Cite this article as: BMJ, doi:10.1136/bmj.38127.444838.63 (published 2 June 2004)

Papers

Severe acute respiratory syndrome and its impact on professionalism: qualitative study of physicians' behaviour during an emerging healthcare crisis

Sharon E Straus, Kumanan Wilson, Gloria Rambaldini, Darlyne Rath, Yulia Lin, Wayne L Gold, Moira K Kapral

Abstract

Objective To explore issues of medical professionalism in the context of severe acute respiratory syndrome (SARS), a new emerging health threat.
Design Qualitative interviews analysed with grounded theory methodology.
Setting University hospitals in Toronto, Canada, during the SARS outbreak in 2003.
Participants 14 staff physicians from divisions of infectious diseases, general internal medicine, and critical care medicine.
Results Of 14 attending physicians, four became ill during the outbreak. Participants described their experiences during the outbreak and highlighted several themes about values inherent to medical professionalism that arose during this crisis including the balance between care of patients and accepted personal risk, confidentiality, appropriate interactions between physicians and patients, ethical research conduct, and role modelling of professionalism for junior doctors.
Conclusion Despite concerns raised by professional societies about the erosion of professionalism, participants in this study amply demonstrated the necessary qualities during the recent healthcare crisis. However, there were several examples of strained professional behaviour witnessed by the participants and these examples highlight aspects of medical professionalism that medical educators and professional organisations should address in the future, including the balance between personal safety and duty of care.

Introduction

Recently, medical educators have focused on professionalism with discussion centring on the erosion of competency in this area.[1 2] Changes in healthcare systems—such as unionisation of physicians, conflicts of interest precipitated by managed care and for profit healthcare systems, and the role of the pharmaceutical industry in medical education—threaten the values of professionalism. Professional societies have attempted to meet these challenges and recently developed a charter on medical professionalism outlining three fundamental principles including the primacy of welfare of patients, autonomy of patients, and social justice.[3] Professionalism was defined as those values that sustain the interests of the patients above the physician's own interests, including a wide range of attitudes and behaviours such as altruism, humility, commitment to excellence in care, honour and respect for others, integrity and compassion, and accountability to patients, colleagues, and society.

The recent outbreak of severe acute respiratory distress syndrome (SARS) allows an opportunity to explore medical professionalism in the context of a new emerging health threat. Stories of personal heroics of physicians who knowingly exposed themselves to contagious and often fatal illnesses with little understanding of the disease abound in history. Similarly history provides stories of physicians who avoided responsibility for treating such patients.[4] For example, the emergence of AIDS led to fear about contact with infected patients and to concerns among some clinicians regarding their responsibilities to these patients.[5–11] Even though relatively few patients were affected by SARS, the outbreak has been compared with experiences with HIV, smallpox, tuberculosis, and polio. However, it remains unique in the paucity of information about the disease (including its aetiology and mode of transmission) that was available during the outbreak. Moreover, its rapid clinical course, the necessity of providing care for affected colleagues, and the risk of occupational exposure posed unique challenges. All of these concerns affect physicians' response to this disease. We explored the impact of the recent SARS outbreak on healthcare professionalism.

Methods

A research assistant invited a random sample of attending physicians from the departments of medicine at three university hospitals to participate. Participants included physicians from the specialties primarily involved with the care of SARS inpatients including infectious diseases, general internal medicine, and critical care medicine.

A research nurse with extensive interview experience conducted semistructured, individual telephone interviews using open ended questions. Telephone interviews had to be used because of quarantine issues. Participants were encouraged to speak freely, to raise issues that were important to them, and to support their responses with examples. We identified domains of inquiry from a literature review of studies completed during the initial HIV outbreak. Additional domains were identified from discussion among the investigators (SES, KW, MKK, WLG) who participated in the care of inpatients and of SARS patients (WLG, SES) during the outbreak. The initial outbreak began in Toronto in March 2003 and a second outbreak developed in May. Interviews were conducted in May and June 2003.

The interview tapes were transcribed verbatim and assigned a unique identifier for each participant. We used grounded theory[12] to analyse the data by generating categories and themes from the data. We started the analysis after the first interview to

allow emerging themes to be explored in subsequent interviews. Sampling of participants continued until saturation was achieved and no new themes were identified. Two investigators who were blinded to the identity of the participant independently coded the data to increase the reliability. After the transcripts were checked for accuracy we destroyed the tapes.

