Diabetes mellitus

Diabetes is a metabolic condition, associated with insulin insufficiency and resistance, resulting in an inability to regulate blood glucose levels. Type 1 is an auto-immune condition where the pancreatic beta cells that produce insulin are destroyed. Type 2 occurs when the body becomes resistant to the action of insulin, initially compensating by increasing production, the pancreatic beta cells are unable to keep up with demand and eventual beta cell failure ensues.

2.5 million adults have diagnosed diabetes, though many are undiagnosed. The highest PCT rate is 2.5 times the lowest. Type 2 diabetes (>90% of diabetes) increases with age and is strongly associated with obesity, inactivity and ethnicity. Geographical patterns broadly reflect the presence of these risk factors.

Diabetes can lead to long term micro and macro vascular complications including loss of sight. It increases the risk of heart attack and stroke by around a factor of three and end-stage kidney disease by around four.

Compared to people of a similar age, people with Type 1 and Type 2 are 2.6 and 1.6 times, respectively, more likely to die prematurely. This results in 24,000 excess deaths per year.\(^1\)

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\(^1\) The NHS Information Centre, National Diabetes Audit 2007-2008 Mortality Analysis.
Learning disabilities refers to the presence from childhood of significant general difficulty in learning and understanding (see also congenital anomalies), excluding specific learning difficulties such as dyslexia. Around 190,000 adults are registered with a GP as having learning disabilities but it is estimated there are approximately 300,000 children and 900,000 adults affected.

The rate of people with learning disability registered with GPs varies geographically by PCT. The highest rate is around three times that of the lowest.

The rate of learning disabilities varies across age ranges. Low numbers in those aged under nine reflects incomplete recognition. The peak in males aged 10–19 years may reflect a new group of survivors of premature birth. The sharp reduction after the age of 49 reflects reduced life expectancy. The median age of death of people with a learning disability is 25 years younger than that of the general population. Poverty, less healthy lifestyles, worse access to services and (for some) genetic predisposition are likely to contribute to this.

To reduce health inequalities, it is helpful to have more responsive services emphasising early detection of problems, such as annual health checks.
Mental health problems

'Mental health problems' describes all diagnosable mental illnesses/disorders, including personality disorders, common mental disorders such as depression and anxiety, developmental disorders and other less common conditions such as psychosis. They vary in severity, may manifest at different ages, may present as behavioural problems and may be acute or chronic. Dementia is examined separately in this report.

The rate of people with severe mental health problems (schizophrenia, bipolar disorder and other psychoses) registered with a GP varies geographically, ranging from 0.5% to 1.5% of those registered (with an average of 0.8%). It is likely that this does not represent the total population with severe mental health problems.

Trends in prevalence and service use for mental health problems have been informed by English psychiatric morbidity surveys since 1993. These studies show a slight increase and, since 2000, a plateauing of common mental disorders in adults. They also show a strong association between deprivation and many mental health problems which are likely to be both a cause and a result of deprivation.

Many evidence-based treatments exist for mental health problems but to be effective these need to be accessible and timely.

Key facts

- Around 35,800 potential years of life lost (to age 75) in 2010 (2% of all PYLL)
- Around 3,988,000 hospital bed days in 2010/11 (9% of all bed days)
Dementia is a clinical syndrome describing progressive loss of abilities including memory, language, reasoning and activities of daily living. The main causes are Alzheimer’s disease and cerebrovascular dementia (which may be experienced in combination). Less common disorders are Lewy body dementia and fronto temporal dementia. Younger adults can be affected by dementia but the major risk factor is age. To understand local burden, crude rates may be more useful than age standardised rates.

Rates (GP registered) vary by Primary Care Trust, with the highest rate being around four times that of the lowest rate. This reflects different rates of diagnosis and variation in the distribution of elderly populations.

Dementia is a terminal disorder, with people living for 7 to 12 years after diagnosis. However, many die with, rather than of, dementia. Crude mortality rates have been increasing substantially faster than age standardised rates, reflecting the aging population and higher numbers of older people with dementia.

To improve the quality of life of people with dementia, there is a need for timely diagnosis and appropriate access to services across health and social care. Integral to this is support for carers.
Sensory organ diseases, such as sight impairment and loss of hearing, are often preventable. National, systematically collected data for sensory organ diseases is currently difficult to obtain. Individuals with vision below a certain threshold can be offered registration with Social Services. This involves completion of a certificate of vision impairment (CVI) by a consultant ophthalmologist, which includes the cause of sight loss. CVIs are collected centrally but participation in this scheme, and certification, is voluntary.

CVI rates in England increase with age in both sexes, and there is wide geographical variation. Potentially preventable causes include age related macular degeneration (wet and dry), glaucoma and diabetic eye disease. These accounted for 59% of all CVIs in 2010/11.

