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How Much Do Expert Opinions Matter? An Empirical Investigation of Selection Bias, Adversarial Bias, and Judicial Deference in Chinese Medical

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HOW MUCH DO EXPERT OPINIONS MATTER? AN EMPIRICAL INVESTIGATION OF SELECTION BIAS, ADVERSARIAL BIAS, AND JUDICIAL DEFERENCE IN CHINESE MEDICAL NEGLIGENCE LITIGATION

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INTRODUCTION

Courts rely heavily on expert opinions on technical issues arising throughout civil litigation when knowledge about complex science is beyond the capacity of the judges.[1] In common law jurisdictions, with their adversarial traditions, it is common practice for parties to call their own experts to separately provide expert opinions to the court.[2] This party-solicited expert testimony has been criticized for its inherent vulnerability to selection bias[3] and adversarial bias.[4] This is why the

1. Tal Golan, *Revisiting the History of Scientific Expert Testimony*, 73 BROOK. L. REV. 879, 881 (2008).

2. John H. Langbein, *The German Advantage in Civil Procedure*, 52 U. CHI. L. REV. 823, 835–36 (1985); John Basten, *The Court Expert in Civil Trials - A Comparative Appraisal*, 40 MOD. L. REV. 174, 176 (1977); *see also* Golan, *supra* note 1, at 887.

3. Paul Michell & Renu Mandhane, *The Uncertain Duty of the Expert Witness*, 42 ALTA. L. REV. 635, 646 (2005).

4. David E Bernstein, *Expert Witnesses, Adversarial Bias, and the (Partial) Failure of the Daubert Revolution*, 93 IOWA L. REV. 451, 453 (2008). To mitigate the problems of selection bias and adversarial bias, the alternative to partisan expert testimony has been introduced to common law jurisdictions, such as "court-appointed expert witness" established by Rule 706 of the Federal Rules of Evidence of the United States, and "concurrent evidence" adopted in Australian civil procedure, *see* Basten, *supra* note 2, at 181; Gary Edmond, *Merton and the Hot Tub: Scientific Conventions and Expert Evidence in Australian Civil Procedure*, 72 L. & CONTEMP. PROBS. 159, 162 (2009). However, empirical studies found that court-appointed experts were used infrequently in the United States, *see* Langbein, *supra* note 2, at 840–

"battle of the experts" often happens in the courtroom.[5] The courts are supposed to filter out problematic expert testimony that fails to meet the test of relevance and reliability, although the standard of admissibility for expert testimony varies between jurisdictions.[6] However, it is difficult for lay judges to evaluate partisan expert testimony as to scientific reliability and scientific merit, which might lead to the use of junk science by judges in delivering their judgment.[7]

By contrast, civil law jurisdictions follow an inquisitorial system where courts appoint disinterested and neutral experts to provide expert opinions on technical issues.[8] On the one hand, the court-appointed expert testimony may mitigate the problems of selection bias and adversarial bias associated with partisan experts.[9] On the other hand, because most judges lack the knowledge and experience to evaluate the scientific reliability and scientific merit of expert testimony, they are more inclined to accept it and show great deference to experts. With the high rate of acceptance of expert opinions, court-appointed experts may become the de facto decision-makers in determining contested technical issues.[10]

41; Anthony Champagne, Daniel W. Shuman & Elizabeth Whitaker, *The Problem with Empirical Examination of the Use of Court-appointed Experts: A Report of Non-findings*, 14 BEHAV. SCI. & L. 361, 364–65 (1996).

5. The "battle of the experts" refers to a medical-legal phenomenon where conflicting or contradictory expert testimony is presented in court because the litigants, when required to provide expert opinions in the proceeding, usually call expert witnesses who present testimony in favor of the calling party, *see generally* Larry W Myers, *The Battle of the Experts: A New Approach to an Old Problem in Medical Testimony*, 44 NEB. L. REV. 539 (1965).

6. Andrew W Jurs, *Balancing Legal Process with Scientific Expertise: Expert Witness Methodology in Five Nations and Suggestions for Reform of Post-Daubert U.S. Reliability Determinations*, 95 MARQ. L. REV. 1329, 1348, 1365, 1373–74 (2012).

