TIIG Greater Manchester Themed Report

Deliberate Self-Harm across Greater Manchester April 2011 to March 2014

April 2015

James Marrin, Simon Russell and Mark Whitfield

Centre for Public Health,
Faculty of Education, Health and Community,
Liverpool John Moores University,
Henry Cotton Campus,
15-21 Webster Street,
Liverpool, L3 2ET

cph.org.uk

0151 231 4500
tiig@ljmu.ac.uk
tiig.info
twitter.com/tiig_cph

ISBN: 978-1-908929-95-2 (print)
ISBN: 978-1-908929-96-9 (web)

CPH | CENTRE FOR PUBLIC HEALTH
LIVERPOOL JOHN MOORES UNIVERSITY

LIVERPOOL JOHN MOORES UNIVERSITY

James Marrin, Simon Russell and Mark Whitfield

April 2015

Centre for Public Health

Faculty of Education, Health and Community

Liverpool John Moores University

2nd Floor, Henry Cotton Building

15-21 Webster Street

Liverpool

L3 2ET

Tel: 0151 231 4500

Fax: 0151 231 4552

Email: tiig@ljmu.ac.uk

Web: www.tiig.info and www.cph.org.uk

Twitter: www.twitter.com/tiig_cph

CONTENTS

FOREWORD

Annually across the UK there are approximately 170,000 presentations to hospital Emergency Departments (EDs) due to acts of deliberate self-harm (DSH)[1]. These are often triggered by socio-economic and interpersonal stressors (e.g. unemployment, poverty, chronic illness and substance misuse)[2,3]. Substantial proportions of the Greater Manchester population experience high levels of such stressors[4]. Subsequently, across Greater Manchester there is an elevated risk of DSH.

Those who present to hospital EDs for DSH episodes are at an increased risk of repeating their self-harm behaviour[5]. After the DSH episode they are also at an increased short and long-term risk of death by suicide. This is particularly so for females and younger people[6]. There is also the risk of long-term health problems following self-harm and attempted suicide.

In addition to their human costs, DSH and suicide exact financial costs on society. These include:

- Immediate medical treatment to address the harm/suicide attempt;
- Lost productivity and provision of financial support for the harmer whilst they recover;
- Lost productivity and provision of financial support for the harmer's family/friends whilst they recover from the effects of the harm and/or support for the harmer though their recovery; and,
- Support (e.g. counselling, time off work) for those left behind after a completed suicide, or whilst family take time to support the harmer during their recovery.

Clearly, understanding and monitoring DSH across GM would prove useful for a number of public health concerns, not least suicide prevention work. This report contributes to that understanding. Intelligence gained through this report can help focus GM resources aimed at supporting those with mental health and well-being needs, reducing self-harming behaviour and preventing suicide.

Kirstie Haines

Greater Manchester Public Health Network Programme Director

---

[1] Kapur, N., Cooper, J., Hiroeh, U. et al. (2004). Emergency department management and outcome for self-poisoning: a cohort study. General Hospital Psychiatry. 26. 1: 36–41.

[2] Butler, J. and Longhitano, C. (2004). Self-harm. Medicine. 36. 9: 455-458 (online). Available at: http://www.sciencedirect.com/science/article/pii/S1357303908001825.

[3] Self-harm: The short-term physical and psychological management and secondary prevention of self-harm in primary and secondary care: National Clinical Practice Guideline Number 16.

[4] PHE. (2015). Public Health Outcomes Framework (online). Available at http://www.phoutcomes.info/public-health-outcomes-framework#gid/1000049/par/E12000004.

[5] Bilen, K., Ottosson, C. et al. (2010). Deliberate self-harm patients in the emergency department: factors associated with repeated self-harm among 1524 patients, Emergency Medicine Journal (online), Available at http://emj.bmj.com/content/early/2010/11/12/emj.2010.102616.

[6] Zahl, D. L. and Hawton, K. (2004). Repetition of deliberate self-harm and subsequent suicide risk: long-term follow-up study of 11,583 patients. British journal of Psychiatry. 185.1 (online). Available at:http://bjp.rcpsych.org/content/185/1/70.full.

ACKNOWLEDGEMENTS

With thanks to the Greater Manchester Accident and Emergency Departments and North West Ambulance Service for collecting and sharing this data. Thanks also to Public Health England for providing HES data. Thanks to Greater Manchester Public Health Network, in particular Kevin Sanderson-Shortt and Thomas Maloney for their comments and contributions. Thanks to Laura Heeks for designing the front cover and, finally, thanks to Jenny Brizell and Jane Harris for their help in proofing and preparing this report.

KEY FINDINGS

- Deliberate self-harm is a potentially preventable public health problem and yet accounts for an estimated 170,000 hospital attendances in the UK every year. Following a deliberate self-harm (DSH) episode, there is a substantially increased and persistent risk of suicide, particularly within the first six months. Studies estimate that one-percent of patients presenting to hospital for DSH commit suicide within one year, and that between three and 10 percent of those who have a history of DSH will eventually commit suicide.
- Greater Manchester has a population of around 2.7 million, substantial proportions of which are economically deprived. High levels of unemployment and debt have been consistently associated with mental health disorders, DSH and suicide, and Greater Manchester has a suicide rate that is almost double that of the national average. Since most DSH patients present to Emergency Departments (EDs), management within this context is crucial to reducing and preventing DSH and suicide.
- There were 15,394 attendances for incidents of DSH to Greater Manchester EDs between April 2011 and March 2014, 84% (12,980) of which were made by Greater Manchester residents; the ED with the highest number of attendances was Salford Royal Hospital (2,733) and the largest number of attendances (2,219) came from residents of Salford Local Authority (LA).
- There are gender, age and ethnic differences among people who exhibit DSH behaviour; however the patterns of elevated risk are complex. For example, females, especially among younger people (under 18 years of age), are more likely than males to present to hospital for DSH, yet males in the community are more likely to commit suicide. Younger people are more likely to present for DSH, yet older people are more likely to commit suicide following an episode of DSH. In terms of ethnicity, people from black and minority ethnic (BME) groups are less likely to seek help and attend EDs following an episode of DSH and are less likely to receive a psychosocial assessment when they do present to hospital.
- Data from EDs in Greater Manchester presented in this report adds evidence to findings in the literature: females accounted for 19% more attendances than males for DSH between April 2011 and March 2014; the highest number of attendances were for individuals aged 30-59 (6,191), followed by those aged 15-29 (5,824); and the majority (87%) of attendances at Greater Manchester EDs for DSH were by white people (the proportion of white people in the total population of Greater Manchester is approximately 80%; ONS, 2011).
- Over four in ten (43%) DSH incidents occurred in the home. The location of the incident was stated as 'other' in 17% of attendances (2,146), and 'unknown' in 35% of attendances (4,599).
- The majority of DSH attendees (59%) were self-referred and, in terms of arrival method, a similar majority arrived at EDs by ambulance (62%). In terms of disposal method, 26% of DSH attendees were discharged, while 25% were admitted to hospital; there was a large proportion (13%) of 'other' disposals.
- The majority of EDs did not collect, or did not collect to a high standard, data on the presence of alcohol in DSH attendances. Where this was available 4% (656) of attendees stated they had consumed alcohol prior to presenting at EDs.
- Between April 2011 and March 2014 there were 33,360 ambulance call outs for incidents of DSH. The largest proportion of call outs were in Manchester LA (7,938; 24%). The majority of call outs were for males (17,926; 54%) and people aged 30 to 59 years (17,315; 52%).

- In response to evidence and data presented in this report, various recommendations have been made which primarily focus on data collection and quality, and mechanisms to improve prevention and treatment services. The various recommendations relating to data collection and quality will be addressed over time and will involve cooperative, multi-agency working.
- It is suggested that while there will be barriers and challenges to improving data recorded by EDs, there is potential for good quality information to exact positive and lasting change for victims of DSH. In terms of prevention and intervention, the primary recommendation of this report is to improve early intervention by ensuring psychosocial assessments are carried out for all patients presenting at hospitals for DSH.

DELIBERATE SELF-HARM IN THE UK

Self-inflicted violence, self-poisoning or deliberate self-harm (DSH), is an important public health problem in the UK and across the world (Perry et al., 2012). DSH is defined as an act of intentional self-poisoning or injury irrespective of the apparent purpose of the act (NHS, 1998). It can be an intention to die, an intention to express distress or to relieve unbearable tension (NHS, 2014). DSH is especially common among females and younger people; a 2002 survey of people aged 15-16 years in the UK estimated that 10% of girls and 3% of boys had self-harmed in the previous year (NHS, 2014). Where DSH is carried out to deal with overwhelming emotional issues, the most common causes are reported to be: social factors, such as being bullied; trauma, such as physical or emotional abuse; and mental health conditions, such as depression (NHS, 2014). Independent risk factors for DSH have been found to be: not living with close relatives, secrecy of self-harm behaviour and alcohol or drug misuse (Cooper et al., 2002). DSH has high comorbidity with suicidal behaviour and research suggests that it is important for assessment tools, used to identify those at risk of DSH, to consider suicidal behaviours (Fliege et al., 2006). Suicide is the act of intentionally ending your life and, like DSH, is often caused by overwhelming negative feelings often exacerbated by mental health conditions and alcohol or drug misuse (NHS, 2012).

DSH has been estimated to account for 170,000 hospital attendances in the United Kingdom (UK) each year, with an average annual rate of patients presenting to hospital services of 310 per 100,000 population (Kapur et al., 2004). Following DSH there is a significant and persistent risk of future suicide; approximately one-percent of those presenting with DSH commit suicide within one year of an episode of DSH (Hawton and Fagg, 1988), between three and 10 percent of DSH patients eventually kill themselves (Owens, Horrocks and House, 2002; Nordentoft et al., 1993) and half of suicide victims have been reported to have a history of DSH (Department of Health, 2001). The time immediately following DSH is the highest period of risk for suicide and studies have found this risk to increase by 50 to 100 times in the year following an episode compared to the general population (Owens and Horrocks, 2002; Hawton and Fagg, 1988). The risk of suicide is higher among males (Cooper et al., 2005) and older people, particular those aged 55 years and over (Hawton, Zahl and Weatherall, 2003). However, when compared to suicide rates in the general population, the risk following a DSH episode has found to be higher among females than males, which is suggested to be due to low rates of female suicide in the general population and lower engagement by males with treatment services (Cooper et al., 2005).

Reducing DSH has been identified as a key aim for suicide prevention strategies in the UK and has been a subject of the World Health Organization's (WHO) Health for All program (Kapur et al., 2004). Studies suggest the vast majority of DSH cases present to Emergency Departments (EDs), therefore management within EDs is crucial to reducing and preventing DSH. Greater Manchester has large economically deprived urban populations and a suicide rate that is almost double the national average (20.5 compared to 11.8 per 100,000; ONS, 2000). A cohort study of DSH attendees in EDs in Greater Manchester found that traditional risk factors for DSH (including previous episodes, psychiatric contact and substance dependence) increased the likelihood of a patient receiving a psycho-social assessment[7] but that receiving an assessment was not associated with reduced repetition. However, referral for follow up treatment was associated with a reduced risk of repetition; psychiatric follow up appointments[8] were given in about one-third of cases from this cohort in Greater Manchester (Kapur et al., 1998). Reducing the

[7] Psychosocial assessments are evaluations of patients' mental, physical and emotional health, which accounts the patients' perception of self and ability to function in the community.

[8] Psychiatric appointments are carried out by physicians who are specially trained to diagnose and treat patients who are experiencing issues from emotional distress to mental health concerns.

risk of suicide is also a core element of suicide prevention strategies in the UK; recognition of risk and delivering appropriate treatment for DSH and suicidal patients is suggested to be crucial in achieving that goal.

This Trauma and Intelligence Group (TIIG) themed report seeks to contextualise the evidence relating to DSH within the area of Greater Manchester using ED recorded data. Since EDs do not distinguish between DSH and attempted suicide (or accidental overdose), the numbers presented here have been grouped under the umbrella term DSH. However, while DSH and suicide are inextricably linked (DSH is the single most important risk factor for suicide; Perry et al., 2012), there is a distinction between DSH and suicidal behaviour and there is variance in terms of the groups at elevated risk. This report will present data from 12 EDs across eight Local Authorities (LAs) in Greater Manchester between April 2011 and March 2014. In addition to reporting information relating to DSH presentations at EDs within Greater Manchester, this report considers how ED data could be used to inform policy makers and improve preventative interventions for those at risk of DSH and suicidal behaviour in Greater Manchester and across the North West of England. Additionally, this report presents case studies to illustrate an overview of suicide rates in the UK and socio-demographic predictors of DSH, specifically considering teenagers and black and minority ethnic (BME) groups.