The National Survey of Hearing and Communication 2011 examined hearing in the over 60s. It showed that 45% of men and 39% of women had some sort of hearing impairment in their ‘better hearing’ ear. Over 50% of those with severe hearing impairment in their ‘better hearing’ ear reported not having any hearing aid.
Cardiovascular disease (CVD) is a general term for a disease of the heart or blood vessels. In 2010, CVD was responsible for around one in three premature deaths (under 75) in men and one in five premature deaths in women. Coronary heart disease (CHD) and stroke are the main causes of CVD mortality.

In 2010, 35% of deaths in men, and 16% in women, from CVD occurred in under 75s, though the premature mortality rate from CVD fell by 36% between 2001 and 2010. CVD mortality varies geographically by local authority, with the highest rate 2.5 times that of the lowest. There is a clear North/South divide, and rates are 1.4 times higher in the most deprived areas than the least deprived.

The majority of people affected by CVD are from a white ethnic background, with crude rates higher than in other ethnic groups. However, CVD risk is higher for Pakistani and Irish males.

Most deaths due to CVD could be prevented through lifestyle changes. Identifying people with medical risks (e.g. diabetes, high blood pressure, high cholesterol, familial hypercholesterolemia, previous CVD event) and ensuring they receive effective treatment will help to reduce mortality due to CVD.
Cardiovascular disease – coronary heart disease

Coronary heart disease (CHD) occurs when the coronary arteries are interrupted by a build-up of fatty substances (atheroma). This can cause a heart attack. CHD was the biggest single cause of death in 2010, responsible for around 65,000 deaths.

In 2010, CHD accounted for 44% of all mortality from cardiovascular disease (CVD), and 54% of under 75 deaths. 31% of all CHD mortality was in under 75s.

Estimated prevalence rates of CHD generally reflect the North/South divide seen for all cardiovascular diseases. People of South Asian origin are at higher age adjusted risk of CHD than the general population.

Effective identification and treatment of CHD (particularly in primary care) should continue the reduction in CHD mortality. Early identification and treatment of associated risk factors such as high blood cholesterol will support this.

The incidence of CHD could substantially reduce with wider adoption of preventative behaviours such as eating a healthy diet, maintaining a healthy weight, exercising regularly, not smoking and avoiding harmful drinking.

Mortality, morbidity and wellbeing

Key facts

- Around 222,900 potential years of life lost (to age 75) in 2010 (10% of all PYLL)
- Around 1,166,000 hospital bed days in 2010/11 (3% of all bed days)
- Acute myocardial infarction accounted for 41% of PYLL and 33% of bed days for coronary heart disease

Estimated prevalence of coronary heart disease (angina or heart attack) in persons aged 16 years and over by upper tier local authority, England, 2009

Source: APHO CHD prevalence model. (Provided by ERPHO)

Percentage of the population (aged 16+) with CHD (defined as doctor-diagnosed heart attack or angina)
Cardiovascular disease (CVD) includes cerebrovascular diseases (CBVD). Stroke is the most common CBVD. The two main types are ischaemic stroke (65%) where a clot blocks an artery carrying blood to the brain and haemorrhagic stroke (15%) caused by bleeding into the brain. The risk of ischaemic stroke increases with age. Haemorrhagic strokes tend to occur in younger people and are more often fatal or severely disabling than ischaemic stroke.

There were 74,000 emergency admissions for stroke in 2010/11, 89% of all CBVD emergency admissions. Most people with severe strokes survive to admission. Rates of emergency admissions were lower in 2010/11 than in 2001/02, but have shown an increase since 2007/08. This is likely to be due to raised public awareness of symptoms and better coding for admissions.

Hospital emergency admission rates for stroke vary geographically by PCT with the highest rate almost 3 times that of the lowest. The geographical distribution of stroke reflects that of risk factors, particularly high blood pressure.

Wider adoption of preventative behaviours will help to reduce the population risk of stroke. Effective secondary prevention for high risk groups e.g. people with high blood pressure, cholesterol levels and/or a history of CVD will also reduce levels of illness and mortality.

**Key facts**

- Around 74,400 potential years of life lost (to age 75) from cerebrovascular disease (mainly stroke) in 2010 (3% of all PYLL).
- Around 1,721,000 hospital bed days due to stroke in 2010/11 (4% of all bed days).
Respiratory diseases affect the airways, lungs and respiratory muscles that are involved in gas exchange. They include both infectious diseases and chronic respiratory diseases such as Chronic Obstructive Pulmonary Disorder (COPD) and asthma. They are among the most common causes of death in young infants and the very old.

Exposure to occupational hazards, urban air pollution, smoking and second-hand smoke (which increases risk of acute bronchiolitis in infants) all increase the risk of respiratory disease.

Mortality due to respiratory diseases varies geographically, reflecting the urban/rural split and smoking patterns. An overall reduction over time is likely to be influenced by reductions in smoking. In 2010, infectious respiratory diseases accounted for over 40% of all mortality due to respiratory diseases.

