CASE STUDY ON HEALTHCARE REPORTING

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Abstract
The purpose of this paper is to emphasize that financial fraud does not only take place into an economic environment, such as financial institutions or economic entities, profit-making companies, but also into the healthcare system. Healthcare providers usually work to improve patient's health and are honest entities; however some of them use ways to increase their income/profit illegally. This paper will try to highlight the primary health care schemes and how they wrongfully make use of public funds.
The healthcare system is in continuous change in the light of the economic depression that is to follow after the COVID-19 pandemic, and the expected cutbacks in budgets in all the sectors create anxiety among physicians and healthcare institutions. This case should be a wake-up call to all physicians and medical institutions that when facing financial uncertainty, their responsibilities should be providing medical welfare for the patients but also to act financially responsible. The information should also be used by the enforcement institutions, which should keep in mind that in times of economic depression, healthcare institutions and medical providers are no different from economic entities in terms of financial fraud possibilities.
Understanding these schemes can help enforcement institutions adopt more efficient ways of action when fighting against the ever-changing threats of organized crime and fraud.
The methodology used for this paper is mostly made of scholarly articles and articles relevant to the topic in discussion retrieved from the web as sources of information.

Keywords
Financial fraud, Fraud, Healthcare Fraud, Organized crime

JEL Classification
K42, I18

Introduction

Healthcare fraud is a serious matter that affects every one of us. This kind of fraud generates considerable damage to individuals. Healthcare fraud involves deception in health insurance, deceptive billing of hospitals for unprovided services, and exaggerating medical services

(Rudman et al., 2009). Health professionals or their facility submitted application forms to the government and the treatment insurance agencies (Thompson, 1992), which were never issued, and there was no supporting evidence in the relevant patient files. The schemes listed above require some efforts, additional dates, and codes on the claim forms, to make the scheme credible.

This fraudulent conduct causes substantial financial losses in the number of billions of Euros of annual loss and severe damage to the patient. Identifying fraud in the healthcare system, therefore, becomes an urgent challenge to prevent corruption and misuse of public funds. Romania's national health expenditure, as in % of GDP, was 5% in 2016 (World Health Organization, 2020). Compared to other countries that might not be a significant percentage, but considering that Romania is a developing country, this percentage suggests enough of a reason to pay more attention to the healthcare system fraud.

The practice of fictitious diagnoses - diseases added to the people who come to the hospital with various problems and for which the state pays, patient by patient, inflated bills - has a devastating effect: artificially impoverishes the system, intoxicates national health statistics, inflates public procurement of drugs, generates seizures.

"We are a sick nation because sometimes we invent diagnoses," admits the current Minister of Health (Ilie, 2018)

1. Healthcare fraud schemes

Unscrupulous providers will charge for additional treatment if they announce fake serious illnesses or procedures that have been carried out. For example, if an elderly patient allegedly fell inside a nursing home, a crooked provider may deliberately misdiagnose her with head trauma requiring the (unnecessary) use of computer tomography (CT) scan or/and blood tests. There are endless ways for false provider statements in poor health for the elderly or patients with severe mental disabilities.

Specific diagnoses require more extended, more expensive stays in the hospital. Unbundling is one of the most common error reporting procedures. Unbundling means charging a detailed code plus more part codes, instead of just one, that would compress all the others. For example, for a hysterectomy, one would pay 1300 USD. When unbundled, the operation would be made up of the first 1300 USD, plus 950 USD for the ovaries and Fallopian tubes removal, 671 USD for the abdomen exploration, 250 USD for the appendectomy, and 550 USD for the "lysis of adhesions." The new total is 3721 USD, instead of 1300 USD (United States Department of Health and Human Services Office of Inspector General and the American Health Lawyers Association, 2007).

Overutilization of services includes billing for services that are not needed – such as completing and charging for an unnecessary investigation. Unscrupulous practitioners use this technique to hypochondriac patients. Tests and examinations can continue indefinitely or at least as long as a patient can afford to pay for the investigations. Rehabilitation centers for drugs and alcohol users are suitable for overuse.

