

# CAUSES OF DEATH IN A RURAL SOUTH-WEST LANCASHIRE COMMUNITY IN THE LATE EIGHTEENTH CENTURY

John Virgoe

John Virgoe, a retired chartered geologist, gained a PhD from Liverpool University for a thesis on rural south-west Lancashire in the eighteenth century, from which this article is drawn.

## Introduction

From May 1789 until 1801 the parish register of St Cuthbert's Church, North Meols in Lancashire, records both cause of death and age at death of a large proportion of individuals buried in the parish. A brief summary of this medical information was made by F. J. Baildon, a Southport doctor, in the introduction to the transcribed parish register. This article examines this information in greater detail and discusses its significance in the context of the location of North Meols, other sources of information on causes of death, medical knowledge of the period and the contribution which it makes to late eighteenth century mortality and medical understanding in rural north-west England. It is thought that Lancashire in the period 1760–1840 had higher death rates than other comparable counties not only in the urban, industrialising areas but also in the rural communities. Five diseases were said to be important in the county—*influenza*, *typhus*, *typhoid*, *putrid fever* and *whooping cough*.<sup>1</sup>

The parish church of St. Cuthbert's is located some 18 miles north of Liverpool and about 12 miles south west of Preston (see Figure 1). Today it is part of the Churchtown district of Southport, but in the eighteenth century Southport did not exist. The urban area of modern Southport encompasses virtually the entire area of the historic North Meols parish from Crossens in the north to Ainsdale in the south. North Meols was typical of many Lancashire parishes, covering a large area and made up of more than one administrative township. North Meols contained two townships, Birkdale and North Meols itself. Birkdale was a dispersed township with house scattered over the area, but no centre. There were numerous other minor centres of population, such as Marshside, Rowe Lane, Banks, Blowick (both higher and lower), Crossens, and Little London. These are all recorded in the parish registers. Little London could cause confusion to any one not familiar with the area, since it is often referred to in the registers as London. There was a semblance of a village centre at North Meols, recorded in the registers as Churchtown and still known by that name today. An excellent picture of the parish is portrayed in William Yates map of Lancashire, date 1786 (Figure 2). The parish formed a long coastal strip, about

**Figure 1** Map of south-west Lancashire showing location of North Meols and other places mentioned in the text



nine miles in length, but at its widest it was only about two and a half miles from the shore and on average about half this width. It was a low-lying area, at its highest being only about ten metres above sea level (about 33 feet) and most of the parish was well below this elevation. The total land area was 10,680 acres, but there was an extensive foreshore which at low water extended the area of the parish to nearly 25,000 acres. Historically, North Meols has been at the mercy of the sea and a major incursion of the sea occurred in 1720 when about 5,000 acres, nearly half the area of permanent dry land in the parish, were flooded.<sup>2</sup> The boundary between land and sea is almost imperceptible and the coastline has continually altered, both due to natural causes and the

Figure 2 William Yates map of Lancashire, 1786



intervention of man, through the building of banks along the shore. The northern part of the parish was bounded on its inland side by Martin Mere, once the largest lake in Lancashire until a major effort was undertaken to reclaim the Mere at the beginning of the eighteenth century. This was only partially successful, and a further attempt was made in the early 1780s for which Thomas Eccleston of Scarisbrick was awarded a gold medal of the Royal Society for the Encouragement of Arts, Manufactures and Commerce in 1786. On Yates' map Martin Mere is described as 'dry in the summer season'. At its lowest the reclaimed land of Martin Mere is below sea level and even today the Mere would rapidly revert to wetland if the pumps at the pumping station at Crossens were turned off. Along part of the shore was a large area of sand dunes and on the inland side of the parish an extensive stretch of peat bog, known locally as mosses. Although North Meols was fairly close to Liverpool and Preston, it could still be reasonably described as remote in the later part of the eighteenth century. The road between Liverpool and Preston went through Ormskirk, some six miles to the south east. North Meols was on the road to nowhere, and access was also impeded by the mosses, which were still in the process of being drained and turned into the top quality agricultural land they constitute today.

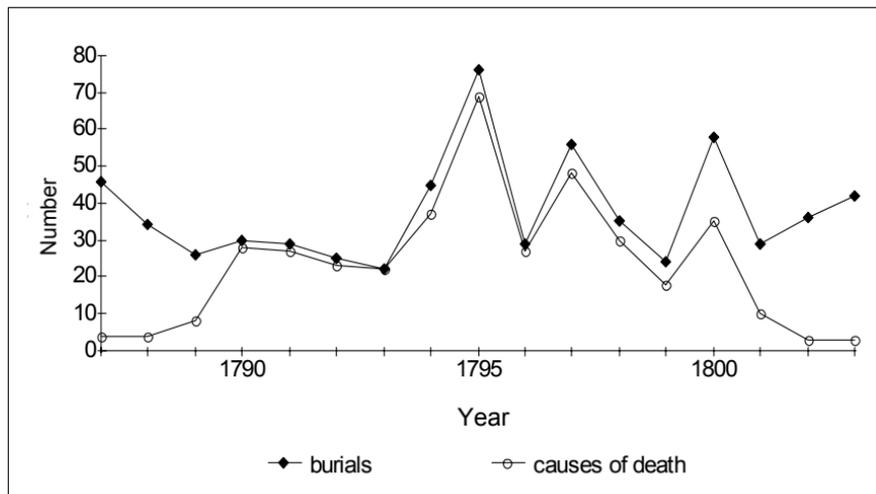
In 1725 according to Bishop Gastrell there were about 200 families in the parish giving a population of about 1,000 to 1,200.<sup>3</sup> By 1801 the population had increased to 2,096 in 327 inhabited houses.<sup>4</sup> Parish registers survive from 1594 and have been published in two volumes by the Lancashire Parish Register Society.<sup>5</sup> The originals are still held by the church, which makes general access difficult. However, the transcription was carried out by Frank Cheetham (1872–1936), a well-known local historian, with an impressive list of historical publications, and is probably reasonably accurate.<sup>6</sup> They record an excess of baptisms over burials, which between 1701 and 1801 amounted to an aggregate increase of 1,798 persons. Simplistically, this would more than account for the growth in population and allow for some migration away from the parish into the growing Lancashire towns. The situation is complicated however, by the nature of Lancashire parishes, which are large, often comprising several townships, so that it is relatively common for major life events such as baptisms, weddings and funerals to take place in a neighbouring parish church if this is closer than one's own parish church. That this is the case in North Meols is evident from the frequent recording of the burial of individuals from neighbouring parishes and townships.