7. Henry Berry, *The Medical Expert, Junk Reasoning, and Junk Science in Personal Injury Litigation*, 44 TORT TRIAL INS. PRAC. L. J. 1101, 1101, 1113, 1116–19 (2005).

8. Expert opinions are required in court to assist judges in determining technical issues concerning special knowledge and skills that are beyond their capacity. Technical issues vary in different types of cases, such as car accident, product liability, work-related accident, and professional negligence, etc. In medical negligence lawsuits, technical issues are normally medical issues concerning medical science and clinical experiences and skills.

9. Langbein, *supra* note 2, at 836-40.

10. Jurs, *supra* note 6, at 1389.

Chinese civil procedure is an inquisitorial system[11] and follows a hybrid approach to employing experts to assist judges in civil litigation by using civil law court-appointed experts supplemented by common law style party-solicited experts. Specifically, an expert who provides expert opinions to assist judges in deciding a case is called an "authenticator."[12] The process of making expert opinions is called "authentication,"[13] which can be unilaterally or jointly initiated by the parties, or can be initiated by the court according to Article 76 of *Civil Procedure Law of People's Republic of China*.[14] In court-initiated authentication cases, the court normally selects a court-appointed expert either based on the consensus of the parties or its own decision if the parties' joint selection fails.

Authenticators decide the contested technical issues by considering the available case materials and statements of the parties or the witnesses.[15] An authenticator must accept cross-examination when one party disagrees with their expert opinions or when the court thinks it necessary; otherwise, the expert opinions should not be admitted.[16] To supplement the expert opinions of authenticators, the parties may apply to the court to invite one or two partisan experts to question the authenticators on behalf of the party or provide additional opinions on technical issues.[17] The court has the power to question partisan experts, as do the parties, provided that the court approves. Either party may apply to the court for re-authentication when it does not accept the expert opinions of the authenticators. The court will give leave if the party has evidenced a statutory ground for re-authentication according to Article 27 of *Some Provisions of the Supreme People's Court on*

11. Mo Zhang, *International Civil Litigation in China: A Practical Analysis of the Chinese Judicial System*, 25 B.C. INT'L & COMP. L. REV. 59, 71 (2002).

12. Jianding ren (鉴定人) [Authenticator].

13. Jianding (鉴定) [Authentication].

14. Zhonghua Renmin Gongheguo Minshi Susong Fa (中华人民共和国民事诉讼法) [Civil Procedure Law of People's Republic of China], (promulgated by Nat'l People's Cong., Apr. 9, 1991, effective Apr. 9, 1991 amend. 2007, 2012, 2017), [hereinafter Civil Procedure Law].

15. *See* Civil Procedure Law, art. 77.

16. *See id.*, art. 78.

17. *Id.*, art. 79.

Evidence in Civil Procedures ("Provisions on Evidence in Civil Procedures").[18]

Medical disputes have caused serious social conflicts and instability in China.[19] Litigation works as the last resort to help the patient-victims of adverse medical accidents who seek legal remedies. It was reported that the number of medical negligence lawsuits was 8,854 in 2004, and increased to 21,480 in 2016.[20] On average, this number is increasing by more than 8% every year.[21] Because it is common and important for judges to rely on expert opinions in determining medical negligence cases, this article addresses the nature of the operation and role of expert opinions in Chinese medical negligence litigation. This article draws on content analysis of the "documents of adjudication decisions" [22] (DAD) of 3,619 medical negligence cases and an in-depth survey of judges with experience in adjudicating medical negligence cases. This empirical study offers three major findings: first, that both parties to medical negligence disputes show significant selection bias towards medical opinions, as do courts when selecting court-appointed experts; second, expert opinions in medical negligence litigation demonstrate substantial adversarial bias; and third, courts display very strong judicial deference to expert opinions in determining medical negligence liability. This article further analyzes the social, legal, and institutional factors that contribute to selec-

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18. Zuigao Renmin Fayuan Guanyu Minshi Susong Zhengju De Ruogan Guiding (最高人民法院关于民事诉讼证据的若干规定) [Some Provisions of the Supreme People's Court on Evidence in Civil Procedures] (promulgated by Supreme People's Court, Dec. 21, 2001, effective Apr. 1, 2002, [hereinafter Provisions on Evidence in Civil Procedures].

