Agenda Item 8 iii)

NORTHUMBERLAND TYNE AND WEAR NHS FOUNDATION TRUST

BOARD OF DIRECTORS MEETING

Meeting Date: 24 June 2015

Title and Author of Paper:

Analysis of unnatural deaths (2010-2014) in NTW - Dr Damian Robinson

Paper for Debate, Decision or Information:
Information

Key Points to Note:

- This is the 2015 update of a routine report on unnatural deaths occurring amongst service users in NTW and covers the five year period 2010-2014.
- In 2014 there has been a reversal of the previous upward year-on-year trend for unnatural deaths.
- A slight increase in deaths in community teams has been offset by marked reductions in addictions and crisis & home resolution teams.
- The number of deaths occurring in NTW mirrors the regional experience.

Outcome required:
Note the content.

Northumberland, Tyne and Wear NHS
NHS Foundation Trust

ANALYSIS OF FIVE YEARS OF UNEXPECTED DEATHS (2010 TO 2014) IN NORTHUMBERLAND, TYNE AND WEAR FOUNDATION TRUST

(ANALYSIS UNDERTAKEN ON DATA EXTRACTED FROM SAFEGUARD ON 12th MAY 2015)

Shining a light on the future

CONTENTS

1) Methodology and cautions
2) Unnatural deaths in all services
3) Deaths by own hand in all services
4) Unnatural deaths in community services
    a. Community Mental Health Teams
    b. Addiction Services
    c. Crisis and Home Resolution Teams
5) Unnatural deaths within three months of discharge from hospital
6) Unnatural deaths occurring while an in-patient
7) Deaths while detained under the Mental Health Act
8) Demography
9) Comparison with North East suicide rates
10) Main findings

Dr Damian Robinson
Group Medical Director Urgent Care
Director IPC/EPRR

With the assistance of Antony Gray
Head of Safety and Patient Experience

June 2015

1) METHODOLOGY AND CAUTIONS.

This analysis was undertaken on data extracted from NTW SafeGuard on 12th May 2015. As this is a live database, which is continually updated with results from coroner verdicts, the data, and consequently the analysis, will change on a daily basis.

The analysis covers unexpected deaths reported through the IR1 system over the five year period from January 1st 2010 to December 31st 2014. Cases are allocated to a year or quarter year based on the date of death, where known, or notification. Cases are allocated to a service line based on the entry in SafeGuard, which is derived from information provided on the IR1 form.

An ***unexpected death*** is one which occurs in the absence of ill health which led to a predictable death. Where that death occurred as the result of a natural pathological process (e.g. heart attack/stroke/pneumonia etc), it is termed a ***natural unexpected death***. Where death was otherwise caused, often through own intent and/or the involvement of an external agent, it is termed an ***unnatural unexpected death***.

Coroner verdict outcomes are obtained from the coroner's office after the inquest has been held. This may be several months after a death has occurred, although this time gap is currently falling. The data provided in SafeGuard is a direct quote from the coroner office report.

For the purpose of undertaking this analysis some reclassification of the coroner verdict is necessary.

1) Where a coroner has used a standard form of verdict this is the term used. This includes ***Suicide, Open, Misadventure***, and ***Accident***.

2) Where the coroner has used a short narrative verdict the following reclassification has been used.

    - Where the words drug(s) and/or alcohol appear the verdict is reclassified as ***Drug/Alcohol***.

    - Where there is an indication that the person has killed themselves, but no indication of intent is apparent, the verdict is reclassified as ***Killed Self***.

3) Where the coroner has given a long narrative verdict this is reclassified as ***Narrative***.

4) There are a small number of cases where it is not possible to determine the coroner verdict. These cases are classified as ***Other***.

5) Where the coroner has not yet given a verdict the cases is classified as ***Pending***.

The term ***Death by own Hand*** is used to describe all events where it is likely that the person killed themselves, whether they had intended to do so or not. This includes all *Suicide* verdicts, all deaths re-classified as *Killed Self* and all *Open* verdicts (conventionally included in analyses of suicide cases).

This is an interim analysis as there are a significant number of verdicts still pending, particularly for deaths occurring in 2014. Many of these may be returned as either natural deaths, or due to accident/misadventure. Therefore, it cannot be concluded, at this stage, that they represent persons who died by own hand. There is a balance to be drawn between an early analysis which is timely and spots developing patterns, and a later analysis which is accurate and allows informed interpretation. National data which can be used to benchmark NTW data is not available until at least one year behind Trust data.

In many cases, particularly the analyses on individual services, the number of events in any time period are small and subject to random variation. Therefore, caution is needed in interpreting short term trends; for example, year to year differences.

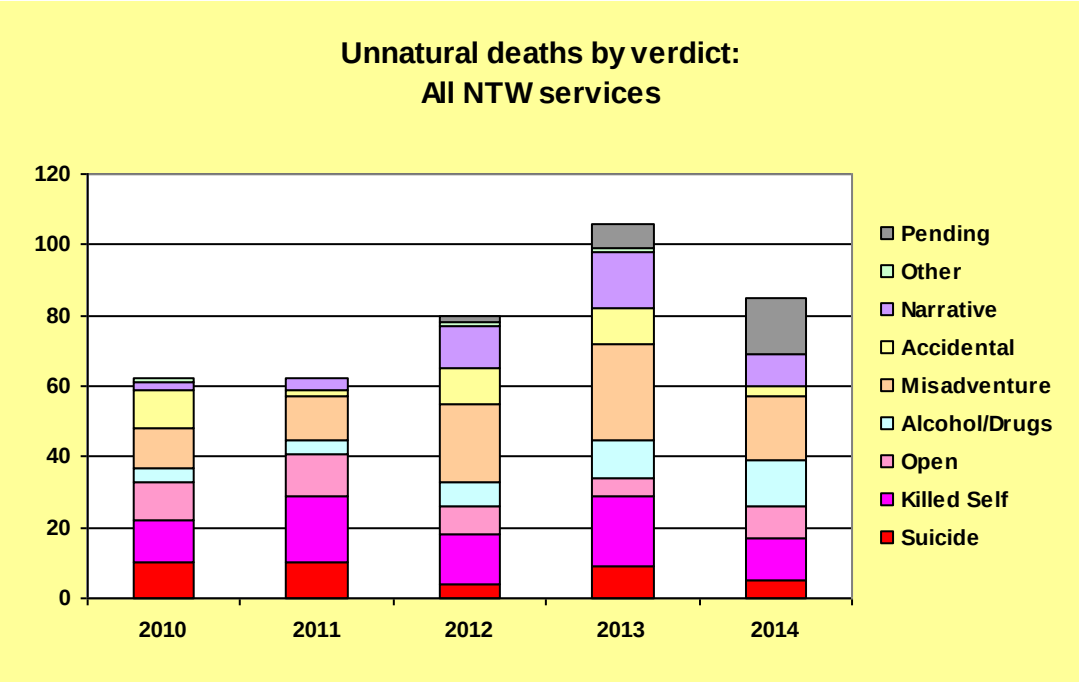
2) UNNATURAL DEATHS IN ALL SERVICES.

Over the four year period there were 395 potentially unnatural deaths reported. At the time of data extraction (12th May 2015) verdicts were pending in 25 cases, so unnatural death had been confirmed in 370 cases.

There were no pending verdicts for deaths occurring in 2010 and 2011. Two verdicts are pending for deaths in 2012, seven verdicts for deaths occurring in 2013, and 16 verdicts for deaths occurring in 2014. It is likely that some deaths will be classified as being of natural causes at inquest so caution is required in interpreting data for time periods for which verdicts are still outstanding.

The number of potential unnatural deaths increased year on year between 2010 and 2013, but decreased in 2014 (see graph 1). In 2010 there were 62 coroner confirmed unnatural deaths and 62 in 2011. In 2012 there were potentially 80 unnatural deaths though 2 verdicts are pending and in 2013 this rose to a possible 106 deaths, but with 7 verdicts pending. However, the range of unnatural deaths for 2014 lies between 69 (already confirmed) and 85 (including pending verdicts).

The Trust has taken on new services over this period, notably drug and alcohol services. This analysis is for all potentially unnatural deaths occurring across all services. The analyses on the following pages is repeated across specific service areas.



Graph 1: Unnatural deaths by coroner verdict across all NTW services, 2010 to 2014.
Source: NTW SafeGuard, accessed May 12th 2015.

