The cost of health in early modern London

Vanessa Harding
Birkbeck, University of London

This paper is a work in progress, towards a chapter on family, household and health in a book on early modern London. The subjects covered are limited and selective – for example, I will not discuss plague and its impact on the capital – but I am seeking to understand how important sickness, healthcare and the provision of medical services were to the family and to the larger economy of London in the sixteenth and seventeenth centuries. Sickness and poverty went hand in hand: people were poor because they or the breadwinner fell sick and could not work, and the poor were more sick because they could not afford a reasonable quality of food, accommodation, or medical care. At a more middling social level too, though food and shelter may have been adequate, many chronic or deadly diseases were widespread; loss of time and earnings were still important, the depressing and debilitating effects of illness and premature deaths dogged the family, and the cost of medical care had a significant impact on family budgets. For the most part it is easier to outline the prevalence of disease and disability, and to note the frequency of premature death, than to calculate their financial, social or psychic impact on any single family or social group. It is also, of course, easier to concentrate on the cost of ill-health rather than good health: while Londoners, influenced by the prevailing Galenic medical outlook of the day, sought to maintain good health through diet and preventive medicine, it is the treatment of ill-health that predominates in the written record.

London's demography/mortality/morbidity

Population size and change;

First, a brief sketch of early modern London's demography and the sources for it.

It seems likely that the population of London was not much more than 50,000 in 1500, but that it was by then beginning to rise, after stagnation in the 15C. By 1550, the population of the built-up area – the city, Southwark, Westminster - might have been 70- 80,000, a figure based on a count of communicants in 1548. From this date to the early seventeenth century we have both a scattering of parish registers and occasional plague-year death figures to trace the rising trend of London's population, to a plausible 200,000 by 1600. By the 1630s we have annual returns of baptism and burial totals in the so-called Bills of Mortality, with burial figures for parish and parish grouping and always distinguishing plague deaths. The Bills also give annual breakdowns of the causes of death (not organised by locality). Parish registration was severely compromised by the upheavals of the civil war and commonwealth, and some records were lost in the Fire of 1666, but in the later seventeenth century other sources such as property tax returns help to establish population size and trend. London the metropolis may have reached 350,000 by mid-century and well over 500,000 by 1700 – all the more remarkable as national population totals declined between about 1650 and 1680, so that England's population in 1700 may have been lower than in 1650.

This growth was driven by migration. London's opportunities and attractions drew hundreds and then thousands of migrants a year, from a pool that widened beyond England to include Wales, Ireland, Scotland, and continental Europe. Some of these were temporary or seasonal visitors, but the majority made London their home, settling within its spreading purlieus and integrating and, up to a point, assimilating with its existing residents. Early modern 'Londoners' always included a very large number of men and women who had not been born there. Analysis of the origins of the (mostly middle-class) deponents in London's church courts between 1565 and 1644 shows that 80 per cent had been born outside London, as had over 70 per cent of deponents in the London church courts between 1665 and 1725.[1] It is of course significant for the profile of disease exposure and immunity, that so high a proportion of the population were recent rural-urban migrants.

Migration flows were dominated by the movement of young single people, in pursuit of training and employment opportunities: young men seeking apprenticeship places in the sixteenth and early seventeenth centuries, young women to fill the burgeoning demand for domestic servants in the seventeenth. There were also large numbers of poor migrants of all ages, gentry and professionals, and some middling-class individuals and families from France and the Netherlands. Migration thus gave the capital a distinctive age- and sex-structure, dominated by young single people, but changing in gender balance over time. In the early sixteenth century, when London was beginning to grow, it may have had the slight excess of females over males common to medieval urban populations, but by the 1550s, when apprentice migration was exceptionally high (up to 1,400 a year), a significant excess of males was building up. But by the end of the seventeenth century, this appears to have reverted to an excess of females over males, perhaps of the order of 80-90:100. Throughout the period considered here, London's population had a high proportion of adolescents and young adults. The excess of males in the mid-sixteenth-century population was specifically

[1] Elliott, thesis; P. Earle, *City full of people*, 47-8

an excess of young single males, concentrated in the teens and early twenties. And the recorded high number of young single men in the late seventeenth century must imply an even larger number and proportion of single females, to achieve the sex ratios discussed above.[2] Not all of these single women were young, since a number of women never married at all, but it seems likely that the great majority were in their twenties. John Landers' detailed study of London's eighteenth-century population offers estimated age-distributions. He suggests that in the period 1730-49, just over 30 per cent of the population (male and female) was aged between 10 and 29, and emphasises the importance of adolescents and young adults in London. Figures like these may well hold good for the last quarter of the seventeenth century.[3]

If young men and women were unusually numerous, the number of children was probably lower than elsewhere, with more in the 0-5 age group than in the 5-10 and 10-15, 'consistent with the very severe levels of childhood mortality in the capital ... and high levels of in-migration among adolescents and young adults'.[4] Most of the under-16s, and even more of the under-10s, would have been London-born, though some English migrants, and rather more alien immigrants, arrived in London with children born elsewhere. There was huge mortality in the first two or three years of life, and only 50 to 60 per cent of London-born children lived to age 15.[5] Infants and young children made up perhaps 40 to 50 per cent of all deaths across the whole metropolis in non-plague years.[6] The significant scale of wetnursing both reduced the proportion of London-born babies living with their families and may well have contributed to their poor survival rates.[7] Tax returns from the 1690s paint a clear picture of small co-resident families, with few parents having more than three children at home and many only one.

