Ethical Obligations of Physicians Participating in Public Health Quarantine and Isolation Measures

Nathan A. Bostick, MA, MPP[a]
Mark A. Levine, MD[b]
Robert M. Sade, MD[c]

SYNOPSIS

In dealing with outbreaks of communicable diseases, the medical profession should work with public health authorities to promote the use of interventions that achieve desired public health outcomes with minimal infringement upon individual liberties. This article endeavors to help physicians manage their dual responsibilities to their patients and to their communities when participating in appropriate quarantine and isolation measures. In implementing such measures, individual physicians should take necessary actions to promote patients' well-being. In addition, the medical profession and individual physicians share responsibility for taking appropriate precautionary measures to protect the health of individuals caring for patients with communicable diseases.

[a]American Medical Association Ethics Group, Chicago, IL

[b]Center for Bioethics and Humanities, University of Colorado at Denver and Health Sciences Center, Aurora, CO

[c]Medical University of South Carolina, Charleston, SC

Address correspondence to: Nathan A. Bostick, MA, MPP, American Medical Association Ethics Group, 515 N State St., Chicago, IL 60610; tel. 312-464-4859; fax 312-464-4799; e-mail <andy.bostick@ama-assn.org>.

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Quarantine and isolation are public health interventions designed to protect a population's health by separating from the general population individuals who are either affected by or have been exposed to communicable diseases.[1] Because these actions may conflict with the interests of individual patients, the use of quarantine or isolation must be balanced against their potential to compromise individuals' liberty and autonomy.[2] When treating individual patients, physicians are obligated to hold the best interests of the patient as paramount.[3] However, these individually centered concerns for personal liberties can undermine public efforts to protect the health of the population.[4] Further guidance is warranted to help physicians manage their dual responsibilities to their patients and to their communities when dealing with outbreaks of communicable diseases.

MANAGING THE SPREAD OF COMMUNICABLE DISEASE

Quarantine has been used to manage the outbreaks of communicable disease since the 13th century.[5] The purpose of quarantine is to separate from the general population those individuals who have been exposed to and are suspected of carrying a communicable disease but have yet to display symptoms. Quarantine measures do not generally entail the forced detention of affected individuals. Rather, the measures are usually voluntary. Those subject to quarantine are closely monitored for symptoms to detect disease at an early stage.[6]

In contrast to quarantine, isolation is applied to individuals known or suspected to be infected by contagious agents. Isolation separates infected from uninfected individuals during the period of communicability[6] and restricts their movement to limit exposure of unaffected individuals. Additionally, it allows for the focused delivery of specialized health care to the ill. While ill people subjected to isolation may be isolated and cared for within hospitals, public health isolation policies may also call for infected individuals to be isolated at home or to stay at other appropriate community-based facilities.[7]

Quarantine and isolation may be either voluntary or mandatory. When mandatory, they may be effective in limiting the spread of communicable diseases, but produce tension between the public goal of disease containment and the protection of individuals' autonomy. Standards of medical ethics place great emphasis upon respect for patients' self-determination.[8] In contrast, public health measures can incorporate mandatory interventions if necessary, and public health statutes can authorize the restriction of individual liberties in times of public peril, thereby overriding patient autonomy.[2]

The justified use of quarantine and isolation requires balancing individual liberties with the social goals of public health policies. As the invocation of quarantine or isolation measures may restrict citizens' exercise of fundament civil liberties, these practices will likely be subject to a high degree of legal scrutiny. To this end, the Supreme Court has declared that states must demonstrate a compelling interest that is substantially furthered by the deprivation of personal rights protected by the constitution.[9] Moreover, legal precedents in the analogous situation of mental health civil commitment dictate that applicable public measures must contain proper protections for citizens' rights.[2]

A review of relevant court decisions over the last few decades suggests that various legal tests may be employed to assess the acceptability of public health interventions. According to this analysis, the restriction of individual rights and liberties in the interest of public health is justifiable when the risks posed are subject to rigorous scientific assessment; restrictive measures are targeted to avoid unnecessary or undue burdens; a safe and healthy environment is provided for those placed under restriction; procedural due process is protected; and the least restrictive possible means of achieving the desired public health outcomes are used.[10]

RESPONSIBILITIES OF THE MEDICAL PROFESSION

By virtue of physicians' unique knowledge and qualifications, members of the medical profession will be called upon to assist in the design of public health measures such as quarantine or isolation. When serving in this capacity, physicians must uphold accepted standards of medical professionalism by implementing policies that adequately balance the attendant benefits and risks posed to the public.

Physicians, in collaboration with public health officials, must first assess the relative risks posed by a communicable disease as compared with the potential positive and negative consequences resulting from public intervention. When intervention appears warranted, public efforts must be applied fairly and undertaken in a manner that minimizes any potentially deleterious consequences at the individual level.[2,5,11] Finally, the undertaking of any intervention must be sufficiently transparent in nature so as to enable the public to understand the need for public health measures and to participate in the planning process.[11,12] By adhering to these ethical guidelines, members of the medical profession can help ensure that quarantine and isola-

tion measures achieve their public health goals and maximally promote the well-being of individuals.