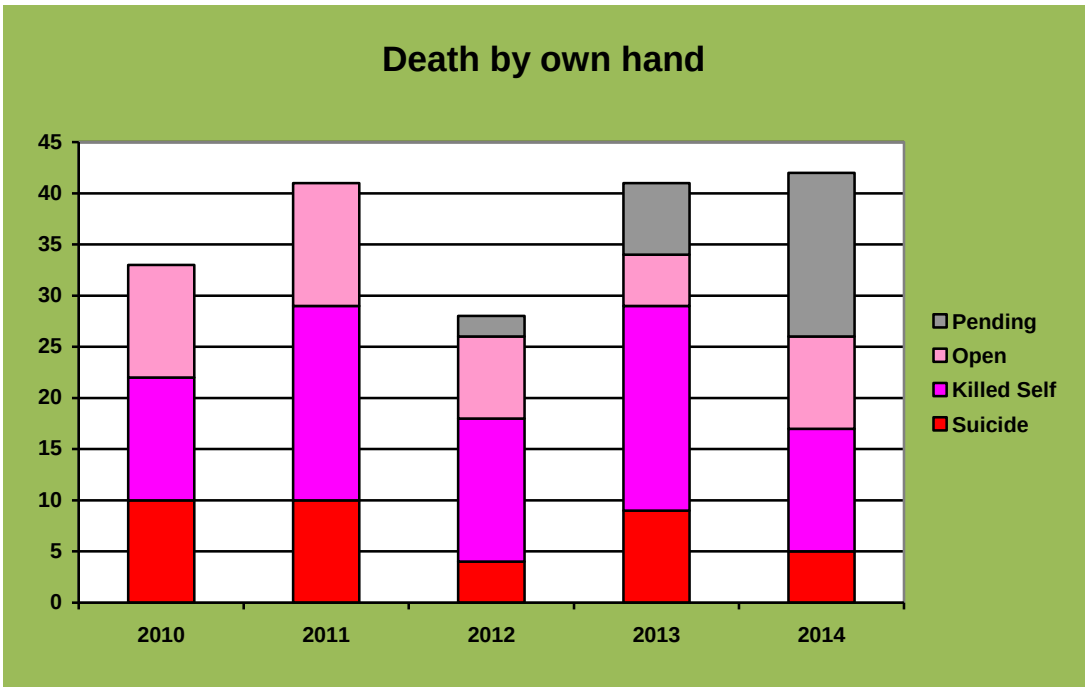
3) DEATHS BY OWN HAND IN ALL SERVICES

Deaths classified as those "*by own hand"* include those where the coroner verdict is either suicide, open, or indicative of being the consequence of self-applied cause but without evidence of intent to die (termed "killed self"). The latter is derived from the nature of short form verdicts.

At the time of analysis there had been 160 coroner confirmed cases of death by own hand. This included 38 suicides (24%), 77 "killed self" (48%) and 45 open (28%). In addition, there are 25

deaths with verdicts still pending; 2 for deaths occurring in 2012, 7 for deaths occurring in 2013, and 16 for deaths occurring in 2014.

The number of cases of death by own hand shows less trend over the four year period (see graph 2). This may be due in part to the relatively small number of events. Even including potential cases which still have pending verdicts there is no increasing trend though 2010 to 2014. The significant number of verdicts pending for 2013 and 2014 means it is currently unreliable to comment on the likely number of death by own hand cases for these years other than the total number cannot exceed 41 in 2013 and 42 in 2014 (both cases are unlikely scenarios).



Graph 2: Deaths by own hand across all NTW services 2010 to 2014.
Source: NTW SafeGuard, accessed May 12th 2015.

Previous comparisons with national data obtained from the Office of National Statistics and the National Confidential Inquiry into Suicides and Homicides (NCISH) has indicated that a Trust the size of NTW would expect between 33 and 38 deaths from suicide each year. Because of methodological issues these figures are only indicative. .

Analysis of the NCISH data set suggests that 28% of all general population suicides were current or recent (within 12 months) users of mental health services. The total number of patient suicides in England – which includes open verdicts - has been relatively stable over recent years with an estimated 1306 suicides in 2010, 1307 in 2011 and 1272 in 2012. The number of suicides amongst male patients has steadily increased since 2006

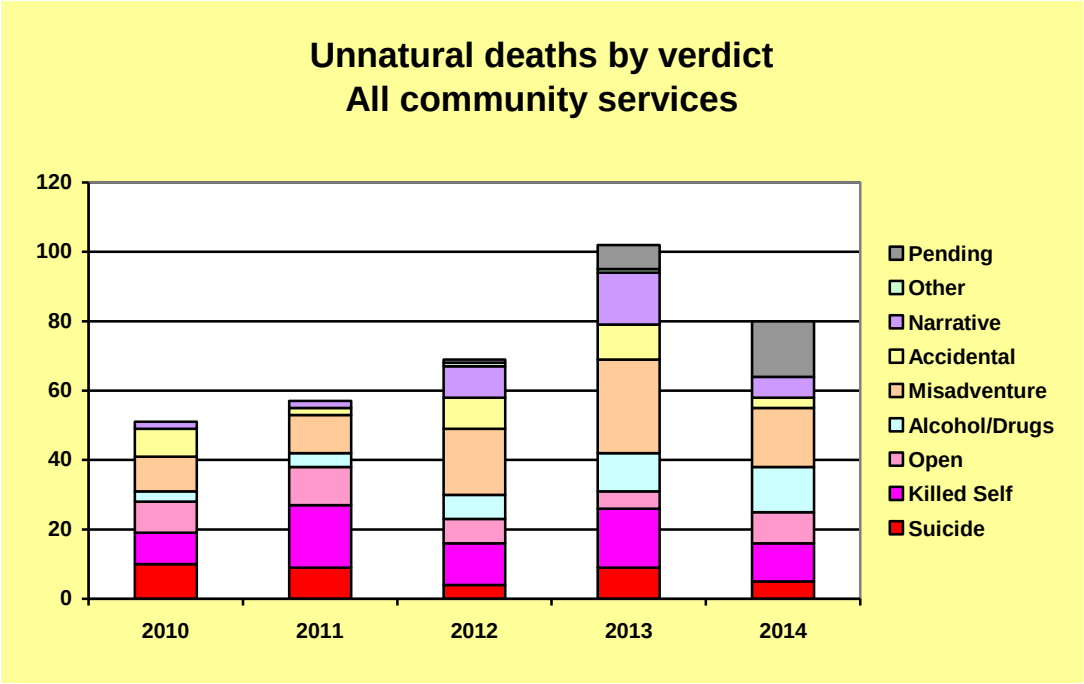
The NCISH have noted an association between lower patient suicide rates and features of services such as specialised community services and multidisciplinary reviews of previous deaths. NTW undertakes multidisciplinary reviews of all unnatural deaths though the SUI process. They note also a higher proportion of suicides where the patient was unemployed occurring in 2009-11 compared to pre-recession years

The North East is known to have higher rates of suicide in the general population than other parts of England. The Cumbria, Northumberland Tyne and Wear area (NHS England Area Team) falls into the third highest quartile for suicide rates. The average rate of suicide per 100,000 population in 2010-2012 was 10.2 compared with 7.7 to 8.3 in London. The area has also been adversely affected by the recession. Suicide rates within the Trust are likely to reflect rates in the general population and local intelligence from the police indicates increased attendance by officers at self harm incidents over the last three years.

4) UNNATURAL DEATHS IN COMMUNITY SERVICES.

Over the four year period there were 358 potential unnatural deaths across all community based services (see graph 3). Verdicts are pending in 24 cases (1 from 2012, 7 from 2013 and 16 from 2014). Therefore, 334 cases currently have coroner confirmed unnatural cause verdicts.

A third of coroner confirmed verdicts (116 cases, 35%) were misadventure or accidental deaths. Death by own hand accounted for 144 cases (43%); this included 36 suicides, 67 killed self, and 41 open verdicts.

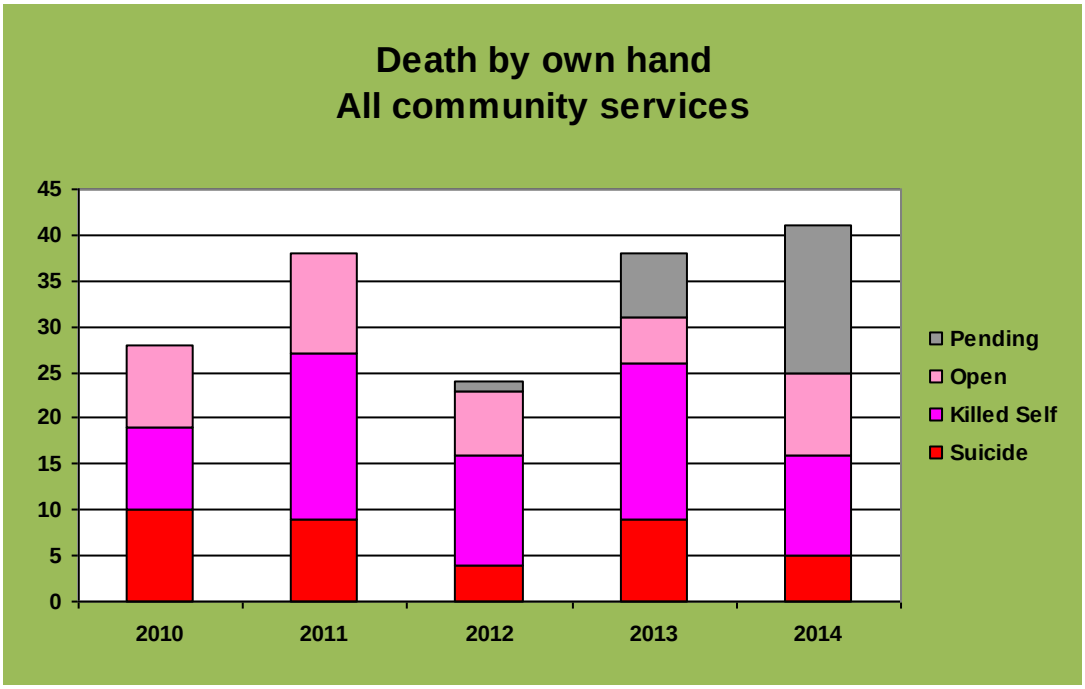


Graph 3: Unnatural deaths by coroner verdict across all NTW community based services 2010 to 2014. Source: NTW SafeGuard, accessed May 12th 2015.

