

West Sussex Joint Strategic Needs Assessment Briefing

MORTALITY IN WEST SUSSEX – WINTER 2014/15

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July 2015

Summary Points

- In January 2015 there were 1,125 deaths registered in West Sussex, this was 34% higher than January 2014 registrations (837).
- The pattern, in relation to monthly deaths in West Sussex, is in line with the national picture, including the high number of deaths in January 2015.
- Week commencing 2nd January 2015 saw a particularly high number of deaths (221) and numbers were high over the Christmas and New Year period into early February.
- In terms of age at death, a higher proportion of deaths in January 2015 were of people aged 85 years or over (54%), this was higher than the percentage in 2014 (47%).
- Local analysis found that respiratory causes were listed as the cause of death, or listed as a contributory factor, in 42% of deaths in West Sussex in January 2015, again higher than 2014.
- A higher proportion of deaths in January 2015 were in care homes, a smaller proportion in hospitals. This, in part, is explained by the increased proportion of deaths in the very elderly age groups.
- Using national surveillance information, it is evident that the weekly pattern of deaths reflects the peak period of circulating influenza. It should also be noted that the effectiveness of the seasonal flu jab was low in winter 2014/15.

Note: For this briefing two sources of information have been used:-

- The Office for National Statistics (ONS) publishes data on the number of registered deaths by area of usual residence on a monthly basis. This is publically available information, and from this we are able to compare West Sussex with other areas, and with England. Data from this source relates to date of registration.
- The Primary Care Mortality Database (PCMD) is a more detailed extract of death registration data. This is provided, under specific conditions, to Public Health in Local Authorities and some NHS organisations. The PCMD includes patient level data and contains detail including date of death, cause, and underlying cause, of death, age, sex, location, GP and also coroner information, where applicable. The information is provided monthly but there is some time lag in the release and the dataset may be subject to minor revision. This enables a more detailed analysis of death in the county but we are not able to compare this detailed analysis with other areas.

Although both sources of information originate from death registration, there are some differences in the numbers, which arise from time lag and some revision of information.

The ONS provide a commentary on seasonal mortality each November for the previous winter.

Public Health England (PHE) publishes weekly bulletins on death registrations (national level) and publishes surveillance on influenza and other respiratory viruses in circulation over winter periods.

This briefing examines four aspects of the mortality data available:- the number of deaths, the age at death, the cause of death and the location of death.

Number of Deaths

Monthly deaths for West Sussex (Figure 1a) and England and Wales (Figure 1b) are shown on the graphs below. These graphs plot the monthly total (blue dots), the period average (the black line) and include lines which denote two (orange line) and three (red line) standard deviations (SD) from the mean. A blue dot which lies outside of the 3 SD line indicates it is outside the normal limits of the dataset and therefore may represent a systematic difference.

The pattern in monthly deaths in the county closely matches the England picture, with higher number of deaths in the winter months. In West Sussex, and England, there were an unusually high number of deaths in January 2015. This is the only month where the number of deaths was beyond three SD from the mean for the period shown, in all other months the number of deaths fell within two SD.