GREATER MANCHESTER AREA PROFILE

AREA DESCRIPTION

Greater Manchester is a metropolitan county within the North West of England and has a population of around 2.7 million people (mid 2012 population estimates; ONS 2013). Table 1 shows a breakdown of the Greater Manchester population by LA; Manchester (510,772) has the largest population, followed by Wigan (318,670) and Stockport (283,897).

TABLE 1. Greater Manchester resident population estimates (mid-2012 population estimates)

Local Authority	Population estimate
Bolton	278,984
Bury	186,199
Manchester	510,772
Oldham	225,875
Rochdale	212,020
Salford	237,085
Stockport	283,897
Tameside	220,241
Trafford	228,466
Wigan	318,670

Source: Office for National Statistics (2013).

DELIBERATE SELF-HARM IN GREATER MANCHESTER: HOSPITAL EPISODE STATISTICS DATA

RECORDED SELF-HARM AND SUICIDE

Table 2 shows hospital episode statistics (HES) for DSH in Greater Manchester. This data was accessed from HES data courtesy of Public Health England (PHE). For yearly breakdowns by gender and age of HES for DSH in Greater Manchester for both LAs and EDs see appendices one and two.

TABLE 2. Hospital admissions for deliberate self-harm in Greater Manchester, April 2011 to March 2014

Local Authority	2011/12	2012/13	2013/14	Yearly average 2011/12 to 2013/14
Bolton	537	527	778	614
Bury	414	350	368	377
Manchester	1235	1280	1393	1303
Oldham	580	448	549	526
Rochdale	563	496	455	505
Salford	945	943	996	961
Stockport	623	526	702	617
Tameside	638	627	611	625
Trafford	367	407	431	402
Wigan	1008	985	1219	1071
Total	6910	6589	7502	7001

Source: Public Health England (2015).

HOSPITAL ADMISSIONS FOR DSH

Table 3 shows the number and crude rate (per 100,000) of average yearly hospital admissions for DSH in Greater Manchester (codes X60-84 'Intentional self-harm' and Y10-Y34 'Event of undetermined intent'). Crude rates have been calculated using 2012 mid-year population estimates. Manchester LA has the highest number (1,303) of DSH related hospital admissions; however, Salford (405) had the highest crude rate per 100,000 population, followed by Wigan (336) and Tameside (284).

TABLE 3. Greater Manchester hospital admissions for deliberate self-harm, April 2011 to March 2014

Local Authority	Hospital admissions for DSH (yearly average 2011/12 to 2013/14)	Hospital admissions for DSH: Crude rate per 100,000 population (2011/12 to 2013/14 pooled)	Lower CI	Upper CI
Bolton	614	220	192	251
Bury	377	203	176	233
Manchester	1303	255	225	288
Oldham	526	234	205	266
Rochdale	505	238	209	270
Salford	961	405	367	446
Stockport	617	217	189	248
Tameside	625	284	252	319
Trafford	402	176	151	204
Wigan	1071	336	301	374
Total	7000	259	228	293

Source: Public Health England (2013).

LEVELS OF DEPRIVATION IN GREATER MANCHESTER

In terms of deprivation, LAs within Greater Manchester are generally more deprived than the UK average. In the Indices of Multiple Deprivation (IMD 2010), seven out of ten LAs within Greater Manchester are ranked in the most deprived quintile, these being; Bolton, Manchester, Oldham, Rochdale, Salford, Tameside and Wigan. Bury is ranked in the 2nd most deprived quintile and Stockport and Trafford are ranked in the 3rd most deprived quintile.

Box 1: Suicide

In January 2014, the Government published a study examining the cross-government outcome strategy to save lives initiated in 2012. In 2008 suicide rates had risen across the UK after a period of substantial decline between 2002 and 2007, which has been attributed to the severe and ongoing effects of the global economic circumstances. High levels of unemployment and debt have fostered a rise in cases of clinical depression among the most vulnerable sections of society which is often a predictor of suicidal behaviour and DSH. This study reported that:

- The total number of suicides in the UK had risen to 4,518 for 2011 and 4,513 in 2012; however, this is 17% lower than the highest numbers recorded between 1998 and 2000.
- Male suicides were three times higher than female suicides; the highest incidents for males were among those aged between 35 and 54 years, and the highest incidents for females were among those aged between 40 and 59 years.
- The most common method for males was by strangulation, hanging or suffocation, while drug related poisoning was the most common method for females.
- Almost half of all suicide deaths have a history of DSH.
- Inpatient suicides had fallen dramatically with twice as many patient suicides occurring amongst home-treatment patients.
- There was a rise in suicide deaths within two days of release from police custody (59), almost two-thirds of which had underlying mental health issues or prior mental health treatment.
- Previous research has demonstrated an association between areas of high unemployment and/or absence of welfare services and higher than expected deaths by suicide (800 male and 155 female cases more than historical trends would predict, which may be a consequence of the economic crash).

A recommendation from this research is for the development of local monitoring and surveillance networks to help with early detection and prevention, especially in cases of DSH which is a key predictor for suicide. At present only half of all UK DSH attendees are given a psychosocial assessment. This study also recognised that ED data can be utilised to develop more efficient management of resources and to identify hotspots and vulnerable groups. Data could also be vital in developing aftercare and follow up treatment by encouraging information sharing which could distinguish between different demographics, such as those with previous mental health treatment or DSH episodes. Data analysis from an ED in the North West of England showed that:

- Almost three in ten DSH attendances were a result of self-harm or attempted suicide, while 72% were the result of an overdose.
- Over half of female attendances were aged between 30 and 59 years of age, while 48% of male attendances were aged between 15 and 29 years of age.

Data utilised from EDs could facilitate improvements in the administration of National Suicide Prevention Strategy measures by local services, promoting evidence based treatment and follow-up care plans for patients at risk of suicide based on attending behaviours and categories. For example, accurate categorisation of patients' risk factors could lead to specific focus of treatment resources, such as drug education or treatment for those attending after an accidental overdose, or monitoring mechanisms for adolescent DSH.

Source: www.gov.uk/dh

ACCIDENT AND EMERGENCY DEPARTMENT DATA

EMERGENCY DEPARTMENTS IN GREATER MANCHESTER

Within Greater Manchester there are twelve EDs which primarily serve residents of Greater Manchester. These are: Manchester Royal Infirmary (MRI); Royal Albert Edward Hospital (RAE); Salford Royal Hospital; Stepping Hill Hospital; Tameside General Hospital; Royal Bolton Hospital; Trafford General Hospital[9]; Wythenshawe Hospital; Fairfield General Hospital; North Manchester General Hospital; Royal Oldham Hospital and Rochdale Infirmary[9].

TABLE OF INJURY GROUPS COLLECTED

Table 4 details which injury groups are collected by each ED. There are varying levels of data collected across different trusts with some EDs only collecting the College of Emergency Medicine (CEM) recommended injury groups. All EDs across Greater Manchester, except Stepping Hill, categorise victims of DSH.

TABLE 4. Greater Manchester ED injury group data items

ED	Pennine Acute Trust[10]	Manchester Royal Infirmary	Royal Albert Edward infirmar	Salford Royal	Stepping Hill Hospital	Tameside General Hospital	Royal Bolton	Trafford General Hospital	Wythen shawe Hospital
Assault	Y	Y	Y	Y	Y	Y	Y	Y	Y
Other injury	Y	Y	Y	Y	Y	Y	Y	Y	Y
Road traffic collisions	Y	Y	Y	Y	Y	Y	Y	Y	Y
Sports injuries	Y*	Y	-	Y	Y	Y	Y	Y	Y
Deliberate self-harm	Y	Y	Y	Y	-	Y	Y	Y	Y
Falls	Y	-	-	Y	Y	Y	Y	-	Y
Burns & scalds	Y	-	-	Y	Y	-	Y	-	Y
Bites & stings	Y	-	-	Y	Y	-	Y	-	-

*Collected by Fairfield General and Rochdale Infirmary only

ENHANCED ALCOHOL DATA COLLECTION

TIIG work with EDs across the North West of England to develop the information recorded from patient attendances based on whether attendees had been consuming alcohol prior to episodes of DSH. Table 5 details which EDs participate in completing the TIIG recommended questions relating to alcohol consumption and assessments. The completion rates of TIIG recommended questions for participating EDs are: Manchester Royal Infirmary 30%, Royal Albert Edward Infirmary 71%, Tameside General Hospital 3% and Wythenshawe Hospital <1%.

[9] Urgent Care Centre.

[10] Pennine Acute Trust incorporates Fairfield General Hospital, North Manchester General Hospital, Royal Oldham Hospital and Rochdale Infirmary.

TABLE 5. Greater Manchester ED enhanced alcohol consumption and assessment data items

ED	Alcohol questions						Assessment
	Alcohol consumed?	Alcohol in last 3 hours?	How often?	How many units?	How often more than 6 units (female)/ 8 units (male)?	Last drink location	Assessment given?
The Royal Bolton Hospital	-	-	-	-	-	-	-
Pennine Acute Trust	-	-	-	-	-	-	-
Manchester Royal Infirmary	Y	Y	-	-	-	Y	-
Royal Albert Edward infirmary	Y	-	Y	Y	Y	Y	Y
Salford Royal	-	-	-	-	-	-	-
Stepping Hill Hospital	-	-	-	-	-	-	-
Tameside General Hospital	Y	-	-	-	-	-	-
Trafford General Hospital	-	-	-	-	-	-	-
Wythenshawe Hospital	Y	-	-	-	-	-	-

DELIBERATE SELF-HARM ACROSS GREATER MANCHESTER: ANALYSIS OF ED DATA

This section of the report examines the burden of DSH across Greater Manchester using ED data between April 2011 and March 2014[11]. In order to support local work, this report describes data at both LA and ED level to assist local partners in their work following the Public Health Outcome Framework (PHOF); in particular this report can be used in work which considers indicators of 'mental health' and 'suicidal behaviour'.

TRENDS IN DELIBERATE SELF-HARM ACROSS GREATER MANCHESTER (2009/10 TO 2013/14)

TIIG has stored data from all EDs across Greater Manchester since April 2009 which allows comparisons to be made over a five year period (2009/10 to 2013/14)[12]. Table 6 shows that total attendances for DSH to Greater Manchester EDs have risen by 23% between 2009/10 (4,243) to 2013/14 (5,219). The majority of EDs have reported a significant increase in attendances during this period; for example Wythenshawe Hospital has had the largest growth in attendances for DSH of 381%[13]. Similarly, both Fairfield General Hospital and Royal Oldham Hospital have reported a 90% increase in DSH attendances during this period. Some EDs have reported a reduction in attendances; for example DSH attendances at Rochdale Urgent Care Centre reduced by 60% over the five year period. This is likely to be due to the change in status from an ED to an Urgent Care Centre in April 2011. Increases in attendances to neighbouring EDs such as Royal Oldham Hospital and North Manchester Hospital may be partially due to patients being redirected from Rochdale.

[11] Trends analysis presents data from April 2009 to March 2014.

[12] Please note the data provided in Table 6 has been taken from previous TIIG reports. The remaining data in this report is from a refreshed extract from Greater Manchester; EDs and numbers may not be consistent in all cases.

[13] The substantial percentage increase over this period, for example at Wythenshawe, is likely due to improved standards in data collection for incidents for DSH, rather than reflecting actual increases in incidents.

TABLE 6. Deliberate self-harm trends across Greater Manchester, April 2009 to March 2014

Hospital	2009/10	2010/11	2011/12	2012/13	2013/14	Increase/decrease between 2009/10 and 2013/14
Fairfield General Hospital	162	248	314	253	307	90%
Manchester Royal Infirmary	531	305	364	559	420	-21%
North Manchester General Hospital	214	308	333	271	286	34%
Rochdale Infirmary	224	171	75	74	89	-60%
Royal Albert Edward infirmary	578	693	576	540	574	-1%
Royal Oldham Hospital	217	334	442	380	413	90%
Salford Royal	770	764	847	925	961	25%
Tameside General Hospital	714	652	721	802	820	15%
The Royal Bolton Hospital	447	383	499	411	476	6%
Trafford General Hospital	309	289	519	481	503	63%
Wythenshawe Hospital	77	110	360	429	370	381%
Total Greater Manchester EDs[14]	**4243**	**4257**	**5050**	**5125**	**5219**	**23%**

DEMOGRAPHICS

This section of the report will look at DSH attendances to Greater Manchester EDs between April 2011 and March 2014. During this time a total of 15,394 attendances for DSH were recorded.

GEOGRAPHY

Of the 15,394 DSH attendances, 12,980 (84%) were attendances by Greater Manchester residents. The highest out of region attendances came from Rossendale (68; <1%), West Lancashire (46; <1%), and St Helens (46; <1%). It was not possible to attribute an LA area to 2,136 attendances (14%). Table 7 shows the number of attendances made by Greater Manchester residents to Greater Manchester EDs by financial year from April 2011 to March 2014[15]. Across the three year period, the month with the highest number of DSH attendances was August (1,181; 9%), followed by January (1,151; 9%), May (1,141; 9%) and October (1,125; 9%). December (990; 8%) had the fewest number of attendances for DSH. During the three year period, DSH attendances increased by 18% from 3,835 in 2011/12 to 4,528 in 2013/14.