The number of unnatural deaths increased each year from 51 in 2010, 57 in 2011, 68 to 69 in 2012 and 93 to 102 in 2013. However, the number fell in 2014 to lie between 64 and 80.

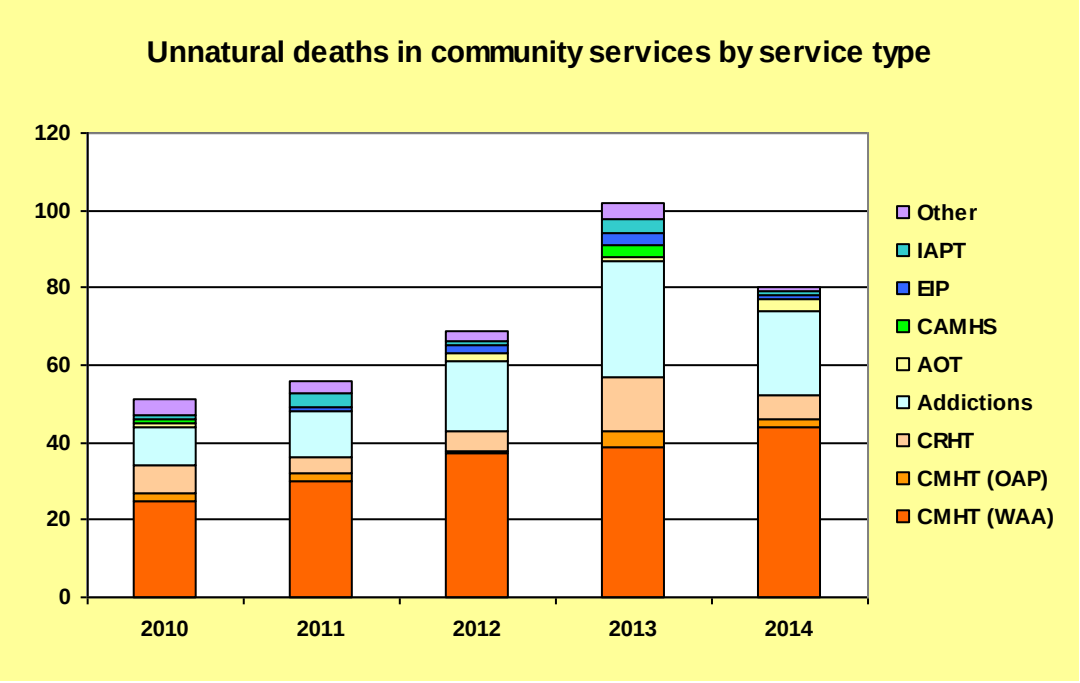
The lower figure for the latest two years reflects the number of cases with current unnatural verdicts while the higher figure includes cases with pending verdicts. The latter are thus potential unnatural cases but it is likely that some of these will be reclassified as natural cause deaths.

The number of deaths by own hand is harder to interpret (see graph 4). There were 28 coroner confirmed cases in 2010, 37 in 2011, 23 to 24 in 2012, 31 to 38 in 2013 and 25 to 41 in 2014. The high number of pending verdicts in 2013 and 2014 (23 cases currently) makes the data for these years unreliable.



Graph 4: Deaths by own hand across all NTW community based services 2010 to 2014.
Source: NTW SafeGuard, accessed May 12th 2015.

Graph 5 shows that the majority of deaths occur amongst service users in community mental health teams for working age adults (N=175, or 49%), addiction services (N=92, or 26%) and crisis resolution and home treatment services (N=36, or 10%).



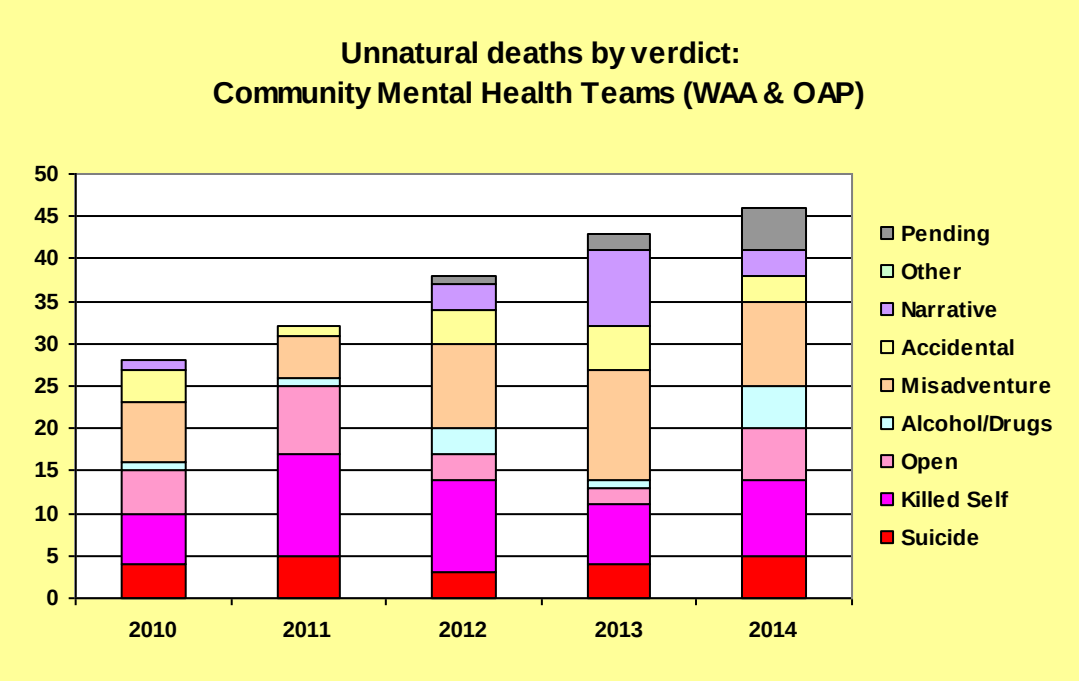
Graph 5: Unnatural deaths across all NTW community based services, by service type, 2010 to 2013.
Source: NTW SafeGuard, accessed July 17th 2014.

The number of such deaths has increased between 2010 and 2013 but has decreased in 2014. In 2014 there was a decrease in deaths occurring in addictions and crisis resolution and home treatment teams, but an increase in adult community mental health teams (see next section).

- **Community Mental Health Teams (CMHTs)**

Potential unnatural deaths in CMHTs in 2014 (44 WAA, 2 OAP) was slightly higher than in 2013 (39 WAA, 4 OAP). There has been an increasing trend over the five year period from 27 in 2010.

The increase in 2014 reflects more verdicts citing alcohol/drugs but also more deaths attributed to death by own hand (20 cases, 33%). While the number of deaths by own hand increased from 2013 (13 cases), this is still lower than in 2011 (25 cases). Also, 2014 demonstrates a reversal of a previous trend of increasing accidental, misadventure and narrative verdicts.



Graph 6: Unnatural deaths in community mental health teams, 2010 to 2014.
Source: NTW SafeGuard, accessed May 12th 2015.

- **Addiction Services**

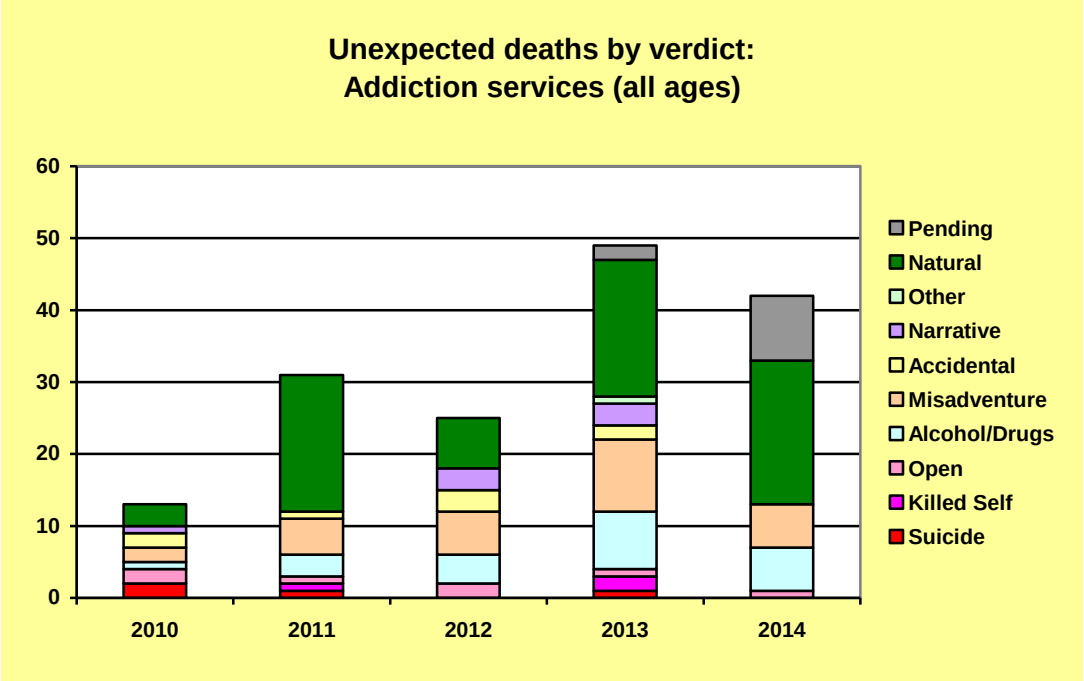
In this analysis addiction services were defined as those where the word “addiction” appears in the “department” field in SafeGuard.

