



国家卫生和计划生育委员会“十三五”英文版规划教材
全国高等学校教材

供临床医学专业及来华留学生 (MBBS) 双语教学用

Forensic Medicine

法医学

Jason Payne-James Richard Jones Steven B Karch John Manlove

● 主 编 赵 虎

Chief Editor Hu Zhao

● 副主编 王振原

李 桢 沈忆文

Vice Chief Editor Zhenyuan Wang Zhen Li Yiwen Shen



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1995 年,我国首次招收全英文授课医学留学生,到 2015 年,接收临床医学专业 MBBS (Bachelor of Medicine & Bachelor of Surgery) 留学生的院校达到了 40 余家,MBBS 院校数量、规模不断扩张;同时,医学院校在临床医学专业五年制、长学制教学中陆续开展不同规模和范围的双语或全英文授课,使得对一套符合我国教学实际、成体系、高质量英文教材的需求日益增长。

为了满足教学需求,进一步落实教育部《关于加强高等学校本科教学工作提高教学质量的若干意见(教高[2001]4号)》和《来华留学生医学本科教育(英文授课)质量控制标准暂行规定(教外来[2007]39号)》等相关文件的要求,规范和提高我国高等医学院校临床医学专业五年制、长学制和来华留学生(MBBS)双语教学及全英文教学的质量,推进医学双语教学和留学生教育的健康有序发展,完善和规范临床医学专业英文版教材的体系,人民卫生出版社在充分调研的基础上,于 2015 年召开了全国高等学校临床医学专业英文版规划教材的编写论证会,经过会上及会后的反复论证,最终确定组织编写一套全国规划的、适合我国高等医学院校教学实际的临床医学专业英文版教材,并计划作为 2017 年春季和秋季教材在全国出版发行。

本套英文版教材的编写结合国家卫生和计划生育委员会、教育部的总体要求,坚持“三基、五性、三特定”的原则,组织全国各大医学院校、教学医院的专家编写,主要特点如下:

1. 教材编写应教学之需启动,在全国范围进行了广泛、深入调研和论证,借鉴国内外医学人才培养模式和教材建设经验,对主要读者对象、编写模式、编写科目、编者遴选条件等进行了科学设计。

2. 坚持“三基、五性、三特定”和“多级论证”的教材编写原则,组织全国各大医学院校及教学医院有丰富英语教学经验的专家一起编写,以保证高质量出版。

3. 为保证英语表达的准确性和规范性,大部分教材以国外英文原版教科书为蓝本,根据我国教学大纲和人民卫生出版社临床医学专业第八轮规划教材主要内容进行改编,充分体现科学性、权威性、适用性和实用性。

4. 教材内部各环节合理设置,根据读者对象的特点,在英文原版教材的基础上结合需要,增加本章小结、关键术语(英中对照)、思考题、推荐阅读等模块,促进学生自主学习。

本套临床医学专业英文版规划教材共 38 种,均为国家卫生和计划生育委员会“十三五”规划教材,计划于 2017 年全部出版发行。

In 1995, China recruited overseas medical students of full English teaching for the first time. Up to 2015, more than 40 institutions enrolled overseas MBBS (Bachelor of Medicine & Bachelor of Surgery) students. The number of MBBS institutions and overseas students are continuously increasing. At the meantime, medical colleges' application for bilingual or full English teaching in different size and range in five-year and long-term professional clinical medicine teaching results to increasingly demand for a set of practical, systematic and high-qualified English teaching material.

In order to meet the teaching needs and to implement the regulations of relevant documents issued by Ministry of Education including "Some Suggestions to Strengthen the Undergraduate Teaching and to Improve the Teaching Quality" and "Interim Provisions on Quality Control Standards of International Medical Undergraduate Education (English teaching)", as well as to standardize and improve the quality of the bilingual teaching and English teaching of the five-year, long-term and international students (MBBS) of clinical medicine in China's higher medical colleges so as to promote the healthy and orderly development of medical bilingual teaching and international students education and to improve and standardize the system of English clinical medicine textbooks, after full investigation, People's Medical Publishing House (PMPH) held the writing discussion meeting of English textbook for clinical medicine department of national colleges and universities in 2015. After the repeated demonstration in and after the meeting, PMPH ultimately determined to organize the compilation of a set of national planning English textbooks which are suitable for China's actual clinical medicine teaching of medical colleges and universities. This set will be published as spring and autumn textbooks of 2017.