TABLE 7. Deliberate self-harm attendances to Greater Manchester EDs of Greater Manchester residents, April 2011 to March 2014

Years	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Total
2011/2	342	389	276	289	326	333	312	238	266	389	322	353	**3835**
2012/3	361	407	407	444	465	401	377	380	343	349	347	336	**4617**
2013/4	318	345	419	372	390	325	436	379	381	413	373	377	**4528**
Total	**1021**	**1141**	**1102**	**1105**	**1181**	**1059**	**1125**	**997**	**990**	**1151**	**1042**	**1066**	**12980**

[14] Stepping Hill does not collect data on incidents of deliberate self-harm and has been excluded from this table.

[15] Please note the remainder of this section will look at Greater Manchester residents only.

Table 8 shows DSH attendances at Greater Manchester EDs as percentages of LA of residence. The highest number of DSH attendances were to Salford Royal (2,308; 18%), followed by Tameside General Hospital (2,027; 16%) and Royal Albert Edward Infirmary (1,479; 11%). Rochdale Infirmary (Urgent Care Centre as of April 2011) saw the fewest number of DSH attendances (211; 2%). The majority of patients attended an ED close to where they live; e.g. 96% of Tameside residents attended Tameside General Hospital and 89% of Wigan residents attended Royal Albert Edward Infirmary.

TABLE 8. Deliberate self-harm attendances to Greater Manchester EDs as percentages of Local Authority of residence, April 2011 to March 2014

Hospital	Bolton	Bury	Manchester	Oldham	Rochdale	Salford	Stockport	Tameside	Trafford	Wigan
The Royal Bolton Hospital	71%	2%	0%	0%	0%	8%	0%	0%	0%	18%
Fairfield General Hospital	1%	55%	1%	2%	40%	1%	0%	0%	0%	0%
Manchester Royal Infirmary	1%	0%	82%	1%	1%	3%	3%	4%	6%	0%
North Manchester General	0%	12%	62%	4%	14%	7%	0%	0%	0%	0%
Royal Oldham Hospital	0%	1%	2%	78%	18%	0%	0%	1%	0%	0%
Royal Albert Edward infirmary	1%	0%	0%	0%	0%	0%	0%	0%	0%	99%
Rochdale Infirmary	0%	1%	0%	1%	96%	0%	0%	0%	0%	0%
Salford Royal Hospital	1%	5%	3%	0%	1%	87%	0%	0%	2%	1%
Tameside General Hospital	0%	0%	2%	1%	0%	0%	2%	94%	0%	0%
Trafford General Hospital	0%	0%	2%	0%	0%	3%	0%	0%	94%	0%
Wythenshawe Hospital	0%	1%	61%	1%	1%	1%	7%	1%	27%	0%

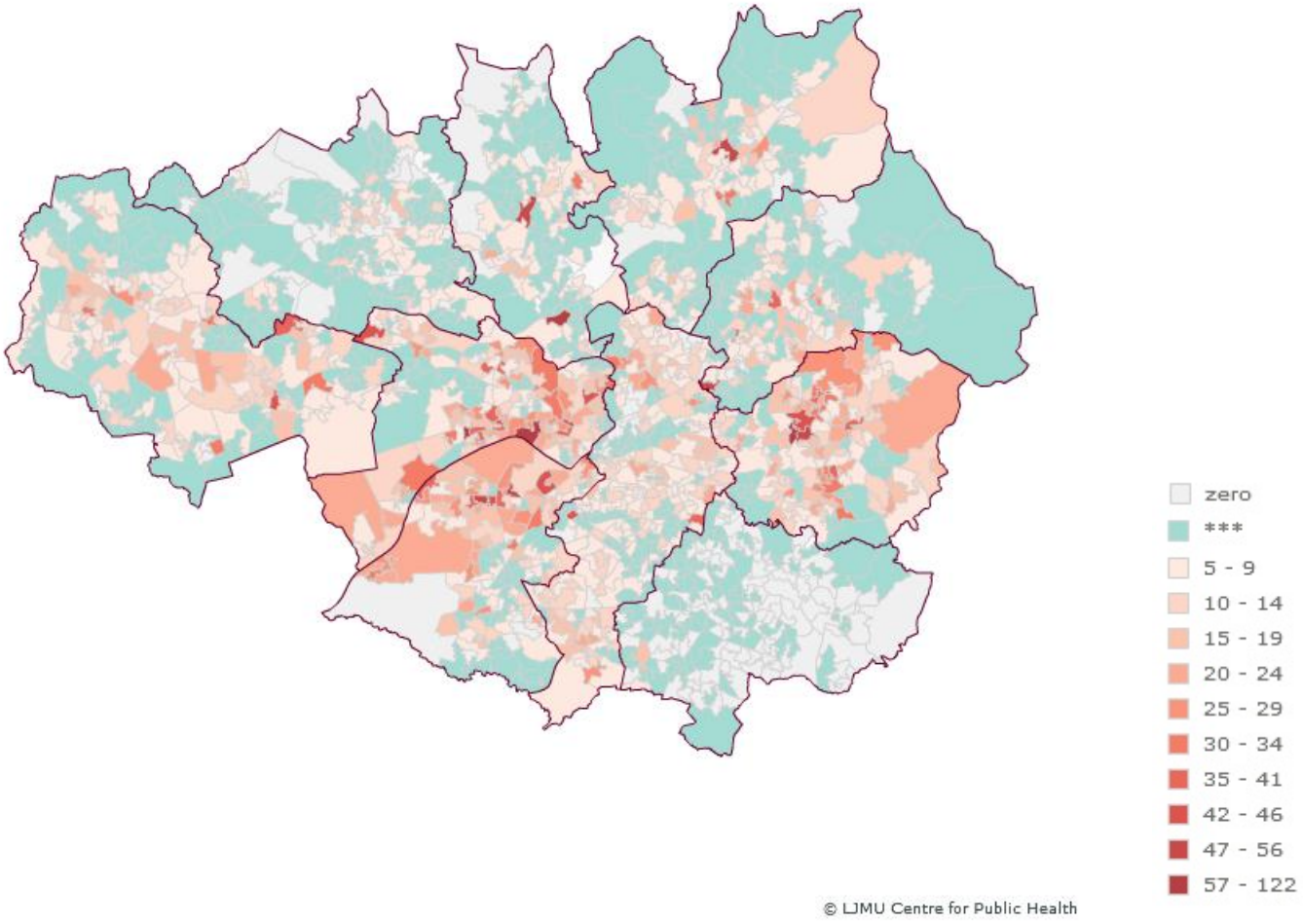
Table 9 shows that the highest number of attendances came from the Lower Super Output Area (LSOA) Tameside 013D (122) followed by Bury 022D (97) and Salford 021D (63).

TABLE 9. Top 20 LSOAs for Greater Manchester ED deliberate self-harm attendances, April 2011 to March 2014

LSOA code	LSOA name	Number of attendances
E01005952	**Tameside 013D**	122
E01005034	**Bury 022D**	97
E01005720	**Salford 021D**	63
E01005729	**Salford 025A**	60
E01006198	**Trafford 009A**	56
E01006159	**Trafford 006C**	54
E01005370	**Oldham 032C**	49
E01006016	**Tameside 017E**	48
E01005482	**Rochdale 010C**	47
E01004948	**Bury 009B**	47
E01005682	**Salford 024D**	46
E01005948	**Tameside 013A**	45
E01005611	**Salford 016B**	45
E01006333	**Wigan 030B**	44
E01005662	**Salford 004B**	43
E01006187	**Trafford 003C**	43
E01006199	**Trafford 009B**	43
E01005631	**Salford 020A**	42
E01005150	**Manchester 029A**	42
E01005601	**Salford 026C**	41
E01006156	**Trafford 008A**	41
E01006201	**Trafford 009D**	41

FIGURE 1. Number of DSH ED attendances by LSOA with Local Authority boundaries, April 2011 to March 2014

Figure 1 displays an overview of the geographical spread of DSH attendees to EDs by Greater Manchester residents within LA boundaries. This map was produced using InstantAtlas software and populated using the total number of attendances for each LSOA, as partially shown in Table 9.



GENDER AND AGE

Over the three year period, the majority of attendances were made by females (7,163; 55%) and 45% were by males (5,815). There were less than five attendances where the gender was unknown (<1%) which have been omitted from these analyses. Figure 2 shows the number of DSH attendances by gender over the three year period. There have been consistent peaks and troughs for female attendances with the lowest attendances in July 2011 (135), and the highest number during August 2012 (266). Similarly, male attendances have followed similar undulations throughout this period; the lowest period for DSH attendances was November 2011 (101), and the highest peaks were in July 2012 and October 2013 (both 206).

FIGURE 2. Deliberate self-harm attendances to Greater Manchester EDs by gender, April 2011 to March 2014

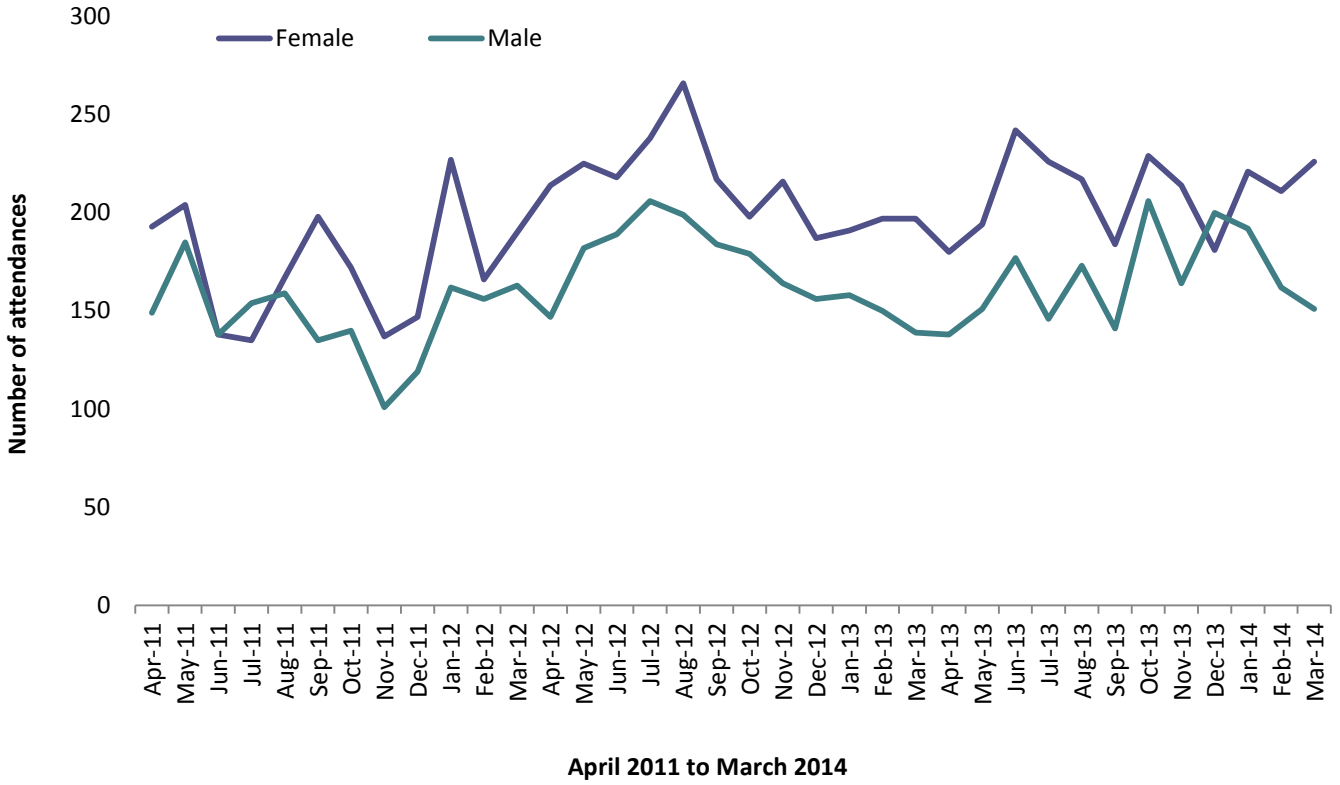
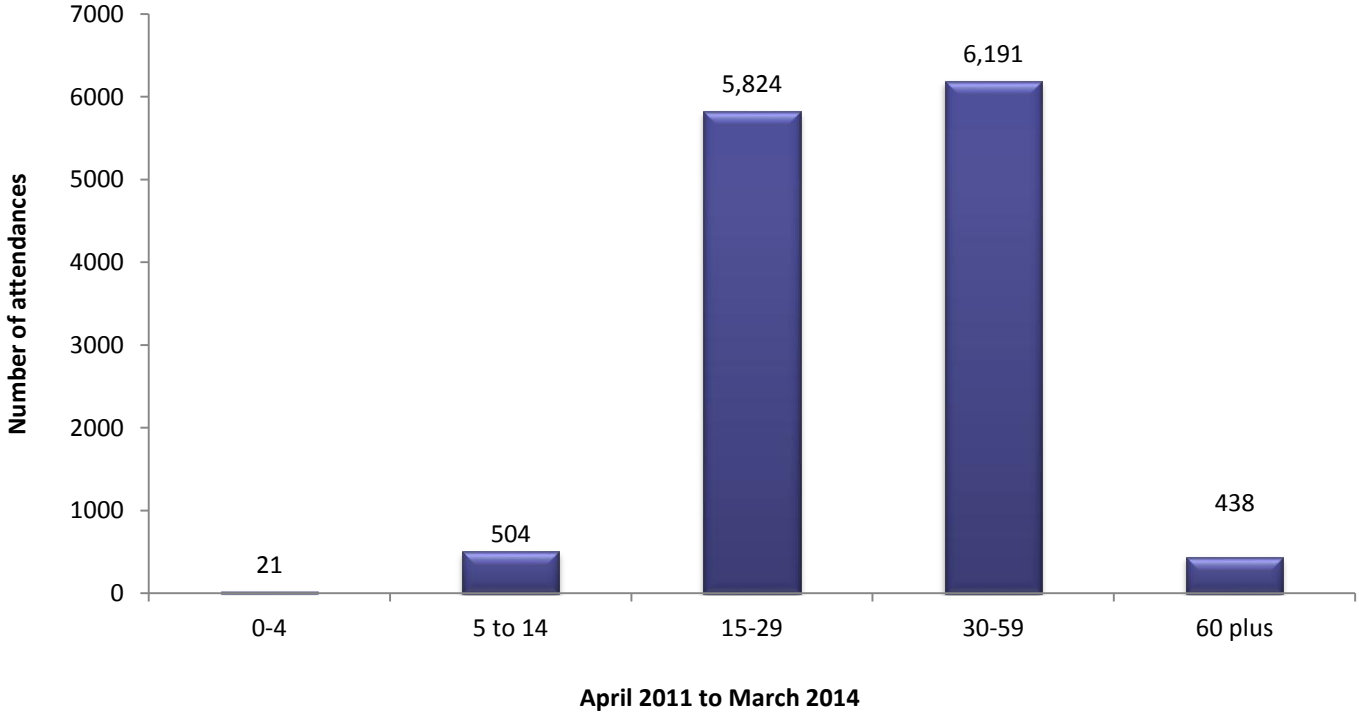


