High Impact Strategic Mental Health Training & Education Programme
Building capacity for improved patient outcomes
Improving services, implementing best practice and informing mental health commissioning

Commissioning Support Factsheet: Early Intervention Psychosis and At Risk Mental State (ARMS): A South London Case Study - Lambeth, Southwark and Lewisham

January 2013

Dr Jonathan Campion, Director for Public Mental Health, Consultant Psychiatrist, South London and Maudsley NHS Foundation Trust and Public Health & Mental Health Advisor for NHSL

Key messages

- Early intervention services for first episode psychosis have clinically important benefits over standard care (Bird et al, 2011).
- Early intervention during the phase preceding psychosis (prodrome) can prevent a proportion of psychosis from developing (Fusar-Poli et al, 2012).
- Work by the London School of Economics for the mental health strategy highlighted the economic savings of early treatment of psychosis and prodrome psychosis (DH, 2011).
- Across four south London boroughs, 86% of those with first episode psychosis receive treatment from early intervention psychosis services while 4% of those with prodrome psychosis receive intervention (Campion and Costafreda, 2012).

Applying the London School of Economics figures (DH, 2011) to south London, treatment of all new cases of first episode psychosis in a single year in four south London boroughs would result in:

- Total net savings of £1,975,734 at end of first year compared with standard care due to reduced service costs.

- Total annual net savings of £1,632,708 from years 2-5 (£823,536 due to reduced service costs and £701,784 due to reduced lost productivity).
- Total annual net savings of £889,200 from years 6-10 (£20,520 due to reduced service costs, £653,904 due to reduced lost productivity, and £214,776 due to reduced intangible costs of associated negative impact on quality of life, reduced suicides and homicide.
- Total savings over 10 years of treating all those with first episode psychosis in a single year would be £12,952,566 with £5,372,478 of the savings being realised by the NHS.

Applying LSE figures (DH, 2011), treatment of all new cases of psychosis prodrome (ARMS) in a single year in four south London boroughs would result in:

- Total extra costs of £1,904,940 in the first year (due to increased service costs).
- Total annual net savings of £2,583,810 in years 2-5 (£982,395 due to reduced service costs and £1,568,925 due to reduced lost productivity).
- Total annual net savings of £2,226,420 in year 6-10 (£900,315 due to reduced service costs and £1,261,980 due to reduced lost productivity).
- Total net savings of treating all those with ARMS in a single year in four south London boroughs would be £19,562,400 over 10 years with £6,526,215 of the savings realised by the NHS.

A) Effect of early intervention for psychosis

The mental health strategy (HMG, 2011) highlights the effectiveness of early intervention services for people with psychosis. Compared to standard care, early intervention services for people with psychosis show important benefits which may be accounted for by inclusion of CBT and family
intervention (Bird et al, 2011; IRIS, 2012). Benefits include:

- Reduced use of the Mental Health Act (Yung et al, 2003).
- Reduced hospital admissions, relapse rates and symptom severity (Bird et al, 2010).
- Improved access to and engagement with treatment (Bird et al, 2010) and improved medication adherence (Craig et al, 2004).
- Lower levels of psychotic symptoms, greater likelihood of remission and more favourable course of illness after eight years compared with controls (Mihalopoulous et al, 2009).
- Increased independent living, reduced homelessness, improved psychotic symptoms, lower levels of substance abuse and better global functioning at two-year follow-up (Bertelsen et al, 2008; Craig et al, 2004; Petersen et al, 2005; Garety et al, 2006).
- Higher employment rates (36%) compared with standard care (19%) (Major et al, 2010).
- Suicide reduction: two studies suggest that early intervention is associated with a reduced suicide rate. A population-based retrospective cohort study of 7760 people found a 50% reduction in suicide risk during the first three years after contact with an early intervention service (Harris et al, 2008). Another longitudinal, prospective, five-year follow-up study of 547 individuals with first-episode schizophrenia found rates of completed suicide were 548/100,000 after early intervention, compared with 735 after standard care (Bertelsen et al, 2007).
- Homicide risk reduction: 56% of people with schizophrenia who committed homicide were in the first year of illness and most were undiagnosed or untreated (Meehan et al, 2006). Homicide rates in those with first episode psychosis were 170/100,000 in those with no specialist treatment compared to 11/100,000 after treatment for first episode psychosis (Niellson & Large, 2010).
- Early intervention also offers important health promotion and prevention opportunities to prevent physical illness associated with long-term psychosis.