The total number of unexpected deaths (natural, unnatural and verdict pending deaths) reported in addiction services over the five year period was 142. Of these 11 still have verdicts pending. Of the 131 cases with currently confirmed verdicts, 50 (38%) were natural deaths and 81 (62%) were unnatural deaths. Natural cause deaths have been included here because of the high number of sudden deaths occurring in these services which are determined to be the result of a natural process.

The total number of unexpected deaths has increased between 2010 and 2013 but fell in 2014. Taking into account deaths confirmed as natural, unnatural and those with verdicts pending, there were 13 deaths in 2010, 31 deaths in 2011, 25 deaths in 2012, 49 deaths in 2013 and 42 deaths in 2014. The number of natural cause deaths has varied significantly from year to year between 3 in 2010 and 20 in 2014.

Misadventure and accidental death accounted for almost half of all coroner confirmed unnatural deaths (37 cases, 46%), while a further 22 cases were attributed to alcohol or drugs. Fourteen cases were deaths by own hand (4 suicide, 3 killed self and 7 open), and this shows no trend over the four year period. However, it is worth noting that there are eleven outstanding verdicts for 2013 and 2014

This increase is associated with new addiction services being incorporated into the Trust and so may not reflect an increased risk of death in individual service users. Deaths in addiction services have recently been subject to a separate internal review process with external validation.

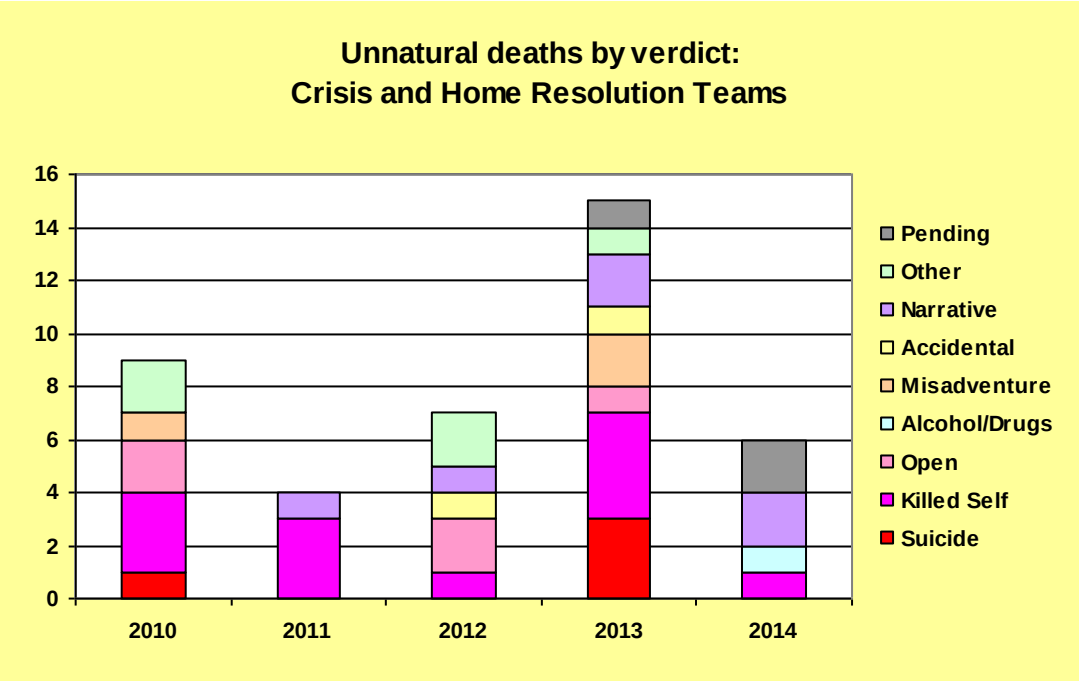


Graph 7: Unexpected deaths (includes natural causes) in community addiction teams, 2010 to 2014. Source: NTW SafeGuard, accessed May 12th 2015.

- **Crisis and Home Resolution Teams (CRHTs)**

The number of potential unnatural deaths in CRHTs rose in 2013 to 14 deaths but has fallen significantly to 6 deaths in 2014 (see graph 8). Figures for previous years ranged between 4 and 7 deaths. Of the deaths in 2014, only 1 currently has a verdict indicating death by own hand (0 suicide, 1 killed self and 0 open). Two verdicts are pending.

The NCISH analysis shows that 13% of patient deaths occur in those under crisis resolution and home treatment teams. The NCISH notes that since 2006 there have been more deaths amongst users of CRHTs than in in-patient units which reflects the change in the provision of acute care. However, there has been a reduction nationally in the number of CRHT related deaths since 2009.In NTW over the five year period 13% (21 out of 160) of all service users who received a verdict of suicide, killed self or open were under CRHT care.



Graph 8: Unnatural deaths in crisis and home resolution teams, 2010 to 2014.
Source: NTW SafeGuard, accessed May 12th 2015.

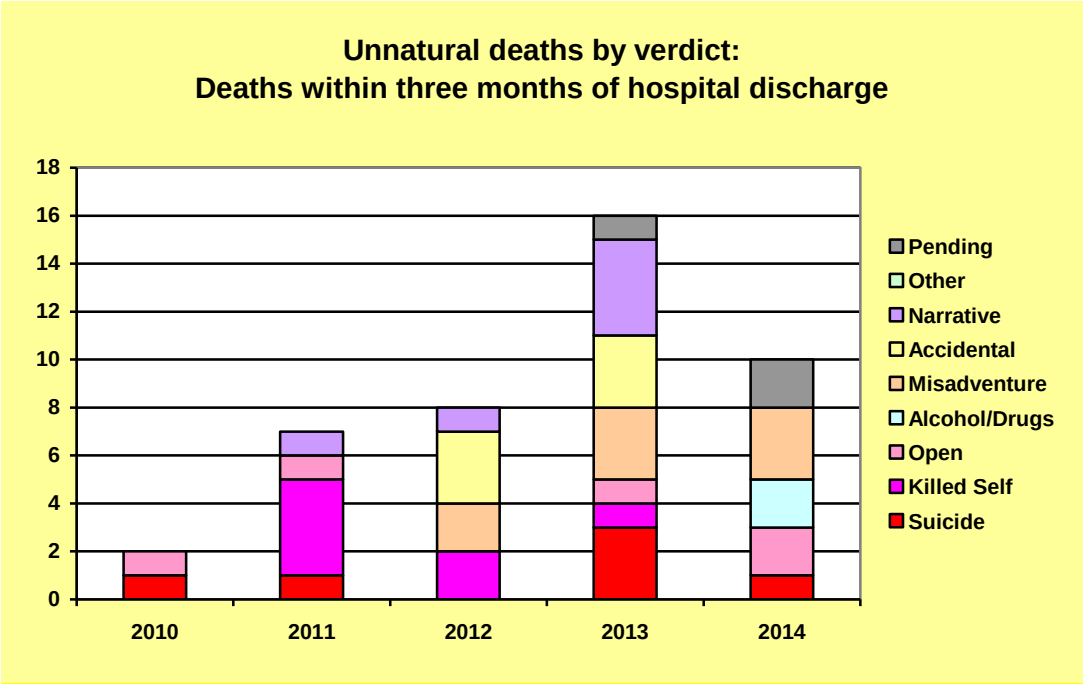
- **Other Services.**

Over the five year period there were seven deaths in assertive outreach (AOT) services, seven deaths in early intervention in psychosis (EIP) services and eleven deaths in IAPT services. There were four deaths in CAMHS.

Deaths in other services were small with only one or two deaths over the four year period. These included community treatment team for learning disability, psychology services, primary care, gender dysphoria, and rehabilitation services.