Figure 1a Monthly Deaths in WEST SUSSEX January 2013 to May 2015

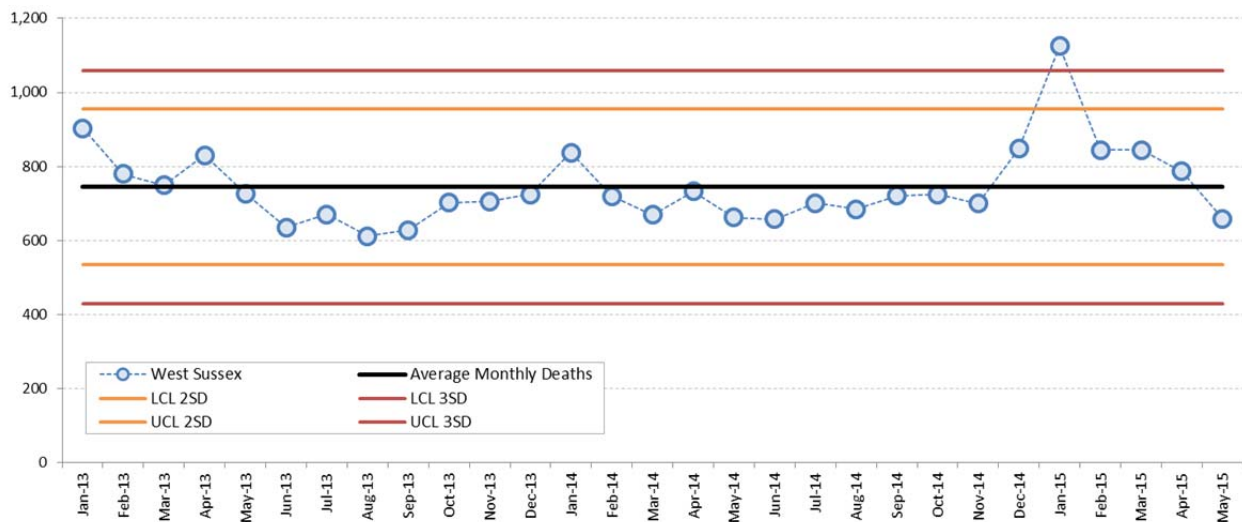
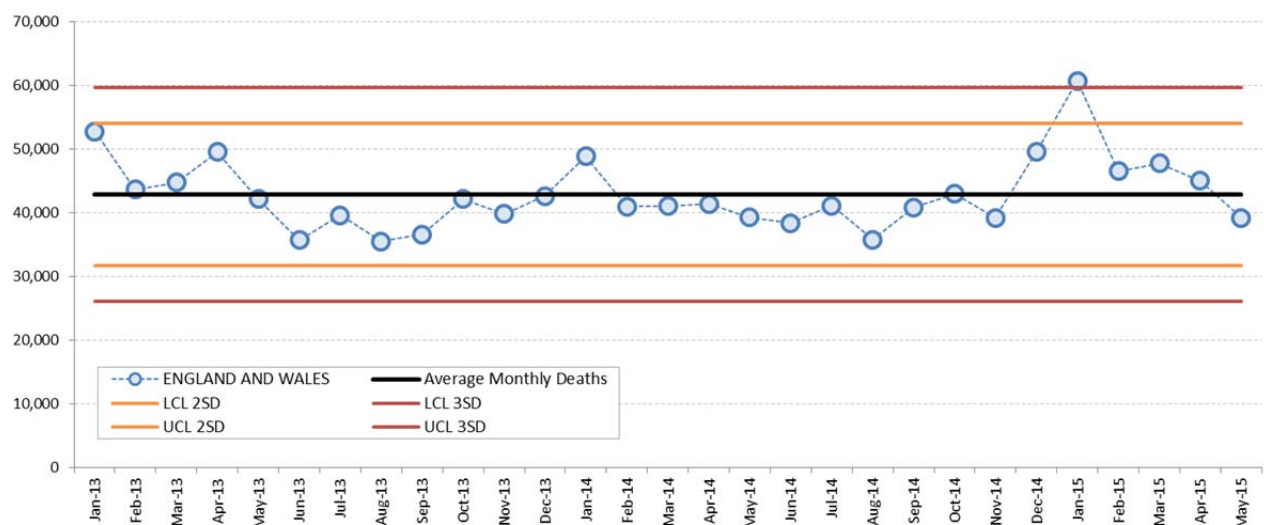


Figure 1b Monthly Deaths in ENGLAND AND WALES January 2013 to May 2015

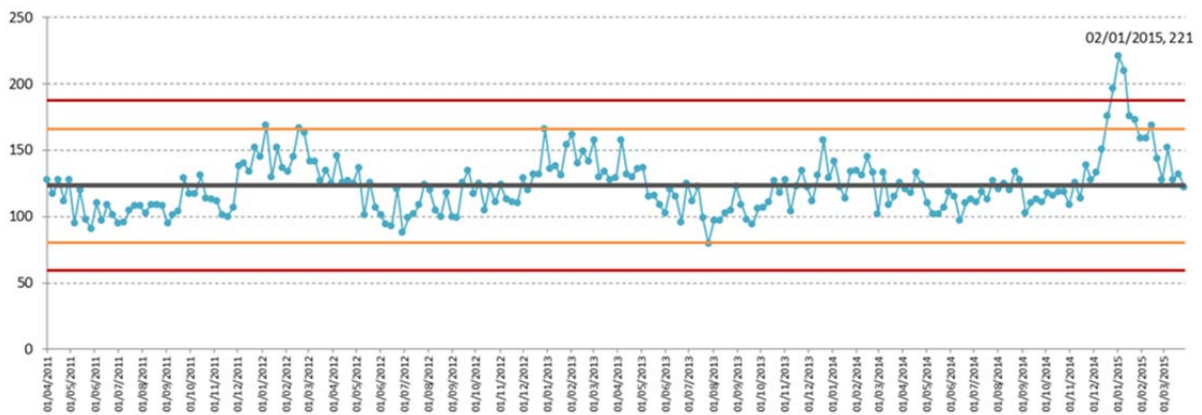


Source: ONS - West Sussex Public Health Research Unit. Date relates to date of registration.

