As I write this article from our Tucson home, like most of you, I’m sheltering in place from the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). Not content with merely sheltering, we raised our virus game level—I’m actually in quarantine because of a coronavirus disease 2019 (COVID-19) exposure. Fortunately, no sign of infection ... just doing my part in preventing possible spread—just in case.

Luckily, I’m sitting in a comfortably stocked and prepared home, and our house I commute from in Florida is also stocked and prepared—largely thanks to my social media network. In December 2019, ominous tweets detailing an unusual pneumonia striking citizens in Wuhan, China, began appearing in my Twitter feed. By January, many thought a significant epidemic was building. I didn’t know when it would arrive here—and it sounded like it could be serious—but thanks to my Twitter feed, I was not caught off-guard. Insider knowledge was not my reason for creating a Science Twitter “posse”; I thought it might benefit my freelance business. Nevertheless, thanks to this network, I was prewarned, informed, and able to prepare for this nightmare.

Once again, incorporating social media into my business strategy created an advantage—only this time it was one I never before imagined I would need.

Shifting From Corporate Science to Accidental Social Media Science Communication

My degrees are in microbiology and immunology, and most of my corporate career was spent in commercial biopharmaceutical vaccine and immunological products programs. Throughout my career, I have been involved in nearly every aspect of bringing a biological product to market. In 2009, I left the corporate world and started my freelance business specializing in areas I am passionate about: training and development. I began by concentrating in an area that has always fascinated me: infectious diseases.

This timing was perfect for setting up my freelance business. The H1N1 influenza (commonly called “swine flu”) pandemic was just beginning, and concern was rising. When designing and teaching microbiology classes, I usually incorporated stories of the Great Influenza Epidemic of 1918 into my courses. Quickly, calls and messages from former students and colleagues began pouring in as the epidemic grew. I prepared a small “refresher and explainer” around influenza—what we knew, as well as what was new.

I emailed it to friends and colleagues, and they in turn emailed it to their friends and families. Suddenly, not unlike a virus working its way across the country, my email somehow landed on a television producer’s desk, landing me an unusual project. I was contracted as a script consultant for his television series episode about surviving an influenza epidemic. My role was keeping their science accurate, and that evolved into an on-camera role with me serving as a “talking-head scientist.” This was a unique experience and provided me with a great icebreaker I still use: “I’m not just a microbiologist in real life; I also play one on TV.”

Later that year, I met a colleague from my corporate days for a networking coffee, and as I described this adventure, she rolled her eyes in disbelief that I was so behind the social media curve and uttered a phrase that changed my world: “We have got to get you a Twitter handle, now.” I left that Boca Raton Starbucks as “@scopedbylarry,” and my journey with incorporating science into social media began.

Turning Twitter Into a Business Tool: It Didn’t Happen Overnight

I wasn’t sure where this was headed, but I waded into Twitter by following and developing a few online relationships with fellow scientists, journalists, and even an assortment of individuals, simply because they were interesting and quirky and provided my Twitter feed with additional color and character.

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I often describe my Twitter feed as a virtual cocktail party, but it probably has more of an old-school salon evening vibe. Followers pop in, and I serve as host; people come to chat, watch, listen, learn, or contribute on a variety of issues and topics. My role, albeit virtual, mirrors a real-life party-host role. I try to maintain an atmosphere in which my guests enjoy themselves, learn something on a topic of interest they dropped in for, and, as a result, leave something beneficial behind for others. Occasionally, like in a real-life party, a guest may cross a line. Usually other guests will "help steer the ship back," but, if necessary, I will escort an offending guest out using the mute or block feature, depending on the severity of the offense. I strive to maintain an atmosphere that encourages guests to stay, return frequently, and contribute more.

**Figure 1.** Suggestions for successful Twitter engagement.

### Host Your Social Media Just Like You Would Host a Party

- **Host Behavior** is essential—this is your party and a good party host attends to their guests needs.
- **Your menu** sets your style—if you promote and serve what your guests like and expect, they are more likely to show up.
- **Keep serving your guests more**—they will keep your timeline loaded and refreshed with good content, and they will keep coming back more frequently.
- **Continually mingle** with your followers—make your guests feel welcome and introduce them around; people stay and return where they feel welcome and appreciated.
- **Watch and monitor**—make certain the conversations are productive and meaningful, and if they need to be steered back on track, step in, but tread lightly; resist being overly controlling.
- **Control the atmosphere**—create an atmosphere in which people realize you provide content they benefit from, making it more likely they in turn will contribute content that benefits you.

**When hosting, give it your best effort, but also keep in mind:**

Even when you do your best to set the stage for an enjoyable and rewarding time for all, not everyone is going to enjoy the style of party you are offering. When this happens, just let them go—in the end, they will be happier and so will you and your other guests.

### Focusing Twitter for Success

For me, the rewards have outweighed any problems. To increase the rewards, I organize key people I follow into topical lists. This helps me isolate conversations and themes of interest and usefulness. A Twitter stream rushes by so rapidly that the timeline is often compared to “drinking from a fire hose.” Grouping related people into specific lists increases the likelihood that I will see content that is of value to me.

Early on, while exchanging useful information with my Twitter follows, valuable relationships developed. These have been beneficial in enhancing client projects as well as expanding my portfolio. The more contacts I make, the more gaps I fill, and the more my knowledge in multiple areas grows.

