JUNE 2025 (№34)
Volume 11; Issue 2; Page No. 38-51
ISSN: 2346-7916 (Print)
ISSN: 2587-5043 (Online)

INTERNATIONAL JOURNAL OF LAW: "LAW AND WORLD" www.lawandworld.ge

https://doi.org/10.36475/11.2.4

Towards a Special Compensation System Aligned with the Unique Nature of Civil Liability for Medical Applications of Genetic Engineering

Yekhlef Abdelkader
Ph.D., Associate Professor of Law and Political Sciences,
Ammar Telidji University of Laghouat, Algeria
a.yekhlef@lagh-univ.dz

ARTICLE INFO

Article History:

Received	6.04.2025
Accepted	21.05.2025
Published	30.06.2025

Keywords:

Compensation system, Medical liability, Civil liability, Genetic engineering

ABSTRACT

Medical civil liability has attracted significant attention from researchers due to the issues it raises, especially those related to the use of modern practical, medical, and biological means in treatment and diagnosis. This study aims to analyze the effectiveness of traditional civil liability rules in compensating for damages resulting from the use of genetic engineering in the medical field, focusing on Algerian and comparative legal systems.

The study finds that the current judicial mechanism of fault-providing compensation is not sufficient now to satisfy the demands of modern medical risks, and therefore, there should be new models of compensation reflecting the peculiar nature of medical liability and reinforcing and supplementing judicial protection of patients harmed by modern medical procedures. In addition, this research takes into account future ethical challenges in genetic use and addresses alternative models of compensation being proposed in other jurisdictions. The study points towards the need for urgent legislative reform that balances.

INTRODUCTION

The technology has become essential in medical and therapeutic research, a landmark in modern science, particularly in gene therapy and early disease detection, rather than detection at an advanced level.

Yet whereas these technologies are bringing enormous benefits, their increasing use exposes patients to risk from therapeutic or experimental treatments with unanticipated physical health effects in the long term. On the one hand, they appear to be offering cures for difficult-to-treat diseases; on the other, they raise serious legal and ethical concerns.

Their use can, in some cases, cause physical or psychological harm to patients. This reality makes it necessary for there to be a strict legal framework to control their use—a framework that honors bodily integrity and protects individuals against harm.

In such an event, the intervention of physicians using genetic engineering to diagnose and cure patients becomes more complex. Physicians can, by negligence or failure to properly use such means, cause harm to the patient, thereby incurring liability under law.

Thus, this study aims to explore the scope of civil medical liability that has emerged due to genetic engineering being applied in clinical practice. It focuses on the legal nature of liability and compensation processes for resulting harm.

This study will examine the regulation needed to oversee the use of genetic technologies in medicine, along with how liability for genetic injury differs from traditional medical liability.

Based on the foregoing, this research paper seeks to address the following core question: What are the distinctive characteristics of civil medical liability arising from the use of genetic engineering, particularly concerning its legal nature and the rules governing compensation?

To answer this question, the research will take a deductive analytical path, founded upon the interpretation of the relevant legal documents that determine the nature of civil medical liability and the clarification of the technologies of genetic engineering and their fields of application.

The research will also analyze the legal precepts that govern the compensation of damage resulting from the use of these technologies.

1. GENETIC ENGINEERING BETWEEN MEDICAL BENEFITS AND REGULATORY CONSTRAINTS

Scientists deciphering genetic codes during the technological revolution have enhanced our understanding of organism traits and disease causation. The breakthrough led to the treatment of genetic diseases through gene therapy, and euphoria and alarm swept scientific circles. Although some see enormous potential for humankind, others worry about misuse.

1.1. The medical applications of genetic engineering

Scientific advances in medicine, genetics, and biology have led to the discovery of innovative techniques that have opened vast new horizons, particularly in the areas of genetic diagnosis and gene therapy.

1.1.1. The role of genetic engineering in disease diagnosis

Pre-marital testing can identify carriers of genetic mutation and assess the risk of passing it on to the child, and enable couples to make informed decisions regarding reproduction, reducing the chance of inherited illness. Similarly, prenatal testing can reveal fetal genetic abnormalities,[1] allowing parents to prepare medically—yet it also raises moral concerns surrounding selective abortion, thus requiring comprehensive ethical counseling. In the context of IVF,[2] preimplantation genetic diagnosis (PGD) permits the selection of embryos free from genetic disorders, significantly improv-

1 Al-Bouaichi Al-Kilami, F. (2011). Medical Examinations of Spouses Prior to Marriage – Their Legal Bases and Objectives (1st ed.). Dar Al-Nafaes for Publishing and Distribution, Jordan. p. 140.

2 Ouskin, A. (2007). The Legal Status of the Human Being Before Birth. In Family Law and Scientific Developments. Laboratory of Law and Modern Technologies, Faculty of Law, University of Oran. p. 18.

ing healthy pregnancy outcomes for high-risk families.[3]

Yet, such breakthroughs are accompanied by profoundly ethical issues. Disclosure of genetic information can amount to an invasion of privacy and expose individuals to the risk of discrimination in the work environment or under insurance policies. To prevent this, robust legal protection is required to ensure that individual rights are protected while ensuring that the utility of genetic technologies is balanced against the values and moral principles of society.[4]

1.1.2. The role of genetic engineering in the treatment of diseases

Gene therapy, in particular, has transformed the management of inherited disease because it deals with the underlying genetic causes of a disease rather than symptoms. It is achieved through the introduction of new functional genes, the enhancement of current genes, or the removal of harmful sequences. These interventions are today more targeted because of CRISPR technology.

