

SOME ASPECTS OF MORTALITY IN THREE SHROPSHIRE PARISHES IN THE MID-SEVENTEENTH CENTURY

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Introduction

After relatively rapid population growth in the later sixteenth century and slower growth in the first four decades of the seventeenth century, the mid-seventeenth century nationally saw growth change to stagnation and even loss. Falling fertility, changes in nuptiality or worsening mortality, or a combination of all these, could have caused this phenomenon. The aim of this article is to examine whether three Shropshire parishes – Wellington, Wem and Whitchurch – followed this national trend, to investigate aspects of mortality in the three parishes during this highly significant period and to place this mortality in its economic and social context.

Wellington, Wem and Whitchurch are all in north Shropshire and all in the ancient Bradford Hundred. They are similar in many ways: all are very large parishes of between 11,000 and 15,000 acres, all have a small market town located roughly centrally, and all are surrounded by an agricultural hinterland of hamlets and isolated farmsteads. All the market towns were originally Saxon villages situated on the best soils in the parish, while the hamlets were for the most part settled in the later Saxon period or early Middle Ages, and the isolated farms were established on cleared woodland in the later Middle Ages. Their manorial lords stimulated the growth of all three towns in the thirteenth and fourteenth centuries by giving them market charters and laying out burgage plots. All three towns, however, remained unincorporated and under the control of the lord of the manor's court. All three towns fall into the lowest and most numerous category of Clark and Slack's typology of English early modern towns, the simple market town.¹

However, by the 17th century, despite these similarities and the basically agrarian character of their economies, differences between the three towns and their hamlets were emerging. Whitchurch was increasingly becoming a thoroughfare town on a major route to Chester, north Wales and Ireland, involved in long-distance provisioning of the London market with cheese and cattle. Wellington, though only a part of the parish actually lay on the east

Shropshire coalfield, was increasingly influenced by the development of coal and iron mining and served as the market town for the coalfield. In Wem there was much woodland clearance and drainage of marshy land and agriculture expanded and prospered, but there was no industry and it was remote from any major routes. Rough estimates based on the Hearth Tax of 1672 and the Compton Census of 1676 suggest that the population of Wellington parish was about 2,250, of Wem about 2,100 and Whitchurch about 2,750.² With these large multi-township parishes it can be difficult to disentangle the town population from that of the whole parish, but the evidence of various sources such as surveys, Easter Books and parish registers which record an individual's residence within the parish indicates that by the mid-seventeenth century about half the population of Whitchurch and Wellington parishes lived in the towns and about one-third of that of Wem.

Reliability of the parish registers

The halting of the population growth in the mid-seventeenth century is a demographic trend of great significance; as parish registers are the main source for examining this phenomenon, they must be approached particularly critically. It is generally assumed that baptisms, burials and marriages may all have been under-recorded. Rickman (as cited by Jones) gave the following general causes for under-registration of burials: the presence of Roman Catholics and dissenters who would not have been baptised according to the rites of the Church of England and would therefore not be eligible for the Church of England burial ceremony, people too poor to afford a burial ceremony, and negligence, particularly in small benefices where there were no resident clergy.³ Though there were groups of Baptists at Bridgnorth and Shrewsbury in the 1650s who may have objected to Church of England baptismal rites, Skinner found no evidence of Baptists in Wellington, Wem or Whitchurch during this period.⁴ The 1660s saw a growth of Presbyterianism in Whitchurch and the surrounding area stimulated in particular by the well-known preacher, Philip Henry. In his diary Henry mentioned a controversy in Whitchurch when local dissenters protested against Church of England baptism because they objected to the use of the sign of the cross and involvement of godparents, but Henry himself conformed to Anglican baptism. Roman Catholics were only strong in a few areas of Shropshire and the 1676 Compton Census shows very few in Wellington, Wem and Whitchurch.⁵ Whether the dead were unbaptised nonconformists or Roman Catholics or simply too poor for a burial ceremony, in most parishes there was no practicable alternative to interment in the parish churchyard. The question is, therefore, whether the register lists interments or ceremonies. Burial registers were intended to record burial ceremonies, and it is rarely explicitly stated whether entries record the ceremony or the interment. The Whitchurch, Wem and Wellington registers all included stillborn babies and all referred to 'son of' or 'daughter of' without a Christian name (which Jones suggests may imply an unbaptised child); it is probable, therefore, that in Wellington, Wem and Whitchurch recorded burials imply all interments.⁶ The causes of under-registration of baptisms proposed by Rickman were similar to the under-registration of burials with the addition of private baptism.⁷ The incidence of

private baptism and the extent to which this led to omissions in the register is essentially unquantifiable, but Jones suggests that it was only beginning to become fashionable in the mid-seventeenth century.⁸ Contemporaries believed that the problem of small parishes without resident clergy was the most likely cause of deficient registers: Wellington, Wem and Whitchurch, however, were all large parishes and all had resident clergy.