Respiratory health can be protected by ensuring appropriate standards for air pollution and occupational hazards are monitored and enforced. This is conducted through the Health and Safety Executive (HSE) and local environmental health. Respiratory health is also supported by promoting smoking cessation and ensuring high uptake rates for pneumococcal and annual influenza vaccinations.

### Key facts
- Around 144,300 potential years of life lost (to age 75) in 2010 (6% of all PYLL)
- Around 4,297,000 hospital bed days in 2010/11 (10% of all bed days)
- Main causes – PYLL: COPD (38%); infectious respiratory diseases (35%)
- Main causes – bed days: infectious respiratory diseases (58%); COPD (18%)

### Respiratory diseases – all

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### Trend in mortality due to respiratory diseases (and sub-categories) by deprivation, England, 2001 to 2010

<table>
<thead>
<tr>
<th>Year</th>
<th>Urban respiratory diseases</th>
<th>COPD</th>
<th>Asthma</th>
<th>Other respiratory diseases</th>
</tr>
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<td>120</td>
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### Average annual mortality due to respiratory diseases by upper tier local authority, England, 2008-10

Source: Mortality, morbidity and wellbeing
Chronic Obstructive Pulmonary Disease (COPD) is a group term for some chronic lung diseases such as chronic bronchitis and emphysema. Asthma also affects breathing due to inflammation of the airways, and triggers can cause acute attacks.

Geographical patterns of COPD reflect smoking patterns and exposure to some occupational hazards. Both COPD and asthma (in children and adults) exhibit a clear relationship with deprivation, with higher rates of both in the most deprived areas.

The most common cause of COPD is smoking. Smoking cessation leads to a gradual reduction in risk. The most effective preventative approach for smokers is to encourage smoking cessation.

For those with COPD, secondary prevention, such as quitting smoking and receiving influenza vaccinations, is advisable. Onset of asthma can occur at any age. Around one third of childhood-onset asthmatics remain symptomatic into adulthood. Neither COPD nor asthma can be cured, but symptoms (particularly for asthma) can be treated.

For asthma, controlling exposure to triggers, particularly second-hand smoke and air pollution, will help prevent acute events. Given effective symptom control exists, early identification and provision of integrated care models is key to managing asthma.

**Prevalence of asthma and COPD by age and sex, England, 2010**

**Estimated prevalence of COPD in persons aged 16 years and over by upper tier local authority, England, 2009**

**Key facts**
- Around 54,800 potential years of life lost (to age 75) in 2010 and 777,000 hospital bed days in 2010/11 due to COPD (2% of all PYLL / bed days)
- Around 6,600 potential years of life lost (to age 75) in 2010 and 163,000 hospital bed days in 2010/11 due to asthma (<1% of all PYLL / bed days)
This section refers to all disorders in the ICD10 chapter 'Diseases of the digestive system', excluding diseases of the oral cavity, salivary glands and jaws, plus 'oesophageal varices' as part of the Gastrointestinal (GI) bleeding category.

There has been a slight downward trend in mortality from most digestive diseases in recent years. The notable exception is mortality from cirrhosis of the liver, which showed a generally upward trend, with rates in 2010 significantly higher than those of 2001. In 2010, the rate of digestive diseases in the most deprived areas was 2.6 times that of the least deprived. Making an equivalent comparison, mortality from cirrhosis was nearly four times higher in the most deprived areas.

Between 2001/02 and 2010/11, rates of hospital admissions for digestive diseases increased by nearly a third. It is unclear whether this reflects increasing prevalence of digestive disorders or a change in clinical treatment or coding of admissions. Of the 1.5 million hospital admissions in 2010/11, GI bleeding, diverticular disease and inflammatory bowel disease each accounted for 6%, appendicitis 3% and cirrhosis 1%.

Key facts
- Around 173,800 potential years of life lost (to age 75) in 2010 (8% of all PYLL)
- Around 3,370,000 hospital bed days in 2010/11 (8% of all bed days)
- Main cause – PYLL: cirrhosis of the liver (59%)
Liver disease is one of the few major causes of premature mortality that is increasing. Liver disease refers to damage likely to interfere with vital liver functions and results in progressive scarring (fibrosis). Cirrhosis (an advanced stage of fibrosis) confers additional risk of liver failure, variceal haemorrhage or liver cancer. It accounts for 83% of deaths from ‘diseases of the liver’. Mortality rates for liver disease vary widely by local authority, though even the lowest rates remain higher than UK rates in the 1980s.

Where a local authority age standardised liver disease mortality rate is higher than 20 per 100,000 population, this is likely to be due to local alcohol culture or undiagnosed hepatitis infection. This is the case in 50 local authorities. Between 2001 and 2010, there was a general upward trend in mortality from liver disease from 13.9 to 16.6 per 100,000 population.

