



## Health inequalities: Respiratory disease

### Introduction

Respiratory disease is one of the 3 most common causes of mortality in the UK, alongside heart disease and non-respiratory cancers<sup>1</sup>. In 2012, 20% of all deaths in the UK were due to respiratory causes, most commonly lung cancer (6.2%), chronic obstructive pulmonary disease (COPD) (5.3%) and pneumonia (5.1%)<sup>1</sup>. While mortality from heart disease and many non-respiratory cancers is falling, the number of people killed each year by lung disease is staying the same<sup>1</sup>.

### Prevalence and risk factors

Many people supported by learning disability services will have compromised or vulnerable respiratory status<sup>2</sup>. Higher rates of asthma, chronic obstructive pulmonary disease (COPD) and upper respiratory tract infections have been reported for people with learning disabilities<sup>3 4 5 6 7</sup>, as well as poorer measured lung function<sup>8</sup>. For 1,097 adults with learning disabilities in one English city, the prevalence of asthma was 12%, about twice the rate as the local general population<sup>9</sup>.

A systematic review of studies on physical health issues in adults with severe or profound learning and motor disabilities found that the prevalence of respiratory problems ranged from 8% to 27%, with meta-analysis indicating a prevalence rate of 21% (95% Confidence Interval 12%-30% - all ranges in brackets in this document will be 95% CIs)<sup>10</sup>.

A number of factors may increase the risk of respiratory diseases among people with learning disabilities. Dysphagia is common in people with learning disabilities and aspiration pneumonia is considered by many to be the main complication of dysphagia<sup>11</sup>. In people with learning disabilities and dysphagia, oral microbial status is associated with pneumonia and it has been suggested that the oral cavity of people with learning disabilities may serve as a reservoir for bacteria that may be aspirated into the lungs<sup>12</sup>. People with severe or profound learning disabilities who lack the ability to change their position may have their swallowing compromised by poor head to neck posture in the absence of appropriate postural care<sup>13</sup>. Severe scoliosis can also impact on respiratory function.

## Impact on people with learning disabilities

A recent systematic review including studies from other countries reported that respiratory disease and circulatory diseases were the main causes of death of people with learning disabilities, with bronchial pneumonia being the most common cause of respiratory death<sup>14</sup>. In England, respiratory disease has been found to be the most common immediate cause of death among people with learning disabilities (52%), twice as common as for people without learning disabilities (25.6%)<sup>15</sup>. A study using data from 343 GP practices in England found that deaths caused by respiratory diseases were nearly 7 times more common in adults with learning disabilities than in the general population (Hazard Ratio 6.68 (5.38-8.29))<sup>16</sup>. Specifically, pneumonia and aspiration pneumonia as underlying causes of death were noted to be 10 times more common.

A study in London of hospital admissions for respiratory diseases among adults with learning disabilities found that admissions were more frequent (Standardised Admission Ratio (SAR) 4.02 (3.79-4.26)), of longer duration (by 2.34 days (0.03-4.64)) and had a higher likelihood of recurring (Hazard Ratio 1.35 (1.17-1.56)) than among the general population<sup>17</sup>. The SAR was particularly high for lung diseases due to external agents (SAR 15.25 (11.63-19.62)), influenza and pneumonia (SAR 6.28 (5.46-7.19)), and 'other' acute lower respiratory tract infections (SAR 6.21 (5.21-7.35)). Learning disabilities have been reported to be associated with a threefold increase in risk of death due to asthma - OR 3.07 (1.31-7.20)<sup>18</sup>.

British guidelines on the management of asthma note that learning disabilities<sup>19</sup> are a psychosocial risk factor for fatal asthma<sup>20</sup>. One of the recommendations of The Confidential Inquiry into Premature Deaths of People with Learning Disabilities is that adults with learning disabilities should be considered a high-risk group for deaths from respiratory problems<sup>21</sup>.

## Healthcare and treatment

There is little evidence on healthcare and treatment for respiratory disease specifically among people with learning disabilities. Groups for people with poor respiratory health may be inaccessible to people with learning disabilities<sup>2</sup>. One city in Northern England introduced a lung health group specifically for people with learning disabilities and their carers run by physiotherapists and speech and language therapists<sup>2</sup>. Sessions introduced an adapted version of the active cycle of breathing technique (ACBT) with hands-on postural support where required. Whilst a small scale study, the group appeared to improve respiratory skills and carers' knowledge.

Improved recognition and management of dysphagia may reduce the occurrence of associated health conditions such as aspiration pneumonia<sup>11</sup>. Meticulous,

comprehensive oral hygiene may be needed to reduce oropharyngeal microbial load<sup>12</sup>. For people with learning disabilities prescribed inhaled medication, tailored individualised and regularly reinforced inhaler technique instruction is advisable<sup>22</sup>[21]. Education should also be directed to the person's caregiver<sup>22</sup>. Overall, further evidence is needed on how to improve the respiratory health of people with learning disabilities<sup>2</sup>.

## Social determinants

There is a correlation between some of the most common lung diseases (COPD, asthma and lung cancer) and social deprivation<sup>1</sup>. The most socially deprived 20% of the population are two and-a-half times more likely to have COPD and nearly twice as likely to develop lung cancer compared with someone from the least deprived group in society<sup>1</sup>. For COPD and lung cancer, this can be explained in large part by higher rates of smoking, as well as greater exposure to air pollution and workplace dusts and chemicals.

British children with learning disabilities are significantly more likely than their peers to live in localities with high rates of outdoor air pollution<sup>23</sup>. However, we are not aware of any other data relating specifically to people with learning disabilities.

## Resources

City Hospitals Sunderland NHS Foundation Trust [Helping you with your asthma](#)

East and North Hertfordshire NHS Trust [Asthma Easy Read](#)

Asthma UK [Easy Read resources](#) includes asthma attack card, all about asthma, medicine card.

## References

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- <sup>19</sup> The term learning difficulties is used in the guidelines and has been taken to refer to learning disabilities

<sup>20</sup> British Thoracic Society and Scottish Intercollegiate Guidelines Network, British guideline on the management of asthma. *Thorax*, 2014. 69 Suppl 1: p. 1-192

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