The changing religious requirements of the government during the Civil War years must have added an extra dimension to the perennial reasons for possible deficiencies in the registers. In 1643 a Presbyterian ministry was established and the Book of Common Prayer forbidden, the Directory for Public Worship prescribing in August 1645 the only legal rites.⁹ In June 1646 the government ordered that presbyteries or classes, voluntary associations of clergy and laity, should be established as an alternative form of organisation to the parish.¹⁰ Though this form of organisation, in many areas of the country, had hardly been implemented before it was abolished in 1654, it was quickly put into effect in north Shropshire. Disruption in the personnel of parish clergy was caused in 1643 by the requirement to sign the Covenant and again in 1654 when a committee of 38 members was appointed by Cromwell to enquire into the learning and fitness for office of parish clergy. This committee was mainly composed of Independents and was supported in the counties by assistants: there were 20 such assistants in Shropshire including the incumbents of Wellington, Wem and Whitchurch.¹¹ The impact of these changes in the church during the Civil War and the Interregnum inevitably created problems the significance of which varied from place to place and even from year to year and may have had repercussions on the keeping of the parish registers.

The main factor in determining the effect of these changes in particular parishes must have been the attitudes of their clergy and their degree of sympathy with the prevailing regime. In Wellington Francis Wright was vicar from 1621 until his death in 1659. He was reputed to be the first Puritan in Shropshire, and as a Puritan he remained in office on the outbreak of the Civil War, becoming an influential member of the first classis of north Shropshire.¹² Francis Wright was the registrar for Wellington and after he died in June 1659 the handwriting in the registers deteriorates markedly, but the registers were nevertheless still regularly maintained. The only obvious gaps in the registers are of marriages in the later 1640s and early 1650s.¹³

Nicholas Page who became rector of Wem in 1639 was a Royalist who signed the loyal address from the clergy to the King in 1642, and was ejected when Wem became a Parliamentary garrison in the autumn of 1643.¹⁴ His successor, Andrew Parsons, was a leading member of the fourth classis of which Thomas Porter of Whitchurch was president.¹⁵ He remained in office throughout the Civil War and the Interregnum, but was removed from Wem in 1660 and in 1661 was tried, fined and imprisoned for allegedly calling the King a devil.¹⁶ Although Andrew Parsons was rector throughout the 1650s, there are gaps in the baptism register from September 1649 to November 1652 and from January 1659 (new style calendar) to July 1663 and in the burial register from

July 1647 until November 1653. In 1653 John Smith, the parish clerk, was elected registrar and the burial register was thereafter apparently efficiently maintained.¹⁷

In Whitchurch Thomas Fowler was ejected in 1643 for his refusal to take the Covenant.¹⁸ His place was taken by Thomas Porter, of whom it was said that 'he was an instrument of much good... by his great prudence he so managed the ministers that on that side of the county where a Presbytery was settled that he found no need for compulsory laws.' In 1654 Thomas Porter and Francis Wright were amongst the ministers appointed to assist the Ejectors in their enquiry into the learning and beliefs of incumbents.¹⁹ Thomas Porter is known to have supported infant baptism, arguing the case for it in a public dispute with an Anabaptist at Ellesmere in 1656. He gave up the living in 1660, but the register appears to have been regularly maintained by his successor. The only obvious break in the Whitchurch registers (other than the marriage register) is a six week gap in February and the first half of March 1646 (new style) when the burial register states that, '...I was imprisoned and stayed about six weeks' (there is no parallel gap in the baptism register). The register earlier records the burial of a parish clerk describing him as 'my predecessor'; the actual writing of the register appears, therefore, to have been the responsibility of the clerk in Whitchurch.²⁰ It is significant that in Whitchurch the ordinary course of parochial administration continued throughout the upheavals of the 1640s and 1650s; the churchwardens' accounts were kept throughout as efficiently as they had been before the outbreak of war.²¹

None of the clergy of the three parishes was directly affected in 1662 when the Act of Uniformity demanded that they accept all the Thirty Nine Articles and every detail of the Prayer Book; Francis Wright of Wellington was dead and Andrew Parsons of Wem and Thomas Porter of Whitchurch had already left office.

Given the lack of organised groups who might have objected to Church of England ceremonies and the Puritan but tolerant views of Andrew Parsons of Wem, Thomas Porter of Whitchurch and Francis Wright of Wellington,²² it seems probable that most rites of passage in their respective communities would have taken place in their churches and that there was no specific reason arising from their attitudes to have made registration significantly worse in the troubled years of the mid-seventeenth century, other than the unexplained gaps in the Wem registers of the 1650s.

