TIIG Merseyside and Cheshire Themed Report

Deliberate Self-Harm across Merseyside and Cheshire April 2011 to March 2014

September 2015

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FOREWORD

It is estimated that we in the UK have the highest rate of self-harming behaviour in Europe. Indeed, it is believed that amongst young people the rates of self-injurious behaviours have trebled in the last decade alone.[1] Whilst these figures are by themselves a real cause for concern, it is the correlation between self-harm and eventual suicide that makes the phenomenon one of the most pressing public health issues we face today.[2] The factors that have led to this increase are often based around socio-economic and familial stressors. Whilst current studies have identified a link between an increase in self-harming behaviours and poverty,[3] a recent report has demonstrated that more Liverpool families are facing such issues, raising concerns about a greater number of self-harm incidents.[4]

Alongside those factors associated with poverty, there are other aspects of modern life that are felt to increase self-harming behaviours. In particular, it is our young people who are at increased risk of deliberate self-injury and there has been a call for a greater understanding of the particular needs of this group.[5] Factors such as a greater use of social media and the growth of pro self-harm sites have been cited as potential causes in the rise in the numbers of youngsters who are being treated for self-harm.[6]

Yet, despite these increases, the subject of self-harm remains one, in which most people including health professionals, hold limited knowledge. The stigma that surrounds self-harming behaviours has been well documented, and many of those who self-harm are unwilling to come forward because of the negative responses that they face. Reports such as this, go a long way to increasing our understanding of self-harm as both a public health issue and an individual concern for those involved. By providing up to date information on how self-harm impacts on the people of Merseyside and Cheshire, we will be better equipped to reduce the alarming rise in figures that we have seen of late.

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KEY FINDINGS

MERSEYSIDE AND CHESHIRE EMERGENCY DEPARTMENT DATA

- Between April 2011 and March 2014, there were 19,621 attendances for deliberate self-harm (DSH). Of these 16,495 (84%) were residents of Merseyside and Cheshire.
- The highest number of DSH attendances were to Aintree University Hospital (3,539; 21%), followed by Warrington Hospital (2,454; 15%) and Arrowe Park Hospital (2,084; 13%).
- The Local Authorities (LAs) with the highest number of attendees were Sefton (2,757; 17%), Cheshire East (2,489; 15%), Liverpool (2,489; 15%), and Cheshire West and Chester (2,453; 15%). The LAs with the highest rate of DSH per 100,000 population were Sefton (1,009), Warrington (776) and Cheshire West and Chester (741).
- The wards with the highest number of attendees were Winsford Verdin (299), Waldron (290) and Birkenhead (281).
- The majority of attendances were female (9,309; 56%) with 44% of attendances made by males (7,184).
- The highest number of attendances was made by those aged between 30 and 59 years (7,929; 48%), followed by those aged 15 to 29 years (7,000; 43%).
- The majority of attendances were of White ethnicity (4,721; 81%).
- Over six in ten incidents of DSH took place in the home (9,420; 62%).
- The majority of DSH attendees were self-referred (9,960; 60%), while 15% (2,503) were referred by the Emergency Services.
- The majority of DSH attendees arrived at Emergency Departments (EDs) by ambulance (10,324; 63%).
- Over one-third of attendees were admitted into hospital (5,894; 36%), while 25% (4,151) were discharged without follow up treatment.
- Arrowe Park Hospital records whether alcohol had been consumed prior to a patient attendance. At Arrowe Park ED 856 (41%) of attendees reported consuming alcohol before presenting for DSH.

NORTH WEST AMBULANCE SERVICE DATA FOR MERSEYSIDE AND CHESHIRE

- Between April 2011 and March 2014 there were 21,432 ambulance call outs for psychiatric/suicide attempt across Merseyside and Cheshire.
- The majority of call outs were for males (11,358; 53%) while 47% (9,906) were for females.
- The highest number of call outs was for those aged between 30 and 59 years (11,422; 53%), followed by those aged 15 to 29 years (5,734; 27%).
- The highest number of call outs were to locations in Liverpool (6,024; 28%), Wirral (2,861; 13%), Sefton (2,436; 11%), and Cheshire East (2,375; 11%).
- The highest number of call outs were to the wards Birkenhead (480), Tuebrook (427) and Everton (407).

INTRODUCTION

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., 2005). 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). Hospital admissions due to DSH are increasing each year, by as much as 20% for some age groups between 2012 and 2013 (PHE, 2014). 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).

In Cheshire and Merseyside among young people (aged 10 to 24) incidences of DSH are significantly higher in four Local Authorities (LAs) compared to the national average. These are Halton (636.4 per 100,000 population), Knowsley (465.1 per 100,000), St Helens (626.3 per 100,000) and Wirral (526.6 per 100,000; PHE, 2014). In terms of age standardised suicide rates, the North West has the joint highest rates for males (19.8 per 100,000 population) and the highest rate for females (12.4 per 100,000 population) compared to any other region in England (ONS, 2012). A cohort study of DSH attendances to EDs in the North West of England 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

[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.

repetition; psychiatric follow up appointments[8] were given in about one-third of cases from this cohort in the North West of England (Kapur et al., 1998). Reducing DSH and the risk of suicide is a core element of 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). Recognition of risk and delivering appropriate treatment for DSH and suicidal behaviour is important in achieving that goal. Since studies suggest that the vast majority of DSH cases present to Emergency Departments (EDs), appropriate management within that context can play a leading role in early detection of ongoing DSH and risk of suicide.

This Trauma and Injury Intelligence Group (TIIG) themed report seeks to contextualise the evidence relating to DSH within the areas of Cheshire and Merseyside 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 10 EDs across 9 Local Authorities (LAs) in Cheshire and Merseyside[9] between April 2011 and March 2014. In addition to reporting information relating to DSH presentations at EDs within Cheshire and Merseyside, 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 Cheshire and Merseyside and across the North West of England. Additionally, it presents case studies to illustrate the increasing prevalence of DSH in young people and the comparatively high rates of DSH and suicide in prisons in England and Wales.

[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.

[9] Data will also be presented from Ormskirk District General Hospital in Lancashire.

MERSEYSIDE AND CHESHIRE AREA PROFILE

AREA DESCRIPTION

Merseyside, a metropolitan county, and Cheshire, a ceremonial county, are based within the North West of England. Merseyside is made up of five Local Authorities: Liverpool, Knowsley, St Helens, Sefton and Wirral. Cheshire is made up of four Unitary Authorities: Cheshire West and Chester, Cheshire East, Halton, and Warrington. Using mid-2013 population estimates, Merseyside has a population of approximately 1.38 million people and Cheshire has a population of approximately 1.03 million people (ONS, 2014). Table 1 displays the population of Merseyside and Cheshire by LA; Liverpool has the largest population (470,780), followed by Cheshire East (372,707), and Cheshire West and Chester (331,026).

TABLE 1. Merseyside and Cheshire resident population estimates by Local Authority

County	Local Authority	Population
Cheshire	Cheshire East	372,707
	Cheshire West and Chester	331,026
	Halton	125,970
	Warrington	205,109
Merseyside	Knowsley	146,086
	Liverpool	470,780
	Sefton	273,207
	St Helens	176,221
	Wirral	320,295

Source: Office for National Statistics Mid-2013 population estimates.

LEVELS OF DEPRIVATION IN MERSEYSIDE AND CHESHIRE

Using the Indices of Multiple Deprivation (IMD 2010), four out of five LAs within Merseyside are ranked in the most deprived quintile. These are: Liverpool, Knowsley, St Helens and Wirral; Sefton is ranked in the second most deprived quintile. Conversely in Cheshire, only Halton unitary authority is ranked in the most deprived quintile, while Cheshire East is ranked in the second least deprived quintile. Cheshire West and Chester and Warrington are ranked in the third quintile of five.

Case Study 1: Young people and deliberate self-harm

In recent years there has been an increase in the prevalence of DSH among young people. Between 2011/12 and 2013/14 the number of hospital admissions for DSH increased by 71% from 3,850 to 6,581 for those aged between 10 and 14 years of age. The number of admissions made by those aged between 15 and 19 years also increased by 23% from 16,055 to 19,704, (HSCIC, 2014). In 2014, the National Child and Maternal Health Intelligence Network (PHE, 2014) published updated local authority child health profiles. One section of these profiles looks at the prevalence of self-harm among people aged between 10 and 24 years split by LA and using the number of hospital admissions for self-harm during 2012/13. The table below shows that, when compared to the England average of 346.3 per 100,000 population, many LAs in Cheshire and Merseyside have a significantly higher prevalence of DSH than the national average. Across Cheshire, three of four local authorities have a higher rate for DSH than the national average, with Halton and Warrington being significantly higher. In Merseyside four out of five LAs have a higher rate for DSH than the national average with Knowsley, St Helens and Wirral being significantly higher.

Local Authority	Number of attendances	DSR (per 100,000)	National comparison	Statistically significant
Cheshire East	238	387.8	Higher	No
Cheshire West and Chester	162	277.1	Lower	Yes
Halton	146	636.4	Higher	Yes
Warrington	234	643.7	Higher	Yes
Knowsley	134	465.1	Higher	Yes
Liverpool	249	236.0	Lower	Yes
Sefton	172	355.8	Higher	No
St Helens	195	626.3	Higher	Yes
Wirral	292	526.6	Higher	Yes

Using Merseyside and Cheshire ED data (April 2011 to March 2014) 5,490 (33%) DSH attendees were aged between 10 and 24 years. Broken down by LA, the areas with the highest proportion of 10 to 24 year olds for DSH attendances were Cheshire East (974; 39%), Wirral (735; 36%) and Warrington (553; 35%). Thirty per cent of Liverpool residents (738) and 29% of Sefton residents (788) were aged between 10 and 24 years. Using mid-2013 population estimates the table below displays the highest rates (per 100,000) of DSH attendances by people aged 10 to 24 years were in Sefton (1703.7), Cheshire East (1608.4) and Warrington (1542.5); Liverpool had the lowest rate of attendance (639.6) for this age group.