This set of English textbooks meets the overall requirements of the Ministry of Education and National Health and Family Planning Commission, the editorial committee includes the experts from major medical colleges and universities as well as teaching hospitals, the main features are as follows:

1. Textbooks compilation is started to meet the teaching needs, extensive and deep research and demonstration are conducted across the country, the main target readers, the model and subject of compilation and selection conditions of authors are scientifically designed in accordance with the reference of domestic and foreign medical personnel training model and experience in teaching materials.

2. Adhere to the teaching materials compiling principles of "three foundations, five characteristics, and three specialties" and "multi-level demonstration", the organization of English teaching experts with rich experience from major medical schools and teaching hospitals ensures the high quality of publication.

3. In order to ensure the accuracy and standardization of English expression, most of the textbooks are modeled on original English textbooks, and adapted based on national syllabus and main content of the eighth round of clinical medicine textbooks which were published by PMPH, fully reflecting the scientificity, authority, applicability and practicality.

4. All aspects of teaching materials are arranged reasonably, based on original textbooks, the chapter summary, key terms (English and Chinese), review questions, and recommended readings are added to promote students' independent learning in accordance with teaching needs and the characteristics of the target readers.

This set of English textbooks for clinical medicine includes 38 species which are among "13th Five-Year" planning textbooks of National Health and Family Planning Commission, and will be all published in 2017.

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PREFACE

I first express my sincere gratitude to Dr. Jason Payne-James, Dr. Steven Karch, Dr. Richard Jones and Dr. John Manlove for their outstanding contributions to this book, which reflect the accumulation of their wisdom and knowledge. This textbook has been well accepted by students for its thorough explanation of key principles of forensic medicine and forensic science with judicial practice, as well as its clear visual layout, which aids in the learning process. We appreciate an endowment from the People's Medical Publishing House, which is responsible for the reorganization of this textbook, and the understanding and support of the CRC Press in publishing a rearranged version of this book in China.

This textbook includes the main disciplines of forensic science, such as forensic pathology and forensic toxicology. However, in China, forensic application also cover the forensic clinical medicine, forensic psychiatry, forensic biology and so on. Therefore, it is necessary to expand the scope of this textbook in order to meet the needs of China's current judicial practice. Meanwhile, the rapid development of forensic medicine calls for new textbooks to update knowledge of the field for international students and undergraduates in China. For these purposes, we

reorganized Simpson's Forensic Medicine, 13th edition, according to the education protocol in China.

The contents of the new edition will be arranged in the following order: ethics, identification and assessment of the deaths, disability, diseases, injuries, sexual assault, child assault, mental state, alcohol consuming, poisoning, as well as DNA analysis in biological samples. It also focuses on historical background, the interpreting of scientific evidence for the investigation and trial of criminal cases, civil cases, medical malpractice, as well as those dealing with forensic science and the law, which is expected to help solve medicine-related problems in forensic practice.

I would like to acknowledge all of my colleagues for their generous contributions of time and work. Their endeavors and professionalism guarantee the success of the rearranged edition.

I anticipate that this rearranged version will help readers in China better understand the principles and application of forensic medicine.

Hu Zhao
Guangzhou, China

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- Evidence for courts
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- Summary
- Important terminology
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Principles of forensic practice

■ Introduction

Different countries have different legal systems, which broadly divide into two areas-criminal and civil. The systems have generally evolved over many years or centuries and are influenced by a wide variety of factors including culture, religion and politics. By and large, the rules have been established over many hundreds of years and are generally accepted because they are for the mutual benefit of the population-they are the framework that prevents anarchy. Although there are some common rules (for example concerning murder) that are to be found in every country, there are also considerable variations from country to country in many of the other codes or rules. The laws of a country are usually established by an elected political institution, the population accepts them and they are enforced by the imposition of penalties on those who are found guilty of breaking them.