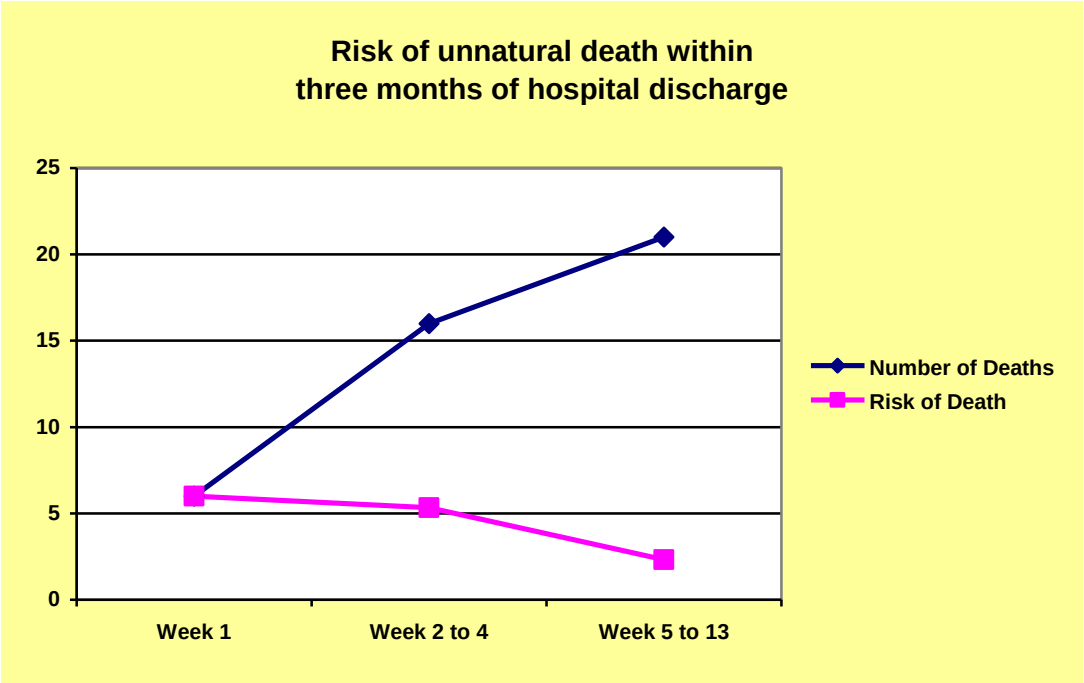
5) UNNATURAL DEATHS WITHIN THREE MONTHS OF DISCHARGE FROM HOSPITAL.

In common with many of the parameters, the number of cases of unnatural or potentially unnatural deaths occurring in the community but within three months of discharge from an in-patient unit increased between 2010 and 2013 but decreased in 2014 (see graph 9). The number of such deaths has increased from 2 in 2010 to 7 in 2011, 8 in 2012, reaching a peak of 16 in 2013 before falling to 10 in 2014. However, the peak number of “death by own hand” was in 2011 (7 cases).



Graph 9: Unnatural deaths within three months of discharge, 2010 to 2014.
Source: NTW SafeGuard, accessed May 12th 2015.

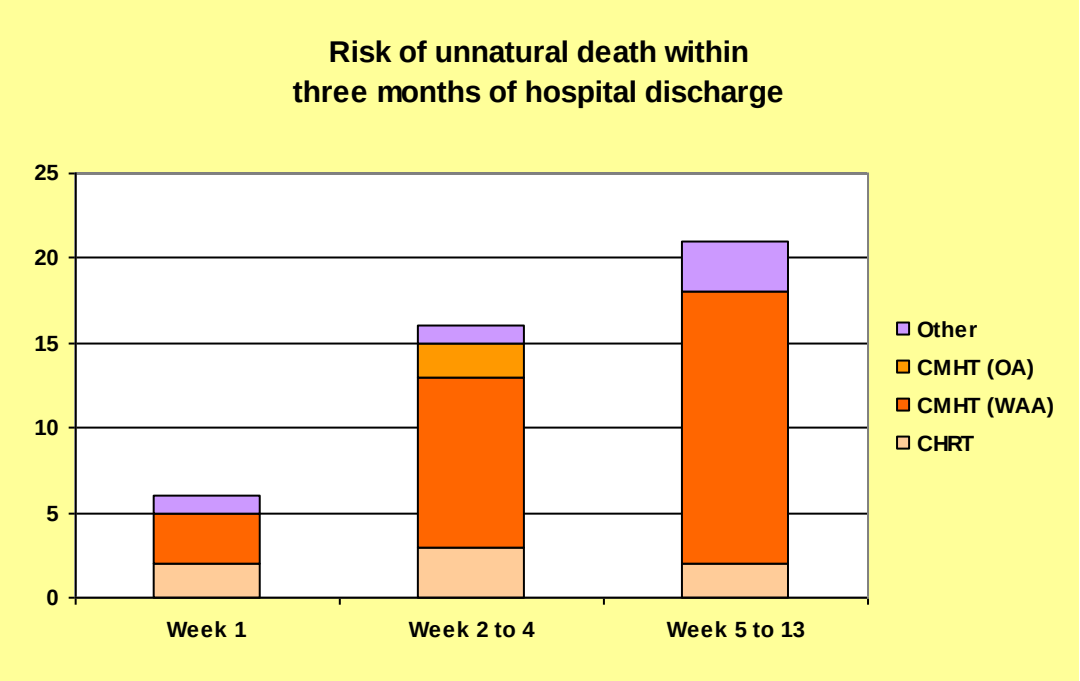
Most deaths occurred in the period from week 5 to week 13 after discharge (see graph 10). However, the period when service users were at highest risk of death, measured by the incidence rate, was in the first week followed closely by weeks 2 to 4.



Graph 10: The number and risk of unnatural death following discharge from hospital, 2010 to 2014.
Source: NTW SafeGuard, accessed May 12th 2015.

The NCISH report indicates that 18% of all patient suicides occur within the three months of hospital discharge. Over the five year period 18 NTW service users died by own hand within three months of discharge, equating to 11%. The highest risk period was in the first week of leaving hospital which is confirmed by NTW data.

Graph 11 shows which service the patient was under at the time of death. Of the 43 deaths (including pending verdicts) 31 occurred while the patient was being managed by a CMHT and towards the end of the three month period. Deaths occurring during CRHT care occurred earlier after discharge and accounted for 7 of the deaths.



Graph 11: Unnatural death following discharge from hospital by service, 2010 to 2014. Source: NTW SafeGuard, accessed May 12th 2015.

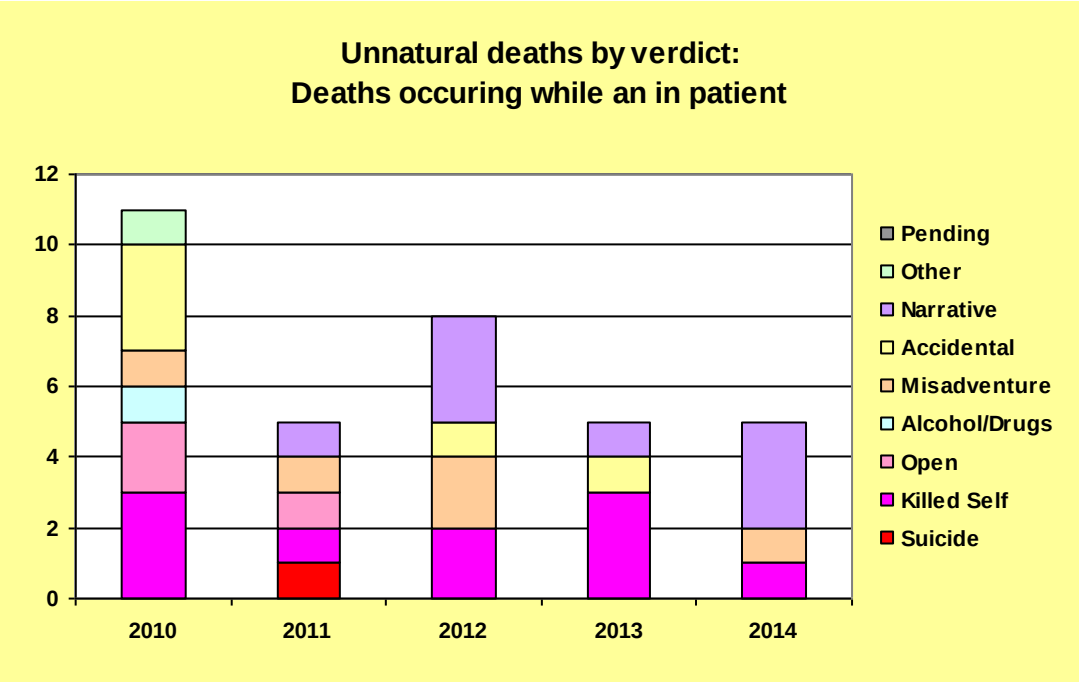
6) UNNATURAL DEATHS OCCURING WHILST AN IN PATIENT

This analysis includes deaths of service users while an in-patient. It includes deaths which occurred on the ward but also deaths which occurred while an in-patient was on leave or absent without leave (AWOL).