Local Authority	Attendances	Population	Crude rate
Cheshire East	974	60,557	1608.4
Cheshire West and Chester	809	57,022	1418.8
Halton	288	22,482	1281
Warrington	553	35,851	1542.5
Knowsley	345	27,980	1233
Liverpool	738	106,400	693.6
Sefton	788	46,253	1703.7
St Helens	260	30,393	855.5
Wirral	735	54,815	1340.9

HSCIC. (2014). Available at: http://www.hscic.gov.uk/media/14858/Self-HarmAreaTeamagegender2011-2014/xls/SelfHarm_AreaTeam_age_gender_2011-2014.xlsx

PHE. (2014). Available at: https://www.gov.uk/government/news/phes-2014-child-health-profiles-published

ACCIDENT AND EMERGENCY DEPARTMENT DATA

EMERGENCY DEPARTMENTS IN MERSEYSIDE AND CHESHIRE

Within Merseyside and Cheshire there are ten EDs which primarily serve residents of Merseyside and Cheshire. These are: Aintree University Hospital, Alder Hey Children's Hospital, Arrowe Park Hospital, Countess of Chester Hospital, Leighton Hospital, Macclesfield District General Hospital, Southport and Formby District General Hospital, The Royal Liverpool University Hospital, Warrington Hospital and Whiston Hospital. Throughout this report data from Ormskirk District General Hospital will also be included as a high number of Sefton residents attend this hospital. All EDs across Merseyside and Cheshire categorise and report data for DSH attendances.

DELIBERATE SELF-HARM ACROSS MERSEYSIDE AND CHESHIRE: ANALYSIS OF ED DATA

This section of the report examines the burden of DSH across Merseyside and Cheshire using ED data between April 2011 and March 2014. In order to support local work, this report describes data at both LA and ED level to assist local partners in their work in keeping with the Public Health Outcome Framework (PHOF). In particular this report can help to inform preventative interventions and treatment services in both the community and clinical setting by considering DSH and suicidal behaviour as indicators of mental health.

TRENDS IN DELIBERATE SELF-HARM ACROSS MERSEYSIDE AND CHESHIRE (2009/10 TO 2013/14)

TIIG has stored data from all EDs across Merseyside and Cheshire (except Warrington Hospital) since April 2009[10] which allows year on year comparisons to be drawn for each ED. Table 2 displays total attendances for DSH to Merseyside and Cheshire EDs between April 2009 and March 2014; as shown attendances rose by 3% between 2011/12 (6,442) to 2013/14 (6,621). Some EDs reported an increase in the number of DSH attendances between 2011/12 and 2013/14; there was a 58% increase at Alder Hey Children's Hospital and a 75% increase at Whiston Hospital during this period. Other EDs reported a reduction in the number of DSH attendances; there was a 59% decrease in the number of DSH attendances at Ormskirk District General Hospital.

TABLE 2. Deliberate self-harm trends across Merseyside and Cheshire, April 2009 to March 2014

Hospital	2009/10	2010/11	2011/12	2012/13	2013/14	Increase/decrease between 2011/12 to 2013/14
Aintree University Hospital	1563	1750	1297	1260	1199	-8%
Alder Hey Children's Hospital	23	17	38	57	60	58%
Arrowe Park Hospital	662	718	792	776	631	-20%
Countess of Chester Hospital	NC	675	745	837	892	20%
Leighton Hospital	682	667	718	659	607	-15%
Macclesfield District General Hospital	553	561	591	588	624	6%
Ormskirk District General Hospital	67	38	87	42	36	-59%
Southport and Formby District General Hospital	732	688	739	737	648	-12%
The Royal Liverpool University Hospital	173	240	261	288	329	26%
Warrington Hospital	NC	NC	806	902	952	18%
Whiston Hospital	335	275	368	412	643	75%
Total	**4790**	**5629**	**6442**	**6558**	**6621**	**3%**

NC – Not collected

[10] For the remainder of this report, data presented is from April 2011 onwards.

DEMOGRAPHICS

This section of the report will consider DSH attendances to Merseyside and Cheshire EDs between April 2011 and March 2014. During this time a total of 19,621 attendances were recorded.

GEOGRAPHY

Of the 19,621 DSH attendances, 16,495 (84%) were attendances by Merseyside and Cheshire residents. The highest out of region attendances were by residents of West Lancashire (931; 5%), Wigan (64; <1%) and High Peak (55; <1%). It was not possible to attribute an LA area to 1,889 attendances (10%). Table 3 displays attendances made by Merseyside and Cheshire residents to Merseyside and Cheshire EDs[11] by financial year from April 2011 to March 2014.[12] Across the three year period, the month with the highest number of DSH attendances was June (1,481; 9%), followed by July (1,473; 9%) and March (1,457; 9%). November (1,282; 8%) had the fewest number of attendances for DSH. During the three year period for residents of Cheshire and Merseyside, DSH attendances increased by 14% from 5,072 in 2011/12 to 5,757 in 2013/14.

TABLE 3. Deliberate self-harm attendances to Merseyside and Cheshire EDs by Merseyside and Cheshire residents, April 2011 to March 2014

Years	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Total
2011/12	426	458	437	386	369	454	466	386	376	431	420	463	**5072**
2012/13	408	482	575	571	475	457	477	399	447	415	460	500	**5666**
2013/14	451	488	469	516	490	484	466	497	492	471	439	494	**5757**
Total	**1285**	**1428**	**1481**	**1473**	**1334**	**1395**	**1409**	**1282**	**1315**	**1317**	**1319**	**1457**	**16495**

Table 4 displays DSH attendances to Merseyside and Cheshire EDs as percentages of LA of residence. The highest number of DSH attendances were to Aintree University Hospital (3,539; 21%), followed by Warrington Hospital (2,454; 15%) and Arrowe Park Hospital (2,084; 13%). Both paediatric hospitals reported the fewest number of DSH attendances; 1% of patients for both Alder Hey Children's Hospital (154) and Ormskirk District General Hospital (102). The majority of patients attended an ED close to where they live; e.g. 97% of Wirral residents attended Arrowe Park Hospital and 98% of Warrington residents attended Warrington Hospital.

[11] Including Ormskirk District General Hospital.

[12] Please note the remainder of this section will look at Merseyside and Cheshire residents only.

TABLE 4. Deliberate self-harm attendances to Merseyside and Cheshire EDs as percentages of Local Authority of residence, April 2011 to March 2014

Hospital	Knowsley	Liverpool	St Helens	Sefton	Wirral	Halton	Warrington	Cheshire West and Chester	Cheshire East
Aintree University Hospital	52%	58%	1%	55%	1%	0%	0%	0%	0%
Alder Hey Children's Hospital	2%	5%	0%	1%	0%	0%	0%	0%	0%
Arrowe Park Hospital	0%	1%	0%	0%	97%	0%	0%	3%	0%
Countess of Chester Hospital	0%	1%	0%	0%	2%	1%	0%	72%	1%
Leighton Hospital	0%	0%	0%	0%	0%	0%	0%	22%	35%
Macclesfield District General Hospital	0%	0%	0%	0%	0%	0%	0%	1%	64%
Ormskirk District General Hospital	1%	0%	0%	3%	0%	0%	0%	0%	0%
Southport and Formby District General Hospital	1%	1%	1%	40%	0%	0%	0%	0%	0%
The Royal Liverpool University Hospital	2%	30%	1%	1%	0%	0%	0%	0%	0%
Warrington Hospital	1%	1%	22%	0%	0%	74%	98%	2%	1%
Whiston Hospital	40%	5%	75%	0%	0%	24%	1%	0%	0%

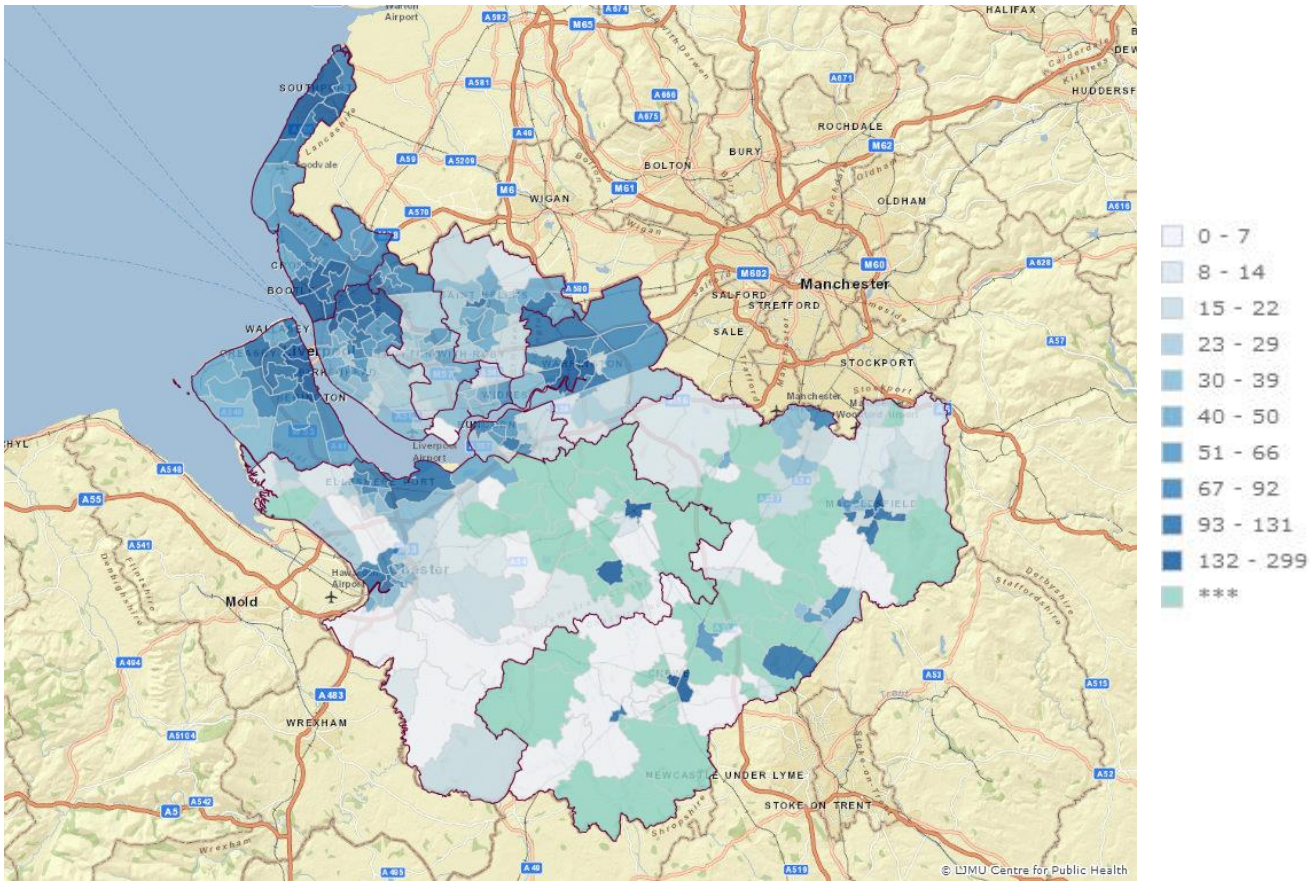
Table 5 shows that across Merseyside and Cheshire the highest number of attendees were resident in the wards Winsford Verdin (299), Waldron (290), Birkenhead (281), Linacre (258) and Warbreck (249).