Upheavals resulting from involvement in the hostilities of the Civil War, in particular the use of churches as garrisons, may have been a further factor aggravating deficiencies in the registers in some areas. In the autumn of 1643 Wem was made a Parliamentary garrison, the only one in Shropshire at the time, and remained in Parliamentary hands for the remainder of the war.²³ In the spring of 1644 Wem was subject to several weeks of siege, but during this period the registers appear to have been efficiently maintained. Wellington was not a major centre in the war; the church was briefly garrisoned by the Royalists, and though when taken by the Parliamentarians in March 1644 the

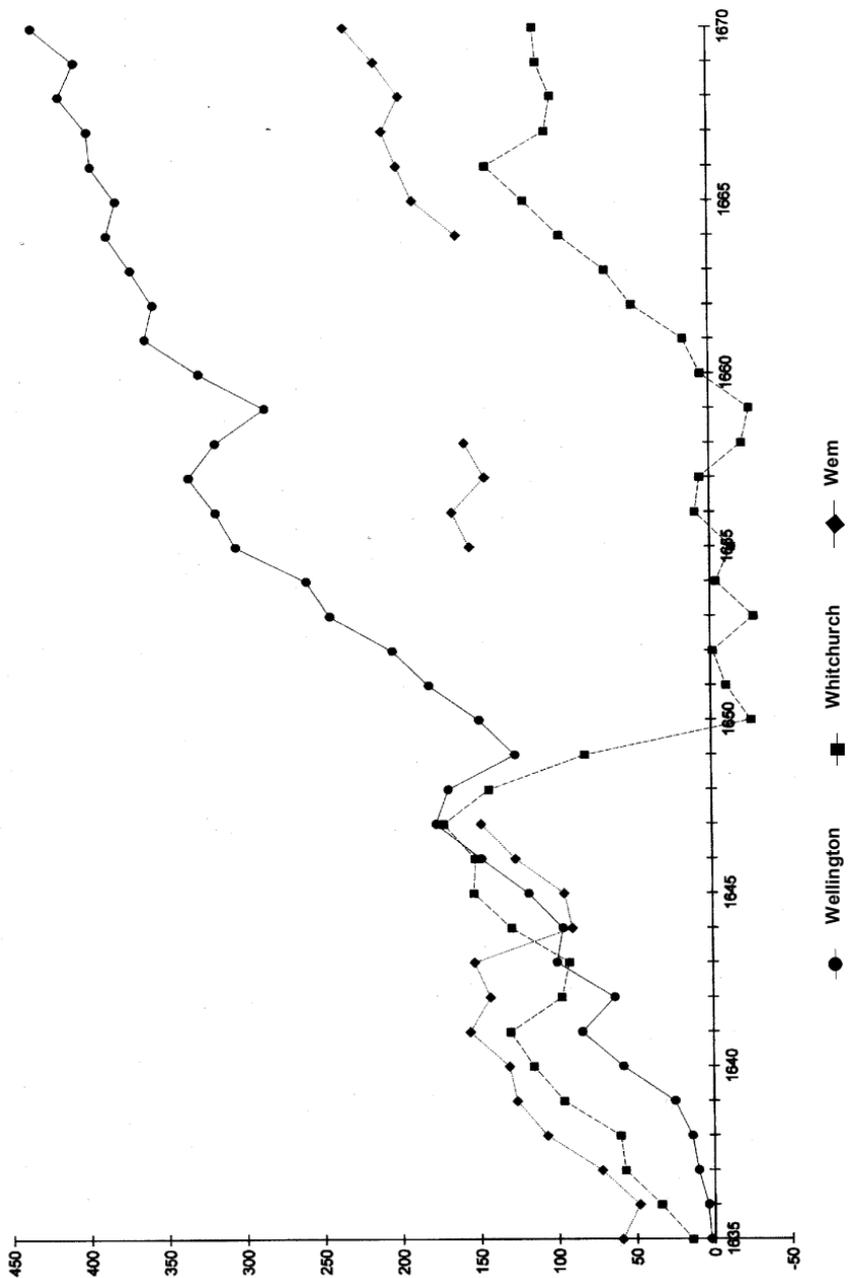


Fig. 1 Cumulative natural index

church was considerably damaged, the fighting lasted only a few hours.²⁴ Whitchurch was enthusiastically Royalist; Sir William Brereton called it a 'malignant place', but there was no major garrison in the town, only the church being from time to time briefly used as a garrison.²⁵ The parish register noted that on 30 May 1643 Whitchurch was surprised by the Parliamentary commander, Sir William Brereton, and recorded the burials of 28 soldiers and 3 prisoners.

Population trends and mortality

Nationally, according to Wrigley and Schofield, population was expanding rapidly in the late sixteenth and the first half of the seventeenth century, but the mid-seventeenth century was a time of slackening growth or even stagnation.²⁶ A cumulative natural index was constructed by adding the surplus of baptisms over burials year by year and deducting any surplus of burials in an attempt to determine whether population was rising or falling in Wellington, Wem and Whitchurch (see Figure 1).

This index suggests that the population of Wellington was growing throughout the period with only minor setbacks in 1642, 1649 and 1659. For Wem the picture is incomplete because of the gaps in the registers in the 1650s, but it suggests that growth was quickly resumed after a setback in 1644 and continued in the 1660s. Only in Whitchurch is there clear evidence for a mid-seventeenth century slump in population, showing a fall in the 1640s and 1650s and only sluggish growth in the 1660s. Figure 2, using a five-year moving average of baptisms calculated as a percentage of burials, shows the same trends.