The four main drivers of increasing liver disease (alcohol, obesity and chronic hepatitis B and C infection) are preventable. Long-term reduction of mortality due to liver disease requires concerted public health action on these drivers, better awareness amongst the public of their liver health, and greater effort by service providers to proactively detect early signs of liver disease.
Genitourinary diseases

Chronic kidney disease (CKD) is a common genitourinary disease. CKD is defined as reduced kidney excretory function or the presence of kidney damage (proteinuria) for more than 3 months. The 2009-10 Health Survey for England estimates prevalence of ‘CKD 3-5’ (about 50% loss of function) as 6% of men and 7% of women. CKD rates increase with age, and to a much lesser extent with deprivation.

CKD may progress to end stage kidney failure, potentially requiring renal replacement therapy (RRT), i.e. dialysis or transplantation, but the most common outcome is cardiovascular mortality. Other risks of CKD include anaemia, infection, fractures and reduced quality of life as kidney function falls.

2008-10 mortality rates for all genitourinary diseases (including CKD) show geographical variation, appearing to mirror socioeconomic demographic patterns.

The downward trend in mortality rates since 2007 coincides with the introduction of a national primary care prevention strategy and stabilisation of the RRT acceptance rate. Reduced mortality could be due to falling incidence rates of CKD or reduced mortality in those developing CKD, or both.

The downward mortality trend can be supported by ensuring access to services for those with CKD, particularly those requiring RRT.

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The ICD 10 chapter definitions of ‘diseases of the skin and subcutaneous tissues’ (L00-L99) is used to calculate the key facts presented here. ‘Skin conditions’ additionally include benign and malignant skin lesions and skin infections. Whilst rarely fatal, skin conditions cause substantial loss of quality of life.

In 2010 an estimated 24% of the population of England and Wales presented to their GP with a skin condition. Skin conditions were the most common reason for a new GP consultation. Most GP consultations regarding the skin are due to ten categories of common conditions.

The most common skin conditions presenting to GPs are skin infections and eczema; 20% of children under one year old present with eczema. Primary care data suggests that skin disease is neither increasing nor decreasing.

GPs refer around 6% of patients with skin conditions for specialist advice.

National, systematically collected data from specialist dermatology centres is not available. However, it is likely that skin lesions/cancer are the most common reason for referral to specialist care.

Skin diseases

Skin infections
Other
Eczema
Symptoms involving the skin
Intracutaneous gland disease (lumps)
Hair and nail disorders
Paresthesia
Urticaria

Key facts
- Around 4,300 potential years of life lost (to age 75) in 2010 (<1% of all PYLL)
- Around 868,000 hospital bed days in 2010/11 (2% of all bed days)

Prevalence of common skin conditions in persons presenting in primary care by age and sex, England, 2010

Common skin conditions in persons presenting in primary care, England, 2010

1. RCGP Research and Surveillance Unit, personal communication.
Disorders of joints, muscles and bones are major causes of pain and disability. National data on the full extent and impact of some musculoskeletal diseases are often difficult to obtain. Two key conditions are osteoporosis and rheumatoid arthritis (RA).

Osteoporosis is a progressive, preventable condition of bone fragility, particularly prevalent in post-menopausal women. In the over 65s, hip fracture is mostly due to falls in those with osteoporosis. Differing geographical rates for hip fractures probably reflect the underlying prevalence of osteoporosis.

There were 50,000 emergency admissions for hip fracture in 2010/11 and an estimated 60,000 hip fractures1. Bone strength can be increased through physical activity, good nutrition, avoiding smoking and avoiding harmful drinking.

RA, an auto-immune disease, is a severe form of arthritis. Just under 0.5% of GP registered patients have a recorded diagnosis. This probably underestimates the prevalence. It can manifest at any age, but usually manifests in 50-80 year olds. Rates are highest in the South West, possibly reflecting underdiagnosis in other regions. Early identification and treatment prevents pain, disability and lasting skeletal damage.

1 Personal communication, 2012, National Hip Fracture Database
There are more children who are free from obvious dental decay than those who have at least one decayed, missing or filled tooth (dmft in deciduous teeth/DMFT in permanent teeth), 69% of 5 years olds and 67% of 12 year olds.

However, around a third of all children display some degree of poor dental health. On average, five year olds with experience of dental caries have had 3.5 teeth affected. There is wide variation between PCTs, with 18% to 53% of five year olds having had dental caries experience.

Variation is also seen across PCTs in 12 year olds, with 13% to 56% having had dental caries experience. Overall, 33% of children have had dental caries experience, and for those affected the average number of decayed, missing or filled teeth is 2.2.

Good dental health starts in childhood. To address geographic and socioeconomic differences in child dental health, further action is needed to promote dental hygiene and improve children’s diets, particularly limiting the quantity of, and frequency of consumption of sugary foods and acidic foods. The use of toothpaste with the most effective fluoride content should be encouraged. At a community level, there is evidence for the effectiveness of water fluoridation.