TABLE 5. Top 20 wards for Merseyside and Cheshire ED deliberate self-harm attendances, April 2011 to March 2014

Ward name	Ward code	Local authority	Number of attendances
Winsford Verdin	13UHHS	Cheshire West and Chester	299
Waldron	13UDHA	Cheshire East	290
Birkenhead	00CBFC	Wirral	281
Linacre	00CAGL	Sefton	258
Warbreck	00BYGJ	Liverpool	249
Fairfield and Howley	00EUNG	Warrington	247
Dukes	00CAGG	Sefton	245
Northwich Witton	13UHHG	Cheshire West and Chester	243
Delamere	13UDGL	Cheshire East	239
Gilmoss	00BYFS	Liverpool	237
Fazakerley	00BYFR	Liverpool	188
Norwood	00CAGS	Sefton	188
Bewsey and Whitecross	00EUNC	Warrington	186
Church	00CAGE	Sefton	186
Derby	00CAGF	Sefton	182
St Oswald	00CAGW	Sefton	172
Tranmere	00CBFW	Wirral	172
County	00BYFL	Liverpool	166
Kew	00CAGK	Sefton	163
Macclesfield Hurdsfield	13UGHM	Cheshire East	161

FIGURE 1. Number of Deliberate Self-Harm ED attendances by Ward with Local Authority boundaries, April 2011 to March 2014

Figure 1 displays an overview of the geographical spread of DSH attendees to EDs of Merseyside and Cheshire residents within LA boundaries. This map was produced using InstantAtlas software and populated using the total number of attendances for each ward, as partially shown in Table 5.



GENDER AND AGE

Over the three year period, the majority of DSH attendances were made by females (9,309; 56%); 44% were made by males (7,184). 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; the lowest number of attendances were in August 2011 (369), and the highest number of attendances were in June 2012 (575).

FIGURE 2. Deliberate self-harm attendances to Merseyside and Cheshire EDs by gender, April 2011 to March 2014

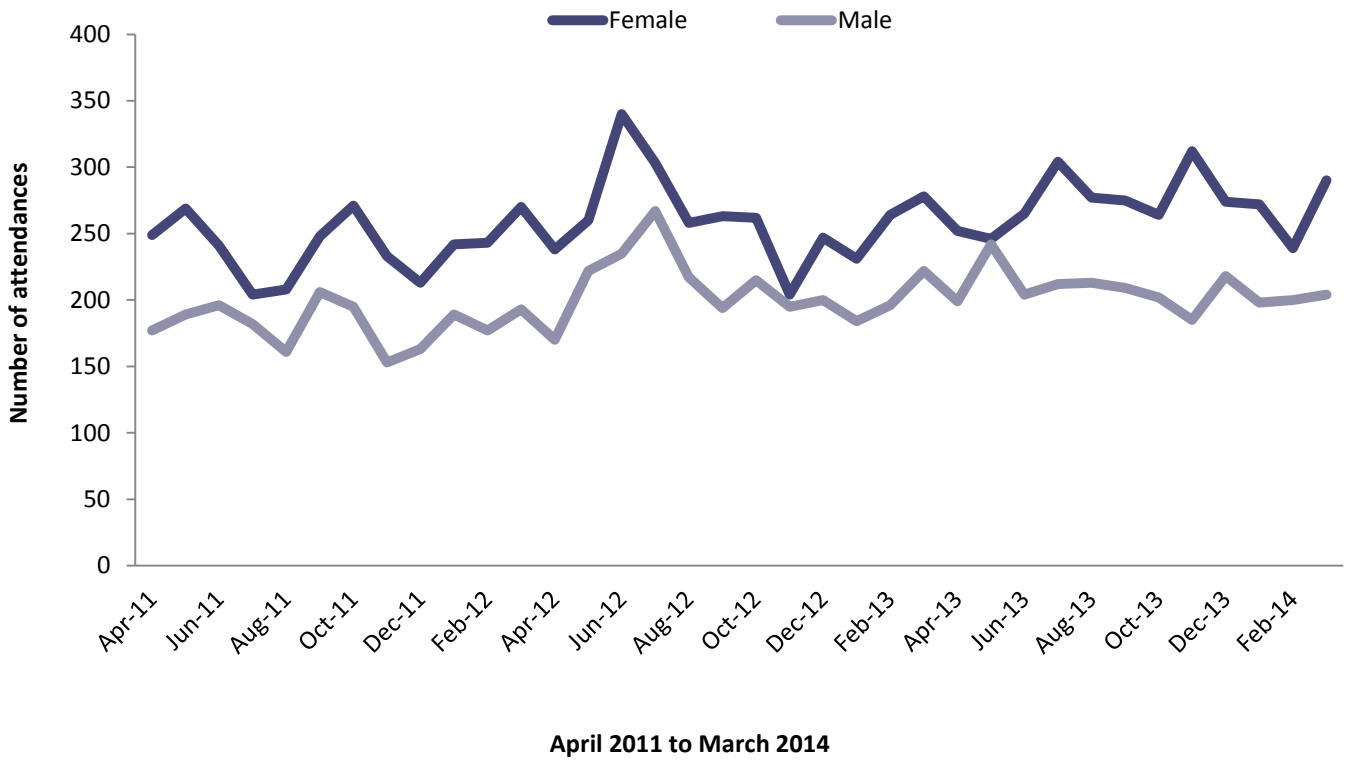
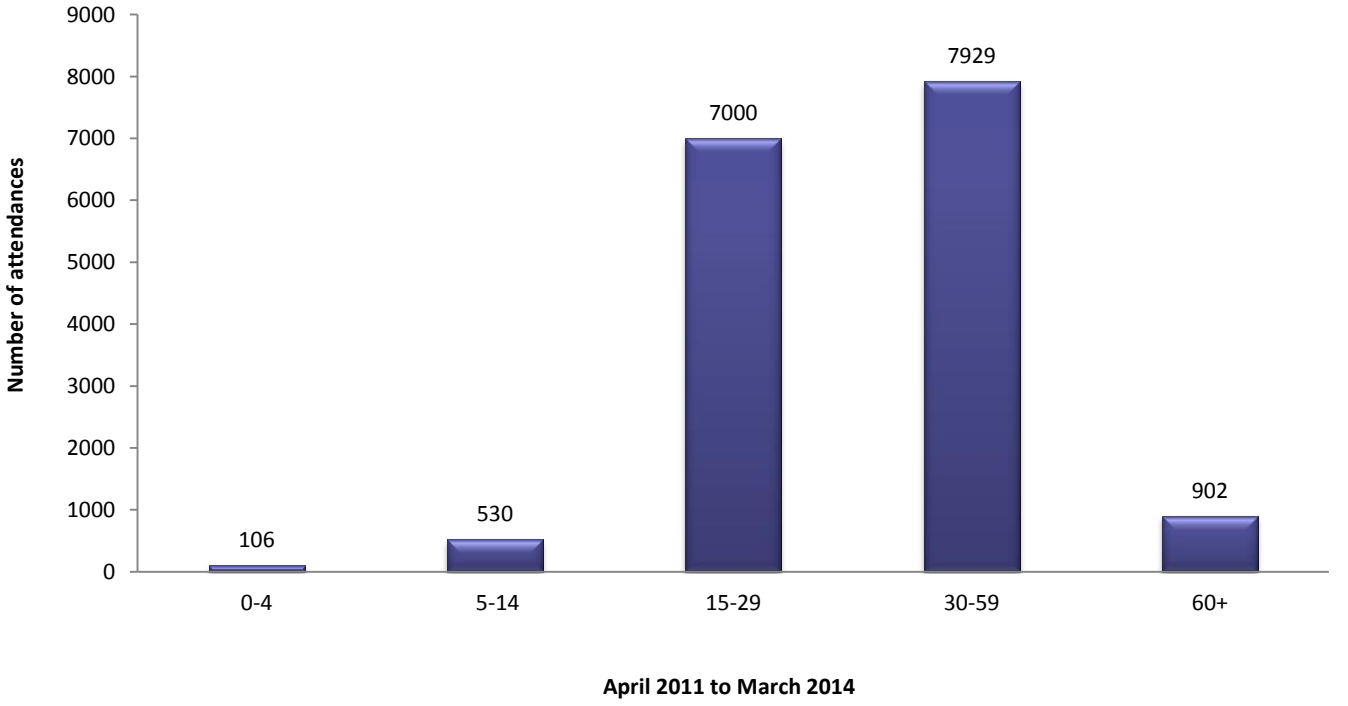


Figure 3 displays that the highest proportion of DSH attendances were from people aged between 30 and 59 years (7,929; 48%), followed by those aged between 15 and 29 years (7,000; 43%). There were 902 attendances of people aged 60 years and older (5%), 530 of people aged between 5 and 14 years (3%) and 106 of people aged between 0 and 4 years (1%). There were 28 attendances where the age was unknown.

FIGURE 3. Deliberate self-harm attendances to Merseyside and Cheshire EDs by age group, April 2011 to March 2014



Case study 2: Deliberate self-harm in prisons

The prevalence of suicide amongst prisoners is far higher than in the general population. Across England and Wales the standardised mortality ratios are five times higher in males and 20 times higher in female prisoners than in the general population (Hawton et al 2013). In the largest ever study of self-harm in prisons, Hawton et al (2013) found that between January 2004 and December 2009 there were 139,195 incidents of self-harm involving 26,510 prisoners across England and Wales. The rate of self-harm was over ten times higher in female than male prisoners with an estimated 5-6% of male prisoners and 20-24% of female prisoners self-harming every year. It was also reported that the prevalence of self-harm in prisoners was around 30 times higher than in the general population. Within Merseyside and Cheshire there are six prisons which have a combined population of 4,440 inmates (approximately 5% of the prison population across England and Wales (Ministry of Justice, 2015).

Recent media reports have highlighted the increasing number of prisoners self-harming or taking their own life. In 2015, the Liverpool Echo reported that in one prison in Merseyside there were six suicides between 2011 and 2015 and close to 900 incidents of self-harm in 2013 (an increase from 290 during 2009), while an article from The Guardian (2012) discussed the high prevalence of self-harm and suicide in a prison in Cheshire.