19. Benjamin L Liebman, *Malpractice Mobs: Medical Dispute Resolution in China*, 113 COLUM. L. REV. 181, 183–84 (2013); Chunyan Ding, *A Dose to Cure "Medical Chaos": Medical Mediation in China*, 10 J. COMP. L. 158, 158–59 (2015).

20. *Zhongguo Yiliao Jiufen An Shinian Fanbei (中国医疗纠纷案十年翻倍) [The Number of Medical Negligence Lawsuits Doubted within One Decade]*, SUOHU XINWEN (SOHU NEWS) (Oct. 29, 2018), http://www.sohu.com/a/271907448_129883.

21. *Id.*

22. *Caipan Wenshu* (裁判文书) [Documents of adjudication decisions]. In China, documents of adjudication decisions consist of two types: one is judgment that contains judicial decisions on substantive issues, and the other is ruling that contains judicial decisions on procedural issues. This study investigates judgments of medical negligence cases.

tion bias, adversarial bias, and judicial deference to expert opinions in the Chinese medical negligence litigation setting.

This article fills the methodological gap left by the existing literature because there has been no empirical discussion on expert opinions in Chinese civil litigation to date. It provides empirical evidence to verify selection bias and adversarial bias, as well as judicial deference to expert opinions in Chinese medical negligence litigation. Moreover, in October 2018, the National Health Commission and the Ministry of Justice jointly published the draft *Regulatory Measures on Medical Negligence Authentication (For Public Consultation)*.[23] This article therefore has important implications for the ongoing reform of the medical negligence authentication mechanism proposed by the Chinese government.

This article proceeds as follows: Part I provides a brief introduction of a special mechanism through which expert opinions are produced and presented in Chinese medical negligence litigation. Part II focuses on the issues of selection bias, adversarial bias, and judicial deference to expert opinions arising from Chinese medical negligence litigation and formulates hypotheses concerning these three issues. Part III explains the data and research methods used in this study. Part IV presents the research findings and tests the hypotheses. Part V discusses the results of the research and analyzes the social, legal, and institutional factors that contribute to selection bias, adversarial bias, and judicial deference to expert opinions in the Chinese medical negligence litigation setting. The conclusion summarizes the article's main contributions and their implications.

I. MEDICAL NEGLIGENCE AUTHENTICATION MECHANISM IN CHINA

Before focusing on the discussion of selection bias, adversarial bias, and judicial deference to expert opinions in Chinese

23. Yiliao Sunhai Jianding Guanli Banfa (Zhengqiu Yijian Gao) (医疗损害鉴定管理办法(征求意见稿)) [Regulatory Measures on Medical Negligence Authentication (For Public Consultation)], *see* Notice of the National Health Commission and the Ministry of Justice on Public Consultation of the Regulatory Measures on Medical Negligence Authentication, NAT'L HEALTH COMM'N (2018), http://www.nhfpc.gov.cn/wjw/yjzj/201810/9fbd70bf42d74c96afb8bb77b3d7e25f.shtml.

medical negligence litigation, this part of the article explains how expert opinions are produced and presented in Chinese courts through a special mechanism called "medical negligence authentication." [24] It will also detail the special importance of this mechanism for medical negligence lawsuits, as well as the unique features of the mechanism.