Levels of first episode psychosis in South London

Evidence highlights that South East London has 55.8% more new cases of schizophrenia and other psychoses each year compared to England as a whole (49.4 cases per 100,000 persons per year in South East London compared to 31.7 cases per 100,000 persons per year in England (Kirkebride et al, 2012). However, these figures for South London are likely to be underestimates with other studies finding higher incidence rates for psychosis of:

- 100/100,000 in Lambeth (Mahmood et al, 2006).
- 58.4/100,000 in East London (Coid et al, 2008).
- 60-65/100,000 among 16-34 year olds (Coid et al, 2008).
- 80/100,000 for 16-34 year olds based on preliminary unpublished data (personal communication with Craig Morgan).

The most recent population estimate found that there were 427,600 15-34 year olds in the boroughs of Croydon, Lambeth, Lewisham and Southwark (ONS, 2012). Assuming an annual psychosis incidence of 80 per 100,000 15-34 year olds, this would mean a total of 342 individuals aged 15-34 living would be estimated to develop psychosis each year. The proportion who received treatment from early intervention psychosis services was 86% (294 cases) (Campion and Costafreda, 2012).

Cost effectiveness of early intervention psychosis

Work done by the LSE for the mental health strategy (DH, 2011) shows that early intervention psychosis services result in:

- Net savings of £5,777 per person at end of first year compared with standard care due to reduced service costs.
- Annual net savings of £4,774 per person from years 2-5 (£2408 due to reduced service costs and £2,052 due to reduced lost productivity).
- Annual net savings of £2,600 per person from years 6-10 (£60 due to reduced service costs, £1,912 due to reduced lost productivity, £628 due to reduced intangible costs of associated negative impact on quality of life, reduced suicides
Savings from early interventions psychosis services in South London

Across four south London boroughs, there are an estimated 342 new cases of psychosis each year. Treatment of all those with First Episode Psychosis in a single year in these boroughs would result in total:

- Net savings of £1,975,734 at end of first year compared with standard care due to reduced service costs.
- Annual net savings of £1,632,708 from years 2-5 (£823,536 due to reduced service costs and £701,784 due to reduced lost productivity).
- Annual net savings of £889,200 from years 6-10 (£20,520 due to reduced service costs, £653,904 due to reduced lost productivity, and £214,776 due to reduced intangible costs of associated negative impact on quality of life, reduced suicides and homicide.
- Net savings over 10 years of treating all those with first episode psychosis in a single year would be £12,952,566 with £5,372,478 of the savings being realised by the NHS.

B) Early intervention for ARMS

Onset of psychosis is usually preceded by a prodromal phase also known as an ‘At Risk Mental State’ (ARMS). This comprises of brief psychotic experiences and symptoms of depression, anxiety, loss of personal function and subtle cognitive impairments. The proportion of people ARMS who develop a psychotic episode is 18% after six months, 22% after one year, 29% after two years and 36% after three years (Fusar-Poli et al 2012).

Treatment of ARMS is associated with:

- Reduced proportion going on to develop psychosis. Treatment of 4-8 people with prodrome prevents one transition to psychosis (Fusar-Poli et al, 2012).
- Reduced duration of untreated psychosis if psychosis develops: By engaging individuals at risk before the onset of psychosis it is easier to offering targeted help as soon as psychosis develops.

- Fewer crises, reduced and shorter admission and less disruption to the social functioning of patients (Fusar-Poli et al, 2010).

