

Defensive Medicine as a Cause of Prolonged Hospital Stays

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ABSTRACT

Prolonged hospital stay refers to the length of stay in days beyond what is estimated according to the statistical parameters of each institution. Studies have shown that up to 15% of hospitalization days may be unnecessary. While various factors prolong hospital stays, defensive medicine currently impacts patient length of stay. This refers to the use of unnecessary diagnostic and therapeutic procedures or, conversely, the avoidance of patient care or the performance of procedures, with the explicit purpose of avoiding malpractice lawsuits. This implicitly implies a breach of medical ethics. This problem has implications such as damage to the doctor-patient relationship, impairment of clinical practice, and, in this case, an increase in hospital length of stay.

Keywords

Prolonged hospital stay, Defensive medicine, Medical ethics.

Introduction

Hospital care is a substantial part of the health care system. Within this, the days of stay are an important indicator to evaluate efficient care in health services; when it is prolonged, it increases demand, costs and affects the quality of patient care, saturating priority services, and reducing the availability for essential care of the patient, thus constituting a problem in the health system [1]; This situation increases due to the high incidence and prevalence of chronic diseases in Mexico.

Prolonged hospital stay refers to the time to days of hospital stay beyond what is estimated according to the statistical parameters

of each institution [2]. This term faces a series of variations depending on the place; various health systems coin the term Mean Hospital Stay (HMS) to the average time expressed in days from the patient's admission to the hospital, until they are discharged from hospital. Therefore, to identify a prolonged hospital stay, the size of the hospital (number of beds) and the EMH by area must be assessed, so there is no single criterion [3].

According to the Methodological Manual of Indicators 2022, the Mexican Institute of Social Security considers prolonged stays to be those with more than 12 hours of stay in observation areas, not applying to hospitalization areas, using for these the average number of days of hospital stay, whose objective is to measure the average time used by the unit to care for hospitalized patients in areas such as surgery, internal medicine, pediatrics, gynecology

and obstetrics, so that the average number of days of ideal stay and in accordance with the national reference value, indicates that the provision of medical care services is timely [4].

Studies have shown that up to 15% of hospitalization days may be unnecessary, and of these 63% may be for non-medical reasons, subjecting the patient to complications such as Healthcare-Associated Infections, malnutrition, pressure ulcers, even the risk of death [5].

The causes of hospital stay differ depending on the historical and social context. For example, Rosenfeld et al., in 1957, point out that the main causes of prolonged hospital stay were active medical need, that is, the need for at least one medical assessment per day, attributed to unstable chronic diseases, the need for surgical procedures and rehabilitation processes. Regarding the causes of a hospital stay without the need for active medical care, difficulty was found in transferring patients, lack of family support to the patient for discharge, deficient facilities and for scientific research reasons [6].

According to the literature, several factors prolong hospital stay, among these are: 1) those related to outpatient consultation, for example, patients who have not been studied correctly or sufficiently; 2) in-hospital factors such as delay in the preparation of laboratory studies, lack of supplies for medical and surgical procedures, delay in procedures; 3) Postoperative in-hospital factors such as infectious complications, hospital stay without apparent cause; 4) General factors related to the patient such as age, severity and intensity of the condition, physical constitution and social aspects [7].

Over the years, according to a study carried out by Uzun, an important cause of prolonged stay is due to the submission to laboratory and cabinet studies, finding that the more studies were requested, the longer their stay increased. Likewise, services such as internal medicine were more likely to present this phenomenon. As for the characteristics of the hospitalized person, senescence represents an important factor, since this population has a greater number of comorbidities [8].

Although subjecting the patient to unnecessary procedures and studies increases the number of days of hospitalization, it is a safety measure that many doctors opt for the exercise of the so-called "**Defensive Medicine**", implementing practices that justify each compliance in order to reduce the number of complaints. These practices can cause potential harm to the patient and can transgress the ethical standards of medicine [9].