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**Dental caries experience in 5 and 12 year olds by deprivation, England, 2007/08 and 2008/09 respectively**

**Proportion of 5 year olds with dental caries experience by primary care trust, England, 2007/08**

**Proportion of 12 year olds with dental caries experience by primary care trust, England, 2008/09**
Dental disease – adult

Poor dental health can lead to considerable pain, infection and psychological distress. The retention of 21 or more natural teeth is regarded as the minimum number of teeth consistent with a functional dentition, enabling most individuals to eat in comfort without the need for a partial denture.

In 2009, 71% of adults reported good/very good dental health1. This response was more common in younger adults, aged 16-24 (79%), than in older adults aged 75-84 (71%). Over three quarters of adults from managerial and professional households reported good/very good dental health compared to two thirds from routine and manual occupational households.

Around 86% of dentate adults had 21 or more natural teeth. The proportion fell significantly with age, reflecting loss of teeth throughout life. 100% aged 16-24 had 21 or more natural teeth, compared with 91% of 45-54 year olds and 40% of adults aged 75 and over.

Further improvements in dental health can be achieved through promoting good oral hygiene, and regular dental checks, while encouraging a reduction in the quantity of, and frequency of, consumption of sugary foods. As smoking causes gum disease, encouraging smoking cessation will improve dental health.

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1 Adult Dental Health Survey, 2009, Health and Social Care Information Centre
Injuries contribute considerably to mortality, to temporary and permanent disability and are financially costly to society. In 2010, there were 15,915 deaths due to injury. In 2010/11, there were 798,024 emergency hospital admissions due to injury.

Injuries are a leading cause of death in children. Suffocation is the main cause of death from injury in children under five, whereas motor vehicle traffic accidents lead to most deaths in children over five and teenagers. Self-inflicted injury and injury of undetermined intent are also considerable causes of death in young people.

People aged over 75 experience the highest rates of death and hospital admission due to injury, with falls being the leading cause. Injuries from motor vehicle traffic accidents, self-inflicted injury and suffocation are also of particular concern in this age group.

There is a relationship between injury and deprivation. In 2010, those living in the most deprived areas had nearly twice the rate of mortality due to injury compared to the least deprived.

Injuries are a key public health concern, as they are often preventable. Strategies and policies relating to children, young people and older people need to incorporate injury prevention.

**Key facts**

- Around 304,200 potential years of life lost (to age 75) in 2010 (13% of all PYLL).
- Around 3,441,000 emergency hospital bed days in 2010/11 (8% of all bed days).
- Main causes – PYLL: intentional self-harm/injury of undetermined intent (39%), motor vehicle traffic accidents (16%).
- Main cause – bed days: accidental falls (58%).

**Average annual mortality due to injuries (and sub-categories) by age and sex, England, 2008-10**

**Average annual mortality from all injuries by upper tier local authority, England, 2008-2010**

**Trend in mortality due to all injuries (and sub-categories) by deprivation, England, 2001 to 2010**

**Emergency hospital admissions due to injuries by type and age, England, 2010/11**

**Source:** Death registrations and 2008 to 2010 population estimates. ONS. (Analysis by DH)

**Source:** Hospital Episode Statistics (HES), Health and Social Care Information Centre. Crown Copyright © 2012. (Analysis by PHSO, led by EMPIRE)
In 2010, there were 1,461 deaths due to motor vehicle traffic accidents. In 2010/11 there were 27,779 emergency hospital admissions and motor vehicle traffic accidents were the leading cause of death from injury in children aged over five and teenagers. Mortality and injury are a particular issue for young people in more deprived areas.

Deaths in 2010 (where the role of the victim was specified) involved 789 (54%) occupant of motor vehicles, 325 (22%) motor cyclists, 322 (16%) pedestrians and 49 (3%) pedal cyclists.

Males accounted for 75% of all motor vehicle traffic deaths in 2008/10, and 96% of motor cyclist deaths. The highest rates of death occurred in those aged 15-24 and 85+. Two thirds of deaths in the younger group were vehicle occupants and only 20% were pedestrians, whereas 46% of the older group were motor vehicle occupants and 45% were pedestrians.

Mortality and serious injury due to motor vehicle traffic accidents have significantly reduced over the last decade. Various road safety campaigns and regulations, including car safety improvements, are likely to have contributed to this. Mortality could be further reduced by continuing to improve road safety for all users, including pedestrians and cyclists.

Injuries – road traffic accidents

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Emergency hospital admissions due to motor vehicle traffic accidents by type and age, England, 2010/11

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Key facts

- Around 48,500 potential years of life lost (to age 75) in 2010 (2% of all PYLL)
- Around 105,000 emergency hospital bed days in 2010/11 (<1% of all bed days)
- Injured motor vehicle occupants accounted for 55% of PYLL and 42% of bed days for motor vehicle traffic accidents. Injured motorcyclists accounted for 24% of PYLL.
In 2010, there were 1,395 deaths recorded as due to accidental poisoning, with 583 (42%) of deaths due to narcotics and hallucinogens, 580 (42%) to other drugs, medicaments and biological substances and 173 (12%) to alcohol. However, alcohol may have played a role in other deaths.

