Routine Chest X-rays and Tuberculosis
Updated March 2011

Chest x-rays should **not be done** for the following purposes:

**Routine periodic follow-up of tuberculosis (TB) patients who have completed therapy.**
Unless the patient has an unusual risk of relapsing, routine post therapy follow-up only needs to consist of counseling about what to do if symptoms of TB recur. Chest x-rays are likely to be of use only if symptoms develop. Persons with an unusual risk of relapsing from TB, e.g. those treated for multidrug-resistant TB (MDR-TB) or those for whom drug toxicity prevented completion of a standard course of therapy, should have routine follow-up clinical examination. Some experts would include a routine chest x-ray as part of this; others would not.

**Annual monitoring of persons with latent tuberculosis infection (LTBI) regardless of whether they take preventive therapy, to see if they are developing tuberculosis.**
A person with LTBI may develop TB at any time. They are likely to be symptomatic when they do, and the TB may progress rapidly. Routine chest x-rays in the absence of symptoms will only be able to pick up the occasional case of asymptomatic TB. Routine chest x-rays also may provide a false and potentially fatal sense of security between x-rays in the person who is being examined and therefore are not usually recommended. One exception to this general approach are contacts to cases of MDR-TB who have LTBI and are not treated. These individuals should be evaluated with a chest x-ray and symptom review every 3 to 6 months for at least two years. The recommendation against routine chest x-rays includes asymptomatic healthcare workers that have a history of LTBI (treated or untreated) assuming they have documentation of a negative chest x-ray at the time of diagnosis, unless recommended by a physician.

**As part of an annual physical examination to rule out TB.**
The same rationale applies as for persons with LTBI. While review for symptoms of TB should be part of any annual physical examination performed for any purpose, chest x-rays are only necessary to rule out TB if a person has symptoms or a new LTBI (e.g. newly positive tuberculin skin test or interferon gamma release assay.)
The routine use of chest x-rays are recommended in the following situations:

**End of therapy for persons with pulmonary TB disease**
A chest x-ray upon completing a course of therapy for pulmonary TB disease is important to establish a baseline for further comparison in the event that the individual should develop symptoms suggestive of TB.

**In the initial evaluation of someone with LTBI before considering preventive therapy, even if they do not have symptoms.**
The consequence of development of INH resistance in a person with active tuberculosis who is given only INH is great enough to justify routine use of chest x-rays to rule out active TB before beginning preventive therapy.

**In the evaluation of some asymptomatic close contacts to a case of TB who test negative for LTBI.**
These include situations when contact testing is done promptly, results from testing of other contacts suggest that there is high probability of infection, and the contact has a condition which may prevent early symptoms from being noticed (e.g. HIV-infection) or may be unlikely to give an accurate symptom history (e.g. a child or adolescent).

**To screen for TB disease in situations where there is either a group with a high prevalence of active TB for whom initial testing for LTBI is likely be impractical or inaccurate or where the consequences of an undiagnosed case of TB are particularly severe.**
Such situations may include some jails, homeless shelters, refugee populations, prisons, residential facilities for HIV-infected persons, and long-term care facilities.

**References**

