

# Challenges to TB Treatment Adherence for Adults Who Are Substance Misusers in Leeds

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## INTRODUCTION

Tuberculosis (TB) is the second leading cause of death from infection worldwide and is still classed as being of paramount public health importance in England, despite being both preventable and curable<sup>1</sup>. TB is caused by *Mycobacterium tuberculosis* and when this organism is present in the lungs it can cause active pulmonary TB. This type of infection is of most significant public health importance due to the potential for onward transmission when an infected person coughs<sup>2</sup>. A person with active TB has the potential to spread the disease to up to 15 of their close contacts per year<sup>1</sup>.

TB disease control hinges on two main factors<sup>3</sup>:

- Early case detection; and
- The completion of at least six months of antibiotic therapy.

There are a number of co-morbidities and risk factors for TB which leaves some individuals more susceptible to the disease. These include medical conditions, such as HIV and risk factors associated with the wider determinants of health, such as poor nutrition, smoking, homelessness and the use of harmful substances such as alcohol and drugs<sup>4</sup>.

These same factors are also documented to be associated with poor adherence to treatment, development of drug-resistant strains of TB, onward transmission and cases being lost to follow-up<sup>5</sup>. Non-adherence to TB treatment has led to global emergence of drug resistant strains of TB, as well as increased disease transmission and disease relapses<sup>2, 3</sup>. Many cost effectiveness studies into non-adherence to TB treatment have concluded adherence to short course antibiotic regimens to be one of the most cost effective public health interventions for TB treatment and control<sup>6</sup>.

### Research Aim:

- To explore the reasons why adults who are substance misusers in Leeds may not adhere to TB treatment.

## METHODS

Qualitative health research methods were employed in the study. This was due to the type of research questions the study aimed to answer<sup>7</sup>: questions of 'what' 'how' and 'why' rather than 'how many'.

These exploratory questions were used to delve beneath the surface of the responses gained from participants in order to obtain meaning in relation to the complex attitudes and behaviours around non adherence to TB treatment by substance misusers.

Semi structured, in-depth interviews were conducted with a sample of healthcare professional currently involved in the management of adults with TB in Leeds. Purposive sampling methods were used to 'deliberately' select participants based on their professional grouping in order to gain participants from a wide cross-section of professional groupings<sup>8</sup>.

Thematic analysis was chosen as the method of analysis of the responses obtained due to the flexibility this method offered over other methods of analysis such as phenomenological analysis, grounded theory or discourse analysis. **Figure 1** shows an example of the coding style used and these initial codes went on to generate the mind map of themes. This map is presented in **Figure 2**.

Data extract	Coding
"What are the levers that I can pull or relationships I can develop for this person? Is the substance misuse leading to housing issues? What influence can I have with the housing department or drug treatment service?" (Interview A)	1. Influencing skills this health professional can use to make this a shared issue 2. Relationships - health professionals to social care services 3. Housing issues - wider determinants impacting

Figure 1 Example of coding

## RESULTS

### Participant Characteristics:

15 key health professionals were identified as working in the field of TB in Leeds and of these 6 agreed to participate in this study. The participants included a range of health professionals: Consultants in Communicable Disease Control; hospital respiratory Consultants; and specialist TB nurses. **Figure 3** shows the key themes that were generated from the interviews.

### Key themes identified:

#### • Chaotic Lifestyle.... 'Sofa surfing and security of housing'

"..they may not have a fixed abode, or may be sofa surfing, so tracking them down and keeping up with them and ensuring they're taking their medication can be problematic." (Participant D)

#### • Relationships, rapport and trust..... 'Who's gonna believe me?'

"It's important to build a rapport and relationship with the case...it's about a relationship over a period of time to support that person through that journey of at least six months of treatment." (Participant A)

#### • TB drug interactions..... 'It affects my high!'

"TB medication makes the liver becomes more efficient and breaks down heroin and methadone a lot quicker so the user gets less of a hit from their drugs." (Participant C)

#### • Degree of illness experienced..... 'But I feel fine now'

"He doesn't turn up for anything and would be very unlikely to adhere to medication prescribed because he doesn't feel sick. If they develop symptoms they're banging on the door of your clinic very soon after a cough develops." (Participant C)

### Interconnected Themes:

All the themes identified were highlighted as being interconnected in relation to adherence to TB treatment, making it hard to unpick or intervene in relation to a root cause of non-adherence.