Assessing the appropriateness of public intervention

Public health officials are charged with protecting the general population against reasonably foreseeable threats, such as those presented by contagious diseases, even when the magnitude and scope of these threats are scientifically uncertain.[12] In considering the need for a public health intervention, decision makers must first determine that a specific contagious disease poses a real threat to the public's well-being. They also must assess whether or not public health measures present a reasonable chance of significantly curtailing the disease's spread.[5]

Decisions about quarantine and isolation should always be subject to review by physicians who are qualified to evaluate the rationale underlying public health interventions. Public health physicians are trained to evaluate the need for public health interventions according to the severity and communicability of a given threat to public health and should be involved in decision-making regarding quarantine and isolation. Should physicians' clinical judgment determine that the presence of a communicable disease seriously threatens the health and well-being of the public, they should advocate for appropriate disease-control measures.

Balancing the risks and benefits of public health measures

To be ethically justifiable, public health measures must only be instituted if their prospective risks are warranted in light of their probable social benefits.[13] Accordingly, the anticipated health benefits associated with a given policy must be weighed against potential societal consequences, including encroachment upon personal liberty and social and economic harm to individuals.[14] Because the implementation of quarantine and isolation requires substantial resources and logistical support, decision makers must also weigh the costs of these measures compared with alternative strategies.[5]

Medical expertise is essential in considering the effectiveness of alternative interventions. If the medical community does not believe that the benefits afforded by public health interventions are warranted in light of societal consequences, the profession, working with appropriate public health professionals, should publicly advocate for the adoption of alternate policies. When identifying alternative interventions, physicians should advocate for those interventions that will achieve desired public health goals with minimal infringement upon personal liberties.[5]

Ensuring the fair implementation of quarantine and isolation

To ensure fairness, public health measures must be implemented in a manner that ensures the equitable distribution of associated benefits and burdens.[14] Public health programs are objectionable when they burden a particular segment of the population without scientific justification. For example, a quarantine imposed by the city of San Francisco in 1900 was deemed unconstitutional because it unjustly targeted Chinese households and businesses.[15] In contrast, the fact that the burdens associated with New York City's tuberculosis-control efforts in the early 1990s fell disproportionately upon marginalized indigent populations was not found to be ethically objectionable.[16] The essential distinction between these situations is that New York's program focused on a specific population that faced the greatest risk of contracting and transmitting the disease, while San Francisco's focus on a specific ethnic population was based on racial biases rather than medical considerations. To further ensure that quarantine and isolation measures are implemented fairly, public health interventions should also contain due-process safeguards and appropriate legal review of individual cases.[17]

The medical profession must lend its expertise to ensure that no group is arbitrarily deprived of personal liberties, and that the design and implementation of public health interventions are scientifically valid.[5] To further encourage access to public health services, physicians should also reach out to patients who might not normally have access to the health-care system.[18]

Moreover, the pursuit of optimal outcomes requires that the quarantine or isolation interventions not undermine the overall care received by patients. The profession should help to ensure that individuals who are quarantined or isolated receive medical services in accordance with accepted standards of care.

In anticipation of exceptional situations in which adequate resources are not readily available, treatment policies should be developed that would maximize quarantined or isolated patients' welfare subject to available medical resources.[19] Physicians should participate in the development of these policies and promote the use of ethically appropriate criteria in establishing allocation guidelines.[20]

Promoting transparency and public participation

It is ethically imperative that all people being subjected to quarantine or isolation be fully informed of the risks and benefits associated with the intervention,[13] and that policies infringing upon patient autonomy be available for examination and periodic thorough review.[16] Accordingly, the medical profession should

promote transparency by participating in the planning and review of public health policies, and by educating patients and the public, informing them of the necessity of public health measures and their potential risks and benefits.

RESPONSIBILITIES OF INDIVIDUAL PHYSICIANS

Principle VII of the *Code of Medical Ethics* advises physicians to "participate in activities contributing to the improvement of the community and the betterment of public health."[21] When faced with epidemics and the threat of contagious diseases, physicians must shoulder the tasks of prevention, detection, containment, and treatment.[17] In addressing these obligations, they confront dual responsibilities toward public protection and respect for individuals' autonomy and privacy.

Physicians' obligations to detect and report communicable diseases

The detection of contagious disease is a necessary antecedent to its treatment and containment. The United States' public health surveillance system relies heavily upon reports from health-care professionals. The early signs of an impending epidemic would likely be noted first among physicians examining symptomatic patients.[22] Physicians must be aware of reporting requirements[23] and recognize case reporting as an important component of patient care.[18]

Physicians are ethically obligated to safeguard patients' privacy and should not reveal confidential communications or information without the express consent of the patient, unless required to do so by law.[24] Therefore, physicians must comply with legal requirements to report affected patients to appropriate public health authorities. Public health agencies must adhere to the same standards of confidentiality that apply to physicians and their staffs. Disclosure of confidential information must be limited to the few circumstances in which it is allowed by law and required for the protection of the health of others. Physicians who are concerned about possible breaches of confidentiality should discuss their concerns candidly with public health authorities and legal counsel.

