

Protecting and improving the nation's health

The mental health of children and young people in London

Contents

| Background and aims | 3 |
|---|----|
| The importance of mental health for children and young people (CYP) | 4 |
| Facts about mental health illness in CYP | 6 |
| Why invest in CYP mental health? | 10 |
| Mental health statistics | 11 |
| Common mental health conditions in children and young people | |
| Anxiety disorders | 15 |
| Attention deficit hyperactivity disorder (ADHD) | 16 |
| Conduct disorder | 17 |
| Depression | 18 |
| Eating disorders | 19 |
| Schizophrenia | 20 |
| Self-harm and suicide | 21 |
| Useful resources | 22 |
| References | 24 |
| Picture credits | 31 |
| Acknowledgements | 32 |

Background and aims

Background

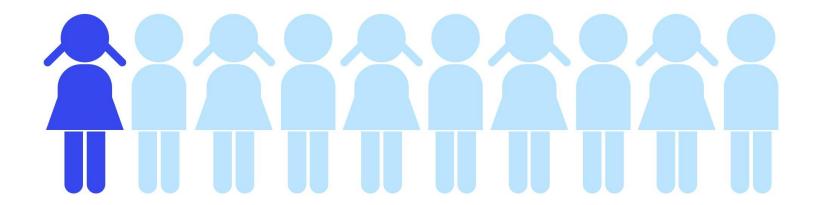
The emotional health and wellbeing of children is just as important as their physical health and wellbeing. Over the past few years there has been a growing recognition of the need to make dramatic improvements to mental health services for children and young people (CYP). This has resulted in:

- significant investment in these services
- the development of Local Transformation Plans outlining how Clinical Commissioning Groups (CCGs) and CCG consortia, working with partner agencies will use the new funding to improve children's health and wellbeing and improve services for CYP with mental health illness across the care pathway, ensuring these service are age appropriate

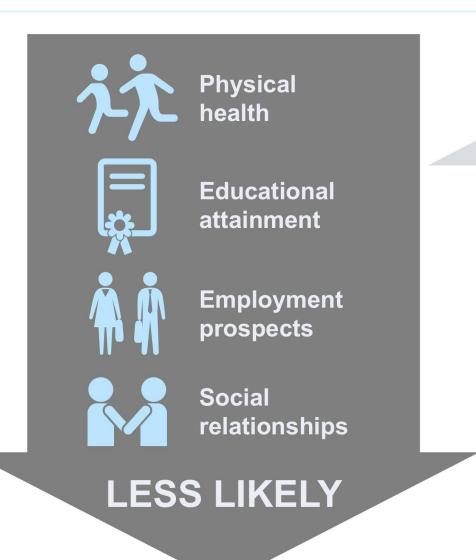
Aims

The purpose of this report is to:

- describe the importance of mental health in CYP
- describe the case for investing in mental health
- provide a descriptive analysis of mental health in CYP in London
- summarise the evidence of what works to improve mental health in CYP in order to inform local transformation of services



Mental health illnesses are a **leading** cause of health-related disabilities in CYP and can have **adverse** and **long-lasting** effects



MORE LIKELY



Smoking



Alcohol misuse



Drugs misuse

Risk and protective factors for CYP's mental health

RISK FACTORS

- Genetic influences
- Low IQ and learning disabilities
- X Specific development delay
- Communication difficulties
- X Difficult temperament
- Physical illness
- X Academic failure
- X Low self-esteem

- Family disharmony, or break up
- Inconsistent discipline style
- Parent/s with mental illness or substance abuse
- X Physical, sexual, neglect or
- x emotional abuse
- Parental criminality or alcoholism
- Death and loss

- Bullying
- X Discrimination
- Breakdown in or lack of positive friendships
- X Deviant peer influences
- Peer pressure
- X Poor pupil to teacher relationships

- Socio-economic disadvantage
- X Homelessness
- Disaster, accidents, war or other overwhelming events
- X Discrimination
- Other significant life events
- X Lack of access to support services









- Secure attachment experience
- ✓ Good communication skills
- Having a belief in control
- A positive attitude
- Experiences of success and achievement
- Capacity to reflect

- Family harmony and stability
- Supportive parenting
- Strong family values
- ✓ Affection
- Clear, consistent discipline
- Support for education

- Positive school climate that enhances belonging and connectedness
- Clear policies on behaviour and bullying
- 'Open door' policy for children to raise problems
- A whole-school approach to promoting good mental health

- Wider supportive network
- Good housing
- High standard of living
- Opportunities for valued social roles
- Range of sport/leisure activities

PROTECTIVE FACTORS

Facts about mental health illness in CYP



10% children aged 5-16 years suffer from a clinically significant mental health illness



25% of children who need treatment receive it



50%
of those with lifetime mental illness (excluding dementia) will experience symptoms by the age of 14



75%
of those with lifetime mental illness (excluding dementia) will experience symptoms by the age of 24



maternal depression is associated with a 5 fold increased risk of mental health illness for the child



boys aged 11-15 years are
1.3x more likely to have a
mental illness compared to girls
aged 11-15 years



60% of looked after children have some form of emotional or mental health illness



18x
young people in prison are
18x more likely to take their
own lives than others of
the same age

