

Online Supplement Table 1. Cut-offs for defining frequent use (n=16,123)

Frequent user definitions		%
5+ visits in 2014 *	n= 331	3
Visits attributed to service seekers attending 5+	2,502	16
4+ visits in 3 months (Acute)	n= 278	3
Visits attributed to service seekers attending 4+ times in 3m	2,102	13
4+ visits in 2014	n= 598	6
Visits attributed to service seekers attending 4+	3,570	22

*definition used

Online Supplement Table 2. ICD-10 Diagnoses made as a result of visits to ED services, and the groups into which they were categorized.

ALCOHOL USE DISORDERS	
F10	Mental and behavioural disorders due to use of alcohol
F105	Mental and behavioural disorders due to use of alcohol, psychotic disorder
F109	Mental and behavioural disorders due to use of alcohol, unspecified mental and behavioural disturbance
F100	Mental and behavioural disorders due to use of alcohol, acute intoxication
F102	Mental and behavioural disorders due to use of alcohol, dependence syndrome
DRUG USE DISORDERS	
Z722	Drug use
F559	Unspecified harmful use of non-dependence producing substance
F129	Mental and behavioural disorders due to use of cannabinoids, unspecified mental
F131	Mental and behavioural disorders due to use of sedatives or hypnotics
F159	Mental and behavioural disorders due to use of other stimulants, including caffeine
F132	Mental and behavioural disorders due to use of sedatives or hypnotics, dependence
F192	Mental and behavioural disorders due to multiple drug use and use of psychoactive substances
ADJUSTMENT DISORDER	

Z600 Problems of adjustment to life-cycle transitions

F432 Adjustment disorders

CONDUCT DISORDERS

F91 Conduct disorders

F910 Conduct disorder confined to the family context

F911 Unsocialised conduct disorder

F913 Oppositional defiant disorder

F918 Other conduct disorders

F92 Mixed disorders of conduct and emotions

F929 Mixed disorder of conduct and emotions, unspecified

F919 Conduct disorder, unspecified

OBSERVATION

Z039 Observation for suspected disease or condition, unspecified

Z028 Other examinations for administrative purposes

Z049 Examination and observation for unspecified reason

Z032 Observation for suspected mental and behavioural disorders

Z018 Other specified special examinations

DELIRIUM

R418 Other and unspecified symptoms and signs involving cognitive functions and awareness

F05 Delirium, not induced by alcohol and other psychoactive substances

F059 Delirium, unspecified

OPIOID USE DISORDERS

F112 Mental and behavioural disorders due to use of opioids, dependence syndrome

F119 Mental and behavioural disorders due to use of opioids, unspecified mental and behavioural disorder

GAMBLING DISORDERS

Z726 Gambling and betting

F630 Pathological gambling

SCHIZOPHRENIA OR PSYCHOTIC DISORDERS

F20 Schizophrenia

F202 Catatonic schizophrenia

F205 Residual schizophrenia

F206 Simple schizophrenia

F208 Other schizophrenia

F22 Persistent delusional disorders

F229 Persistent delusional disorder, unspecified

F23 Acute and transient psychotic disorders

F232 Acute schizophrenia-like psychotic disorder

F2320 Acute schizophrenia-like psychotic disorder without mention of associated acute

F2320 Other acute predominately delusional psychotic disorders without mention of associated acute

F2330

F239 Acute and transient psychotic disorder, unspecified

F28 Other nonorganic psychotic disorders

F259	Schizoaffective disorder, unspecified
F200	Paranoid schizophrenia
	Other acute and transient psychotic disorders without mention of associated acute
F2380	
F29	Unspecified nonorganic psychosis
F220	Delusional disorder
F209	Schizophrenia, unspecified

ANXIETY DISORDERS

F40	Phobic anxiety disorders
F4000	Agoraphobia without mention of panic disorder
F4001	Agoraphobia with panic disorder
F401	Social phobias
F41	Other anxiety disorders
F418	Other specified anxiety disorders
F410	Panic disorder episodic paroxysmal anxiety
F419	Anxiety disorder, unspecified

PERSONALITY DISORDERS

F60	Specific personality disorders
F601	Schizoid personality disorder
F603	Emotionally unstable personality disorder
F6031	Emotionally unstable personality disorder, borderline type
F608	Other specific personality disorders
F600	Paranoid personality disorder
F602	Dissocial personality disorder
F609	Personality disorder, unspecified
	Personality and behavioural disorders due to brain disease, damage and dysfunction
F07	
F070	Organic personality disorder

DISORDERS WITH ONSET USUALLY OCCURRING IN CHILDHOOD

R480	Dyslexia and alexia
F909	Hyperkinetic disorder, unspecified
F939	Childhood emotional disorder, unspecified
F95	Tic disorders
F952	Combined vocal and multiple motor tic disorder de la Tourette
F959	Tic disorder, unspecified
	Other behavioural and emotional disorders with onset usually occurring in childhood
F98	
	Other specified behavioural and emotional disorders with onset usually occurring in childhood
F988	
	Unspecified behavioural and emotional disorders with onset usually occurring in childhood
F989	
F938	Other childhood emotional disorders
F93	Emotional disorders with onset specific to childhood

DEPRESSIVE DISORDERS

F32	Depressive episode
F320	Mild depressive episode
F3200	Mild depressive episode, not specified as arising in the postnatal period
F322	Severe depressive episode without psychotic symptoms
F323	Severe depressive episode with psychotic symptoms
F3290	Depressive episode, unspecified, not specified as arising in the postnatal period
F332	Recurrent depressive disorder, current episode severe without psychotic symptoms
F34	Persistent mood affective disorders
F331	Recurrent depressive disorder, current episode moderate
F341	Dysthymia
F33	Recurrent depressive disorder
F329	Depressive episode, unspecified
F3220	Severe depressive episode without psychotic symptoms, not specified as arising in the postnatal period

