Management and control of tuberculosis control in socially complex groups: a research programme including three RCTs

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Plain English summary

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Plain English summary

Tuberculosis is a serious infection spread by breathing. When people are infected, tuberculosis can lie dormant (latent infection). Treating latent infection can prevent active disease from ever developing. Active tuberculosis often affects the lungs, and signs of this can be seen on a chest radiograph. Microbiology tests can identify tuberculosis in phlegm to confirm the diagnosis. Tuberculosis treatment takes at least 6 months. Failing to take treatment consistently leads to poor outcomes and the spread of disease to others. Directly observed treatment (where a health-care worker observes each dose being taken) is used to support patients who have difficulty taking treatment. People experiencing homelessness, prisoners and drug users are at a high risk of tuberculosis infection, are often diagnosed late and often find it difficult to take treatment regularly.

We studied how tuberculosis can best be diagnosed and treated in these groups. In the group studied, 17% of people experiencing homelessness and 13% of prisoners had latent tuberculosis infection and could benefit from testing and treatment to prevent active tuberculosis. This would be good value for money. In addition, 10% of people experiencing homelessness and 4% of prisoners were infected with hepatitis C but very few were being treated. Radiographic screening was very difficult for prisons to organise. Even with additional investment, a prison screened only 43% of eligible prisoners. People with experience of homelessness were no better or worse than NHS staff at persuading people experiencing homelessness in hostels to be screened for tuberculosis. We introduced a mobile microbiology diagnostic laboratory alongside mobile radiographic screening of people experiencing homelessness; however, it was not possible to conduct a trial of its effectiveness in this setting. Video-observed treatment, in which patients have their treatment observed using a smartphone application (app), was more effective than face-to-face, directly observed treatment. It was also cheaper and preferred by patients.
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