The relationship between mental and physical health



12%
of young people live with a long term condition

2-6x

People with a chronic condition have a **2-6x**higher risk of mental health illness

16-25 years lost

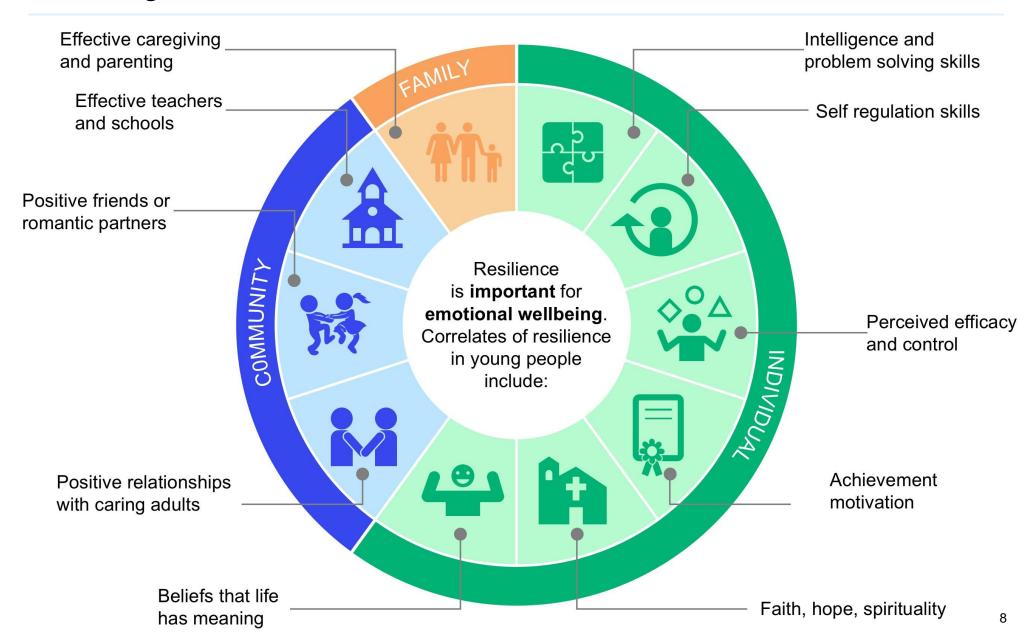
People with mental health illness e.g. schizophrenia or bipolar disorder die on average

