

Introducing Mass Communications Strategies to Medical Students: A Novel Short Session for Fourth-Year Students

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Abstract

Problem

The World Health Organization calls on all with quality medical information to share it with the public and combat health misinformation; however, U.S. medical schools do not currently teach students effective communication with lay audiences about health. Most physicians have inadequate training in mass communication strategies.

Approach

In August 2018, a novel 90-minute class at the University of Minnesota Medical School introduced fourth-year medical students to basic skills for communicating with lay audiences through mass media. Instructors were physicians with experience interacting with the general public via radio, op-ed articles, social media, print media,

television, and community and legislative advocacy. After a 20-minute lecture and sharing of instructors' personal experiences, students completed two 30-minute small-group activities. They identified communications objectives and talking points for a health topic, drafting these as Tweets or an op-ed article outline, then presented talking points in a mock press conference with their peers, practicing skills just learned. Pre- and postsurveys documented students' previous engagement and comfort with future engagement with mass media messaging.

Outcomes

Over 1 week, 142 students participated in 6 separate classes, and 127 completed both pre- and postsurveys. Before the course, only 6% (7/127) of students had

comfortably engaged with social media and 14% (18/127) had engaged with traditional media in their professional roles. After the course, students self-reported an increase in their comfort, perceived ability, and likelihood of using specific communications skills to advocate for their patients (all $P < .001$).

Next Steps

The course will be expanded into a 5-session thread for third- and fourth-year medical students spread over 2 years. This thread will include meeting physicians who engage with lay audiences, identifying best practices for mass health communication, identifying bias and misinformation, "dos and don'ts" of social media, and communication skills for legislative advocacy.

Problem

Given limited training in communicating with lay audiences for physicians, we developed and piloted a session for medical students on basic mass

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communication skills. Session learning objectives were to:

- Identify and discuss students' hesitations about interacting with lay audiences through mass media;
- Identify and practice multiple strategies for communicating effectively through mass media; and
- Demonstrate the ability to develop and communicate a single communication objective and 3 associated talking points.

The need to promote quality science and disseminate facts from trusted sources to help combat health misinformation is part of the World Health Organization (WHO) COVID-19 response resolution.¹ Journalists may train in health reporting, such as the Kaiser Family Foundation media fellowships in health reporting. Public health officials may train in health promotion through coursework in formal degree-bearing programs. Scientists are improving science communication, as demonstrated by the National

Academies of Sciences, Engineering, and Medicine hosting 3 Science of Science Communication colloquia (2011, 2012, and 2017) and drafting a national research agenda to improve science communication.² However, to our knowledge, little training exists focusing on training physicians in mass health communication strategies. Ensuring that physicians receive appropriate media training is important because lay audiences have high levels of trust in physicians and other health care providers.³ For example, regardless of race, age, or political affiliation people who were not yet vaccinated against COVID-19 were most likely to turn to physicians, nurses, or other health care providers for vaccine information, rating these providers higher than the Centers for Disease Control and Prevention, family or friends, health departments, or religious leaders.⁴

We propose that physicians should use this trusted position to act as disseminators of quality medical

information and collaborate with journalists, scientists, and public health colleagues in improving health communication on a large scale to educate the lay public. To do this, physicians should work toward quality training to optimize their ability to communicate effectively with larger audiences.

For medical students, communications training typically focuses on best practices for one-on-one patient encounters or communication with small family groups. Medical students and physicians are generally not trained in effective approaches for communicating with large audiences or the general public. There are occasional electives for interested students to engage in health communications with lay audiences, such as those offered by SiriusXM's Doctors Radio station⁵ and ABC news⁶ and a fellowship in global health media offered by Stanford University,⁷ but little teaching reaches all, or even most, medical students. In the peer-reviewed literature, there are descriptions of opportunities for medical students⁸ and residents⁹ to learn advocacy work, but we were unable to find documentation about curricula focused specifically on mass media health communication. Practicing physicians may seek out other training such as journalism school, health promotion training through a Master of Public Health degree, or conferences in science communication. However, many simply learn on the job, with or without assistance from their institutions'

public relations department, by being interviewed by the lay press, writing their own articles, or engaging on social media.

Our author group includes medical communicators who learned on the job, one who completed Stanford's Global Health Media Fellowship, and physicians without formal communications backgrounds. Together, we discussed what skills in mass health communications may be important for medical students. While we think it is important for physicians to learn skills for improving their mass health communication skills, we created this course as a first step in determining if students would engage with the topic of health communications for the general public by physicians.