Defensive Medicine and its Current Outlook

It is known that the overstay in health services depends on a diversity of factors already studied and commented on in the literature, however, a factor that has been little addressed and related to what was previously published in the article "The ignorance of health regulation as a fundamental part of the assignment of responsibilities of the medical act" of our authorship,

it is associated with the defensive medicine practiced today, giving reason to the present publication.

To understand defensive medicine, it is important to define medical *malpractice or malpractice*, which is damage caused not only by lack of attention, but also by a lack of education, experience or competence, causing errors in the diagnosis, treatment and follow-up of the patient. According to a study conducted by Ozdemir and Cools, of 248 doctors, 99.2% of the doctors surveyed thought about the possibility of taking out medical liability insurance, and 72.6% avoided treating patients considered difficult, demonstrating an increase in medicine for defensive purposes for fear of malpractice, in order to avoid legal problems [10].

Data from the American Medical Association's 2007-2008 Medical Practice Information Survey (PPI) measure the number of malpractice claims made against the physician during the exercise of his career, contemplating 5825 physicians, presenting these in 42.2% at some point in their career and 20% were sued two or more times. being more frequent with older age. In terms of specialties, those that generated the highest number of demands were general surgery and gynecology [11].

In Mexico, the report of the CONAMED (National Commission of Medical Arbitration) in 2023 received 21,457 nonconformities related to the provision of health services, being higher than in 2022 by 32%, issuing a high number of opinions for malpractice [12].

Defensive Medicine Through Time

"Defensive medicine" is not a recent term, its use was implemented in the 60's, however, Tancredi in 1978 refers to it as *the use of diagnostic-therapeutic procedures with the explicit purpose of avoiding lawsuits for malpractice, implicitly bringing the lack of medical ethics, since it goes against the interests of the patients. limiting their rights* [13].

Although the first manifestations of this term are in the 70's, there is an unexpected turn in 1994 when the OTA (Technology Office of the U.S. Congress) redefines defensive medicine, contemplates more motivations for this practice. In addition to the indiscriminate use of studies, procedures, and visits, it also includes the avoidance of medical care for certain patients, or even high-risk procedures primarily due to medical malpractice liability. By incorporating these, various authors classify defensive medicine based on the criteria that lead to its execution in 1) Objective criterion, encompassing practices of omission and commission; 2) volitional criterion, has to do with the intention or not to do so [14, 3] consequentialist criterion, that is, based on the positive or negative effects on the patient; and 4) subjective criteria, where the professional refrains from treating the patient. Acts [14,15].

What Leads to the Practice of Defensive Medicine?

The causes of the doctor's defensive behavior are multiple, among which the following stand out:

- Modifications in clinical action in the face of fear: Physicians

who, in the face of a lawsuit, suffer modification in their clinical performance, subjecting the patient to a greater number of therapeutic diagnostic procedures in order to reduce the risk of litigation for medical malpractice, it is worth mentioning that fear and little tolerance to uncertainty can affect the doctor-patient relationship. Faced with the possibility of complaint or lawsuit by the patient, the doctor avoids making the decision of certain medical treatments or surgical procedures, in the best of cases consults other doctors, or if he works in a hospital he submits the case to the corresponding committee, sometimes referring or rejecting it [16,17].

- Change in thinking and culture: With the implementation of social media, a public awareness of health problems is highlighted, highlighting medical errors and putting pressure on them, leading them to use defensive medicine consciously or unconsciously [18].
- Consumer role of patients: The pressure exerted by the patient and family members on the doctor in the face of the demand for studies and the use of medications in many cases unjustified, rather than a doctor-patient relationship, fosters a relationship between the client and the patient [18].
- Influence of the health system: Ignorance of guidelines and evidence-based medicine and limited time in patient care can compromise quality care [18].
- Proliferation of medical schools and faculties: On the other hand, medical performance and quality, in general, have also been affected by the continuous increase in medical schools and faculties, many of which reflect deficiencies in the training of doctors, who, due to the lack of knowledge of processes, practice defensive medicine [18,19].