16-25 years sooner than the general population

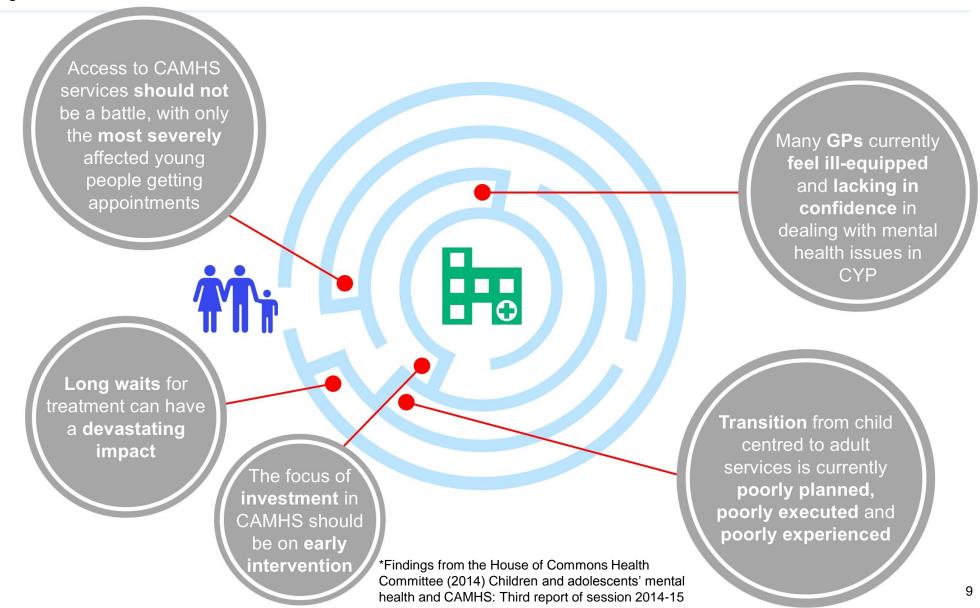


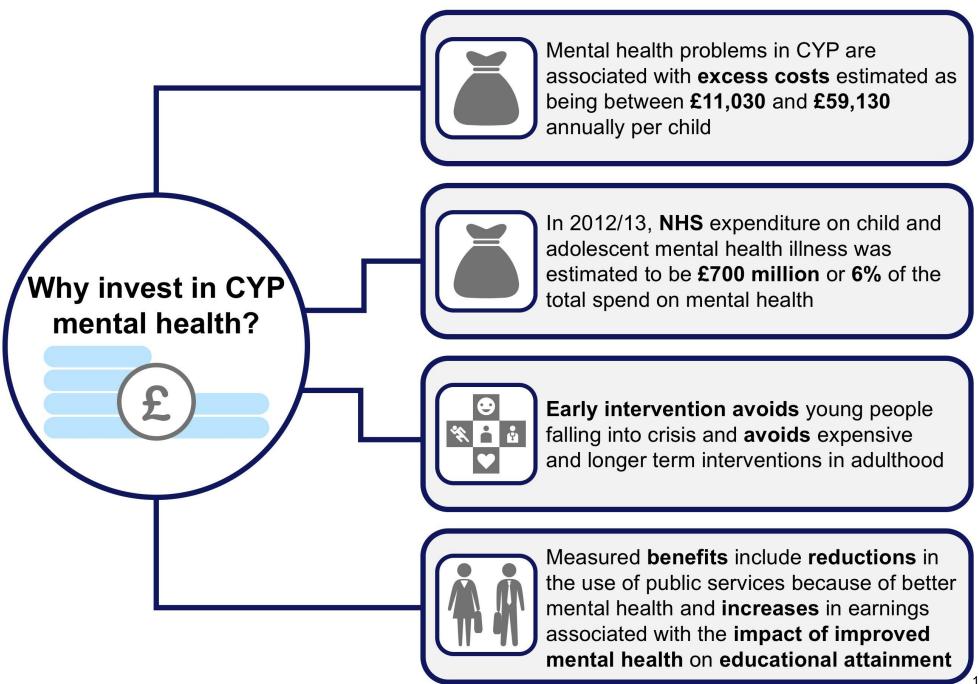
50% increased risk of mortality in people who are depressed

Building resilience (the ability to cope with adversity and adapt to change)



There are **serious problems** with the **commissioning** and **provision** of children's and adolescents' mental health services*





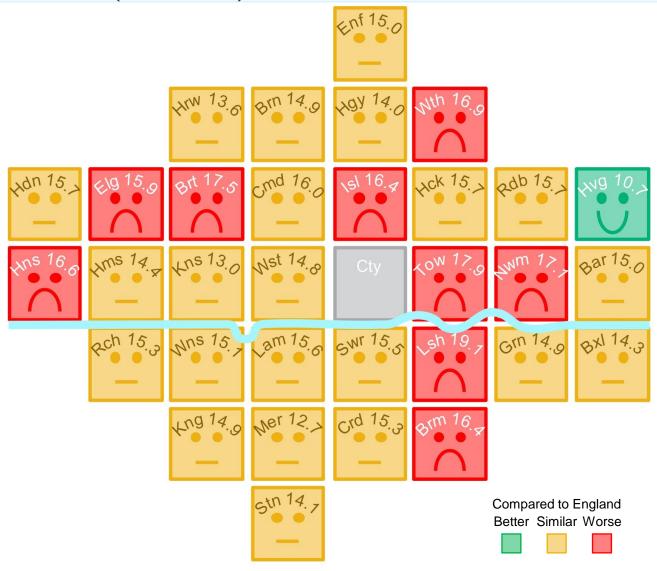
Percentage of 15-year-olds in London reporting low life satisfaction (2014/15)

About **1 in 6** (15.5%) 15-yearolds in London reported low life satisfaction in 2014/15

This is **significantly higher** than the proportion of 15-year-olds in England (13.7%) reporting low life satisfaction and is the **highest** of all regions in England

The proportion of 15-year-olds reporting low life satisfaction was significantly better than the England average in only Havering

There are wide variations in the proportion of 15-year-olds reporting low life satisfaction, ranging from 10.7% in Havering to 17.9% in Tower Hamlets



Inequalities in reporting low life satisfaction (2014/15)

About **1 in 7** young people (YP) aged 15 years in **England** reports low life satisfaction



YP from the **most deprived** group are **1.2x more likely** to report low life satisfaction than the **least deprived** group

Percentage reporting low life satisfaction



Least deprived



Most deprived

YP who are black are **1.3x more likely** to report low life satisfaction compared to YP who are white

Percentage reporting low life satisfaction







White

Asian

Black

Girls are **2.2x more likely** to report low life satisfaction compared to boys

Percentage reporting low life satisfaction





Boys

Girls

YP who are bisexual are are **3.3x more likely** to report low life satisfaction compared to YP who are heterosexuals

Percentage reporting low life satisfaction



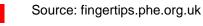




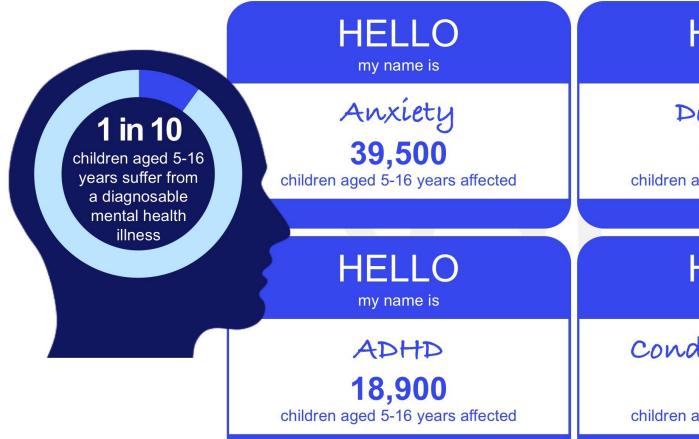
Better Similar Worse



Heterosexual Gay/Lesbian



About **111,600** children aged 5 to 16 years in London have a clinically significant mental health illness