Existing approaches, initially applied in rare genetic diseases like cystic fibrosis, are now being adapted to oncology to optimize immune recognition of tumors and optimize responsiveness to treatment. With widespread administration of viral vectors for gene delivery, delivery continues to be a significant concern.

In HIV-specific studies, gene editing in reengineered immune cells has been utilized to preclude viral replication. Quantum advances permitted through genomic diagnosis using germline modifications support early diagnosis of mutations based on personalized medicine. Use of genetic technologies brings in conjunction with it ethical and legal issues, mainly consisting of the long-term outcomes and social repercussions of germline modification.[5]

1.2. The legal conditions for the use of genetic engineering in the medical field

There are no special legal provisions in Algerian law for genetic screening and treatment of genetic engineering due to the novelty of such technology. Article 7 bis of the Code de la Famille[6] addresses genetic therapy and diagnosis,[7] and it stipulates prenuptial medical screening. The law does not specify, however, what disease is to be screened for, and it leaves physicians to do so. The law does not specify, however, which disease is to be screened, but leaves it to the discretion of physicians. Genetic engineering and stem cell therapy are governed by Article 355 of the Health Law, which prohibits the removal or transplantation of human organs or tissues except for therapeutic or diagnostic purposes. The doctor's motive must be treatment for a justifiable reason, and if harm results from transferring stem cells, the doctor must not do so to avoid civil and criminal liabilities.[8]

To perform cell, tissue, or organ transfers for treatment, Algerian legislation establishes some general principles such as licensure in medicine, respect for scientific practice, and informed consent by the patient. The following requirements must be fulfilled:

1.2.1. It should be considered as the last resort for treatment or diagnosis

This condition is emphasized in Article 355 of the Health Law (18-11), which states that human organs cannot be removed, nor tissues or organs transplanted, except for therapeutic or diagnostic purposes. This technique may only be utilized if it is the only available method to treat or preserve the life of the patient or to ensure their physical

3 Zaghbib, N. E. H. (2008–2009). Genetic Engineering and the Criminal Protection of the Human Genome. (Master's thesis, Faculty of Law and Political Sciences, University of Frères Mentouri, Constantine). p. 115.

4 AMPD Languedoc Roussillon. (2013, February). Doping through Genetic Material Modification, Introduction to Gene Therapy, Part II. Hôpital Lapeyronie. p. 01. Available at: <http://wwwold.chu-montpellier.fr/publication/inter_pub/R226/A12813/IntroductionTG.pdf>.

5 Al-Bahji, E. A. (2006). Compensation for Damages Resulting from Genetic Engineering Applications in Light of Civil Liability Rules. Dar Al-Jami'a Al-Jadida for Publishing, Egypt. pp. 100, 102.

6 Family Code, Article 7 bis, and Executive Decree No. 06/154 (2006). Ordinance No. 05-02 (2005). Article 07, including the Family Law. Official Gazette of Algeria.

7 Ben Sghir, M. (2015). The Provisions of Medical Error under Civil Liability Rules: A Foundational Comparative Study (1st ed.). Al-Hamed Publishing and Distribution, Jordan. p. 266.

8 Law No. 18-11. (2018). Article 359, Paragraph 2, and Article 413 relating to health. Official Gazette No. 46.

well-being, without posing any danger to the patient's life or the donor's health. It should also be confirmed that the donor (the source of the cell) is not suffering from any infectious disease that can be transmitted along with the stem cells. This is further underlined in Articles 360, 361, and 364 of the Health Law.[9]

1.2.2. Formality requirement

Algerian law makes available legal formalities in medical contracts under Health Law 18-11. Donors must provide informed, voluntary consent before the head of the regional court, where it is subjected to a test of legality.[10] A report by an expert board is followed by a second authentication to confirm that consent and legislation have been satisfied. Donors can revoke their consent at any time.[11]

For cadaveric donors, Article 362 of the Health Law prohibits organ or cell removal without a certain medical and legal determination of death, as per scientific criteria. In the absence of a written objection, consent must be obtained from relatives or, if absent, the legal heir. Donor anonymity must be maintained by the recipients and their families. Organ removal is prohibited if it interferes with a forensic autopsy, which must take precedence.

Recipients must give written consent in the presence of the chief physician and two witnesses. When the recipient is incapable, a member of the recipient's family may give it. When urgency or exceptional circumstances render contact impossible, the written consent may be waived.[12]

1.2.3. Eligibility

Before the operation, patient consent—or that of a guardian or legal representative—must be obtained, as stipulated in the final paragraph of Article 364 of the Health Law and Articles 44 and 52 of the Code of Medical Ethics. Consent is valid only after the treating physician has fully informed the patient or their representatives of potential medical risks.

As for organ donation, Algerian law prohibits donations from minors, individuals lacking discernment, those without legal capacity, and adults with health conditions that may compromise either the donor or recipient. The physician must inform all eligible donors of the medical risks involved. Donors may withdraw consent at any time, without formal procedures.