Weekly Pattern

Winter months have higher numbers of death, due to factors such as cold weather and the increased presence of respiratory viruses. Peaks can also occur reflecting the circulation of particular influenza strains. Using PCMD data information the weekly pattern for West Sussex (Figure 2) shows that week commencing 2nd January 2015 had the highest number of deaths (221 deaths), although deaths were also high in the preceding weeks and into early February.

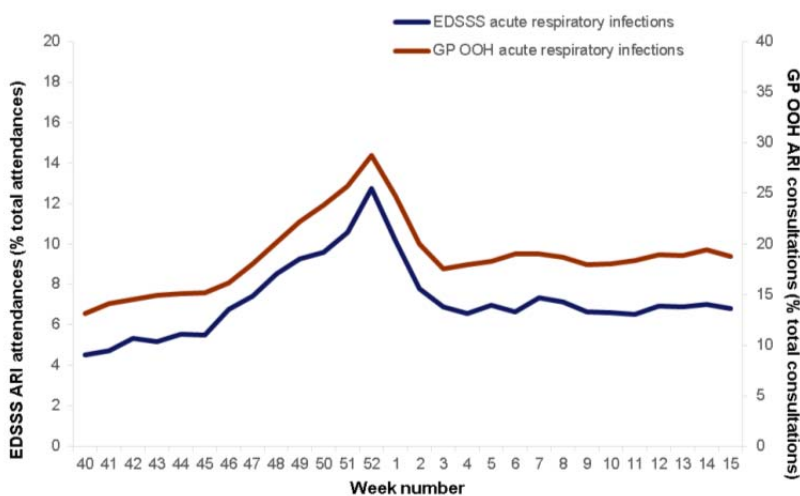
Figure 2 Weekly deaths in WEST SUSSEX April 2011 to April 2015



Source: PCMD - West Sussex Public Health Research Unit. Date relates to date of death.

Using data published by Public Health England (PHE) in relation to circulating viruses, it is evident that the pattern of deaths aligns with flu circulation which peaked towards the end of 2014. This was noted in the weekly surveillance reporting of acute respiratory infections presenting at GP surgeries and A&E departments (Figure 3).

Figure 3 Weekly all age acute respiratory infection Emergency Department attendances and GP out of hours consultations for winter 2014 to 2015, England

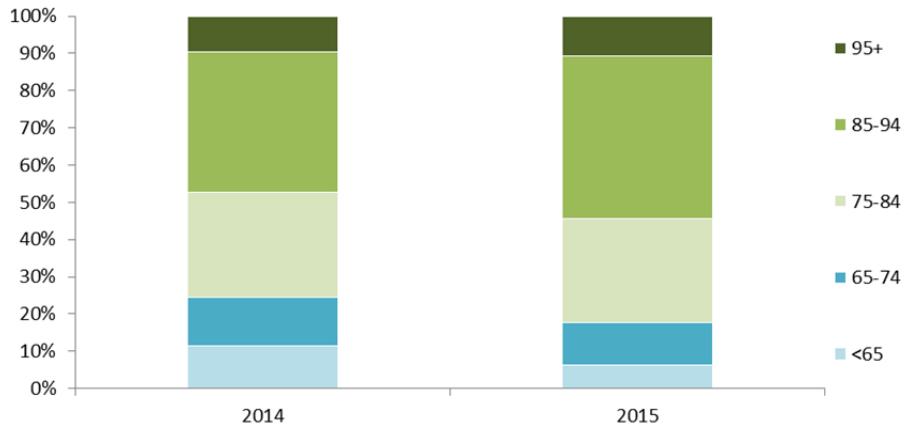


Source: PHE 2015 - Graph taken from [“Surveillance of influenza and other respiratory viruses in the United Kingdom: winter 2014 to 2015.”](#)

Age of Death

Comparing deaths in January 2015 with January 2014 (Figure 3), a higher proportion of deaths in 2015 were of people aged 85+ years; 54% of deaths in January 2015 were of people aged 85 years or over compared with 47% in 2014.