HELLO

my name is

Depression

10,800

children aged 5-16 years affected

HELLO

my name is

Conduct disorder

68,100

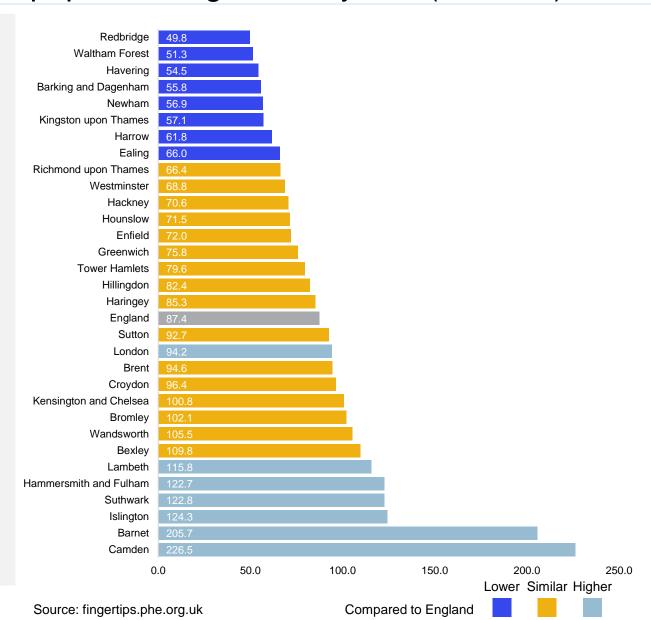
children aged 5-16 years affected

Hospital admission rate for mental health illnesses for children per 100,000 population aged 0-17 years (2014/15)

The rate of children aged 0-17 years being admitted to hospital in London (94.2 children per 100,00 population was **significantly higher** than the rate of admissions for England (87.4 children per 100,000 population)

There is a wide variation in the rate of children aged 0-17 years admitted to hospital in London for mental health illnesses

Hospital admissions were
4.5x higher in the Camden
(226.5 children per 100,000
population) compared to
Redbridge (49.8 children per
100,000 population)



Anxiety disorders

Anxiety disorders are amongst the **most** common causes of childhood psychiatric conditions

They include:

- Generalised anxiety disorder
- Panic disorder
- Obsessive-compulsive disorder
- · Specific phobias
- Social phobia
- Agorophobia

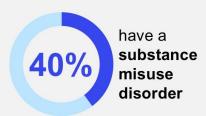
They occur in:

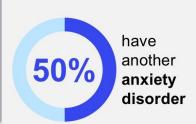
- 2.2% of 5-10 year olds
- 4.4% of 11-16 year olds



Anxiety disorders are associated with **other mental health** illnesses. Of those with a diagnosis of social anxiety disorder:







Anxiety disorders are associated with:



Depression later in life Suicidal behaviours



Poor educational attainment Truanting



Lower earnings due to dropping out of school early

Every £1 spent on cognitive behavioural therapy for children returns:



Group therapy



Therapy via parents

Actions to manage anxiety include:

Early intervention

Targeted work with small groups of children to develop problem solving approaches and other skills

Specific approaches

These are dependent on the anxiety disorder and include:

- Group based cognitive interventions
- ✓ Behaviour focused interventions
- Education support
- ✓ Play based approaches to develop more positive child/parent relationships
- Considering medication if therapy alone is not working

Attention deficit hyperactivity disorder

ADHD affects 1.5% of children aged 5-16 years

Factors that increase the risk of ADHD include:

> Increased risk

Boys



Children with special educational needs



Living in a home where no parent works



Living with a lone parent



ADHD is associated with poorer outcomes in later life:



Lower educational attainment



Teenage pregnancy



Criminality



Poorer employment and lower earnings



Interpersonal difficulties

ADHD places very substantial costs on society

The estimated annual healthcare costs associated with the treatment of ADHD in adolescents are

£670 million

Long term costs for every child with ADHD are estimated to be

£102,135

34%

consisting of



The high costs of ADHD support an economic case for early intervention

Actions to manage ADHD include:

- Parenting programmes to give parents the skills and strategies to help their child
- Behaviour therapy with children to replace behaviours that don't work or cause problems
- Advice for teachers about how to teach children with ADHD
- Medication for severe cases

Nearly all parents of children with ADHD seek some form of help because of concerns about their child's mental health, but only a minority of children receive evidence-

based treatment



Conduct disorders

Conduct disorders such as defiance, aggression and anti-social behaviour, affect 5.8% of children aged 5-16 years. Factors that increase the risk of conduct disorder include:





Children with conduct disorders are **more likely** to have **poorer** outcomes:



2x more likely to leave school with no qualifications



4x more likely to be drug dependent



6x more likely to die before the age of 30 years



20x more likely to end up in prison

The case for **prevention** of conduct disorders is clear

£5.2 billion

Estimated lifetime costs of a one-year cohort of children with conduct disorder

£60 billion

Estimated costs in England and Wales of crime attributed to adults who had conduct disorders in childhood

Potential savings from each case prevented through early intervention:

Severe: **£150,000**

Moderate: £75,000

The **cost** of managing conduct disorders is **very low** relative to the potential benefits