As Andrada Alvares would mention, the "divine profession" has changed due to the practice of a different medicine called "Defensive Medicine", leaving aside normal practice to avoid accusations; this type of medicine orders medical tests, procedures or consultations as a form of medical protection from criminal lawsuits [19].

Implications of Defensive Medicine

When describing defensive medicine, its main characteristics are its occurrence in public and private practice, a loss of the doctor's authentic interest in the patient, reducing his vocation and professional ethics; there is a constant fear of the doctor to be sued affecting his performance; its use implies poor quality of care, higher economic costs in health and therefore social and institutional repercussions. Specifically produces: [20]

- Damage to the doctor-patient relationship: Although it seems logical for the doctor to perceive and seek an adequate doctor-patient relationship, Casanova points out that in a hospital just over 50% of doctors perceive a bad relationship [21]. Part of the damage in this is determined by the positivization of the rights of patients and the reduction of the idealization of the medical figure, breaking trust and dialogue in this binomial; on the one hand, doctors, being defensive, lose close communication with patients (cornerstone of a good relationship), while they question, claim, litigate the medical procedure [20,21].

- Deviation from clinical practice: It involves a radical change from doing what is possible to solve the patient's health problem to preparing to deal with future demands or complaints from the patient [22].
- Repercussions on the personal life of the doctor: According to a study carried out in Spain in 2010, legal claims against medical practice cause personal repercussions and professional activity, up to 85% of the doctors studied refer to repercussions in their family life, in addition to the economic cost of a medical claim [23].
- Prolonged stay: An increase in the use of diagnostic and therapeutic supplies is reflected in the cost of medical care [24].

Prolonged Stay in a Public Context

With the passage of time, the practice of defensive medicine has intensified, and with it the number of demands, generally in high-risk areas and specialties, thus increasing in public and private sector hospitals [25]. Although there are many causes of a prolonged stay, defensive medicine could be an important one of these, from which the following question arises: *What is the situation in a public context?*

Showing as an example of a public context the Regional General Hospital of the Mexican Institute of Social Security (IMSS), which reflects the probable practice of defensive medicine, through prolonged hospital stays. This hospital has an infrastructure that contains 200 hospitalization beds divided into core sections: internal medicine with 64 beds, general surgery with 56 beds, gynecology and obstetrics with 33 beds, and pediatrics with 47 beds. Services such as Internal Medicine and Surgery, with a greater influx of patients and extended stays in 2023, compared to other areas, are subject to continuous surveillance and evaluation, through variables such as the number of hospitalized patients according to the portfolio offered, occupancy percentage, patients with extended stays per day, patients with medical pre-discharge, effective discharges (before 10 a.m. and 6 p.m.), discharges due to death and attributions of prolonged stays, in addition to their cost based on the GRDS as an added factor.

Regarding the average number of days of stay, according to Table 1, there is an achievement in the reference value of all services that is indicative of the resolution of patients' health problems in an optimal time according to pathologies.

As in Mexico, in the HGR, chronic-degenerative and cardiovascular pathologies represent the first causes of hospital care; This situation is contemplated in outpatient care and hospitalization, so it would be expected that the largest number of hospitalization admissions would occur in the Internal Medicine Division considering subspecialties such as cardiology, geriatrics, nephrology, neurology, psychiatry; however, according to the results of Table 2. It can be seen that, although Diabetes Mellitus is among the ten main causes of consultation, it is not the first cause, it is displaced by Kidney Failure, arthropathies and other pathologies.

Table 1: Average Days of Hospital Stay per service in an IMSS Hospital in 2023.