A notable feature of Health Law 18-11 is the allowance of blood-forming organ removal from a minor donor, but only for the benefit of a sibling. If no other treatment exists, the procedure may extend exceptionally to a cousin, niece, nephew, or similar relatives (e.g., child of an uncle or aunt), provided that both parents or the legal representative give informed consent.[13]

1.2.4. Free of charge

Algerian Health Law Article 358 prohibits financial transactions in the removal and transplantation of human organs, tissues, and cells. The law also ensures that the identity of the dead donor and the recipient's family shall not be disclosed. The law also prohibits physicians who certified the donor's death from being part of the transplant team to prevent suspicion of illegal inducement or coercion. Article 367 mandates that professionals who are performing organ removal or transplant not receive any fees for the procedures. The measures ensure the ethical management of the human body and rule out any chance of monetary exchange.[14]

1.2.5. Authorization for the venue of organ or cell transplantation

The Algerian legislator also stipulates that organ and tissue transplantation procedures must take place in hospitals authorized by the minister responsible for health to perform such operations. These hospitals are to operate under the

9 Health Law No. 18-11. (2018). Articles 361, 364; Executive Decree No. 92-276. (1992), Article 43, Code of Medical Ethics. Official Gazette No. 52. Health Law No. 18-11. (2018). Articles 363, 367. Health Law No. 18-11. (2018). Article 366; Executive Decree No. 12-167 (2012), Articles 5, 6, 7, establishing the National Organ Transplant Agency. Official Gazette No. 22. Health Law No. 18-11. (2018). Articles 430, 431, 432.

10 Health Law No. 18-11. (2018). Article 360.

11 Khadir, A. (2014). La Responsabilité Médicale à l'usage des praticiens de la médecine et du droit. Éditions Houma, Alger. p. 92.

12 Health Law No. 18-11. (2018). Article 364.

13 Health Law No. 18-11. (2018). Articles 360, 361. Official Gazette No. 46; Executive Decree No. 92-276. (1992). Article 43, Code of Medical Ethics. Official Gazette No. 52.

14 Health Law No. 18-11. (2018). Articles 363, 367. Official Gazette No. 46.

supervision and evaluation of the National Organ Transplant Agency, and they must ensure that their medical and technical organization, as well as their hospital coordination, meet the required standards to obtain this authorization.[15] As permitted by the legislator in Article 357 of the Health Law, the establishment of a structure within the healthcare institution is authorized, tasked with the preservation of human tissues and cells.

1.2.6. Sanctions resulting from violations of genetic engineering regulations

The legislator established sanctions for prohibited human organ, tissue, and cell removal and transplantation. In accordance with Articles 430 and 431 of the Health Law, violations—including those committed against minors or individuals lacking legal capacity—are penalized in accordance with Articles 303 bis 16 to 303 bis 20 of the Penal Code.

Physicians are criminally liable for unlawful removal. Law No. 90-01 illegalized the removal of living or dead subjects without legal compliance, and any removal for compensation, even with consent.

Articles 303 bis 16 and 303 bis 17 of the Penal Code impose imprisonment from 3 to 10 years and fines up to 1,000,000 DZD for receiving organs for money, acting as an intermediary, or conducting removals without consent or legal compliance. Additionally, Article 432 of the Health Law penalizes profit-driven promotion of organ, tissue, or cell donation with 6 to 12 months' imprisonment and fines between 200,000 and 400,000 DZD.

These actions are taken so that unethical practices can be evaded, and legality is ensured at every step.[16]

15 Health Law No. 18-11. (2018). Article 366. Official Gazette No. 46; Executive Decree No. 12-167. (2012). Articles 5, 6, 7, establishing and structuring the National Organ Transplant Agency. Official Gazette No. 22.

16 Health Law No. 18-11. (2018). Articles 430, 431, 432. Official Gazette No. 46.

2. THE SPECIFIC NATURE OF CIVIL MEDICAL LIABILITY IN GENETIC ENGINEERING APPLICATIONS

Civil liability of doctors remains a major topic among legal scholars and judges, due to evolving medical practices and the settings in which they occur. One factor affecting this liability is scientific innovation, particularly genetic engineering in medicine.

Thus, the nature of medical civil liability continues to prompt legal and judicial discussion, especially regarding its legal basis.

2.1. Medical liability for the use of genetic engineering in light of the traditional approach to civil liability

Medical civil liability generally falls under contractual or tortious liability. Tortious liability stems from a doctor's breach of a legal duty, while contractual liability arises from failing to fulfill an agreed obligation. Although fault type usually determines liability, legal opinions and court decisions differ on which kind of fault applies. Some favor tortious fault, while others support contractual fault as the basis for liability.

2.1.1. Medical civil liability based on negligence for the use of genetic engineering applications

In 1833, the French Court of Cassation established that medical liability is based on fault, according to Articles 1382 and 1383 of the Civil Code. Since then, French courts and legal scholars have reaffirmed this principle.

This approach is based on several justifications: proving physician fault ensures patient protection and fair compensation; the technical nature of medicine requires adherence to professional standards; liability for criminal harm must be fault-based; and the doctor-patient relationship concerns personal rights beyond simple contract law.

The Algerian courts followed the same approach, with slight differences at the doctrinal level. Courts will regard medical liability as contrac-

tual due to the doctor-patient relationship, but the Algerian Supreme Court ruled on 23/01/2008 that a violation of scientific care standards is a medical fault and it is considered negligence.[17]

Likewise, the Tlemcen Court of Appeals, by virtue of judgment no. 06/12/2003, held that doctor negligence warrants liability and attributed liability to the hospital based on employer liability.[18]

2.1.2. Medical civil liability based on contractual fault for the use of genetic engineering applications

A century after affirming doctor liability for negligence, French judges and scholars began questioning fault-based liability in clinical contexts, promoting a shift toward contractual fault. They argued that when a treatment contract exists, physicians are obliged to meet scientific and professional standards, and the burden is on the plaintiff to prove a breach.