Figure 3 shows that the highest proportion of DSH attendances came from those aged between 30 and 59 years of age (48%), followed by those aged 15 to 29 years (45%). There were 504 attendances aged between 5 to 14 years (4%), 438 aged 60 years and above (3%) and 21 aged between 0 and 4 years of age (<1%). There were less than five attendances where the age was unknown (<1%).

FIGURE 3. Deliberate self-harm attendances to Greater Manchester EDs by age group, April 2011 to March 2014



Box 2: Teenage Self-Harm

In 2012 a multi-centre cohort for suicide prevention published a study in collaboration with the WHO, which examined DSH epidemiology and characteristics for children and adolescents in the U.K. Data was collected on all patients under 18 years old that presented with DSH to participating EDs in Oxford, Manchester and Derby between 2000 and 2008. The study analysed repeat attendance data including the sex, age, date and method of DSH. Individuals who re-presented were subsequently followed for a further two years. Three thousand nine hundred and twenty individuals were included in this study, and were involved in a total of 6,598 incidents of DSH during this period.
This study established that:

- 75% of DSH attendances were female and one quarter were male.
- Repeated DSH occurred in 27% of the individuals involved, with 29% of males and 27% of females re-presenting for DSH incidents.
- Of the 1,071 who re-presented, 59% did so once, while 42% of individuals repeat self-harmed numerous times.
- Among young people, the likelihood of repeated DSH increased with the age of the individual at the first attendance, with those aged 15 to 18 more likely to repeatedly DSH than those presenting for the first time at a younger age. DSH patients aged between 15 and 18 at initial attendance were six times more likely to die by suicide than younger age groups.
- Underlying and prior mental health issues were key predictors for repeated DSH.
- Self-cutting as a method both at the first presentation and the repeat incident indicated the greatest risk of eventual suicide but the methods of suicide were usually different from methods of DSH.
- There is a link between DSH in childhood and adolescence and eventual suicide; half of all subsequent deaths of the individuals in this cohort involved suicide.
- Males with a history of adolescent DSH were at a higher risk of eventual suicide.

A recommendation from this report was that teenage DSH needs to be met with early detection, intervention and psychosocial assessment to prevent DSH from leading to suicide. Such practice needs to be extended to all patients presenting with DSH injuries, in addition to incidents categorised as 'non-suicidal self-injury'. This is highlighted by the fact that attendees who had cut themselves were less likely to have a psychosocial assessment at the point of discharge, and that methods of suicide largely differed from previous methods of DSH. Further sources including ED data could help in providing a more robust profile of teenage DSH victims and influencing protocol for repeat incidents and follow-up care.

TIIG data shows that between April 2011 and March 2014:

- Thirteen percent of DSH attendances made to Greater Manchester EDs by Greater Manchester residents were aged between 13 and 17 years of age (1,553); 27% were aged 16, 25% aged 17, 22% aged 15, 16% aged 14 and 9% aged 13.
- Three-quarters of attendees were female, 25% were male.
- Over three in ten were referred, 31% were admitted, 29% discharged, and 7% left by other means.

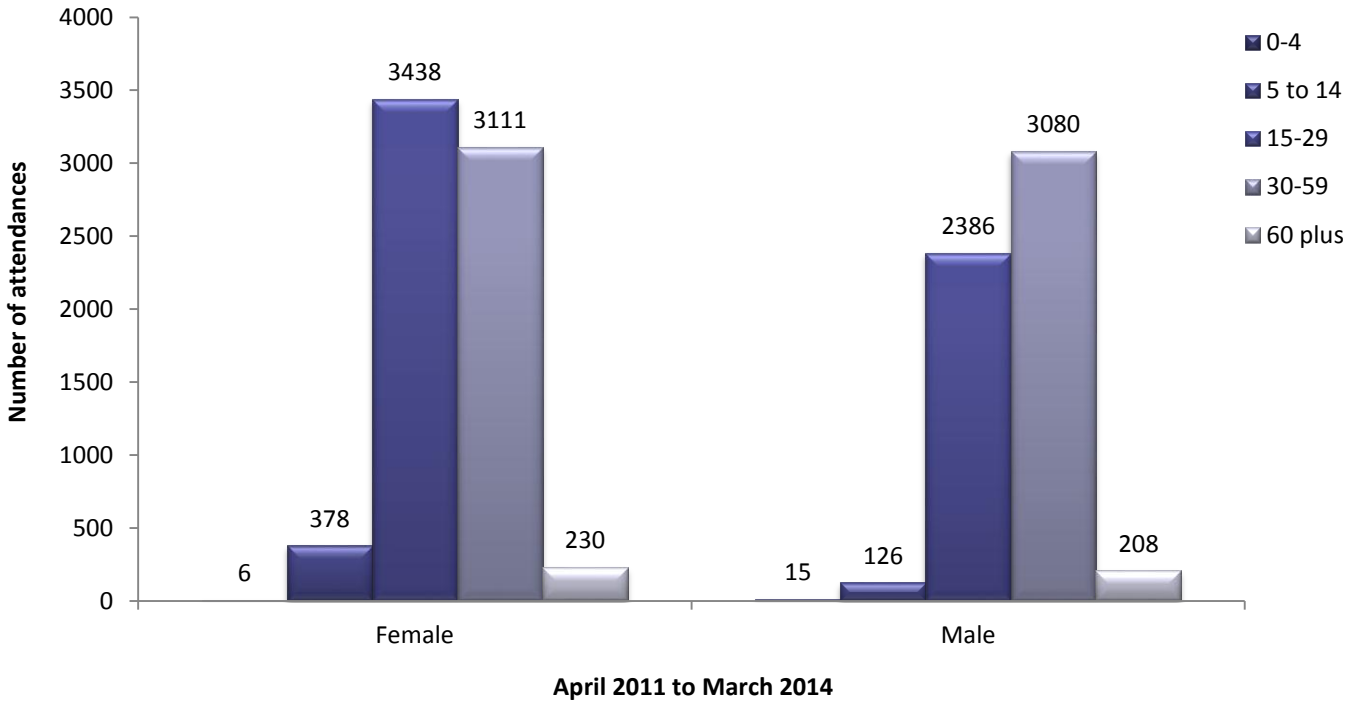
At present, information collected across Greater Manchester EDs on the method of DSH and whether the patient has been assessed at the point of discharge are not to the standard required to ascertain whether individuals had repeatedly self-harmed. Data from an ED within the North West but outside of Greater Manchester showed that:

- Fourteen percent of DSH attendances were aged between 13 and 17 years of age.
- Fifty-six percent were female and 44% were male.

Source: Hawton, K. et al (2012)

As displayed in figure 4, the most attendances for females were aged between 15 and 29 years (3,438; 48%), while the majority of male attendees were aged between 30 and 59 years (3,080; 53%). There were less than five attendances that did not have either a gender or an age recorded; these attendances have not been included in the figure.

FIGURE 4. Deliberate self-harm attendances to Greater Manchester EDs by gender and age group, April 2011 to March 2014



Box 3: Ethnicity and DSH

Studies on DSH across black and minority ethnic (BME) communities have been limited in size and often restricted to isolated geographical areas. In 2010 a multi-centre cohort for suicide prevention published a study in collaboration with the WHO, examining variations in DSH between ethnic groups. This study focused on attendances for DSH to five EDs in Oxford, Manchester and Derby between 2001 and 2006. Over 2,500 individuals were included in this study and were involved in 33,314 incidents of DSH during this period. Data on ethnicity was available for 75% of the 33,314 attendances. The main findings of this report were that:

- There were higher attendances from BME groups in Manchester than other areas.
- Black females aged between 16 and 34 years constituted the highest demographic for DSH attendances.
- Black and Asian attendees tended to be younger than white patients, and more likely to be students.
- The method of DSH varied with ethnicity; white women were found to be more likely to present with self-cutting, and black and Asian patients were found to mostly present with poisoning.
- Black and Asian patients presented with an absence of precursors to DSH such as alcohol misuse or prior mental health treatment.
- Black females presenting with DSH were less likely to receive psychosocial assessment.
- There were a low number of attendances for black males.
- White DSH patients were more likely to repeatedly self-harm.

A recommendation from this study is that primary care and health professionals should have further training and information in order to develop a cultural sensitivity to presentations from BME groups. This is evident in the low number of assessments for BME DSH attendances which may be a result of a lack of understanding of the cultural factors and frameworks involved in mental health. TIIG data shows that between April 2011 and March 2014:

- Less than three percent of DSH attendances were made by patients who identified as being of black or Asian ethnicity.
- Fifty-four percent of attendances from BME patients were aged between 16 and 34 years of age, with 48% of this group being female.
- Sixty-one percent of Asian attendees were aged between 16 and 34 years of age, with 64% percent of this group being female.

The current level of information collected across Greater Manchester EDs is insufficient to allow a wider analysis of the method of DSH and the incidents of repetition amongst BME patients. Similarly, there is a lack of information collected on aftercare monitoring and assessment. ED data could be used to enhance the patient profiles for LAs and healthcare providers to develop resources and training to enable culturally specific frameworks for mental health assessments.

Source: Cooper, J. et al (2010)

ETHNICITY

The majority of DSH attendances between April 2011 and March 2014 were White (11,265; 87%), 1% (165) were Pakistani and 1% (89) were of Black ethnicity (Figure 5).

