A surveillance study of Paediatric Bipolar I Disorder in the United Kingdom and the Republic of Ireland (SPBID UK & ROI) – preliminary results

Aditya Sharma[a]; Joanne Neely[a]; Nigel Camilleri[a]; Heinz Grunze[a] ;Tony James[b]; Ann Le Couteur[a];
a-Newcastle University, UK; b-Oxford University, UK
Email:joanne.neely@ncl.ac.uk

Background

- Paediatric Bipolar I Disorder (PBID) (with an onset prior to 16) has become an area of intense clinical and research interest and the focus of considerable controversy regarding its diagnosis.(1-3)
- Diagnosis poses challenges because of
  a. Symptoms that may differ from those exhibited in adulthood
  b. Co-morbid conditions e.g. ADHD, ASD, Conduct Disorder, anxiety disorders etc (4)
- Increasing trend in the prevalence of BD among young people in the USA (5)
- Early onset of Bipolar Disorder may be associated with a more severe course (6)
- PBID may go unrecognised or mis-diagnosed and more needs to be done to raise awareness about the condition in the UK and Europe
- There is no published research on the incidence of PBID in the UK

Aims

Primary Aim

- Estimate the incidence of first diagnosis of PBID in children and adolescents under 16 years old in the UK and ROI

Secondary Aims

- Determine symptom and diagnostic profile at presentation
- Frequency of co-morbid conditions, associated genetic and psychosocial factors
- Determine the short term and intermediate management strategies
- Determine the clinical outcome (after 1 year)

Method

Participants

All (~750) Consultant Child and Adolescent Psychiatrists (CCAPs) in the UK and ROI, members of the Royal College of Psychiatrists (RCPsych)

Design

The study uses active prospective surveillance. Study duration – 13 months + 1 year follow up - start date September 2009

Procedure

- The Child and Adolescent Psychiatry Surveillance System (CAPSS) send out a yellow surveillance card every month for 13 months to CCAPs asking them to report any new cases of PBD they have seen in the previous month.
- Following a positive case report response the CCAP receives a 13 item questionnaire (http://www.rcpsych.ac.uk/pdf/questionaireSPBD.pdf) compiled by the research team, designed to gather demographic and relevant clinical information. For all valid cases, a further brief questionnaire will be administered a year later to determine outcome.

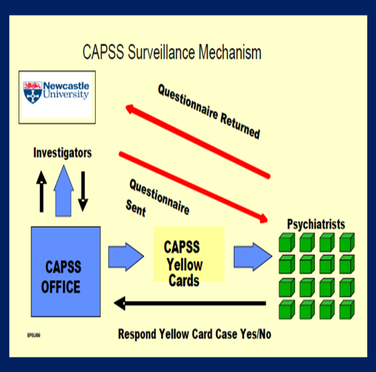


Figure 1. CAPSS Surveillance Model

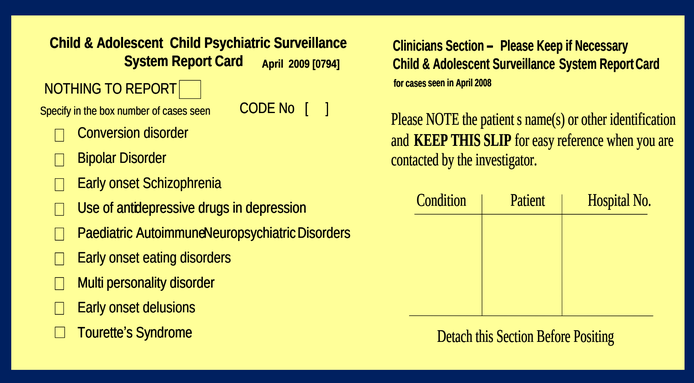


Figure 2. Example reporting card

Results : Response rates and outcome of questionnaires

Table 1. % reporting card response rate

Overall	**61.5%**
Northern & Yorkshire	72.6
Scotland	69.4
Trent	67.2
West Midlands	65.3
Northern Ireland	64.2
Wales	62.9
North London	61.5
Anglia & Oxford	59.8
South & West	59.8
Republic of Ireland	56.8
North Western	56.1
South London	52.4

Figure 3. Frequency of respondents and non-respondents to questionnaires by region