Even where a doctor's mistake is criminalizable, breach of contract may nonetheless provide a basis of legal liability. This view is extended by some to emergency cases, where hospital forms remain an open invitation, and the patient's request constitutes the acceptance.

Others maintain that, although life and health are not contractual matters and public policy upholds patient autonomy, this does not exclude the contractual nature of physician liability.[19]

The French Court of Cassation, in the Mercy case (May 20, 1936), confirmed that a physician-patient contract exists and that failure to fulfill care obligations triggers contractual civil liability.[20]

In Algerian jurisprudence, unlike in France or Egypt, courts often focus on the presence or absence of fault, especially in public hospital cases.[21] However, elements of contractual liability appear, such as Article 44 of the Algerian Medical Ethics Code, which emphasizes patient capacity and consent, implying a contractual framework for the physician-patient relationship.

2.2. Medical liability for the use of genetic engineering in light of modern trends in civil liability

The integration of machines and modern technology in healthcare has sparked debate over civil, particularly medical, liability. Judges and attorneys have heavily criticized the continued reliance on fault as its basis. Some support preserving medical fault within a modern framework by redefining it as professional or presumed fault. Others call for abandoning fault altogether, especially in the context of genetic engineering.

2.2.1. Amending the concept of fault as the basis for civil medical liability

The concept of civil medical liability has been influenced by economic and technological changes in medicine. Traditional liability is in a dilemma to attribute direct harm to physicians, and therefore, it becomes difficult for patients to prove causation. Judges and theorists devised presumed fault as a solution to this dilemma, which allows courts to presume physician fault without total proof, making patient claims of compensation easier.[22]

Public hospitals are commonly held responsible in Algerian law, associating suspected errors with poor management. A July 15, 2002, Council of State ruling condemned a hospital for the death of

17 Quillere-Majzoub, F. (2004). La responsabilité du service public hospitalier. In La responsabilité juridique des professionnels, Vol. I (Responsabilité médicale), Proceedings of the Annual Scientific Conference organized by the Faculty of Law, University of Beirut. Helabi Legal Publications, Volume I, Beirut. p. 576.

18 Decision of the Administrative Chamber of the Tlemcen Court of Appeal dated 06.12.2003 (unpublished), cited in: Rais, M. (2012). Scope and Provisions of Civil Liability of Physicians and Its Proof (1st ed.). Houma Publishing and Distribution, Algiers. p. 18.

19 Al-Hayari, A. H. (2002). The Civil Liability of the Physician in the Private Sector in Light of the Jordanian and Algerian Legal Systems. (Master's thesis, Faculty of Law, Ben Aknoun). p. 17.

20 Villa, F. (dir.). (2010). The Major Decisions of Medical Law. L.G.D.J, Alpha Edition, Lebanon, p. 128.

21 Council of State. (03.06.2003). Decision in the case of Bologhine Health Sector v. A.L. and the Ministry of Health; (2003, March 11). Decision in the case of M.Kh. v. Béjaïa Hospital; (15.07.2002). Decision in the case of Fernand Hanifi Psychiatric Hospital, Tizi Ouzou Province v. Widow of Moulay; (17.01.2000). Decision in the case of Dorban University Hospital in Annaba v. S.M; (19.03.1999). Decision in the case of Director of the Health Sector in Adrar v. Zaaf Roukia and others. In Khadir, A. (2014). Judicial Decisions on Medical Liability, Vol. 1. Houma Publishing and Distribution House, Algiers, pp. 64, 67, 78, 84, 88.

22 Quillere-Majzoub, F., op. cit. (n 1), p. 577.

Mr. Moulay due to a lack of supervision in a psychiatric center.[23]

Later, some jurists proposed professional fault to reflect the unique nature of medical work. This concept, merging tortious and contractual liability, grounds physician responsibility in ethical violations.[24] Article 13 of the Algerian Medical Ethics Code supports this, as do Article 27 of the Saudi Health Professions Practice Act, Article 2 of the Jordanian draft Medical Liability Law, the 1995 Palestinian Patient's Rights Charter, Article 18 of the Lebanese Medical Ethics Law, and Article 26 of the UAE Federal Law on Medical Liability—all affirming that professional errors justify liability.[25]

2.2.2 Adopting the concept of damage as the basis for civil medical liability for the applications of genetic engineering

Legal and judicial thinking has shifted from individual guilt and moral standards due to moral liability's failure to keep pace with social change. Based on the core concept of compensating the injured, more direct and objective liability now applies to physicians and medical staff.

Judicial focus has moved to the harm-causing entity rather than personal fault. Doctors are held liable as custodians of treatment tools or as decision-makers impacting others.

The first move from fault-based to risk theory came in the French Council of State's "Cames" ruling (June 21, 1895), which based compensation on professional risks. French courts have since focused medical liability on harm.[26]

Supporters of traditional liability justify objective liability with two concepts: risk and guarantee. The risk principle holds that anyone creating or benefiting from a risk must bear its consequences. In medical institutions, this means compensating for harm caused by their operations in fairness.