Approach

Session design and implementation

The Becoming a Doctor course at the University of Minnesota Medical School is a longitudinal transition-to-residency course held in the style of a professional conference 4 times throughout the third and fourth year of the curriculum. During this course in August 2018, we offered a 90-minute elective session, Communicating Effectively through Modern Media, to all 240 fourth-year medical students that introduced students to mass medical communication via a 20-minute lecture, two 30-minute small-group activities, and a 10-minute closing. We offered this session 6 separate times to keep class sizes under 25 students per session.

For the didactic element, we recruited physician leaders who actively engage in medical communications with lay audiences through various media. The assigned leader, who was not the same for each session, delivered a core 20-minute lecture and shared their own experiences with social media, radio, op-ed articles, and legislative or community advocacy. The lecture was created by one of us (K.M.K.) based on their previous experience as a Stanford Global Health Media Fellow facilitating outbreak communications training with the WHO. Teaching points were adapted from previous WHO curricula, which are very similar to the WHO emergency risk communication training curriculum available online as of 2021.¹⁰ Physician leaders highlighted important differences between the communication styles used by medical professionals and the most effective styles for communicating with lay audiences, with a specific focus on those strategies shown in Table 1.

Students then practiced these skills during two 30-minute small-group exercises. First, students could select from a list of provided topics such as gun violence or vaccines or choose their own topic. The provided topics included brief articles and summaries. Students identified talking points and used these to either create a series of Tweets or outline a brief op-ed. Second, students held a mini press conference in which they presented their topic to another group of students acting as reporters. Groups then swapped roles and repeated the

Table 1
Key Strategies Emphasized in Teaching Mass Media Communication Strategies to 142 Fourth-Year Medical Students, From the Elective Communicating Effectively Through Modern Media Course Session, University of Minnesota Medical School, 2018

Strategy	Reasoning
Get to the point	Physicians and scientists often communicate through scientific writing or medical documentation where the most important point, the conclusion or assessment and treatment plan, comes last. Most newsreaders do not consume information this way. Tweets, newspaper articles, sound bites, and interviews catch people's attention by first sharing the headline, which should be the most important piece of information. Many scientists fail to be heard simply because people have stopped listening or reading by the time they get to the point.
Have a clear communications objective	It is important to have a clear "ask" or "what you want people to do" with the information you provide. Do you want gun owners to keep their guns in a secure lock box? Do you want people to get vaccinated? Pick 1 objective and focus on that objective. Do not stray.
Stick to your main talking points	Prepare talking points before you Tweet, write, talk to a reporter, or make a podcast. Know the information that you want to convey and distill it into a few main talking points. Do not go down tangents, or that may become the story. Do not speculate. Sticking to your talking points helps you better achieve your communications objective.
Tell stories	People are more likely to respond to a personal story about an individual than to impressive statistics. For physicians, it is important that we have both. Starting with a compelling story that you can backup with data is much more compelling than data alone. That being said, if you make up stories without solid data, you will lose your credibility quickly. Tell stories while sticking to the facts.

exercise. Public relations personnel from the medical school's communications department coached the "reporters" to ask tough questions and shared pointers with the presenters on how to stick to their talking points. Students had to practice staying on message and returning to their talking points regardless of the reporters' tactics. The last 10 minutes were spent debriefing as a large group.

Evaluation

This intervention was submitted to the University of Minnesota's Institutional Review Board, which determined that it did not qualify as research involving human subjects. We evaluated the sessions using a pre/postsurvey study design. Students were given a link to a Google form survey with modified Likert-type scale questions to complete before and after class. The complete surveys are available as Supplemental Digital Appendices 1 and 2, at <http://links.lww.com/ACADMED/B216>. Surveys were not anonymous to enable comparison of individual students' pre- and postclass answers but were de-identified for analysis and interpretation. In the postcourse survey, students were asked to provide qualitative feedback on the session. While the surveys state that completion was required for class grades, no attendance was taken, and completion of the evaluation was not used for grading purposes. The primary use of the pre- and postsurveys was to assess effectiveness of the class and improve future classes.