Demographic determinants

Disease and death were constantly reshaping the metropolitan population. One seemingly inevitable feature of London's early modern growth is that it became a less healthy, place to live. This is an obvious inference, if population growth entailed increased settlement densities, more overcrowding, and poorer accommodation and environmental quality, but a range of other factors also contributed: increasing levels of poverty, the susceptibility of migrants to urban diseases, childcare practices such as wetnursing, health policies in relation to plague. Changing patterns of disease must also be considered.

It seems likely that London's 'demographic regime' had two main phases in this period: from 1540 to the 1640s, it appears that 'at least in the absence of plague London may have been able to maintain a balanced demography', that is that outside epidemics, births matched or occasionally exceeded deaths, though probably not by a great deal.[8] This 'balanced' phase may well have begun much earlier than 1540, but this cannot be established in the absence of parochial registration. From the mid-seventeenth century, London like other cities entered a phase of 'natural decrease', when deaths exceeded births and migration alone was responsible for the capital's continued strong growth. Ironically, of course, this second phase, which lasted until the end of the eighteenth century, was for the most part outside the age of plague, which did not return to London after the late 1660s.[9] The worsening health of London in the seventeenth century can be objectively charted, in rising levels of mortality and declining life-expectancies, while the meaning of the experience for Londoners is documented in thousands of sources from wills to parish records.

Life-expectancy is a complex measure of chances, and for this period life expectancy at birth must always be compared with life-expectancy on reaching adulthood, and set against the representativeness of the sample. Roger Finlay's calculations for the period 1580-1650 show that two comparatively wealthy city-centre parishes (St Peter and St Michael Cornhill) fit with a model of life-expectancy at birth of 29 to 36 years, while in two poorer parishes (All Hallows London Wall and St Mary Somerset), it was only 21-26 years.[10] These low expectancies were to a significant extent due to high infant mortality, and those who survived childhood - even if they comprised barely half the birth cohort - had a much better chance of living longer, though it is difficult to compare life-expectancies of native Londoners with those of migrants. Steve

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[2] Glass, *London inhabitants with in the walls*, p. xxvii; Earle, *City full of people*

[3] Landers, J., *Death and the metropolis. Studies in the demographic history of London, 1670-1830* (Cambridge University Press, 1993), 180. The assumption that these figures, for 1730-49, may be reasonably representative of the late seventeenth century is mine, based on the fact that the age distributionof deaths in 1675-99 was very similar to that in 1725-49: ibid. 95, 100-1.

[4] Landers, p. 180-1

[5] Finlay, *Population and metropolis*, pp. 50, 101.

[6] Harding, *Dead and living*, ch 1/2?

[7] Fildes?

[8] Galley, *The demography of early modern towns: York in the sixteenth and seventeenth centuries* (Liverpool, 1998), pp. 16-17

[9] Ibid.; Landers, *Death and the metropolis*.

[10] Finlay, *Population and metropolis*, p. 108

Rappaport's study shows that the median life-expectancy of 93 entrants to the freedom (then in their mid-twenties) in 1551-3 was another 28 years, giving them an average lifespan of over 50 years.[11] Between a third and a quarter of the sample lived into their mid-sixties, and a number into their seventies.[12] Some parish registers give age at death, and while individuals may have rounded-up or sometimes exaggerated ages, it does appear that ages of sixty or more were not uncommon. In the city-centre parish of St Peter Cornhill, where the parish clerk noted the ages of almost all those buried between 1579 and 1605, 5 per cent were in their sixties, 2 per cent in their seventies, and 4 per cent were attributed ages from eighty to 100. A similar picture emerges for the two suburban parishes of St Botolph Aldgate and St Botolph Bishopsgate in the same period.[13] Even so, there was a steady attrition through the adult years, with significant numbers dying in every decade of life.[14]

Finlay's calculations cover the period to c. 1650, and he points to evidence that 'the expectation of life ... deteriorated in London during the course of the seventeenth century'.[15] Infant mortality seems to have increased – even in areas rebuilt after the Fire, where an improvement in living conditions might be expected to bring improvement in health. As before, however, individuals who made it to adulthood had better prospects, with a reasonable chance of living perhaps to 60 or more.[16] Two specific contributions to this apparent improval in adult mortality rates by the late seventeenth century were the disappearance of plague by 1670 and the fact that smallpox mortality was strongly associated with the under-30s.