Members of medical, healthcare and scientific professions are bound by the same general laws as the population as a whole, but they may also be

bound by additional laws specific to their area of practice. The training, qualification and registration of doctors, scientists and related professions is of great relevance at the current time, in the light of the recognized need to ensure that evidence, both medical and scientific, that is placed before the court, is established and recognized. Fraudulent professional and 'hired guns' risk undermining their own professions, in addition to causing miscarriages of justice where the innocent may be convicted and the guilty acquitted. It is sometime difficult for medical and scientific professionals to realize that their evidence is only part of a body of evidence, and that unlike in the fictional media, the solving of crimes is generally the result of meticulous painstaking and often tedious effort as part of a multi-professional team.

The great diversity of the legal systems around the world poses a number of problems to the author when giving details of the law in a book such as this. Laws on the same aspect commonly differ widely from country to country, and some medical procedures (e.g. abortion) that are routine practice (subject to appropriate legal controls) in some countries are

considered to be a crime in others. Within the United Kingdom, England and Wales has its own legal system, and Scotland and Northern Ireland enjoy their own legal traditions which, although distinct from that of England and Wales, share many traditions. There are also smaller jurisdictions with their own individual variations in the Isle of Man and the Channel Isles. Overarching this is European legislation and with it the possibility of final appeals to the European Court. Other bodies (e.g. the International Criminal Court) may also influence regional issues.

This book will utilize the China, England and Wales legal system for most examples, making reference to other legal systems when relevant. However, it is crucial that any individual working in, or exposed to, forensic matters is aware of those relevant laws, statutes, codes and regulations that not only apply generally but also specifically to their own area of practice.

不同的国家有不同的法律制度,大致分为刑事制度和民事制度两个领域。这些制度通常经历了许多年或几个世纪的演变,受到各种因素的影响,包括文化、宗教和政治。总的来说,法律规则已经建立了数百年,并且被普遍接受,因为这些法律规则可以保障民众的共同利益,防止无政府状态。虽然在每个国家都有一些共同规则(例如关于谋杀),但在许多其他法典或规则中,各国之间仍然存在相当大的差异。一个国家的法律通常由一个民选的政治机构确立,人民接受法律,并且通过对违法的人施加惩罚来实施法律。

与其他公民一样,医学、医疗和科学专业的人士,应当遵守相同的一般性法律,但同时他们也受到与其实践领域相关的其他法律的约束。医生、科学家和相关专业人员的培训、资格和注册在当前是非常重要的,因为在向法院提供医疗和科学证据之前,需保证这些证书得到确认。专业欺骗和“雇佣的枪炮”风险将损害他们自己的专业,还可能导致无辜者被判罪和有罪者被释放,丧失公平正义。医学和科学专业人员有时难以认识到他们的证据仅仅是完整证据的一部分,与虚构的媒体不同,解决犯罪通常需要多专业团队的艰苦努力和通力合作。

在本书中,由于世界各地法律制度的巨大多样性,很难对法律进行详细描述。同一方面的法

律在国与国之间通常有很大差异,在一些国家作为通常做法(受适当的法律控制)的一些医疗程序(例如堕胎),在其他国家则被视为犯罪。在英国,英格兰和威尔士拥有自己的法律制度,苏格兰和北爱尔兰享有自己的法律传统。即使在马恩岛和海峡群岛较小的立法辖区,也有它们自身的差异。欧洲立法是该州的最高法律,一些案件有可能向欧洲法院提出最后上诉。其他一些机构(例如国际刑事法院)也可能影响区域问题。

本书将主要以中国、英格兰和威尔士的法律制度为例进行探讨,必要时也参考其他法律制度。任何从事法医工作或涉及法医工作的个人,都应该了解这些相关的法律、法规、法典及规章。它们不仅普遍适用,而且还特别适用于医生自身的实践活动。

Legal systems

Laws are rules that govern orderly behaviour in a collective society and the system referred to as 'the Law' is an expression of the formal institutionalization of the promulgation, adjudication and enforcement of rules. There are many national variations but the basic pattern is very similar. The exact structure is frequently developed from and thus determined by the political system, culture and religious attitudes of the country in question. In England and Wales, the principal sources of these laws are Parliament and the decisions of judges in courts of law. Most countries have two main legal systems: criminal courts and civil courts. The first deals predominantly with disputes between the State and individual, the second with disputes between individuals. Most jurisdictions may also have a range of other legal bodies that are part of these systems or part of the overall justice system (e.g. employment tribunals, asylum tribunals, mental health review tribunals and other specialist dispute panels) and such bodies may deal with conflicts that arise between citizens and administrative bodies, or make judgements in other disputes. All such courts, tribunals or bodies may at some stage require input from medical and scientific professionals.