A. Overview of Medical Negligence Authentication Mechanism

Current Chinese medical negligence law derives from two sources of law. One is chapter seven (titled "Liability for injury in medical care") of *Tort Liability Law of People's Republic of China* ("Tort Liability Law").[25] The other source is *Interpretations of the Supreme People's Court regarding Problems in Determining Compensation for Medical Negligence Cases* ("SPC Interpretations on Medical Negligence Liability").[26] Under Chinese law, medical negligence liability arises where a patient sustains any harm during diagnosis and treatment due to the fault of a medical institution or any of its medical staff.[27] To claim medical negligence liability, the plaintiff-patient has a burden of proof for personal injury, fault of the medical care provider, and causation between the fault and the damage.[28] The defendant–medical care provider bears a burden of proof when it argues no or less medical negligence liability in three situations: (1) non-breach in the case of emergency, (2) non-breach due to the state of medical knowledge at the time of accident, and (3) contributory negligence.[29] Both disputing parties rely heavily on medical opinions in discharging their bur-

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24. Yiliao Sunhai Jianding (医疗损害鉴定) [Medical negligence authentication].

25. Qinquan Zeren Fa (侵权责任法) [Tort Liability Law of People's Republic of China], (promulgated by the Standing Comm. of Nat'l People's Cong. Dec. 26, 2009, effective July 1, 2010) Standing Comm. Nat'l People's Cong. Gaz.

26. Zuigao Renmin Fayuan Guanyu Shenli Yiliao Sunhai Zeren Jiufen Anjian Shiyong Falv Ruogan Wenti De Jieshi (最高人民法院关于审理医疗损害责任纠纷案件适用法律若干问题的解释) [Interpretations of the Supreme People's Court regarding Problems in Determining Compensation for Medical Negligence Cases], (promulgated by Supreme People's Ct., Dec. 13, 2017, effective Dec. 14, 2017) [hereinafter SPC Interpretations on Medical Negligence Liability].

27. *See* Tort Liability Law, art. 54.

28. *See id.*, art. 54 and 58. *See also* SPC Interpretations on Medical Negligence Liability, art. 4.

29. *See* Tort Liability Law, art. 60(1).

den of proof, as do courts in the resolution of medical negligence disputes.

In Chinese medical negligence litigation, medical opinions are normally given through a special mechanism called "medical negligence authentication," which is organized by an authentication institution and performed by a group of medical experts selected from the listed medical experts of the authentication institution.[30] The selected authenticators must have no personal interest in the dispute.[31] Parties may unilaterally or jointly initiate medical negligence authentication before or during the proceedings. The court, either upon the parties' application or its own initiative, may initiate medical negligence authentication after the pleadings stage of litigation.[32] The court will receive collective medical opinions stated in an authentication report issued in the name of the authentication institution.[33] The authenticators may be called to testify in court and questioned under cross-examination by judges, lawyers, and partisan medical experts.[34] Partisan medical experts may provide additional opinions on other technical issues arising from the case, although they have rarely been invited by the parties to medical negligence lawsuits.[35]

B. Special Importance of Medical Negligence Authentication Mechanism

The medical negligence authentication mechanism is of special importance to Chinese medical negligence litigation for three reasons. First, given the information asymmetry between patients and medical care providers, Article 4 of SPC Interpretations on Medical Negligence Liability allows the plaintiff-patients to discharge their burden of proof regarding the issues of fault and causation by applying to the court for medical neg-

30. *See* Yiliao Jiufen Yufang he Chuli Tiaoli (医疗纠纷预防和处理条例) [Reg. on Prevention and Handling of Med. Disp.] (promulgated by the St. Council, July 31, 2018, effective Oct. 1, 2018) ST. COUNCIL GAZ., art. 34 & 35.

31. *See* Reg. on Prevention and Handling of Med. Disp., art. 37.

32. *See* SPC Interpretations on Medical Negligence Liability, art. 8 & 9.

33. *See* Reg. on Prevention and Handling of Med. Disp., art. 36.

34. *See* SPC Interpretations on Medical Negligence Liability, art. 13 & 14.

35. Xiaoyan Li & Hong Deng, *Yiliao Jiufen Susong Zhong De Zhuangjia Fuzhuren (医疗纠纷诉讼中的专家辅助人) [Assisting Experts in Litigation of Medical Disputes]*, 24 ZHONGGUO WEISHENG FAZHI (中国卫生法制) [CHINA HEAL. LEG. SYST.] 19, 19 (2016).

ligence authentication if they are unable to provide any supporting evidence.[36] In other words, medical negligence authentication can be used by the plaintiffs to release their burden of proof and may prevent them from losing the litigation despite the lack of supporting evidence.