A fundamental change in the area occurred at the end of the period under consideration here with the beginnings of the development of Southport as a leisure resort during the 1790s, the name first being used in 1798.<sup>7</sup> Prior to this change the seaside communities had lived a unique type of existence, being major centres for smuggling in the seventeenth and eighteenth centuries, fishing communities, which developed their own techniques for fishing along the shore, and managing the sand dunes as important rabbit warrens.<sup>8</sup>

North Meols church is an old foundation, the first recorded rector being appointed in 1178. The church was completely rebuilt in the eighteenth century, further enlarged and modified in 1860 and enlarged and changed again in 1908–09.<sup>9</sup> South-west Lancashire is an area where many of the gentry and common people continued to follow the Catholic religion after the Reformation, but in North Meols there were only three Catholics recorded in 1767.<sup>10</sup> This contrasts with neighbouring Scarisbrick, where over 20 per cent of the population were Catholics.

John Baldwin became rector in 1748, changed his name to Rigbye (his wife's maiden name) in 1789, and remained in office until his death in 1793, when he was succeeded by Gilbert Ford who was the incumbent for over 40 years, dying in 1835. The parsonage at Crossens was in a poor state of repair, and the rector was not usually resident in the parish until a new parsonage was built in the 1830s, most of the parish work being done by a resident curate who lived in the parsonage. John Mawdesley, the son of a husbandman from Parbold, a Lancashire township about 12 miles from North Meols, became curate in 1780 and remained in office until his death in 1814. He is considered to have made most of the entries in the parish register between 1778 and 1813.<sup>11</sup> The period when the registers record medical information does not, therefore, coincide with the incumbency of any particular individual. The recording of such

Figure 3 Burials and causes of death, North Meols, 1787–1803



information started suddenly, quickly reached a peak when the vast majority of burial records gave a cause of death and then faded away over a period two or three years. This pattern is clearly shown in Figure 3. Why or by whom this information was initiated remains a mystery. Mawdesley's background does not suggest that he had any particular knowledge of medical matters, and if he was responsible, why did he not start much earlier during his curacy? If he was responsible why did he suddenly stop? It is possible that the procedure may have been initiated by a churchwarden with a medical background, but unfortunately no churchwardens' records survive before 1813.

### Establishing causes of death prior to 1837

Information on the causes of death nationally prior to the introduction of general registration in 1837 is patchy. An early attempt to collect systematic information on the subject was initiated in the late sixteenth century following an outbreak of plague in London in 1592, when what became known as the London Bills of Mortality were started. Early recordings were spasmodic, but in 1603 they were put on a more regular footing with weekly accounts of burials and christenings printed on Thursdays, with an annual summary published each year on the last Thursday before Christmas. The information on causes of death was provided by searchers, elderly women of the various parishes who were called out to examine the corpses and report to the parish clerk, who in turn forwarded the information. No particular medical skill was involved, and many of the causes given were a matter of common sense, such as aborted or still born, fits, convulsions, fever, cough, old age (usually over 60), various accidents and consumption (usually indicated by emaciation).

Often the searchers reported the opinions of relatives, friends or a physician if one had been involved with the deceased. Although the information in the Bills of Mortality was intended to provide a measure of whether the population was increasing or decreasing and furnish data on the state of health of the metropolis, they were little used until John Graunt (1620–1674) made the first real effort to collect medical statistics from them, to analyse his results and to relate them to social factors—the first attempt to do so.<sup>12</sup> The London Bills of Mortality, however, have been said by some to be worthless and their advantages and shortcomings are briefly summarised by Landers.<sup>13</sup>

In 1750 Thomas Short, a physician from Yorkshire, set out to establish which trades, situations and locations were best suited for a long life.<sup>14</sup> His interest in population questions may have arisen from his perception that Graunt's work was based on the metropolis and could not therefore provide a sound basis for considering either the nation as a whole or the rural areas which Short considered to offer a superior way of life. He used data from the Bills of Mortality as well as parish registers from 160 different parishes. The latter only provided him with numbers of burial and baptisms, the ratio between which he used to decide whether the population was rising and therefore to infer whether the place was a healthy one or not. This approach is clearly simplistic and takes no account of other important factors such as migration. Short's work has been criticised on a number of grounds, being considered as colourless and unimpressive as well as lacking novelty.

By the eighteenth century Bills of Mortality were being produced by a number of other towns, including Norwich, Northampton, Carlisle, Liverpool, Carlisle, Chester and others in England, as well as some towns abroad.<sup>15</sup> At the same time, there was increasing criticism of the way in which the London Bills were kept and proposals for improvements in the ways that information should be recorded. This was prompted to a degree by the need to have better information for the calculation of life insurance and annuity premiums by a growing industry, and a growing awareness of the effects of different lifestyles, occupations, diet, relaxations, sex, and even the air that was breathed upon life expectancy.<sup>16</sup> Linked to these changes was an increased consciousness that better information was required on the population make up and its health and that some other countries had better reporting systems. This was ultimately to lead to the first census of 1801 and general registration in 1837. In the meantime, these changes in attitude did not affect the rural areas, where the only recording system was the parish registers.

Although parish registers are the major source of recorded deaths in the pre-registration period, the amount of detail they provide on any individual is highly variable according to the whim of the recorder. The basic information they record is the name of the deceased and the date of burial. Often they may contain the place of residence and next of kin (wife, husband, father, mother, son or daughter). Less frequently they include the occupation and age of the deceased and, less frequently still, the cause of death. This randomly recorded information cannot be located easily by a programmed search of parish registers (unless one systematically trawls through every register for the country),

but is most likely to be found by chance when using registers for another purpose. Mary Dobson, in her study of death and disease in Kent, Sussex and Essex, found that only six parish registers out of the 600 she examined recorded causes of death for any length of time, although the vicar of Newhaven, Sussex, in 1804 thought 'it no bad plan to mention the disorder of each that dies as it will greatly assist any medical person who attends the village.'<sup>17</sup> Therefore reports on such chance finds of unusual information such as cause of death is of value even if it only makes known its existence to other researchers. This is of particular value when it comes from a rural area, where Bills of Mortality do not exist, and where the health of the population may be considerably different to those living in the cramped and often unsanitary conditions in the urban areas. An analysis of their contents enables comparisons between different localities to be made. Other parishes from which information has been published include Whitehaven in Cumbria.<sup>18</sup> The so-called Dade Registers provide a further source for examining a wide-range of topics including further information on causes of death.<sup>19</sup> These registers originated from the initiative of William Dade, who introduced a new and more detailed format in 1770 for the registers of St Helen Stonegate, York. The use of registers in a similar format was extended by a directive of Archbishop Markham of York in 1777, and the practise was carried out mainly in the dioceses of Chester and York, but was by no means universal. Registers in the Dade format in general only exist for the period 1777 to 1812.