The Chinese legal system is divided into the Executive, Legislative and Judicial branches. The Execu-

tive branch appoints the President and Vice President of the People's Republic of China, their powers are defined in the Constitution of the People's Republic of China. At the summit of the Chinese, hierarchy is the National People's Congress (NPC), a unicameral group of the Legislative Branch which has high authority to issue laws and appoint the Premier. The State Council is the branch of the PRC carrying out day to day duties under the counsel of the Premier. The central government of the PRC, located in Beijing, is the source of all decisions and edicts that are enacted. Local governments have only limited control and act mainly as enforcers of the little power that is delegated to them.

The Legislative Branch is home to the NPC which according to the constitution is "the highest organ of state power" and carries out "the legislative power of the state". The NPC is responsible for amendments to the constitution and for the constitution's enforcement and general lawmaking.

The Judicial Branch is comprised of a four-level court system, which includes the Supreme People's Courts, the Higher People's Courts, the Intermediate People's Courts and the Basic People's Courts. Basic People's Courts handle all low level crimes and civil disturbances in their province that do not carry a possible death sentence or life imprisonment penalty. Intermediate People's Courts handle cases transferred from Basic Court in addition to cases dealing with life imprisonment or the death sentence. They also handle cases involving foreigners. Higher People's Courts rule over cases referred from lower courts as well as major criminal cases that impact the entire province. They also hear appeals and protests from lower courts. Finally, the Supreme People's Court has jurisdiction over all the lower courts in addition to making decisions on principles of law, much like the Supreme Court of the U.S. Some of the other responsibilities of the Chinese Judicial system include managing reform and reeducation through work programs, oversee the nation's jails and review and implement changes pertaining to incarceration policies. The Judicial system also regulates lawyers, regulates public notaries, appoint and train judicial

officials and supervise theory building in relation to judicial administration. There are special courts that listen to cases involving military, railway and maritime law. On every level of the Judicial system is a corresponding organ called people's procuratorates which function as state prosecutors and in a watchdog capacity. In this role, the procuratorates act to investigate cases involving government corruption and dereliction of duty. They also look into complaints by citizens against the system.

In England and Wales, decisions made by judges in the courts have evolved over time and this body of decisions is referred to as 'common law' or 'case law'. The 'doctrine of precedent' ensures that principles determined in one court will normally be binding on judges in inferior courts. The Supreme Court of the United Kingdom is the highest court in all matters under England and Wales law, Northern Irish law and Scottish civil law. It is the court of last resort and highest appeal court in the United Kingdom; however the High Court of Justiciary remains the supreme court for criminal cases in Scotland. The Supreme Court was established by the Constitutional Reform Act 2005 and started work on 1 October 2009. It assumed the judicial functions of the House of Lords, which were previously undertaken by the Lords of Appeal in Ordinary (commonly called Law Lords). Along with the concept of Parliamentary Sovereignty is that the judiciary are independent of state control, although the courts will still be bound by statutory law. This separation is one that is frequently tested.

Criminal law

Criminal law deals with relationships between the state and the individual and as such is probably the area in which forensic medical expertise is most commonly required. Criminal trials involve offences that are 'against public interest'; these include offences against the person (e.g. murder, assault, grievous bodily harm, rape), property (e.g. burglary, theft, robbery), and public safety and security of the state (terrorism). In these matters the state acts as the voice or the agent of the people. In continental