Second, medical experts are allowed to provide opinions on both technical and legal issues. Specifically, the experts may comment on the following issues: (1) fault in the diagnosis and treatment; (2) causation between the fault and the damage, and the "degree of causal contribution"[37] of the fault to the damage; (3) breach of the duty of disclosure or the duty to obtain written consent of the patient or their close relatives; (4) the degree of severity of personal injury sustained by the patient-victim; (5) the nursing period, rest period, and nutrition period that the patient-victim needs for recovery from personal injury; and (6) other technical issues.[38] Among them, the first three are legal issues and fall within the jurisdiction of courts. Given the wide coverage of issues on which medical experts are entitled to provide opinions, collective medical opinions given through medical negligence authentication are similar to a ruling of a medical professional tribunal.

Third, because parties are allowed to apply for re-authentication on a statutory ground,[39] their application for re-authentication functions as a "quasi-appeal" against the professional ruling and therefore amounts to a different form of "battle of the experts" in medical negligence litigation in China. Although courts have discretion to decide whether to give leave for re-authentication, Chinese civil procedure law has no cap on how many times re-authentication may be conducted in a single civil proceeding. Occasionally, medical negligence cases

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36. *See* SPC Interpretations on Medical Negligence Liability, art. 4.

37. Yinguo Guanxi Canyu Du (因果关系参与度) [Degree of causal contribution] or Yuanyinli Daxiao (原因力大小) [Degree of causal potency] (which means to what extent, among several causes, the defendant's fault contributes to the damages sustained by the plaintiff). *See*, Chunbing Zhang & Zhichun Du, *Yiao Sunhai Sifa Jianding Yinguo Guanxi Fenxi Ji Canyudu Panding (医疗损害司法鉴定因果关系分析及参与度判定) [Analysis of Causation and Determination of the Degree of Casual Contribution in Medical Negligence Authentication]*, 82 ZHONGGUO SIFA JIANDING (中国司法鉴定) [CHINESE FORENSIC SCI.] 100, 100 (2005).

38. *See* SPC Interpretations on Medical Negligence Liability, art. 11.

39. *See* Provisions on Evidence in Civil Procedures, art. 27.

may undergo re-authentication three times prior to the court's decision.[40]

C. Dual Form of Medical Negligence Authentication

Article 11 of SPC Interpretations on Medical Negligence Liability provides a uniform medical negligence authentication mechanism under which parties or courts may select a medical association or forensic authentication agency to organize and conduct medical negligence authentication and issue an authentication report.[41] The medical negligence authentication conducted by medical associations (MA-MNA), and that by forensic authentication agencies (FA-MNA), originated from the abolished two-track system of medical negligence liability.[42] These two forms of medical negligence authentication significantly differ in terms of the competence and neutrality of medical experts. Specifically, medical experts of MA-MNA normally include medical practitioners, professors, or researchers specializing in a particular field of medicine and working at a higher professional post for no less than three years, according to Article 6 of *Interim Measures on Medical Malpractice Technical Authentication*.[43] In contrast, medical experts of FA-MNA are normally qualified forensic experts who are registered with the provincial Bureau of Justice but do not practice in medical institutions, according to Article 3 of *Decision of the Standing Committee of the National People's Congress on the Administration of Forensic Authentication*.[44] They normally lack knowledge or experience in clinical medicine. Therefore, medi-

40. In the author's DAD database of medical negligence cases, there were only five medical negligence cases involving re-authentication for three times.

41. *See* SPC Interpretations on Medical Negligence Liability, art. 11.

42. Chunyan Ding, *Local Judicial Activism and Law Reform in China: Medical Negligence Law as a Case Study* (working paper, 2019) (on file with the author).

43. *See* Yiliao Shigu Jishu Jianding Zanxing Banfa (医疗事故技术鉴定暂行办法) [Interim Measures on Medical Malpractice Technical Authentication] (promulgated by the Ministry of Health, July 31, 2002, effective Sept. 1, 2002) art. 6 [hereinafter MMTM Measures].