The actual figures, derived for the most part from the Bills of Mortality and sometimes only surviving in later transcriptions, suggest that London's early modern death rates were normally 3 times higher than modern rates, with exceptional epidemic peaks. Contemporary and more recent demographers converge on a background figure of c. 33-35 deaths per thousand, with a birthrate rather lower. In actual numbers, in the second decade of the seventeenth century (1610-19), annual burials for the city and surrounding parishes, excluding Westminster, averaged 8,000, with baptisms around 7,400. In the 1690s, mean annual burials in metropolitan London exceeded 20,000, and births (probably under-recorded, owing to the growth of nonconformity) barely exceeded 15,000.

London's 'medical marketplace'

In one sense the cost of health for the metropolis was demonstrably high, in that the demand for medical care was able to support a large number of health practitioners, from university-trained physicians to empirics to purveyors of self-help manuals and medicines, as well as a host of full-or part-time nurses. On the other hand, of course, these activities were an important section of the capital's economy, a lively 'medical marketplace' for both services and goods, including imported drugs and manufactured remedies.

The highest-status catgory of health professionals were the members of the College of Physicians, an elite body of around 50 men, with a university training. Traditionally the college's members practised Galenic or humoral medicine, but there were a fair number with Paracelsian training or sympathies by the later sixteenth century. Most of their work was with the court, nobility, and possibly the city elite, and they tended to keep a comparatively low public profile and made little contribution to public health. Nevertheless, the college exercised an important influence over London medical practice: college members had a statutory monoply of internal medicine and prescription, underpinned by the issue of the official *Pharmacopoeia* in 1585, and their best-recorded collective activities were focused on controlling other practitioners. The college's records of prosecutions are indeed the best source for understanding the much wider world of irregular medical practice, and especially the contractual nature of medicine, since dissatisfied patients had no hesitation in reporting unlicensed practitioners to the college.[17]

Second in status to the physicians were the surgeons, more practical and hands-on, but still mostly superficial: they undertook little in the way of internal surgery, though techniques for operating for the stone were developed in the seventeenth century. They belonged to a city company, the Barber-Surgeons, and may have numbered around 100 in 1600.

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[11] Rappaport, *Worlds within worlds*, p. 69.

[12] Rappaport, *Worlds within worlds* .pp. 69-71

[13] *Register of St Peter Cornhill*, pp. 127-160; Forbes, *Chronicle from Aldgate*, table 4, p. 75; Hollingsworth and Hollingsworth, 'Plague mortality rates by age and sex', p. 135.

[14] Cf Forbes, *Chronicle from Aldgate*, table 4, p. 75; Hollingsworth and Hollingsworth, 'Plague mortality rates by age and sex', p. 135

[15] Finlay, p. 109

[16] Landers, p. 158. The sample populations came from Southwark and the city's northwestern suburbs, and recorded over 1,100 births between 1650 and 1699: ibid., pp. 131-4.

[17] Margaret Pelling and Frances White, Database of Physicians and Irregular Medical Practitioners in London 1550-1640 (2004): http://www.british-history.ac.uk/source.aspx?pubid=107 (Hereafter Pelling, Practitioners). See also M.Pelling, *Medical Conflicts in Early Modern London: Patronage, Physicians and Irregular Practitioners 1550-1640* (Oxford, 2004),

Apothecaries emerged as a distinct branch of the powerful Grocers' Company, dealers in spices, drugs, and strong waters; they established their independence in 1617, as did the distillers in 1638, but only after long struggles.[18] Apothecaries were in theory subordinate to the College of Physicians, dispensing the remedies the latter prescribed; there were some 100 apothecaries c. 1600. But although the formal and legal distinctions were clear, medical practice was more protean: both surgeons and apothecaries intruded into the realm of physicians, and apothecaries in particular diagnosed illnesses and prescribed remedies, usually at a lower price than the licensed physicians. John Gerard (c.1545–1612) belonged to the Barber-Surgeons' Company but gained fame as a herbalist, curator of the Physicians' physic garden and author of the *Herball, or, Generall Historie of Plants Gathered by John Gerarde of London* (1597).[19] Nicholas Culpeper (1616-54) was trained by apprenticeship as an apothecary, but made it his mission to widen popular medical knowledge by translating the Physicians' official *Pharmacopoeia* from Latin into English, as *A Physicall Directory, or, A Translation of the London Dispensatory*, in 1649, also adding definitions of terms and improved instructions.[20]

In addition to those with formal training or membership of an approved body, there were also perhaps another 250 'irregular' practitioners in 1600, a major object of the College of Physicians' censorial activities. To use Patrick Wallis's definition, 'irregular' medical practitioners are 'those who worked without membership of a medical guild or the College of Physicians in London, or members who overstepped the division between their functions'.[21] 'Irregulars' thus included a wide range of practitioners, from empirics, quacks, herbalists, and wise women, selling advice and simple remedies, to individuals with some qualification or skill that was not recognised by the College of Physicians, and those not willing to submit to the College's authority. One such was Leonard Poe, practising in London from the late 1580s with the support of patrons such as the earl of Essex, despite it appears the lack of any formal training. Poe was examined many times by the College's censors, who noted in 1594 that he could not give the symptoms of pleurisy, and 'knew no Greek or Latin' and on another examination that he was 'completely unlearned and ignorant', at least by their standards. Nevertheless, thanks largely to his patrons, he was eventually licensed to practise medicine in 1596, but 'only for the French pox, intermittent tertian fever, skin diseases, the stone and gout'.[22] Another prominent 'irregular' was the astrological medical practitioner Simon Forman. Forman, again lacking formal training, came into conflict with both the Surgeons and the Physicians for both his methods and his attitude, and had to settle outside the latter's monopoly limit, but this does not seem to have hampered his successful practice.[23]