Europe, a form of law derived from the Napoleonic era applies. Napoleonic law is an 'inquisitorial system' and both the prosecution and the defence have to make their cases to the court, which then chooses which is the more credible. Evidence is often taken in written form as depositions, sometimes referred to as 'documentary evidence'. The Anglo-Saxon model applies in England and Wales and in many of the countries that it has influenced in the past. This system is termed the 'adversarial system'. If an act is considered of sufficient importance or gravity, the state 'prosecutes' the individual. Prosecutions for crime in England and Wales are made by the Crown Prosecution Service (CPS), who assess the evidence provided to them by the police. The CPS will make a determination as to whether to proceed with the case and, in general, the following principles are taken into account: prosecutors must be satisfied that there is sufficient evidence to provide a realistic prospect of conviction against each suspect on each charge; they must consider what the defence case may be, and how it is likely to affect the prospects of conviction; a case which does not pass the 'evidential stage' must not proceed, no matter how serious or sensitive it may be. Sir Hartley Shawcross in 1951, who was then Attorney General, stated: '...[this] has never been the rule in this country-I hope it never will be-that suspected criminal offences must automatically be the subject of prosecution'. He added that there should be a prosecution: 'wherever it appears that the offence or the circumstances of its commission is or are of such a character that a prosecution in respect thereof is required in the public interest' (House of Commons Debates). This approach has been endorsed by Attorneys General ever since. Thus, even when there is sufficient evidence to justify a prosecution or to offer an out-of-court disposal, prosecutors must go on to consider whether a prosecution is required in the public interest. The prosecutor must be sure that there are public interest factors tending against prosecution that outweigh those tending in favour, or else the prosecutor is satisfied that the public interest may be properly served, in the first instance, by offering the offender the opportunity to

have the matter dealt with by an out-of-court disposal. The more serious the offence or the offender's record of criminal behaviour, the more likely it is that a prosecution will be required in the public interest.

In a criminal trial it is for the prosecution to prove their case to the jury or the magistrates 'beyond reasonable doubt'. If that level cannot be achieved, then the prosecution fails and the individual is acquitted. If the level is achieved then the individual is convicted and a punitive sentence is applied. The defence does not have to prove innocence because any individual is presumed innocent until found guilty. Defence lawyers aim to identify inconsistencies and inaccuracies or weaknesses of the prosecution case and can also present their own evidence.

The penalties that can be imposed in the criminal system commonly include financial (fines) and loss of liberty (imprisonment) and community-based sentences. Some countries allow for corporal punishment (beatings), mutilation (amputation of parts of the body) and capital punishment (execution).

In England and Wales the lowest tier of court (in both civil and criminal cases) is the Magistrates' Court. 'Lay' magistrates sit in the majority of these courts advised by a legally qualified justice's clerk. In some of these courts a district judge will sit alone. Most criminal cases appear in magistrates' courts. The Crown Court sits in a number of centres throughout England and Wales and is the court that deals with more serious offences, and appeals from magistrates' courts. Cases are heard before a judge and a jury of 12 people. Appeals from the Crown Court are made to the Criminal Division of the Court of Appeal. Special courts are utilised for those under 18 years of age.

Civil law

Civil law is concerned with the resolution of disputes between individuals. The aggrieved party undertakes the legal action. Most remedies are financial. All kinds of dispute may be encountered, including those of alleged negligence, contractual failure, debt, and libel or slander. The civil courts can be viewed

as a mechanism set up by the state that allows for the fair resolution of disputes in a structured way.

The standard of proof in the civil setting is lower than that in the criminal setting. In civil proceedings, the standard of proof is proof on the balance of probabilities - a fact will be established if it is more likely than not to have happened.

Recently Lord Richards noted in a decision of the Court of Appeal in *Re (N) v Mental Health Review Tribunal* (2006) QB 468 that English law recognizes only one single standard for the civil standard but went on to explain that the standard was flexible in its application:

'Although there is a single standard of proof on the balance of probabilities, it is flexible in its application. In particular, the more serious the allegation or the more serious the consequences if the allegation is proved, the stronger must be the evidence before the court will find the allegation proved on the balance of probabilities. Thus the flexibility of the standard lies not in any adjustment to the degree of probability required for an allegation to be proved (such that a more serious allegation has to be proved to a higher degree of probability), but in the strength or quality of the evidence that will in practice be required for an allegation to be proved on the balance of probabilities.'

If the standard of proof is met, the penalty that can be imposed by these courts is designed to restore the position of the successful claimant to that which they had before the event, and is generally financial compensation (damages). In certain circumstances there may be a punitive element to the judgment.

The Magistrates' Court is used for some cases, but the majority of civil disputes are dealt within the County Court in the presence of a circuit judge. The High Court has unlimited jurisdiction in civil cases and has three divisions:

1. *Chancery* - specializing in matters such as company law;
2. *Family* - specializing in matrimonial issues and child issues; and
3. *Queen's Bench* - dealing with general issues.

