

Medical Treatment Negligence Analysis

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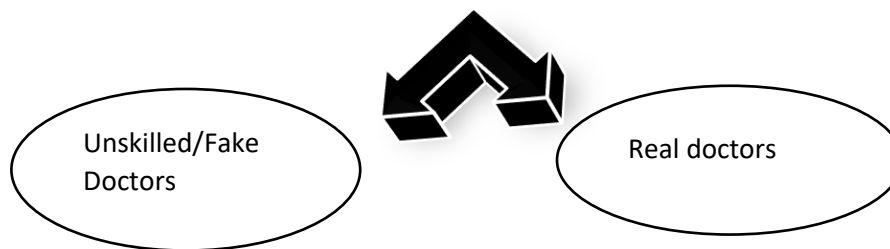
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Idea

Negligence is that violation of the responsibility to worry. A breach of such kind provides a patient with rights to initiate action against negligence.

Persons who provide medical recommendation and treatment implicitly state that they possess the ability and information to treat. They make sure that there is no question from the patient side whether or not they are willing to proceed with the treatment, and to administer that treatment. This is often referred to as associate “implied undertaking” on the part of a medical skilled.

This very fact itself is prone to ambiguity. Most of the times the result is a successful outcome. Doctors operate on the patients and it proves to be a triumphant one. But there are cases where mishap occurs. There are 2 possible scenarios in this case:



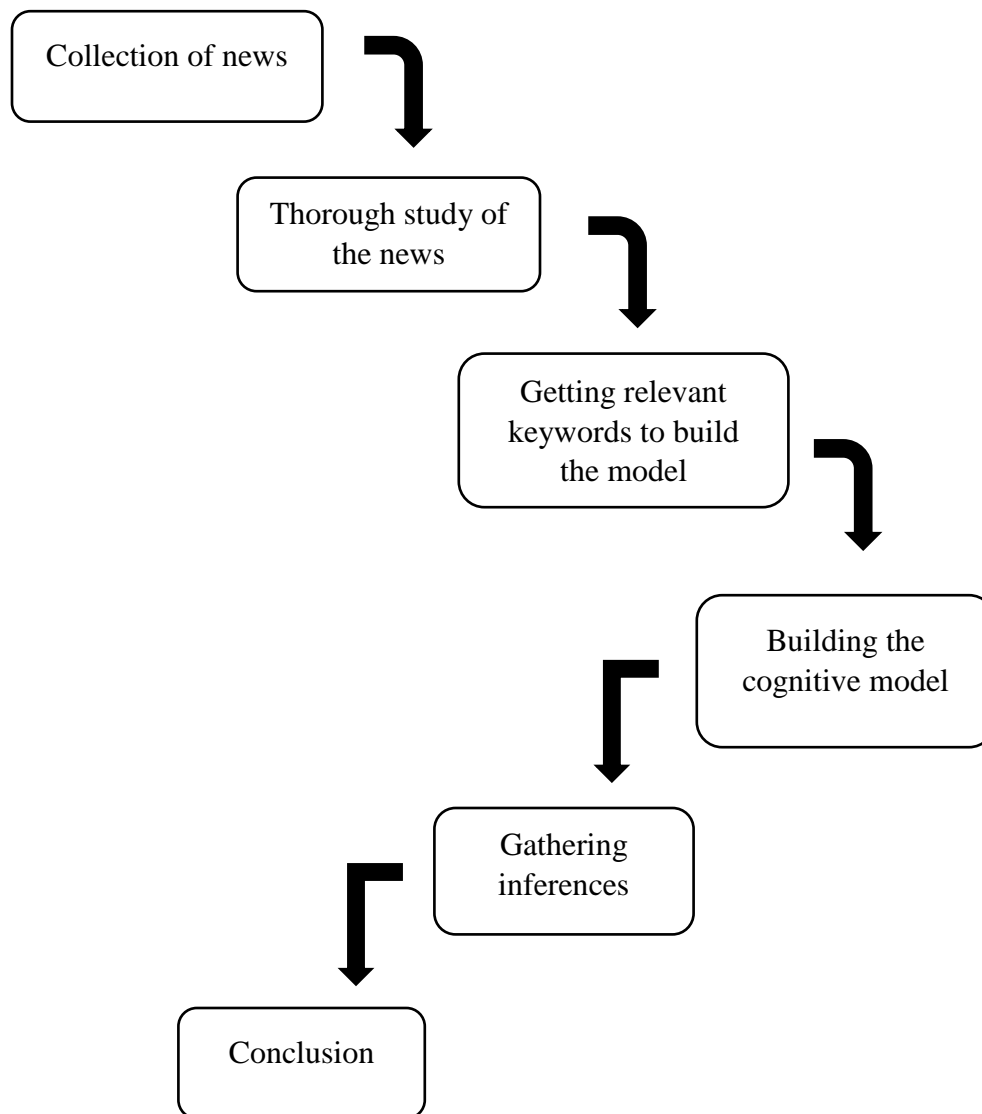
Some people pose themselves as doctors to stand out as a prominent figure in the society. Using forged documents, they are able to deceive the common eye and practise medicine. This, in turn, leads to many mishaps. In certain other cases, it is the real, qualified and renowned doctors who carry out a wrong treatment based on countless possible factors. This causes unwanted issues too.