In terms of ED data, information about whether an incident of self-harm occurred in a prison or if attendees were referred by a prison, is only collected by Aintree University Hospital; therefore this report cannot provide a true reflection of the number of self-harm incidents occurring in prisons across Merseyside and Cheshire. For Aintree University Hospital between April 2011 and March 2014, 20 (1%) incidents of self-harm took place in a prison. The majority of these attendances were male (95%), over half were aged between 30 and 59 years (55%) and 40% were aged between 15 and 29 years with the average age being 33. The majority arrived by ambulance (55%). Four in ten (40%) were discharged from hospital, 30% were referred for further treatment and 25% were admitted into hospital.

National and regional estimates suggest that self-harm and suicide are both more prevalent in prisons than the general population. If collected, data on self-harm attendances which have occurred in prison could help to add to the knowledge base regarding the prevalence of self-harm in prisoners across Merseyside and Cheshire and help to develop the understanding of the profiles of individuals who are self-harming or exhibiting suicidal behaviours.

Hawton. et al. (2013). Self-harm in prisons in England and Wales: an epidemiological study of prevalence, risk factors, clustering, and subsequent suicide. Lancet, 383 (9923), p1147-1154.

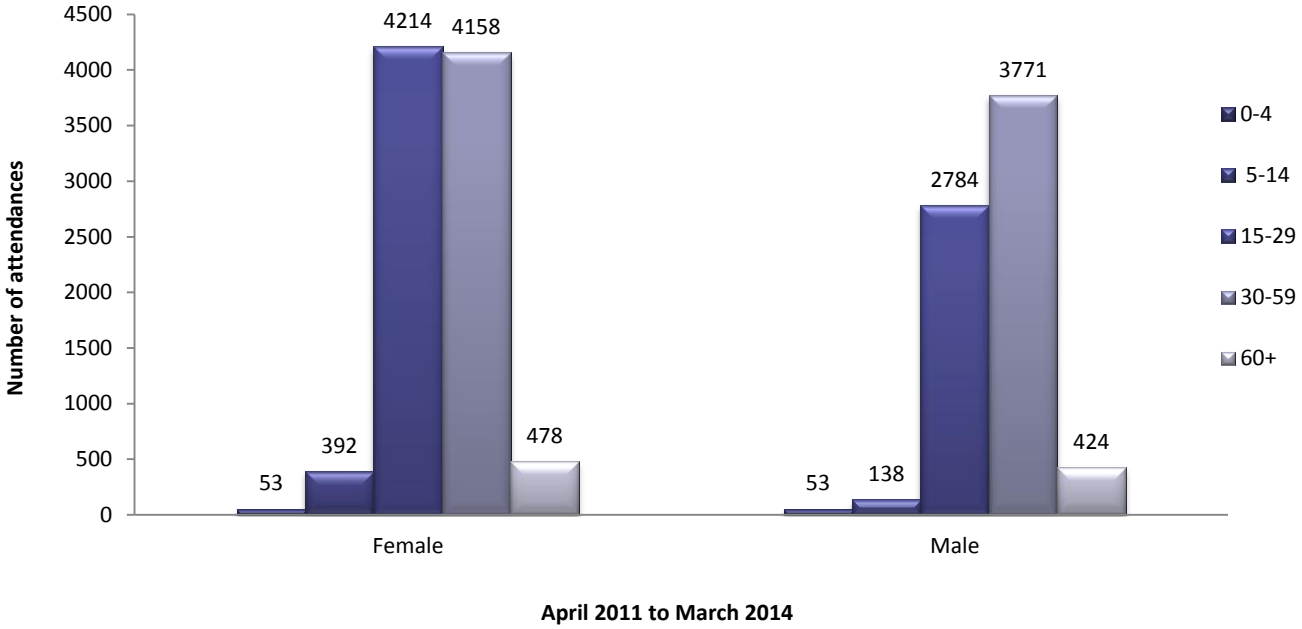
Liverpool Echo. (2015). Exposed: The alarming self-harm rates and suicides of young men at Merseyside's privately-run prison. Available at: http://www.liverpoolecho.co.uk/news/liverpool-news/exposed-alarming-self-harm-rates-suicides-8599851

Ministry of Justice (2015). Offender Management Statistics Quarterly (October to December 2014). Available at: https://www.gov.uk/government/collections/prisons-and-probation-statistics#prison-population-figures

The Guardian (2012). Women prisoners: self-harm, suicide attempts and the struggle for survival. Available at : http://www.theguardian.com/society/2012/feb/11/women-prisoners-suffering-mental-health

As displayed in figure 4, the highest proportions of female attendees were aged between 15 and 29 years (4,214; 45%) and 30 to 59 years (4,158; 45%); the majority of male attendees were aged between 30 and 59 years (3,771; 53%). There were 30 attendances that did not have either a gender or an age recorded; these attendances have not been included in figure 4

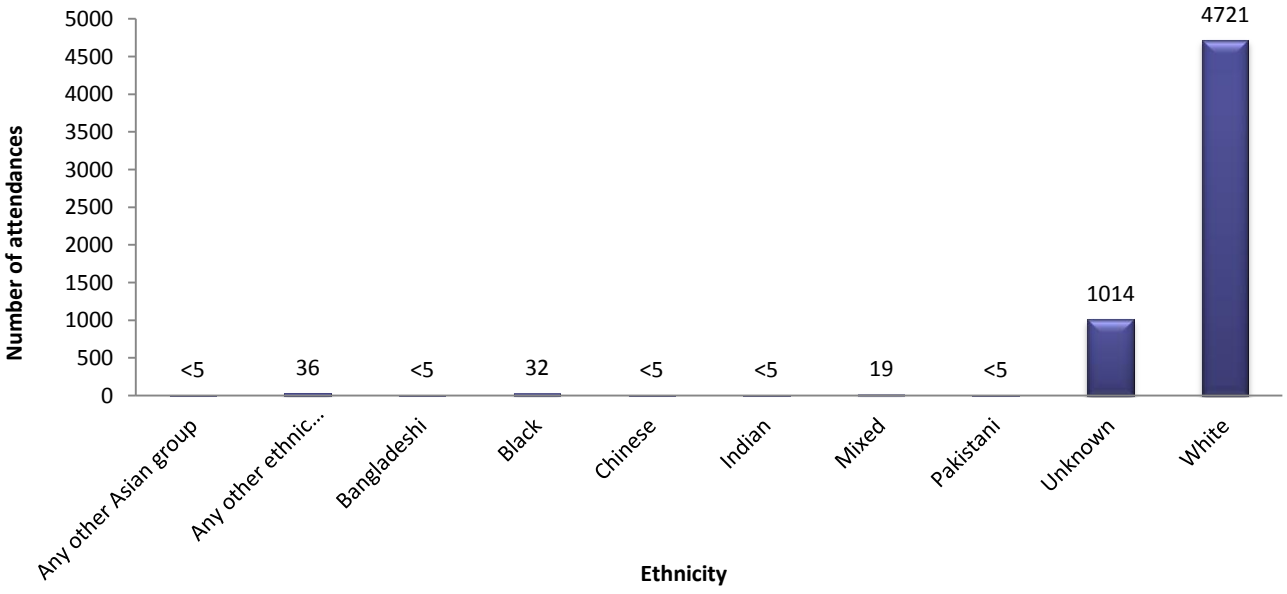
FIGURE 4. Deliberate self-harm attendances to Merseyside and Cheshire EDs by gender and age group, April 2011 to March 2014



ETHNICITY

The majority of DSH attendances between April 2011 and March 2014 were White (4,721; 81%) and 1% (32) were of Black ethnicity (Figure 5).[13]

FIGURE 5. Deliberate self-harm attendances to Merseyside and Cheshire EDs by ethnicity, April 2011 to March 2014

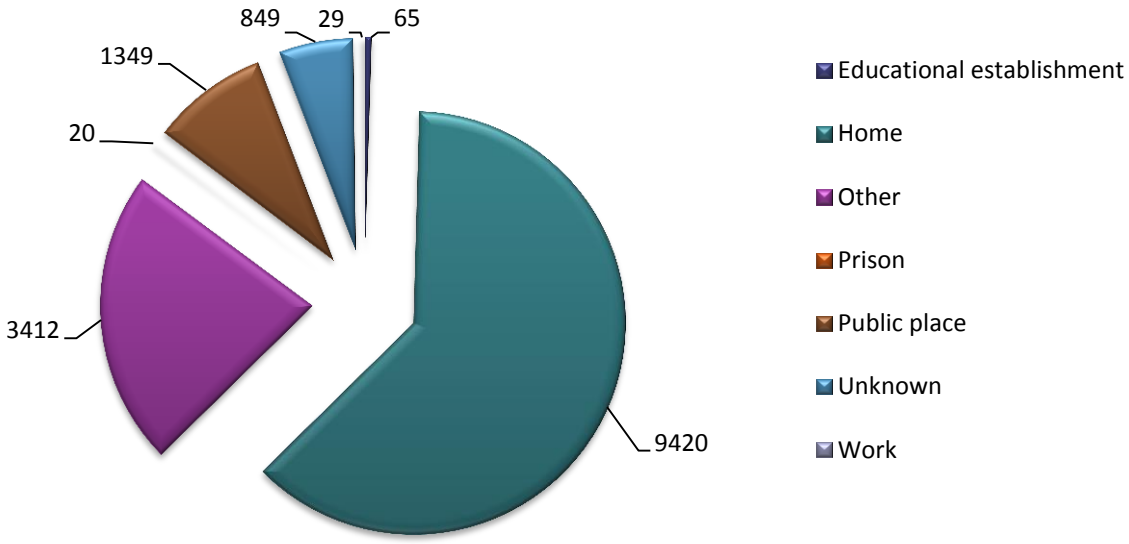


[13] Please note Aintree University Hospital, Arrowe Park Hospital, Southport District General Hospital, Ormskirk District General Hospital, Warrington Hospital and Whiston Hospital do not collect data on ethnicity and are not included in Figure 5. Percentages given do not include attendances from EDs who do not collect ethnicity.

LOCATION

Figure 6[14] shows the location of DSH incidents for Merseyside and Cheshire residents. Over six in ten incidents of DSH took place in the home (9,420; 62%) and 23% (3,412) had the location recorded as other.

