

Charles Dickens: Impact on Medicine and Society

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In 1836 Charles Dickens published the first installment of *The Posthumous Papers of the Pickwick Club*. In this novel he introduces the reader to a character, Joe, the Fat Boy who is obese, sleepy, difficult to arouse, snores, and has peripheral edema. This description so intrigued the medical field that many hypotheses about the symptoms were examined, but it was not until 120 years after the novel was published that physicians started to interrelate these features and a new field of medicine emerged. Although he is best known for this description, Dickens impacted medicine

and medical care in many ways. Besides his brilliant clinical descriptions (many of which were unrecognized in his day) and his activities as a social reformer, he was instrumental in facilitating the development of homeless shelters for women, the first pediatric hospital in the United Kingdom, and the development of orthopedics.

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“What a gain it would have been to physic if one so keen to observe and facile to describe had devoted his powers to the medical art.”—British Medical Journal, 1870

Charles Dickens (1812-1870) was the first “blockbuster” novelist in the English language. His influence was so widespread in literature and society that that he continues to be an object of fascination, as evidenced by the many biographies that have been published and will be published to celebrate the 200th anniversary of his birth. He was a keen observer and his character descriptions were so accurate that among his many “medical” achievements he described many of the clinical features of sleep breathing disorders at least 120 years before medical science started to recognize such sleep disorders.¹⁻³ In this article, we review what he is currently best known for by the medical profession—a description in his first novel of a character, Joe, the Fat Boy and how this played a role in our understanding of a disease that affects at least five percent of the population.

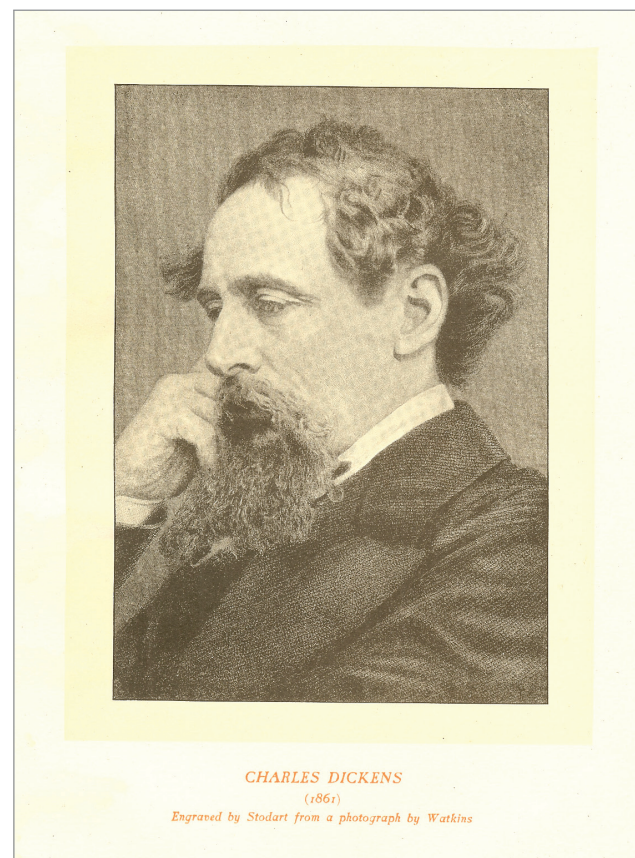
Dickens was a prolific writer and his works include newspaper articles, short stories, novels, novellas, letters, and speeches. His novels are, of course, the best known. When physicians read his novels and encounter some of his wonderful descriptions of characters, they frequently ask themselves whether he is describing the features of a disease.

When he died, there was an obituary in the *British Medical Journal*; this was well before his clinical descriptions fascinated doctors. We will therefore also review the many other reasons his life and contributions were extolled at the time of his death in the most prestigious medical journal in England.