Fortunately, deaths while an in-patient are rare events. Over the five year period there were a total of 32 deaths. Nearly two-thirds of these occurred on the ward (19 cases, 59%), with the remainder while the patient was on leave (9 on leave and 4 while AWOL)

The trend has been downwards, although the annual numbers involved are small. In 2010 there were 11 in-patient deaths, falling to 5 in 2011, 8 in 2012 and 5 again in 2013 and 2014.

Twelve deaths were attributed to death by own hand, nine deaths to misadventure or accident and a narrative verdict was given in eight cases. There are no outstanding verdicts.



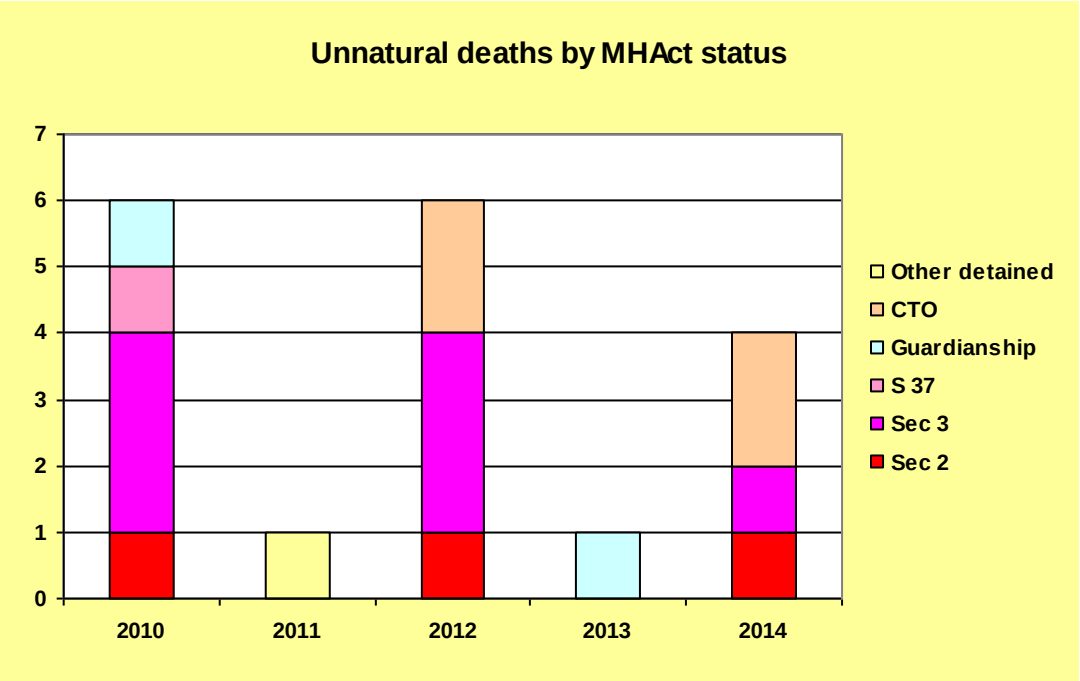
Graph 12: Unnatural deaths amongst in-patients, 2010 to 2014.
Source: NTW SafeGuard, accessed May 12th 2015.

Deaths occurring while an in-patient was on leave have become less common. In 2010 three in-patients died on leave and another one died while absent without leave. Two in-patients died on leave in 2011, one in 2011 (while AWOL), three in 2013 (all on agreed leave) and three in 2014 (one on leave, two AWOL).

In the NCISH report, 10% of all patient suicides occurred whilst the person was an in-patient; the number of in-patient deaths has fallen 50% between 2002 and 2011. Death due to hanging/strangulation is usually from low-lying ligature points, but the number of such deaths has also been decreasing. In the NTW dataset 12 patients died by own hand over the four year period (7.5%).

7) DEATHS WHILE DETAINED UNDER THE MENTAL HEALTH ACT.

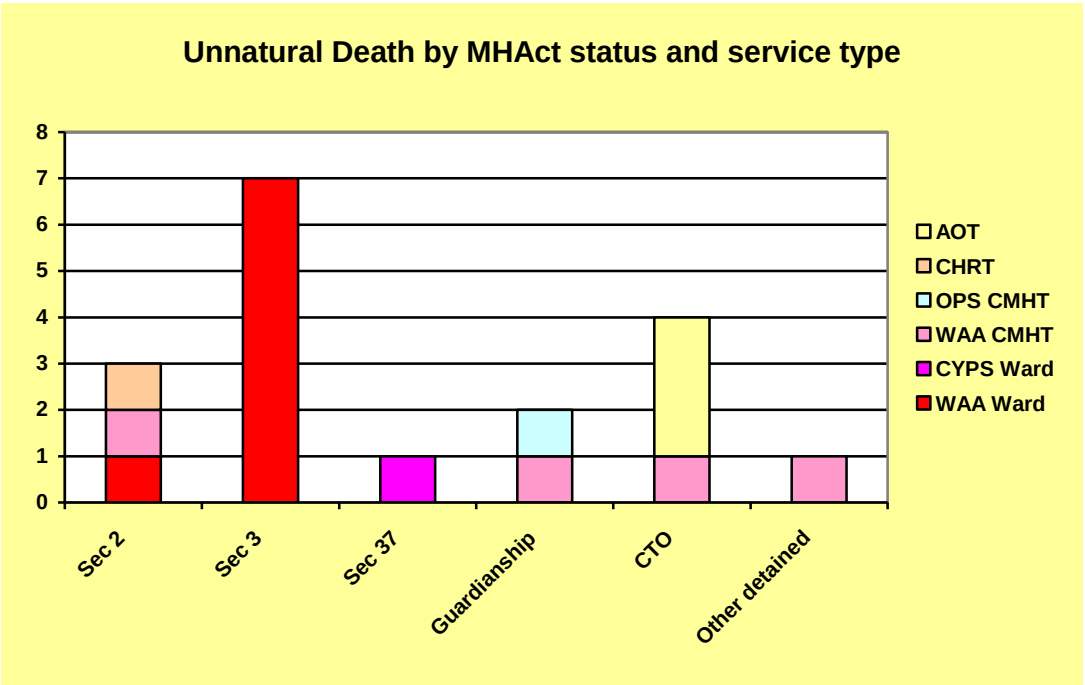
Each year a small number of people die unexpectedly while detained under the Mental Health Act. Over the five year period there were 18 deaths ranging from only 1 death in 2011 and 2013 to six deaths in each of 2010 and 2012. There were four such deaths in 2014.



Graph 13: Unnatural deaths by MHAct status at time of death, 2010 to 2014.
Source: NTW SafeGuard, accessed May 12th 2015.

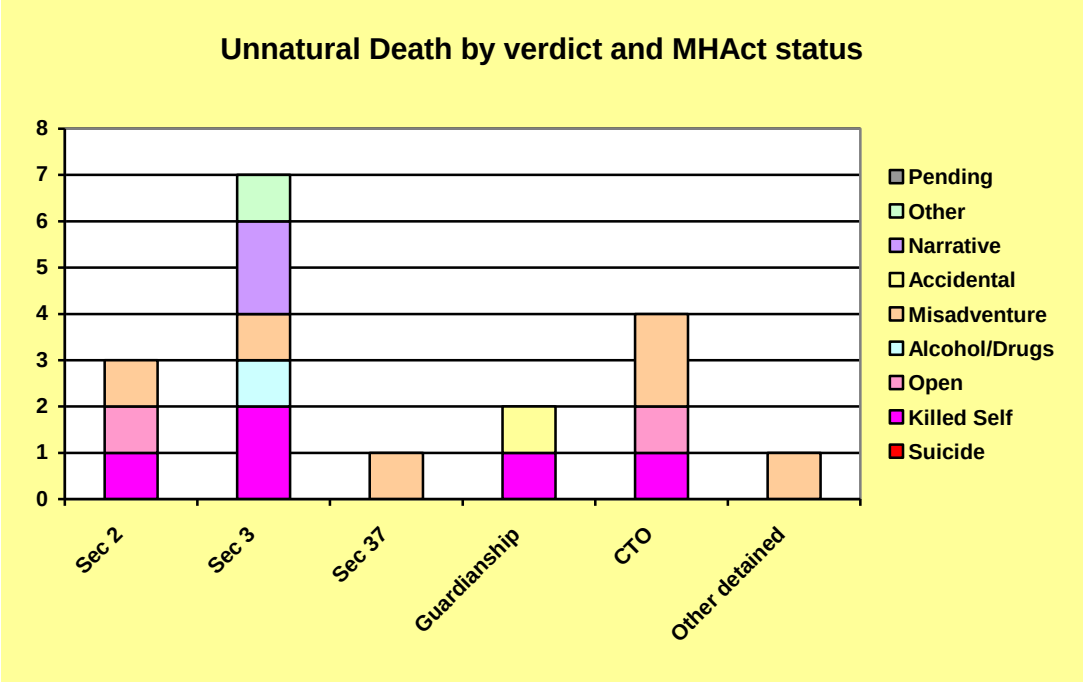
Seven deaths occurred while the service user was detained under Section 3, four deaths under a Community Treatment Order (CTO) and three under Section 2.