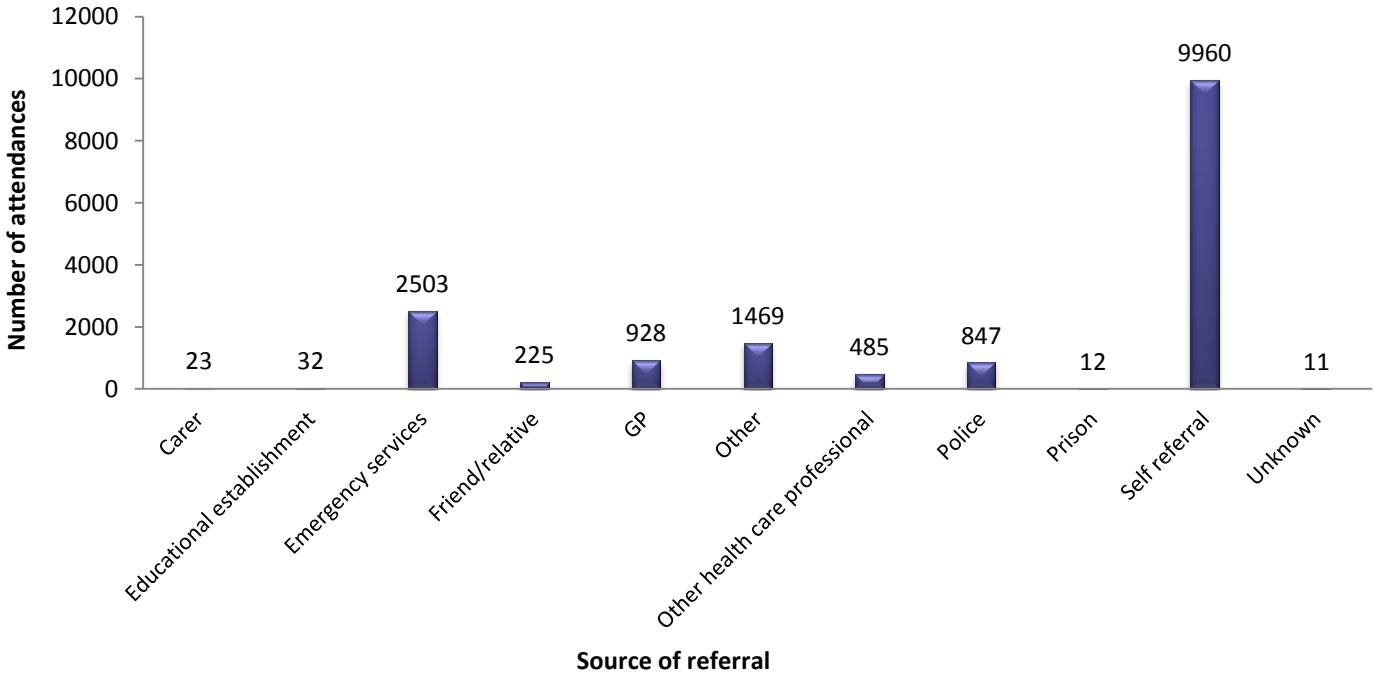
FIGURE 6. Deliberate self-harm attendances to Merseyside and Cheshire EDs by location of incident, April 2011 to March 2014



SOURCE OF REFERRAL

Figure 7 shows the referral method to Merseyside and Cheshire EDs. Six in ten of all attendees were self-referred (9,960; 60%), while 15% (2,503) were referred by the Emergency Services.

FIGURE 7. Deliberate self-harm attendances to Merseyside and Cheshire EDs by source of referral, April 2011 to March 2014

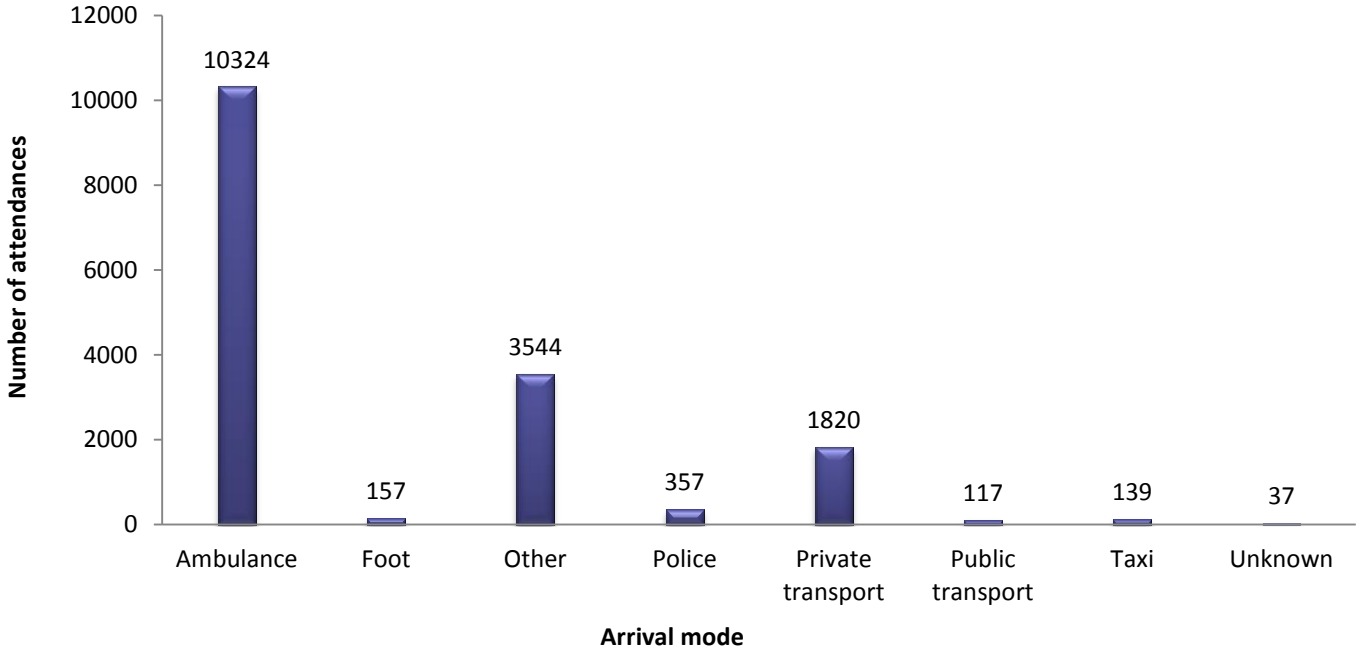


[14] Please note Whiston Hospital does not collect details on incident location and data from Whiston are not included in Figure 7.

ARRIVAL MODE

Figure 8 shows how patients arrived at the ED. Over six in ten (10,324; 63%) arrived by ambulance and 11% (1,820) arrived by private transport. A comparatively small proportion was brought into the EDs by the police (357; 2%).

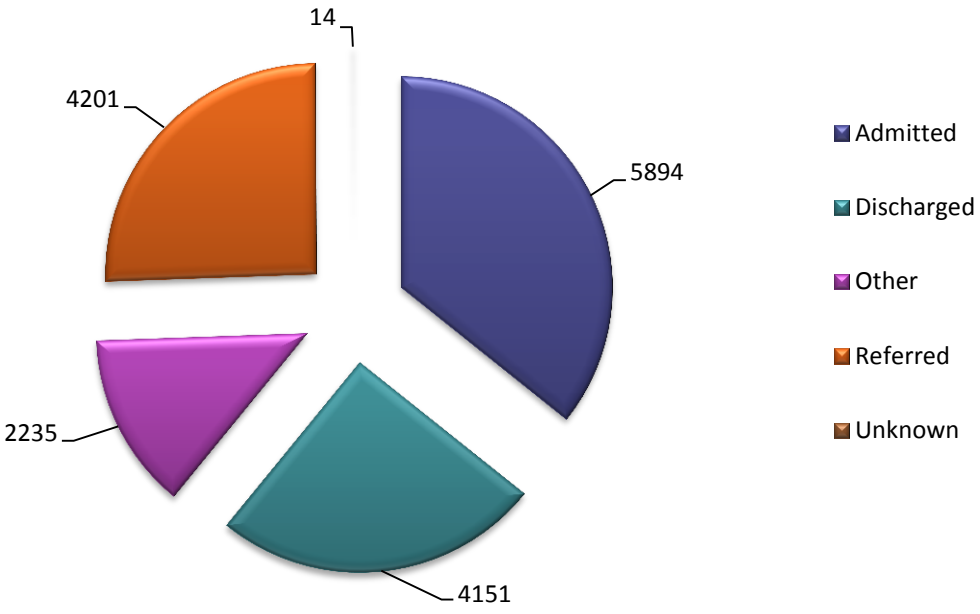
FIGURE 8. Deliberate self-harm attendances to Merseyside and Cheshire EDs by arrival mode, April 2011 to March 2014



DISPOSAL METHOD

Figure 9 shows the outcome of patient attendances. Over a third of attendances were admitted (5,894; 36%), 25% (4,201) were referred and 25% (4,121) were discharged.

FIGURE 9. Deliberate self-harm attendances to Merseyside and Cheshire EDs by disposal method, April 2011 to March 2014



ALCOHOL-RELATED DELIBERATE SELF-HARM DATA

Among Cheshire and Merseyside EDs, only Arrowe Park Hospital records whether alcohol was consumed in the three hours prior to an attendance for DSH. Between April 2011 and March 2014, information was not collected in 8 cases (<1%), 22 attendees refused to provide the information (1%) and 297 (14%) were unable to provide this information. Of the remaining records, 856 (41%) reported that they had consumed alcohol, while 901 (43%) reported they had not consumed alcohol.

LOCAL AUTHORITY PROFILES

CHESHIRE EAST

Between April 2011 and March 2014, there were 2,489 DSH attendees from Cheshire East LA (15% of total attendances). The crude rate of attendances per 100,000 population was 667.8.[15] Over six in ten (1,558; 63%) attendees were female and 37% (930) were male (gender was unknown in fewer than five records). The proportion of females was higher than the average (56%) for Merseyside and Cheshire. There was a higher rate of female attendances per 100,000 population (819.4) than male attendances (509.4).[16] Forty-eight per cent of attendees were aged between 15 and 29 years (1,185) and 44% were aged between 30 and 59 years (1,101). Females aged between 15 and 59 years comprised 57% (1,426) of attendances. The highest crude rate of attendances per 100,000 population was for those aged between 15 and 29 years (2,012.9) and 30 and 59 years (732.2; table 6).