Physicians' use of quarantine and isolation

State laws often empower state and local health department officials to invoke quarantine or isolation measures as a matter of professional judgment,[2] thereby isolating such decisions from clinicians who are primarily responsible for attending to individual patients' interests.[18] In considering the use of quarantine or isolation, physicians should consult with public health specialists when there is doubt about the best way to prevent patients from harming others.[25] Physicians should first engage in educational efforts aimed at encouraging their patients to cooperate voluntarily with public health measures. To respect the principle of patient autonomy while protecting the health of others, physicians should inform their patients regarding the details of their illness, the potential harm that it poses to themselves and others, as well as the personal and public benefits of quarantine or mandatory isolation. Physicians must be available to answer patients' questions and help them understand why they are asked to adhere to restrictive interventions.

If patients fail to comply voluntarily with public health measures, the physician should support scientifically grounded public health policies that mandate quarantine or isolation. If necessary, physicians should also make themselves available to participate in their patients' legal appeals, such as due-process procedures.

Professionalism and the duty to treat patients during epidemics

The responsibility to treat those in need is a key component of medical professionalism. Individual physicians are ethically obligated to provide urgent medical care during disasters.[26] This ethical obligation holds in the face of greater than usual threats to their own safety, lives, or health. However, the physician workforce is not an unlimited resource and physicians should balance immediate benefits to individual patients with the ability to care for patients in the future.

When faced with the possibility of personal harm, such as infection with a communicable disease, physicians must arrange for continuity of care for their patients. In anticipation of this possibility, the medical profession should advocate for availability of protective and preventive measures for physicians and others at risk. In turn, frontline physicians should utilize these measures to remain healthy and be available to provide necessary medical services during epidemics.

Physicians who have been exposed to a communicable disease and have reason to believe they may have become infected should contact appropriate health professionals for clinical evaluation. If infected, physicians must adhere to mandated public health measures. In some circumstances, exposed physicians may be placed on "working quarantine."[27] While adhering to quarantine measures, these physicians may continue to provide indirect medical services or provide limited direct patient care for other quarantined individuals.

CONCLUSION

The practices of quarantine and isolation have long been used to curtail the spread of communicable diseases. Although patients generally participate voluntarily, public health authorities can mandate isolation. However, restrictions upon patient autonomy and invasions of privacy should occur only when the public health risk has been assessed with valid scientific methods. Physicians should maintain expertise in the recognition of communicable diseases and assessment of their risks, and should collaborate with public health authorities to help ensure that public health interventions respect patient autonomy and privacy to the greatest extent possible. Ultimately, it remains the obligation of individual physicians to balance their public obligations with their professional roles as patient advocates and providers of medical care.

Recommendations

Quarantine and isolation to protect the population's health potentially conflict with the individual rights of liberty and self-determination. The medical profession, in collaboration with public health colleagues, must take an active role in ensuring that those interventions are based on science and are applied according to certain ethical considerations.

To this end, the medical profession should:

- Seek an appropriate balance of public needs and individual restraints so that quarantine and isolation use the least restrictive measures available that will minimize negative effects on the community through disease control while providing protections for individual rights;
- Help ensure that quarantine and isolation are based upon valid science and do not arbitrarily target socioeconomic, racial, or ethnic groups;
- Advocate for the highest possible level of confidentiality of personal health information whenever clinical information is transmitted in the context of public health reporting;
- Advocate for access to public health services to ensure timely detection of risks and prevent undue delays in the implementation of quarantine and isolation;
- Educate patients and the public about quarantine and isolation through the development of educational materials and participation in educational programs; and
- Advocate for the availability of protective and preventive measures for physicians and others caring for patients with communicable diseases.

Individual physicians should participate in the implementation of appropriate quarantine and isolation measures as part of their obligation to provide medical care during epidemics (see Opinion E-9.067, "Physician Obligation in Disaster Preparedness and Response").[28] In doing so, advocacy for their individual patients' best interests remains paramount (see Opinion E-10.015, "The Patient-Physician Relationship").[29] Accordingly, physicians should:

- Encourage patients to voluntarily adhere to scientifically grounded quarantine and isolation measures by educating them about the nature of the threat to public health, the potential harm that it poses to the patient and others, and the personal and public benefits to be derived from quarantine or isolation. If the patient fails to comply voluntarily with such measures, the physician should support mandatory quarantine and isolation for the noncompliant patient.
- Comply with mandatory reporting requirements and inform patients of such reports.
- Minimize the risk of transmitting infectious diseases from physician to patient and ensure that they remain available to provide necessary medical services by using appropriate protective and preventive measures, seeking medical evaluation and treatment if they suspect themselves to be infected, and adhering to mandated public health measures.

Frontline physicians have an increased ethical obligation to avail themselves of safe and effective protective and preventive measures (i.e., influenza vaccine).

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