Public Health England

Protecting and improving the nation's health

Health inequalities: Cardiovascular disease

Introduction

Cardiovascular disease (CVD) is an umbrella term that describes all diseases of the heart and circulation. It includes congenital or inherited conditions and also those that develop later in life such as ischemic heart disease, atrial fibrillation, heart failure, and stroke[1].

Globally more people die annually from CVDs than from any other cause[2]. Heart disease is the one of England's leading causes of death, with 13.6% of males and 8.3% of females dying from ischemic heart disease[3]. Preventing CVD is a major focus of activity for Public Health England[4] and the NHS England Long-Term Plan[5]. Relevant National Institute for Health and Care Excellence (NICE) guidelines apply, with reasonable adjustments, to people with learning disabilities.

Prevalence and risk factors

Epidemiological research on age-related rates of CVD in people with learning disabilities is scarce and inconclusive[6]. The prevalence of CVD in adults with learning disabilities may be greater and apparent earlier in life than that found in the general population[7]. However, there may be variation depending on type of CVD. Primary care records of nearly 15,000 adults with learning disabilities in England indicate that the prevalence of ischemic heart disease (IHD) is lower than in the general population (prevalence ratio 0.65 (95% CI 0.57, 0.74) but rates of heart failure are higher (prevalence ratio 2.26 (95% 1.84, 2.78) as are rates of stroke and transient ischemic attack (TIA) (prevalence ratio 1.74 (95% CI 1.52 to 1.98)[8].

Data from Scotland also indicate higher rates of heart failure than in the general population (2.5% versus 0.9%) but no difference in the rates of chronic obstructive pulmonary disease, ischemic heart disease, or stroke[9]. Based on English data from the General Practice Extraction Service 2017/18, the proportion of patients with a diagnosis of ischemic heart disease was 1.1% of those with a recorded learning disability, compared to 2.9% of those without[10].

Risk factors for CVD are common in people with learning disabilities. CVDs are associated with some genetic causes of learning disabilities. For example, almost half of all people with Down syndrome are affected by congenital heart defects[11] [12]

[13]. For infants with Down syndrome in North East England, the prevalence of cardiovascular anomalies was 42%, most commonly a complete atrioventricular septal defect (CAVSD)[14]. However, people with Down syndrome seem to be protected from atherosclerosis, arterial hypertension and coronary artery disease[13].

Behaviour related risk factors for CVD identified for the general population are common in people with learning disabilities. People with learning disabilities may have poor diets[15], high rates of obesity[16], high levels of sedentary behaviour[17], and are 'incredibly inactive'[18]. Whilst people with learning disabilities known to specialist services may be less likely to smoke and drink alcohol than the general population, rates are higher amongst those with mild learning disabilities[19]. Evidence also suggests a significantly higher prevalence of diabetes in people with learning disabilities than in the general population[20] which is a risk factor for CVD[1].

Impact on people with learning disabilities

A recent systematic review reported that respiratory disease and circulatory diseases (with greater congenital and lesser ischemic disease compared with the general population) were the main causes of death of people with learning disabilities[21]. The Confidential Inquiry into Premature Deaths of People with Learning Disabilities (CIPOLD) found that heart and circulatory disorders were the most common underlying cause of death of people with learning disabilities (22% of deaths) and the second most common immediate cause of death (21% of deaths) after respiratory disorders (34%)[22]. Deaths occurred at a younger age for both gender groups than in the general population[22].

A systematic review on causes of death of people with Down syndrome found that congenital heart anomalies were reported as the leading primary or underlying cause of mortality in the majority of the studies[23]. Congenital heart anomalies were substantially more common as a cause of death in Down syndrome than the general population[23]. Based on data regarding roughly 5% of the population of England, diseases of the circulatory system were responsible for the largest number of deaths of people with learning disabilities[6]. Myocardial infarction and chronic ischemic heart disease caused the most deaths. After adjusting for age and gender, death rates for these conditions in people with learning disabilities were double those in the general population[6].

Healthcare and treatment

There appears to be no research regarding the healthcare and treatment of CVD generally among people with learning disabilities, although research may exist regarding specific types of CVD. Atrioventricular septal defect of all types can be treated with excellent results in people with Down syndrome[13]. It is possible that there is inadequate identification of some CVDs in people with learning disabilities[8].

CIPOLD found that of the 53 people with learning disabilities whose underlying cause of death was related to the heart and circulatory system, just 15% had had a cardiovascular disease risk assessment recorded[22]. As CVD risk factors are common among people with learning disabilities, proactive screening should take place[24].

Most cardiovascular diseases can be prevented by addressing behavioural risk factors such as tobacco use, unhealthy diet and obesity, physical inactivity and harmful use of alcohol using population-wide strategies[2]. Training can improve the public health knowledge of staff working within learning disability services and this could lead to increased awareness of and attention to the health and wellbeing requirements of individuals[25]. Research exists regarding health promotion for people with learning disabilities in relation to some risk factors for CVD, for example weight management[26], although there is a dearth of evidence on tobacco and alcohol-related health promotion interventions for people with intellectual disability[27].

Social determinants

People in the most deprived areas of England are almost 4 times as likely to die prematurely from CVD compared with those in the least deprived areas[28]. There is also a higher prevalence of many behavioural risk factors (smoking, physical inactivity, eating few than five portions of fruit and vegetables a day, and excess weight) in more deprived areas compared with less deprived areas[29]. However, there does not appear to any data specifically relating to people with learning disabilities.

Resources

Public Health England (2019) Health matters: preventing cardiovascular disease

References

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