

organisations and structures that support people who inject drugs and at-risk individuals is particularly important in this situation.

Potential limitations of the study by Deterding and colleagues include the small number of patients and the high rates of re-infection in at-risk populations receiving high-cost treatment. However, other studies will be done to establish the optimum strategy, and the costs of treatment will subsequently fall. Finally, most patients with acute HCV infection in high-risk populations will be treated, so that the number of patients able to transmit HCV will decrease as a result, although this should not obviate the importance of preventive measures.

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Time to review treatment of isoniazid-resistant tuberculosis?



Despite substantial investment over many years, tuberculosis is still a global threat.¹ The main focus at present is containment of the spread of multidrug-resistant and extensively drug-resistant tuberculosis, but the Article² by Medea Gegia and colleagues in *The Lancet Infectious Diseases* is a reminder that even mono-resistance to isoniazid needs to be managed with care. To assume that standard first-line drugs will cure these cases can be dangerous.

The 2014 reported global rate of isoniazid resistance not associated with rifampicin resistance was 9.5%,¹ and the estimated prevalence of multidrug-resistant tuberculosis was 4.8%. Thus almost twice as many people with tuberculosis harbour isoniazid-resistant strains (either resistant to isoniazid only or coupled with resistance to another first-line drug) as harbour multidrug-resistant strains.^{1,2} Because standard first-line regimens are the recommended treatment of tuberculosis resistant to isoniazid only, less attention and scientific interest has been paid by clinicians and public health experts, who are focused on the

complexities of treating multidrug-resistant and extensively drug-resistant disease.^{3,4}

A systematic review^{3,4} of treatment outcomes of more than 9000 patients with multidrug-resistant or extensively drug-resistant disease showed that the median treatment success rate was 62% (64% in multidrug resistance and 40% in extensive drug resistance). The success rate in tuberculosis with a drug-resistance profile beyond extensive drug resistance was lower than 20%.⁴ The findings of the regression analysis done in that systematic review were the basis for the 2011 WHO guidelines for management of multidrug-resistant tuberculosis management.

So far, treatment outcomes in patients with mono-drug-resistant or poly-drug-resistant cases have not been so thoroughly investigated, although concerns about suboptimal results were raised by the authors of one study.⁵ The comprehensive meta-analysis² of treatment outcomes in patients with isoniazid-resistant, rifampicin-sensitive tuberculosis by Gegia and colleagues is therefore timely and important. The



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authors used data gathered from 33 clinical trials and 19 cohort studies involving more than 20 000 patients and 102 different treatment regimens to show that initially isoniazid-resistant disease was associated with significantly poorer outcomes than was isoniazid-sensitive disease. They used statistical methods to demonstrate that use of standard WHO first-line drug regimens in patients with isoniazid-resistant tuberculosis could lead to 60 000 new multidrug-resistant cases annually. This study should prompt clinicians to establish fully the drug-resistance pattern before prescribing an anti-tuberculosis regimen especially in places where the prevalence or incidence of resistance to isoniazid is high.

An investigation by the European Respiratory Society and European Centre for Disease Prevention and Control of the effect of the European standards for tuberculosis care⁷⁻⁹ published in 2012 showed that adoption of this important document is still suboptimal and that more advocacy and training are necessary. In other words, publication of evidence-based standards or guidelines¹⁰ is important, but not sufficient to achieve high-quality diagnosis, treatment, and prevention of tuberculosis and latent tuberculosis infection.^{11,12} The findings of Gegia and colleagues² are really useful to guide the upcoming WHO guidelines on tuberculosis treatment and the joint American Thoracic Society, European Respiratory Society, US Centers for Disease Control and Prevention, and Infectious Diseases Society of America treatment guidelines on drug-resistant tuberculosis.

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When free is not fair: the case of vaccine donations

On Oct 10, 2015, Médecins Sans Frontières (MSF) rejected Pfizer's proposed donation of 1 million doses of its branded pneumococcal conjugate vaccine (PCV).¹ The news caused a stir in the global health community; after all, free essential health goods might be considered something to be celebrated.

This decision represents the latest development in a prolonged advocacy campaign spearheaded by MSF, which aims to reduce the cost of PCV, and presents a timely

opportunity to examine the case for vaccine donations. In their rejection of Pfizer's offer, MSF cited several concerns related to the donation of pharmacological agents—namely, conditions attached to donation agreements, the sustainability of programmes dependent on donations, and the deleterious effect of donations on the incentive to reduce prices.

To understand MSF's concerns, the history of drug donation programmes should be explored. Perhaps the