While the reasons are unclear, the recent trend in drug-related deaths recorded as due to mental and behavioural disorders (drug abuse and drug dependence) is downwards and deaths due to accidental poisoning are increasing.

Nearly three quarters (73%) of deaths due to accidental poisoning in 2008-10 were in males. The majority of deaths were in 20-59 year olds. The mortality rate for those living in the most deprived area was more than four times higher than the least deprived area in 2010.

In 2010/11 there were 24,226 emergency hospital admissions due to accidental poisoning.

Interventions to prevent accidental poisoning need to be tailored to the type of poisoning. For example, supporting people to avoid or stop illegal drug use and supporting safe use of substances could reduce mortality due to narcotics and hallucinogens.

Key facts

- Around 46,100 potential years of life lost (to age 75) in 2010 (2% of all PYLL)
- Around 34,000 emergency hospital bed days in 2010/11 (<1% of all bed days)
- Main cause – PYLL: narcotics and hallucinogens (47%)
- Main cause – bed days: other drugs, medicaments and biological substances (67%)

In 2010 there were 3,353 deaths due to falls (plus 1,817 deaths from fractured femur in unspecified accident, which are mostly due to falls) and in 2010/11 there were 348,115 emergency hospital admissions.

Falls are a leading cause of emergency admissions in older people and of admissions due to injuries in children, but the causes differ between age groups. In children injury is often due to misjudgement of risk during play and can also raise issues of safeguarding. In older people it often reflects greater risk and vulnerability to falls, often due to osteoporosis.

Fall injuries in older people, e.g. hip fracture, can lead to loss of mobility and independence, requiring a subsequent move into a care home for many. Older people have the highest rate of deaths due to falls.

The mortality rate due to falls in the most deprived areas is nearly double that of the least deprived areas.

Fall prevention interventions in older people include exercise programmes, use of stair rails and mobility aids and review of diet and medication. For children, they include use of stair gates, window locks and improving play equipment and sports safety.

<table>
<thead>
<tr>
<th>Injury Type</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Falls</td>
<td>3,353 deaths in 2010, 348,115 emergency admissions in 2010/11</td>
</tr>
<tr>
<td>Fractured femur</td>
<td>Often due to falls, mostly in older people</td>
</tr>
</tbody>
</table>

**Key facts**
- Around 17,000 potential years of life lost (to age 75) in 2010 (<1% of all PYLL)
- Around 1,985,000 emergency hospital bed days in 2010/11 (5% of all bed days)

**Average annual mortality due to accidental falls by age and sex, England, 2008-10**

- Male: 0.1% of all deaths
- Female: 0.3% of all deaths

**Average annual mortality due to accidental falls by upper tier local authority, England, 2008-10**

**Trend in mortality due to accidental falls by deprivation, England, 2001 to 2010**

**Directly age standardised rate, per 100,000 population**

- 2001: 1,150 deaths
- 2010: 800 deaths

**Source:** Death registrations and 2008 to 2010 population estimates, ONS. (Analysis by DH)
Suicide estimates include deaths of undetermined intent as most are likely to be suicides. While death rates are generally low in adolescents and young adults, suicide is a major cause of premature mortality. Self-harm is especially common in young people; it is a clear sign of distress and a risk factor for suicide.

While the long term trend in suicide rates has been declining, the most common method of suicide (hanging, strangulation and suffocation) has been increasing in prevalence (52% of suicides in 2010 compared to 45% in 2001).

Defined by hospital attendance (as opposed to admission), self-harm has been falling for several years; however actual prevalence is difficult to estimate as many self harmers are reluctant to seek medical help. Despite this, deliberate self-harm, particularly drug related poisoning and cutting, is in the top five causes of acute medical admission.

To further reduce suicide mortality rates, local and national action should be joined up. This would encourage a stronger focus on wellbeing for the whole population, and strengthen services for high risk groups such as mental health patients and offenders. Other effective interventions include reducing access to means and tackling local hotspots.

Emergency hospital admissions due to intentional self-harm by type and age, England, 2010/11

Injuries – suicide and self-harm

Suicide estimates include deaths of undetermined intent as most are likely to be suicides. While death rates are generally low in adolescents and young adults, suicide is a major cause of premature mortality. Self-harm is especially common in young people; it is a clear sign of distress and a risk factor for suicide.

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Injuries – violence

Victims of violence often suffer ongoing health, emotional and social problems. Childhood exposure to violence increases the risk of health damaging behaviour later and conditions such as mental illness, obesity, cancer and heart disease. It also increases risks of further violence, as either victim, perpetrator, or both.

In 2010/11, violence resulted in 33,000 emergency hospital admissions and around ten times as many emergency department attendances. Mortality due to violence was significantly lower in 2010 than in 2001, but this has not been a linear decrease.

Mortality rates are highest in young males. Higher rates of hospital admissions and mortality due to violence are associated with deprivation.