Every £1 invested in the early years saves

Family nurse partnership



Parenting programmes



School based interventions



Whole school antibullying interventions



Every £1 invested in adolescence saves

Aggression replacement therapy



Functional family therapy



Multi-systemic therapy



Actions to manage conduct disorder include:



Classroom-based emotional learning and problemsolving programmes



Group parent training programmes



Multisystemic therapy to young people aged 11-17 years



Do **not** offer pharmacological interventions for the **routine** management



Develop local care pathways between education and healthcare that promote access to services

Depression

About **10,800** CYP in London are seriously depressed

7x

Depression is 7x more common in **older** children: 5-10 years 11-16 years

0.2%

1.4%

Prevalence (%)



Depression is more common in girls aged 5-16 years

Prognosis

10% recover by

40% recover by 1 year

3 months



20%

30% recover by do not recover by 2 years 2 years

Depression is caused by a combination of risk factors including:

Biological



Family history of depression



Family

Lone parent More than 1 child Unemployment



Factors intrinsic to the child

Chronic ill health Disability



Interpersonal

Poor friendships Being bullied History of abuse



Psychological



Emotional distress e.g. bereavement Emotional temperament High levels of critical self thought

Behavioural therapy to manage depression is **cost** effective, with benefits including:



Higher earnings



Lower costs in the NHS



Lower costs in the education system

Every £1 spent on cognitive behavioural therapy for children returns:



Individual

Group therapy

Most parents of children with depression seek advice, but only about 25% have contact with a children's mental health service

Actions to manage depression include:

Mild depression

- Watchful waiting
- Psychological therapy, if there are no comorbid conditions or suicidal ideation
- Referral to tier 2 or 3 CAMHS team if no response after 2-3 months

Moderate or severe depression

- Review by tier 2 or 3 CAMHS team
- ✓ Individual psychological therapy
- Consider medication
- Multidisciplinary review if unresponsive to psychological therapy
- Consider inpatient treatment if high risk of suicide or self-harm

Eating disorders

Eating disorders, such as anorexia nervosa, bulimia nervosa and eating disorder unspecified, are a group of illnesses that cause a person to have issues with their body weight and shape, which disturbs their everyday diet and attitude to food

Over **725,000** people in the UK have an eating disorder*

Anorexia nervosa associated with under-eating



16-17 years average age of onset

Bulimia nervosa associated with binge eating



18-19 years average are female age of onset



of the most seriously affected will die prematurely Eating disorders are caused by a combination of risk factors including:

Biological



Genetic makeup can make some people more vulnerable to eating disorders



Social

Media /cultural pressures



Psychological

Emotional distress e.g. bereavement Low self esteem Depression/anxiety



Interpersonal

Troubled relationships Being bullied History of abuse The physical impacts of eating disorders include:



Anxiety, depression, obsessive behaviours



Changes in hair and skin



Tooth erosion, dry mouth, tooth decay



Increase risk of heart failure



Brittle bones



Kidney stones, renal failure



Constipation, diarrhoea, bloating Irregular or absent periods, infertility

£16.8 billion

Estimated total annual costs of eating disorders* (comprising treatment costs (NHS and private), costs to sufferers and carers and costs to the economy)

Actions to manage eating disorders include:



Prevention through school-based peer support groups



amily therapy



Cognitivebehavioural therapy



Hospital care Inpatient or outpatient



There is a clear pattern of delay in seeking help for eating disorders, which in turn delays diagnosis and treatment creating more severe and long term impacts

Schizophrenia

Schizophrenia represents a major psychiatric disorder characterised by psychotic symptoms that alter the child's perception, thoughts and mood and behaviour

Schizophrenia is rare in CYP, the prevalence increasing from age 14 onwards

Childhood schizophrenia affects about

1.6-1.9 children

per 100,000 child population

Symptoms of schizophrenia include:



Positive symptoms

- Hallucinations
- Delusions



Negative symptoms

- Emotional apathy
- Poverty of speech
- Social withdrawal

Schizophrenia is caused by a combination of risk factors, including:

□ Genetic makeup



Family history of schizophrenia



Birth complications



Emotional distress



History of abuse



Cannabis use in adolescence

Schizophrenia places very substantial costs on society

on early
intervention
psychosis
teams saves

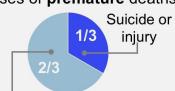


CYP with schizophrenia have poorer physical health than the general population when they get older



Life expectancy is reduced by 16-25 years

Causes of premature deaths



Cardiovascular, pulmonary and infectious diseases

Early onset schizophrenia in CYP is associated with poor long-term outcomes

15%

25%

good outcome moderate outcome



60% poor outcome

Actions to manage schizophrenia include:



Exclude organic causes



Antipsychotic medication



Psychoeducational group intervention

for young people with psychosis and their carers



Help the child or young person to continue their education



Provide a

supported employment programme for those above school age



Discuss and **plan transition** to adult services

Self-harm and suicide

Each year **self-harm** leads to **150,000**

attendances at A&E

About 1 in 10 young people will self-harm. The prevalence of self-harm varies by age and is more common in children with mental illness