Sometimes, even the hospital facilities are not good, which in turn, makes the doctor perform poorly on his treatment work. This is a form of negligence of the hospital authorities as a whole.

Hence, our project aims to develop a cognitive model for analysis of the issues where negligence of doctors and hospitals has caused great distress to the affected families and people.

Our idea is to extract insights from the collected news reports of various cases related to negligence of doctors/hospital authorities and classify the causes into different categories. This will help us understand the usual trend of negligence and identify the source of the issue.

This project aims to minimise the numerous deaths/mishaps of innocent people which occur due to the poor governance and obtuse practice prevailing in the medical sector of our country. We hope to provide an easy-to-understand model so that the idea reaches to the remote masses of the country, where this is prevalent in a more acute manner.



Literature Review

PAPER TITLE	AUTHOR	IDEA	RESULTS
Clinical errors and medical negligence	Femi Oyebode	The paper discusses the relationship between clinical errors and medical negligence as well as characteristics of lawsuits and events that are sources of lawsuits. The pattern of malpractice claims have been examined. Among the hospitalized worldwide, 3-16% suffer injury as a result of medical intervention, usually due to adverse drug effects. This frequency appears higher in intensive care units and emergency departments.	The paper concludes that 1 in 7 adverse events in medicine result in malpractice claim and the factors that predict that a patient will resort to lawsuit depends on the poor relationship between clinician and the patient and the feeling that the patient was not kept informed. Methods for preventing clinical errors are still in their infancy. The most promising include new technologies such as electronic prescribing systems, diagnostic and clinical decision-making aids and error-resistant systems.
Closed medical negligence claims can drive patient safety and reduce litigation.	Pegalis, S. E., & Bal, B. S.	Malpractice claims were studied and leading causes of surgical error and their ways to prevention was also researched. 444 closed malpractice claims were studied from 4 liability insurers, in which patients alleged a surgical error. Surgeon-reviewers examined the litigation file and medical record to determine whether	Reviewers identified surgical errors that resulted in patient injury in 258 of the 444 (58%) claims. Sixty-five percent of these cases involved significant or major injury; 23% involved death. In most cases (75%), errors occurred in intraoperative care; 25% in preoperative care; 35% in postoperative care. Thirty-one percent of

		an injury attributable to surgical error had occurred and, if so, what factors contributed.	the cases had errors occurring during multiple phases of care; in 62%, more than 1 clinician played a contributory role. Systems factors contributed to error in 82% of cases. The leading system factors were inexperience/lack of technical competence (41%) and communication breakdown (24%). All this data is pertaining to medical care at the US.
Craniofacial surgery and adverse outcomes: an inquiry into medical negligence.	Svider, P. F., Eloy, J. A., Folbe, A. J., Carron, M. A., Zuliani, G. F., & Shkoukani, M. A.	The study aimed to evaluate factors contributing to medical negligence relevant to craniofacial surgery. The methods employed were Retrospective analysis of verdict and settlement reports on the Westlaw legal database for outcome, awards, physician defendants, and other specific factors raised in malpractice litigation.	Of 42 verdicts and settlement reports included, 52.4% were resolved with either an out-of-court settlement or plaintiff verdict, with aggregate payments totaling \$50.1M (in 2013 dollars). Median settlements and jury-awarded damages were \$988 000 and \$555 000, respectively. Payments in pediatric cases (\$1.2M) were significantly higher. Plastic surgeons, oral surgeons, and otolaryngologists were the most commonly named defendants. The most common alleged factors included intraoperative negligence (69.0%),

