

Policy Analysis: The Quarantine of Typhoid Carriers

Luis Dequesada

[In 1906 the New York City Dept of Health had to decide what to do about the infamous cook who became known as Typhoid Mary. This paper is a retrospective policy analysis on the thinking that went on for years about what to do with her and others like her. The issues highlighted remain relevant to this day in the management of contemporary communicable disease. Prof. Bohm]

I've recently been appointed as the New York City Department of Health's administrator in charge of reviewing a recent proposal to quarantine all carriers of the highly contagious typhoid fever while they test positive for the presence of the disease. The quarantine proposal has come as a result of an infected cook named Mary Mallon who was recently quarantined by the Department of Health because she has in fact been spreading this highly communicable intestinal disease to the families who employ her. The quarantine was done to prevent the spread of the disease to other people as she is a cook and therefore handles food.

I've identified three potential legal and political problems with this proposal to place all carriers of typhoid fever under quarantine. The radical nature of aspects of the quarantine will definitely attract media attention and therefore cause awareness that people are being quarantined against their will. Such a move will raise the brow of many civil liberties groups and is sure to cause mass protests. This is a problem particularly because the political image of the Department of Health will be compromised by such a move. Civil liberties groups will easily justify an argument against the quarantine because of the lack of due process associated with the way we are conducting this action. We shouldn't, as a department, seem as though we are impinging on people's civil rights.

The next problem is that quarantine alone will not cure or eliminate the incidences of typhoid fever. The medical community will definitely expose the fact that we are confining people who have the disease, but who is to say the disease itself will cease to exist? What if many more become infected? What will happen to those already quarantined? How will the quarantine approach directly address the pathologic process itself? A quarantine without some sort of pharmaceutical response, for example, a vaccine, will do nothing more than prevent those in custody from spreading the disease.

The final problem is that quarantine isn't the most cost effective method of dealing with the disease. What will happen if the disease reaches epidemic proportions? Are we to hold each and every carrier under quarantine? This will mean a vastly increased demand for facilities to hold the carriers. The city will have to hire people to work in these sectors, such as doctors, nurses, and epidemiologists. In addition to a medical labor force, the city will have to provide treatment, medications, and therapeutic services for the infected. Such a move will prove disastrous for the already tight city and state budgets. Such a proposal will be very expensive in the long run, without the promise of stopping the disease.

The quarantine can only be successful in the short run. Overall, such a policy will not work. It poses a dynamic moral, ethical, and, socio-political conflict; and it will cause civil unrest. Housing the infected in no way will stop the disease; it will fail to do anything but isolate those already infected in a very costly manner. Quarantine will fail to yield any significant positive results; however, it will certainly cause damage.

We must take a different approach. An alternative strategy would be only testing food handlers for typhoid. This strategy would yield far more effective results. Perhaps new jobs would have to be created; however this approach would prevent any but food handlers from being held in quarantine camps. This method would considerably narrow the population affected by the policy and thus would be the more humane alternative. We've learned from the example of Ms. Mallon that there is a particular concern and concrete evidence that infected food handlers play a major role in the transmission of typhoid fever. Testing the food handlers, who incidentally are the largest known carriers of typhoid, for the disease is a far more direct way of dealing with this issue; and thus far more beneficial than only quarantining them; we would not only see a sharp decline in the incidence of typhoid, but we would also be treating people with the respect and dignity they deserve.

While quarantining food handlers carrying typhoid may not be the best alternative strategy in controlling the spread of the disease, a policy of doing nothing would be far worse. And if it did nothing, the Health Department's reputation would be forever marred. The chances of disease transmission under the "do nothing" policy would be extremely high. An epidemic could become a pandemic, and eventually, a plague. In this scenario, quarantining is the more beneficial policy, but only a temporary policy.

In determining policy we need to consider a few other important points. An overall reduction in incidences would be of primary importance. Quarantine implies controlling the proliferation of a disease, and quarantining food handlers would certainly provide good insights on the quarantine approach. Public opinion is also an important consideration; after all, the Department of Health ultimately serves the interests of public health, and with this trial effort, we could see the public's response, perhaps through polls, surveys, newspapers, and political involvement. Another point for measurement would be the overall costs that such a policy would generate. This is quite important as local, and city budgets affect our governments and tax payers. If too much funding is required to enforce such

a policy, then ultimately, it will not be a very good choice and the public will resent it.

Clearly it is easier to control the movement of individuals when they are not free to roam on their own, a situation that is probably impossible in all but the most authoritarian human societies as noted in Sattensfield & Herring 2003. Their article exposes the ineffectiveness of multiple quarantines in the past, which were limited mostly to travel and trade. For example, during the influenza pandemic of 1918-1919, quarantine was a strategy used by public health departments (Sattensfield & Herring 2003). Another article gives the example of Lome, Nigeria; aggressive attempts were made to protect the citizens there as well as British troops from the flu pandemic by quarantining known cases. Troops were confined to their barracks, and there were closures of schools and churches. Even so, influenza took hold in Lome, demonstrating the futility of even the strictest isolation and quarantines when applied to a disease as contagious and difficult to contain as influenza (Patterson, 1983). These attempts were similar to the Ms. Mallon case because they had a similar goal, to control a communicable disease; however these techniques yielded ineffective results. Influenza still managed to spread, as is the case with typhoid fever.

As administrator in charge of reviewing the quarantine policy under consideration, I have found multiple issues that prove that a strategy of total quarantine of infected typhoid carriers would be ineffective, as well as costly and damaging to the reputation of our department. Examples from the past have shown that a total quarantine is ineffective in combating the spread of disease. The benefits of alternatives to quarantine greatly outweigh quarantine alone and these alternatives can be well measured by the public's response, and by economic and biological outcomes.

References

- Sattenspiel, L., & Herring, D.A. (2003). Simulating the Effect of Quarantine on the Spread of The 1918–19 Flu in Central Canada. *Bulletin of Mathematical Biology*, 65. Doi:10.1006/bulm.2002.0317.
- Patterson, K. D. (1983). The influenza epidemic of 1918 in the Gold Coast. *J. Afr. Hist.* 24, 485–502.

Nominating faculty: Professor Josef Bohm, Health Services Administration 3602, Department of Health Services Administration, School of Professional Studies, New York City College of Technology, CUNY.

Cite as: Dequesada, L. (2011). Policy analysis: The quarantine of typhoid carriers. *City Tech Writer*, 6, 51-53. Online at <https://openlab.citytech.cuny.edu/city-tech-writer-sampler/>