44. *See* Quanguo Renda Changweihui Guanyu Sifa Jianding Guanli Wenti De Jueding (全国人大常委会关于司法鉴定管理问题的决定) [Decision of the Standing Comm. of the Nat'l People's Cong. on the Admin. of Forensic Authentication, hereinafter Decision on Forensic Authentication], (promulgated by the Standing Committee of National People's Congress, Feb. 28, 2005, effective Oct. 1, 2005) art. 3.

cal experts of MA-MNA have advantages over those of FA-MNA in terms of competence.

Medical experts of MA-MNA, however, have been severely criticized for professional protectionism and local protectionism.[45] Medical associations in China are established according to administrative regions and administrative levels: municipal, provincial, and national.[46] The municipal-level medical associations undertake the first-time medical negligence authentication and the provincial-level conduct re-authentication for medical disputes occurring in their jurisdiction.[47] Few cases reach the national medical association.[48] Medical associations at each level establish their own list of qualified medical experts serving as authenticators, and local medical practitioners are given priority listing over non-locals according to the locality rule.[49] Therefore, medical experts of MA-MNA who conduct authentication at the municipal level are usually medical practitioners working in the local medical institutions and peers to the alleged negligent physicians.

By contrast, medical experts of FA-MNA are not local peers to the alleged negligent physicians. They are affiliated to and work in forensic authentication agencies. There is no bureaucratic or hierarchic relationship within forensic authentications.[50] Moreover, forensic authentication agencies are not sub-

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45. The term "Professional protectionism" refers to professional bias to improperly maintain professional power and interests, and a tendency of professionals to protect each other from outside scrutiny and cover up each other's misconducts. The term "local protectionism" refers to local bias to rule in favor of locals and a tendency to place the interests of the locality above the merits of a case. *See* CHUNYAN DING, MEDICAL NEGLIGENCE LAW IN TRANSITIONAL CHINA 153-59 (2012); Lin Lin, *Yixuehui Congshi Yiliao Sunhai Jianding De Fansi Yu Chonggou (医学会从事医疗损害鉴定的反思与重构) [Reflection and Restructuring of Medical Negligence Authentication Conducted by Medical Association]*, ZHIFU SHIDAI (致富时代) [FORTUNE TIMES] 198, 198-199 (2017).

46. The national medical association is called Zhonghua Yixue Hui (中华医学会) [Chinese Medical Association], which is located in Beijing, *see* the Website of Chinese Medical Association, http://www.cma.org.cn (last visited Nov. 20, 2019).

47. *See* MMTA Measures, art. 3.

48. In the author's DAD database of medical negligence cases, there were only five medical negligence cases involving MA-MNA conducted by the national medical association.

49. *See* MMTA Measures, art. 6

50. *See* Decision on Forensic Authentication, art. 8.

ject to the locality rule.[51] As such, they can employ both local and non-local medical experts and undertake both local and non-local medical negligence cases. Medical experts of FA-MNA, therefore, have received little criticism for professional protectionism or local protectionism. The public generally regard them as more neutral and trustworthy than medical experts of MA-MNA.

II. SELECTION BIAS, ADVERSARIAL BIAS, AND JUDICIAL DEFERENCE TO EXPERT OPINIONS IN CHINESE MEDICAL NEGLIGENCE LITIGATION

The uniform medical negligence authentication mechanism operating in medical negligence litigation has two distinguishing features from expert opinions employed in other civil proceedings in China. One is that it only produces institutionalized medical opinions. Because expert opinions are collectively made and issued in the name of the authentication institution, this study is concerned with authentication institutions rather than individual experts. The other feature is its dual form of medical negligence authentication: MA-MNA and FA-MNA. Hence, selection bias, adversarial bias, and judicial deference to expert opinions in the Chinese medical negligence litigation setting are demonstrated in special ways.