As per Global Study on Substance Use and Health, "in 2011, 21.6 million persons aged 12 or older needed treatment for an illicit drug or alcohol use problem. Of these 2.3 million received treatment at a special facility" (National Institute on Drug Abuse, 2018). There is obviously much potential for fraud in this field.

Like all industries, the healthcare industry's potential for corruption is great. Providers were found to unlawfully pay for referrals and/or accept payment. Obviously, when referrals are made for facilities that are not really required, such as X-rays, MRIs, prescription medications, the practice can be misused.

In order to prove the bribery/kickback scheme, you have to set the "quid pro quo." It is essential and not very convenient to claim that the provider charged or received anything of interest in exchange for referrals. Sometimes the kickbacks or bribes are hidden or disguised

in the form of luxury holidays, discounts on property rentals or hidden gifts compared to quietly slipping something under the table.
False or unauthorized issuance of prescription drugs. The abuse of prescription drugs is often characterized as taking prescription drugs (prescribed or not) for reasons beyond the wishes of physicians. The number of US people who misuse managed prescription drugs almost doubled from 7.8 million in 1992 to 15.1 million in 2003, according to the study (Center on Addiction, 2019).
The most widely abused medication is pain. The street value of these medications is almost ten times the prescribed value. Media around the country often report thieves robbing pharmacies to get painkillers at gunpoint. Tips for crime prevention also show that homeowners should make sure that visitors, particularly children and adolescents, do not have unwanted access to the prescription of the occupants.
Some patients visit several doctors, without them having any idea, in order to obtain prescriptions for the medication, particularly painkillers. Through selling the medication on the market, fraudsters can quickly recover the costs of medical visits and filling prescriptions. Even some employees of the medical facility were notorious for stealing prescription paper pads and forging prescriptions and doctor's signature. Others think they can adjust by pen the quantity or the permitted refill amounts.

2. Case study at an Infectious Diseases Hospital in Bucharest

2.1 Patients experience description

Fictitious diagnosis is a systematic method of fraud of the National Health Insurance House (CNAS). To the real ailments of patients, the ones that bring patients to the hospital, and which doctors discover at specific consultations, the statistical department of the Institute also adds a set of fictive diagnoses.
One patient, a Bucharest resident, woke up one morning in the summer of 2016 with terrible diarrhea. She was hospitalized at the “Matei Bals” Institute. A series of medical tests were done, and she was given some pills to slow down her intestinal transit. Nothing complicated, just enterocolitis. However, her diarrhea, officially exploded in the hospital documents, and in her medical history, which statisticians from the hospital loaded with an impressive collection of diseases (fig.no.1).

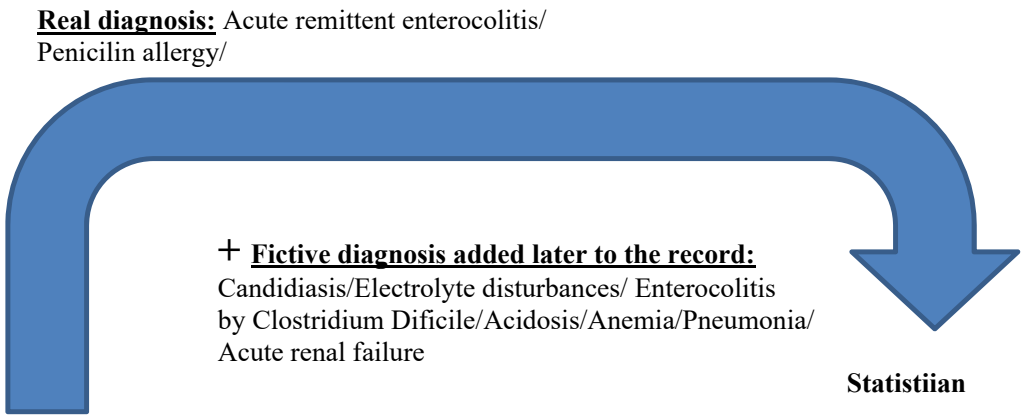

Fig. no. 1 Doctor – statistician disease trajectory
Source: Ilie, 2018. The Institute of invented diseases

Most of them are invented. There are four times more diseases than in reality, all with a direct effect on the woman's health care. In other words, for diarrhea that cost 100 Euros as treatment, we all paid 1000 Euros. Below you can read the doctor's answers for each additional disease (fig. no. 2).