Some forms of violence are largely hidden e.g. child abuse, elder maltreatment and intimate partner (domestic) and sexual violence.

Health professionals (particularly midwifery and health visitor services) are well placed to identify and support victims, and to implement primary violence prevention. There is strong evidence that early life interventions, such as nurse home visiting and parenting programmes, can have sustained benefits in preventing violence.

Key facts
- The figures on mortality from violence are based on final (rather than original) cause of death.
- Around 23,300 potential years of life lost (to age 75) in 2010 (1% of all PYLL)
- Around 43,000 emergency hospital bed days in 2010/11 (<1% of all bed days)
### International classification of disease (ICD) 10 codes

#### CHAPTER 2 TOPIC  CATEGORY  ICD 10 CODE

#### All cause mortality

<table>
<thead>
<tr>
<th>All causes mortality*</th>
<th>Deaths data: All deaths (including neonatal)</th>
<th>A00-A99, G00, G03-G04, J00-J93, Z05-Z09, Z20-Z22, H00-H59</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-categories:</td>
<td>Infectious and parasitic diseases (excluding otitis media)</td>
<td>A00-A09, G90, G03-G04, N00-N73, J00-J22, H50-H59</td>
</tr>
<tr>
<td>Malignant neoplasms</td>
<td>C00-C97</td>
<td></td>
</tr>
<tr>
<td>Neurosympathetic lesions</td>
<td>F01-F98, G06-G09</td>
<td></td>
</tr>
<tr>
<td>Cardiovascular diseases</td>
<td>H00-H99</td>
<td></td>
</tr>
<tr>
<td>Respiratory diseases (excluding infectious respiratory diseases)</td>
<td>J00-J99</td>
<td></td>
</tr>
<tr>
<td>Injuries</td>
<td>V61-V89 (for deaths: plus U50-9)</td>
<td></td>
</tr>
<tr>
<td>Other causes</td>
<td>All causes minus sub-categories above (for deaths: includes all neonatal deaths)</td>
<td></td>
</tr>
</tbody>
</table>

#### Communicable diseases*

<table>
<thead>
<tr>
<th>Infectious and parasitic diseases; for deaths and hospital admissions data: excluding otitis media</th>
<th>A00-A99, G00, G03-G04, N00-N73, J00-J22, H50-H59</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-categories:</td>
<td>Infectious respiratory diseases (including otitis media)</td>
</tr>
<tr>
<td>Influenza (and all nested under this)</td>
<td>A00-A09 excluding A09</td>
</tr>
<tr>
<td>Malignant neoplasms for incidence: excluding melanoma skin cancer</td>
<td>C00-C97</td>
</tr>
</tbody>
</table>

#### All cancers

<table>
<thead>
<tr>
<th>Malignant neoplasms for incidence: excluding melanoma skin cancer</th>
<th>C00-C97</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-categories:</td>
<td>Mouth, pharynx and salivary glands</td>
<td>C00-C14</td>
</tr>
</tbody>
</table>

#### Diarrhoea and enteritis

| Diarrhoea and enteritis | C15 |                                                             |

#### Infections

<table>
<thead>
<tr>
<th>Infections</th>
<th>C18-C20</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-categories:</td>
<td>Colon, rectosigmoid junction and rectum</td>
<td>C18-C20</td>
</tr>
<tr>
<td>Liver</td>
<td>C22</td>
<td></td>
</tr>
</tbody>
</table>

#### Fetus (and premature birth)

<table>
<thead>
<tr>
<th>Fetus (and premature birth)</th>
<th>C25</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-categories:</td>
<td>Malignant melanoma of skin</td>
</tr>
</tbody>
</table>

#### Dementia*

| Dementia | C71 |

#### Deaths data: All deaths

<table>
<thead>
<tr>
<th>Deaths data: All deaths (including neonatal)</th>
<th>C00-C97</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-categories:</td>
<td>Malignant melanoma of skin</td>
<td>C43</td>
</tr>
</tbody>
</table>

#### Diabetes mellitus*

<table>
<thead>
<tr>
<th>Diabetes mellitus*</th>
<th>Note: PYP and hospital bed days not calculated due to data concerns. Mortality data taken for the National Diabetes Audit</th>
</tr>
</thead>
</table>

#### Mortality, morbidity and wellbeing

<table>
<thead>
<tr>
<th>Mortality, morbidity and wellbeing</th>
<th>All diabetes</th>
<th>E10-E14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-categories:</td>
<td>Insulin-dependent diabetes</td>
<td>E10</td>
</tr>
<tr>
<td></td>
<td>Non-insulin dependent diabetes</td>
<td>E11</td>
</tr>
</tbody>
</table>

#### Mental health problems*

<table>
<thead>
<tr>
<th>Mental health problems*</th>
<th>Psychiatric disorder</th>
<th>F04-F69, F80-F99</th>
</tr>
</thead>
</table>