In addition to the problem of paucity of information there is also the question of its usefulness. The vast number of terms used to describe causes of death were both vague and imprecise and often described not a pathological condition, but merely symptoms from which no inference can be drawn.<sup>20</sup> Although in a few cases, such as smallpox, the diagnosis is thought to be reasonably certain, doubt has even been raised in this instance suggesting that confusion between smallpox, measles and scarlet fever was possible.<sup>21</sup>

### **Causes of death in North Meols**

In 1787 and 1788 combined only eight causes of death were given in the North Meols burial register, all of whom were drowned. Five of these were listed as 'a drowned man' with no name given and were presumably of corpses that were recovered from the sea. Then from 12 May 1789 onwards most burials give a cause of death, so that from 1 January 1790 until 31 December 1798 nearly 90 per cent of all burials have a cause of death given. In the following three years the percentage drops off. In 1799 only 75 per cent have a cause given, in 1800 this had decreased to 60.3 per cent and in 1801 only 34.5 per cent. In 1802 and 1803 there were only seven causes of death recorded. Three of these were drowned men and two others were accidents. One was a man from Liverpool killed when loading a balk and the second, a 16 year old youth, was killed by a gun. Thereafter until 1810 only accidents were noted as cause of death. It therefore seems that apart from 1789 until 1801, causes of death were only recorded when the cause was not a natural one. In the period which is considered in this article, 12 May 1789 to 31 December 1800, there were 442 burials

**Table 1 Places of residence of those buried at North Meols from May 1789 to December 1800 and numbers from those locations**

Within North Meols parish		Outside North Meols parish	
Banks	57	Ainsdale	5
Birkdale	54	Bretherton	3
Blowick	6	Burscough	2
Churchtown	84	Croston	1
Cop End	1	Eccleston	1
Crossens	38	Great Crosby	1
Heys	1	Halsall	3
Higher Blowick	13	Hesketh	3
Little London	1	Hindley	1
London	11	Holmswood	2
Marshside	44	Liverpool	9
Mearside	1	Newburgh	1
Moss Lane	1	Ormskirk	3
North Meols	1	Preston	1
Rowe lane	25	Scarisbrick	17
Poolside	1	Tarleton	1
South Haws	30	Upholland	1
		Tulketh	1
		Warrington	1

recorded of which a cause of death was given for 374 individuals (84.6 per cent). This is not a large sample, but it will be shown that useful information can be extracted from it. Because of the high proportion for which a cause is given, it is also meaningful to examine those burials for which no cause is given, since these were exceptional and one can suspect that there should be a reason for such exceptions. Of the 69 burials for which no cause of death is given, 38 (55 per cent) were infants below the age of one year, a further six (8.6 per cent) were under three years old and 11 (15.9 per cent) were over 60. The age groups for which no cause of death is given are therefore mainly those groups which would be most expected to have a high mortality rate, namely, the very young and the elderly. Thus only 14 burials might be considered to be genuine cases of death of individuals for whom no indication of the cause of death was given.

Of the burials 211 (47.7 per cent) were females and 231 (52.3 per cent) were males. This is a slightly unusual ratio, there being, on average about 104 men born for every 100 females and all must die, whereas the North Meols figure is

**Table 2 Age at death recorded in the parish register (percentages)**

Age	Females	Males	Combined
Not given	4.3	5.6	5.0
0–1	24.2	26.8	25.6
2–4	9.5	8.2	8.8
5–9	7.6	5.2	6.3
10–19	6.6	5.2	5.9
20–29	9.5	9.5	9.5
30–39	4.7	7.8	6.3
40–49	6.2	6.4	6.1
50–59	5.7	6.1	5.9
60–69	8.5	7.4	7.9
70–79	8.1	6.5	7.2
Over 80	5.2	5.6	5.4
Total	100.0	100.0	100.0
Number	211	231	442

over 109.<sup>22</sup> However, very little significance can be ascribed to this statistic, since the local picture is complicated by the burial of unknown individuals who were drowned and also by the burial of others from outside the parish.

Of the 442 burials recorded during the period under examination, places of residence were given for all but 15 individuals, eight of whom were unnamed and died by drowning. The places where the deceased came from is summarised in Table 1. There were 57 individuals (12.9 per cent of the total) who came from outside the parish, 47 of whom were recorded as paying double dues. The largest number (17) of those from outside the parish were from neighbouring Scarisbrick, the second highest number (9) were from more distant Liverpool. All 57 were from south Lancashire townships. Although the majority were from townships adjacent to or close to North Meols and therefore demonstrate the operation of convenience, some were from surprisingly distant townships such as Warrington and Hindley.

The presumed ages at burial are given for 95 per cent of all burials. Since there were also a number of burials for bodies recovered from the sea for whom no details were known, this figure is higher than 95 per cent for those from the parish. The distribution of recorded age at death is shown in Table 2.

**Table 3 Causes of death and numbers listed in the registers 1789–1800**

Abortion	1	Falls	3	Old age	9
Ague	1	Fever	72	Palsy	3
Asthma	2	Fitts	21	Pox	6
Burned	2	Gravel	3	Quincey	1
Childbed	1	Gripes	2	Scorbutic	1
Chinkcough	7	Impost	1	Sickness	1
Colic	1	Inward convulsions	1	Smallpox	40
Consumption	39	Infancy	2	Sudden complaint	1
Convulsions	2	Influence	2	Surfeit	1
Decay of nature	1	Jaundice	2	Throat swelling	2
Decay of old age	1	Measles	1	Ulcerated throat	1
Decline	5	Mortification	4	Weakness	92
Dropsy	14	Mortification (in side)	1	White swelling	1
Drowned	20	Nervous fever	2	Unknown	1

Infant deaths (age 0–1) constituted 25.6 per cent of the total, and 8.8 per cent more died before the age of 5. If these are excluded the mean age at death was 43.3 years for females and 44.5 years for males. The oldest age at death recorded was a 91 year old woman, and the youngest a child who only lived half an hour. There is little difference between the pattern for males and females. There is considerable detail concerning the ages of those who died below the age of two years. Nine were less than one day old. A further ten died at one week old or less. Another 17 did not live more than one month and 53 more did not live beyond a year. Of those who enjoyed their first birthday, 24 did not live to see a second. Most of those that did not live a week were not baptised but, surprisingly, three of those that only lived a few hours were.