The guarantee theory describes the basis of liability: not only fault, but also benefit from an activity requires enduring harm caused. However, these theories may not be in a position to fully protect the injured.

Neither Algerian legislation nor judgments accept harm-based liability strictly in medical settings. Civil law acknowledges liability founded on harm, but it's not accepted in the healthcare industry straightforwardly. As compared to French public health legislation, Algerian public health law lacks such a mechanism of liability, and there is no judgment confirming its practice.[27]

3. THE SPECIFICITIES OF THE COMPENSATION SYSTEM IN MEDICAL LIABILITY FOR GENETIC ENGINEERING APPLICATIONS

Given the widespread medical errors in facilities and the difficulty of proving them—due to technical procedures, challenges in attributing fault, or professional solidarity—the traditional civil liability principles, which assign compensation based on fault (Article 124 of the Civil Code), have proven insufficient to ensure justice. This is especially true regarding fair compensation for harm caused by medical actions, whether or not fault is involved. Thus, a specialized compensation mechanism is needed, suited to the unique nature of damages, particularly from genetic engineering.

3.1. Compensation under traditional civil liability principles: How effective is it in protecting victims?

Traditional civil liability rules primarily seek to assign compensation to the doctor responsible for the harm caused by their fault. Accordingly, a doctor cannot be held liable for compensation without having committed a fault that resulted in harm to another, in line with Article 124 of the Civil Code.

Through the analysis of the Code of Medical Ethics, the Health Law 18-11, and other legal pro-

23 Council of State. (15.07.2002). Decision in the case of Mental Hospital "Fernane Harfi" in Bouad Issa, Tizi Ouzou v. Widow Moulay. In Khadir, A. (2014), op. cit., pp. 78-79.

24 Rais, M. (2010). Civil Liability of Doctors in Light of Algerian Law. Dar Houma for Publishing and Distribution, Algeria. p. 402.

25 Al-Hayari, A. H., op.cit., pp. 18-19.

26 Quillere-Majzoub, F., op. cit. (n 1), pp. 577-578.

27 Idris, M. S. (n.d.). Medical Errors Towards a Balanced Legal Protection for the Parties of Medical Errors. The Independent Commission for Human Rights (Ombudsman Office), Legal Reports Series, No. 77, Palestine. pp. 52-62.

visions that concern the medical field, it can be seen that the Algerian legislator did not address the issue of compensation in an extended and broad way. Instead, the focus has been on penalties and sanctions resulting from the harm caused by doctors to their patients. Given this ambiguity and the general nature of the legal texts related to the medical field, it is necessary to refer back to the general provisions in the Civil Code governing compensation. The determination of compensation is made by the judge, using their discretionary powers within the legal framework established by the legislator. This situation reflects the typical approach to judicial compensation. However, the practical application of these provisions has shown certain shortcomings in ensuring adequate justice for victims of medical malpractice.

3.1.1. The familiar image of compensation assessment is a judicial estimate, but it is often inadequate

Traditional civil liability assigns compensation to doctors solely when fault that has resulted in damage is determined, based on Article 124 of the Civil Code.

An examination of the Code of Medical Ethics, Health Law 18-11, and relevant provisions demonstrates that the Algerian legislator has addressed sanctions for damages by physicians, not compensation at large. Due to the generality of such texts, judges apply provisions of the Civil Code. Compensation is thus determined by the judge via discretionary power under the law. However, this judicial policy does not always result in full justice for victims.

Judicial compensation assessment, though standard, is often inadequate.

Whether before civil, administrative, or criminal courts, judges must establish harm and fault to award compensation.

As in-kind damages are rare in medical cases, compensation is usually monetary, since all harm can be financially valued.

To explain how judges calculate compensation for medical errors, we must outline their role and the circumstances requiring such calculation.

3.1.2. The mechanism of judicial assessment of compensation

The Algerian legislator does not leave judges to assess compensation according to personal discretion. Rather, fixed criteria have to be applied, and decisions are to be reviewed by the Supreme Court. Judges are required to look at both the objective elements of the damage and the personal circumstances of the injured party in awarding compensation.

3.1.2.1. Objective assessment of the damage requiring compensation

Compensable damage includes two elements: actual loss and lost profits, as stated in Article 182 of the Civil Code. Thus, if a medical error causes harm—such as permanent disability or prolonged immobility—it leads to a loss of income, which is compensable.[28]

Judges can also request medical experience to ascertain disability, recovery time, amount of damage, or the type of injury, relying on technical opinions of experts.[29]

3.1.2.2. Subjective assessment of compensatory damage

The judge must take into account the specific circumstances surrounding the victim when determining compensation, in accordance with Article 131 of the Civil Code, which states: "The judge shall assess the extent of the compensation for the harm suffered by the victim in accordance with the provisions of Article 182, taking into account the relevant circumstances". These relevant circumstances refer to factors related to the victim's personal, health, family, and financial situation.[30]

3.1.2.3. Timing of the judge's assessment of compensation

While most civil law commentators agree that the time of assessing the damage is the moment the harm occurs, the right to compensation is not finalized until a judgment is issued. This judgment does not create the right but merely reveals it, as