FIGURE 5. Deliberate self-harm attendances to Greater Manchester EDs by ethnicity, April 2011 to March 2014

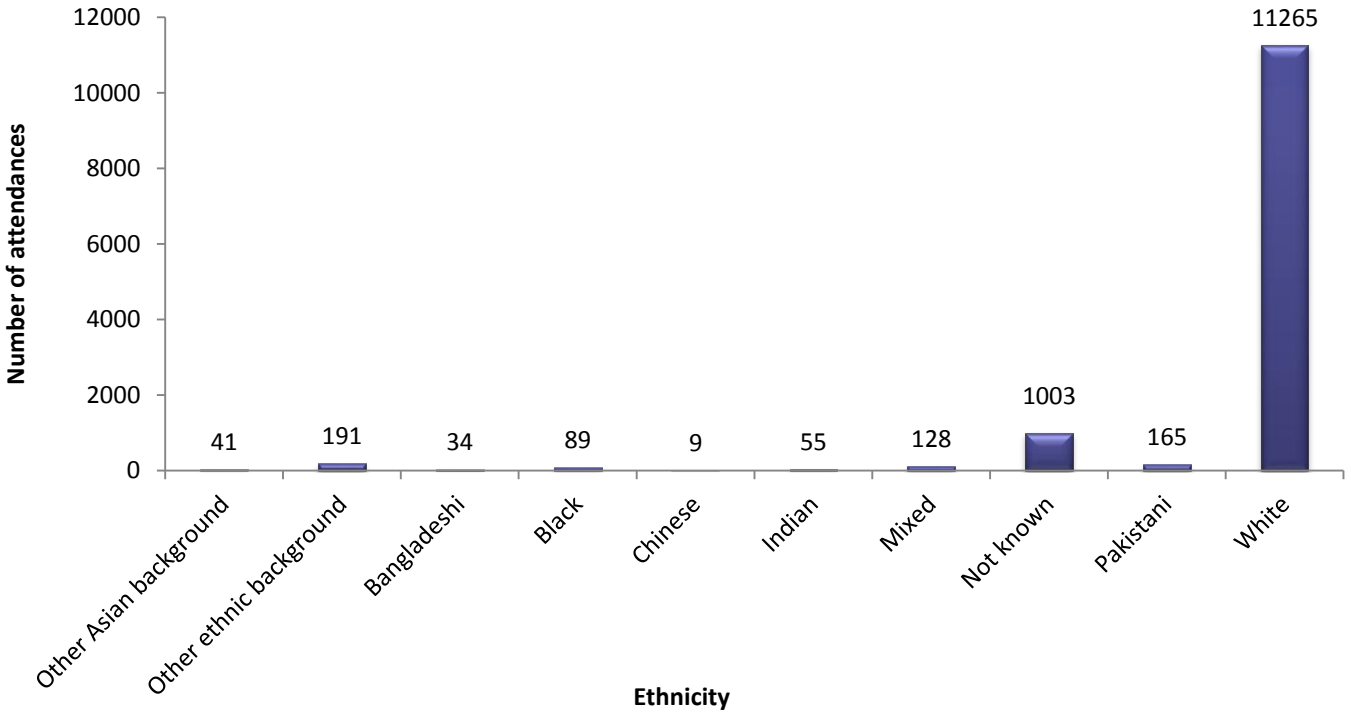


Table 10 shows both a breakdown of DSH attendances by ethnicity for each ED, and a breakdown of each LA by ethnic proportion. Manchester Royal Infirmary had the highest number of attendances from individuals of Black (30), Chinese (5) and Pakistani (51) ethnicity. Tameside General Hospital had the largest number of attendances from individuals of Indian ethnicity (26), and Salford Royal had the largest number of attendances from individuals of white ethnicity (2,160).

TABLE 10. Deliberate self-harm attendances to Greater Manchester EDs as percentages of ethnic composition

ED	Other Asian background	Other ethnic background	Bangladeshi	Black	Chinese	Indian	Mixed	Not known	Pakistani	White
Fairfield General Hospital	1%	1%	0%	1%	0%	0%	1%	5%	3%	89%
Manchester Royal Infirmary	1%	6%	1%	3%	1%	0%	2%	13%	5%	69%
North Manchester General	1%	2%	0%	2%	0%	0%	1%	7%	2%	86%
Rochdale Infirmary	0%	0%	0%	0%	0%	0%	1%	0%	2%	96%
Royal Albert Edward infirmary	0%	0%	0%	0%	0%	0%	0%	1%	0%	99%
Royal Oldham Hospital	0%	2%	1%	0%	0%	0%	1%	5%	4%	86%
Salford Royal Hospital	0%	2%	0%	0%	0%	0%	1%	3%	0%	94%
Tameside General Hospital	0%	1%	0%	0%	0%	1%	0%	18%	0%	79%
The Royal Bolton Hospital	0%	0%	0%	0%	0%	1%	0%	20%	1%	77%
Trafford General Hospital	0%	1%	0%	1%	0%	0%	2%	5%	1%	89%
Wythenshawe Hospital	0%	1%	0%	0%	0%	1%	2%	4%	0%	90%
Total	0%	1%	0%	1%	0%	0%	1%	8%	1%	87%

Table 11 provides a percentage breakdown of Greater Manchester LAs by ethnicity. Manchester LA has the greatest ethnic diversity within Greater Manchester (67% white), Oldham has the largest percentage of Bangladeshi residents (7%), and Rochdale has the largest percentage of Pakistani residents (11%).

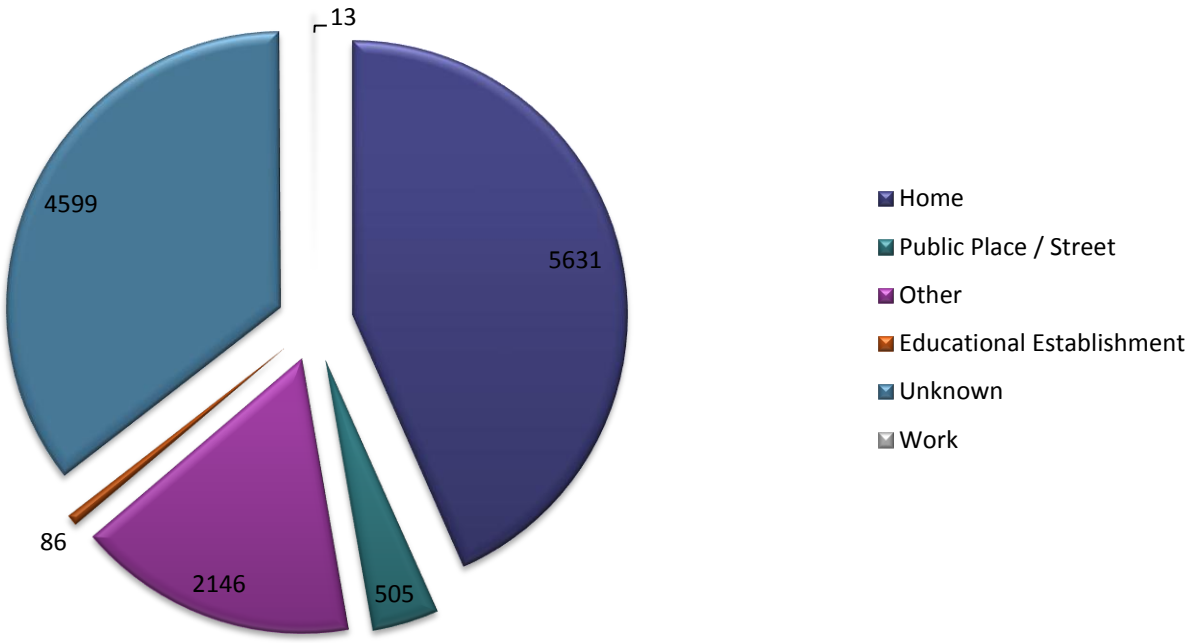
TABLE 11. Greater Manchester Local Authorities as percentages of ethnic composition

Local Authority	Other Asian background	Other ethnic background	Bangladeshi	Black	Chinese	Indian	Mixed	Pakistani	White
Bolton	1%	1%	0%	2%	1%	8%	2%	4%	82%
Bury	1%	1%	0%	1%	1%	1%	2%	5%	89%
Manchester	2%	3%	1%	9%	3%	2%	5%	9%	67%
Oldham	1%	0%	7%	1%	0%	1%	2%	10%	77%
Rochdale	1%	0%	2%	1%	0%	1%	2%	11%	82%
Salford	1%	1%	0%	3%	1%	1%	2%	1%	90%
Stockport	1%	1%	0%	1%	1%	1%	2%	2%	92%
Tameside	0%	0%	2%	1%	0%	2%	1%	2%	91%
Trafford	1%	1%	0%	3%	1%	3%	3%	3%	86%
Wigan	0%	0%	0%	1%	0%	0%	1%	0%	97%
Greater Manchester Total	1%	1%	1%	3%	1%	2%	2%	5%	84%

LOCATION

Figure 6 shows the location of DSH for Greater Manchester residents. Over four in ten incidents of DSH took place in the home (5,631; 43%) and 17% (2,146) had the location recorded as other. There were a large number of attendances where the location was unknown (4,599; 35%), which is partially due to some EDs not collecting this information.

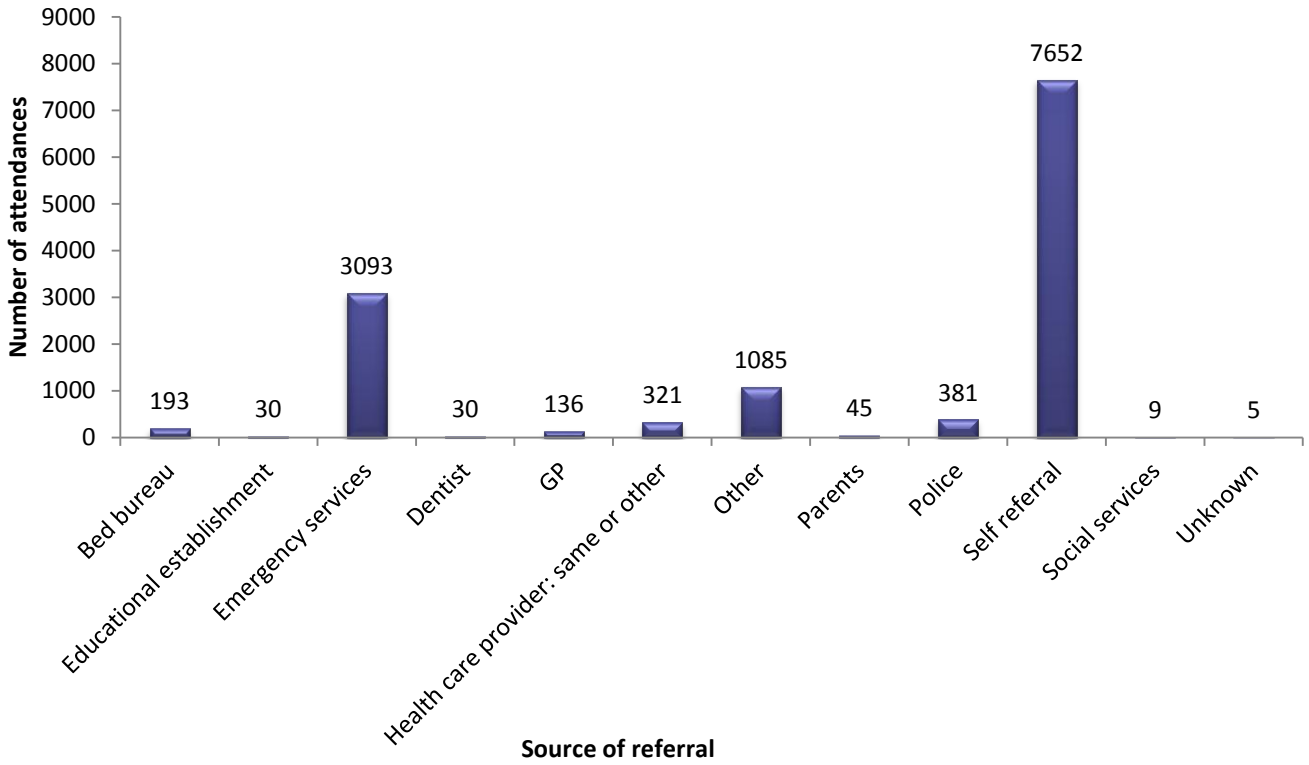
FIGURE 6. Deliberate self-harm attendances to Greater Manchester EDs by location of incident, April 2011 to March 2014[16]



SOURCE OF REFERRAL

Figure 7 shows referral method to Greater Manchester EDs. Over half of all attendees were self-referred (7,652; 59%), while 24% (3,093) were referred by the Emergency Services.