TABLE 6. Cheshire East population and crude rates by age group, April 2011 to March 2014

Age group	Attendances	Population	Rate (per 100,000)	95% CI (lower)	95% CI (upper)
0-4	7	20330	34.4	13.8	70.9
5-14	93	41217	225.6	182.1	276.4
15-29	1185	58871	2012.9	1899.9	2130.8
30-59	1101	150378	732.2	689.5	776.7
60+	103	101911	101.1	82.5	122.6

Table 7 displays that within Chester East the highest number of attendances came from the wards Waldron (290), Delamere (239), Macclesfield Hurdsfield (161), Macclesfield Central (159) and Macclesfield East (124).

TABLE 7. Top 10 wards for Cheshire East residents for deliberate self-harm attendances, April 2011 to March 2014

Ward name	Ward code	Number of attendances
Waldron	13UDHA	290
Delamere	13UDGL	239
Macclesfield Hurdsfield	13UGHM	161
Macclesfield Central	13UGHK	159
Macclesfield East	13UGHL	124
Barony Weaver	13UDGG	113
Macclesfield West	13UGHS	112
Macclesfield South	13UGHQ	103
Odd Rode	13UCGM	101
Buglawton	13UCGA	78

[15] Crude rates and confidence intervals are presented in Appendix 1.

[16] Crude rates and confidence intervals are presented in Appendix 2.

CHESHIRE WEST AND CHESTER

Between April 2011 and March 2014, there were 2,453 DSH attendees from Cheshire West and Chester LA (15% of total attendances). The crude rate of attendances per 100,000 population was 741.0. Close to six in ten (1,405; 57%) attendances were female and 43% (1,048) were male. This represents a similar proportion to the average for Merseyside and Cheshire (56%). There was also a higher rate of female attendances per 100,000 population (827.4) than male attendances (650.0).

Forty-four per cent of attendees were aged between 15 and 29 years (1,084) and 46% were aged between 30 and 59 years (1,129). Females aged between 15 and 59 years comprised 51% (1,252) of attendances. The highest crude rate of attendances per 100,000 population was for those aged between 15 and 29 years (1,879.9) and 30 and 59 years (853.1; table 8).

TABLE 8. Cheshire West and Chester population and crude rates by age group, April 2011 to March 2014

Age group	Attendances	Population	Rate (per 100,000)	95% CI (lower)	95% CI (upper)
0-4	18	18342	98.1	58.2	155.1
5-14	72	36049	199.7	156.3	251.5
15-29	1084	57664	1879.9	1769.6	1995.2
30-59	1129	132345	853.1	804.0	904.3
60+	150	86626	173.2	146.6	203.2

Table 9 displays that within Cheshire West and Chester the highest number of attendances came from the wards Winsford Verdin (299), Northwich Witton (243), Blacon Lodge (119), City and St Anne's (111) and College (107).

TABLE 9. Top 10 wards for Cheshire West and Chester residents for deliberate self-harm attendances, April 2011 to March 2014

Ward name	Ward code	Number of attendances
Winsford Verdin	13UHHS	299
Northwich Witton	13UHHG	243
Blacon Lodge	13UBGG	119
City & St Anne's	13UBGL	111
College	13UBGM	107
Stanlow & Wolverham	13UEGH	95
Blacon Hall	13UBGF	89
Rossmore	13UEGG	83
Westminster	13UEGM	83
Upton Grange	13UBHJ	73

HALTON

Between April 2011 and March 2014, there were 849 DSH attendees from Halton LA (5% of total attendances). The crude rate of attendances per 100,000 population was 674.0. Over half (454; 53%) of attendances were female and 47% (395) were male. There was also a higher rate of female attendances per 100,000 population (703.9) than male attendances (642.6).

Forty per cent of attendees were aged between 15 and 29 years (343) and 49% were aged between 30 and 59 years (416). Females aged between 15 and 59 years comprised 47% (396) of attendances. The highest crude rate of attendances per 100,000 population was for those aged between 15 and 29 years (1,461.3) and 30 and 59 years (822.2; table 10).

TABLE 10. Halton population and crude rates by age group, April 2011 to March 2014

Age group	Attendances	Population	Rate (per 100,000)	95% CI (lower)	95% CI (upper)
0-4	7	8280	84.5	34	174
5-14	41	15274	268.4	193	364
15-29	343	23473	1461.3	1311	1624
30-59	416	50599	822.2	745	905
60+	42	28344	148.2	107	200

Table 11 displays that within Halton the highest number of attendances came from the wards Halton Lea (100), Mersey (86), Norton South (66), Grange (63) and Castlefields (60).

TABLE 11. Top 10 wards for Halton residents for deliberate self-harm attendances, April 2011 to March 2014

Ward name	Ward code	Number of attendances
Halton Lea	00ETNK	100
Mersey	00ETNQ	86
Norton South	00ETNS	66
Grange	00ETNG	63
Castlefields	00ETNC	60
Halton Brook	00ETNJ	55
Halton View	00ETNL	52
Appleton	00ETMY	48
Kingsway	00ETNP	45
Ditton	00ETNE	38

WARRINGTON

Between April 2011 and March 2014, there were 1,591 DSH attendees from Warrington LA. This represents 10% of the total number of attendances. The crude rate of attendances per 100,000 population was 775.7. Close to six in ten (917; 58%) of attendances were female and 42% (674) were male. This represents a similar proportion of female attendances to the average for Merseyside and Cheshire (56%). There was also a higher rate of female attendances per 100,000 population (887.0) than male attendances (662.6).

Forty-three per cent of attendees were aged between 15 and 29 years (682) and 48% were aged between 30 and 59 years (771). Females aged between 15 and 59 years comprised 52% (820) of attendances. The highest crude rate of attendances per 100,000 population was for those aged between 15 and 29 years (1,857.7) and 30 and 59 years (904.5; table 12).

TABLE 12. Warrington population and crude rates by age group, April 2011 to March 2014

Age group	Attendances	Population	Rate (per 100,000)	95% CI (lower)	95% CI (upper)
0-4	***	12605	7.9	0.2	44.2
5-14	72	24076	299.1	234.0	376.6
15-29	682	36712	1857.7	1720.9	2002.5
30-59	771	85243	904.5	841.7	970.6
60+	<70	46473	139.9	107.9	178.3

Tables 13 displays that within Warrington the highest number of attendances came from the wards Fairfield and Howley (247), Bewsey and Whitecross (186), Latchford East (126), Orford (114) and Burtonwood and Winwick (108).

TABLE 13. Top 10 wards for Warrington residents for deliberate self-harm attendances, April 2011 to March 2014

Ward name	Ward code	Number of attendances
Fairfield and Howley	00EUNG	247
Bewsey and Whitecross	00EUNC	186
Latchford East	00EUNM	126
Orford	00EUNQ	114
Burtonwood and Winwick	00EUNE	108
Great Sankey South	00EUNK	98
Poplars and Hulme	00EUNS	92
Poulton North	00EUNT	88
Latchford West	00EUNN	69
Birchwood	00EUND	68

KNOWSLEY

Between April 2011 and March 2014, there were 1,022 DSH attendances from Knowsley LA. This represents 6% of the total number of attendances. The crude rate of attendances per 100,000 population was 699.6. Fifty-five percent (565) of attendances were female and 45% (457) were male. This represents a similar proportion of female attendances as the average for Merseyside and Cheshire (56%). There was also a higher rate of female attendances per 100,000 population (737.2) than male attendances (658.1).

Thirty-nine per cent of attendees were aged between 15 and 29 years (395) and 47% were aged between 30 and 59 years (484). Females aged between 15 and 59 years comprised 47% (484) of attendances. The highest crude rate of attendances per 100,000 population was for those aged between 15 and 29 years (1,354.7) and 30 and 59 years (832.1; table 14).

TABLE 14. Knowsley population and crude rates by age group, April 2011 to March 2014

Age group	Attendances	Population	Rate (per 100,000)	95% CI (lower)	95% CI (upper)
0-4	16	9358	171.0	97.7	277.7
5-14	46	17169	267.9	196.2	357.4
15-29	395	29157	1354.7	1224.4	1495.2
30-59	484	58164	832.1	759.6	909.7
60+	76	32238	235.7	185.7	295.1

Table 15 displays that within Knowsley the highest number of attendances came from the wards Whitefield (121), Tower Hill (94), Cherryfield (90), Kirkby Central (87) and Northwood (82).

TABLE 15. Top 10 wards for Knowsley residents for deliberate self-harm attendances, April 2011 to March 2014

Ward name	Ward code	Number of attendances
Whitefield	00BXFY	121
Tower Hill	00BXFU	94
Cherryfield	00BXFB	90
Kirkby Central	00BXFF	87
Northwood	00BXFJ	82
Park	00BXFL	63
Prescot West	00BXFN	59
Prescot East	00BXFM	51
Whiston South	00BXFX	41
St. Gabriels	00BXFR	39

LIVERPOOL

Between April 2011 and March 2014, there were 2,489 DSH attendances from Liverpool LA. This represents 15% of the total number of attendances. The crude rate of attendances per 100,000 population was 528.7. Over half (1,308; 53%) of attendances were female and 47% (1,181) were male. This represents a slightly lower proportion of female attendances than the average for Merseyside and Cheshire (56%). There was also a higher rate of female attendances per 100,000 population (549.3) than male attendances (507.6).

Forty per cent of attendees were aged between 15 and 29 years (994) and 52% were aged between 30 and 59 years (1,294). Females aged between 15 and 59 years comprised 49% (1,208) of attendances. The highest crude rate of attendances per 100,000 population was for those aged between 15 and 29 years (800.0) and 30 and 59 years (715.6; table 16).

TABLE 16. Liverpool population and crude rates by age group, April 2011 to March 2014

Age group	Attendances	Population	Rate (per 100,000)	95% CI (lower)	95% CI (upper)
0-4	16	27588	58.0	33.1	94.2
5-14	71	46350	153.2	119.6	193.2
15-29	994	124245	800.0	751.1	851.4
30-59	1294	180832	715.6	677.1	755.7
60+	107	91765	116.6	95.6	140.9

Table 17 displays that within Liverpool the highest number of attendances came from the wards Warbreck (249), Gillmoss (237), Fazakerley (188), County (166) and Pirrie (149).