All deaths under Section 3 occurred on adult wards as did one of the deaths under Section 2. The remaining deaths under Section 2 occurred in adult CMHT or crisis home resolution teams. All deaths of service users with Community Treatment Orders occurred in Assertive Outreach teams (AOT); these three deaths accounted for half of all deaths in AOTs over the period (3 out of 6 cases).



Graph 14: Unnatural deaths by MHAct status and service type, 2010 to 2014.
Source: NTW SafeGuard, accessed May 12th 2015.

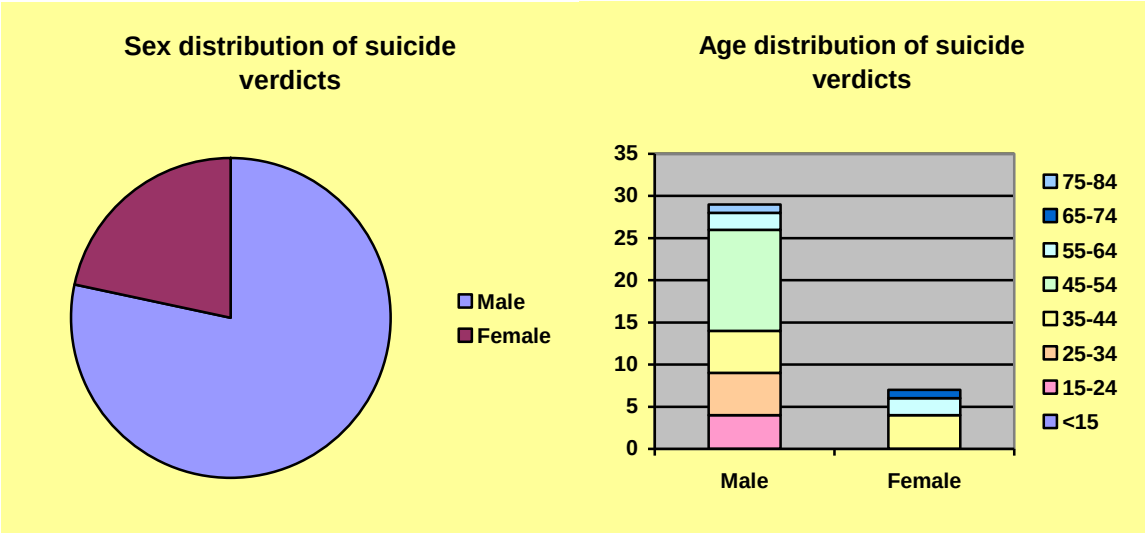
Misadventure was the most common verdict (6 cases) followed by killed self (5 cases). A narrative or open verdict was given in 2 cases each.



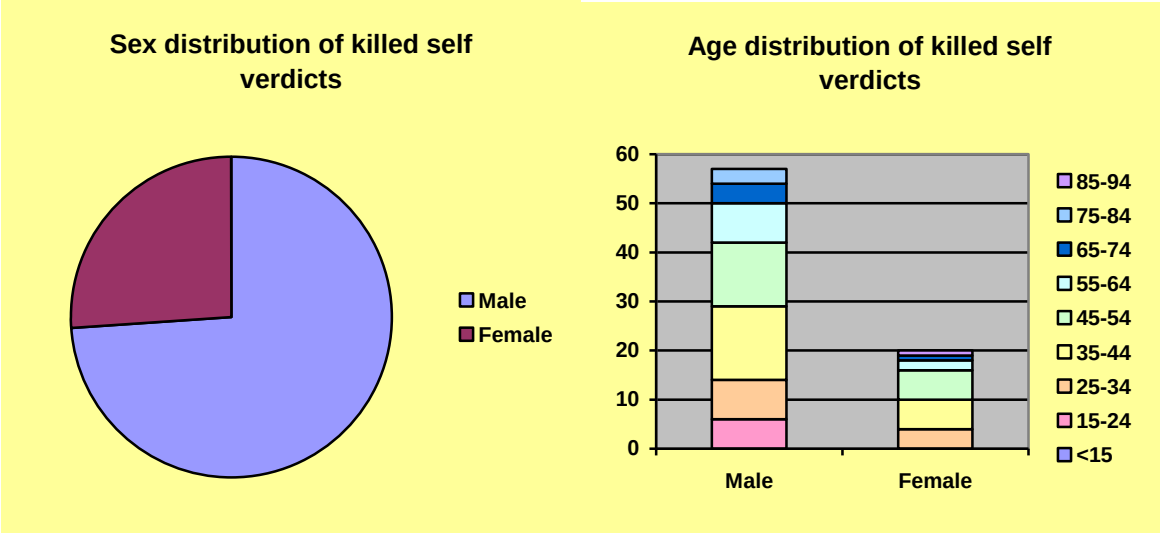
Graph 15: Unnatural deaths by MHAct status and verdict, 2010 to 2014.
Source: NTW SafeGuard, accessed May 12th 2015.

8) DEMOGRAPHY.

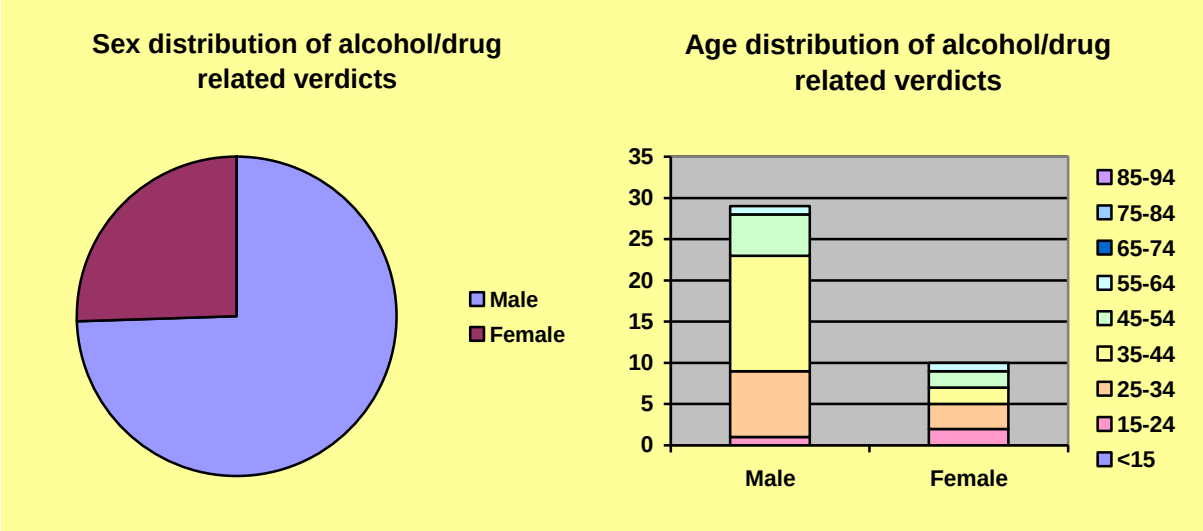
The majority of people who received a verdict of suicide or killed self were male. In the NISCH dataset 67% of all suicides were in males. Graph 16 shows that for all suicide verdicts for NTW patients, 76% of incidents were amongst male service users (29 out of 38 – sex was not recorded for 1 case). For those with a verdict of killed self (graph 17) the percentage was only slightly lower at 74% (57 out of 77). Where the verdict indicated alcohol or drug use the ratio was again similar with males representing 74% of all cases (see graph 18). Ten percent of all suicides in the NCISH dataset occurred in person aged under 25. In NTW there were 15 young people who died by own hand over the four year period (11%).



Graph 16: Age and sex distribution of persons with a suicide verdict, 2010 to 2014.
Source: NTW SafeGuard, accessed May 12th 2015.



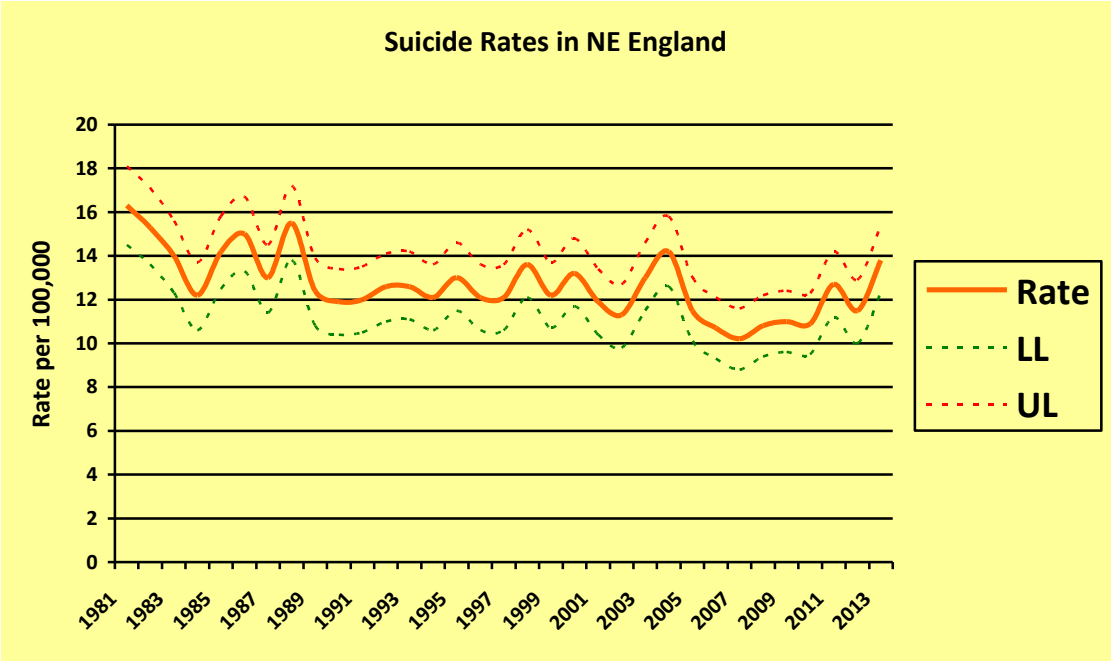
Graph 17: Age and sex distribution of persons with a killed self verdict, 2010 to 2014. Source: NTW SafeGuard, accessed May 12th 2015.