In both civil and criminal trials, the person against

whom the action is being taken is called the defendant; the accuser in criminal trials is the state and in civil trials it is the plaintiff.

■ Doctors and the law

Doctors and other professionals may become involved with the law in the same way as any other private individual: they may be charged with a criminal offence or they may be sued through the civil court. A doctor may also be witness to a criminal act and may be required to give evidence about it in court.

However, it is hoped that these examples will only apply to the minority of professionals reading this book. For most, the nature of the work may result in that individual providing evidence that may subsequently be tested in court. For doctors are circumstances in which doctors become involved with the law simply because they have professional skills or experiences. In these cases, the doctor (or other professional) may have one of two roles in relation to the court, either as a professional or as an expert witness, the delineation of which can sometimes overlap.

Professional witness

A professional witness is one who gives factual evidence. This role is equivalent to a simple witness of an event, but occurs when the doctor is providing factual medical evidence. For example, a casualty doctor may confirm that a leg was broken or that a laceration was present and may report on the treatment given. A primary care physician may confirm that an individual has been diagnosed as having epilepsy or angina. No comment or opinion is generally given and any report or statement deals solely with the relevant medical findings.

Expert witness

An expert witness is one who expresses an opinion about medical facts. An expert will form an opinion, for instance about the cause of the fractured leg or the laceration. An expert will express an opinion about the cause of the epilepsy or the ability of an individual with angina to drive a passenger service

vehicle. Before forming an opinion, an expert witness will ensure that the relevant facts about a case are made available to them and they may also wish to examine the patient. In the United Kingdom the General Medical Council has recently published guidance for doctors acting as expert witnesses (http://www.gmc-uk.org/guidance/ethical_guidance/expert_witness_guidance.asp).

There are often situations of overlap between these professional and expert witness roles. For example a forensic physician may have documented a series of injuries having been asked to assess a victim of crime by the police and then subsequently be asked to express an opinion about causation. A forensic pathologist will produce a report on their post-mortem examination (professional aspect) and then form conclusions and interpretation based upon their findings (expert aspect).

The role of an expert witness should be to give an impartial and unbiased assessment or interpretation of the evidence that they have been asked to consider. The admissibility of expert evidence is in itself a vast area of law. Those practising in the USA will be aware that within US jurisdictions admissibility is based on two tests: the Frye test and the Daubert test. The Frye test (also known as the general acceptance test) was stated (*Frye v United States*, 293 F. 1013 (D.C.Cir. 1923)) as:

Just when a scientific principle or discovery crosses the line between the experimental and demonstrable stages is difficult to define. Somewhere in the twilight zone the evidential force of the principle must be recognized, and while courts will go a long way in admitting expert testimony deduced from a well-recognized scientific principle or discovery, the thing from which the deduction is made must be sufficiently established to have gained general acceptance in the particular field in which it belongs.

Subsequently in 1975, the Federal Rules of Evidence - Rule 702 provided:

If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness

qualified as an expert by knowledge, skill, experience, or training, or education may testify thereto in the form of an opinion or otherwise.

It appeared that Rule 702 superseded *Frye* and in 1993 this was confirmed in *Daubert v Merrell Dow Pharmaceuticals, Inc.* 509 US 579 (1993). This decision held that proof that establishes scientific reliability of expert testimony must be produced before it can be admitted. Factors that judges may consider were:

Whether the proposition is testable Whether the proposition has been tested Whether the proposition has been subjected to peer review and publication Whether the methodology technique has a known or potential error rate Whether there are standards for using the technique Whether the methodology is generally accepted.

The question as to whether these principles applied to all experts and not just scientific experts was explored in cases and in 2000 Rule 702 was revised to:

If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, or training, or education may testify thereto in the form of an opinion or otherwise, provided that (1) the testimony is sufficiently based upon reliable facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods to the facts of the case.

Committee Notes of the Federal Rules also emphasize that if a witness is relying primarily on experience to reach an opinion, that the witness must explain how that specific experience leads to that particular opinion.

In England and Wales, His Honour Judge Cresswell reviewed the duties of an expert in the *Ikarian Reefer* case (1993) FSR 563 and identified the following key elements to expert evidence:

1. *Expert evidence presented to the court should be, and should be seen to be, the independent product of the expert uninfluenced as to form or content by the exigencies of litigation.*