An assessment of the accuracy of the ages at death as given in the burial register was made as follows. A search was made in the baptismal register for all the 420 individuals whose age at death was recorded, and 240 were found, with varying degrees of confidence. For many there was a high degree of confidence since the names of both parents were given in both registers. This was obviously most likely for younger people, although such cases existed for those who died up to the age of 42. A comparison of the ages given in the burial register and computed from the two registers showed no difference in 184 cases (76.7 per cent). Of the remainder, 44 (18.3 per cent) were within plus or minus one year which, allowing for delays in baptism after birth and delays between death and burial, is within acceptable error. Only six cases showed a discrepancy greater than two years, of whom four were over 70 years of age on either basis and the greatest difference was eight years for a man whose age was given as 77 or 85 years. On this basis it would seem that the ages at death as given in the burial register are remarkably accurate.

There are 42 causes of death recorded in the North Meols burial register for the period under consideration. These are listed in Table 3. This table gives the full details of the causes, with the exception of accidents, which are given in more detail in the registers, the falls for example, being two from carts and one from a horse, and one of the drownings being described as in the canal.<sup>23</sup> The six deaths from pox are almost certainly smallpox. It is noteworthy that for one death, that of a 16 week old boy, the cause is described as 'unknown'. This is the only acknowledgement of ignorance of the cause, but it does suggest that some consideration had been given to the cause, despite the fact that no cause is given for 68 other deaths. The number of causes in this list can be reduced to 37 by combination without losing precision: for example, decay of nature, decay and decline could be simply reduced to decline, but they are given in detail at this stage for completeness.

A number of the supposed causes of death given do not truly identify the cause of death, but merely indicate a symptom. Of these, the commonest (and the second most common cause overall) is fever, which only indicates that the cause of death was associated with a high temperature and probably an infectious condition. Other causes of death which describe symptoms but are not diagnostic of a specific condition include white swelling, throat swelling, fits, convulsions and sickness. Causes of death which were usually identified accurately in the eighteenth century include smallpox, measles, and whooping cough (chinkcough).<sup>24</sup>

The causes of death are broken down by age group in Table 4. The commonest causes of death are summarised in Table 5 and will be considered in turn. By far the commonest cause listed was 'weakness', accounting for nearly one in four of those for whom a cause is given and over 20 per cent of all deaths. This term is of little medical significance, but it would seem to be most appropriate to apply it to the most vulnerable, namely the very young and the elderly. An examination of the age distribution to whom this term was applied only partly bears this out. Although a third of those to whom this cause was ascribed were below ten years of age (of whom over two thirds were babies less than two years old) and 28 per cent were over 60 years old, the largest group were between 11 and 60 years old. The term was therefore widely used across the age spectrum, suggesting that people to whom the term was applied died from a number of different causes which were not clearly identifiable but which left them in a weakened condition. Such causes could be, for example, malnutrition or a debilitating disease such as consumption. It is also interesting to consider what was considered to be old age. Of those listed as dying of old age, all except one were over 70 and over half were over 80. The exception, strangely, was only 53 years old.

The second most common cause of death was ascribed to fever, 72 cases being described simply as 'fever' and two as 'nervous fever'. Deaths due to fever did not show any bias towards a particular age group, being distributed across the age spectrum. This term could be ascribed to a number of medical conditions, and its general use is perhaps symptomatic of the ignorance of disease in the

**Table 4 Causes of death by age categories**

Age	N.G.	0-1	2-4	5-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80+	Totals
Abortion	-	-	-	-	-	-	-	1	-	-	-	-	1
Ague	-	-	1	-	-	-	-	-	-	-	-	-	1
Asthma	-	1	-	-	-	-	-	1	-	-	-	-	2
Burned	-	-	2	-	-	-	-	-	-	-	-	-	2
Childbed	-	-	-	-	-	1	-	-	-	-	-	-	1
Chinkcough	1	4	2	-	-	-	-	-	-	-	-	-	7
Colic	-	-	-	1	-	-	-	-	-	-	-	-	1
Consumption	1	2	-	2	3	15	6	1	6	-	2	1	39
Convulsions	2	-	1	-	-	-	-	-	-	-	-	-	3
Decay	-	-	-	-	-	-	-	-	-	-	2	-	2
Decline	-	1	1	-	-	-	-	1	-	1	1	-	5
Dropsy	-	-	-	-	2	1	2	1	4	1	3	-	14
Drowned	9	-	-	-	3	4	2	1	1	-	-	-	20
Fell	-	-	-	1	-	-	-	1	1	-	-	-	3
Fever	1	8	2	3	4	8	5	11	4	14	5	7	72
Fitts	1	13	4	-	1	-	1	1	-	-	-	-	21
Gravel	-	-	-	-	1	-	-	-	-	1	1	-	3
Gripes	-	-	-	-	-	-	-	-	-	1	1	-	2
Impost	-	-	-	-	-	-	-	-	-	1	-	-	1
Infancy	-	2	-	-	-	-	-	-	-	-	-	-	2
Influence	-	2	-	-	-	-	-	-	-	-	-	-	2
Jaundice	-	-	-	-	-	-	-	-	-	2	-	-	2
Measles	-	-	1	-	-	-	-	-	-	-	-	-	1
Mortification	-	1	-	-	-	-	1	-	1	-	2	-	5
Nervous fever	-	-	-	-	-	-	1	-	1	-	-	-	2
Old age	-	-	-	-	-	-	-	-	1	-	3	5	9
Palsey	-	-	-	-	-	-	1	-	-	2	-	-	3
Quincey	-	-	1	-	-	-	-	-	-	-	-	-	1
Scorbutic complaint	-	-	-	1	-	-	-	-	-	-	-	-	1
Sickness	1	-	-	-	-	-	-	-	-	-	-	-	1
Smallpox	-	15	12	17	2	-	-	-	-	-	-	-	46
Suddenly	-	-	-	-	1	-	-	-	-	-	-	-	1
Surfeit	-	-	-	-	-	-	1	-	-	-	-	-	1
Throat swelling	2	1	-	-	-	-	-	-	-	-	-	-	3
Unknown	-	1	-	-	-	-	-	-	-	-	-	-	1
Weakness	2	21	7	2	5	10	7	7	6	8	7	10	92
White swelling	-	-	-	-	1	-	-	-	-	-	-	-	1
Not given	5	40	3	1	3	3	1	1	1	4	5	1	68
Totals	25	112	37	28	26	42	28	27	26	35	32	24	442

