Detention to prevent transmission of tuberculosis: a proportionate public health response?

Stephen Conaty

South Western Sydney and Sydney Local Health District's Public Health Unit

Email: stephen.conaty@email.cs.nsw.gov.au

Case study

Trevor (not his real name) was a homeless man in his late 40s habituated to heroin and alcohol who presented to a hospital in Sydney with cough and shortness of breath in June 2009. A chest X-ray showed upper lobe changes and computed tomography (CT) scanning revealed a cavity in his left lung apex; his sputum smear was positive for acid fast bacilli (a marker of infectiousness). It was presumed and later proven that he had tuberculosis (drug sensitive) and he was started on standard four-drug therapy. These medications need to be taken for at least 6 months to ensure cure. With regular meals and effective therapy, including daily methadone for opiate dependence, his health improved fairly quickly and he discharged himself 3 weeks after admission (without a plan for further treatment in place).

He was found 2 weeks later and agreed to attend for a further chest X-ray and to have directly observed treatment (standard in tuberculosis) in the community, but he was not regularly available to receive his thrice-weekly tablets. By chance he was brought in by ambulance to the Emergency Department after collapsing in the street. During this admission, he was served with a public health detention order (*NSW Public Health Act 1991*, ss. 21–36) as his behaviour was likely to endanger the health of the public. This duly authorised order required him to remain in the city hospital and be detained using any security measures that were necessary.

Despite the order he left hospital temporarily but returned. A security guard was then placed on his hospital room door. At the expiry of the order (valid for a month), discharge plans, including a housing arrangement with a family member, fell into disarray. He left hospital and was difficult to find. This became an established pattern. Over the ensuing months, he was placed on two further public health orders. The last was extended for 4 months by the Administrative Appeals Tribunal after an application made by the NSW Department of Health. Trevor, the subject of the order, refused representation. These detention orders were only partially effective. Trevor managed to escape his city hospital detention four times and was returned by police each time when he could be found. By June 2010 at the end of the extension to the detention order granted by the court, treatment was stopped and he was allowed to leave. He had received less than the recommended length of treatment because of frequent interruptions.

Trevor was a reluctant inpatient: restless, suspicious and prickly, and at times verbally aggressive. At other times he was charming, appeared settled and prepared to stay. But staying in hospital was on his own terms, with a fairly casually articulated threat that he could leave whenever he wanted. Getting regular meals and saving money are advantages of a stay in hospital. He was not cognitively impaired and was frequently quick witted. It was difficult to gauge at what level he understood and believed that he had tuberculosis and needed regular therapy for a long time to keep him well and to prevent the infection being transmitted to others. He didn't refuse treatment when he was available to take it and he tolerated the treatment well. He was used to authority and suspicious of it, and thus may have discounted the advice he was given.

General hospitals (as distinct from psychiatric and dementia units that are designed to be locked) are poorly equipped places to detain patients, especially someone who is relatively fit and determined to leave. Wards are generally open places and staff are not trained to deal with involuntary patients. Issues arise of whether a room can be safely locked, whether patients should be allowed out of the locked room for exercise and whether security guards have the right to physically restrain patients. In this case, the burden on staff was high, largely because of constant demands and uncertainty with how to manage a difficult and reluctant patient. A light touch and frequent cigarette breaks accompanied by a security guard seemed to be the formula that worked best. The cost of detention was high including the bed and 24-hour security guard as well as the time of public health professionals, doctors, nurses, lawyers, police and others.

The story has a surprising postscript. Having stopped therapy prematurely in June 2010, Trevor relapsed some months later and presented in a poor state around Christmas 2010. He had been very sick. He described an experience of feeling close to death and then pulling away rather

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than letting go. This experience seemed to shift his priority to getting better and finishing treatment. He responded positively to support and completed treatment as a voluntary inpatient in July 2011.

Discussion

The public health arguments to detain Trevor are: he is either infectious now or his risk of relapse and of becoming infectious are high; he is homeless and cannot be prevented from having regular contact with other people including homeless people (as he could be if he was cared for at home); homeless people who have drug or alcohol problems are at higher risk of acquiring the infection and developing active tuberculosis; attempts at treatment in the community and as a voluntary inpatient have failed. He also risked spreading infection into his own community – a community with high contact rates because of large extended family groups. The conclusion reached in this situation was that the only sure way of treating Trevor and preventing transmission of tuberculosis to others was to confine him in hospital until treatment was completed.

The ethical tension is between denial of liberty of an individual and the public health benefits of preventing tuberculosis infection in others. Under section 23 (1) of the Act, the test that must be met is that an individual by his or her behaviour is 'endangering or likely to endanger the health of the public'. These legal provisions appear in the legislation in all states and territories[1] although they are seldom used. When tuberculosis re-emerged in New York in the early 1990s similar provisions were used systematically[2] although not without criticism.[3] If the risks to the health of others are small, then detaining someone against his or her will is unlikely to be justified. The facts of each situation are important. However, in this case the risks to a large number of homeless injecting drug users and possibly family and community members seemed real. Clusters of tuberculosis in homeless people and injecting drug users are well described[4] and in some contexts this has prompted special efforts to find early active cases in these groups.[5]

Despite sound arguments, it should be noted that the benefits of detention were probably overestimated because, on this occasion, we were unable to do it well, it did not result in cure and there was a further period of infectiousness after Trevor had been detained on several orders, discharged and then relapsed. In addition, there are considerable costs associated with detention.

References

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