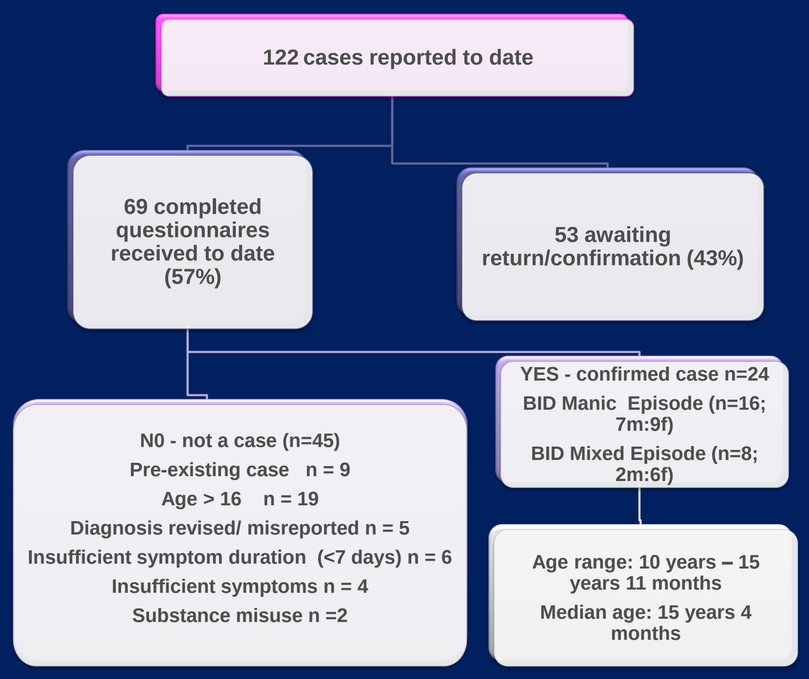


Figure 4. Reported cases to date - July 2010

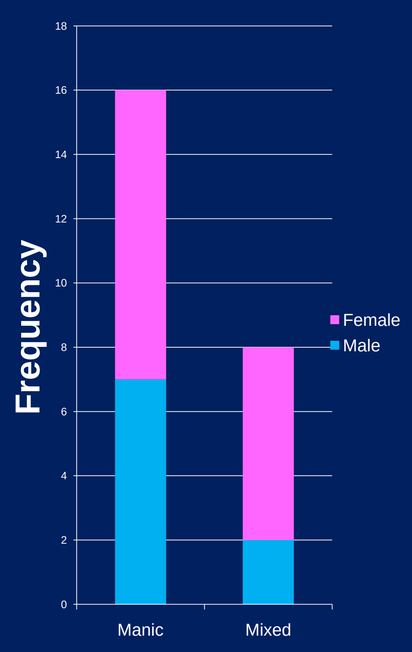
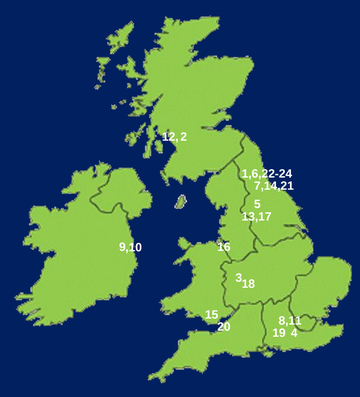


Figure 5. Episode type and gender in confirmed cases

Results : Demographic details of confirmed cases n = 24



1.Prudhoe
2.Glasgow
3.Birmingham
4.London
5.York
6.Newcastle
7.Sunderland
8.Hounslow
9.Dublin
10.Dublin
11.Hounslow
12.Johnstone
13. Leeds
14. Sunderland
15. Tonteg
16. Chester
17. Leeds
18. Solihull
19. Surrey
20. Bristol
21. Sunderland
22. Newcastle
23. Newcastle
24. Newcastle

Figure 6. Location of confirmed cases

18 (75%) of confirmed cases are white British/Irish

Results: Responses to questionnaire

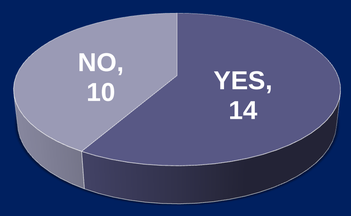


Figure 7. Number of cases previously presented with episode prior to diagnosis

Episode Type	
Depressed	6
Depressed/Mania	3
Mixed	2
Depressed/ Mixed	1
Depressed/Mania/Mixed	1
Depressed/Hypomania/Mixed	1
YES TOTAL	14

Psychotic features present YES n=11 (9 congruent, 2 incongruent) : NO n = 13

Table 2. Frequency and type of co-morbid disorders

Disorder	Current diagnosis	Past diagnosis
Anxiety	0	0
ASD	5	3
ADHD	4	4
Conduct Disorder	3	4
Tic Disorder	1	0
Substance misuse	2	2