DEVELOPMENTAL DISORDERS

Q90	Down's syndrome
Q909	Down's syndrome, unspecified
F70	Mild mental retardation
F709	Mild mental retardation without mention of impairment of behaviour
F71	Moderate mental retardation
F72	Severe mental retardation
F79	Unspecified mental retardation
F791	Unspecified mental retardation, significant impairment of behaviour requiring at
F818	Other developmental disorders of scholastic skills
F819	Developmental disorder of scholastic skills, unspecified
F84	Pervasive developmental disorders
F841	Atypical autism
F845	Asperger's syndrome
F848	Other pervasive developmental disorders
F89	Unspecified disorder of psychological development
F840	Childhood autism
F799	Unspecified mental retardation without mention of impairment of behaviour

DEMENTIA DISORDERS

G30	Alzheimer's disease
G31	Other degenerative diseases of nervous system, not elsewhere classified
F00	Dementia in Alzheimer's disease (G30.-+)
F01	Vascular dementia
F019	Vascular dementia, unspecified
F03	Unspecified dementia
F028	Dementia in other specified diseases classified elsewhere

SLEEP DISORDERS

G47	Sleep disorders
-----	-----------------

F51	Nonorganic sleep disorders
F510	Nonorganic insomnia
F513	Sleepwalking somnambulism
F519	Nonorganic sleep disorder, unspecified

SEXUAL DISORDERS

F52	Sexual dysfunction, not caused by organic disorder or disease
F527	Excessive sexual drive
F64	Gender identity disorders
F641	Dual-role transvestism
F649	Gender identity disorder, unspecified
F650	Fetishism
F652	Exhibitionism
F653	Voyeurism
F661	Egodystonic sexual orientation
F669	Psychosexual development disorder, unspecified
F68	Other disorders of adult personality and behaviour

MANIA and BIPOLAR DISORDERS

F30	Manic episode
F300	Hypomania
F309	Manic episode, unspecified
F31	Bipolar affective disorder
F310	Bipolar affective disorder, current episode hypomanic
F311	Bipolar affective disorder, current episode manic without psychotic symptoms
F312	Bipolar affective disorder, current episode manic with psychotic symptoms
F313	Bipolar affective disorder, current episode mild or moderate depression
F319	Bipolar affective disorder, unspecified

EATING DISORDERS

R630	Anorexia
F50	Eating disorders
F500	Anorexia nervosa
F502	Bulimia nervosa
F509	Eating disorder, unspecified

OBSESSIVE COMPULSIVE DISORDERS

F42	Obsessive-compulsive disorder
F429	Obsessive-compulsive disorder, unspecified
F428	Other obsessive-compulsive disorders

SEVERE STRESS DISORDERS

F43	Reaction to severe stress, and adjustment disorders
F430	Acute stress reaction
F431	Post-traumatic stress disorder
F439	Reaction to severe stress, unspecified
F438	Other reactions to severe stress

BRAIN DAMAGE LEADING TO EMOTIONAL BEHAVIORAL DISORDERS

F069	Unspecified mental disorder due to brain damage and dysfunction and to physical conditions
F068	Other specified mental disorders due to brain damage and dysfunction and to physical conditions

PSYCHOSOCIAL

Z65	Problems related to other psychosocial circumstances
-----	--

OTHER

G20	Parkinson's disease
G24	Dystonia
G258	Other specified extrapyramidal and movement disorders
G40	Epilepsy
G80	Cerebral palsy
P961	Neonatal withdrawal symptoms from maternal use of drugs of addiction
Q8971	Dysmorphic features
Q984	Klinefelter's syndrome, unspecified
F681	Intentional production or feigning of symptoms or disabilities, either physical
F63	Habit and impulse disorders
F632	Pathological stealing kleptomania
F633	Trichotillomania
F638	Other habit and impulse disorders
F639	Habit and impulse disorder, unspecified
F441	Dissociative fugue
F446	Dissociative anaesthesia and sensory loss
F448	Other dissociative conversion disorders
F45	Somatoform disorders
F450	Somatisation disorder
F452	Hypochondriacal disorder
F488	Other specified neurotic disorders
F489	Neurotic disorder, unspecified
F09	Unspecified organic or symptomatic mental disorder
F060	Organic hallucinosis
F061	Organic catatonic disorder
F0630	Organic mood affective disorder, unspecified
D82	Immunodeficiency associated with other major defects
E802	Other porphyria
F99	Mental disorder, not otherwise specified
F44	Dissociative conversion disorders
S432	Dislocation of sternoclavicular joint
S519	Open wound of forearm, part unspecified
V612	Parent-Child Problems
Y10	Poisoning by and exposure to nonopioid analgesics, antipyretics and antirheumatics
Z619	Negative life event in childhood, unspecified

Z631	Problems in relationship with parents and in-laws
Z634	Disappearance and death of family member
Z718	Other specified counselling
Z765	Malingering conscious simulation
Z865	Personal history of other mental and behavioural disorders

Qualitative semi-structured interview guide questions

We are meeting to talk about your experiences providing services at the IMH emergency department. Can you tell me a bit about yourself, and what you think is important to know about you to frame your experiences?

Please tell me about your experiences at the IMH emergency department.

Can you tell me how your team works together to deliver services?

How would you describe the typical ED user? And a typical ED frequent user?

What do you think makes the treatment of your service users difficult?

Which elements of service provision are the most challenging?

How can these challenges be lessened or overcome?