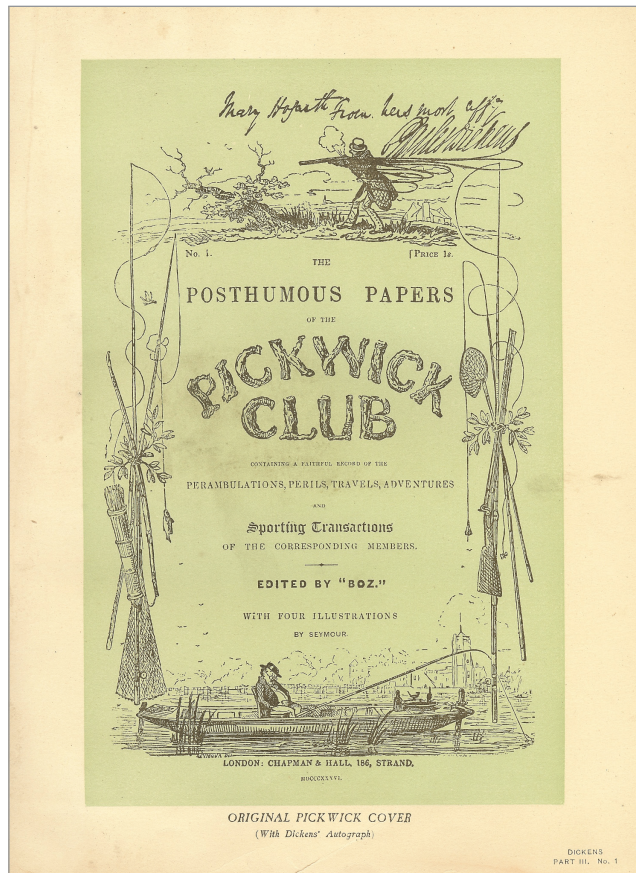
Before *The Pickwick Papers*

Charles Dickens’s early life was marked by poverty. When he was about twelve years old, his father had debts that could not be paid, and as a result his parents and younger siblings were sentenced to Marshalsea Debtors’ Prison. He was forced

Figure 1—Charles Dickens



(Courtesy of Meir Kryger)

Figure 2—Cover of *Pickwick Papers*

(Courtesy of Meir Kryger)

to work at a factory producing boot polish, Warren's Jet Blacking, well before child labor laws were instituted. When he was not working, he wandered the streets of London, which was in the midst of the worst financial crash of the nineteenth century. It is very likely that his experiences during this period led to his empathy towards neglected children, the poor, and disabled, and would drive him to describe the life of the poor in his novels, and later resulted in his being an activist and a reformer. This is also when his writing career began; although his work at Warren's included drudgery, he also wrote jingles used to advertise the boot polish.

His family was released from prison after a year, when his father started to receive a pension. The now thirteen-year-old Dickens returned to school at the Wellington Academy, where he contributed to a weekly school newspaper. He also started to regularly read periodicals, and he put on plays in a toy theater. His family again had severe financial problems, which resulted in Dickens leaving the school in 1827, and soon he was working as a low-level clerk in a law firm. During this period, Dickens mastered shorthand, but he soon left the law firm and started a brief career as a freelance stenographer, often working at Doctor's Common, which contained legal chambers where disputes were heard. Dickens soon obtained a job as a parliamentary reporter, a position that took advantage of his knowledge of shorthand, his accuracy and

his writing ability. He also dabbled in theater and his first story, "A Dinner at Poplar Walk" was published (under the pen name Boz) in the December 1833 issue of *Monthly Magazine* (with a circulation of 600). Soon this piece of fiction was republished (without permission by another magazine), and he was asked by *Monthly Magazine* for more submissions. These submissions and other articles were compiled, and *Sketches by Boz* was published one day after his 24th birthday, February 8, 1836.