One empiric, Abraham Savery, was said to have an extensive ('not Credible') practice, but the majority of irregulars were probably small-scale practitioners, men and women, perhaps specialising in a particular area, such as bone-setting, herbal remedies, or pox.[24] The Physicians' net occasionally caught really small fry such as Christopher Barton, a weaver of Shoreditch, accused in 1639 of taking 5s. to cure a cough, but giving only white wine and sugar; he claimed to heal by touch, not by medicines.[25] On the whole, however, those who treated for free, or for no more than the cost of the herbs, were exempt from prosecution under a charter of 1542, and their number cannot be estimated.

They must also shade into the next area, that of private, home-based medicine, where the advice of friends and family members was the prime source of information. Nursing care was normally domestic, and the literate householder or housewife was clearly the target audience for some of the medical publishing of the period. Paul Slack's analysis of vernacular medical literature in the sixteenth century shows that textbooks and regimens, and collections of remedies, were the most numerous section of the genre, offered in pocketbook format at modest price, and running into many repeat editions. Some may have been intended to inform and educate practitioners, but there was also some demand among the laity.[26] Though publishing was obviously a commercial venture, many authors explicitly set themselves up in opposition to the cost of professional or commercial medicine. The anonymously-authored *Newe boke of medecynes … callyd the*

[18] Unwin, *Gilds and companies*, p. 263; Ward, *Metropolitan communities*, pp. 115-20; Wallis?

[19] ODNB sub Gerard, John.

[20] ODNB sub Culpeper, Nicholas

[21] Wallis, P. 'Plagues, Morality and the Place of Medicine in Early Modern England', *English Historical Review* cxxi (2006), 1, n. 2

[22] Pelling, *Practitioners*, sub Poe, Leonard.

[23] ODNB sub Forman, Simon

[24] Pelling, *Practitioners*, sub Savery, Abraham; Bryers, Margaret

[25] Pelling, *Practitioners*, sub Barton, Christopher

[26] Slack, P., 'Mirrors of health and treasures of poor men: the uses of the vernacular medical literature of Tudor England' in C.Webster, ed., *Health, medicine and mortality in in the sixteenth century* (1979), pp. 237-73.

treasure of poor men ran to 15 editions between 1526 and 1575.[27] Nicholas Culpeper in 1652 offered *The English Physitian, or an astrologo-physical discourse of the vulgar herbs of this nation,* Being a Compleat Method of Physick, whereby a man may preserve his Body in Health; or cure himself, being sick, for three pence charge.' He explained how to make 'Plaisters, Oyntments, Oyls, Pultisses, Syrups, Decoctions, Julips, or Waters, of all sorts of Physical Herbs', and how to mix ' Medicines according to Cause and and Mixture of the Disease, and Part of the Body Afflicted'. Culpeper may have had a countrywide audience in mind, since most Londoners had few opportunities to grow or gather herbs themselves, but Thomas Cock in 1676 published *Kitchin-physick: or, Advice to the poor … With rules and directions, how to prevent sickness, and cure diseases by diet, and such things as are daily sold in the market: as also, for the better enabling of nurses, and such as attend sick people; there being nothing as yet extant (though much desired) of this nature.* Cock may even have intended the book to be lent rather than sold, since he included the admonition 'the reader [is] to take notice, that he is the next week to return this book to the clark, or pay 12d'. In c. 1685 Thomas Tryon published *The good houswife made a doctor, … being a plain way of nature's own prescribing to prevent [and] cure most diseases incident to men, women, and children, by diet and kitchin-physick only.*[28]

On the other hand, readiness to self-prescribe and self-medicate also created the market for patent remedies, aggressively advertised in a variety of media. It was alleged that that the apothecary Gideon Delaune (d. 1659) derived his substantial fortune from sales of 'Delaune's pill', which his kinsman Thomas Delaune claimed 'is in great request to this day [1681], notwithstanding the swarms of pretenders to pill-making'.[29] Lionel Lockyer, 'Authoriz'd physician and chymist', used handbills to advertise his pills from 1662; a 1702 bill, after his death, lists their multiple uses, describes the packaging, notes the price (4s. for 100 or 2s. for 50), and lists the London wholesalers and retailers.[30]