	January	February	March	April	May	June	July	August	September	October	November	December	Accumulated
CUSN06	76.13%	72.74%	80.56%	71.80%	75.70%	81.89%	80.14%	75.98%	75.63%	85.71%	81.35%	73.49%	77.60%
CUSN07MI	6.2	8.3	8.37	7.3	7.02	7.23	7.35	7.24	7.46	6.55	6.23	6.65	7.32
CUSN07CG	5.2	5.9	5.8	5.2	4.78	5.3	5.77	5.67	5.51	4.59	4.65	4.69	5.37
CUSN07PED	2.6	3	3.1	3.3	4.87	3.24	3.52	3.61	3.31	2.97	3.08	2.97	3.35
CUSN07GO	2.08	1.94	1.95	2.1	1.92	2.53	2.11	2.29	2.28	2.17	2.27	2.05	2.17

*NRV: National Reference Value

*CUSN: Coordination of Second Level Units based on the Methodological Manual of Medical Indicators

*Highlight: Yellow: Mean Value Green: Within the NRV

*Source: IMSS Medical Indicators Portal.

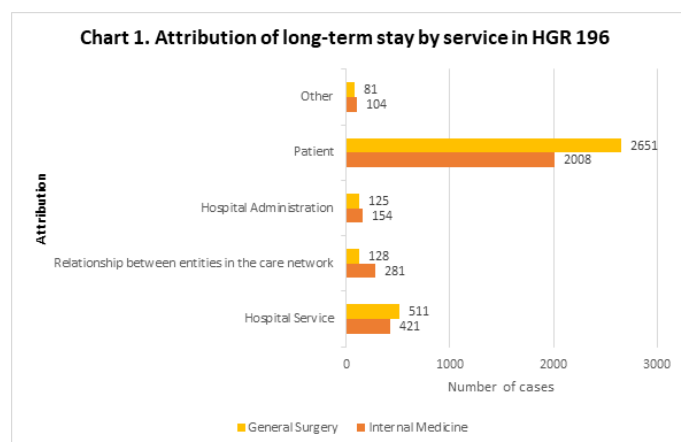
Table 2: Main reasons for consultation 1st time and subsequent in an IMSS Hospital in 2023.

NP	Reason for query by ICD 10 code	1st Time	Subsequent	Total
1	Renal Failure (N17-N19)	4355	3953	8308
2	Arthropathies (M00-M25)	4698	1853	6551
3	Soft Tissue Disorders (M60-M79)	3192	960	4152
4	Dorsopathies (M40-M54)	3249	861	4110
5	Non-inflammatory disorders of the female genital organs (N80-N98)	3233	844	4077
6	Malignant tumors that are declared or presumed to be primary of specified anatomical site except of hematopoietic lymphatic tissues and similar (C00-C75)	1768	1558	3326
7	Persons in contact with health services with reproduction-related circumstances (Z30-Z39)	2804	389	3193
8	Lens disorder (H25-H28)	2277	628	2905
9	Human Immunodeficiency Virus Disease HIV (B20-B24)	1118	1731	2849
10	Diabetes Mellitus (E10-E14)	1713	928	2641

*Source: Medical Information Area and Clinical Archive. HGR

Table 3. Breakdown of hospital stays and HGR attribution																
Hospital Service	Total number of hospitalized patients	Occupancy percentage	Patients with prolonged stay		Average days of stay	Patients with pre-discharge	Percentage of pre-discharge use	Effective discharges	Percentage of effective discharges	Expenses due to death	Mortality	Attribution				
			Number	Percentage								Health personnel	Relationship between entities in the care network	Hospital administration	Patient	Other
Internal Medicine	3045	95	1245	40	17.2	1045	35	2011	68	211	7	421	281	154	2008	104
General Surgery	3496	117	984	28	14.6	1321	38	2409	69	194	5	511	128	125	2651	81
Weekly summary	6541	10600%	2229	3400%	15.9	1366	3650%	4420	68.50%	405	600	932	409	279	4659	185
												42%	18%	13%	209%	8%

*Source: Weekly report on hospital stays of an IMSS Regional Hospital.



*Source: HGR Weekly Report on Hospital Stays.