The Pickwick Papers

Three days after *Sketches by Boz* was published, another publishing firm, Chapman and Hall contacted Dickens to write pieces to accompany illustrations to be drawn by Robert Seymour. This project would be the *Posthumous Papers of the Pickwick Club* (often referred to as *The Pickwick Papers*) and the first installment was published March 31, 1836. Each installment had a flimsy green cover and was very inexpensive (perhaps the first soft cover novel) and was read by all strata of society. After the first, installments appeared at the end of each month, with the final one in October 1837. Dickens married April 2, 1836. Seymour committed suicide on April 20, 1836, and a new artist, Hablot Knight Browne (Phiz), then only 21 years old, was commissioned to do the illustrations. Meanwhile, in the same year Dickens agreed to write two books for other publishers and still continued his reporting job. What a momentous year! After a slow start (there were 400 copies published of the first installment), *Pickwick Papers* became enormously successful (40,000 copies per month at the end) because of the wonderful writing and characters including Samuel Pickwick, Sam Weller, and of course Joe, the Fat Boy. It is with Dickens' description of Joe that we begin our review of the medical contributions.

Sleep Breathing Disorders

Dickens created a character Joe, the Fat Boy who pops up many times in *Pickwick Papers*.¹ He is simply known as Joe, the Fat Boy, the only important character in *Pickwick Papers* who does not have a surname. Dickens first introduces us to Joe as follows:

"Fastened up behind the barouche was a hamper of spacious dimensions—one of those hampers which always awakens in a contemplative mind associations connected with cold fowls, tongues, and bottles of wine—and on the box sat a fat and red-faced boy, in a state of somnolency, whom no speculative observer could have regarded for an instant without setting down as the official dispenser of the contents of the before-mentioned hamper, when the proper time for their consumption should arrive." (Emphasis added)

In the next paragraph, when someone is trying to get Joe's attention is blurted out for the first of several times "Joe!—damn that boy, he's gone to sleep again" (see below). The paragraph ends with Joe having taken his place on the barouche after others had mounted the carriage: "the fat boy waddled to the same perch, and fell fast asleep instantly." Thus, Dickens, in a matter of several sentences introduces the reader to important clinical features.

Figure 3—Mr. Pickwick chasing his hatIllustration from *Pickwick Papers*.**Figure 4**—“and on the box sat a fat and red-faced boy, in a state of somnolency”Detail from **Figure 3**.

The Fat Boy is obviously obese. “Vell, young twenty stun,” said Sam, ‘you’re a nice specimen of a prize boy, you are!’ ‘Thank’ee,’ said the fat boy.” The word *stun* is a play of words on the word *ton* and the word *stone*. Stone refers to the old English measure of 14 pounds. Thus, the fat boy is thought to weigh about 280 pounds. Another example:

“The fat boy, with *elephantine* playfulness, stretched out his arms to ravish a kiss; but as it required no great agility to elude him, his fair enslaver had vanished before he closed them again; upon which the apathetic youth ate a pound or so of steak with a sentimental countenance, and fell fast asleep.” (Emphasis added)

Joe is very sleepy during the daytime. The expression or its variations “Joe!—damn that boy, he’s gone to sleep again.” appears six times in the book. In fact when he does appear to be awake, it is a surprise: “Joe; why, damn the boy, he’s awake!”

Joe falls asleep at the wrong time and place:

“The fat boy rose, opened his eyes, swallowed the huge piece of pie he had been in the act of masticating when he last fell asleep.”; “...the fat boy laid himself affectionately down by the side of the cod-fish, and, placing an oyster-barrel under his head for a pillow, fell asleep instantaneously.”

Joe was difficult to arouse from sleep. At a military exercise “Everybody was excited, except the fat boy, and he slept as

soundly as if the roaring of cannon were his ordinary lullaby.” Dickens mentions that Joe snored. “...the snoring of the fat boy, penetrated in a low and monotonous sound from the distant kitchen.” Thus, he snored loudly.

Joe likely had *cor pulmonale*. Two of the cardinal findings in patients who have *cor pulmonale* are polycythemia, often manifested on physical exam as plethora (Joe was described as being “red-faced”) and peripheral edema, which was called *dropsy* in the early nineteenth century:

“Well,’ said Sam, ‘of all the cool boys ever I set my eyes on, this here young gen’l’m’n is the coolest. Come, wake up, young dropsy!’”

