

# Tuberculosis and Hepatitis C

Tuberculosis (TB) is a bacterial infection which can affect most parts of the body, but most commonly the lungs where it causes severe coughing. It is transmitted through respiratory fluids carried in the air when a person with TB coughs or sneezes. There is a vaccine against TB and the disease is treated by a six-month course of antibiotics.

Hepatitis C is a blood-borne virus which attacks the liver, causing cirrhosis (scarring) and damage. While there is little data on the rates of TB and hepatitis C coinfection, the incidence of both diseases is high in similar patient populations. The toxic effects of TB drugs on the liver can make it more challenging to treat people with both TB and hepatitis C.

People with hepatitis C often have other illnesses. Drawing on interviews with expert clinicians and patient organisations, the Hepatitis C Coalition has prepared a series of short factsheets on the relationship between Hepatitis C and associated diseases.

These factsheets were developed in the hope that stepping up efforts to address hepatitis C can present opportunities to address other health problems, and vice versa, achieving better services for patients and better efficiency for the NHS. **August 2015**

## Prevalence

- There were 7,892 notified cases of TB in the UK in 2013 and London accounted for 37.8% of these cases<sup>1</sup>
- 73% of TB cases occurred among people born outside the UK, but only 15% of cases in people born outside the UK were in recent migrants (diagnosed within two years of entering the UK)<sup>1</sup>
- Within the UK, those born outside the country demonstrate a TB infection rate 18 times that of the UK-born population<sup>1</sup>
- In a post-mortem analysis of people who died of TB in London, comorbidities were present in 35 of 46 cases, mainly hepatitis C virus and HIV infections, cancer, cardiovascular disease, and chronic obstructive pulmonary disease<sup>2</sup>

## Tuberculosis - Health impact

- Most healthy people's immune systems kill or contain TB infection without developing symptoms<sup>3</sup>
- Latent TB infection is an asymptomatic and non-transmissible form of TB<sup>3</sup>
- In people with weakened immune systems, latent TB may develop into active TB disease<sup>3</sup>
- Active TB disease presents symptoms including: persistent cough lasting more than three weeks; bringing up phlegm containing blood; loss of appetite; weight loss; night sweats; fever; fatigue; swellings that haven't gone away after a few weeks.<sup>3</sup>

"The link between these two diseases is becoming more widely recognised, particularly given the increased focus on prevention and public health."

*Mike Mandelbaum, Chief Executive TB Alert*



"TB and hepatitis C are two public health issues of personal priority to me as public health minister. I am eager to see us tackle both infections thereby reducing health inequalities and premature mortality. Both infections are challenging to control and share a range of common problems. They affect similar groups of people and sufferers share common problems around access to care."

*Jane Ellison, Minister for Public Health<sup>4</sup>*

## Interaction with hepatitis C

- Standard treatments for TB have been shown to have hepatotoxicity, meaning that they are toxic to the liver and can exacerbate liver disease<sup>5</sup>
- Treating TB in patients with hepatitis C can require a longer duration of therapy and increased monitoring
- Both infections are normally treated concurrently, presenting patients with difficult side effects. In future, new hepatitis C medicines may alleviate this.

## Recent policy developments

- **The Collaborative Tuberculosis Strategy for England 2015-2020** was profiled by Jane Ellison, Minister for Public Health, at a joint TB and hepatitis C summit held in March 2015. The strategy was developed by Public Health England and NHS England. A similar Hepatitis C Improvement Framework is planned<sup>4</sup>
- **'Find and Treat'** is a local initiative in London, where vans with mobile x-ray units are used to screen high risk populations for TB infection.<sup>6</sup> Many of these populations are also those at greatest risk of hepatitis C infection.

### Sources for further information:

- TB Alert [www.tbalert.org](http://www.tbalert.org)
- *The Truth About TB* [www.thetruthabouttb.org](http://www.thetruthabouttb.org)
- Find and Treat [www.ucl.ac.uk/tb/research/find-and-treat](http://www.ucl.ac.uk/tb/research/find-and-treat)
- Hepatitis C Trust [www.hepctrust.org.uk](http://www.hepctrust.org.uk)
- NHS Choices [www.nhs.uk/conditions/tuberculosis/](http://www.nhs.uk/conditions/tuberculosis/)  
[www.nhs.uk/conditions/hepatitis-C/](http://www.nhs.uk/conditions/hepatitis-C/)

## About the Hepatitis C Coalition

The Hepatitis C Coalition is a group of leading clinicians, patient organisations and other interested parties committed to the reduction of morbidity and mortality associated with Hepatitis C and its eventual elimination. The Hepatitis C Coalition has funding from Gilead Sciences Ltd. The Coalition's report, 'A Vision for Change in Hepatitis C' is available online at [www.hepc-coalition.uk](http://www.hepc-coalition.uk)

### Members of the Hepatitis C Coalition

Addaction	British Viral Hepatitis Group	Liver4Life
BASL	Crime Reduction Initiatives	Sickle Cell Society
BASL Nurses Forum	Gilead Sciences	South Asian Health Foundation
BHIVA	Haemophilia Society	St Mungo's Broadway
Blenheim CDP	London Drug and Alcohol	TB Alert
British Liver Trust	Policy Forum	The Hepatitis C Trust
British Society of	London Joint Working Group	Turning Point
Gastroenterology	on Substance Use and	UK Thalassaemia Society
	Hepatitis C	

1 Public Health England, *Tuberculosis in the UK Annual Report*. 2014

2 E Sbrana et al. *Co-morbidities associated with tuberculosis in an autopsy case series*. *Tuberculosis*. 2011

3 NHS Choices, *Tuberculosis*. Accessed May 2015

4 Jane Ellison, *Speech: Helping Local Authorities to reduce TB and Hepatitis C*. March 2015

5 YS Kwon et al, *Hepatitis C virus infection and hepatotoxicity during antituberculosis chemotherapy*, *Chest*, March 2007

6 University College London Hospitals, *Find & Treat Service*. Accessed May 2015

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