Women were active as irregular medical practitioners, but another important section of women's employment was midwives and nurses. The capital had a large and competent body of midwives, licensed by the bishop. Doreen Evenden has identified about 170 licences issued between 1607 and 1641, but she is clear that this is a very incomplete count. In the later seventeenth century at least 520 testimonials and certificates can be traced, suggesting a reasonably large number of recognised midwives operating at one time. Midwives underwent a long period of training, serving as apprentices or 'deputies' with a licensed midwife and gaining practical experience before applying for a licence, if indeed they ever found it necessary to do so.[31] Satisfied clients signed testimonials, and there is evidence for repeated employment and of the same midwife serving several members of the same family. Midwifery could be a proper business, in which a woman could earn a good reputation and quite reasonable rewards. An anonymous midwife of the late seventeenth and early eighteenth century delivered between 22 and 42 clients a year between 1695 and 1722, earning on average over £1 per delivery.[32] However, if that was the normal cost of a good midwife's services, it would have been beyond the means of most Londoners. The positive view of the professional midwife must allow for the fact that deceased clients do not issue testimonials, and that, while practised help may have been on hand for many, with 5-10,000 births a year in seventeenth-century London, there must have been at least a number of unskilled and perhaps not really competent women operating as well. Nor was high-profile medical attendance a guarantee of safety: in 1615 Arthur Doughton, a member of the Barber-Surgeon's company, was charged with having killed the wife of Mr Blackabee, brassworker, in childbirth. Mrs Coxford, midwife, corroborated the charge. Doughton had received a fee of £5 for his services, but the midwife's fee, if any, is not noted.[33]

Women designated as 'keepers of women in childbed'[34] were probably not trained midwives but merged into the larger army of nurse-keepers (so called to distinguish them from wet-nurses) who attended sickbeds and provided personal care. Although women's occupations are rarely given in sixteenth-century sources, wills and occasional probate accounts indicate the activities of such women, sometimes benefiting from deathbed bequests: 'to the woman which is my kepar in my sekenes, a fetherbedd, 6 paynted cloths, 2 platters,' or small money legacies. The three women who looked after Katherine Bracy in her final illness in

[27] Slack, 'Mirrors', p. 248

[28] EEBO

[29] ODNB sub Delaune, Gideon

[30] P.Isaac, 'Pills and print', in R.Myers and M.Harris, eds., *Medicine, mortality, and the book trade* (London, 1998), pp. 25-47.

[31] Evenden, *Midwives*

[32] Evenden, *Midwives.* Cf. Smith, *Obituary*, noting the deaths of 'my wife's midwife' and Mr Siday, a 'well-known' midwife: //. Cf Evenden p.//

[33] Pelling, *Practitioners*, sub Doughton

[34] Kirk and Kirk, *Registers of aliens.*

1543 were paid 8s. 8d.[35] Similar bequests occur throughout sixteenth- and seventeenth-century wills. Probate litigation also illuminates this subject, as in the case of Isaac Kendall (d. 1585): a young man still living with his former master, he was nursed at home by at least two women, (widow) Emma Thompson and Goodwife Arnet, and although he was sick for some days and clearly believed to be dying, there eis no mention of other medical intervention.[36] In Peter Earle's sample of female deponents in the church courts in the late seventeenth and early 18th century, 10 per cent of working wives and 36 per cent of working widows said they earned their living as nurses or through the practice of medicine.[37]

Disease and death: chronic and fatal ailments

Although the main focus of this paper lies elsewhere, early modern London was subject to a number of epidemic diseases, occurring sporadically and sometimes very locally, and creating sharp fluctuations in mortality. Serious plague epidemics recurred at roughly 15-20 year intervals, and in the worst years killed 1/5 to a quarter of the population; the influenza epidemic of 1556-9 was severe enough to affect the national population trend and certainly had a major impact on London. Other 'epidemical and malignant diseases', varying markedly in incidence from year to year, included *'Purples, Spotted-Feaver, Small-Pox,* and *Measles'*.[38] There is no doubt that such epidemics were enormously costly for the city, sapping human capital, interrupting commerce and trade and hence employment.

However, outside these epidemic years, the health of London was characterised by a wide variety of diseases, complaints, and casualties. Londoners were at risk of death throughout their adult years, from accidents, gastric infections, respiratory diseases, and chronic ailments, as well as short-term epidemic diseases. Obviously, the diseases and causes from which early modern Londoners died are not identical with those from which they suffered – and health may have more to do with the latter. However, the attribution of causes of death is one of the few ways we have of getting an overall picture of the prevalence of disease and other ailments.[39]

Chronic ailments

A mixed array of chronic ailments accounted for 25-30 per cent of non-infantile deaths. These included gout, dropsy, and stone and the disorders classified as 'mother', 'rising of the lights', and 'surfeit': constant but low-level killers, varying little from year to year, and presumably affecting their victims for some time before death. Some of the other 'causes' (including the category 'aged'), would not, in the eyes of modern medical science, have been fatal in themselves, but must have been symptoms or complaints accompanying the individual's decline and death; however, if they are cited as the cause, it seems certain that obvious infective and epidemic disease was not present.