FIGURE 7. Deliberate self-harm attendances to Greater Manchester EDs by source of referral, April 2011 to March 2014

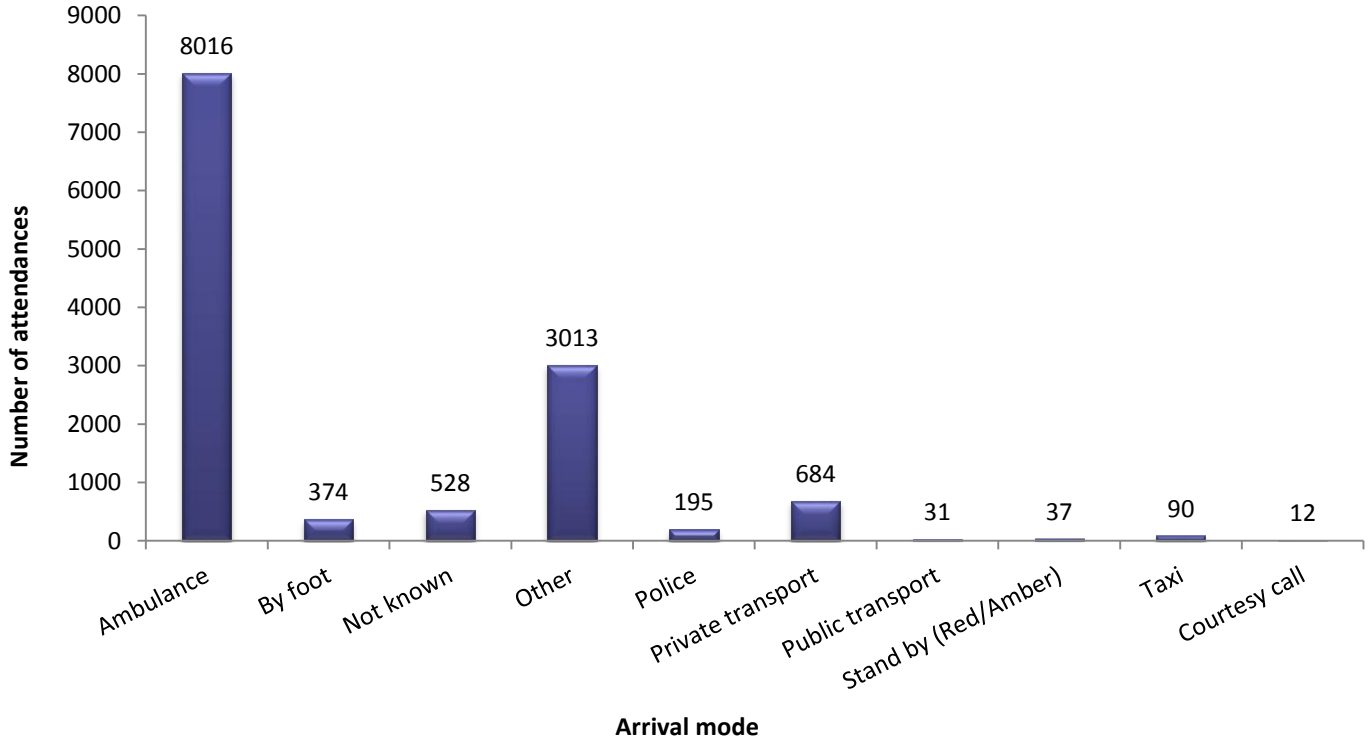


[16] Please note that the large proportion of 'unknown' incident locations is due to Salford Royal Hospital not providing this information

ARRIVAL MODE

Figure 8 shows how patients arrived at the ED. Over six in ten (8,016; 62%) arrived by ambulance and 5% (684) arrived by private transport. A comparatively small proportion was brought into the EDs by the police (195; 2%).

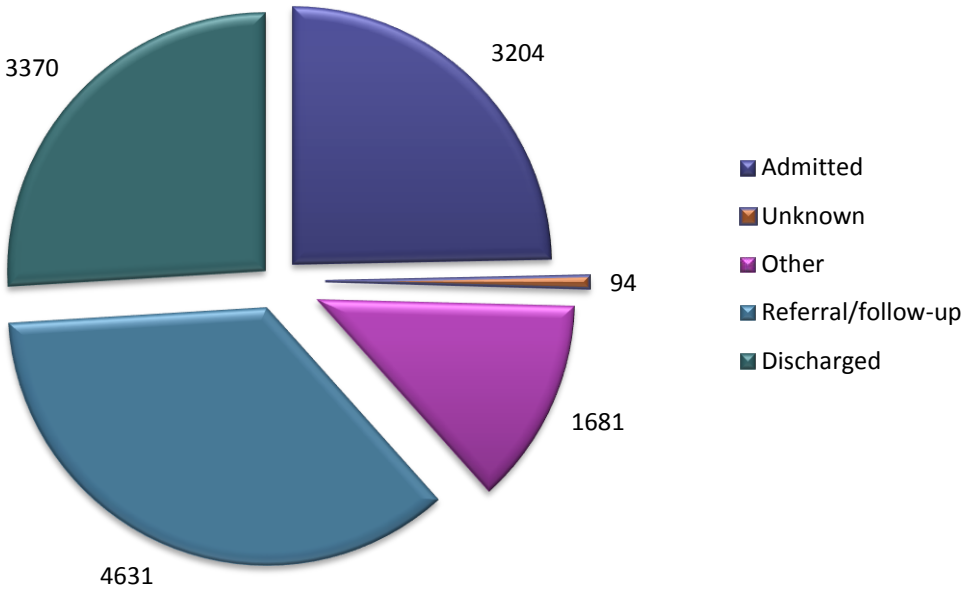
FIGURE 8. Deliberate self-harm attendances to Greater Manchester EDs by arrival mode, April 2011 to March 2014



DISPOSAL METHOD

Figure 9 shows the outcome of patient attendances. Over a third of attendances were referred (4,631; 36%), 26% (3,370) were discharged and 25% (3,204) were admitted.

FIGURE 9. Deliberate self-harm attendances to Greater Manchester EDs by disposal method, April 2011 to March 2014



ALCOHOL RELATED DELIBERATE SELF-HARM DATA

This section of the report focuses on enhanced DSH data collected by each ED across Greater Manchester between April 2013 and March 2014. Table 5 has a detailed description of which EDs collect what information. This section specifically focuses on the presence of alcohol in cases of DSH. Due to data not being collected, or not collected to a high enough standard, only DSH attendances to Manchester Royal Infirmary, Royal Albert Edward Infirmary and Tameside General Hospital are included in this section.

Greater Manchester ED Deliberate Self-harm Data Quality

During the financial year 2015/16 TIIG will arrange site visits to each ED/trust across Greater Manchester. These visits will involve discussing the 'booking in' processes when a patient attends A&E with DSH and considering where data quality improvements can be made. Visits will provide an opportunity to discuss whether additional fields can be added onto each ED IT system, similar to assault data, in order to capture more complete data, such as whether the patient is presenting as a consequence of accidental overdose, self-harm or attempted suicide.

MANCHESTER ROYAL INFIRMARY

Manchester Royal Infirmary collects and shares information on whether alcohol was involved in DSH attendances, based on whether the attendee has consumed alcohol in the twelve hours prior to attending the ED, and if so where the attendee had consumed alcohol. Forty percent of patients (166) did not provide this information, were unsure, or were unable to answer whether they had consumed alcohol. Over a third (141; 34%) had consumed alcohol and 27% (113) had not consumed alcohol in the previous 12 hours. For location of the last drink consumed, 70% (295) did not provide this information, 12% (51) consumed alcohol at home, and 9% (38) in a location stated as other, while only 5% (22) of patients consumed alcohol in a pub/bar.

ROYAL ALBERT EDWARD INFIRMARY

Royal Albert Edward Infirmary collects information on whether alcohol was consumed in the previous twelve hours, where the last drink was consumed, how often the patient drinks alcohol, and how many units they consume regularly and on a single occasion. Between April 2013 and March 2014, 86% (492) of patients had consumed alcohol in the last twelve hours, while 14% (82) had not. Thirty percent (173) of patients did not provide information of the location of their last drink, and 29% (168) stated they had consumed alcohol in a restaurant. Twenty-five percent (141) stated they had consumed their last drink in a pub while 16% percent (92) stated they had consumed alcohol in a nightclub prior to their attendance at the ED.

For responses to how often the patient drinks alcohol, 76% (439) stated they never consumed alcohol[17], 16% (91) didn't provide this information, and 2% (9) consumed alcohol daily. In terms of patient drinking volumes, 77% (442) consumed 1-2 units daily, 2% (10) consumed more than 5 units daily while a further 4% (22) consumed over 10 units daily. When asked how often they consumed more than 6 units on a single occasion, 77% (440) stated never, while 2% (10) stated more than four times a week and a further 1% (5) stated that they consumed more than 10 units daily.

TAMESIDE GENERAL HOSPITAL

Tameside General Hospital collects information on whether alcohol was involved in incidents of DSH. Between April 2013 and March 2014, only 3% (23) of attendees stated they had consumed alcohol, while 97% (797) did not provide this information.

DSH ACROSS GREATER MANCHESTER: ANALYSIS OF AMBULANCE DATA

DEMOGRAPHICS

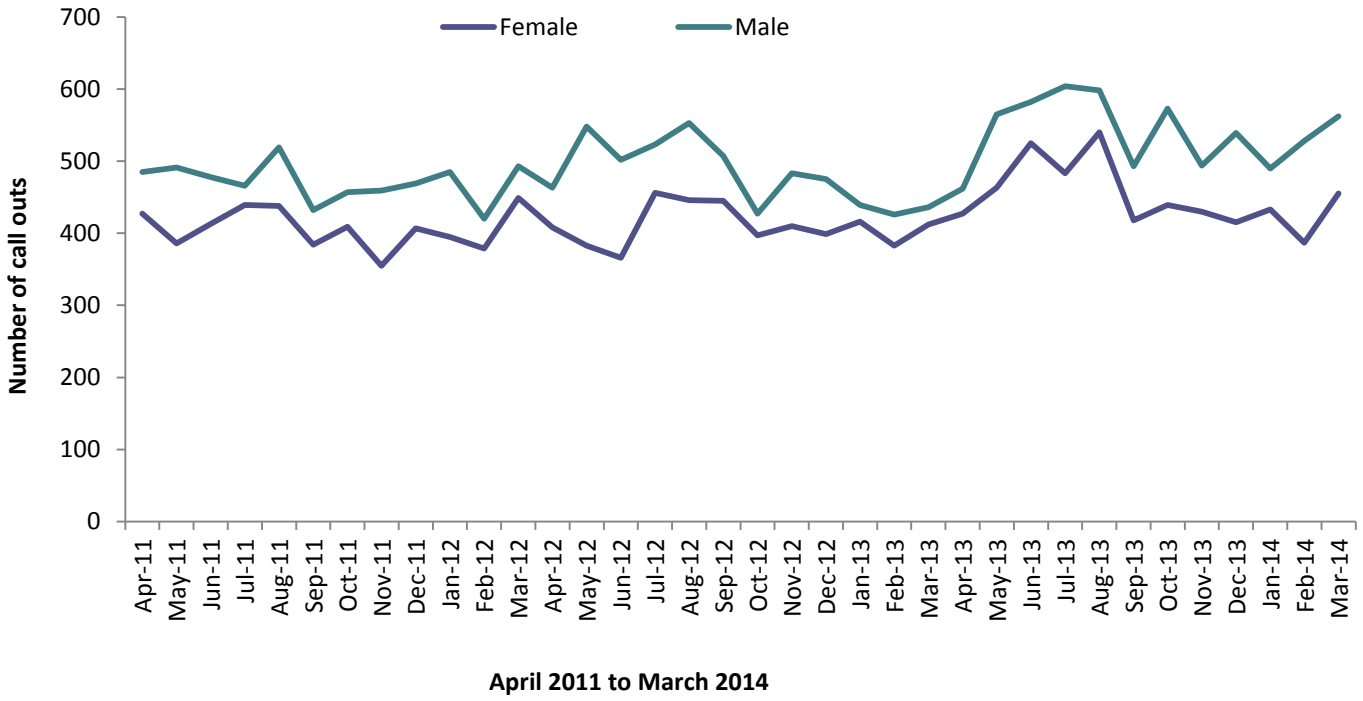
This section of the report examines DSH across Greater Manchester using North West Ambulance Service (NWAS) call out data between April 2011 and March 2014. NWAS collect information on call outs categorised as Psychiatric/Suicide Attempt, which incorporates incidents of self-harm, self-inflicted violence and suicide. Between April 2011 and March 2014 there were 33,360 ambulance call outs for incidents of Psychiatric/Suicide Attempt in Greater Manchester. In the financial year 2011/12 there were 10,660 call outs for Psychiatric/Suicide Attempt, 10,748 in 2012/13 and 11,952 in 2013/14.

The majority of call outs were for males (17,926; 54%), females comprised 46% (15,217) of call outs and there were 217 call outs (1%) where a gender was not recorded[18]. Males were the subject of more call outs for incidents of 'Psychiatric/Suicide Attempt' and this was consistent across the three years (Figure 10). The highest number of male call outs occurred in July 2013 (604) and the lowest in February 2012 (420), compared with female call outs where the peak number occurred in August 2013 (540), and the lowest was in November 2011 (355).

[17] Please note that the fields on alcohol consumption are inconsistently populated and therefore may produce contradictory results.