Statistical analyses

Students' rankings of comfort, ability, likeliness, importance of, and interest in engaging with the general media were summarized pre- and postsession using means and standard deviations (SDs) for matched pre/postsurveys. Some responses were summarized pre-session using frequencies and percentages and postsession using means and SDs. The difference between pre- and postsession rankings was calculated for each student, and a mean of these differences and 95% confidence interval were obtained. To investigate the effect of the session on these rankings, a paired *t* test was performed. All reported *P* values are 2-sided, and a significance level of 0.05 was used. Statistical analyses were performed using R statistical software,

version 3.6.1 (R, Vienna, Austria), and SAS statistical software, version 9.4 (SAS Institute Inc., Cary, North Carolina).

Outcomes

Of the 240 medical students eligible to participate in this elective, 142 students enrolled and 127 of these completed both the pre- and postclass surveys (response rate 89%). Before the session, 48% of students (61/127) reported having posted on social media in their professional life as a medical student/future physician (Figure 1A); however, just 6% (7/127) indicated that they felt comfortable engaging with social media in their professional role (Figure 1B). Forty-one percent (52/127) had written or been interviewed for traditional mass media in their private lives, whereas only 14% (18/127) had written or been interviewed for traditional media in their professional roles as medical students/future physicians (Figure 1B).

Table 2 summarizes medical students' pre- and postsession rankings of their comfort, perceived ability, likelihood, importance of, and interest in engaging with the general media. After course completion, students reported increases in their comfort, perceived ability, and likelihood of engaging with the media (all $P < .001$). There was no significant change in how important medical students thought these skills were or in their interest in engaging with the media as a medical student or future physician. The slight wording changes for these 2 items from the pre- to postsurvey may have led to unintended differences. For the single item "I am more likely to engage in social media in my professional life after taking this session," the mean response was 3.2 (SD 1.0) on a 5-point scale from 1 = strongly disagree to 5 = strongly agree. This question was not assessed consistently between pre and post; therefore, no statistical comparison was made.

Next Steps

These findings suggest that a brief educational session can increase medical students' comfort and perceived ability in communicating with lay audiences through mass media, which, in turn, may increase the likelihood that they advocate publicly.

Limitations

Our evaluation of this pilot curriculum was limited to self-report and thus we did not evaluate students' real-world behaviors or performance. The durability of any changes over time remains unknown. Additionally, the survey was not anonymous, but rather initially was planned as a method to track student attendance in this new course; data were analyzed in a completely de-identified manner, and in the end, we did not use the survey for attendance purposes. Future iterations will use a unique identifier not linked to participant identifiers. An additional limitation is that we did not collect formal validity evidence for our survey instrument before use. The focus of this course was on introducing the concepts important for quality mass health communication and quickly giving students an opportunity to practice these skills in a safe space; thus, student performance was not formally assessed.

Future sessions

In the open-ended questions on the postsurvey, students stated that there was too much information for 1 session and that they found meeting physicians who use these skills in different ways the most helpful. We are currently partnering with the medical schools' communications department and the university's journalism and public health school colleagues to create a thread of 5 classes over the last 2 years of medical school that will build upon one another for teaching and assessing students' skills in communicating with lay audiences about health. The initial required classes will include introductions to physicians who use these skills in different platforms, "dos and don'ts" for physicians and medical students on social media, identifying bias and misinformation, and introductions to best practices in health communication per the WHO and the Centers for Disease Control and Prevention's communication training materials. These required classes will be followed by elective options that apply active learning in social media engagement, op-ed writing, and advocating with legislators and/or community groups about health issues. To measure and report outcomes, students' skills will be assessed through in class activities and repeated surveys over the course of the 2 years.