0.8%

5-10 years11-15 years

No mental illness

6.2%

9.4%

Anxiety disorder

7.5%

18.8%
Conduct disorder/ADHD/other



Girls are more likely to report self-harm than boys

The **annual cost** of hospital self-harm **admissions** in England and Wales in 2014-15 was £40 million

Risk factors for self-harm include:



Mental health illness Depression

Family issues



Poverty
Parental criminality
Parental separation
or divorce



Being abused

Supporting CYP who self-harm includes:

- Appropriate medical and surgical care
- Prevention e.g. building resilience
- ✓ Individual support and/or group counselling

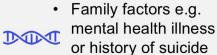
100x

Those who have self-harmed are **100x more likely** than the general population to die by suicide in the following year

149 children aged 10-19years in England committedsuicide in 2014, almostthree children every week

Risk factors include:

Biological



Long-term conditions

Psychological

- Alcohol or drug abuse
- Bereavement and experience of suicide
 - Mental health illness, self-harm and suicidal ideas
 - · Social isolation

Environmental



Abuse and neglect Bullying Academic pressures

Actions to **reduce suicide** include:



Tailor approaches to **improvements** in mental health



Reduce access to the means of suicide



Support the media in delivering sensitive approaches to suicide



Support research, data collection and monitoring



Provide better information and support to those bereaved or affected by suicide

Useful resources

Websites

- www.adhdfoundation.org.uk/main-v1.php
- www.b-eat.co.uk
- · www.centreformentalhealth.org.uk
- www.chimat.org.uk/camhs
- www.chimat.org.uk/PIMH_Needs_Assessment
- http://fingertips.phe.orh.uk/profile-group/mental-health/profile/cypmh
- www.chimat.org.uk/camhstool
- www.headmeds.org.uk
- www.local.gov.uk/camhs
- www.mind.org.uk
- www.minded.org.uk
- · www.papyrus-uk.org
- www.place2be.org.uk
- www.rcpsych.ac.uk
- www.themix.org.uk
- www.youngminds.org.uk

Useful resources

Reports

- Department of Health, Department of Education (2013) Supporting the health and wellbeing of young carers
- Department of Health (2014) Annual Report of the Chief Medical Officer 2013 Public Mental Health Priorities: Investing in the Evidence
- Department of Health, Public Health England (2015) Promoting emotional wellbeing and positive mental health of children and young people
- Department of Health and NHS England (2015) Future in mind: Promoting, protecting and improving our children and young people's mental health and wellbeing
- Local Government Association (2016) Best start in life: Promoting emotional wellbeing and mental health for children and young people
- PHE and Children and Young People's Mental Health Coalition (2015) Promoting children and young people's emotional health and wellbeing: A whole school and college approach
- PHE and UCL Institute of Health Equity (2014) Local action on health inequalities: Building children and young people's resilience in schools
- PHE (2015) Measuring mental wellbeing in children and young people
- PHE and Evidence Based Practice Unit (2016) Measuring and monitoring mental wellbeing a toolkit for schools and colleges

Page 3

- Department of Health, NHS England (2015) Future in mind: Promoting, protecting and improving our children and young people's mental health and wellbeing
- NHS England (2015) Local transformation plans for children and young people's mental health and wellbeing
- NHS England (2016) The five year forward view for mental health
- NHS England (2016) Implementing the five year forward view for mental health

Page 4

• Department of Health (2011) No health without mental health

Page 5

- Commonwealth of Australia (2012-13) Kids matter: Australian primary school mental health initiative
- Department for Education (2016) Mental health and behaviour in schools: Departmental advice for school staff

- 10% of children aged 5-16 years suffer from a clinically significant mental health illness
 Department of Health (2013) Our children deserve better: Prevention pays
- Percentage of people with lifetime mental illness who experience symptoms in childhood
 Kessler R, Berglund P, Demler O et al Arch Gen Psychiatry. 2005;62(6):593-602 Lifetime Prevalence and Age-ofOnset Distributions of DSM-IV Disorders in the National Comorbidity Survey
- 25% of children who need treatment receive it
- 60% of looked after children have some form of emotional or mental health illness
- Young people in prison are 18x more likely to take their own lives than other of the same age
 Children and young people's health outcome forum (2012) Report of the children and young people's health outcomes forum mental health subgroup
- Boys aged 11-15 years are 1.3x more likely to have a mental illness compared to girls aged 11-15 years Department of Health (2013) Our children deserve better: Prevention pays

Page 7

Department of Health and NHS England (2015) Future in mind: Promoting, protecting and improving our children and young people's mental health and wellbeing

Page 8

Department of Health (2014) Public mental health priorities: Investing in the evidence

Page 9

House of Commons Health Committee (2014) Children and adolescents' mental health and CAMHS: Third report of session 2014-15

Page 10

- Mental health excess costs
 Department of Health (2013) Our children deserve better: Prevention pays
- NHS expenditure, early intervention and measured benefits
 Department of Health and NHS England (2015) Future in mind: Promoting, protecting and improving our children and young people's mental health and wellbeing

- Overall prevalence rate, prevalence of ADHD and depression in 2014 from Children and young people's mental health and wellbeing Fingertips tool available at fingertips.phe.org.uk
- Prevalence rates of anxiety and depression from ONS (2005) Mental health of children and young people in Great Britain, 2004 (Table 4.1) applied to 2014 population estimates from fingertips.phe.org.uk (anxiety: 3.3%, depression: 0.9%)