**Table 5 Summary of the main causes of death from Table 4**

	Number	%
Weakness	92	20.8
Fevers	74	16.7
Not given	68	15.4
Smallpox	46	10.4
Consumption	37	8.4
Accidental	25	5.7
Fitts	21	4.8
All other causes	79	17.9
Total	442	100.0

late eighteenth century. It could possibly be linked to malaria, only one case of ague, which could be malaria, having been reported. This is at a time when a study of the geography of disease in Kent, Sussex and Essex suggested that places below 50 feet above sea level, and especially saline and marshland areas, were much more unhealthy places than uplands, a significant factor being mosquitos and their involvement in malaria.<sup>25</sup> Geographically, this description fits North Meols, but there is less evidence that it was a particularly unhealthy place, and any involvement with malaria can only be guessed at from the evidence available. The breakdown of deaths stated to be due to fever is shown in Table 6. It can be seen that such deaths occurred in every year with a greater tendency to occur in the winter months and not in summer. There was an increase in death due to fever in 1797 when the second quarter had four more deaths than the first and the fourth quarter was the highest. This trend continued into 1798 with a high number of deaths in the first quarter which were claimed to be due to fever. This pattern suggests that the increase during these six months was probably due to an outbreak of an unidentified infectious disease.

Deaths from smallpox were only recorded amongst children, the oldest victim being 15 years old. This may be because adults susceptible to the disease had already survived it in childhood and were therefore immune to a second attack later in life. Smallpox was not an endemic disease in the neighbourhood, but was probably introduced from outside and occurred in spasmodic outbreaks. There were single, isolated deaths due to smallpox in March 1792 and September 1794, both of the children dying coming from Liverpool, from where the disease probably was introduced. The main outbreak was between July 1795 and March 1796, when 41 children died of the disease with a peak in the month of October. Smallpox undoubtedly was the cause of the higher than average number of deaths recorded in 1795. Three further deaths due to smallpox were recorded in the second half of 1800, possibly indicating a second outbreak, but due to the paucity of causes of death recorded at this time this cannot be confirmed. The first death recorded at this time was a child from Ormskirk,

**Table 6** Death ascribed to fever, broken down by years and quarters

Year	Annual total	Quarter	Number of burials	Year	Annual total	Quarter	Number of burials
1789	3	1		1795	10	1	5
		2	1			2	4
		3				3	
		4	2			4	1
1790	5	1	1	1796	5	1	4
		2	4			2	1
		3				3	
		4				4	
1791	5	1	2	1797	18	1	1
		2				2	3
		3				3	1
		4	3			4	13
1792	2	1		1798	13	1	11
		2				2	1
		3				3	
		4	2			4	1
1793	1	1		1799	1	1	
		2				2	
		3				3	
		4	1			4	1
1794	4	1	2	1800	5	1	4
		2				2	
		3	1			3	
		4	1			4	1

suggesting that this may again indicate a possible origin, Ormskirk being on the road between Liverpool and Preston.

Consumption was probably endemic in the area, a few deaths being reported due to it in every year except 1791 and 1798. There was a slight increase in the number of reported deaths due to consumption in 1795 when 11 were reported compared to the average for the 11 year period of 3.4. Although consumption was given as a cause of death for ages ranging from babies less than two years old to one case in which the victim was over 80, it was mainly attributed those in their twenties, and females seem to have been more susceptible than males, 22 (59.5 per cent) of the deaths being those of females. Most deaths due to consumption were in the age range 10–60 (88 per cent of male deaths and 73 per cent of females) and the disease was most common between the ages of 10 and 21 for females and 21 and 30 for males. Baidon considered that that many

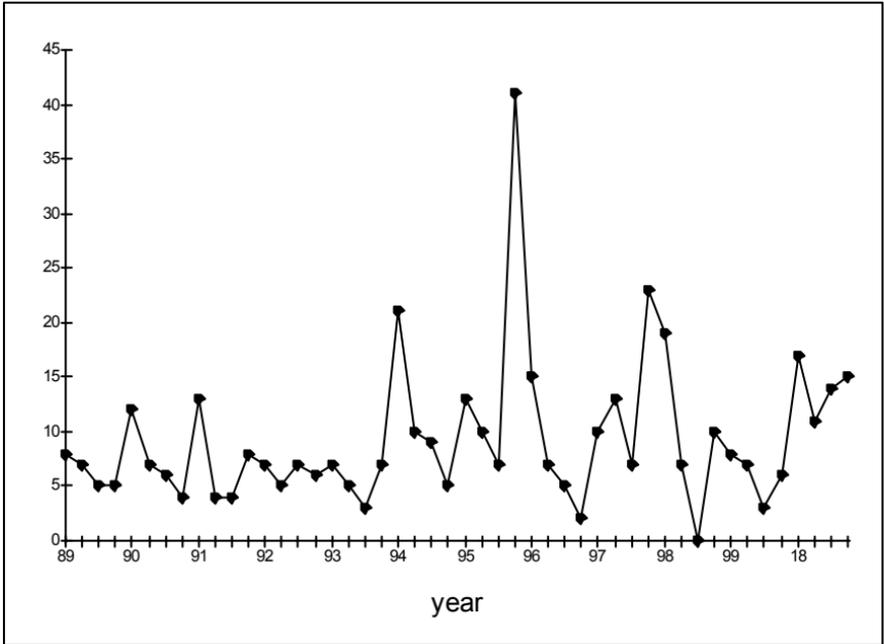
**Table 7** Numbers of deaths reported as due to consumption, weakness and fever 1790–1800