Graph 18: Age and sex distribution of persons with an alcohol/drug related verdict, 2010 to 2014. Source: NTW SafeGuard, accessed May 12th 2015.

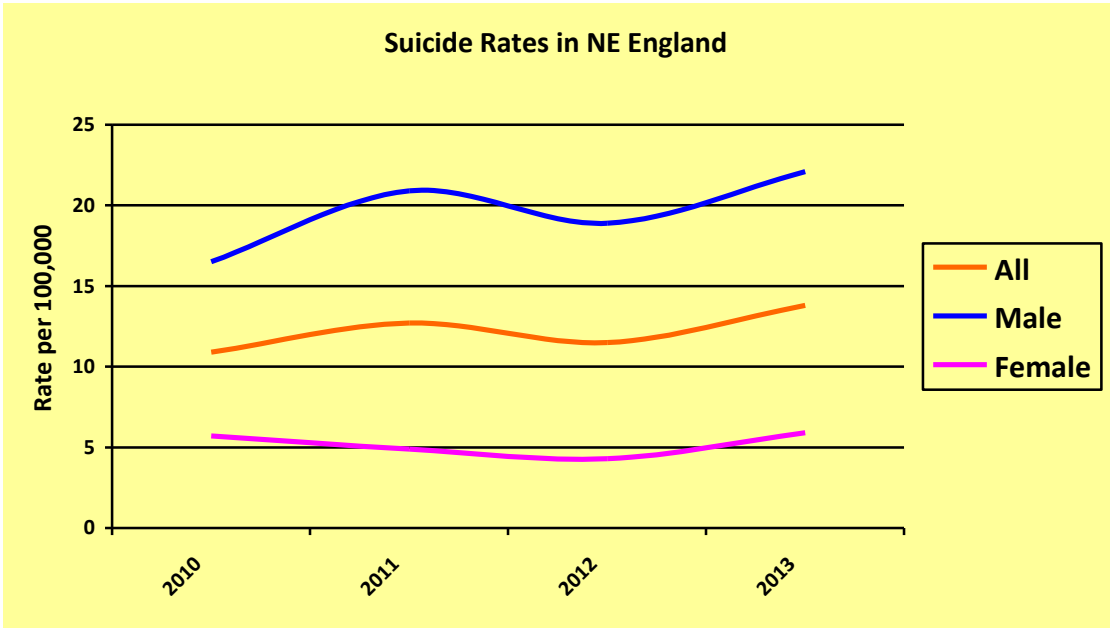
9) COMPARISON WITH NORTH EAST SUICIDE RATES.

Suicide rates are recorded by the Office of National Statistics on a calendar year basis, and published one year in arrears. Data are available at national and subnational level, down to local authority areas. They are derived from coroner's verdicts and include verdicts of suicide and open verdicts. Recently, new guidance has been issued to coroners and ONS staff to facilitate the inclusion of narrative verdicts where intent is stated.



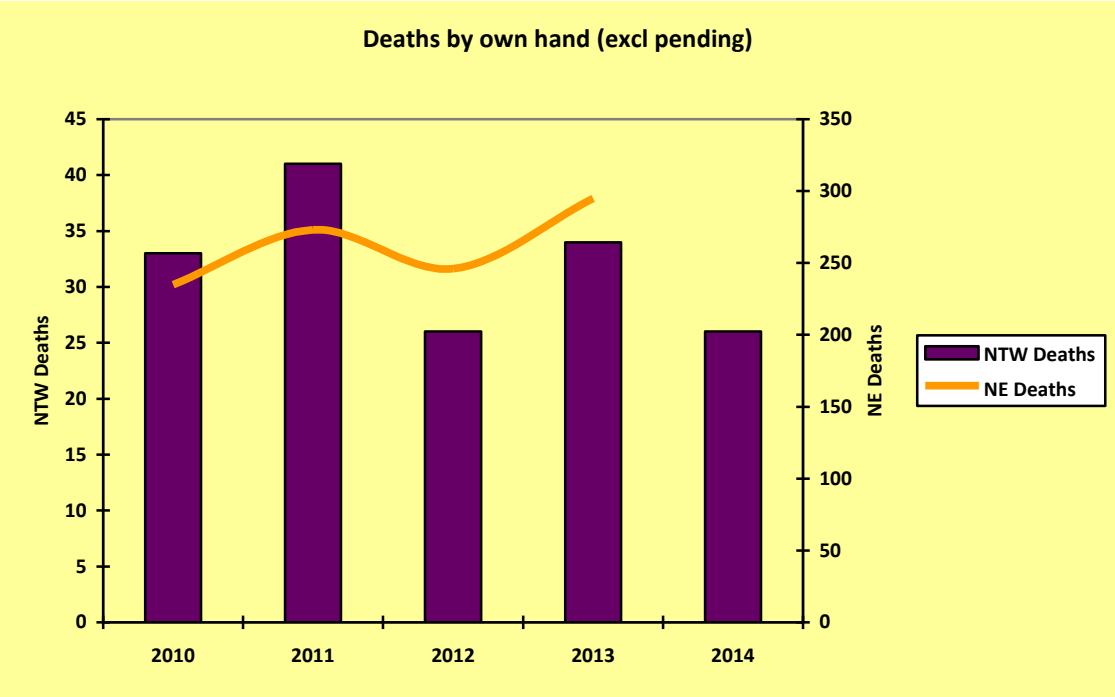
Graph 19: Suicide rates in North East England 1981 to 2013.
Source: ONS.

Graph 19 demonstrates that even for a large population like the North East, annual suicide rates vary from year to year. Since 1981 there has been a general reduction in suicides rates, although that trend shows signs of reversal since 2010.



Graph 20: Suicide rates in North East England by sex, 2010 to 2013.
Source: ONS.

Graph 20 focuses on the data between 2010 and 2013, showing an overall upwards trend, due predominantly to an increase in male suicides. This may be associated with the economic downturn in the region.



Graph 21: Suicide deaths in North East England and NTW, 2010 to 2013. Source: ONS and NTW SafeGuard, accessed May 12th 2015.

Graph 21 superimposes the number of suicides in the North East on the corresponding data for NTW from 2010 to 2013 demonstrating that recent peaks and troughs in NTW deaths reflect fluctuations in the regional number of deaths. However, as a proportion of all North East deaths, NTW appears better placed in 2012 and 2013 than in the two preceding years. Some caution is required as the NTW data does not yet include all pending verdicts.

10) MAIN FINDINGS

1) There has been a decrease in the total number of potential unnatural deaths reported in 2014, compared with earlier years which showed a year on year upwards trend. However, there are a significant number of coroner verdicts still outstanding.

2) The reduction has been across all verdicts

3) At the time of analysis, the number of deaths by own hand across all services is comparable with previous years, although there are still a number of verdicts outstanding.

4) The total number of deaths occurring in community services has shown a reduction compared with 2014 but it is too early to make comment about the number attributed to death by own hand.

5) The number of deaths in community mental health teams has shown a slight increase since 2014 as has the number of deaths by own hand.

6) The number of unexpected deaths occurring in addiction services has fallen in 2014 particularly those attributed to death by own hand. The majority of deaths were attributed to natural causes.

7) Unnatural deaths by users of crisis and home resolution services have significantly fallen in 2014, since a marked increase in 2013. This has been particularly so for deaths by own hand.

8) The number of deaths occurring in the community, but within three months of discharge from an in-patient unit has also fallen in 2014 compared to 2013, but has continued an upwards trend seen in previous years between 2010 and 1012.

9) The number of deaths of service users while an in-patient is small. The number of deaths was comparable to previous years 2011 and 2013.

10) Deaths occurring while detained under the mental health act was higher than in 2013 but lower than in 2010 and 2012. The number of such deaths is small. The bulk of such deaths occurred while the service user was detained under section 3, and while on a working age adult in-patent ward.

11) Male service users are slightly over-represented in deaths by own hand in NTW compared with national data.

12) The number of deaths by own hand in NTW mirrors the community suicide rates in the North East of England.

THIS PAGE IS INTENTIONALLY BLANK