TABLE 17. Top 10 wards for Liverpool residents for deliberate self-harm attendances, April 2011 to March 2014

Ward name	Ward code	Number of attendances
Warbreck	00BYGJ	249
Gillmoss	00BYFS	237
Fazakerley	00BYFR	188
County	00BYFL	166
Pirrie	00BYGB	149
Melrose	00BYFX	134
Tuebrook	00BYGF	123
Clubmoor	00BYFK	120
Dovecot	00BYFP	97
Kensington	00BYFW	91

SEFTON

Between April 2011 and March 2014, there were 2,757 DSH attendances from Sefton LA. This represents 17% of the total number of attendances. The crude rate of attendances per 100,000 population was 1009.1. Close to six in ten (1,560; 57%) attendances were female and 43% (1,197) were male. This represents a similar proportion of female attendances as the average for Merseyside and Cheshire (56%). There was also a higher rate of female attendances per 100,000 population (1097.0) than male attendances (913.8).

Thirty-eight per cent of attendees were aged between 15 and 29 years (1,060) and 51% were aged between 30 and 59 years (1,411). Females aged between 15 and 59 years comprised 51% (1,403) of attendances. The highest crude rate of attendances per 100,000 population was for those aged between 15 and 29 years (2257.5) and 30 and 59 years (1337.9; table 18).

TABLE 18. Sefton population and crude rates by age group, April 2011 to March 2014

Age group	Attendances	Population	Rate (per 100,000)	95% CI (lower)	95% CI (upper)
0-4	26	14722	176.6	115.4	258.8
5-14	49	28861	169.8	125.6	224.5
15-29	1060	46955	2257.5	2123.6	2397.6
30-59	1411	105462	1337.9	1269.0	1409.6
60+	195	77207	252.6	218.4	290.6

Table 19 displays that within Sefton the highest number of attendances came from the wards Linacre (258), Dukes (245), Norwood (188), Church (186) and Derby (182).

TABLE 19. Top 10 wards for Sefton residents for deliberate self-harm attendances, April 2011 to March 2014

Ward name	Ward code	Number of attendances
Linacre	00CAGL	258
Dukes	00CAGG	245
Norwood	00CAGS	188
Church	00CAGE	186
Derby	00CAGF	182
St Oswald	00CAGW	172
Kew	00CAGK	163
Ford	00CAGH	160
Litherland	00CAGM	156
Cambridge	00CAGD	144

ST HELENS

Between April 2011 and March 2014, there were 782 DSH attendances from St Helens LA. This represents 5% of the total number of attendances. The crude rate of attendances per 100,000 population was 443.8. Over half (411; 53%) of attendances were female and 47% (371) were male. This represents a lower proportion of female attendances as the average for Merseyside and Cheshire (56%). There was also a higher rate of female attendances per 100,000 population (458.7) than male attendances (428.3).

Forty-two per cent of attendees were aged between 15 and 29 years (326) and 46% were aged between 30 and 59 years (356). Females aged between 15 and 59 years comprised 45% (352) of attendances. The highest crude rate of attendances per 100,000 population was for those aged between 15 and 29 years (1028.7) and 30 and 59 years (510.4).

TABLE 20. St Helens population and crude rates by age group, April 2011 to March 2014

Age group	Attendances	Population	Rate (per 100,000)	95% CI (lower)	95% CI (upper)
0-4	15	10522	142.6	79.8	235.1
5-14	31	19316	160.5	109.0	227.8
15-29	326	31691	1028.7	920.0	1146.6
30-59	356	69746	510.4	458.8	566.3
60+	54	44946	120.1	90.3	156.8

Table 21 displays that within St Helens the highest number of attendances came from the wards Newton West (125), Queen's Park (94), Parr and Hardshaw (53), Thatto Heath (51) and Grange Park and Newton East (both 48).

TABLE 21. Top 10 wards for St Helens residents for deliberate self-harm attendances, April 2011 to March 2014

Ward name	Ward code	Number of attendances
Newton West	00BZFK	125
Queen's Park	00BZFM	94
Parr and Hardshaw	00BZFL	53
Thatto Heath	00BZFR	51
Grange Park	00BZFE	48
Newton East	00BZFJ	48
West Sutton	00BZFS	42
Haydock	00BZFF	42
Moss Bank	00BZFH	41
Marshalls Cross	00BZFG	39

WIRRAL

Between April 2011 and March 2014, there were 2,062 DSH attendances from Wirral LA. This represents 13% of the total number of attendances. The crude rate of attendances per 100,000 population was 643.8. Fifty-five percent (1,131) of attendances were female and 45% (931) were male (gender was unknown in fewer than five records). This represents a similar proportion of female attendances as the average for Merseyside and Cheshire (56%). Per 100,000 population, there was also a higher rate of female attendances (681.1) than male attendances (603.6).

Forty-five per cent of attendees were aged between 15 and 29 years (931) and 47% were aged between 30 and 59 years (967). Females aged between 15 and 59 years comprised 50% (1,031) of attendances. The highest crude rate of attendances per 100,000 population was for those aged between 15 and 29 years (1686.5) and 30 and 59 years (775.7; tables 22).

TABLE 22. Wirral population and crude rates by age group, April 2011 to March 2014

Age group	Attendances	Population	Rate (per 100,000)	95% CI (lower)	95% CI (upper)
0-4	0	18934	0.0	0.0	19.5
5-14	55	36554	150.5	113.3	195.8
15-29	931	55203	1686.5	1579.9	1798.4
30-59	967	124663	775.7	727.6	826.2
60+	110	84941	129.5	106.4	156.1

Table 23 displays that within Wirral the highest number of attendances came from the wards Birkenhead (281), Tranmere (172), Seacombe (159), Egerton (154) and New Brighton and Leasowe (both 113).

TABLE 23. Top 10 wards for Wirral residents for deliberate self-harm attendances, April 2011 to March 2014

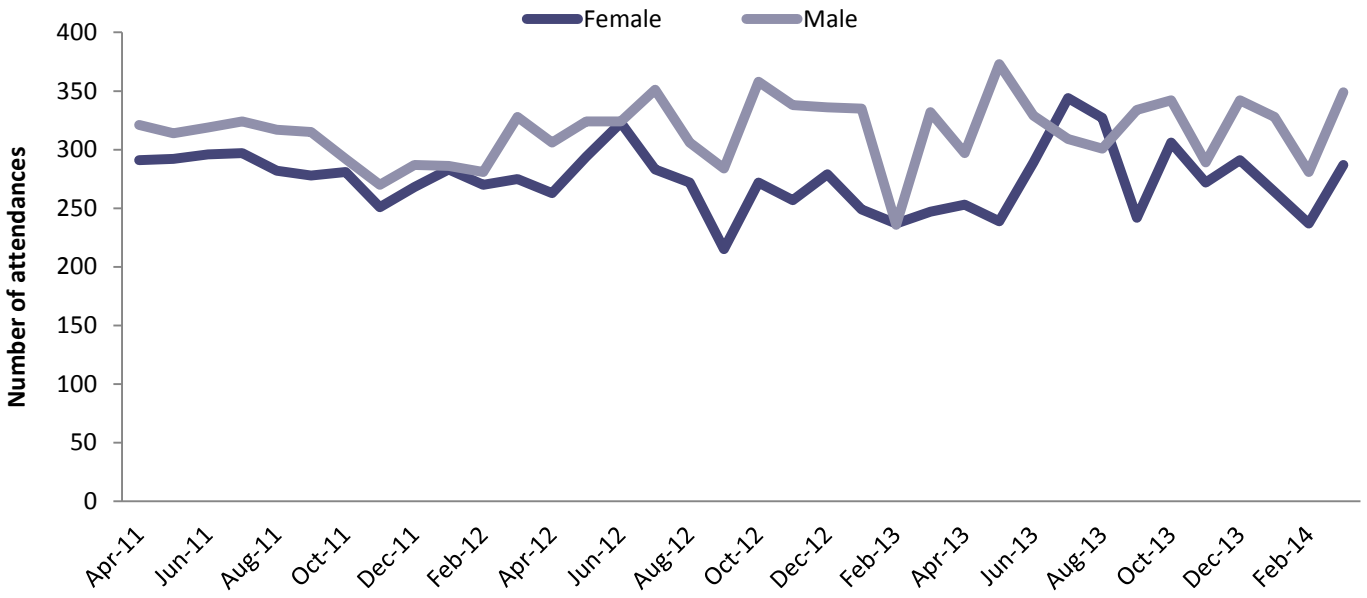
Ward name	Ward code	Number of attendances
Birkenhead	00CBFC	281
Tranmere	00CBFW	172
Seacombe	00CBFT	159
Egerton	00CBFH	154
New Brighton	00CBFP	113
Leasowe	00CBFL	113
Bidston	00CBFB	105
Claughton	00CBFF	97
Liscard	00CBFM	97
Prenton	00CBFR	92

DEMOGRAPHICS

This section of the report examines DSH across Merseyside and Cheshire 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 21,432 ambulance call outs for incidents of psychiatric/suicide attempt in Merseyside and Cheshire. In the financial year 2011/12 there were 7,103 call outs for Psychiatric/Suicide Attempt, 7,057 in 2012/13 and 7,272 in 2013/14.

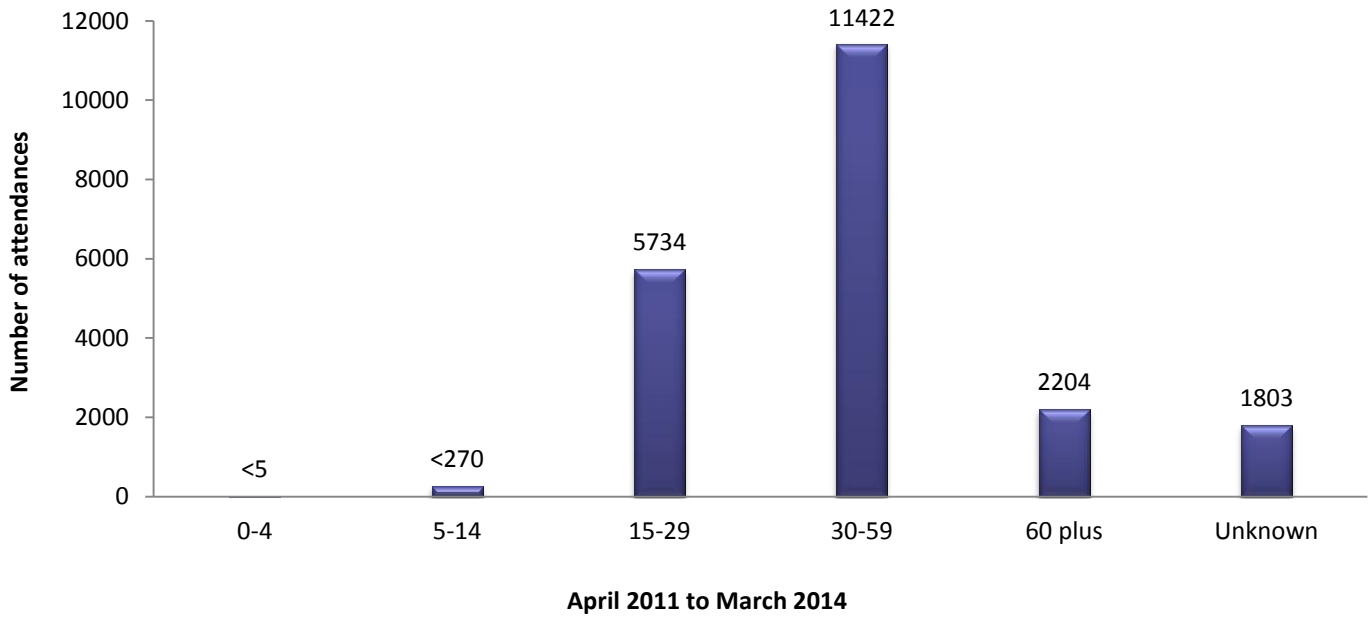
The majority of call outs were for males (11,358; 53%), females comprised 46% (9,906) of call outs and there were 168 call outs (1%) where a gender was not recorded (figure 10).