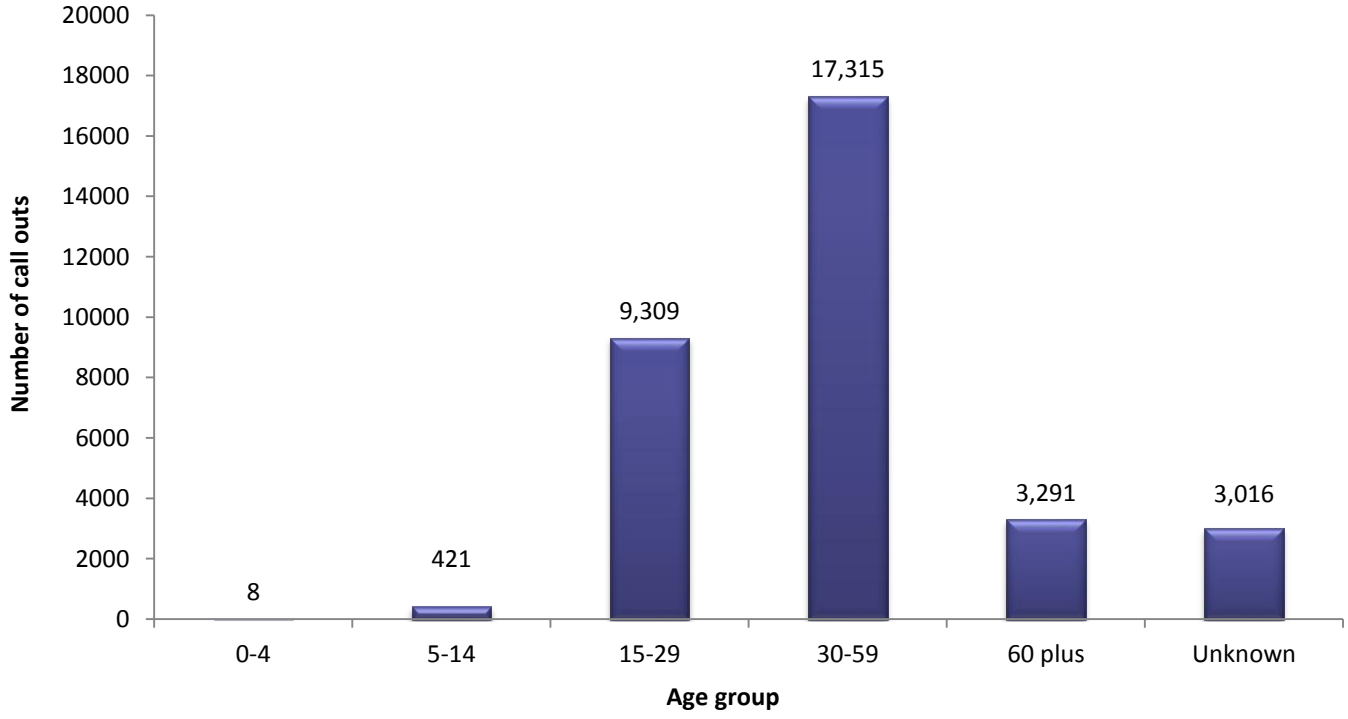
[18] The high percentage of male call out attendances, in contrast to ED data which showed the majority of attendances were female, is discussed further in the recommendations section of this report.

FIGURE 10. Deliberate self-harm ambulance call outs in Greater Manchester by gender, April 2011 to March 2014



The highest proportion of call outs came from people aged between 30 and 59 years (17,315; 52%), followed by those aged 15 to 29 years (9,309; 28%) and those aged 60 plus (3,291; 10%). There were a high number of call outs where an age had not been recorded (3,016; 9%) (Figure 11). Almost half of all ambulance call outs for DSH were made by males aged between 15 and 59 years of age (14,681; 45%)[19].

FIGURE 11. Deliberate self-harm call outs in Greater Manchester by age group, April 2011 to March 2014



[19] Percentages given include those call outs where information is missing or unknown.

GEOGRAPHY

The largest proportion of call outs were in Manchester LA (7,938; 24%), followed by Wigan (4,159; 12%) and Stockport (3,225; 10%). Six percent (2,130) of DSH related call outs were in Trafford (Table 12).

TABLE 12. Deliberate self-harm call outs in Greater Manchester by Local Authority, April 2011 to March 2014

Local Authority	Number of call outs
Bolton	2967
Bury	2175
Manchester	7938
Oldham	2529
Rochdale	2580
Salford	2918
Stockport	3225
Tameside	2739
Trafford	2130
Wigan	4159
Grand Total	**33360**

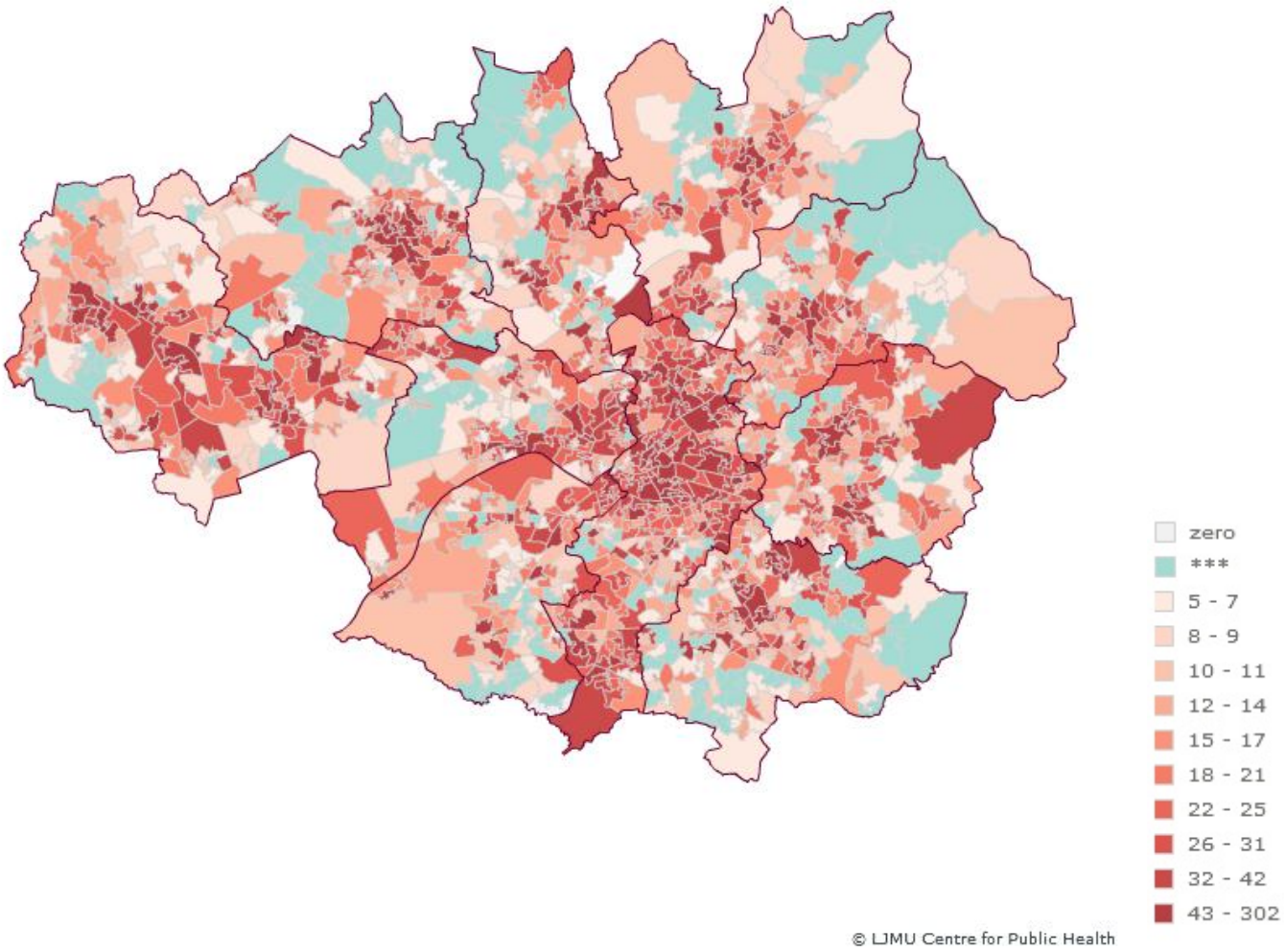
As displayed in Table 13, the highest number of call outs came from LSOA Manchester 055B (302) followed by Stockport 014B (273).

TABLE 13. Top 20 LSOAs in Greater Manchester for deliberate self-harm related call outs, April 2011 to March 2014

LSOA name	LSOA code	Number of call outs
Manchester 055B	**E01033653**	302
Stockport 014B	**E01005758**	273
Manchester 054C	**E01033658**	198
Rochdale 010C	**E01005482**	189
Wigan 008C	**E01006369**	170
Tameside 013A	**E01005948**	159
Bury 022D	**E01005034**	155
Oldham 014B	**E01005350**	147
Wigan 030B	**E01006333**	135
Manchester 055E	**E01033661**	114
Bury 022A	**E01004969**	107
Tameside 013D	**E01005952**	106
Bolton 016E	**E01033217**	105
Bolton 022E	**E01004817**	104
Stockport 016D	**E01005822**	103
Bolton 016C	**E01004823**	99
Manchester 009B	**E01005203**	98
Wigan 017A	**E01006239**	95
Rochdale 024A	**E01005533**	94
Manchester 011B	**E01005257**	93

FIGURE 12. Number of DSH call outs by LSOA with Local Authority boundaries, April 2011 to March 2014

Figure 12 displays an overview of the geographical spread of DSH call outs using NWAS data across LA boundaries in Greater Manchester. This map was produced using InstantAtlas software and populated using the total number of attendances for each LSOA, as partially shown in Table 13.



RECOMMENDATIONS

Recommendations presented here are derived from evidence reported in the literature and information presented in this report, including TIIG, HES and NWAS data. The recommendations have been presented in the following categories: data collection and quality; demographic variance; and, prevention and intervention.

DATA COLLECTION AND QUALITY

- Consider mechanisms to enable Stepping Hill Hospital to start categorising DSH attendees. This can be achieved through multi-agency meetings and dialogue, primarily between the TIIG team and the ED. Potential barriers may include IT systems capability and staff capacity, which may be overcome by highlighting the importance of such data in informing prevention and intervention strategies.
- Consider the issue that a large number of DSH attendances are being categorised as unintentional and therefore excluded from ED data. One mechanism to achieving this could be categorising accidental poisonings as DSH.
- Consider mechanisms to distinguish between accidental overdose, self-harm and attempted suicide. All such presentations are currently considered under the umbrella of DSH, but there is a distinction between self-harming behaviour and attempted suicide. Appropriate categorisation would be helpful in determining specific treatment needs and estimating the level of persisting risk for that patient.
- Consider mechanisms to include whether the patient has received an assessment. Currently only one ED in Greater Manchester records whether patients have received an assessment. Such information would accurately determine how many assessments had been carried out and could be related to disposal methods and treatment outcomes. Since particular outcomes, such as referral for psychiatric follow up, have a significant impact in reducing repeated DSH, such information could form an important component in improving treatment services for victims of DSH.
- Consider mechanisms to record whether a patient has presented previously for DSH. While EDs record whether a presentation is a ‘first visit’ or a ‘follow up’ attendance, currently mechanisms are not utilised to allow patients to be linked to previous attendances. Where unique patient identification numbers are recorded, individual EDs could search records for repeat presentations. Alternatively a specific question for DSH patients could be included, in which the attendees volunteer information relating to their history of DSH.
- Consider mechanisms to include detailed questions about alcohol and/or substance use for all DSH attendees. The vast majority of EDs in Greater Manchester do not ask these questions, except in relation to assaults; where these data items are collected they are poorly recorded. Alcohol and substance use can be a predictor of DSH and understanding patterns of alcohol and substance use in DSH victims may facilitate and improve appropriate referrals to alcohol and drug treatment services.
- Consider ways to improve the population of disposal method across all EDs. By reducing the ‘other’ and ‘unknown’ records, analysts will be able to compare disposal outcomes in terms of appropriateness and, potentially in the future, success in terms of reducing repeat attendances for DSH.
- Consider ways to improve the completion of incident location fields; approximately half of EDs in Greater Manchester complete this data poorly. This information is useful in determining individuals at elevated risk of DSH and therefore informing prevention strategies.

The ultimate aim for EDs in Greater Manchester should be to collect enhanced data relating to DSH, similar to information recorded for assaults. While the mechanism for achieving this may vary between EDs and IT systems, mandatory drop down questions, triggered by the categorisation of DSH, would be the most effective way to capture high quality information. A drop down menu such as this could record whether the presentation was for accidental overdose, self-harm or attempted suicide, whether there had been previous instances or attendances for DSH, whether there was alcohol or drug use historically, or immediately before the episode, and whether assessments or referrals had been given to the patient.