28 Ben Sghir, M., Rulings on Medical Error in Light of Civil Liability Rules, op. cit., p. 226.

29 Fillali, A. (2012). Obligations (Action Worth Compensation) (3rd ed.). Dar Mofam for Publishing, Algeria. p. 379.

30 Mansour, M. H. (1998). Medical Liability. Dar Al-Jamiaa for Publishing and Distribution, Egypt. p. 188.

per the Algerian legislator's position in Article 131 of the Civil Code. If the judge is unable to determine the final amount of compensation at the time of the judgment, the victim is entitled to request a reassessment within a specified period. Additionally, as with any judicial decision, a ruling on compensation is subject to appeal, and the harm may increase or decrease during the period allowed for appeal until a final decision is reached.[31]

3.1.3. Shortcomings of the compensation system under classic civil liability rules

While judicial compensation is a beneficial tool in medical negligence, it has operational limitations, particularly if compared to systems such as the French system. Some of its serious criticisms are:

Slow Processes: Litigation in regular courts is slow and takes time, and this is what extends suffering to patients in seeking compensation for medical expenses.

Reliance on Conventional Civil Liability: The burden of proof for the doctor's fault rests with the patients, a burden considering their limited expertise in medicine, resulting in missed opportunities for compensation.

Difficulty in Holding Doctors Accountable: Proofs notwithstanding, the claim may fail due to the doctor's demise, bankruptcy, being uninsured, or the inability to determine the responsible medical professional from among multiple practitioners.

These constraints reveal that the existing system does not provide sufficient justice, and therefore, alternative rules in addition to fault-based liability are necessary.

3.2. The need for collective compensation systems as a supplementary mechanism for patient protection

To ensure effective protection and preservation of victims' right to compensation for harm from medical activities, the mechanism of civil liability must adapt to shifting needs. This means that its compensatory role must be fortified without giving it up. This calls for accepting compensation mechanisms rooted in strict liability beyond the traditional model limited to the victim and the culpable party. Compensation is presently passed on through collective mechanisms.[32]

These systems differ depending on the party that covers medical harm. Most common is medical liability insurance, where insurers indemnify damages from medical errors. Another is national solidarity, which compensates through public solidarity.

3.2.1. Medical liability insurance; enhancing compensation guarantees, but insufficient

Due to significant advancements in insurance, particularly in terms of providing greater protection for victims, Algerian legislation, under Article 296 of the Health Law, requires both public and private healthcare institutions, as well as healthcare professionals practicing independently, to take out insurance covering their civil and professional liability towards patients and third parties. This obligation is in line with the Algerian Insurance Law No. 95-07 of January 25, 1995,[33], and Executive Decree 07-321, which regulates the operation of private healthcare institutions.[34]

3.2.1.1. The content of the medical liability insurance system

The importance of the liability insurance system is the interplay between two interests: on the one hand, the victim's right to compensation, safeguarded by the rigorous system of liability charged to the doctor, and on the other hand, the insurance system, ensuring enterprises' financial ability by distributing the financial burden of damage, rather than relying on the liable party alone. This not only strengthens the victim's right to compensation but also ensures the continuity of medical activity.[35]

31 Ordinance No. 75-58. (1975). Article 131, concerning the Civil Code, as amended and supplemented by Law 05-10. (2005). Official Gazette, No. 44.

32 Jaber, A. (1990). Insurance for Civil Liability of Physicians (1st ed.). Dar Al-Nahda Al-Arabia, Egypt. p. 01.

33 Order No. 95-07. (1995). Concerning the Insurance Law. Official Journal, No. 13, 1995.

34 Executive Decree No. 07-321. (2007). Concerning the organization and operation of private healthcare institutions. Official Journal, No. 10, 2007.

35 Ben Tarya, A. (2014). The System of Strict Product Liability

Regardless of whether medical liability insurance is mandatory or voluntary, it offers protection to both parties. It fosters mutual support between a doctor, who benefits from financial backing for the victim, and a patient, who is relieved from the need to resort to litigation. Thus, insurance serves as the only means to reconcile the interests of both the doctor and the patient.

Furthermore, the scope of medical liability insurance extends to risks associated with the medical profession itself and covers damages that are eligible for compensation.[36]

3.2.1.2. Observations on the medical liability insurance system

Though the medical liability insurance scheme is important among compensation schemes, there are no criticisms such as:

Others assert that the insurance system provokes negligence and a state of complacency in the exercise of the doctor's duty of care since doctors feel they can be insulated from liability through insurance.[37]

Such insurance can enhance negligence and, as a result, liability claims since victims can sue in the knowledge that they will be compensated by the insurer.

Irrespective of the merits of liability insurance, victims will be greatly disadvantaged in accessing the insured amount, for example, due to the insolvency of the guilty party or the insurer.

There are cases where the insurance system is weak, such as when the causally negligent party is not covered with liability insurance or when the insurance is insufficient to repair the damages to the victim.[38]

3.2.2. Compensation through national solidarity – a complementary mechanism to enhance patient protection

Due to shortcomings in medical liability insurance, the pressure of law has risen for a system of strict liability compensation to achieve justice for the patient who cannot prove fault or when there is no fault. In the aftermath of the Perruche ruling (Nov. 17, 2000),[39] the French legislator introduced profound reforms, notably the system of national solidarity within the Kouchner Law (March 4, 2002),[40] that shifted the onus of injury compensation resultant from public and private healthcare to the state.[41]

Professor Ahmed Aissa sees national solidarity as the basis for collective insurance for medical risks. This compensation model marks the third stage: the first being reform through objective liability based on harm; the second, medical liability insurance; and the third, a guarantee fund for cases not covered by insurance or lacking proven negligence.[42]

