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Title: Determinants of multidrug-resistant tuberculosis (MDR-TB) in Belarus

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Body: Introduction. A nationwide survey to investigate risk factors for multidrug-resistant tuberculosis (MDR-TB) was conducted in Belarus in 2010-2011. A total of 1,344 TB patients were enrolled. Results. MDR-TB was found in 32.3% (95% CI: 29.7-35.0) and 75.6% (95% CI: 72.1-78.9) of new and previously treated patients, respectively. History of previous treatment for TB was the strongest independent risk factor for MDR-TB (Odds Ratios [OR] 6.1, 95%CI: 4.8-7.71) followed by HIV infection (OR 2.2, 95%CI: 1.4-3.5). Other independent risk factors were young age (<35 years) (OR 1.4, 95%CI: 1.0-1.8), history of imprisonment (OR 1.5, 95%CI: 1.1-2.0), disability in such a way as to be unable to work (OR 1.9, 95%CI: 1.2-3.0), alcohol abuse (OR 1.3, 95%CI: 1.0-1.8), and smoking (OR 1.5, 95%CI: 1.1-2.0). Discussion. MDR-TB is a widespread problem in Belarus, with very high levels documented countrywide. The convergence of the MDR-TB and HIV epidemics and association between MDR-TB and numerous risk factors calls for stronger collaboration between TB and HIV control programmes and a more targeted approach to high-risk groups. Adherence to TB treatment could be improved by integrating treatment for alcohol use disorders into TB services and enhancing patient incentives and enablers.