Page 15

- Anxiety disorders, causes and prevalence
 Centre for Mental Health (2015) Investing in children's mental health
- Anxiety disorders prevalence
 ONS (2005) Mental health of children and young people in Great Britain, 2004 (Table 4.1)
- Anxiety disorders associated with other mental health conditions
 Centre for Mental Health (2015) Investing in children's mental health
- Outcomes of anxiety disorders and cost-benefit of cognitive behavioural therapy Centre for Mental Health (2015) Investing in children's mental health
- Actions to manage anxiety
 Department for Education (2016) Mental health and behaviour in schools: Departmental advice for school staff

- Prevalence of ADHD
 ONS (2005) Mental health of children and young people in Great Britain, 2004 (Table 4.1)
- ADHD prevalence, risk factors and outcomes
 Centre for Mental Health (2015) Investing in children's mental health
- Estimated annual UK costs associated with ADHD in adolescents
 Telford C, Green C, Logan S, et al. Estimating the costs of ongoing care for adolescents with attention-deficit hyperactivity disorder. Soc Psychiatry Psychiatr Epidemiol 2013; 48: 337-344
- Long term costs of ADHD
 Mental Health (2014) The lifetime costs of attention deficit hyperactivity disorder
- Actions to manage ADHD
 Department for Education (2016) Mental health and behaviour in schools: Departmental advice for school staff NICE guidelines (2016) Attention deficit hyperactivity disorder: diagnosis and management

Page 16

Only a minority of children receive evidence-based treatment
 Centre for Mental Health (2015) Investing in children's mental health

Page 17

- Prevalence of conduct disorders
 ONS (2005) Mental health of children and young people in Great Britain, 2004 (Table 4.1)
- Conduct disorders outcomes
 Centre for Mental Health (2015) Investing in children's mental health
- Case for prevention of conduct disorders
 Department for Health (2012) Our children deserve better: Prevention pays
- Cost of managing conduct disorders
 Department for Health (2012) Our children deserve better: Prevention pays
 Centre for Mental Health (2015) Investing in children's mental health
- Actions to manage conduct disorders
 The British Psychological Society and the Royal College of Psychiatrists (2013) Antisocial behaviour and conduct disorders in children and young people: Recognition, intervention and management. NICE Clinical Guideline Number 158

- Prevalence of depression
 ONS (2005) Mental health of children and young people in Great Britain, 2004 (Table 4.1)
- Prognosis
 National Collaborating Centre for Mental Health (2005) Depression in children and young people: Identification and management in primary, community and secondary care

Page 18

- Risk factors for depression
 ONS (2005) Mental health of children and young people in Great Britain, 2004
 National Collaborating Centre for Mental Health (2005) Depression in children and young people: Identification
 and management in primary, community and secondary care
- Cost effectiveness of behavioural therapy and parents seeking medical care
 Centre for Mental Health (2015) Investing in children's mental health
- Actions to manage depression
 NICE guidelines [CG28] (2005, updated 2015) Depression in children and young people: identification and management

- Eating disorder definition and prevalence
 BEAT (2015) The costs of eating disorders. Social, health and economic impacts
- Anorexia and bulimia nervosa statistics
 http://www.nhs.uk/conditions/Eating-disorders/Pages/Introduction.aspx (accessed July 2016)
- 1 in 5 of the most seriously affected will die prematurely
 Centre for Mental Health (2015) Investing in children's mental health
- Risk factors for eating disorders
 BEAT (2015) The costs of eating disorders. Social, health and economic impacts
 https://www.imperosoftware.co.uk/national-eating-disorder-awareness-week-nedaw-what-you-need-to-know/
- Physical impacts of eating disorders
 BEAT (2015) The costs of eating disorders. Social, health and economic impacts
 http://www.eatingdisorders.org.au/eating-disorders/anorexia-nervosa (accessed July 2016)
 http://www.eatingdisorders.org.au/eating-disorders/bulimia-nervosa (accessed July 2016)

Page 19

- Costs associated with eating disorders
 BEAT (2015) The costs of eating disorders. Social, health and economic impacts
- Actions to manage eating disorders
 BEAT (2015) The costs of eating disorders. Social, health and economic impacts
 Department for Education (2016) Mental health and behaviour in schools: Departmental advice for school staff

Page 20

- Schizophrenia prevalence, symptoms, risk factors and physical outcomes
 National Collaborating Centre for Mental Health (2012) Psychosis and schizophrenia in children and young people
- Costs associated with schizophrenia
 Personal Social Services Research Unit, London School of Economics and Political Science (2011) Mental health promotion and prevention: The economic case
- Outcomes and management for CYP with schizophrenia
 National Institute for Clinical Excellence (2015) Psychosis and schizophrenia in children and young people:
 Evidence update

- Self harm prevalence, risk factors, support and suicide risk
 National Workforce Programme (2011) Self-harm in children and young people handbook
- Self harm costs of hospital admission
 Early Intervention Foundation (2015) Spending on later intervention: How we can do better for less