DEMOGRAPHIC VARIANCE

- Consider the gender differences between attendances in ED collected TIIG data and NWAS collected call out data; while females accounted for a higher proportion of hospital attendances, males accounted for higher proportion of call outs. An amount of this discrepancy may be due to a higher number of ambulance call outs for attempted suicide compared to DSH (the risk of suicide is higher among males; Cooper et al., 2005); however these figures may also represent an unwillingness by males to engage with treatment services. A challenge for community partners may be to increase awareness of DSH, suicide prevention and mental health treatment services, especially among males.
- While the risk of suicide is generally higher among males, females are more likely to commit suicide following an episode of DSH. This may be partly due to low suicide rates among females in the community; however these rates may be lowered by reviewing and improving risk detection mechanisms as patients are discharged from EDs.
- In response to the proportion of DSH attendees who were under 18 and the elevated risk of repeated episodes among this age group, mechanisms for early detection may require review and improvement. All patients but especially young people categorised as DSH, or suspected of DSH, should receive a psychosocial assessment and appropriate intervention. Comprehensive detection and action is likely to reduce the risk of repeated episodes.
- Previous research and data from this report identifies variations in DSH and treatment processes received among different ethnic groups. It is suggested that representatives of BME groups, with the exception of students, are less engaged with treatment services and are less likely to present to EDs for DSH. Studies have also found that representatives of BME groups were less likely to receive a psycho-social assessment. This may be addressed within EDs by providing staff with additional training regarding cultural sensitivity and by administering a psycho-social assessment for all patients presenting with DSH. At a community level, partners may consider mechanisms to engage representatives of BME groups with treatment services; this may involve providing reassurances regarding the confidential nature of treatment services.

PREVENTION AND INTERVENTION

Reduction of the risk of suicide is a core element of national suicide prevention strategies and early intervention is crucial as most suicides happen within six months of a DSH episode.

- Ensure that psychosocial assessments are given to all patients presenting with DSH or who remain uncategorised but are suspected of DSH. High rates and accurate completion of psychosocial assessments are key to follow up treatment and prevention success. In particular:
    - Ensure psychosocial assessments are given for first time attendees for DSH;
    - Ensure psychosocial assessments are given for patients who have cut themselves as research has indicated that such patients are less likely to receive a psychosocial assessment; and,

    - Ensure psychosocial assessments are given for patients from BME groups as research has indicated that such patients are less likely to receive a psychosocial assessment.
- Ensure psychiatric follow-up appointments are given where appropriate as research indicates that psychiatric appointments reduce the likelihood of repeated DSH. It is recommended that psychiatric follow-up appointments are given for all patients presenting with previous episodes of DSH, existing psychiatric contact and problematic alcohol or substance use.
- Consider mechanisms to improve treatment of individuals being released from police custody. While this mechanism would require a multi-agency response, research has shown a rise in recent years of suicide deaths in the two days following release from police custody.

It is understood that EDs are demanding places of work, that staff are frequently operating at and above capacity and that recording information at reception takes valuable time. However, while these recommendations are ambitious, their implementation would be likely to initiate substantial positive change by preventing and reducing instances of DSH and suicide. Since the vast majority of instances of DSH result in an attendance at hospital, EDs can play a central and leading role in preventing episodes, treating consequences and managing the ongoing complexities of DSH.

REFERENCES

Cooper, J. et al. (2010). Ethnic differences in self-harm, rates, characteristics and service provision: three-city cohort study. In The British Journal of Psychiatry. 197. 3: 212-218.

Cooper, J., Kapur, N., Webb, R. et al. (2005). Suicide After Deliberate Self-Harm: A 4-Year Cohort Study. The American Journal of Psychiatry. 162: 297–303.

Department of Communities and Local Government. (2010). English indices of deprivation [online]. Available at: https://www.gov.uk/government/publications/english-indices-of-deprivation-2010 [Accessed 10th May, 2014].

Department of Health. (2001). Safety first: National confidential inquiry into suicide and homicide by people with mental illness Department of Health, London.

Department of Health. (2012). Preventing suicide in England: one year on first annual report on the cross-government outcomes strategy to save lives. [online] Available at: https://www.gov.uk/government/publications/suicide-prevention-report. [Accessed 24th February, 2015].

Fliege, H., Kocaleventa, R.D., Walter, O. et al. (2006). Three assessment tools for deliberate self-harm and suicide behavior: evaluation and psychopathological correlates. Journal of Psychosomatic Research. 61. 1. 113-121.

Hawton, K. and Fagg, J. (1988). Suicide, and other causes of death, following attempted suicide. British Journal of Psychiatry. 152: 359–366.

Hawton, K. et al. (2012). Repetition of self-harm and suicide following self-harm in children and adolescents: findings from the Multicentre Study of Self-harm in England. Journal of Child Psychology and Psychiatry. 53. 12: 1212-1219.

Hawton, K., Zahl, D. and Weatherall, R. (2003). Suicide following deliberate self-harm: long-term follow-up of patients who presented to a general hospital. British Journal of Psychiatry. 182. 6: 537-542.

Kapur, N., Cooper, J., Hiroeh, U. et al. (2004). Emergency department management and outcome for self-poisoning: a cohort study. General Hospital Psychiatry. 26. 1: 36–41.

Kapur, N. House, A., Creed, F. et al. (1998). Management of deliberate self-poisoning in adults in four teaching hospitals: descriptive study. Br Med J. 316: 831–832.

Krug, G.E. et al. (2002). The world report on violence and health. Global views on violence. The Lancet. 360:.1083-88.

National Health Service. (1998). Centre for reviews and Dissemination: Deliberate self-harm. Eff Health Care. 4: 1-12.

National Health Service. (2012). http://www.nhs.uk/conditions/Suicide/Pages/Introduction.aspx. [Accessed March 2015].

National Health Service. (2014). http://www.nhs.uk/conditions/Self-injury/Pages/Introduction.aspx. [Accessed March 2015].

Nordentoft, M., Breum, L., Munck, L. et al. (1993). High mortality by natural and unnatural causes: a 10 year follow up study of patients admitted to a poisoning treatment centre after suicide attempts. BMJ, 306. 1637–1641.

Office for National Statistics. (2000). Mortality Statistics for Manchester Health Authority Boundary. London, UK Office for National Statistics, 1997–2000, Table VS3.

Office for National Statistics.. (2011). Ethnic group, Local Authorities in the United Kingdom. Available at: http://www.ons.gov.uk/ons/datasets-and-tables/index.html?pageSize=50&sortBy=none&sortDirection=none&newquery=ethnicity+ [Accessed 8th March 2015].

Office for National Statistics. (2013). Population Estimates for England and Wales, Mid-2012 [online]. Available at: http://www.ons.gov.uk/ons/publications/re-reference-tables.html?edition=tcm%3A77-310118 [Accessed 27th May, 2014].

Owens, D., Horrocks, J. and. House, A. (2002) Fatal and non-fatal repetition of self-harm. Systematic review. The British Journal of Psychiatry. 181: 193–199.

Perry, I.J, Corcoran, P., Fitzgerald, A.P. et al. (2012). The Incidence and Repetition of Hospital-Treated Deliberate Self Harm: Findings from the World's First National Registry. PLoS One. 7.2: e31663. Available at: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3282760/ [Accessed 13th March, 2015].

APPENDICES

APPENDIX 1. HES data for DSH attendances made by Greater Manchester residents for each Local Authority by age and gender, April 2011 to March 2014

2011/12	0-24		25-34		35-54		55+		Total		Total
LA	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	
Bolton	49	115	47	55	101	117	38	15	235	302	537
Bury	39	92	46	36	71	86	19	25	175	239	414
Manchester	118	244	134	163	272	211	47	46	571	664	1235
Oldham	51	147	61	45	118	125	16	17	246	334	580
Rochdale	66	119	78	62	101	93	24	20	269	294	563
Salford	89	165	114	110	171	228	34	34	408	537	945
Stockport	56	151	57	70	93	138	22	36	228	395	623
Tameside	69	108	78	69	145	118	25	26	317	321	638
Trafford	43	80	32	38	57	68	20	29	152	215	367
Wigan	109	204	102	96	199	228	30	40	440	568	1008
Total	2114		1493		2740		563		6910		6910

2012/13	0-24		25-34		35-54		55+		Total		Total
LA	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	
Bolton	58	125	57	37	100	94	36	20	251	276	527
Bury	41	81	38	33	58	59	19	21	156	194	350
Manchester	123	289	129	130	297	202	48	62	597	683	1280
Oldham	42	111	44	41	79	107	16	8	181	267	448
Rochdale	52	116	43	48	98	94	20	25	213	283	496
Salford	87	165	109	136	169	172	56	49	421	522	943
Stockport	46	130	50	57	69	117	16	41	181	345	526
Tameside	59	139	79	65	134	107	23	21	295	332	627
Trafford	41	93	28	56	67	80	17	25	153	254	407
Wigan	100	222	91	120	172	209	31	40	394	591	985
Total	2120		1391		2484		594		6589		6589

2013/14	0-24		25-34		35-54		55+		Total		Total
LA	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	
Bolton	90	189	90	84	129	133	38	25	347	431	778
Bury	29	108	25	57	59	58	17	15	130	238	368
Manchester	120	316	122	188	297	236	52	62	591	802	1393
Oldham	42	171	59	48	93	88	31	17	225	324	549
Rochdale	57	126	53	37	77	67	18	20	205	250	455
Salford	88	213	134	111	161	191	54	44	437	559	996
Stockport	80	186	63	60	114	132	25	42	282	420	702
Tameside	51	148	71	56	122	118	31	14	275	336	611
Trafford	40	88	41	44	63	101	18	36	162	269	431
Wigan	142	295	133	143	187	224	42	53	504	715	1219
Total	2579		1619		2650		654		7502		7502

APPENDIX 2. HES data for DSH attendances made by Greater Manchester residents for each ED by age and gender, April 2011 to March 2014

2011/12	0-24		25-34		35-54		55+		Total		Total
ED	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	
Fairfield General Hospital	71	131	91	64	122	134	25	30	309	359	668
Manchester Royal Infirmary	60	104	80	86	118	88	27	16	285	294	579
North Manchester General Hospital	55	86	61	56	139	104	23	20	278	266	544
Rochdale Infirmary	12	17	7	***	***	10	0	0	<24	<32	<56
Royal Albert Edward infirmary	107	177	97	91	191	206	30	33	425	507	932
Royal Oldham Hospital	68	187	95	69	144	150	22	25	329	431	760
Salford Royal Hospital	89	185	110	104	157	199	31	39	387	527	914
Tameside General Hospital	72	129	78	73	157	132	29	30	336	364	700
The Royal Bolton Hospital	54	150	59	71	128	156	35	20	276	397	673
Trafford General Hospital	-	-	-	-	-	-	-	-	-	-	0
Wythenshawe Hospital	71	139	52	81	126	124	24	32	273	376	649
Total	1964		<1430		<2590		491		<6475		<6475
2012/13	0-24		25-34		35-54		55+		Total		Total
ED	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	
Fairfield General Hospital	52	72	48	43	96	98	15	19	211	232	443
Manchester Royal Infirmary	82	129	75	80	132	93	28	24	317	326	643
North Manchester General Hospital	58	124	59	43	141	66	34	33	292	266	558
Rochdale Infirmary	6	12	8	8	11	***	0	***	25	<30	<55
Royal Albert Edward infirmary	100	210	90	109	170	187	23	39	383	545	928
Royal Oldham Hospital	58	166	61	54	116	135	20	20	255	375	630
Salford Royal Hospital	102	150	101	128	164	156	40	47	407	481	888
Tameside General Hospital	68	144	83	75	135	134	23	23	309	376	685
The Royal Bolton Hospital	64	160	74	60	114	140	50	25	302	385	687
Trafford General Hospital	15	28	15	25	30	46	12	13	72	112	184
Wythenshawe Hospital	76	150	56	76	136	139	21	36	289	401	690
Total	2026		1371		<2444		<550		<6391		<6391
2013/14	0-24		25-34		35-54		55+		Total		Total
ED	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Total
Fairfield General Hospital	57	77	57	64	98	91	20	19	232	251	483
Manchester Royal Infirmary	68	155	80	97	141	139	40	32	329	423	752
North Manchester General Hospital	50	167	45	58	130	74	27	26	252	325	577
Rochdale Infirmary	***	15	6	***	***	***	***	***	<21	<30	<51
Royal Albert Edward infirmary	135	280	127	123	181	184	43	49	486	636	1122
Royal Oldham Hospital	55	223	64	46	105	96	31	21	255	386	641
Salford Royal Hospital	93	197	117	107	168	173	38	40	416	517	933
Tameside General Hospital	51	172	68	57	149	147	27	15	295	391	686
The Royal Bolton Hospital	108	245	107	115	156	202	45	32	416	594	1010
Trafford General Hospital	16	25	15	19	25	36	***	14	56	94	150
Wythenshawe Hospital	66	161	83	107	129	142	34	40	312	450	762
Total	<2421		<1567		<2576		<603		<7167		<7167

CPH | CENTRE FOR PUBLIC HEALTH
LIVERPOOL JOHN MOORES UNIVERSITY

LIVERPOOL JOHN MOORES UNIVERSITY