John Snow, who rose to be Queen Victoria’s anaesthetist, began as a surgeon in 1854, in one-room lodgings in Frith Street, Soho, a crowded street where there were already four other surgeons’ practices. There were various part-time appointment to be picked up, such as medical officer to the sick clubs and trade unions that were proliferating, or as public vaccinator, police surgeon or prison medical officer. Snow never married, but most young doctors found that a wife gave them the added gravitas and respectability prized by patients. Practices could be bought and sold through the professional journals. As the practitioner became more eminent there were possibilities of being called to give forensic evidence in criminal trials, particularly in the rash of poisonings that kept the Victorian press focused on the Old Bailey (225-26).

Mrs Charles Dickens . . . was expecting her eighth child in 1849. Her husband first “made himself thoroughly acquainted in Edinburgh with the facts of chloroform,” and then (as described in a letter to a friend) he insisted on the attendance of a gentleman from Bart’s Hospital who administers it in the operations there and has given it four or five thousand times . . . It saved her all pain (she had no sensation, but of a great display of sky-rockets) and saved the child from all mutilation [by forceps delivery?]. It enabled the doctors to do . . . in ten minutes what might otherwise have taken them one and a half hours; the shock to her nervous system was reduced to nothing, and she was to all intents and purposes well, next day. Administered by some one who has nothing else to do, who knows its symptoms thoroughly, who keeps his hand upon the pulse and his eyes on the face, and uses nothing but a handkerchief, and that lightly, I am convinced that it is as safe in its administration as it is miraculous and merciful in its effects.

It is not often that one can witness the birth of a medical specialty so clearly. The key lay in the fact that the “gentleman from Bart’s Hospital” had “nothing else to do” except concentrate on his patient. In 1853 Queen Victoria, surely prompted by her scientifically minded husband, produced her fourth son, Leopold, under chloroform, administered by Dr John Snow. It all went so well that when Dr Snow was summoned to the Palace for Victoria’s next child, he found her already in labour, and Albert methodically administering chloroform to her, dripping it on to a handkerchief. "I commenced to give a little chloroform with each pain . . . the effect of the chloroform was not at any time carried to the extent of quite removing consciousness [which might have raised constitutional questions] . . . the Queen appeared very cheerful and well, expressing herself much gratified by the effect of the chloroform,” but she made no mention of sky-rockets.

The royal seal of approval put paid to the mutterings of the medical establishment, including Mrs Dickens’s doctors, that women were meant to suffer pain in childbirth – they being quite safe from it themselves – because the Bible said so: God had told Eve, after the Fall, that “in sorrow thou shalt bring forth children.” After Dr Snow had been summoned to Lambeth Palace for the lying-in of the daughter of the Archbishop of Canterbury, the opponents of anaesthesia in childbirth on religious grounds had to admit defeat (229-30; square bracket comments by the author).

Cholera was endemic in the Indian sub-continent. In 1820 it had shot up to pandemic proportions, and threatened Europe, but stopped at the Caspian Sea. The next wave began in 1829, this time sweeping through Europe. In 1832 it reached London for the first time; 18,000 people died of it . . .

No-one knew what caused it, not how to treat it. Miss Nightingale believed in stimulating her patients in the Middlesex Hospital with exterior warmth from poultices and hot-water bottles, and internal stimulants such as brandy and laudanum, but without success.
She, with many others, believed in the miasma theory. A bad smell directly caused people to be ill. That was why she insisted on her new hospital of St Thomas's being well ventilated, to avoid the miasma of stuffy wards. Edwin Chadwick, an early pioneer in public health reform, believed in it too:

> The sense of smell . . . generally gives certain warning of the presence of . . . gases noxious to the health. . . . Primary and most important measures . . . [to be taken] are drainage, the removal of all refuse of habitations, streets and roads, and the improvement of the supplies of water . . . better supplies of water are absolutely necessary.

(Square bracket by author; quotation has been reduced from the original)

. . . . In January 1849 cholera recurred. In London alone, there were 14,000 deaths or more. In July 1849 the Board of Health ordered "all streets, mews, alleys . . . to be effectually cleansed every 24 hours and ordure removed, and nuisances e.g. swine, dung, animals kept in or under dwelling houses [to be removed] . . . the owner or occupier must cleanse and whitewash and abate and remove nuisances."

But this miraculous transformation did not, predictably, happen. The clerk to the governors of St Pancras Union carefully minuted their decision that "at present the order of the Board of Health . . . need not be acted on in this Union," on the same day that he recorded a notification that cholera had arrived in their parishes.

In August there were 4,000 deaths, in September over 6,500. Chadwick had unwittingly made its fatal path easier by advocating the flushing of drains into the Thames. The river, which then supplied a large part of London’s drinking-water, became a receptacle for all the infected sewage. In two poor riverside parishes, one in every 56 inhabitants died in Bermondsey, one in every 38 died in Rotherhithe. It remained a mystery why Bethlehem Hospital (better known as Bedlam) in Lambeth should not have had one case among its 700 inmates. Could it be anything to do with the fact that it had “an abundant supply of pure water from a deep well”?

The next epidemic began quietly, in September 1853, but deaths rose inexorably. By now Dr John Snow, who had been considering the cause of cholera since the 1849 epidemic, was reaching the conclusion that it was a water-borned disease. In August 1854 a baby was seriously ill with diarrhoea, in a house in Broad Street, Soho. Her distracted mother washed her soiled nappies, and threw the washing water into the cesspit under the house, which was connected to a drain under the street. The baby’s illness was misdiagnosed as just another case of infantile diarrhoea. When it was recognized as having been cholera, the drain and the well near it which supplied a pump in the street were all examined, but again the vital evidence was missed. The drain, the pump and the well were all found to be soundly built, so the disease could not be water-borned. Snow, however, persisted. They were looked at again.

Sure enough, crumbling brickwork was found which had allowed sewage and the washing water from the cholera-stricken baby’s nappies to percolate from the drain to the well. Armed with this evidence, Snow reported to the relevant authority, the Parish Vestry of St. James’s, which promptly ordered that the handle of the pump in Broad Street be removed. The outbreak began to fall. The case of Mrs Eley gave further proof of the cause of the outbreak, if such were needed. She used to live in Broad Street, where her family had a business making percussion caps. She liked the taste of the water from her local well. When her husband died, she moved to Hampstead, but her loving sons saw to it that she had a regular supply of her favourite water. Hampstead was clear of cholera in 1854 – except for Mrs Eley, who died of it.

Yet the miasma theory still influenced medical thinking. Near Golden Square "the gutters were flowing with a thick liquid, partly water and partly chloride of lime,” a strong-smelling disinfectant, adding to the usual stinks. The miasma theory still held on, until the Great Stink of 1858, when the smell from the Thames was so bad that it made parts of the Palace of Westminster uninhabitable, and at last prompted proper drainage, and Bazalgette, and his marvels. If ever there was a time when bad smells could be shown to cause disease, it was then; but no epidemic appeared (234-37; all parenthetical material by author).