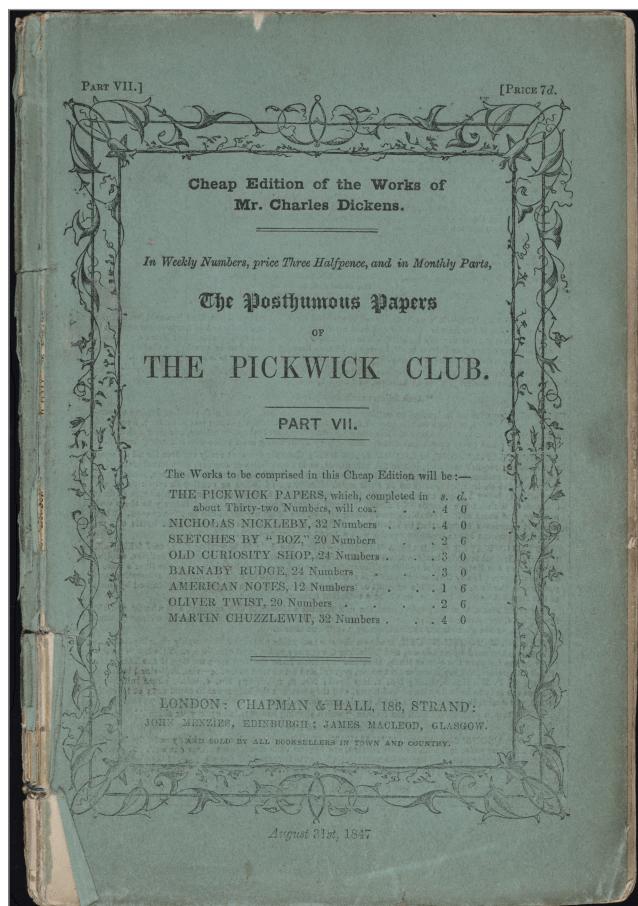
The combination of sleepiness and snoring are prominent in Joe.

“Sleep!’ said the old gentleman, ‘he’s always asleep. Goes on errands fast asleep, and snores as he waits at table.’

‘How very odd!’ said Mr. Pickwick.”

How very odd, indeed. The symptoms described were so striking that physicians speculated that Dickens was describing a syndrome that had not made its way into the medical literature. For example, the “fat boy” was mentioned in the context of sleepiness and obesity by Sir William Osler, in *Principles and Practice of Medicine*.⁴ On the 100th anniversary of the publication of *Pickwick Papers*, there were speculations about what disease the fat boy might have had.⁵ Over the years endocrine

Figure 5—"Cheap Edition" reprint of 1847



Notice that the cover advertises reprints of his other works. From the the Beinecke Rare Book and Manuscript Library, Yale University.

disorders (hypopituitarism, hypothyroidism), hypothalamic disorders,⁶ and Prader-Willi Syndrome have been postulated.⁷ (It is unlikely that Joe had Prader-Willi syndrome in which hypogonadism is prominent; Joe did have an interest in the opposite sex.)

In 1956, in what may have been the most widely cited single case report, (which we would now call an anecdote), the term "Pickwickian syndrome" entered the medical lexicon.² Burwell and colleagues, did not, however, get it right. They described the case of an obese gentleman who fell asleep holding a winning hand of cards in poker. The patient was found to be hypoventilating during the daytime, and he had the features of right heart failure. The hypothesis raised in this case report was that abnormal chemical drives to breathe caused hypoventilation, and that the resultant hypercapnia was responsible for the daytime sleepiness. It only became apparent about a decade later, when researchers studied sleeping patients that the sleepiness was, in fact, caused by repetitive episodes of apnea during sleep which caused multiple awakenings. With time, it also was found that patients with sleep breathing disorders may have normal drives to breathe, without hypercapnia or right heart failure,⁸ and that Charles Dickens had described a subset of sleep breathing disorders which is still called by

many the Pickwickian syndrome, or more recently, the obesity hypoventilation syndrome. Thus, it is not an exaggeration to say that Charles Dickens played a pivotal role in the development of the field of sleep medicine.