Year	Consumption	Weakness	Fever	Total
1790	3	2	5	10
1791	0	7	5	12
1792	4	3	2	9
1793	7	4	0	11
1794	11	2	3	16
1795	3	9	10	22
1796	3	5	3	11
1797	3	9	18	30
1798	0	9	9	18
1799	2	4	1	7
1800	2	8	4	14

of the deaths attributed to fever or weakness were probably also due to consumption.<sup>26</sup> A possible way of testing this suggestion is to consider the relative numbers of deaths due to consumption, weakness and fever in each year, since with an endemic disease such as consumption numbers of deaths due to this cause were less likely to change markedly, and if the numbers of deaths due to consumption were considerably less in any year and those due to fever or weakness increased significantly, then it was possible that some deaths reported as due to weakness or fever might have been due to consumption. Since consumption was less likely to be a cause of death in the very young, deaths due to weakness or fever of those below five years of age have been excluded. The result of this exercise is given in Table 7. It can be seen that this approach works reasonably well for eight of the 11 years considered, with an average of 11 and a range of plus 5 and minus 4 (excluding 1795, 1797, and 1798). In 1794 there was an exceptionally high number of deaths reported as due to consumption itself. There were no deaths attributed to consumption in 1798, which was unusual. The proposition must, at best, be considered only a hypothesis, but the results do suggest that there may be some validity in it. Similar problems have been encountered elsewhere, King claiming that 'decline' was an alternative label for tuberculosis (or consumption).<sup>27</sup>

Accidents accounted for nearly 6 per cent of all burials, the majority being from drowning, perhaps not unexpectedly in a seaside parish in which fishing was an important occupation. What is also significant is that a high percentage (42 per cent) of those who drowned in the sea, including two women, were not identified and were presumably bodies that were washed up on the foreshore. The burials of those who died at sea contain minor stories of human and family tragedy, including the burial on the same day of four young men, varying in age between 16 and 23 and also the burial at the same time of a brother and sister aged 15 and 24 respectively. Both incidents indicate accidents leading to multiple deaths. It is clear that going to sea, even in the usually relatively calm waters off the Lancashire coast, was a dangerous activity in the eighteenth century.

Figure 4 Number of burials in each quarter of the year 1789–1800



Fits accounted for 21 deaths, to which, perhaps, a further three due to convulsions should be added, it not being clear what the difference was between the two. Death due to these causes was mainly a condition of childhood: 18 (75 per cent) of those who died from these causes were below the age of five. Only two deaths ascribed to fits were of adults, a man aged 31 and a woman of 46. It is possible that these could have been due to epilepsy.

Minor causes of death include a number which are more specific in their diagnosis. These include seven cases of chinkcough (whooping cough), two cases of jaundice, one case of scorbutic complaint, two cases of asthma and 14 cases of dropsy. Whooping cough was a disease that caused deaths in the under five year old group. Deaths due to this infection were confined to two outbreaks in 1795 and 1800, there being two deaths in 1795 (April and October), the remaining five occurring between August and November 1800 and including the death of two children from the same family within two weeks of each other. There was only one other death due to an infectious disease, being a single death due to measles of a two year old child in 1800. Surprisingly there was only one case where a woman specifically died in childbirth, and one case was quoted where the death was due to abortion. This was most likely a miscarriage, as the woman in question was the wife of the Rev. John Maudesley, the curate of North Meols, believed to be the compiler of

**Table 8 Comparison of major groupings of causes of death used by Ward and Dobson**

Ward	Dobson
Non Specific	
Genito-urinary	
Musculo-skeletal	
Respiratory	Respiratory and throat
Gynaecological	Pregnancy and childbed related
Neurological	
Skin	
Circulatory	
Tumours	Chronic diseases
Digestion	Gastro-intestinal
Accidental	Casualties
Infections	General infections
	Fevers
	Deaths related to medical / surgical intervention
	Others

the registers. Her demise may have been, in part, due to her age (44 years).

Figure 4 shows the number of burials from 1789 to 1801 inclusive in each quarter of the year. From this it can be seen that there is a strong tendency for most deaths to occur in the first three months of the year, this being the case in 10 of the 12 years considered. The exceptions are 1795, when the smallpox epidemic caused the fourth quarter to have the highest number of deaths and 1797 when the high number of deaths due to fever, possibly linked to an infectious disease, caused the fourth quarter to have the most deaths. The general pattern shows a reduction in deaths in the second quarter followed, usually, by a further reduction in the third and sometimes a further reduction and sometimes an increase in the last quarter of the year.

### Comparative studies

There are few detailed similar studies of individual communities from the late eighteenth century with which to compare the information from North Meols. One such is Ward's study of Whitehaven from 1751 to 1780.<sup>28</sup> Dobson's detailed regional study considered the geography of disease and concluded that the healthiness of a locality was dependent upon both drainage and geology, and that places above 300 feet above sea level had low levels of mortality whereas places below 50 feet above sea level were inherently unhealthy. The worst of all were saline estuaries and marshlands, although this environment had become much healthier by 1800. She thought that the biggest divide was not rural/urban but marshland/non-marshland, due to the influence of the mosquito.<sup>29</sup> This argument may not be applicable in cooler Lancashire. Both Ward and Dobson produced lists of causes of death based on the original descriptions from their primary sources, Ward giving 78 individual causes of

**Table 9 Causes of death listed in the parish registers of North Meols 1789–1800 grouped in the categories used by Ward for Whitehaven**

Non specific	Neurological	Respiratory
Weakness	Convulsions	Asthma
Decay	Fits	Influence
Old age	Palsy	Accidents
Sudden	Tumours	Burns
Infancy	Swellings	Falls
Decline	Impost	Drowning
Not known	Infections	Skin
Gynaecological	Fever	Scorbutic complaint
Abortion	Ague	Digestion
Childbed	Chinkcough	Jaundice
Circulatory	Consumption	Sickness
Dropsy	Nervous fever	Colic
Mortification	Smallpox	Surfeit
Mortification in the side	Measles	Gripes
Genito-urinary	Quincey	
Gravel		

death and Dobson over 200. These were then grouped by both authors into broadly similar categories (though differing in detail) which are shown in Table 8.

As a regional study, Dobson's work does not provide a good basis for comparison with the data from North Meols, but Wards's study of Whitehaven provides a useful basis for comparison, being from a similar time period and for a relatively small place, but differing from North Meols in terms of environment. North Meols was a rural, relatively isolated, low-lying, coastal area; Whitehaven provides data from a small town which was also an important eighteenth-century port and mining area. To facilitate this comparison the information from North Meols has been summarised into the same categories used by Ward, the details being shown in Table 9.