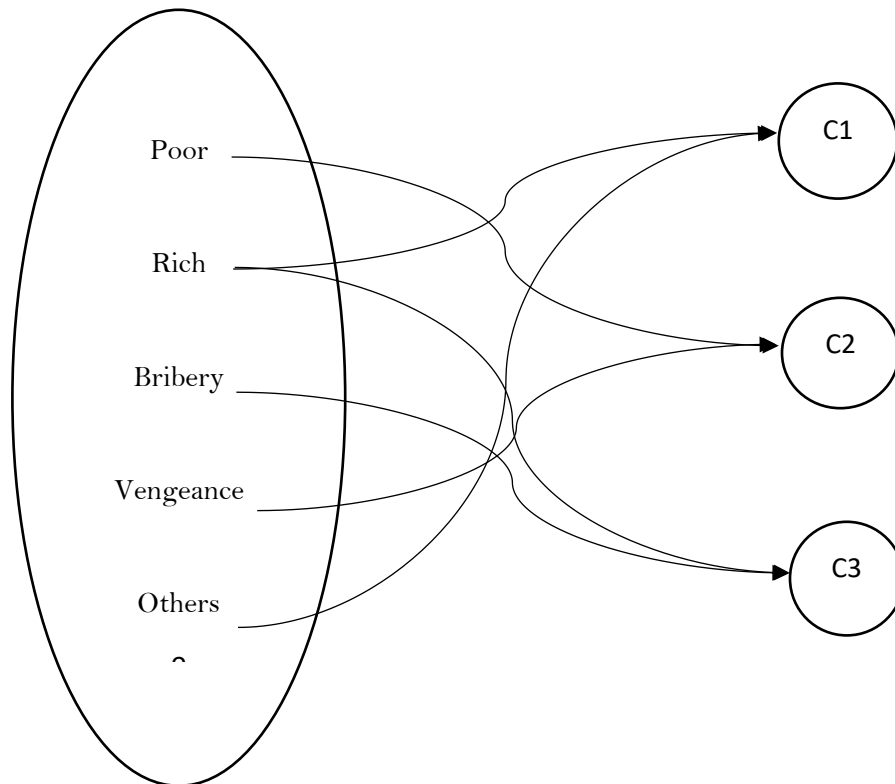
			<p>permanent deficits (54.8%), requiring additional surgery (52.4%), missed/delayed diagnosis of a complication (42.9%), disfigurement/scarring (28.6%), postoperative negligence (28.6%), and inadequate informed consent (20.6% of surgical cases). Failure to diagnose a fracture (19.0%) and cleft-reparative procedures (14.3%) were the most frequently litigated entities.</p>
<p>Knowledge and Awareness among interns and residents about medical law and negligence in a medical college in Vadodara—A Questionnaire Study.</p>	<p>Rai, J. J., Acharya, R. V., & Dave, D.</p>	<p>In India, a study in Bilaspur was conducted [4], comprising of 123 doctors, 68 males and 55 females from varying departments to gauge the frequency of doctors having knowledge of medical law and consequences of negligence. A questionnaire was developed to assess the awareness of consumer protection act and whether they were following medico legal aspects.</p>	<p>It showed that 79.2% of the doctors were aware about the code of medical ethics. Male doctors showed more knowledge compared to female doctors. Department wise general surgeons were slightly more aware than gynaecologists. Along lines of experience also the knowledge differed.</p>
<p>Medical liability of the physician in training.</p>	<p>Wegman, B., Stannard, J. P., & Bal, B. S.</p>	<p>Medical liability of a physician in training has been studied, whether the proper standard governing</p>	<p>Results have shown that the standard by which the professional conduct of a physician in training is measured</p>