It is now known that sleep breathing disorders affect somewhere between five and ten percent of the population and that it is likely that some important historical figures including at least one US President (William Howard Taft) had a sleep breathing disorder.⁹⁻¹³

Other Disorders

It has been suggested that Dickens, in addition to the description of Joe, the Fat Boy, described in his characters a variety of other conditions, including tuberculosis, chronic bronchitis, asthma, restless leg syndrome, Parkinson's disease, chorea, Tourette's syndrome, cerebellar ataxia, torticollis, supranuclear palsy, stroke, epilepsy, and the complications of alcoholism, to name a few.¹⁴⁻¹⁷ Dickens himself likely suffered from asthma, so he knew what he was writing about when he described Major Bagstock, who had "a wheeze very like the cough of a horse" in *Dombey and Sons*. The Major is described as having an attack of bronchoconstriction and cyanosis with: "...wheezing sounds would be heard, and the major's blue would deepen into purple, while his eyes strained and started convulsively..."^{14,18}

One of the most memorable characters Dickens describes is Tiny Tim in *A Christmas Carol*: "Alas for Tiny Tim, he bore a little crutch, and had his limbs supported by an iron frame!" There has been controversy about what illness he had with some authors suggesting that he had Pott's disease (tuberculosis affecting the joints of the spine and the hip joints) or renal tubular acidosis.^{19,20}

Dickens' Medical and Social Activism

Dickens became a celebrity with the publication of *Pickwick Papers*. For the works published in paper cover installments he used the pen name Boz, and as his career evolved and his fame increased, he used his real name for his books published as hard cover or when his earlier novels were reprinted (see Figure 5). His works were widely read by the rich and the poor and what he wrote and said had impact on society.

As a parliamentary reporter Dickens was familiar with the 1834 amendment of the Poor Laws, first established during the reign of Queen Elizabeth in 1601 to deal with the poor.²¹ Under the Poor Laws, workhouses (there was one minutes away from his first home in London) were established. Dickens raged against the terrible living conditions, diet, and medical care in the workhouse in *Oliver Twist*.

In *The Life and Adventures of Nicholas Nickleby*, Dickens brings the reader into the world of poverty and disease in children: "How the last faint traces of hope, the remotest glimmering of any good to be derived from his efforts in this den, faded from the mind of Nicholas as he looked in dismay around! Pale and haggard faces, lank and bony figures, children with the countenances of old men, deformities with irons upon their limbs, boys of stunted growth, and others whose long meagre legs would hardly bear their stooping bodies, all crowded on the view together; there were the bleared eye, the hare-lip, the crooked foot, and every ugliness or distortion that told of unnatural aversion conceived by parents for their offspring, or of

young lives which, from the earliest dawn of infancy, had been one horrible endurance of cruelty and neglect. There were little faces which should have been handsome, darkened with the scowl of sullen, dogged suffering; there was childhood with the light of its eye quenched, its beauty gone, and its helplessness alone remaining....”²²

Dickens presented the reader with the humanity of the ill, the deformed and the disabled. One cannot but be empathetic to characters such as Tiny Tim. These people were not to be shunned but to be accepted and helped.

Dickens had learned about the benefits of removing people with diseases from the London slums and bringing them to the seaside, so they could benefit from fresh air and a more hygienic environment.²³ In *Dombey and Son*, Paul Dombey, whose description suggests he had tuberculosis, is sent to Brighton, a seaside city. Shortly after this novel was published in installments ending in 1848, Dickens’ sister, Fanny, and her son Harry died of tuberculosis. Harry was nine years old, and before his death, was sent to Brighton.²³

Dickens’ interest in sanitation is evident in his description of a cattle market in *Oliver Twist*: “The ground was covered, nearly ankle-deep, with filth and mire; a thick steam, perpetually rising from the reeking bodies of the cattle, and mingling with the fog, which seemed to rest upon the chimney-tops, hung heavily above.”²⁴ Dickens was a strong proponent of public health and sanitation, having learned about the poor sanitation in London from government reports in the early 1830s. In a speech he made in 1851 to promote in London a Department of Health: “I can honestly declare that the use I have since that time made of my eyes and nose have only strengthened the conviction that certain sanitary reforms must precede all other social remedies, and that neither education nor religion can do anything useful until the way has been paved for their ministrations by cleanliness and decency.”²⁵