The total population of the three parishes can be estimated only very approximately, and changes in mortality rates cannot, therefore, be calculated. Figure 3, however, shows that the period of the mid-seventeenth century was punctuated by peaks of higher numbers of burials varying in intensity and timing from parish to parish.

The effect of these episodes of higher numbers of burials on population trends varied considerably. It is usually assumed that an excess of burials in any particular epidemic would be quickly replaced. This appears to have been true of the episodes of minor surplus burials in Wellington; in 1635 the 22 surplus burials over baptisms were made up within four years and the 21 surplus burials in 1642 were made up the following year. The 49 surplus burials in 1649 was the largest surplus recorded for Wellington during this period, but the difference was made up within two years. In Wem 1644 was the only year in which there were substantially more burials than baptisms, 62, and it was four years before these were replaced. In Whitchurch the situation was rather more complicated; the 20 excess of burials in 1636 was made up the next year, the 33 excess in 1642 and a small excess of five in 1643 was replaced by 1645. However, there were three successive years of excess burials – 29 in 1648, 62 in 1649 and 107 in 1650 – a total of 198 burials exceeding baptisms, and these deaths had not been replaced by 1670, the end of the period under review.

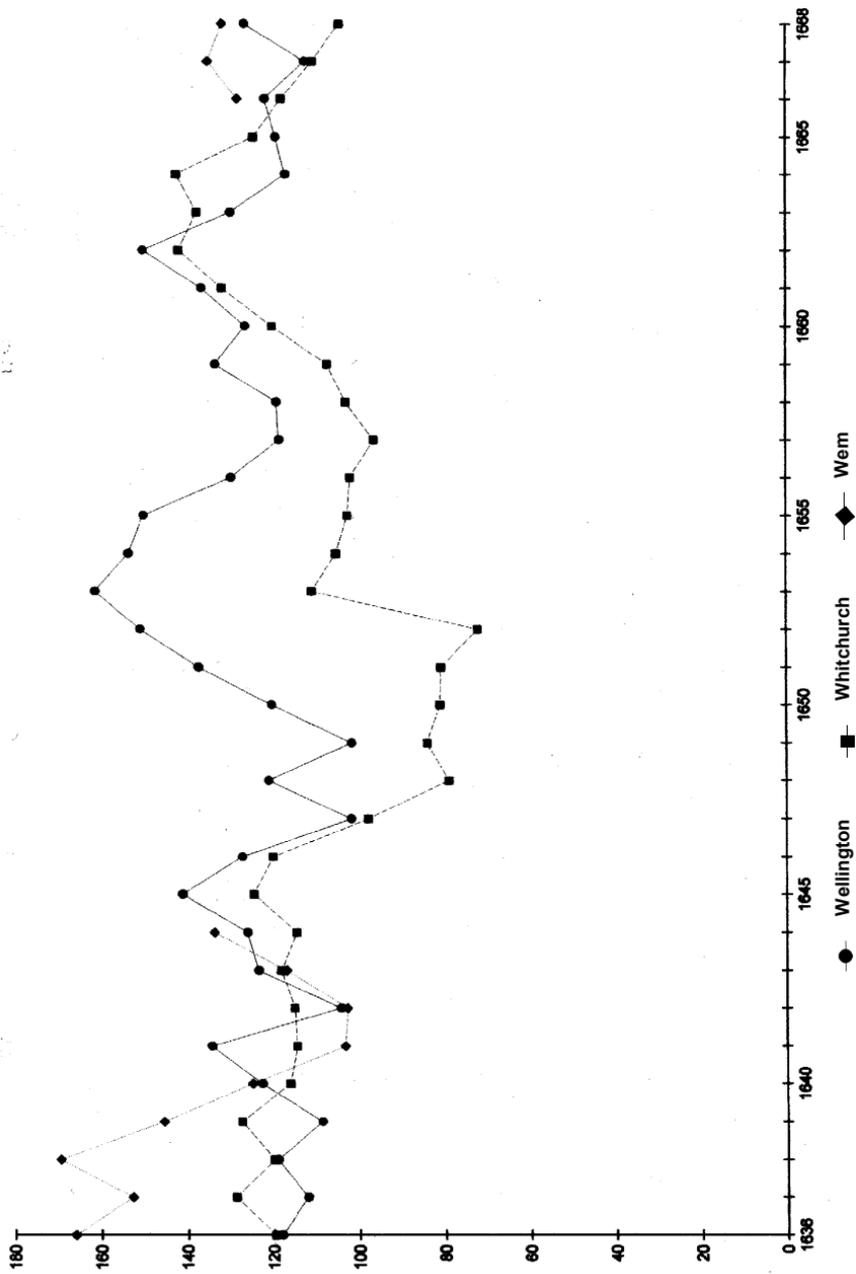


Fig. 2 Baptisms as a percentage of burials (five-year moving average)