		<p>resident physician conduct should be that of a reasonably competent generalist physician, that of a specialty physician, or whether the standard should be some subjective determination that addresses the resident level of training. Westlaw™ and LexisNexis®, two major legal databases used by law professionals, were searched to identify existing case law and law review articles related to the standard of care that applies to physicians in training. Of 57 sources initially identified, 15 legal cases and 10 law review papers addressed the standard of care pertaining to physicians in training.</p>	<p>has varied; most recent legal cases have applied a specialty physician standard. Relevant court rulings have tried to strike a balance between patient interests versus the societal need to train physicians. But conclusively it is the responsibility of the doctor who supervises the professional conduct of the resident.</p>
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Architecture Diagram

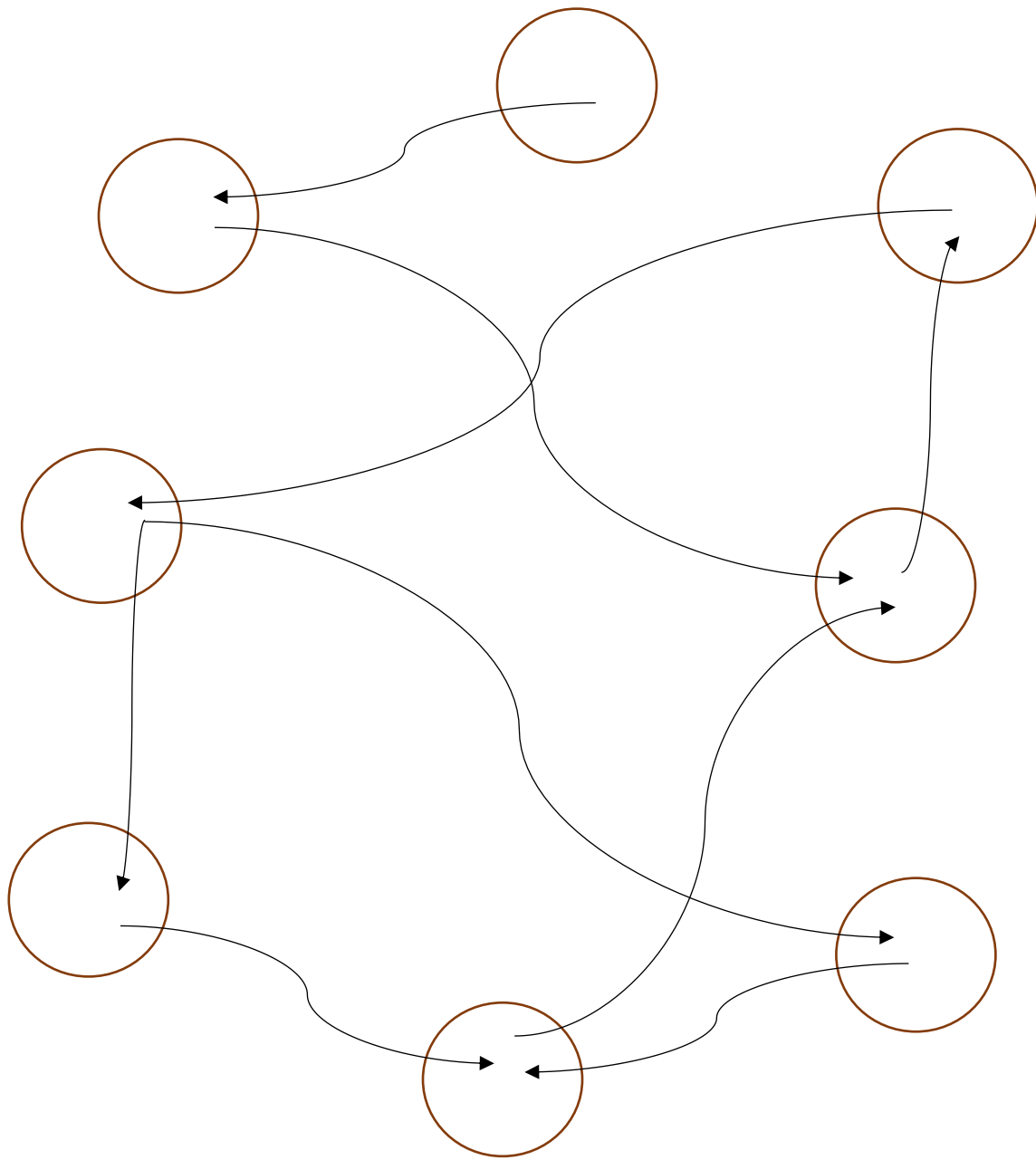
Fuzzy Cognitive Maps will be used for modelling of the samples.