FIGURE 10. Deliberate self-harm ambulance call outs across Merseyside and Cheshire by gender, April 2011 to March 2014



The highest proportion of call outs came from people aged between 30 and 59 years (11,422; 53%), followed by those aged between 15 and 29 years (5,734; 27%) and those aged 60 years and over (2,204; 10%). There were a high number of call outs where an age was not recorded (1,803; 8%; figure 11). Over four in ten of all ambulance call outs for DSH were made by males aged between 15 and 59 years (9,201 43%).

FIGURE 11. Deliberate self-harm ambulance call outs across Merseyside and Cheshire by age group, April 2011 to March 2014



GEOGRAPHY

Table 24 displays ambulance call outs by LA, as shown, the highest number of call outs was to Liverpool LA (6,024; 28%), followed by Wirral (2,861; 13%), Sefton (2,436; 11%) and Cheshire East (2,375; 11%).

TABLE 24. Deliberate self-harm ambulance call outs across Merseyside and Cheshire by local authority, April 2011 to March 2014

Local authority	Number of call outs
Cheshire East	2375
Cheshire West and Chester	2075
Halton	1057
Knowsley	1454
Liverpool	6024
Sefton	2436
St. Helens	1774
Warrington	1376
Wirral	2861

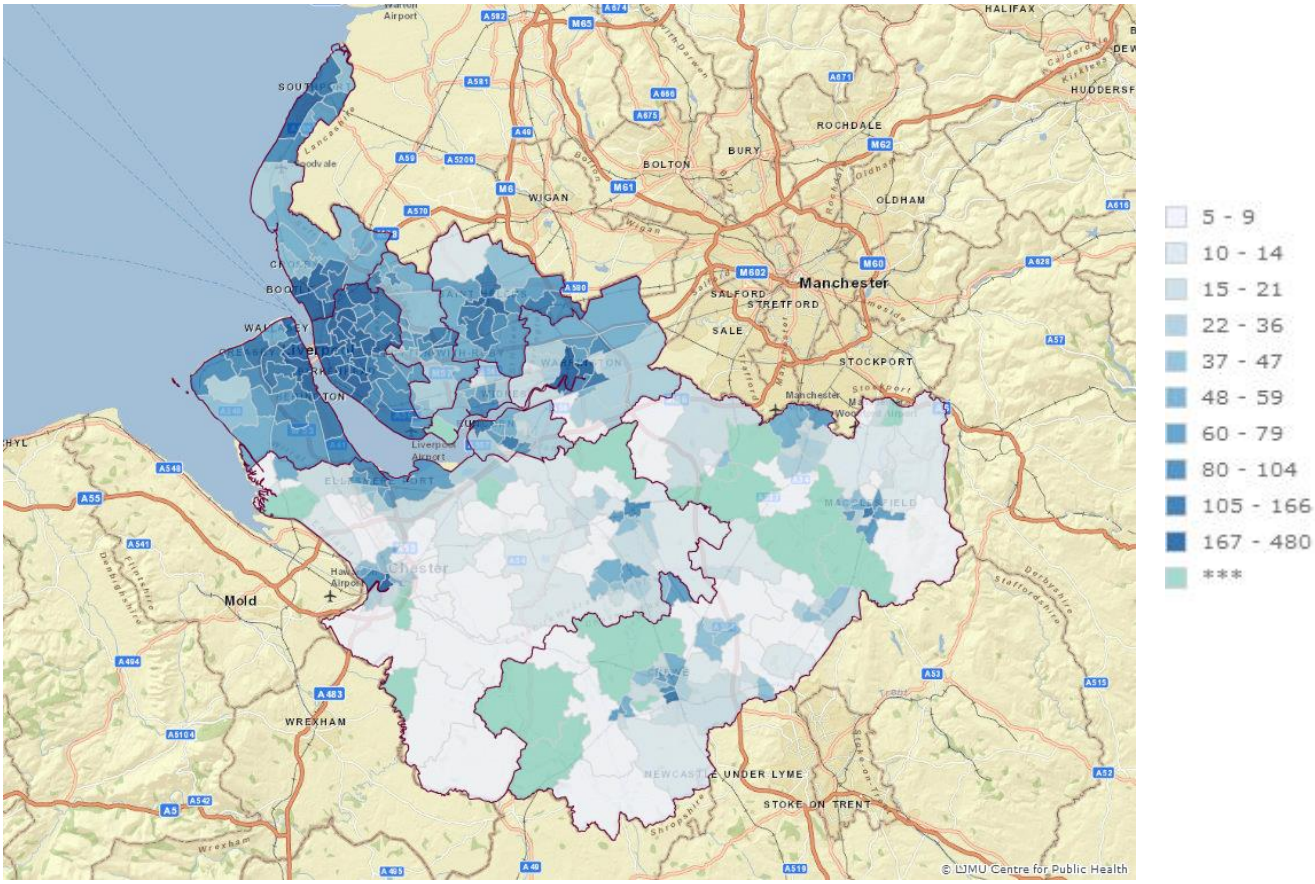
Table 24 displays ambulance call outs by ward. The highest number of call outs was to Birkenhead (480), Tuebrook (427) and Everton (407).

TABLE 25. Deliberate self-harm ambulance call outs across Merseyside and Cheshire by ward, April 2011 to March 2014

Ward name	Ward code	Local authority	Number of attendances
Birkenhead	00CBFC	Wirral	480
Tuebrook	00BYGF	Liverpool	427
Everton	00BYFQ	Liverpool	407
Abercromby	00BYFA	Liverpool	368
Kensington	00BYFW	Liverpool	364
Linacre	00CAGL	Sefton	344
Granby	00BYFT	Liverpool	278
Dukes	00CAGG	Sefton	276
Tranmere	00CBFW	Wirral	267
Anfield	00BYFD	Liverpool	255
Bewsey and Whitecross	00EUNC	Warrington	241
Warbreck	00BYGJ	Liverpool	232
Arundel	00BYFE	Liverpool	231
Queen's Park	00BZFM	St Helens	220
Broadgreen	00BYFG	Liverpool	214
Melrose	00BYFX	Liverpool	211
Picton	00BYGA	Liverpool	204
Seacombe	00CBFT	Wirral	200
Derby	00CAGF	Sefton	196
Fairfield and Howley	00EUNG	Warrington	193

Figure 12 displays an overview of the geographical spread of DSH ambulance call outs across Merseyside and Cheshire within LA boundaries. This map was produced using InstantAtlas software and populated using the total number of attendances for each ward, as partially shown in table 7.

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



RECOMMENDATIONS

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

DATA COLLECTION AND QUALITY

- 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 a psycho-social assessment. Currently this information is not collected by Cheshire and Merseyside EDs. 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. For non-assault related attendances, only Arrowe Park Hospital collects information relating to alcohol consumption prior to an attendance. 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 mechanisms to collect whether an incident of DSH occurred in a prison or when attendees were referred by a prison; currently only Aintree University Hospital has this capability. The prevalence of DSH and suicide is higher in prisons than in the general population and ED recorded data could help inform prison-based prevention initiatives by developing the understanding of the profiles of individuals who are self-harming or exhibiting suicidal behaviours.

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.

- 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.
- 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; and,
    - 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.
- 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.
- In response to the proportion of young people presenting for DSH and the elevated risk of repeated episodes among this age group, consider the review and improvement of early detection mechanisms. All patients but especially young people categorised as DSH, or suspected of DSH, should receive a psychosocial assessment and appropriate intervention. Comprehensive detection and treatment is likely to reduce the risk of repeated episodes.

It is understood that EDs are demanding places of work, that staff are frequently operating at and above capacity but 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.

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APPENDICES

APPENDIX 1. ED attendances by local authority crude rate per 100,000 population

Local authority	Attendances	Rate (per 100,000)	95% CI (lower)	95% CI (upper)
Cheshire East	2489	667.8	648.8	694.6
Cheshire West and Chester	2453	741.0	712.0	770.9
Halton	849	674.0	629.4	720.9
Warrington	1591	775.7	738.0	814.8
Knowsley	1022	699.6	657.3	743.8
Liverpool	2489	528.7	508.1	549.9
Sefton	2757	1009.1	971.8	1047.5
St. Helens	782	443.8	413.2	476.0
Wirral	2062	643.8	616.3	672.2

APPENDIX 2. ED attendances by gender and local authority crude rate per 100,000 population

Gender	Female			Male		
Local authority	Crude rate	95% CI (lower)	95% CI (upper)	Crude rate	95% CI (lower)	95% CI (upper)
Cheshire East	819.4	779.2	861.2	509.4	477.2	543.2
Cheshire West and Chester	827.4	784.7	871.9	650.0	611.3	690.6
Halton	703.9	640.6	771.7	642.6	580.8	709.2
Knowsley	737.2	677.7	800.6	658.1	599.1	721.3
Liverpool	549.3	519.9	579.9	507.6	479.1	537.4
Sefton	1097.0	1043.2	1152.8	913.8	862.7	967.0
St. Helens	458.7	415.5	505.3	428.3	385.8	474.1
Warrington	887.0	830.5	946.3	662.6	613.5	714.6
Wirral	681.1	642.0	722.0	603.6	565.4	643.6

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