A comparison between Whitehaven (1750–1781) and North Meols (1789–1800) using these categories is made in Table 10. The percentage of deaths for which no causes is given was higher in Whitehaven than North Meols, so that to give a better comparison of known causes in the two places the percentage is also given excluding these deaths. There is generally a similar picture of the causes of death in both places. The main differences are the higher percentage of infectious causes in Whitehaven which are offset by an increased percentage of non-specific causes given in North Meols. In Whitehaven, almost all non-specific deaths were described as 'decline', whereas in North Meols the term 'weakness' was the overriding description. These differences in terminology probably reflect no significant difference. A much wider list of infections was

**Table 10 Comparison of causes of death in Whitehaven and North Meols**

Cause	Whitehaven			North Meols		
	N	%	%*	N	%	%*
Not given	886	28.3		68	15.4	
Non-specific	485	15.5	21.6	112	25.3	29.9
Genito-urinary	6	0.2	0.3	3	0.7	0.8
Musculo-skeletal	3	0.1	0.1	0	0.0	0.0
Respiratory	28	0.9	1.2	4	0.9	1.1
Gynaecological	27	0.9	1.2	2	0.5	0.5
Neurological	101	3.2	4.5	27	6.1	7.2
Skin	3	0.1	0.1	1	0.2	0.3
Circulatory	53	1.7	2.4	19	4.3	5.1
Tumours	27	0.9	1.2	5	1.1	1.3
Digestion	75	2.4	3.3	7	1.6	1.9
Accidental	89	2.8	4.0	25	5.7	6.7
Infections	1,351	43.1	60.1	169	38.2	45.2
Total	3,134	100.0	100.0	442	100.0	100.0

**Note:** %\* excluding 'not given' category.

given for Whitehaven, which included a wide range of different fevers. Although the most common three causes of death were the same in both places, there was considerable difference between them. The commonest cause of death in Whitehaven, accounting for 44.2 per cent of infectious diseases, was smallpox, whereas this only accounted for 27.2 per cent in North Meols. Epidemics of smallpox flared up in Whitehaven on an approximately four-yearly cycle. The figure for Whitehaven may have been influenced by its role as a port making it more vulnerable to infectious disease: at least one of its four outbreaks during the period examined has been linked to a ship coming from Dublin, and of the four adults who died of the disease one was a mariner and another a mariner's wife.<sup>30</sup> North Meols was probably less affected due to its greater isolation.

In North Meols the commonest infection was described as fever at 43.7 per cent compared with Whitehaven at 33.4 per cent, despite the greater range of fevers listed in the latter town. An even greater difference was seen in the percentage of deaths due to consumption, with North Meols at 23 per cent of all deaths due to infections compared with 9.8 per cent in Whitehaven. Ward does, however, suggest that consumption deaths may have been under-recorded in Whitehaven in the later years of the period.<sup>31</sup> Measles was the fourth most important infectious disease causing death in Whitehaven, accounting for 6.8 per cent of such deaths, whereas it was almost negligible in North Meols with only one such death.

**Table 11 Comparison of four causes of death by percentage in Whitehaven, North Meols and London**

Basis	Whitehaven		North Meols		London
	all deaths	causes given	all deaths	causes given	
Consumption	4.2	5.9	8.8	10.4	24.5
Fevers	14.4	20.0	16.7	19.8	11.3
Smallpox	19.0	26.5	10.4	12.3	9.3
Infancy	'High'	–	25.6	19.3	32.2
Number	3,138	2,252	442	374	–

North Meols was a marginally more dangerous place to live than Whitehaven with a greater percentage of accidental deaths. This is made more apparent when one examines the causes of death. In Whitehaven three main causes of accidental death were recorded in almost identical numbers: being burnt in the pits, killed in the pits and killed (no specific reason given). Drowning only came fourth in the list, accounting for only 16.9 per cent of all accidental deaths. In North Meols drowning was the overriding cause of accidental deaths accounting for 80 per cent of all accidents. There is therefore a clear difference between the two places, mining being the most dangerous activity in Whitehaven and fishing at North Meols, with the sea being a more dangerous working environment than under ground.

A limited attempt has also been made to make a comparison between Whitehaven, North Meols and London, since this would introduce a comparison with a third environment, that of a crowded, densely-populated metropolis. Data on the frequency in percentage terms of deaths from consumption, fevers, smallpox, infancy and all other causes is provided for London for various 25 year periods including 1775 – 1799 by Landers,<sup>32</sup> but direct comparison with Whitehaven and North Meols is not straightforward since it is not known whether the basis for London is all deaths or only deaths for which a cause is given. Consequently, in Table 11 percentages for North Meols and Whitehaven are calculated on both bases to compare with London.

These figures show high infant mortality for the metropolis and lower, but still high, infant mortality for rural south west Lancashire, suggesting that environment was only a second order effect with regard to infant mortality. The most significant figures are for smallpox and consumption, both diseases where eighteenth century diagnosis was likely to be reasonably accurate. They suggest strong possibilities of environmental influence. There is evidence that the disease in North Meols was possibly brought into the area occasionally from Liverpool and without this factor smallpox deaths in North Meols would probably have been much lower. Whitehaven, as a port, seems to have been much more vulnerable to this disease. The most significant difference is in the figures for consumption, with both Whitehaven and North Meols showing much lower incidences than London. Even allowing for possible under-reporting of this disease, as suggested by Ward, this would seem to indicate the crowded and possibly poorer housing conditions of the capital were a

factor in the prevalence of this disease. There are differences in the reported figures for fever between the north west and London but, as Landers states, the interpretation of fever is problematic.<sup>33</sup>

Another investigation of late eighteenth century causes of death in Lancashire considered the parish of Colne in the east of the county.<sup>34</sup> This was a location very different to North Meols, being an elevated and generally damp environment which was industrialising and with congested houses and unpaved streets, providing many hazards to health.<sup>35</sup> The streams received effluent from several hamlets yet there was no mention of water-born diseases such as cholera and typhoid which became prevalent in England in the nineteenth century.<sup>36</sup> In Colne the reporting system was broadly similar to North Meols, but the pattern of causes of death was different. The infectious diseases smallpox, measles, whooping cough and scarlet fever were important causes of child deaths while the main killers of adults, apart from decline and old age, were respiratory problems, strokes and fits, dropsy, cancer, accidents and childbed.<sup>37</sup>