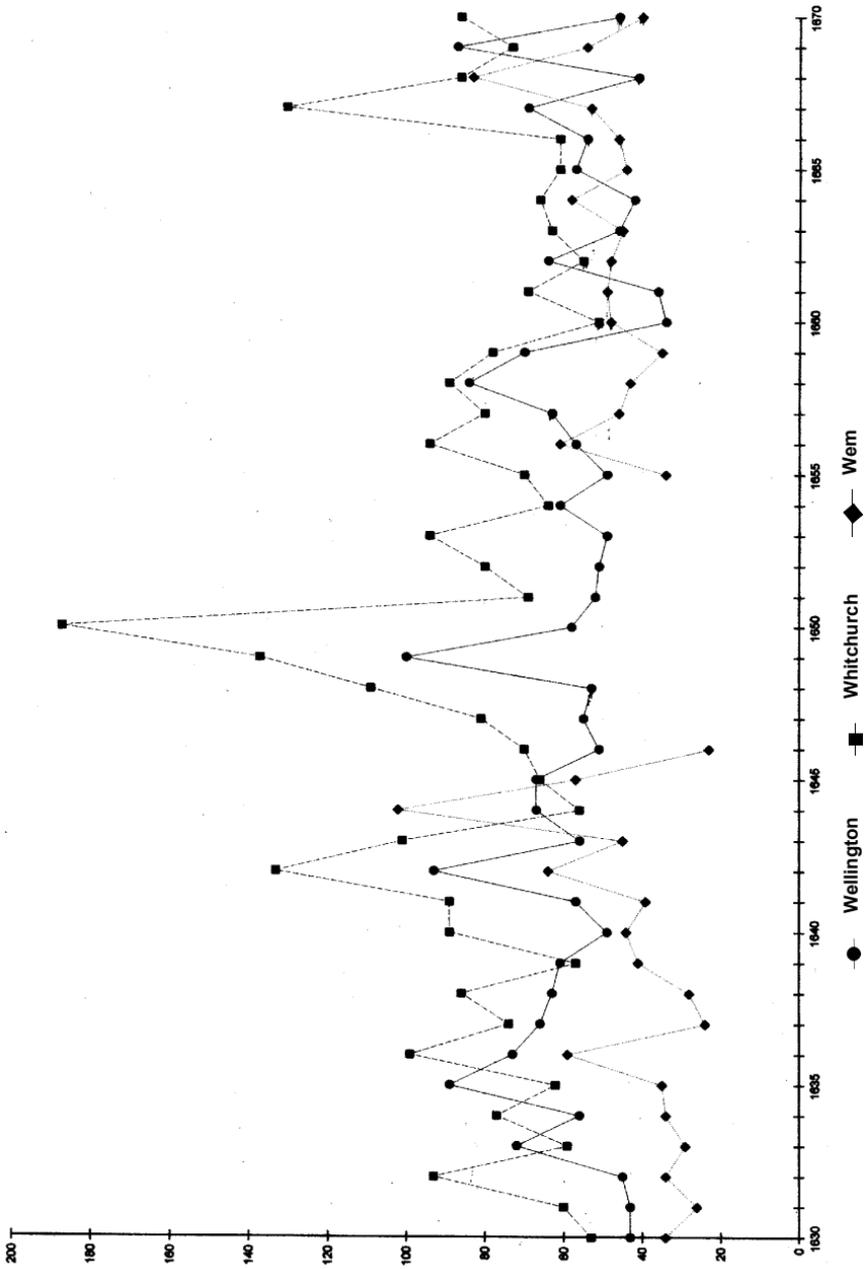


Fig. 3 Annual burials

In all three parishes, in Wem and Wellington where the population appears to have continued to grow and in Whitchurch where there seems to have been stagnation and loss, the basic pattern of mortality appears to have changed. Dyer has emphasised that worsening child mortality levels played an important role in the national population stagnation of the mid-seventeenth century.²⁷ Without figures for the total population at risk child mortality rates cannot be calculated, but aggregative analysis of the parish registers shows that an increase in the proportion of child burials in the mid-seventeenth century was a trend in all three parishes. Table 1 shows that the proportion of child burials in Wellington rose in each decade from the 1630s to the 1670s; in Wem there was little change until the 1650s, while in Whitchurch the proportion of child burials was higher than in Wem and Wellington from the time that the register begins. In the 1660s the proportion of child burials in all three parishes was on average 40–45 per cent of total burials.