- Suicide risk factors
 Butterworth S, Suicide and self-harm in young people: risk factors and interventions available at http://www.youthspace.me/assets/0000/6974/Suicide_and_Self-harm_in_young_people.pdf (accessed August 2016)
- Suicide actions to reduce suicides
 Department of Health (2012) Preventing suicide in England: a cross-government outcomes strategy to save lives
 National Confidential Inquiry into Suicides and Homicides by People with Mental Illness (2016) Suicide by children and young people in England

Picture credits

- Abuse by Dr Marilena Korkodilos
- · Baby by Edward Boatman from the Noun Project
- Bone by Dr Marilena Korkodilos
- Brain by Chameleon Design from the Noun Project
- · Boy's silhouette by Dr Marilena Korkodilos
- · Business people by Honnos Bondor from the Noun Project
- Children by Gilad Fried from the Noun Project
- · Church by Creative Stall from the Noun Project
- · Community by Dr Marilena Korkodilos
- Conversation by Michael Downey from the Noun Project
- Currency by Nimal Raj from the Noun Project
- · Danger by Dr Marilena Korkodilos
- Degree by Dr Marilena Korkodilos
- · Doctor by Megan Strickland from the Noun Project
- Drugs by Dr Marilena Korkodilos
- Drunk by Dr Marilena Korkodilos
- Education by Chris Matthews from the Noun Project
- · Face by Dr Marilena Korkodilos
- · Friend by Dr Marilena Korkodilos
- · Girl and boy by Dr Marilena Korkodilos
- Genetics by Edward Boatman from the Noun Project
- · Grave by Dr Marilena Korkodilos
- Heart by Chameleon Design from the Noun Project
- House by Dr Marilena Korkodilos
- Individual responsibility by CO. Department of Health Care and Policy Financing, US from the Noun Project
- Intestine by Dr Marilena Korkodilos
- · Mental Health by Edward Boatman from the Noun Project
- Integrated heath systems by CO. Department of Health Care and Policy Financing, US from the Noun Project

- Kidney by Edward Boatman from the Noun project
- Maze by Dr Marilena Korkodilos
- Money by Dr Marilena Korkodilos
- Medicine by Dr Marilena Korkodilos
- · Pathway by Dr Marilena Korkodilos
- Partners by Dr Marilena Korkodilos
- Piggy Bank by Lloyd Humphreys from the Noun Project
- · Pill by Dr Marilena Korkodilos
- Plan by Dr Marilena Korkodilos
- Prison by Dr Marilena Korkodilos
- Pregnant by OCHA Visual Information Unit by the Noun Project
- Puzzle by Becky Warren from the Noun Project
- · Reflect by Dr Marilena Korkodilos
- Research by Dr Marilena Korkodilos
- Ribbon by Fission Strategy from the Noun Project
- · School by Dr Marilena Korkodilos
- · Search by Dr Marilena Korkodilos
- Skills by Rflor from the Noun Project
- Social Services by Edward Boatman from the Noun Project
- · Student by Gerald Wildmoser from the Noun Project
- Swirl by Dr Marilena Korkodilos
- · Tablet by Dr Marilena Korkodilos
- Teacher by Dr Marilena Korkodilos
- · Television by Edward Boatman from the Noun Project
- Tooth by Edward Boatman from the Noun Project
- · Treatment by Dr Marilena Korkodilos
- Thinking by Ahmed Sagarwala from the Noun Project
- Uterus by Max Paladii from the Noun Project
- Waiting room by Edward Boatman from the Noun Project

Acknowledgements

I am grateful to the following individuals for their comments/help with the report:

- Jake Abbas, head of local knowledge and intelligence services, PHE
- Shelley Aldred, programme lead, Health and wellbeing, PHE London
- Gillian Bryant, senior health intelligence analyst, Mental health, dementia and neurology network, PHE
- Eustace de Sousa, national lead, Children, young people and families, PHE
- Francesca Edelmann, senior knowledge transfer facilitator, Knowledge and intelligence services (London), PHE
- Lucy Fordham, press officer, PHE London
- Gregor Henderson, director of wellbeing and mental health, PHE
- Lily Makurah, deputy national lead, Mental health and wellbeing, PHE
- Claire Robson, public health delivery manager, Children, young people and families team, PHE
- Clare Semke, regional communications manager London, PHE
- Wendy Nicholson, national lead nurse, Children, young people and families, PHE

About Public Health England

Public Health England exists to protect and improve the nation's health and wellbeing, and reduce health inequalities. It does this through world-class science, knowledge and intelligence, advocacy, partnerships and the delivery of specialist public health services. PHE is an operationally autonomous executive agency of the Department of Health.

Public Health England Wellington House 133-155 Waterloo Road London SE1 8UG

Tel: 020 7654 8000 www.gov.uk/phe

Twitter: @PHE_uk

Facebook: www.facebook.com/PublicHealthEngland

Prepared by: Dr Marilena Korkodilos, Deputy director, specialist public health services, PHE (London)

© Crown copyright 2016

You may re-use this information (excluding logos) free of charge in any format or medium, under the terms of the Open Government Licence v3.0. To view this licence, visit <u>OGL</u> or email <u>psi@nationalarchives.gsi.gov.uk</u>. Where we have identified any third party copyright information you will need to obtain permission from the copyright holders concerned.

Published December 2016

PHE publications gateway number: 2016417