## **Conclusion**

The causes of death cited for North Meols are broadly similar to those used elsewhere and therefore in keeping with eighteenth-century medical knowledge on diagnosis, which remained at this time strictly limited.<sup>38</sup> It is easy to be critical of causes of death given in eighteenth century sources, and it should be remembered that even today with modern medical knowledge diagnosis is a complicated art based on the synthesis of symptoms, medical history, physical examination, the use of modern testing facilities and the identification of possible anatomical structures involved and pathological processes,<sup>39</sup> whereas in the late eighteenth century the clinical thermometer and stethoscope did not yet exist and the significance of the pulse in disease was not properly understood.<sup>40</sup> Ward considers that the minister of Whitehaven, who kept the register there, must have consulted at least one doctor in the town, since the terminology used was that of the medical profession.<sup>41</sup> Her argument is equally applicable to North Meols, although the identity of any medical practitioner in the parish to whom the curate would have had regular and immediate access, which would have been required for diagnosis before burial, remains unknown. This study illustrates the problem of elucidating the history of the causes of death in the period before general registration and comparing places even where there is reasonable data and relatively consistent terminology. Nevertheless, it also demonstrates that the topic is well worth pursuing, and that even on a parochial basis differences can be identified between places such as North Meols, Whitehaven and Colne which do not arise merely from differences in the reporting terminology.

## **Acknowledgments**

I would like to thank John Stewart for his helpful comments on the draft of this paper and Matthew Woollard and the *LPS* Editorial Board whose valuable assistance made the final version possible

## NOTES

1. S. King, *A Fylde country practice: medicine and society in Lancashire circa 1760–1840* (Lancaster, 2001), 9–10.
2. P. Aughton, *North Meols and Southport* (Preston, 1988); W. Farrer, *A history of the parish of North Meol* (Liverpool, 1903); J. Beck, 'The church brief for the inundation of the Lancashire coast 1720', *Transactions of the Historic Society of Lancashire and Cheshire*, **105** (1954), 91–105.
3. F.R. Raines, ed., *Notitia Cestriensis*, vol. 2. Chetham Society, XIX, (1850), introduction.
4. 1801 Census.
5. H. Brierley, *The parish registers of North Meols 1594–1731*, Lancashire Parish Register Society, **66** (Preston, 1929); F.H. Cheetham, *The parish registers of North Meols 1732–1812*, Lancashire Parish Register Society, **72**, (Preston, 1934).
6. F.H. Cheetham, F.S.A., *Transactions of the Historic Society of Lancashire and Cheshire*, **88** (1936), 266; A list of the published works of the late F.H.Cheetham, *Transactions of the Historic Society of Lancashire and Cheshire*, **89** (1937), 139–43.
7. Aughton, *North Meols and Southport*, 92–6.
8. S. Harrop, *Old Birkdale and Ainsdale: Life on the south-west Lancashire Coast 1600–1851* (Southport, 1985).
9. F.H. Cheetham, 'North Meols church, Lancashire', *Transactions of the Historic Society of Lancashire and Cheshire*, **83**, (1931), 5–17.
10. E.S. Worrall, *Return of papists, Diocese of Chester 1767* (Catholic Record Society, 1980).
11. Cheetham, *Parish registers*, viii.
12. J. Graunt, *Natural and political observations made upon the Bills of Mortality* (London, 1662). Gregg edition with an introduction by P.Laslett, (Farnborough, 1973).
13. J. Landers, *Death and the metropolis: studies in the demographic history of London 1670–1830* (Cambridge, 1993), 91.
14. T. Short, *New observations on city, town and country Bills of Mortality* (London, 1750). Gregg edition (Farnborough, 1973).
15. 'Observations on the increased population, healthiness etc of the town of Maidstone' (1782), 2; 'Observations on the Bills of Mortality in Carlisle for the year 1779', 2. Facsimiles of both of the above publications are reproduced in D.V.Glass ed., *The development of population statistics* (Farnborough, 1973).
16. 'A letter from Mr James Dodson to Mr John Robertson F.R.S. concerning an improvement of the Bills of Mortality'; John Fothergill, 'Some remarks on the Bills of Mortality in London' (1768). Both reproduced in Glass ed., *Population statistics*.
17. M. J. Dobson, *Contours of death and disease in early modern England* (Cambridge, 1997), 230.
18. J.E. Ward, 'Death in eighteenth century Whitehaven: the mortality records from Holy Trinity Church', *Transactions of the Cumberland and Westmorland Antiquarian and Archaeological Society*, **48** (1998), 249–61.
19. R. Bellingham, 'Dade Parish Registers', *Local Population Studies*, **73** (2004), 51–60.
20. Dobson, *Contours of death and disease*, 236–41.
21. A. Dyer, 'Epidemics of measles in a seventeenth century English town', *Local Population Studies*, **34** (1985), 35–45.
22. E.A.Wrigley and R.S.Schofield, *The population history of England 1541–1871: a reconstruction* (London, 1981), 126–8, 224–5.
23. Probably the Great Sluice erected by Thomas Fleetwood in the 1690s for draining Martin Mere and which ran through North Meols on its way to the sea.
24. Dobson, *Contours of death and disease*, 240.
25. Dobson, *Contours of death and disease*, *passim*.
26. In Cheetham, *North Meols Registers*, Introduction, ix.
27. King, *A Fylde country practice*, 11.
28. Ward, *Death in eighteenth century Whitehaven*.
29. Dobson, *Contours of death and disease*, 225, 518, 493.
30. Ward, *Death in eighteenth century Whitehaven*, 257–8.
31. Ward, *Death in eighteenth century Whitehaven*, 258.

32. Landers, *Death and the Metropolis*, 95.
33. Landers, *Death and the Metropolis*, 97.
34. King, *A Fylde country practice*, 10–11. King quotes from W.M. Spencer, *Colne parish burial register, 1790–1812* (Colne, 1968).
35. Spencer, *Colne parish burial register*, vii–viii.
36. Spencer, *Colne parish burial register*, 148
37. King, *A Fylde country practice*, 11.
38. King, *A Fylde country practice*, 2.
39. J.S.S. Stewart and B.J.A. Stewart, *Clinical care* (London, 1999), 201–9.
40. Spencer, *Colne parish burial register*, 148.
41. Ward, *Death in eighteenth century Whitehaven*, 251.