Individuals suffering from these complaints probably made up the majority of those seeking medical help, whether from professionals or irregulars. The College of Physicians' proceedings against irregular medical practitioners give some insights into this world, often with useful details, though it is rare to find complaint, treatment and price all listed in the same case. However, individuals were prepared to pay large sums in hope of a cure, as well as small amounts for more minor complaints. Agreements to pay £5-10 for a cure are common; one of the smallest fees noted is 3s., one of the largest £20, to cure a boil on the chin. In many cases a significant part of the cost was the drugs or medicaments. In 1608 Thomas Tenant, 'that notorious quack', was alleged to have undertaken to cure Mrs Brown of St Paul's of dropsy, and had accepted £32, 'increased beyond all conscience', leaving her with no cure. His rapaciousness included charging £6 for one pill, or £6 for a pint of an Apozem.[40]

As already implied, medical treatment tended to be contractual: often the practitioner contracted for a fixed sum, part to be paid in advance and part when or if the treatment was successful. William Forester, physician, contracted to cure Mr Burton, a gentleman of Gray's Inn, in 1594, for £3 10s., with another £3 10s. to follow when the cure was complete; Francis White, apothecary of Lamb's Conduit, promised in 1639 to cure Dorothy Banton of St Olave's for 40s. and £3 when cured. Mrs Butler of Mark Lane was accused in 1637 by Mrs Ellyson of Wapping of treating her, possibly for convulsions, for 100s. plus 100s. if cured, and admitted giving dictander, maydenheyre & alehoofe, treacle.[41] Practitioners could sue or imprison their

[35] Darlington, *Consistory Court wills*, pp. p. 53, 67, 75, 81, 106.

[36] GL MS 9585 (Deposition books, testamentary causes), ff. 67v-75.

[37] Earle, 'Female labour market', p. 339.

[38] Graunt, *Natural and political observations*.

[39] The main source for measuring the incidence of different causes of death in seventeenth-century London is the data in John Graunt's *Natural and political observations on the Bills of Mortality* (1662), using borht Graunt's calculatiosn and later reworkings.

[40] Pelling, *Practitioners*, sub Tenant, Thomas.

[41] Pelling, *Practitioners*, sub Forester, William

patients for non-payment of agreed fees, but if they themselves were practising without a licence the patient might respond by compaining to the College. But the patient was not obliged to stay with the practitioner: in 1613 a Mr Speed, 'fearing death', broke off his agreement with Thomas Tenant, who had agreed to cure him of the stone for £20, but had failed to do so.[42]

However, two diseases stand out in addition to Graunt's 'chronical' causes, consumption or pulmonary tuberculosis, and pox or venereal disease. In both cases their impact on the living must have been considerable, though only consumption was recorded as a major killer, for reasons that will be discussed.

Consumption

Consumption was cited as the cause of around 20 per cent of deaths in non-plague years in seventeenth-century London, according to the Bills of Mortality.[43] Its symptoms included coughing and respiratory distress, as Graunt noted, saying of *Tyssick* 'that it is probable the same is entred as *Cough,* or *Consumption'*.[44] The writer John Evelyn in his *Fumifugium* (1661) also assimilated consumption with other pulmonary complaints and argued that they were exceptionally prevalent in London. He believed that '*Catharrs, Phthisicks, Coughs* and *Consumptions* rage more in this one City than in the whole Earth besides'; 'is there under Heaven such *Coughing* and *Snuffing* to be heard, as in the *London* Churches and Assemlies of People, where the Barking and the Spitting is uncessant and most importunate?' This was not merely a nuisance or inconvenience: 'almost one half of them who perish in *London,* dye of *Phthisical* and *pulmonic* distempers; […] the *Inhabitants* are never free from *Coughs* and importunate *Rheumatisms,* spitting of *Impostumated* and corrupt matter', while the ulceration of the lungs is 'a mischief so incurable, that it carries away multitudes by Languishing and deep *Consumptions,* as the *Bills of Mortality* do Weekly inform us'.[45]

Evelyn, as is well known, attributed all these ills to coal-smoke, especially from industrial processes, and the rise in coal consumption in London in the seventeenth century is well-documented, but it is worth considering what other factors there may have been. Assuming that seventeenth-century consumption can be identified with pulmonary tuberculosis, poor air quality - the 'smoaks and stinkes' of London - would certainly exacerbate its symptoms, but would not in itself cause or spread the disease. In the poorer areas of London, poor housing quality no doubt contributed: cold, damp rooms, inadequate heating and ventilation, when combined with close crowding, provided a good breeding ground for respiratory diseases. In one of the few such comparisons we can make, we can see that consumption was a much greater cause of death (something like 35% of non-plague deaths) in late sixteenth-century Aldgate, a poor suburban area, than the average of 20% noted above. It was also to some extent age-related, accounting for for an increasing proportion of deaths in each age group from the twenties (26.3 per cent of deaths) to the seventies (57.54 per cent of deaths).[46]