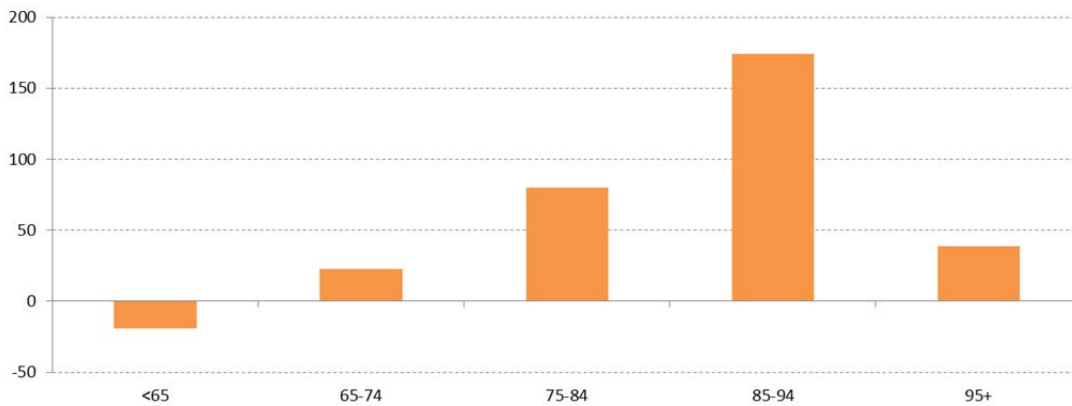
Figure 3 Percentage of deaths by Age Group in West Sussex January 2014 and January 2015



Source: PCMD - West Sussex Public Health Research Unit

There were fewer deaths (in number) of people aged 65 years or under in 2015 compared with 2014, but higher numbers in all 65+ age groups.

Figure 4 Change in the number of deaths by age group 2014 and 2015



Source: PCMD - West Sussex Public Health Research Unit

Cause of death

Respiratory causes were listed as the underlying cause of death, or listed as a contributory¹ factor, in 42% of deaths in West Sussex in January 2015 (Table 1), in 2014 this figure was 36%.

Table 1 Respiratory and Non-respiratory deaths in West Sussex January 2015

Age Group	Underlying Cause of Death (January 2015)			Total deaths	Deaths where underlying cause or contributory factor noted as respiratory	
	Non-Respiratory		Respiratory			
	Respiratory not recorded as contributory factor	With respiratory condition recorded as contributory factor			Number	%
<65	48	10	8	66	18	27.3%
65-74	79	25	15	119	40	33.6%
75-84	158	89	43	290	132	45.5%
85-94	250	125	81	456	206	45.2%
95+	68	18	24	110	42	38.2%
Total	603	267	171	1,041	438	42.1%

Source: PCMD West Sussex Public Health Research Unit

Place of Death

Using PCMD information relating to the place of death, it is evident that, in January 2015, a higher proportion of deaths were in care homes than in previous years. This should be considered in the context of a higher proportion of deaths of people over 85 and respiratory related deaths. Overall there has been a trend in West Sussex of a reducing proportion of deaths in hospital.

Table 2 Place of Death (as % of all deaths) in the month of January 2010 to 2015 – West Sussex

Year	Month of Death	Elsewhere*	Hospice	Hospital	Usual Place of Residence - Care Home	Usual Place of Residence – Household/Home	Other
2010	Jan	1.6%	5.3%	49.9%	24.8%	18.4%	0.1%
2011	Jan	3.0%	7.3%	46.6%	25.8%	17.0%	0.3%
2012	Jan	1.1%	7.7%	46.7%	26.6%	17.5%	0.3%
2013	Jan	1.9%	7.8%	41.2%	30.7%	17.9%	0.4%
2014	Jan	3.0%	8.7%	42.8%	26.5%	18.7%	0.2%
2015	Jan	0.9%	6.6%	38.1%	38.2%	15.8%	0.2%

Elsewhere includes where deaths occurred in public places including road traffic deaths.

Source: PCMD West Sussex Public Health Research Unit

¹ The underlying cause of death is the principal cause and would usually be used in mortality data and statistics. The underlying cause is defined by the World Health Organisation as: a) The disease or injury that initiated the train of events directly leading to death, or b) The circumstances of the accident or violence that produced the fatal injury
A contributory cause of death is a significant condition that contributes to the death.