3.2.2.1. Areas of compensation through national solidarity

Article L.1142-1, section 2 of the French Public Health Code stipulates: "When the liability of the professional, institution, service, or manufacturer is not determined, any medical accident, iatrogenic condition, or hospital-acquired infection incurs a right to compensation on the part of national solidarity on the part of the patient, or his survivors in case of death, subject to the damage being caused by prevention, diagnostic, or curative acts".[43]

Thus, compensation through national solidarity covers:

and Its Role in Strengthening the Compensation System for Defective Product Accidents (A Study in Algerian and Comparative Legislation). Algerian Journal of Comparative Law, Comparative Law Research Laboratory, Faculty of Law, Abou Bakr Belkaid University, Tlemcen, Issue 01, Algeria. p. 132.

36 Bakouche, A. (2011). Towards Strict Liability for Medical Consequences (A Study in Algerian and Comparative Law), unpublished. Dar Al-Jamiaa Al-Jadida, Egypt. p. 332.

37 Derése, M.-N. (2008). Perspectives of Medical Law, directed by Geneviève Schamps. Bruylant, Brussels. p. 408.

38 Al-Saraireh, A. A. K. M. (2012). Insurance for Civil Liability Arising from Medical Errors (A Comparative Study) (1st ed.). Dar Wael for Publishing and Distribution, Jordan. p. 238.

39 Cass. Civ. (2000, November 17). n°99-13701, Perruche. In Villa, F. (dir.), Les Grandes Décisions Du Droit Médical. L.G.D.J, Alpha Edition, Lebanon. p. 467.

40 Aissani, R. (2016). National Solidarity in Compensation for Medical Accidents – A Comparative Legal Study. International Law and Development Journal, 4(1), pp. 13-14.

41 Law No. 2002-303. (2002, March 4). Article 98 of Public Health Code, Official Journal of the French Republic, No. 54, introducing Article L.1142-22 into the French Public Health Code. <www.legifrance.gouv.fr> (Last access: 01.05.2025).

42 Issa, A. (2008). Responsibility of Public Hospitals (A Comparative Study) (1st ed.). Halabi Publishers, Lebanon. p. 132.

43 French Public Health Code. Article L.1142-1. (Paragraph I).

- Medical accidents;
- Damages from prescribed medical products;
- Infections or diseases contracted in a medical facility.

3.2.2.2. Conditions for compensation through national solidarity

The French legislator, in Article L.1142-1, Paragraph 2 of the Public Health Code, offers conditions for compensation based on national solidarity for victims of medical accidents. It is granted if the injury is a direct result of prevention, diagnosis, or treatment, and if it has serious implications in consideration of the patient's condition and expected progress of their illness or injury. The seriousness of the injury, as determined by a decree, considers loss of function and interference with professional and personal life. There has to be a minimum of 25% physical or mental disability for compensation. These standards are intended to limit compensation cases, encouraging equity and protecting public funds.[44]

CONCLUSION

The continuous development of compensation systems, along with evolving frameworks for civil medical liability, as well as the development of rules and regulations for the use of modern biomedical technologies, including genetic engineering, is essential to achieving a fair and just healthcare system. Every system complements the other since no legal system will function without the other legal systems being consolidated.

- Rendering restitution to medical error victims or unforeseen side effects that occur due to advanced medical treatments involving genetic engineering, among others, is an important objective in legal reforms and health policy. Therefore, we propose the following:
- The establishment of a specific legal framework to regulate the fields and controls of genetic engineering in the medical field.
- The creation of a specific legal system to define the nature of civil medical liability, which we advocate for as a general rule based on personal fault, except for adopting objective liability based on damage, but within specific limits and strict controls.
- The establishment of a single compensation system that is complementary to each other, assuring total protection to the victims injured by medical practice. The system would be composed of the traditional compensation system as established via the judge, liability insurance for civil liability, and compensation based on national solidarity, thus making the coexistence of the systems possible, with each one intervening in its domain.

44 French Public Health Code. Article L.1142-1.

BIBLIOGRAPHY:

Journal Articles:

1. Aissani, R. (2016). National Solidarity in Compensation for Medical Accidents – A Comparative Legal Study. International Law and Development Journal, 4(1);
2. Ben Tarya, A. (2014). The System of Strict Product Liability and Its Role in Strengthening the Compensation System for Defective Product Accidents (A Study in Algerian and Comparative Legislation). Algerian Journal of Comparative Law, Comparative Law Research Laboratory, Faculty of Law, Abou Bakr Belkaid University, Tlemcen, Issue 01, Algeria;
3. Quillere-Majzoub, F. (2004). La responsabilité du service public hospitalier. In La responsabilité juridique des professionnels, Vol. I (Responsabilité médicale), Proceedings of the Annual Scientific Conference organized by the Faculty of Law, University of Beirut. Helabi Legal Publications, Volume I, Beirut.

