, but news sources often cite tweets directly now. Don't be surprised if you see your tweet quoted in an article or on television. For this reason, I suggest trying to make tweets "self-contained." It is impossible to entirely prevent short comments from being misinterpreted, especially with the wide audience of social media, but it is worth considering whether a tweet "stands alone" as an accurate portrayal of your views.

THE NEWS IS A CONVERSATION, NOT A STORY

Some news stories are bad. They are misleading, incomplete, or falsely confident. It is important to take a step back and consider how to move forward—not dwell on one bad article. The news moves fast, and journalists are happy to write follow-up pieces as events develop. Experts should work to improve future stories instead of correcting old ones. Journalists frequently receive angry, disrespectful comments from readers (13). We should be sensitive to the risks that they take in their public role.

If you read or watch an incorrect news story, it is reasonable to reach out to the journalist and offer up your professional thoughts for a future piece. Be friendly, explain why you are an expert, and provide your contact information. You can describe your concerns about their story, but it is usually not effective to ask them to fix what they've already published unless the error is egregious.

CONCLUSION

Talking to journalists can be fun. It reminds us why our work in the lab is essential. It boosts our self-esteem to be considered an expert whose opinion matters. Most importantly, it helps provide the public with accurate scientific and medical information by which to live their lives.

Talking to journalists can also be maddening. You can give a 1-h interview only to have a single out-of-context quote included in the final article. The story can get things wrong or have a biased angle. A bad headline written by a copy editor can ruin even a nuanced article. Unlike writing our own manuscripts, we do not have the final say over what gets published. Don't ask a journalist if you can preapprove your quotes—you usually can't (14).

Working with journalists is the same as building any other meaningful relationship. It requires trust, honesty, and consistency. You have to trust the journalist, and he or she has to trust you back. Don't give an interview to a media outlet whose articles you wouldn't take seriously. Conversely, provide the writer with independent sources to back up your claims whenever you can. Honesty should go without saying, but I'll say it anyway. You want to be persuasive, but you should still convey nuance and uncertainty whenever it is relevant. Disclose any conflicts of interest. Consistency is proven over time. Answer the journalist's calls, and if you don't have the time or expertise to provide a quote for a given story, refer the journalist to an expert who can. When you do refer a journalist to another expert, please consider referring to early-career laboratory professionals as well as underrepresented minorities—we can all help end the old boys' club (15).

Finally, understand your institution's media policy in advance. Does your university or hospital want to preapprove any interview? Do they want to sit in on the exchange? Every institution is different. These processes can unfortunately be barriers to good scientific and medical communication. Media relations staff can move too slowly to meet tight deadlines or be overly concerned about protecting the institution. You are ultimately your own public relations representative. Consider what kind of image of yourself and your employer you are presenting. There is risk involved in putting yourself in front of the public (16). There is also tremendous opportunity. Many institutions are recognizing this now.

If you are concerned about being quoted by name, it is possible to offer up advice "on background" (<https://global.oup.com/us/companion.websites/9780190200886/student/chapter10/gline/level/>). This means that the journalist can use the information that you provide but won't attribute it to you specifically. Reporters prefer sources to be fully "on the record," meaning that your quotes will be attributed to you, but some may still use you as a background source. The terms of the interview (on the record, on background, or off the record) must be agreed upon in advance. Unless otherwise negotiated, assume that anything you say is on the record.

Laboratory professionals have always been essential to the public's health. The COVID-19 pandemic has reminded more people of that. By continuing to provide expert commentary in the media, we can inform the public while proving our value to employers, policy makers, and colleagues.

REFERENCES

- Oran DP, Topol EJ. 2020. Prevalence of asymptomatic SARS-CoV-2 infection: a narrative review. *Ann Intern Med* 173:362–367. <https://doi.org/10.7326/M20-3012>.
- Brumfiel G. 7 April 2020. Why COVID-19 patients crash: the body's immune system might be to blame. NPR, Washington, DC. <https://www.npr.org/sections/health-shots/2020/04/07/828091467/why-some-covid-19-patients-crash-the-bodys-immune-system-might-be-to-blame>.
- Wu KJ. 23 December 2020. How confident can you be in a coronavirus test? *New York Times*, New York, NY. <https://www.nytimes.com/2020/12/23/upshot/coronavirus-tests-positives-negatives.html>.
- O'Toole G. 22 November 2013. 'Dog bites a man' is not news. 'Man bites a dog' is news. *Quote Investigator*. <https://quoteinvestigator.com/2013/11/22/dog-bites/>.
- McGregor SC, Molyneux L. 2020. Twitter's influence on news judgment: an experiment among journalists. *Journalism* 21:597–613. <https://doi.org/10.1177/1464884918802975>.
- Choo EK, Ranney ML, Chan TM, Trueger NS, Walsh AE, Tegtmeyer K, McNamara SO, Choi RY, Carroll CL. 2015. Twitter as a tool for communication and knowledge exchange in academic medicine: a guide for skeptics and novices. *Med Teach* 37:411–416. <https://doi.org/10.3109/0142159X.2014.993371>.
- Madrigal E, Jiang XS, Roy-Chowdhuri S. 2017. The professional Twitter account: creation, proper maintenance, and continuous successful operation. *Diagn Cytopathol* 45:621–628. <https://doi.org/10.1002/dc.23710>.
- Soragni A, Maitra A. 2019. Of scientists and tweets. *Nat Rev Cancer* 19:479–480. <https://doi.org/10.1038/s41568-019-0170-4>.
- McCulloch G. 2019. *Because Internet: understanding the new rules of language*. Riverhead Books, New York, NY.
- Breu AC. 2020. From tweetstorm to tweetorials: threaded tweets as a tool for medical education and knowledge dissemination. *Semin Nephrol* 40:273–278. <https://doi.org/10.1016/j.semnephrol.2020.04.005>.
- Cifu AS, Vandross AL, Prasad V. 2019. Case reports in the age of Twitter. *Am J Med* 132:e725–e726. <https://doi.org/10.1016/j.amjmed.2019.03.044>.
- Arora VM, Madison S, Simpson L. 2020. Addressing medical misinformation in the patient-clinician relationship. *JAMA* 324:2367–2368. <https://doi.org/10.1001/jama.2020.4263>.
- Wu KJ. 12 January 2021. How to deal with negative reactions to stories. *The Open Notebook*. <https://www.theopennotebook.com/2021/01/12/how-to-deal-with-negative-reactions-to-stories/>.
- Smith D. 1 March 2018. Scientists and journalists square off over covering science and 'getting it right'. *Undark*. <https://undark.org/2018/03/01/science-journalism-fact-checking-quotes/>.
- Seeger L. 5 May 2019. Diversifying your sources can improve your reporting. *AHCJ Blog*. <https://healthjournalism.org/blog/2019/05/diversifying-your-sources-can-improve-your-reporting/>.
- Scheiber N, Rosenthal BM. 9 April 2020. Nurses and doctors speaking out on safety now risk their job. *New York Times*, New York, NY. <https://www.nytimes.com/2020/04/09/business/coronavirus-health-workers-speak-out.html>.