Results

All physicians who were invited participated in the study. Fourteen staff physicians were included with seven participants from University Health Network-Mount Sinai Hospital and seven from Sunnybrook and Women's College Health Sciences Centre. Four participants became ill during the outbreak, possibly with SARS. We identified several themes around values inherent to medical professionalism, including the balance between care of patients and accepted personal risk, professional respect, confidentiality, appropriate interactions between physician and patients, ethical research conduct, and role modelling of professionalism.

Balance between care of patients and personal risk

The principle of primacy of the welfare of patients is based on dedication to serving the interests of the patient, and altruism is a core feature of this principle. One of the difficulties encountered during the SARS outbreak was the need to balance acceptable personal risk with care of patients. One participant stated: "SARS has made everybody think about would I participate in a high risk procedure with a SARS patient? And I think most of us have come to the conclusion that yes we would as long as we were well informed about what the risk was and as long as we were provided with the appropriate protection . . . But I'm sure everybody has thought about where the line is now that they would draw."

Nine participants expressed concern about personal safety or safety of their family, and all participants involved with caring for SARS patients instituted precautions to optimise safety, including sending their families away and eliminating social interactions. Participants said that, unlike colleagues from the past, clinicians nowadays are not used to the possibility of contracting disease through occupational exposure.

Despite concerns about personal safety, all participants stated that they felt a professional obligation to care for SARS patients. One participant stated: "I don't think it's appropriate for healthcare workers to refuse to look after SARS patients or any other patient. As healthcare professionals we chose this field and that's what we do." Overall, participants thought that their profession had responded well to the crisis. Moreover, they found it difficult to put their personal safety ahead of their patients. "You see somebody for example with SARS who desaturates, and you're not allowed to enter the room . . . until we've assumed appropriate precautions. It takes quite a while to get dressed . . . the whole time you're looking at somebody through a video screen or through the window and you're praying that they're still alive by the time you get in the room."

As professionals, physicians are expected to work collaboratively to optimise care of patients and to be respectful of each other.[3] Although there was an overall feeling of "really rolling up the sleeves and working together," several participants described encountering resistance when they asked for help from colleagues in caring for SARS patients and in developing triage systems for patients suspected of having SARS. Indeed, six participants described episodes of healthcare professionals refusing to assess or care for patients with SARS. These participants expressed frustration over colleagues who stated "I didn't sign up for this" or "they don't pay me enough to take this kind of risk." One participant described "a sense of '9-to-5ism' that medicine never was that's been slowly emerging over the past few years . . . in the past where doctors would stay all hours, it's not like that anymore, there's a sense of more that this is a job and less of a profession."

Confidentiality

Commitment to confidentiality about patients is another requirement of medical professionalism. Participants who were quarantined described anxiety about the wellbeing of ill colleagues and their frustration in not being able to elicit details about their condition. One participant stated "I just wanted to know how my colleagues [who were with me] were doing while I was in quarantine . . . I couldn't find out anything." For those quarantined, knowledge of how their colleagues were faring may have alleviated some of their stress but this must be balanced with the need to preserve confidentiality. Participants also expressed concerns about the media's role in breaking confidentiality when new or suspected cases were discussed.

Physician-patient relationship

Physicians must be dedicated to maintaining appropriate physician-patient interactions and to ensuring that patients have access to care. All participants described concerns about the impact of the SARS outbreak on their relationships with and care of patients. Assessing and communicating with patients became a challenge: "You are toiling under the most stressful clinical time in your professional career. You have a headache, the mask hurts, you're sweating, and it's impossible to establish any of the usual non-verbal clues with patients. You can't feel things through those gloves, you can't tap things out." Another participant stated: "We are asking people not to go in to patients and to use video and don't do physical exams or minimise your time in the room . . . thus putting more distance between them. I can't imagine having someone look after me who is dressed like that." Concern was raised that barrier precautions may have affected interactions with patients. Because of the time required to get into the protective clothing, participants expressed worry that patients may have been seen less frequently than usual.

During the SARS outbreak, visitors were largely prohibited from entering the hospital and participants expressed concern about the impact on patients. Communication between physicians and patients' families was impeded because of this precaution and participants relied on the telephone for discussions about patient management. One participant stated, "To support somebody over the phone was less than ideal and very difficult. I remember telling, I don't know how many families, that their loved one was going to die and [to] do that over the phone and with SARS, [and] having them die alone, that was even worse."