Three of the years termed by Wrigley and Schofield as '3 star crises' occurred in the mid-seventeenth century, 1638/9, 1657/8 and 1665/6.²⁸ Locally, Jones found that in north Shropshire 1643, 1648–50, 1655–6, 1664 and 1667 were years of heavy mortality.²⁹ However, as Wrigley and Schofield stress, even in years of high national mortality, the local incidence of crises was highly variable and never universal.³⁰ A crisis in an individual parish cannot be defined simply by a rise in the death rate as the total population is rarely known, but as the average parish population rarely changed in the short term, large short-term increases in the number of deaths would mean a rise in mortality.³¹ The identification of a crisis, as many writers have pointed out, depends upon an arbitrary definition. Table 2 shows years of apparent crisis calculated according to Schofield's suggestion of using an 11-year moving average together with his further suggestion that the year in question be excluded to avoid an inflated average.³²

It can be seen from Table 2 that the experience of the three parishes varied considerably with Whitchurch experiencing considerably more years of high mortality than Wellington and Wem.

Wellington appears to have escaped outbreaks of plague. The year with the highest number of burials was 100 in 1649. The chief characteristic of the epidemic of this year was the particularly high proportion of child burials, 78 per cent. As shown in Table 3, about half of the children whose age at the time of death is known were one to nine years of age, and boys were substantially more severely affected. In his analysis of years of high mortality in Bolton between 1635/6 and 1655/6 where similarly high numbers of children were involved, Dyer suggests that measles may have been the cause.³³ While it seems clear that this was an epidemic which struck children rather than small babies, the 10-16 age group may be under-represented because of the tendency of older children to be living away from home. The deaths were concentrated in the spring and early summer, February to June, with a peak of 29 deaths in April. The characteristics of this epidemic appear similar to the possible outbreaks of measles in Bolton.

Table 1 Child burials as a proportion of total burials by decade

	Wem			Whitchurch			Wellington		
	Total	Child	%	Total	Child	%	Total	Child	%
1630s	354	117	33.0	756	303	40.1	617	178	28.8
1640s	365*	122	33.4	1029	436	42.4	676	257	39.1
1650s	293*	133	45.4	769	335	43.6	570	236	41.4
1660s	520	236	45.4	750	335	44.7	541	236	43.6

Note: * Incomplete figures for these decades

Table 2 Years of high mortality

Years of mortality above 11 year moving average			
		x 2.5	x 1.5
Wem		1644	1668
Wellington			1669
Whitchurch		1650	1642, 1648, 1649*

Note: * 1.8 times the 11 year average

In 1669 87 burials were recorded in the Wellington register with a minor peak of 10 in June, but 25 burials, more than a quarter, in November and December. With 45 of the burials, 51.7 per cent, being of children, this was not a year of exceptionally high infant/child mortality. The only striking feature of the mortality of Wellington in this year was that three times as many boys died compared to girls, but its cause is unknown.

Like Wellington, Wem appears to have escaped outbreaks of plague, though an epidemic of 1644 caused a sharp rise in the number of burials when 102 people died. The deaths were not said to be of soldiers, were not attributed directly to the war and the proportion of child burials was unusually low, 28 per cent. A chief characteristic of the epidemic was that almost all the deaths took place in the first half of the year, particularly from January to April, with the highest monthly total of 20 in January. Wem was from September 1643 occupied as a Parliamentary garrison, and though the numbers garrisoned in Wem do not appear to have been large, many houses had been destroyed when earthen defensive banks were constructed round the town and congestion in this restricted area must have been acute. Most of the deaths

Table 3 Wellington burials 1649: age of children dying

	Boys		Girls		All	
	No.	%	No.	%	No.	%
0–11 months	7		5		12	15.4
1–4 years	15		10		25	32.0
5–9 years	10		3		13	16.7
10 years +	3		4		7	8.9
Not known	12		9		21	26.9
Total	47	60.2	31	39.8	78	100.0

occurred before the weeks of siege in April 1644, but for some weeks Royalist troops had been crossing and re-crossing the area, food supplies were short, and the market could not operate.³⁴ The characteristics of this epidemic – the conditions of hardship and the low proportion of child deaths – suggest that the cause may have been typhus. According to Creighton, typhus was first described in the Civil War, when it was called a new disease.³⁵ A variety of fevers may have been responsible, but Wrigley and Schofield also argue that in the absence of pathological analysis, the age-specific incidence of mortality is probably the best indicator that typhus was the cause as typhus is unusual in rarely killing young children.³⁶

1668 was the only other year when Wem experienced a higher than average number of burials, when the profile of mortality was very different from that of 1644. Of the 82 deaths in this year exactly half were of children. Of the 29 children whose age could be traced from the baptism register 19 were under one year of age and a further 8 under four years. Though there was a fairly even spread of adult deaths over the year, the child deaths were mainly in the early part of the year from January to April. The data do not point to any one obvious disease, and it seems possible that more than one may have been involved.