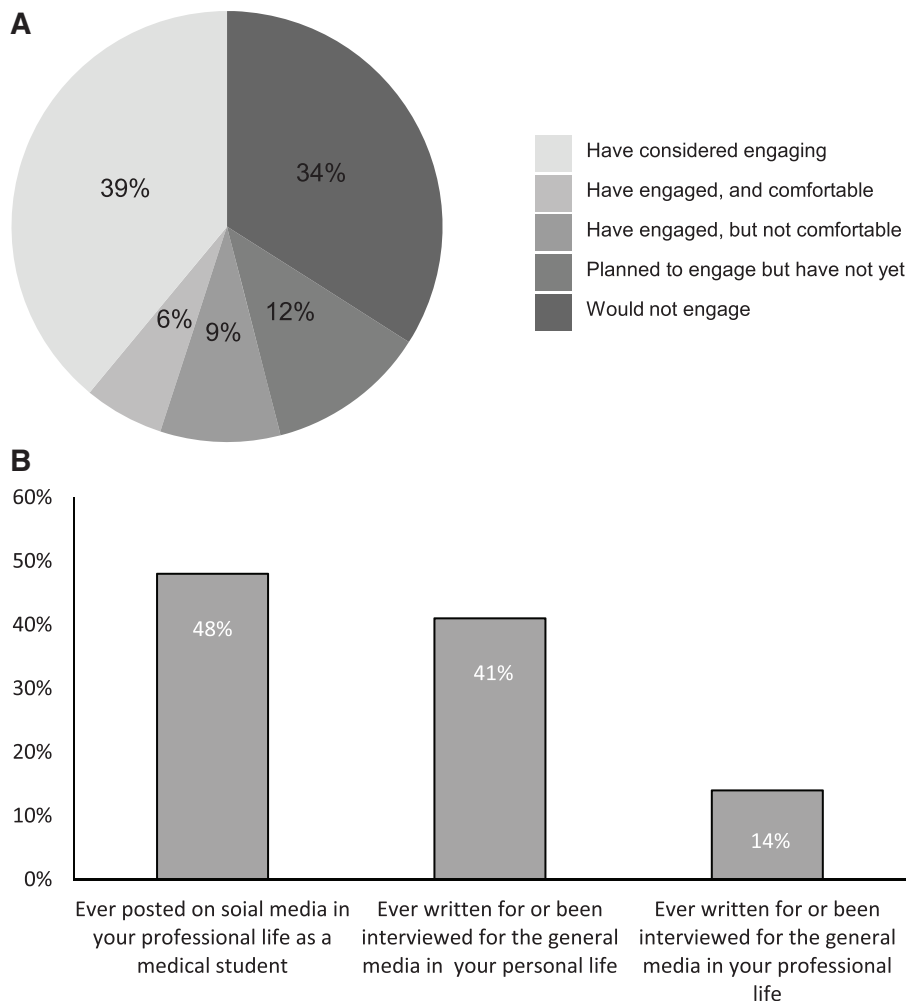


Figure 1 Presurvey, pre-session responses of 127 fourth-year medical students, from an elective session on mass media communication strategies, University of Minnesota Medical School, 2018. A, Likelihood of engaging with social media in professional life. B, Previous engagement with mass communication.

Our vision is that over time we can improve students' abilities to engage with the public about health issues, better work with colleagues in public health and journalism, and improve the public's ability to understand their own health and make informed, quality health decisions. Communicating about health is an integral part of being a physician; it is critical that medical schools initiate quality training to better prepare trainees for this aspect of their work. This course, focused on improving medical students' self-efficacy in health communication with larger audiences, is 1 small step toward empowering the public through improving access to quality health information.

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Table 2
Comparison of Pre- and Post-Survey Responses of 127 Fourth-Year Medical Students, From the Elective Communicating Effectively Through Modern Media Course Session, University of Minnesota Medical School, 2018

Survey item ^a	Pre-session, mean (SD)	Post-session, mean (SD)	Mean of the difference (95% CI)	P value ^b
Comfort in engaging with the general media in your personal life	2.4 (1.0)	2.8 (0.8)	0.4 (0.2, 0.6)	< .001
Comfort in engaging with the general media in your professional life	2.0 (0.9)	2.7 (0.9)	0.7 (0.5, 0.8)	< .001
Ability to identify talking points for engaging with the general media	2.2 (0.9)	3.1 (0.8)	0.9 (0.7, 1.1)	< .001
Likelihood of using specific communication skills (form objectives, identify talking points, use social math, or storytelling) to advocate for your patients	2.9 (1.0)	3.4 (1.0)	0.5 (0.3, 0.7)	< .001
Importance of engaging with the general media in your professional life ^c	2.9 (1.0)	2.9 (1.1)	0.02 (−0.17, 0.22)	.813
Interest in engaging with the general media in your professional life ^c	2.6 (1.1)	2.6 (1.1)	0.01 (−0.18, 0.19)	.934

Abbreviations: SD, standard deviation; CI, confidence interval.

^aItems were assessed using a 5-point scale from 1 = Not at all ____ (comfortable, able, likely, important, interested) to 5 = Extremely ____ (comfortable, able, likely, important, interested).

^bP value is for paired t test to investigate the difference in rankings from pre- to postsession.

^cIn the presurvey, students were asked about their professional life "as a future physician," and in the postsurvey they were asked about their professional life "as a medical student."

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