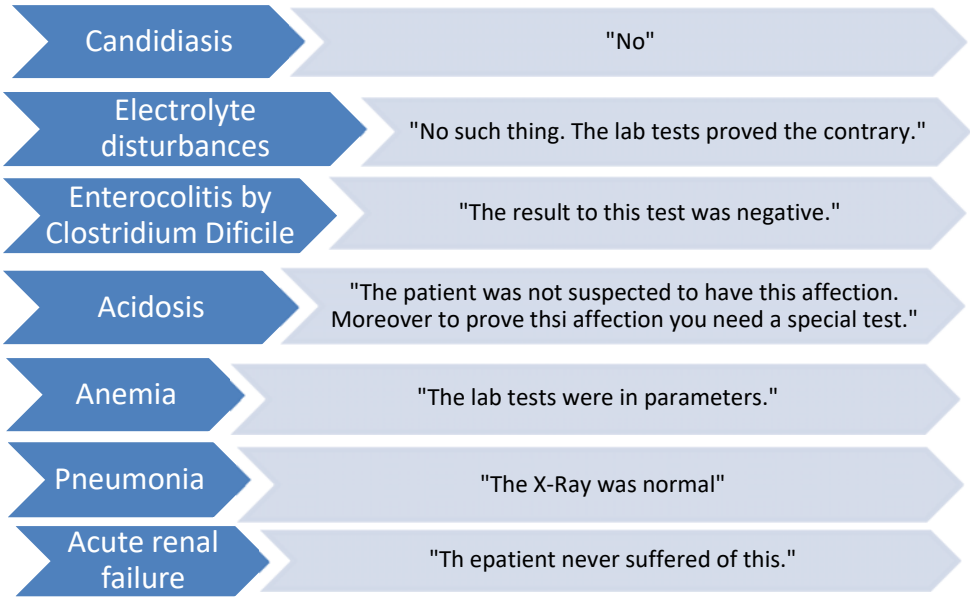

Fig. no. 2 Doctor's answer to the added diagnosis
Source: Ilie, 2018. The Institute of invented diseases

Another patient, female, 32 years of age, came in for a fungus in her mouth. Foot-and-mouth disease and acute angina with erythematous pultaceae, the doctor noted on the sheet. However, she also left with pneumonia, with the inevitable Candida, sinusitis, but also a urinary tract infection. Neither she nor her physician knew about all those other diagnoses.
"Where are my diagnoses?" asked the doctor? "The woman had something for which I made some recommendations for discharge. They have completely disappeared from the coding. It turns out she was hospitalized for something else." (Ilie, 2018)
Also, in the summer of 2016, Sorina, a 14-year-old girl, came to the hospital. She also had problems with her stomach. This time it was Salmonella, but the infections put her on her feet. However, at the statistics department, things looked much worse: Sorina had "additionally" pneumonia, Candida, anemia, and some other bad news.
Ion has a serious, confirmed diagnosis: cirrhosis caused by hepatitis C. However, he also remained in the "Matei Bals" archive as an official carrier of hepatitis B. "It is something that I wrote in the observation sheet, and another thing codifies in statistics. This man also has two diagnoses, on paper, that cancel each other out: thrombocytopenia= few platelets and thrombocytosis= many platelets" a veteran doctor from the Institute is looking amazed, at the vitiated medical history of one of the patients who passed through his hands, but which Statistics processed more expensive for the state.
The fraud scheme is starting with transmitting, in electronic format, to the institutions that manage public health policies and budgets, something different then what the doctor signs in his observation sheet. Everything is in electronic format except for the physical observation sheets. They do not dare to "fill in "on the doctors.