Dickens was also a celebrity in North America. After a trip to the British possessions in Canada and the United States of America in 1842 he wrote *American Notes* in which he included his (often uncomplimentary) thoughts about the conditions he found in this new world.²⁶ On tobacco he wrote: “As Washington may be called the head-quarters of tobacco-tinctured saliva, the time is come when I must confess, without any disguise, that the prevalence of those two odious practices of chewing and expectorating began about this time to be anything but agreeable, and soon became most offensive and sickening. In all the public places of America, this filthy custom is recognized. . . In the hospitals, the students of medicine are requested, by notices upon the wall, to eject their tobacco juice into the boxes provided for that purpose, and not to discolour the stairs.” Dickens devoted an entire chapter to slavery: “Public opinion, in the slave States, has delivered the slaves over, to the gentle mercies of their masters. Public opinion has made the laws, and denied the slaves legislative protection. Public opinion has knotted the lash, heated the branding-iron, loaded the rifle, and shielded the murderer.” He visited public institutions that treated the blind, the deaf, those who could not speak, and those with psychiatric illnesses.

Dickens helped establish and run Urania Cottage in 1846, a “Home for Homeless Women” where destitute and abused women and prostitutes could go to leave their environment of poverty and violence and be helped, nursed, rehabilitated, and educated

in a safe setting.²⁷ Some women were helped to relocate to other countries (Canada, Australia, and South Africa) where they could start new lives. He had written about women who would have benefited from such help, for example, Nancy in *Oliver Twist* who was ultimately murdered. Today such facilities (often called shelters) are common in many parts of the world, and they help women who are homeless or have been abused.

In the 1860s, Dickens participated in public readings. During one of these, a member of the audience, William Treloar, who subsequently became Lord Mayor of London, became inspired to help crippled children after hearing Dickens read about Tiny Tim. He worked to establish the Lord Mayor Treloar Cripple’s Hospital and College, in Alton, England, an institution that exists to this day.²³ In this hospital, pioneering orthopedic treatments were used to help children deformed by tuberculosis and other diseases.

Dickens also played a major role in the preservation of the first pediatric hospital in the British Empire.^{23,28} After the hospital opened in 1852 on Great Ormond Street, Dickens publicized the institution and its importance in magazine articles and in his last completed book *Our Mutual Friend*. He raised money for this institution with readings of *A Christmas Carol*. This institution remains today the largest pediatric medical center in all of Europe.

Dickens was a supporter of women’s rights long before women were first permitted to vote in the United Kingdom in 1918. In *Oliver Twist*:

“‘That is no excuse,’ replied Mr. Brownlow. ‘You were present on the occasion of the destruction of these trinkets, and indeed are the more guilty of the two, in the eye of the law; for the law supposes that your wife acts under your direction.’

‘If the law supposes that,’ said Mr. Bumble, squeezing his hat emphatically in both hands, ‘the law is a ass—a idiot.’”

On May 2, 1870, Dickens delivered a speech at the Royal Academy Dinner which included: “All the arts, and many of the sciences, bear witness that women, even in their present oppressed condition, can attain to quite as great distinction, and can attain to quite as lofty names as men.”²⁹ This is the last public speech he ever gave. He died 38 days later. He was buried in Poets’ Corner, in Westminster Abby.

CONCLUSION

Dickens played an important role in medicine. He described syndromes, promoted the treatment of children, helped establish medical institutions, and most important of all, he brought us face to face with the humanity of the poor, the deformed, and the crippled. It is no wonder that he was extolled in an obituary in the *British Medical Journal*: “What a gain it would have been to physic if one so keen to observe and facile to describe had devoted his powers to the medical art.”³⁰ I believe that the *British Medical Journal* was wrong. If he had been a doctor he would not have had the great impact on society that he had as one of the great authors of all time.

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