Perhaps surprisingly, treatments for consumption do not feature largely in the prosecutions brought by the College of Physicians, coming up as incidental detail or in secondary accusations. It may be that the treatments offered were limited in cost and quality, and perhaps in their ill-effects, though a Mr Edwards did charge the Belgian physician Raphael Thorius with undertaking to cure Mr Edwards' wife of consumption, who had choked and died on the vomit he administered.[47] It may also be that Margaret Pelling's invaluable database only goes to 1640, and consumption was becoming a more serious problem in the second half of the seventeenth century. Possibly too it was something for which domestic medicine was preferred. Cures for coughs and phlegm were prominent among the remedies in two sixteenth-century collections analysed by Paul Slack (38 remedies, coming only after 'agues and fevers', 46, and stone and colic, 41), and seventeenth-century patent medicines such as Theophilus Buckworth's lozenges and Locker's pills claimed to cure (inter alia) 'Difficulty of Breathing, Stoppage of the Stomach, Cough, Tissick, Inflammation of the Lungs, [and] Consumption.[48]

If consumption was as prevalent as Graunt and Evelyn (and the Bills of mortality) suggest, it must have had a significant effect on many London families and on the wider economy. It was principally experienced as a long-term progressively wasting disease: Graunt notes that if 'the dead Corps were very lean, and worn away', that was an adequate marker: 'it matters not to many of our purposes, whether the Disease were

[42] Pelling, *Practitioners*, sub Tenant, Thomas

[43] Graunt, *Natural and political observations*

[44] Graunt, *Natural and political observations,* p. 28

[45] Evelyn, *Fumifugium* (1661)

[46] Forbes, *Chronicle from Aldgate*

[47] Pelling, *Practitioners*, sub Thorius, Raphael; Savery, Abraham; Downinge, Mr.

[48] Slack, 'Mirrors', p. 263.

exactly the same, as *Physicians* define it in their Books'.[49] If it also largely affected older adults, and debilitated some time before it killed, it probably made an important contribution to the impoverishment of older women and widows.

Venereal disease

Venereal disease (probably principally syphilis, but known variously as the pox, French pox, the French disease, etc.) was also widespread in early modern London. Graunt was puzzled by the very low totals of deaths attributed to it in the Bills, since 'by the ordinary discourse of the world it seems a great part of men have, at one time or other, had some species of this disease', and 'so many complained very fiercely' of it. On examination, he concluded that careless diagnosis and selective reporting were to blame: either the searchers failed to identify it as cause of death, or those returning mortality figures concealed it for social reasons.[50] It is possible (as Graunt suggested) that some deaths due to pox were in practice attributed to consumption, since both were wasting diseases: 'forasmuch, as all dying thereof die so emaciated and lean (their Ulcers disappearing upon Death)', the searchers of the dead 'cannot tell whether this emaciation, or leanness were from a Phthisis, or from an Hectick Fever, Atrophy, &c. or from an Infection of the Spermatick parts'. But he also implies that thre was a general tendency to conceal the shameful fact of death from pox: 'onely hated persons, and such, whose very Noses were eaten of, were reported by the Searchers to have died of this too frequent Maladie'.[51]

It may well be true that syphilis was a far greater scourge of the living than a direct cause of death. A recent study of venereal disease treatment in London[52] demonstrates the high demand for hospital treatment. The records of the royal hospitals of St Bartholomew's [Bart's] and St Thomas's (from their mid-Tudor re-foundation) show that poxed patients were admitted and treated from the first. According to William Clowes (1543/4-1604), a surgeon at Bart's, over one thousand venereal patients a year were treated in or at the hospital between 1574 and 1579. At both hospitals some 20-25 per cent of beds were occupied by poxed or 'foul' patients for most of the period from 1622 to the Great Fire. Bart's devoted an average of fifty-seven beds to foul patients between 1622 and 1666, while St Thomas's had some forty beds in the early seventeenth century and about fifty-two by the 1660s. If all foul patients stayed forty days (an 18th-century average) then the hospitals were treating some 885-995 patients a year. Since it appears that quite a number of patients absconded before their treatment was complete, and a few may have died, the numbers actually treated in most years in this period probably exceeded one thousand.

Those who sought admission to hospital, or hospital treatment, for complaints that they or others believed to be venereal form a large but rather amorphous category, certainly larger than the number of beds available or occupied at any one moment, since many failed the series of tests required to gain admission so, and some whose eligibility was accepted disappeared or died before they could be admitted. And application to the foul wards was not the only option explored by sufferers: many either believed they had some other disease, or concealed the venereal nature of their complaint, and sought admission to the 'clean' wards of the hospitals, though if detected they were liable to ejection.

