Nearly a third of prescriptions for antibiotics in the US may be given to patients who have not been examined by a doctor

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ALAMY
Efforts to combat overuse of antibiotics in the United States have been jolted by new evidence that nearly a third of prescriptions for the drugs may be given out to patients who have not been examined by a doctor.

Unnecessary use of antibiotics has been blamed for the rise of drug-resistant superbugs, but efforts to map their use focused on decisions made by doctors after seeing a patient. The uncharted territory turned out to be vast.

When a team from Brigham and Women’s Hospital in Boston and from Northwestern University in Chicago looked at bills for people on the government healthcare programme Medicaid, they found nearly 83 million prescriptions that had been filled without a surgery visit.

Among 298 million prescription fills made over ten years, from 2004 until 2013, about 28 per cent were made without a doctor’s visit.

Michael Pulia, an emergency physician who is director of an antimicrobial stewardship program at the University of Wisconsin Madison, said unnecessary use of antibiotics can have consequences both for the individual patient, in terms of potential side-effects, and more broadly in their community and further afield.
Antibiotics can wipe out bacteria that might have countered or limited the growth of resistant superbugs, allowing them to flourish. A study last year by the Centers for Disease Control found that 35,000 Americans die each year from infection by a superbug. They are prescribed in the United States at about twice the rate that they are dispensed in Britain.

“The emergence of bacterial resistance (to antibiotics) is directly related on even a local level to how much antibiotics are consumed in your local area,” said Dr Pulia. “Your likelihood of catching an infection with a resistant bug goes up.”

Efforts to monitor their use initially focused on prescriptions in hospitals. “But 80-85 per cent of antibiotics were prescribed in an outpatient setting,” he said. In the last five years these “ambulatory” patients became the subject of further research, showing that about thirty per cent of antibiotics prescriptions were unnecessary.

Often antibiotics were prescribed for patients “on the tipping point between a virus and pneumonia,” he said. “When it’s on that tipping point you are going to be conservative.” Often they were prescribed for people who are merely suffering with a cold, he said.

Several studies have now attempted to measure how many people received antibiotics without a doctor’s visit. The latest study, the third of these, “is the biggest and most robust,” said Dr Pulia, who was not involved in the research.

Jeffrey Linder of Northwestern University, the senior author on the study, said that about 17 per cent of prescriptions appear to have been made without evidence of a viral infection. Looking at how prescriptions were made, “we were very forgiving,” he added. “This is a best case scenario.”
This meant that about 45 per cent of prescriptions were made either inappropriately, according to the record, or without a doctor’s visit to show how the decision was made. In the 28 per cent of cases where no doctors visit occurred, about half appeared to involve patients who also had bills for laboratory work or a visit from a nurse or home health aide which may have led doctors to prescribe the antibiotics. In the other half of cases, “the horrifying truth is we have no idea (how antibiotics came to be prescribed)” said Dr Linder.

Doctors may have spoken to patients over the phone or by email, though even this would alarm Dr Pulia. “If you can get it wrong with a patient sitting across from you, how can you get it right over the phone?” he said.