"Some who turn up in the clinic are a total disaster what with their substance misuse, no secure housing and no one to support them. It's just hard to know where to start." (Participant C)

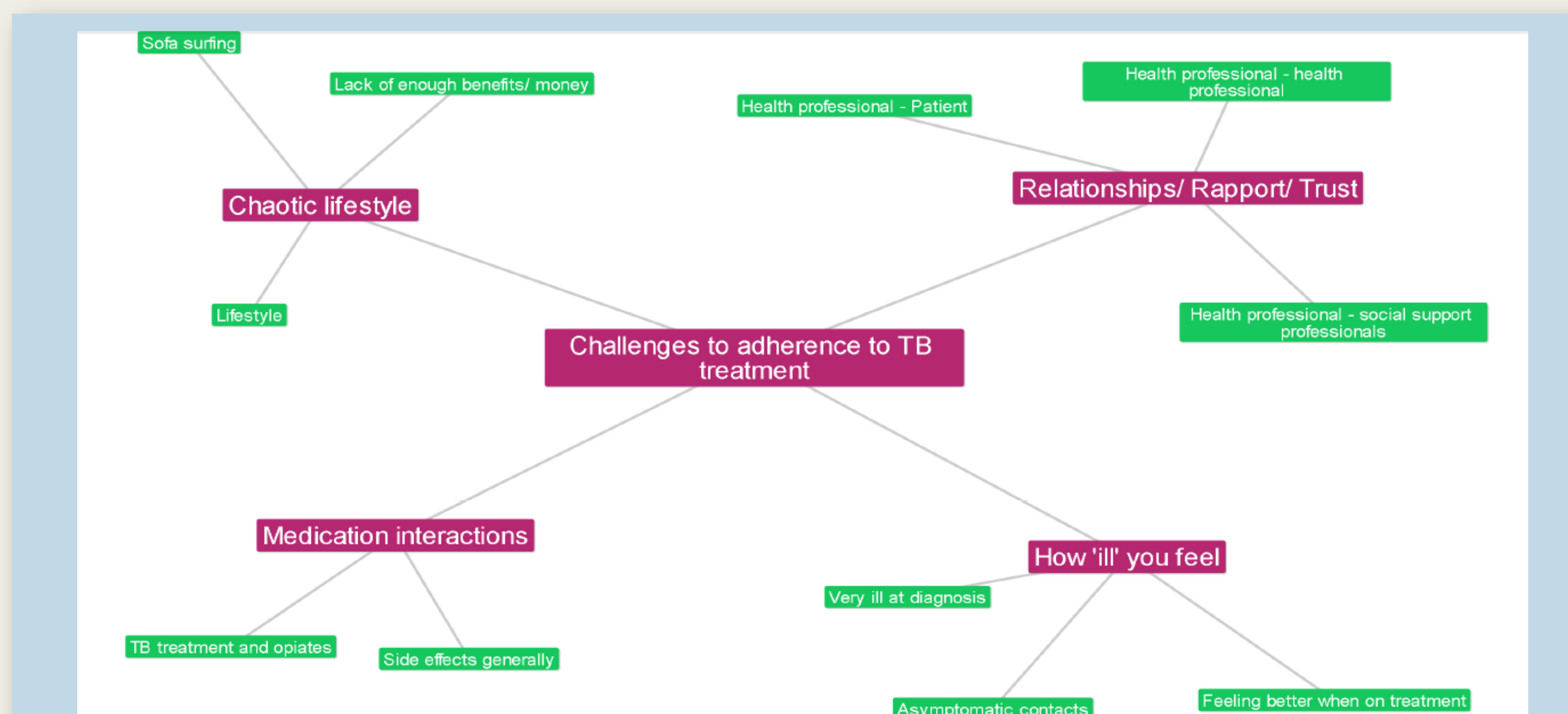


Figure 2. Mind map of themes identified during the interviews

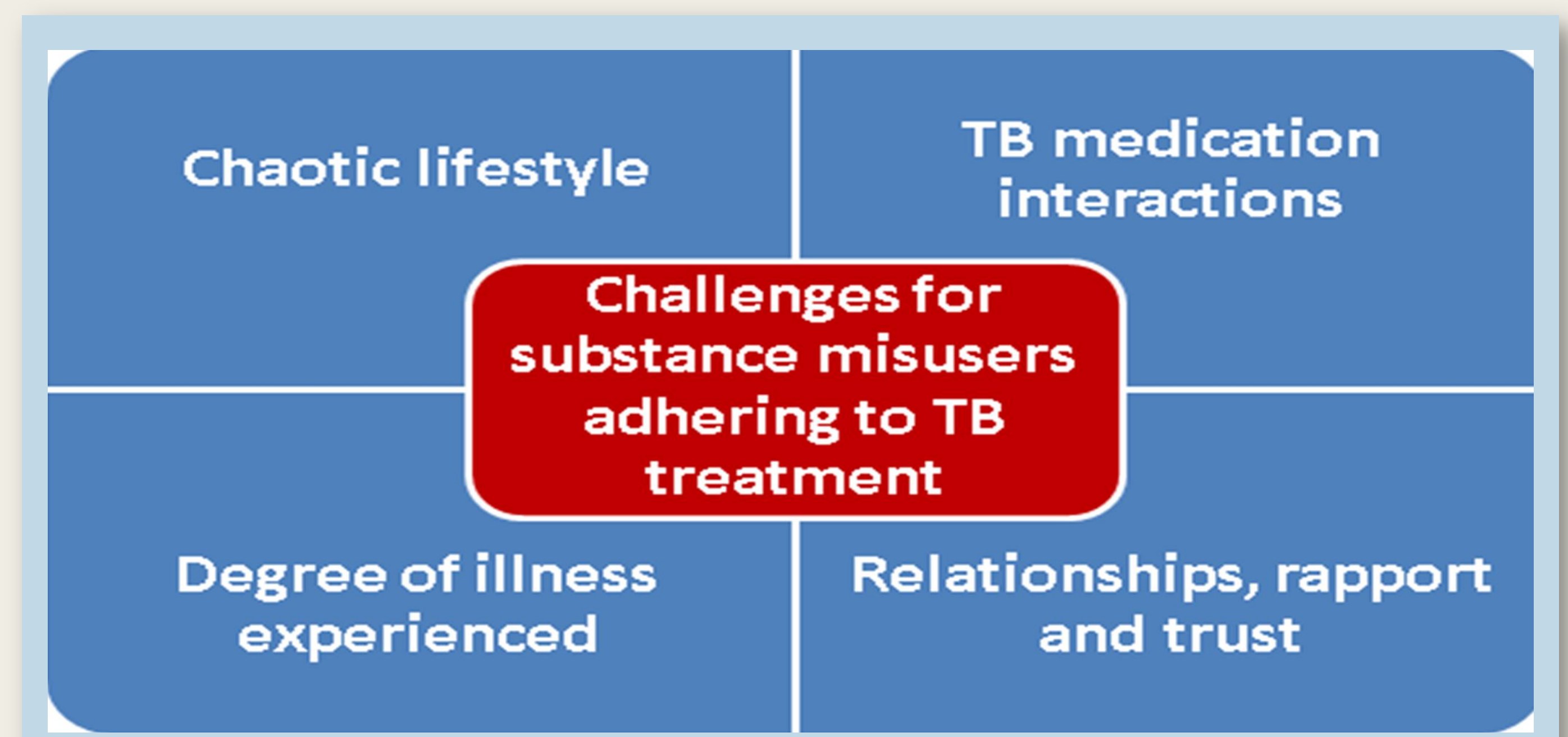


Figure 3. Challenges to treatment adherence for substance misusers

## DISCUSSION

The themes identified within this study as being key in relation to TB treatment adherence suggest that adherence within this population in Leeds is influenced by complex, interrelated social, personal and medical factors.

Whilst the number of substance misusers in Leeds who also have TB is low, less than 10/ year, the participants within this study acknowledged that this group require a higher degree of input from health professionals in order to secure adherence than other patients. Their experience showed that adherence to treatment was greatly improved where the *patient – health professional* relationship was strong.

Health professionals detailed the importance of services that are flexible and responsive and able to meet the needs of patients as they journey along the treatment pathway. The need for flexible service provision has been soundly documented within literature in this field, with many authors acknowledging this to be challenging for the health service within the current economic climate<sup>3, 4</sup>.

The health professionals who participated in this study were clear that their main aim was to ensure patients completed their TB treatment and that by securing adherence to treatment they had the potential to prevent wider public health issues arising.

## CONCLUSIONS

This study aimed to explore, from the health professional's view, the reasons why adults who are substance misusers in Leeds may not adhere to their TB treatment. The findings identified interrelated challenges associated with chaotic lifestyles; relationships, rapport and trust; TB medication interactions; and the degree of illness experienced by the patient, all as being influential in securing adherence.

Despite a variety of public health interventions on a global and national level TB remains of public health significance, with indicator's relating to treatment outcomes included in the current public health outcomes framework for England. In order to achieve the best treatment outcomes for patients, as well as protecting the wider public health, the challenges associated with treatment adherence in underserved populations must be addressed.

Shared responsibility for action across the whole health and social care economy is required in order to secure improvements in treatment adherence for substance misusers. Stakeholders who have the capability to influence local policy must be visible and working in partnership to address the challenges in a holistic manner to positively influence the health outcomes for these patients.

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