Only in 2016, the year in which the above patients were hospitalized, the "Matei Bals" Institute reimbursed 21 million Euros to CNAS, based on the officially communicated diagnoses, for the patients treated in the hospital.
From the amount above, 1000 Euro came for the 32-year-old female, the patient mentioned above, although the bill for diarrhea did not exceed 120 Euros.

2.2. How the Coding System works

In 1893 the International Institute of Statistics introduced the first formal classification of diseases. The method was based on the Bertillon Causes of Death list, created by Jacques Bertillon, a French statistician, and demographer. Originally developed as a classification scheme for health care, the International Classification of Diseases (ICD), includes a set of diagnostic codes for the diagnosis, providing a complicated classification of a wide range of signs, symptoms, pathological findings, grievances, social circumstances and possible causes of injury or disease (National Center for Classification in health, 2002).
Romania adopted ICD-10 in 1994, and since then, 33 additional countries joined them since that time.
This system is also used as financial regulation of services which are reimbursed to hospitals by the state of private insurers. Over time, the mechanism has become increasingly sophisticated, a public health accounting system, a strategic target governed by organic legislation, protected by special services, controlled by an autonomous agency. Nevertheless, as in the community library, the basic concepts remain simple: classification, standardization, archiving.
Every patient is a number. The disease they suffer from has a code. The medicine they are prescribed has a number. The doctor's initials are also registered. The pharmacy where the patient buys the medicine is also specially classified. We are all numbers, rows, and columns in the Unique Integrated Health Insurance Information System (SIUI), administered by CNAS and technically managed by the Special Telecommunications Service. SIUI is a matrix with the history of diseases in Romania. The ultimate source of medical statistics. It stores the data of each and one of us, with or without insurance (Romanian official Gazette, 2009).
When admitted into the hospital, every patient has an observation sheet. The information on the observation sheet is entered in the SIUI. At that moment, the patient code (ICD), the 20 digits code that the state automatically and randomly distributes to you, based on the Personal Numeric Code (CNP), is associated with the system with the specific code of the disease. This is how a patient enters the algorithm. When stopping by the pharmacy on the way home, two data streams are coupled immediately when the pharmacist records the prescription. The prescription, as well as the prescribed drug, is serialized and numbered. Both information (hospital-pharmacy) creates a unique association in SIUI, contributing to the complex map of each medical incident. Another line in a case but containing 70 types of information (fig.no.3).
Every hospital falls into the classification. What counts in the rating is the established success along the way, the severity of cases that could be treated by the hospital. All are assessed: number of beds, rural, urban, occupancy, human resources, or logistics. The connection is made using a so-called Case Mix Index (CMI). The larger the hospital, the bigger the Index. For example, the "Matei Bals" Institute has a CMI of 1,6184 because it handles complicated diseases like HIV or hepatitis, has laboratories of research, emergencies, and a university department.