During the year 2023, a total of 6541 patients were treated in the Internal Medicine and General Surgery services, with the following distribution: Internal Medicine 3045 patients (46.55%), General Surgery 3496 patients (53.44%); hospital occupancy was 95% for Internal Medicine and 117% for General Surgery, due to an inadequate recording of the total number of beds in the source formats.

Of the hospitalized patients, patients with a prolonged stay were 40% (N 1245) and General Surgery 28% (N 984) of the total number of patients hospitalized in each service. The average number of days of stay for Internal Medicine was 17.2 days; that is, 7.6 days more than the (National Reference Value) NRV; while for the General Surgery service it was 14.6 days, with 8.2 days higher than the NRV.

Considering the attribution related to prolonged stay, it was distributed as follows: In the Internal Medicine service by health personnel 421 (13.82%), relationship between entities of the care network 281 (9.2%), hospital administration 154 (5%), patient 2008 (65.94%), other cause (3.4%). In terms of general surgery, the causes attributable to health personnel 511 (14.61%), related to entities of the care network 128 (3.6%), hospital administration 1125 (3.5%) and patient (75.8%), others 81 (2.3%).

Various delays contribute to prolonging the hospital stay, in the example, the delay in carrying out diagnostic studies, mainly affecting General Surgery, resulting in delays in the performance of surgical procedures and in interconsultations, the latter being inherent to the service provider. For the days of hospitalization, the five services presented significant differences: Internal Medicine, Urology and General Surgery, Cardiology and Neurology, where patients with delayed interconsultation stay hospitalized longer; The low resolution of interconsultations has a very important influence on prolonged stays.

Conclusions and Recommendations

The length of stay in hospitalization is a relevant factor, due to its relationship with the patient's administrative and clinical diagnosis processes. The services provided require the maximum possible efficiency, in order to guarantee the quality of care and prompt recovery of the patient; therefore, it is very important to have adequate infrastructure, the necessary technological and scientific instruments, and sufficient human and material resources.

One of the most important indicators for evaluating management based on utilization is the Average Hospital Stay or Average Hospital Stay, which, together with the percentage of occupancy, the performance index and the substitution interval, evaluate the degree of hospital bed utilization. Therefore, a low Average Stay is linked to the development of a resolute clinical practice based on the adequacy of the use of health resources and an effective provision of patient care.

On the contrary, a prolonged hospital stay generates negative effects on the health system, increasing costs, decreases accessibility to hospitalization services, indicates an inadequate use of resources, reflects problems in the hospital's resolution capacity, produces saturation of services and risk of adverse effects on the patient.

Derived from the fact that a cause of prolonged stay is defensive medicine, it is important to implement strategies to avoid this act, which causes frustrations in the doctor and patient, influencing doctor-patient communication; among these broad expectations of patients, discomfort and uncertainty and unnecessary consultations. In order to prevent, it is advisable to promote basic actions such as the preparation of an adequate medical history, a complete physical examination and assertive and empathetic communication, which are the best strategies to avoid litigation due to bad practices, reducing the use of unnecessary tests [26].

Velazquez T, recommends knowledge of the patient's sociocultural context, in order to understand their human situation and promote communication through the patient's narrative. Likewise, to understand the biopsychosocial aspects of their disease, including hygienic and dietary habits, lifestyle, among others. This will have a favorable impact on the patient, reducing the feeling of helplessness in the patient [27].

In Mexico, defensive medicine is common, being part of daily medical practice. A medical preparation according to Ramírez et al. solid in effective and empathetic communication strategies will allow the judgment and free exercise of their profession [28].

In general, Eftekhari et al. point out as a recommendation a greater adherence to standardized protocols and guidelines in patient management and implementation of strategies which they group into organizational-managerial, social and those that focus on the medical complaint management system useful to reduce prolonged stays due to defensive medicine practice [29]. There are many actions and areas of opportunity for the prevention of prolonged stays secondary to the practice of defensive medicine, however, in the face of a continuous change in patient demand, it is necessary to update medical not only in scientific knowledge, but also in ethical action [30].

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