Levels of ARMS in 15-34 year olds

The level of ARMS is at least three times higher than new cases of psychosis and therefore assumed to be 200 per 100,000 of the 15-34 population. The census estimated that the number of 15-34 year olds in Croydon, Lambeth, Lewisham and Southwark was 427,600 (ONS, 2012). Assuming an annual prodrome incidence of 200 per 100,000 15-34 year olds, this would mean a total of 855 individuals aged 15-34 would develop psychosis prodrome each year. The proportion who received treatment from early intervention psychosis services was 4% (35 individuals) (Campion and Costafreda, 2012).

Cost effectiveness of intervention for ARMS services

Work done by LSE for the mental health strategy (DH, 2011) highlights that early detection psychosis services result in:

- Extra costs of £2,228 per person in the first year (due to increased service costs).
- Annual net savings of £3,022 per person in years 2-5 (£1,149 due to reduced service costs and £1,835 due to reduced lost productivity).
- Annual net savings of £2,604 per person in year 6-10 (£1,053 due to reduced service costs and £1,476 due to reduced lost productivity).
- Over 10 years, net national NHS savings of £326 million would be accrued which would increase by £1368 million if wider economic savings are taken into account.

Savings from ARMS services in South London

Across four south London boroughs, there are an estimated 855 new cases of ARMS each year. Treatment of all those with ARMS in these south London boroughs in a single year would result in total:
• Extra costs of £1,904,940 in the first year (all due to increased service costs)
• Annual net savings of £2,583,810 in years 2-5 (£982,395 due to reduced service costs and £1,568,925 due to reduced lost productivity).
• Annual net savings of £2,226,420 in year 6-10 (£900,315 due to reduced service costs and £1,261,980 due to reduced lost productivity).
• Net savings of treating all those with ARMS in a single year in four south London boroughs would be £19,562,400 over 10 years with £6,526,215 realised by the NHS.

Therefore, investment in services to address ARMS would result in savings associated with reduced rates of psychosis and improved outcomes for those going on to develop psychosis.

Targeting groups at higher risk of psychosis

While certain risk factors are associated with both psychosis and prodrome, people from particular groups have significantly increased risk and so need more targeted approaches. Together with intelligence about numbers such groups, it is possible to estimate numbers affected from different groups and compare with the numbers from these groups receiving appropriate intervention which is important in addressing inequalities (Campion and Fitch, 2012):

• Black and minority ethnic groups:

   Non-affective psychosis: Incidence rates are 4 times higher in the black Caribbean group. 3.5 times higher in black African group and 1.6 times higher in the South Asian population group (Kirkbride et al, 2012).
   Schizophrenia: Incidence rates are 5.6 times higher in the black Caribbean group, 4.7 times higher in black African group and 2.4 times higher in Asian groups compared to the white British population (Kirkbride et al, 2012).
   Affective psychosis: Black Caribbean, black African and non-British white groups had 2-3 fold higher rates of affective psychosis (Kirkbride et al, 2008).

• Migrant groups: Schizophrenia is 2.9 times more common in migrant groups (including first and subsequent generations) compared with host populations (Cantor-Graae, 2005). The relative risk is particularly high in migrants from developing countries (RR 3.3), in second generation migrants (RR 4.5) and in migrants from countries where the majority population is black (RR 4.8).

• Adults with learning disability are at threefold increased risk of schizophrenia (Smiley et al, 2005).
• Homeless people are at increased risk of psychosis (OR=11.3) (Bebbington et al, 2004)
• Prisoners: 10% experience psychosis (Stewart, 2008).
• Lesbian, gay and bisexual people are at increased risk of probable psychosis (OR=3.7) (Chakraborthy et al, 2011).

Email: Jonathan.Campion@slam.nhs.uk  jonathan_campion@yahoo.co.uk

For commissioners and providers sharing good practice:
How will you use this information?

1) What key commissioning questions does this factsheet help address?
2) What key messages will you now disseminate to commissioners and providers?
3) What decisions and actions are you likely to make having read this key factsheet?
4) What else could we do to make this factsheet useful to you?
References


ONS (2012) Mid 2011(Census Based) Table 9 [www.ons.gov.uk/ons/publications/re-reference-tab](http://www.ons.gov.uk/ons/publications/re-reference-tab)