We'll have to classify the data into various categories. And then use them for FCM.



Overall layout of the Fuzzy Cognitive Map with the circles representing various *key terms* obtained from the unstructured sample data, i.e. from the newspaper cuttings and online news.

Here, the *weights* will be decided later based on the interdependency of the terms with each other.



Literature Survey

In [1] by Femi Oyeboade, the paper discusses the relationship between clinical errors and medical negligence as well as characteristics of lawsuits and events that are sources of lawsuits. The pattern of malpractice claims has been examined. Among the hospitalized worldwide, 3-16% suffer injury as a result of medical intervention, usually due to adverse drug effects. This frequency appears higher in intensive care units and emergency departments. The paper concludes that 1 in 7 adverse events in medicine result in malpractice claim and the factors that predict that a patient will resort to lawsuit depends on the poor relationship between clinician and the patient and the feeling that the patient was not kept informed. Methods for preventing clinical errors are still in their infancy. The most promising include new technologies such as electronic prescribing systems, diagnostic and clinical decision-making aids and error-resistant systems.

In [2] malpractice claims were studied and leading causes of surgical error and their ways to prevention was also researched. 444 closed malpractice claims were studied from 4 liability insurers, in which patients alleged a surgical error. Surgeon-reviewers examined the litigation file and medical record to determine whether an injury attributable to surgical error had occurred and, if so, what factors contributed. Reviewers identified surgical errors that resulted in patient injury in 258 of the 444 (58%) claims. Sixty-five percent of these cases involved significant or major injury; 23% involved death. In most cases (75%), errors occurred in intraoperative care; 25% in preoperative care; 35% in postoperative care. Thirty-one percent of the cases had errors occurring during multiple phases of care; in 62%, more than 1 clinician played a contributory role. Systems factors contributed to error in 82% of cases. The leading system factors were inexperience/lack of technical competence (41%) and communication breakdown (24%). All this data is pertaining to medical care at the US.

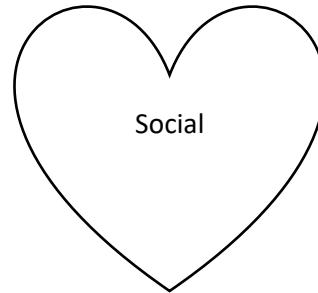
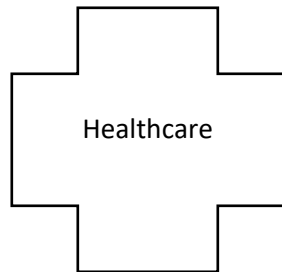
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Type of the project

Our project is related to two categories, from the mentioned categories of topic.



The issue originates from the healthcare sector and affects the society. Hence, it's an amalgam of two categories.

Reasons to be of Healthcare domain:

- Involves doctors and patients
- Involves hospital facilities
- Involves surgery reports and medical practices
- Sometimes involves euthanasia without consent

Reasons to be of Social domain:

- Involves the public
- Involves the issue of deaths of innocent people
- Causes uproar among the general public
- Affects individual or a certain community as whole

References

- [1] Oyeboade, F. (2013). Clinical errors and medical negligence. *Medical Principles and Practice*, 22(4), 323-333.
- [2] Pegalis, S. E., & Bal, B. S. (2012). Closed medical negligence claims can drive patient safety and reduce litigation. *Clinical Orthopaedics and Related Research®*, 470(5), 1398-1404.
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- [4] Rai, J. J., Acharya, R. V., & Dave, D. (2013). Knowledge and Awareness among interns and residents about medical law and negligence in a medical college in Vadodara—A Questionnaire Study. *Journal of Dental and Medical Sciences*, 3(4), 32-8.
- [5] Wegman, B., Stannard, J. P., & Bal, B. S. (2012). Medical liability of the physician in training. *Clinical Orthopaedics and Related Research®*, 470(5), 1379-1385.