In 2011, at the Interscience Conference on Antimicrobial Agents and Chemotherapy, I discovered “live conference tweeting,” and this opened another valuable social media chapter. There were only a few fellow science tweeters in attendance, but this established another layer of relationship building that made social media an even more valuable tool in my freelance business.

Whenever I explore a new therapeutic or clinical area, I reach out to my established network of virtual colleagues around the globe to begin filling knowledge gaps. My networking game, which was already fairly strong, developed new muscle, thanks to my social media connections.

### Along Came Ebola

The Ebola outbreak in West Africa definitively established the value of this Twitter network for my business. As Ebola spread that year, panic and misinformation around it spread even faster. By creating a list of Twitter follows who were providing accurate and timely news and facts, I was able to focus on cur-
rent and pertinent information and distinguish it from misinformation. This became my first “incident-targeted” Twitter list, and I continue to create new ones as situations arise.

I compiled my Ebola list with another Twitter pal, infectious disease physician Dr Judy Stone (also known as @drjudystone on Twitter). We started with mutual contacts who covered Ebola; we evaluated, selected, and added contacts these key follows recommended. Soon we were providing updated guidance on personal protective equipment used for health care providers and in public health initiatives, as well as enhancing our own online blogs and posts with useful Ebola information and perspectives. As a result, we were being sought out as reliable sources for dependable information.

This led to yet another surreal moment; while leaving our 2014 AMWA Annual Conference in Memphis, I shared a flight to Atlanta with our keynote speaker, health care policy expert

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**Figure 2.** Suggestions for making Twitter more useful.

**Figure 3.** Suggestions for creating and using Twitter lists more effectively.
Rosemary Gibson. As Rosemary and I were waiting for connecting flights in the Delta Airlines Sky Club, chatting casually about health care policy changes, my cell phone suddenly seemed to come alive on the glass-top table between us. It began intensely vibrating, ringing, and flashing message after message on the screen. For a moment, I just stared at it—the first diagnosed case of Ebola in the United States had just been announced. Suddenly every information source was being tapped into—including me. A Twitter follower who was a reporter from the Center for Infectious Disease Research and Policy was texting me for an introduction to my sources, and a BBC World News Service reporter who had discovered my tweets was calling to ask if I was available for an interview on her show—which was live and on the air at that very moment. So much for my opportunity to continue the fascinating discussion with our brilliant keynote speaker!

The Sentinel Chicken Approach
Since then, my Science Twitter lists have helped me prepare and stay on top of several infectious disease outbreaks. I call my process “the sentinel chicken approach.” Public health scientists place small flocks of chickens in areas prone to harboring mosquitoes capable of carrying viruses that cause human diseases, including dengue, viral encephalitis, and Zika. Periodically, blood samples are drawn from these sentinel chickens and screened for evidence of these viruses. This epidemiological “listening” alerts scientists when a human disease is emerging in a community and permits mitigation strategies against mosquito populations to be quickly launched and prevent disease.

Likewise, my Science Twitter follows from around the world signal me toward approaching trends. This enables me to research, prepare, and be better informed—if or when a need or an opportunity should arise. This method served me well when dengue, chikungunya, and, more recently, Zika virus invaded our lives in Florida. I was prepared and able to quickly provide my clients and colleagues with information they needed. In each instance, my Twitter network had me up to speed much faster than in the pre–social media world.

As my long-time microbiology colleague and Twitter pal Hilary Lappin-Scott (also known as @lappinscott), retired Vice-Chancellor of Swansea University, once pointed out, “If only Twitter had been around when we began our academic careers, we might have leveled so many silos.” That sums up what social media and Twitter in particular have done for me and my business; they have removed obstacles and provided access to people and materials that have allowed me to prepare and stay ahead of the information curve, benefiting my clients, my business, and now my own personal safety.

Twitter: My Early Warning System in the Age of Corona
This is why I credit my Science Twitter for my advanced preparation for the SARS-CoV-2 pandemic. Those December tweets signaling a pneumonia outbreak in the Wuhan markets immediately captured my attention. In early January 2020, even as many of our leaders in the United States began to downplay the threat, my Twitter feed continued showing that the virus was no longer confined to China. These events triggered my Ebola memories, and I immediately created my Twitter “outbreak list.”

I added key public health entities and professionals leading the effort, including scientists providing newly acquired information and explanations about the virus and pathophysiology, epidemiologists providing analysis of newly emerging data, and journalists reliably covering the various aspects and angles of the outbreak and its effects on our society.

From the beginning of this outbreak, political maneuvering and economic concerns were trampling scientific knowledge as well as public health concerns and actions. My global Twitter science community helped me more accurately frame discussions with emerging facts and data and filter out the political spin and deflection. My Twitter early warning system had me prepared, had me ready to work, and helped serve as a reliable information source for my colleagues, clients, friends, and family.

Because this SARS-CoV-2 COVID-19 outbreak involves a previously unknown virus, it is producing many unique challenges. As additional data emerge and are analyzed, many practices must be revisited and shifted as needed, when supported by newly validated data. My social media network connections are proving invaluable for keeping information current. This permits me to more quickly prepare updates when speed and accuracy are most needed. It also enables me to keep anecdotal observations and misused data properly framed, especially when there are attempts to influence practices and policy changes with it. These added benefits essentially guarantee continued inclusion of social media in my networking game.

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