Whitchurch appears to have been more prone to epidemics than Wellington and Wem, with particularly high numbers of burials in 1650 and higher than average numbers in 1642, 1648, 1649 and 1667. Though Schofield says that London plagues were not widespread around the country,³⁷ Whitchurch had apparently been involved in the outbreak in 1625; the churchwardens' accounts recorded prayers that the plague might be stayed and a few months later recorded thanksgiving when the death toll lessened. However, as the parish registers do not begin until 1630, the effect of this epidemic on the population cannot be analysed.³⁸ The characteristics of the mortality in each of

the five years of high numbers of burials in Table 2 varied considerably. In 1642 there were 137 burials and nearly half of these were in the autumn months of September, October and November. If the proposition is accepted that plague can be inferred from this seasonal incidence, it is possible that plague was, at least in part, the cause of the increased deaths. There was a high proportion of child burials (90 or 66 per cent) and of the 55 of these children whose age can be traced 23 were aged under one year and another 23 were aged between one and four years; this may suggest that other illnesses specific to childhood were also involved. Dyer has noted that child mortality was high in Shrewsbury in 1648 and that this may have been due to measles.³⁹ Whitchurch had many contacts with the county town.

In 1649 there were 137 deaths in Whitchurch, but the characteristics of this episode of higher than average burials were significantly different from 1642. Sixty-seven or 48.9 per cent of those dying were children; the age of 21 of these could not be traced, but of those whose ages were known the largest group, 25, were aged between one and four years. Most of the deaths were in the first four months of the year, with a further peak in June, the worst month being February with 25 deaths. There was little multiple incidence in families: in only three families was more than one child affected. This epidemic has some similar characteristics to that in Wellington in 1649 and to those in Bolton and may have been measles, but as adults were also affected, other respiratory illness may have been involved.

An epidemic mainly in 1650 but continuing into 1651 was specifically named as plague in the parish register, and the names of those believed to have died from plague were marked with a cross. Though the term 'plague' could simply mean any form of pestilence, in a town such as Whitchurch where outbreaks of plague had occurred previously, the symptoms of bubonic plague were presumably distressingly obvious and familiar. In this year 119 died from plague: 23 men, 32 women, 27 boys and 30 girls and 7 children whose sex was not given. Of the 184 burials in 1650, 111 or 60 per cent were attributed to plague. The outbreak began in August 1650 and the last recorded death was in May the following year, but the bulk of the deaths, 95 (80 per cent), occurred in August, September and October 1650, the worst month being September with 42 deaths. This outbreak of plague affected females rather more than males; 55 per cent were women and girls. Sixty-four (54 per cent) of the deaths were of children, but the ages at death of only 20 of these children can be traced; almost all were between five and 16 years of age, only one child being under four years. This epidemic showed a strong familial incidence, said by Slack to be characteristic of plague.⁴⁰ The 119 deaths involved 60 families and in only 21 of these did a single member die. In seven families the husband and wife died, in six the husband, wife and some of the children died, the most acutely affected families being those of John and Mary Wright with four of their children, and William and Mary Ranshall and five of their children. In a further six families the husband and some children died, including Thomas Cowper and five children. In seven families the wife and some children died, such as Joan Baker and three children and Magdalen Moore and four children. A further characteristic of this plague epidemic was

its strongly localised nature. The churchwardens' accounts include Christ-tide lists of the parishioners,⁴¹ and from these the residence of about three-quarters of those mentioned in the burial register for 1642 can be traced, and about half of these were in the town, a proportion reflecting the balance of population. In 1649 again the residence of about half of those dying could be traced, and rather more, about two-thirds, had lived in the town. Of the plague deaths in 1650 the place of residence of only half could be traced, but only three people lived in the hamlets, and one of those was a churchwarden who would have had to come into the town. The plague victims whose residence is known appear to have almost all lived in the High Street of Whitchurch (which was also the market) and a small street known as Pepper Street leading off the High Street, where the outbreak began and where the last plague death was recorded.

In 1667 perhaps more than one disease accounted for the 130 burials. Seventy-three or 56 per cent of burials were of children, a proportion higher than the average for the decade, but not markedly so. The age of 21 of these children could not be traced, but half of all those whose age is known were four years and under. The seasonal distribution of the burials also gives no clear evidence for a particular disease; burials were numerous in April and May, but again in July to October.

Conclusion

Although Wellington and Wem were not without episodes of higher than average mortality, they do not provide evidence of mid-seventeenth century population stagnation. Whitchurch, however, although only slightly larger than Wellington and Wem and still within Clark and Slack's category of small market towns, suffered population stagnation and even loss, as well as more epidemics. Wrigley and Schofield assert that, 'In the seventeenth century plague became relatively rare except in large urban centres';⁴² but Whitchurch, which could not be called a large urban centre, experienced plague in 1625 and 1650. It seems at least feasible that the vulnerability of Whitchurch was the result of its very different economy, for Whitchurch was a thoroughfare town on an increasingly busy route to Chester, North Wales and Ireland. In 1616 Thomas Egerton, Lord Chancellor and lord of the manor, urged James I that Whitchurch should have its own justices because of the press of business on market days.⁴³ Though the nature of the transmission of plague is still debatable, it is speculated that it could pass from flea to rat or flea to man and that the fleas or rats could travel in merchandise; this method of transmission could explain why plague followed lines of communication.⁴⁴ As well as drawing in people to its markets men from Whitchurch were also involved in increasing long-distance trading, droving of cattle and supplying cheese to the markets of London.⁴⁵ There is also evidence that the earlier growth of population had resulted in overcrowding within Whitchurch. From the 1590s the manor courts contain frequent presentments for the use of barns and other outbuildings on the rear of burgage plots being used for dwellings.⁴⁶