Research

Medical professionalism requires that physicians have a duty to promote research and to create new knowledge.[3] Four participants expressed enthusiasm about being at the epicentre of a new disease. Many research projects arose from this experience in attempts to gain knowledge about the disease. Five participants were involved with research efforts and described the experience as a positive one. However, several participants described frustration with the lack of collaboration among investigators. Concerns were also raised that the front line clinicians were unable to have a major role in the development of manuscripts because of their clinical commitments, unlike many

of the senior authors of the research papers who were not involved with the care of SARS patients.

Role modelling

In university affiliated settings, role modelling of medical professionalism is crucial to the educational programme.[3] During the SARS outbreak in Toronto, dedicated SARS units were created at each of the university affiliated hospitals, and consultant physicians assumed primary care of patients, with some house officers from the infectious diseases training programme also providing cover. House officers working in intensive care units provided primary care for patients affected with SARS in these units. Five participants thought that house officers should be involved with the care of SARS patients while the remainder did not feel it was appropriate. Study participants thought that by working in the SARS units they were able to "role model my commitment for the residents. As part of being a doctor you need to be there on the front lines." Medical students were removed from the hospitals during the SARS outbreak in Toronto, and participants reflected on the impact of this action: "I think it is unfortunate that we took the medical students out of the loop. I wonder what the message sends about professionalism and altruism in the healthcare field."

Discussion

Attention has focused recently on frustrations among physicians and medical educators because of threats to the values of medical professionalism. The SARS outbreak provided a unique opportunity to explore the impact of an emerging health threat on professionalism. Despite concerns about its erosion, clinicians involved with the SARS outbreak amply demonstrated these values.

Overall the participants thought that physicians exhibited professionalism, though they witnessed several examples of strained professional behaviour. These examples highlight aspects of medical professionalism that medical educators should address. Firstly, attention must be paid to exploring the balance between the clinician's personal safety and the needs of the patients, and these discussions should occur explicitly and early in the training process.[13] Cruess and colleagues have suggested that individual physicians should consider the consequences of being seen to put self interests above those of patients.[14] A recent survey of 500 house officers asked them to list the attributes of professionalism. Respondents commonly listed competence, respect, integrity, and responsibility, whereas putting patients' needs first was among the least commonly noted attributes.[15] Secondly, clinicians should be encouraged to consider the interests of colleagues to enhance professional respect and collaboration. Thirdly, during similar outbreaks, ethical research must be carried out and clinicians who are caring for the patients being studied should be provided with the opportunity to participate fully. Fourthly, while professional values should be incorporated from the onset of the clinical career it should be described as an ideal to be constantly pursued. Finally, it has been suggested that a good way to teach professionalism is through role modelling,[16] and those serving as role models need detailed knowledge of professionalism.[13]

The observation that there were instances of strained professional behaviour is not surprising.[17 18] SARS presented the healthcare system with a new potentially catastrophic risk over which physicians believed they had little control and it aroused fear. Further contributing to this fear was the knowledge that healthcare workers had become ill as a result of occupational exposure, and some later died from the infection.

What is already known on this topic

Little is known about the impact of an emerging healthcare threat on medical professionalism

The SARS outbreak posed several distinct challenges, including the paucity of information about the disease that was available during the outbreak, the necessity of providing care for affected colleagues, and the risk of occupational exposure

What this study adds

The SARS outbreak challenged medical professionalism

Educators and professional organisations must advocate principles of professionalism, including the balance between personal safety and the needs of patients, professional respect and collaboration, the conduct of ethical research, and role modelling of professionalism to trainees

Limitations and strengths of this study

There are limitations to this study. Firstly, this study included only clinicians from university affiliated institutions. The institutions selected for inclusion were those that provided care for almost half of the patients affected with SARS during the initial outbreak in Toronto. Their experiences may not reflect those of physicians working in other settings elsewhere. Secondly, we included only physicians and thus cannot describe the experiences of other healthcare professionals. However, nurses and support staff were the predominant participants in a study evaluating the psychological impact of SARS at a university affiliated hospital in Toronto that found similar results.[19]

This study is unique in that it provides an in depth exploration of the impact of SARS on medical professionalism. While several studies have explored the experiences of clinicians during the initial experience with HIV,[8–10] there is little rigorous qualitative literature on the impact on professionalism of caring for patients with serious infectious diseases. Moreover, this study was completed during a rapidly emerging crisis and therefore we were able to capture physicians' reflections in the immediate setting.