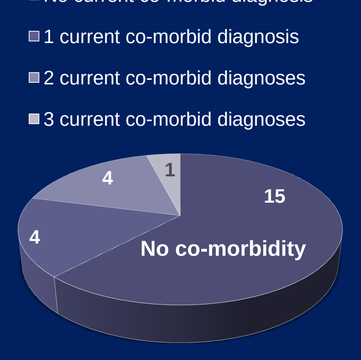


Figure 8. Number of confirmed cases presenting with/without a co-morbid diagnosis

Table 3. Frequency and type of family history

Disorder	1st degree rel	2nd degree rel
Depression	10	1
Anxiety	1	1
Bipolar Disorder	1	7
functional psychosis	0	4
Substance misuse	3	0
ADHD	0	2
ASD	1	2
Other	1	1

Family history of mental health/developmental disorder	YES	NO
	18	6

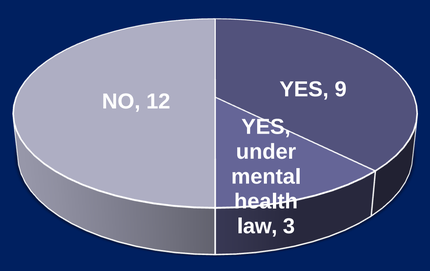


Figure 9. Frequency of Hospital admission

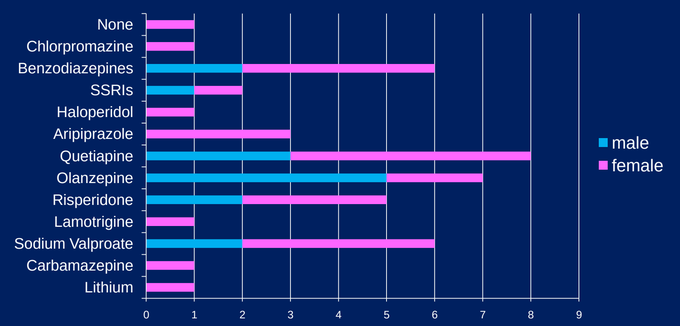


Figure 10. Prescribed medications

Discussion

- This is the first study to estimate incidence of BD in under 16s in the UK and RO. It is also the largest prospective case series of Paediatric Bipolar Disorder from the UK.
- Strengths of the study include active surveillance, a nationwide case ascertainment and a prospective design which relies on clinician diagnosis rather than retrospective self report.
- The results are preliminary as 43% of questionnaires are still outstanding and the surveillance continues for a further two months. Whether this pattern of results will persist as we accumulate the remaining questionnaires is yet to be determined.
- CAPSS is a new procedure which may take time to become established. Surveillance of Paediatric Bipolar Disorder is the first study to use this as a stand alone system. We hope that CAPSS will prove to be a valuable tool for investigating the epidemiology of rare childhood mental health disorders and emulate the success of other surveillance systems such as the British Paediatric Surveillance System (BPSU) which has been in operation for 25 years. The success of this new system depends on the good will of busy Consultant Child and Adolescent Psychiatrists to complete and return the monthly reporting card even when they have nothing to report and to return questionnaires if they report a new case.

References:1. Harrington R, Myatt T. Is preadolescent mania the same condition as adult mania? A British perspective. *Biological Psychiatry.* 2003;53:961-969.2. Biederman J, Klein DN, Pine DS, Klein DF. Resolved: mania is mistaken for ADHD in prepubertal children. *Journal of American Academy of Child and Adolescent Psychiatry.* 1998;37:1091-1099. 3. Geller B, Zimmerman B, Williams M, et al. DSM-IV mania symptoms in a prepubertal and early adolescent bipolar disorder phenotype compared to attention deficit hyperactive and normal controls. *Journal of Child and Adolescent Psychopharmacology.* 2002;12:11-26. 4. Wozniak J, Biederman J, Richards JA. Diagnostic and therapeutic dilemmas in the management of pediatric-onset bipolar disorder. *The Journal of Clinical Psychiatry*. 2001;62 Suppl 14:10-15. 5. Perlis RH, Miyahara S, Marangell LB, et al. Long term implications of early onset in bipolar disorder: data from the first 1000 participants in the Systematic Treatment Enhancement Program for Bipolar Disorder (STEP-BD). *Biological Psychiatry.* 2004;55:875-881. 6. Carter TD, Mundo E, Parikh SV, Kennedy JL. Early age at onset as a risk factor for poor outcome of bipolar disorder. *Journal of Psychiatry Research.* 2003;37:297-303.