For Wellington the surplus of baptisms over burials suggests that the population continued to grow throughout the period under review. Wellington suffered no major population crisis but several minor ones. Evidence is elusive but it appears that coal mining and ironworking were becoming increasingly significant in Ketley and Lawley, hamlets in Wellington parish, and in the neighbouring parishes of Madeley, Dawley and Shifnal.⁴⁷ It is possible that immigration associated with industrial growth was the cause of Wellington's minor crises; diseases such as measles and smallpox may have hit particularly hard a population which included a continuing fresh influx of people without immunity.

In Wem also, though the registers are more defective, there is no obvious decline in population in the mid-seventeenth century. Wem was more isolated than Whitchurch, being distant from any major routes, and its economy was purely agricultural and remote from any area of industrial growth. The only interruption to its moderate prosperity was the accidental fact of becoming a Civil War garrison and a garrison which suffered a considerable siege, events unrelated to the economy of the parish.

Slack suggests that the size of settlements and transport facilities might affect the relative vulnerability of settlements to plague.⁴⁸ On the other hand Wrigley and Schofield, though postulating that the geographical pattern of the incidence of local crises might reflect the climate, local economy, size and density of population and the distance from a market town, found that there was actually a low correlation with the economic and social characteristics of a settlement.⁴⁹ The mortality patterns of Wellington, Wem and Whitchurch, however, suggest that these characteristics may be of considerable importance in studying demographic events at the local level.

NOTES

1. P. Clark and P. Slack, *English Towns in transition 1500–1700*, (Oxford, 1976), 8.
2. The Hearth Tax employed was that of 1672 as published in W. Watkins-Pritchard, *Shropshire Hearth Tax 1672*, (Shrewsbury, 1949), to which were added exemptions listed in Public Record Office E179/342. A multiplier of 4.3 was applied to convert households to population as suggested in T. Arkell, 'Multiplying factors for estimating population totals from the hearth tax', *Local Population Studies*, 28 (1982), 55. These calculations were cross-checked against the Compton Census, which appears to have included all inhabitants above the age of 16 in these parishes, and hence a multiplier of 1.5 was applied to allow for children, as suggested in A. Whiteman, ed., *The Compton Census of 1676: a critical edition*, (London, 1986), lxvii, 442–3. It should be noted, however, that the Compton returns for all three of these parishes are, for conformists at least, suspiciously rounded.
3. E.W. Jones, 'Parish registers and population history in north Shropshire 1538–1837', (unpublished Ph.D. thesis, University of London, 1973), 25.
4. R.F. Skinner, *Nonconformity in Shropshire 1662–1816*, (Shrewsbury, 1964), 4.
5. Whiteman, *Compton Census*, 442–3.
6. Jones, 'Parish registers', 58.
7. Jones, 'Parish registers', 16.
8. Jones, 'Parish registers', 69.
9. J.E. Auden, 'Ecclesiastical history of Shropshire during the Civil War, the Commonwealth and the Restoration', *Transactions of the Shropshire Archaeological Society*, 7, (1907), 241–2.

10. Auden, 'Ecclesiastical history', 24–5.
11. Auden, 'Ecclesiastical history', 264.
12. R. Baxter, *History of Wellington*, (no place of publication, 1949), 69 – typescript in Shropshire Records and Research Centre (hereafter SRRC).
13. Wellington parish register, typescript in SRRC.
14. Auden, 'Ecclesiastical history', 262.
15. Auden, 'Ecclesiastical history', 265–7.
16. Auden, 'Ecclesiastical history', 301.
17. *Wem parish register*, (Shropshire Parish Register Society, 1908).
18. Auden, 'Ecclesiastical history', 254.
19. Auden, 'Ecclesiastical history', 284.
20. Whitchurch parish register, transcript in SRRC.
21. Whitchurch churchwardens' accounts, SRRC 3091/3.
22. Auden, 'Ecclesiastical history', 284.
23. S. Garbet, *History of Wem*, (Shrewsbury, 1982), 216–23.
24. Baxter, *History of Wellington*, 34.
25. W.J. Farrow, *The great Civil War in Shropshire*, (Shrewsbury, 1926), 23.
26. E.A. Wrigley and R.S. Schofield, *The population history of England 1541–1871: a reconstruction*, (London, 1981), 236.
27. A. Dyer, 'Epidemics of measles in a seventeenth-century English town', *Local Population Studies*, **34**, (1984), 35.
28. Wrigley and Schofield, *Population history*, 334.
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