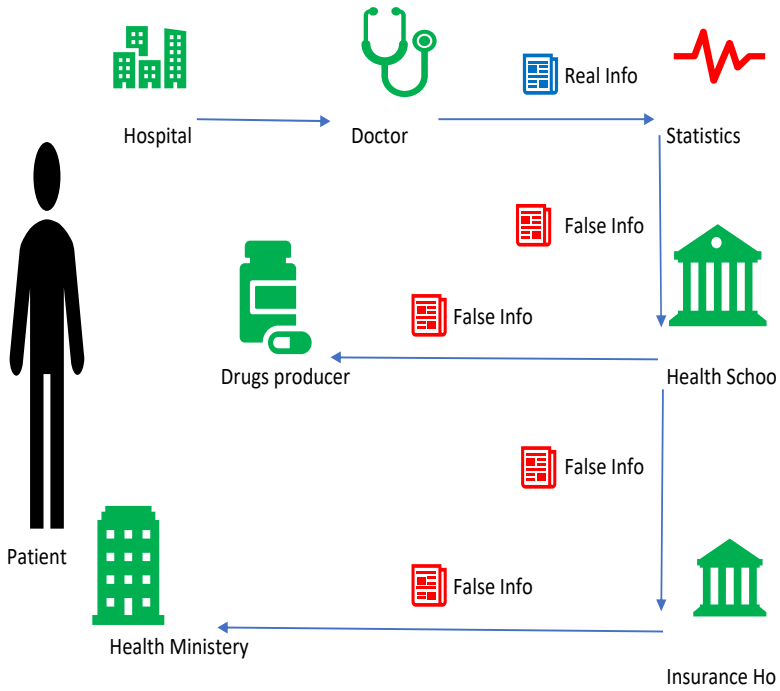

Fig. no. 3 The route of patient's information and the vitiation points. From doctors to institutions.
Source: Ilie, 2018. The Institute of invented diseases

The Buhusi City Hospital, with one working physician, has an index of 1,0548 (Duran et al., 2017). The computer confirms all the above variables with the estimated price of a medical operation, whatever their existence, and obtains a patient's Relative Value (RV), a "coefficient assigned according to the relative amount of work, consumables and capital resources required for the complete treatment of the patient with that condition" (Indaco, 2001).

Another value that the system works with is Weighted Case Rate (WCR). For example, the "Matei Bals" Institute has a WCR of 1800, while the Buhusi City Hospital has a WCR of 1444 (DRG Grouper, 2012).

Payed amount = CMI (Case Mix Index) x WCR (Weighted Case Rate) x RV(Relative Value).

Thus, the funding difference for the same pathology in different hospitals can reach up to 70% of the funding (DRG Grouper, 2016).

The fraudulently inserted fictional diseases in a man's name increase his Relative Value, which significantly increases the sum the state pays for him. The hospital substantially inflates the bill (fig. no.4).

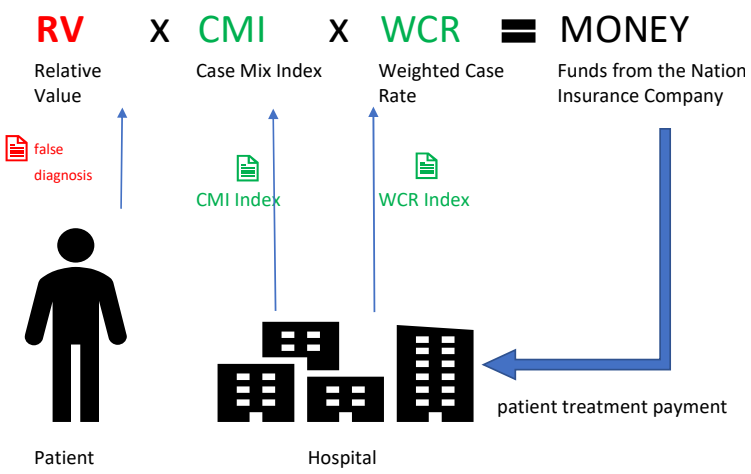

Fig. no. 4 Patient treatment payment inflating scheme

3. Consequences

Statistics is essential science, derived from the theory of the mathematical probability, which analyzes vast quantities of data and applies to almost every contemporary field. It reacts to a fundamental human goal: foresight, the natural need to predict, to be prepared. For decades, humans have studied the evolution of diseases. In this case, Corruption defeats Science. With severe short-term effects. The illness imagined in the " Matei Bals" Institute compromises the statistics. The immediate effect would be relying on false data for predicting the medical and health future of the population. Another side effect would be taking the wrong decisions based on false data, thus not being prepared in severe illness cases.

Conclusions and recommendations

The lack of regulation of hospital coding has caused a gap in monitoring the reporting of diagnosis. The final result is that we all seem a profoundly sick nation, with many added diagnoses. This field needs more resources (human and financial) for enforcement of the law, better monitoring, and evaluation, in order to achieve a better distribution of the funds towards the hospitals.

Secondly, a unique indexing system would be helpful, by eliminating different financing methods, resulting in two different payments, to two different hospitals, for the same procedure.

Aknowledgement

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