#### Sense organ diseases*

<table>
<thead>
<tr>
<th>Sense organ diseases*</th>
<th>All sense organ diseases</th>
<th>H00-H61, H68-H93</th>
</tr>
</thead>
</table>

#### Cardiovascular diseases - all*

<table>
<thead>
<tr>
<th>Cardiovascular diseases - all*</th>
<th>Cardiovascular disease</th>
<th>I00-199</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-categories:</td>
<td>Coronary heart disease (including acute myocardial infarction)</td>
<td>I20-25</td>
</tr>
</tbody>
</table>

#### Respiratory diseases - all*

<table>
<thead>
<tr>
<th>Respiratory diseases - all*</th>
<th>Respiratory disease</th>
<th>J00-J99</th>
</tr>
</thead>
</table>

#### Other causes (including STIs and other causes not included in sub-categories above)

<table>
<thead>
<tr>
<th>Other causes (including STIs and other causes not included in sub-categories above)</th>
<th>C25</th>
</tr>
</thead>
</table>

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1. For data on preventable and non-preventable sight loss, ICD-9 codes were used to categorize the cause of sight loss. For glaucoma: 836 (and all nested under this) and a bespoke code to identify secondary glaucoma. For diabetes: 362.0, 362.01, 362.02 and a bespoke code to identify diabetic maculopathy. For Age-Related Macular Degeneration (AMD): 362.5, 362.51, 362.52 and 362.53. The preventable sight loss category is all glaucoma and diabetic maculopathy and AMD cases. Please note that a number of the cases falling into this group may not be preventable.

2. For data from the Health Survey for England informants are classified as having any CVD condition if they reported having any of the following conditions confirmed by a doctor: angina, heart attack, stroke, heart murmur, irregular heart rhythm, ‘other heart trouble’. High blood pressure and diabetes are not included in this definition. Informants are classified as having CHD if they reported having angina or a heart attack confirmed by a doctor.
### International classification of disease (ICD) 10 codes (continued)

<table>
<thead>
<tr>
<th>CHAPTER 2 TOPIC</th>
<th>CATEGORY</th>
<th>ICD 10 CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Respiratory diseases - COPD and asthma</strong></td>
<td>COPD</td>
<td>J40-J44</td>
</tr>
<tr>
<td>Asthma</td>
<td>J45-J46</td>
<td></td>
</tr>
<tr>
<td><strong>Digestive diseases</strong></td>
<td>Digestive diseases</td>
<td>K20-K92, R85</td>
</tr>
<tr>
<td><strong>Liver</strong></td>
<td>Liver</td>
<td>B15-B19</td>
</tr>
<tr>
<td><strong>Skin diseases</strong></td>
<td>Skin diseases</td>
<td>L00-L99</td>
</tr>
<tr>
<td><strong>Musculoskeletal diseases</strong></td>
<td>Musculoskeletal diseases</td>
<td>M00-M99</td>
</tr>
<tr>
<td><strong>Dental disease - child and Dental disease - adult</strong></td>
<td>Dental - child and adult</td>
<td>K00-K14</td>
</tr>
<tr>
<td><strong>Injuries - all</strong></td>
<td>Injuries</td>
<td>S00-T98, V02-V04, Y02-Y04, Z00-Z99</td>
</tr>
<tr>
<td><strong>Injuries - road traffic accidents</strong></td>
<td>Motor vehicle traffic accidents</td>
<td>V02-V04, V06-V08, V20-V28, V30-V39, V80-V84, Y02-Y04, Z00-Z99</td>
</tr>
<tr>
<td><strong>Injuries - falls</strong></td>
<td>Accidental falls</td>
<td>W00-W19</td>
</tr>
<tr>
<td><strong>Injuries - poisoning</strong></td>
<td>Accidental poisoning</td>
<td>X40-X49</td>
</tr>
<tr>
<td><strong>Injuries - violence</strong></td>
<td>Violence</td>
<td>X85-Y09</td>
</tr>
</tbody>
</table>

### Mortality, morbidity and wellbeing

<table>
<thead>
<tr>
<th>CHAPTER 2 TOPIC</th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Injuries - poisoning</strong></td>
<td>Other and unspecified motor vehicle traffic accident</td>
<td>V02-V04, V06-V08, V20-V28, V30-V39, V80-V84, Y02-Y04, Z00-Z99</td>
</tr>
<tr>
<td><strong>Injuries - violence</strong></td>
<td>Accidental falls</td>
<td>W00-W19</td>
</tr>
<tr>
<td><strong>Injuries - suicide and self-harm</strong></td>
<td>Intentional self-harm and injuries of undetermined intent</td>
<td>X60-X69, Y10-Y19</td>
</tr>
</tbody>
</table>

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1. Note: hospital activity (admissions, bed days) data is based on diagnosis (any position) S00-T98 plus cause code as specified EXCEPT for map of hospital admissions due to violence by upper tier local authority, which is based on cause code only.

2. Use for hospital activity data only, plus Y02-04.