Hospital care for pox was primarily aimed at the poor or modestly off, those who could not afford private treatment. Probably anyone who could do so preferred to avoid the hospital with its intrusive investigations, social stigma, and the painful and protracted mercury salivation that was the principal therapy practised there. Not surprisingly, treatments for pox featured significantly in medical textbooks, both in collections of remedies and in single-subject tracts, such as William Clowes's *A short and profitable treatise touching the cure of the disease called morbus gallicus, by unction* (1579). Based on Clowes's work at Bart's, this was addressed to the Barber-Surgeons' Company, and advised a sequence of evacuation (bloodletting, purging, and sweating), diet, unctions and further 'caustic' medicines, which presuppose professional qualifications or licence. The remedies too are largely set out in professional form and language. However, Clowes envisaged the treatment as taking place in the patient's home or chamber, and it is certainly more of a handbook for private practice as for hospital therapy.[53]

However, a much wider range of individuals, including many quacks and empirics as well as surgeons and physicians, offered treatment for this painful and widespread disease, as many cases coming before the College of Physicians in the sixteenth and seventeenth centuries testify. It seems likely that the number of cases was due both to the prevalence of the disease, and therefore of offers to treat it, and to the violent and dangerous treatments offered. It also seems very likely that many of the cases in which the complaint or

[49] Graunt, *Natural and political observations,* pp. 13-14

[50] Graunt, *Natural and political observations,* pp. 23-4.

[51] Graunt, *Natural and political observations,* pp. 23-4

[52] Kevin P. Siena, *Venereal disease, Hospitals and the Urban Poor. London's "Foul Wards", 1600-1800* (Woodbridge, Suffolk: Boydell & Brewer Ltd., 2004)

[53] W. Clowes, *A short and profitable treatise touching the cure of the disease called morbus gallicus* (1579): EEBO.

disease is not specified also involved the pox, especially when the patients were a married couple and/or the treatment was similar to that for pox. Among the reported cases, Thomas King, surgeon, in 1616 undertook to treat Mr Harper, a printer, and his wife, for the pox. He first gave them a diet drink of 'Searsa 4 oz, Hemedack 4 oz, Saseperall 6 oz', a cure he claimed to have used for 11 years. Mrs Harper, after an apparent cure, got worse; King gave her vomits of stibium lozenges sold by Mr Smith of Newgate Market, let blood and gave her *pulvis sanctus*. The unfortunate couple had agreed to pay a fee of £8, handing over £3 11s before or during the treatment, but the College of Physicians ruled that King must repay their money, though they were of course left no better than before. A more modest fee (£4) was demanded by the apothecary Henry Dickman, for treating Frederick Porter for French pox with mineral pills (turbinth), which caused delirium and mouth ulcers, and then a dietetic drink.[54] At a more popular level still, Margaret Bryers, widow of a barber-surgeon but herself described as 'an aged quack', confessed in 1615 to having given many sudorifics for the French pox, and ointments, plasters, potions and even extreme unction, both on her own and with 'other surgeons'.[55]

The number of those affected by pox in seventeenth-century London was considerable, therefore, and there is no doubt that their sufferings were severe. While some of those infected may have got away with the symptoms of a mere urinary tract infection, others experienced ulcers, sores and skin lesions, and acute pains in the limbs. These could make people unfit for work or, equally cruelly, unacceptable for employment: servants were turned off when symptoms appeared, individuals marked by the pox were less likely to find good jobs or even lodgings. The 'cure', even when available, was both painful and uncertain. The pox brought physical misery and existential despair, and not surprisingly a number of sufferers took their own lives. Contemporary sources such as the Westminster Coroner's records illuminate the desperation of pox sufferers: some killed themselves to end their immediate suffering, others because they saw no prospect of a cure, or could not endure the agonies of mercury treatment, or knew they faced destitution even if cured. Likewise, some of the narratives given in Old Bailey trials tell of the experience of the poxed poor: sacked on the allegation of infection, driven to steal to pay for treatment, turned out of overnight accommodation and left to die in the street.[56] Graunt's comments exemplify the much greater level of prejudice and disadvantage faced by poxed patients over sufferers from other diseases. His language ('vilest', 'miserable', 'uncleanness') chimes with much popular and elite discourse, and although the seventeenth century was more forgiving towards foul patients than the eighteenth they were still very much second class.[57]

Conclusion

The importance of ill-health in the lives of Londoners, and the impact that disability and sickness had on the society and economy of the metropolis, constitute an enormous subject, only partly examined here. In this paper I have concentrated on diseases other than plague, since the latter has had such full treatment in other works,[58] but exceptional as it was it undoubtedly needs to be worked into an account of health care and cost in London. A big question, that it is probably not at the moment possible to answer, is how the cost of ill-health changed over time in the sixteenth and seventeenth centuries: rising infant mortality can be documented, but it is difficult to evaluate the impact of the changing severity of consumption, smallpox, and plague. Studies of the late seventeenth and early eighteenth century are able to use sources not available for earlier periods;[59] the challenge is to find ways of measuring, as well as depicting, the cost of health in early modern London.

[54] Pelling, *Practitioners*, sub King, Thomas; Dickman, Henry.

[55] Pelling, *Practitioners*, sub Bryers, Margaret

[56] Siena, *Venereal disease*. Cf OBSP

[57] Graunt, *Natural and political observations*

[58] See for example the bibliography in Stephen Porter, *The Great Plague* (2000), a comparatively popular study,

[59] Landers, *Death and the metropolis*