Conclusions

Physicians should be proud of the professionalism displayed during the recent SARS outbreak. However, professional organisations and medical educators must continue to advocate the principles of professionalism, physicians must understand the obligations necessary to sustain professionalism, and we must all strive to role model this behaviour to our students.

We thank W Levinson, W Sibbald, and D Davis for their comments on the study design and earlier drafts of the manuscript and the clinicians who participated in this study.

Contributors: SES developed the idea for the study in collaboration with WLG, MKK, YL, GR, and KW. DR conducted all interviews; SES and GR completed the analysis. SES drafted the initial manuscript and all investigators were involved with revising it. SES is the guarantor for the paper.

Funding: SES is supported by a Career Scientist Award from the Ontario Ministry of Health and by the Knowledge Translation Program at the University of Toronto; KW is supported by a New Investigator Award from the Canadian Institutes of Health Research; MKK is supported by a Research Scholarship from the Canadian Stroke Network and the University Health Network Women's Health Program.

Ethical approval: Ethics approval was obtained from the Ethics Review Boards of the University Health Network and Sunnybrook and Women's College Health Sciences Centre.

1 Misch DA. Evaluating physicians' professionalism and humanism: the case for humanism "connoisseurs." *Acad Med* 2002;77:489-95.
2 Barondess J. Medicine and professionalism. *Arch Intern Med* 2003;163:145-9.
3 Project of the ABIM foundation, ACP-ASIM foundation, and the European Federation of Internal Medicine. Medical professionalism in the new millennium: a physician charter. *Ann Intern Med* 2002;136:243-6.
4 Zuger A, Miles SH. Physicians, AIDS and occupational risk. *JAMA* 1987;258:1924-8.
5 Ha KG, Cohen DJ. From plague and tuberculosis to AIDS: a reflection on the medical profession. *Tex Med* 1991;87:76-80.
6 Cohn JA, Warren JW. The HIV epidemic and the primary care physician. *MD Med J* 1991;40:185-90.
7 Emanuel EJ. Do physicians have an obligation to treat patients with AIDS? *N Engl J Med* 1988;318:1686-90.
8 Link RN, Feingold AR, Charap MH, Freeman K, Shelov SP. Concerns of medical and pediatric house officers about acquiring AIDS from their patients. *Am J Pub Health* 1988;78:455-9.
9 Harsh ES, Cromwell G, Ferentz KS, DeForge B. HIV in Maryland. Experiences and attitudes of family physicians. *Med Care* 1991;29:1051-6.
10 Roderick P, Victor R, Beardow R. Developing care in the community: GPs and the HIV epidemic. *AIDS Care* 1990;2:126-32.
11 Loewy EH. Duties, fears and physicians. *Soc Sci Med* 1986;22:1363-6.
12 Mays N, Pope C, eds. *Qualitative research in health care.* London: BMJ Publishing, 1999.
13 Cruess SR, Cruess RL. Professionalism must be taught. *BMJ* 1997;315:1674-7.
14 Cruess SR, Johnston S, Cruess RL. Professionalism for medicine: opportunities and obligations. *Med J Aust* 2002;177:208-11.
15 Brownell AK, Cote L. Senior residents' views on the meaning of professionalism and how they learn about it. *Acad Med* 2001;76:734-7.
16 Reynolds PP. Reaffirming professionalism through the education community. *Ann Intern Med* 1994;120:609-14.
17 Slovic P. Perception of risk. *Science* 1987:236;280-5.
18 Gray GM, Ropeik DP. Dealing with the dangers of fear: the role of risk communication. *Health Aff (Millwood)* 2002;21:106-16.
19 Maunder R, Hunter J, Vincent L, Bennett J, Peladeau N, Leszcz M, et al. The immediate psychological and occupational impact of the 2003 SARS outbreak in a teaching hospital. *CMAJ* 2003;168:1245-51.

(Accepted 30 April 2004)

doi 10.1136/bmj.38127.444838.63

Division of General Internal Medicine, University Health Network, 200 Elizabeth Street, Toronto, ON, Canada M5G 2C4
Sharon E Straus *assistant professor*
Kumanan Wilson *assistant professor*
Gloria Rambaldini *resident physician*
Darlyne Rath *research associate*
Wayne L Gold *assistant professor*
Moira K Kapral *assistant professor*

Department of Haematology, University of British Columbia, Vancouver, BC, Canada V5Z 4E3
Yulia Lin *fellow*

Correspondence to: S Straus sharon.straus@utoronto.ca