Books:

1. Al-Bahji, E. A. (2006). Compensation for Damages Resulting from Genetic Engineering Applications in Light of Civil Liability Rules. Dar Al-Jami'a Al-Jadida for Publishing, Egypt;
2. Al-Bouaichi Al-Kilami, F. (2011). Medical Examinations of Spouses Prior to Marriage – Their Legal Bases and Objectives (1st ed.). Dar Al-Nafaes for Publishing and Distribution, Jordan;
3. Al-Saraireh, A. A. K. M. (2012). Insurance for Civil Liability Arising from Medical Errors (A Comparative Study) (1st ed.). Dar Wael for Publishing and Distribution, Jordan;
4. Bakouche, A. (2011). Towards Strict Liability for Medical Consequences (A Study in Algerian and Comparative Law), unpublished. Dar Al-Jamiaa Al-Jadida, Egypt;
5. Ben Sghir, M. (2015). The Provisions of Medical Error under Civil Liability Rules: A Foundational Comparative Study (1st ed.). Al-Hamed Publishing and Distribution, Jordan;
6. Derése, M.-N. (2008). Perspectives of Medical Law, directed by Geneviève Schamps. Bruylant, Brussels;
7. Fillali, A. (2012). Obligations (Action Worth Compensation) (3rd ed.). Dar Mofam for Publishing, Algeria;
8. Issa, A. (2008). Responsibility of Public Hospitals (A Comparative Study) (1st ed.). Halabi Publishers, Lebanon;
9. Jaber, A. (1990). Insurance for Civil Liability of Physicians (1st ed.). Dar Al-Nahda Al-Arabia, Egypt;
10. Khadir, A. (2014). La Responsabilité Médicale à l'usage des praticiens de la médecine et du droit. Éditions Houma, Alger;
11. Khadir, A. (2014). Judicial Decisions on Medical Liability, Vol. 1. Houma Publishing and Distribution House, Algiers;
12. Mansour, M. H. (1998). Medical Liability. Dar Al-Jamiaa for Publishing and Distribution, Egypt;
13. Rais, M. (2010). Civil Liability of Doctors in Light of Algerian Law. Dar Houma for Publishing and Distribution, Algeria;
14. Rais, M. (2012). Scope and Provisions of Civil Liability of Physicians and Its Proof (1st ed.). Houma Publishing and Distribution, Algiers;
15. Villa, F. (dir.). (2010). The Major Decisions of Medical Law. L.G.D.J, Alpha Edition, Lebanon.

Websites:

1. AMPD Languedoc Roussillon. (2013, February). Doping through Genetic Material Modification, Introduction to Gene Therapy, Part II. Hôpital Lapeyronie. Available at: <http://wwwold.chu-montpellier.fr/publication/inter_pub/R226/A12813/IntroductionTG.pdf>.

Legal Acts:

1. Executive Decree No. 07-321. (2007). Concerning the organization and operation of private healthcare institutions. Official Journal, No. 10;
2. Executive Decree No. 12-167. (2012). Articles 5, 6, 7, establishing and structuring the National Organ Transplant Agency. Official Gazette No. 22;
3. Executive Decree No. 92-276. (1992). Article 43, Code of Medical Ethics. Official Gazette No. 52;
4. Family Code, Article 7 bis, and Executive Decree No. 06/154. (2006);
5. French Public Health Code. Article L.1142-1;
6. Health Law No. 18-11. (2018). Articles 359-367, 430-432. Official Gazette No. 46;
7. Law No. 2002-303. (04.03.2002). Article 98 of Public Health Code, Official Journal of the French Republic, No. 54, introducing Article L.1142-22 into the French Public Health Code. Available at: <www.legifrance.gouv.fr>;
8. Order No. 95-07. (1995). Concerning the Insurance Law. Official Journal, No. 13;
9. Ordinance No. 05-02. (2005). Article 07, including the Family Law. Official Gazette of Algeria;
10. Ordinance No. 75-58. (1975). Article 131, concerning the Civil Code, as amended and supplemented by Law 05-10. (2005). Official Gazette, No. 44.

Court Decisions:

1. Cass. Civ. (17.11.2000). n°99-13701, Perruche. In Villa, F. (dir.), Les Grandes Décisions Du Droit Médical. L.G.D.J, Alpha Edition, Lebanon;
2. Council of State. (03.06.2003). Decision in the case of Bologhine Health Sector v. A.L. and the Ministry of Health; (11.03.2003). Decision in the case of M.Kh. v. Béjaïa Hospital; (15.07.2002). Decision in the case of Fernand Hanifi Psychiatric Hospital, Tizi Ouzou Province v. Widow of Moulay; (17.01.2000). Decision in the case

of Dorban University Hospital in Annaba v. S.M; (19.03.1999). Decision in the case of Director of the Health Sector in Adrar v. Zaaf Roukia and others;
3. Decision of the Administrative Chamber of the Tlemcen Court of Appeal dated 06.12.2003 (unpublished), cited in: Rais, M. (2012).

Theses and Dissertations:

1. Al-Hayari, A. H. (2002). The Civil Liability of the Physician in the Private Sector in Light of the Jordanian and Algerian Legal Systems. (Master's thesis, Faculty of Law, Ben Aknoun);
2. Idris, M. S. (n.d.). Medical Errors Towards a Balanced Legal Protection for the Parties of Medical Errors. The Independent Commission for Human Rights (Ombudsman Office), Legal Reports Series, No. 77, Palestine;
3. Ouskin, A. (2007). The Legal Status of the Human Being Before Birth. In Family Law and Scientific Developments. Laboratory of Law and Modern Technologies, Faculty of Law, University of Oran;
4. Zaghbib, N. E. H. (2008–2009). Genetic Engineering and the Criminal Protection of the Human Genome. (Master's thesis, Faculty of Law and Political Sciences, University of Frères Mentouri, Constantine).