In terms of selection bias, because disputing parties are entitled to initiate medical negligence authentication and may select either MA-MNA or FA-MNA to conduct it, this study will investigate whether the plaintiffs and the defendants have different preferences in selecting the form of medical negligence authentication. Because MA-MNA has been criticized for its lack of neutrality,[52] this study hypothesizes that the plaintiff-patients prefer to select FA-MNA, while the defendant–medical care providers prefer to select MA-MNA. Moreover, the parties are entitled to apply to the court for re-authentication when they do not accept expert opinions given through the first-time medical negligence authentication. This study will also investigate the selection bias of the parties in medical negligence lawsuits that involve re-authentication. Because re-authentication may be seen as a "quasi-appeal" against the professional ruling and a form of "battle of the experts," this study hypothesizes

51. *Id*.

52. Ding, *supra* note 45, at 153–59; Lin, *supra* note 45, at 198–99.

that both the plaintiffs and the defendants show a stronger selection bias when applying for re-authentication.

As courts have the power to initiate medical negligence authentication, this study will also investigate whether courts have any preference in selecting the form of medical negligence authentication and, if so, which form is preferred. Given that courts are supposed to be neutral in dealing with medical negligence cases and courts (except those in Shanghai and Jiangsu Province, which are required to prioritize MA-MNA due to their local interpretations)[53] are free to appoint medical experts of either MA-MNA or FA-MNA, this study hypothesizes that courts do not display selection bias when initiating medical negligence authentication.

In terms of adversarial bias, as noted above, it has been asserted that MA-MNA is more likely to deliver expert opinions in favor of the defendant–medical care providers due to professional protectionism and local protectionism, while FA-MNA does not have such an inclination. Although the concept of "adversarial bias" commonly means the witness bias that arises because experts are retained to advance the cause of one party to an adversarial proceedings,[54] expert opinions given through MA-MNA in favor of the defendant–medical care providers can be seen as "institutional adversarial bias" in Chinese inquisitorial medical negligence proceedings. This study intends to provide empirical evidence to determine whether the assertion about adversarial bias of MA-MNA can be verified from two perspectives: professional protectionism and local protectionism.

In terms of professional protectionism, this study hypothesizes that expert opinions of MA-MNA are much more in favor of

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53. *See* Jiangsusheng Gaoji Renmin Fayuan Jiangsusheng Weishengting Guanyu Yiliao Sunhai Jianding Gongzuo De Ruogan Yijian (Shixing) (江苏省高级人民法院、江苏省卫生厅关于医疗损害鉴定工作的若干意见(试行)) [*Interim Opinions of the High People's Court of Jiangsu Province and the Provincial Health Bureau of Jiangsu Province regarding Medical Negligence Authentication*], (promulgated by the High People's Court of Jiangsu Province, Oct. 11, 2010, effective Oct. 11, 2010), art. 2. *See also*, Shanghaishi Gaoji Renmin Fayuan Guanyu Weituo Yiliao Sunhai Sifa Jianding Ruogan Wenti De Zanxing Guiding (上海市高级人民法院关于委托医疗损害司法鉴定若干问题的暂行规定) [*Interim Rules of the High People's Court of Shanghai regarding Problems on Court-delegated Medical Negligence Authentication*], (promulgated by the High People's Court of Shanghai, Jan. 1, 2011, effective Jan 1, 2011), art. 2.

54. Bernstein, *supra* note 4, at 453.

the defendant–medical care providers than those of FA-MNA, and vice versa. In terms of local protectionism, this study hypothesizes that medical opinions of MA-MNA organized by medical associations in the same location[55] as the defendants are more in favor of the defendants than those organized by medical associations in a different location from the defendant, and that expert opinions of FA-MNA do not display local protectionism because it is not subject to the locality rule. Under the medical negligence authentication mechanism, the provincial-level and national medical associations normally conduct re-authentication and function as the "appellant medical association" to deal with a "quasi-appeal" against the professional ruling made by the first-time MA-MNA.[56] Unlike MA-MNA conducted by the municipal-level medical associations, for MA-MNA conducted by the provincial- or national-level medical associations, the pool of listed medical experts for selection is not limited to local medical practitioners working within the city of the defendants. The provincial- or national-level medical associations have a looser connection with the defendant–medical care providers than the municipal-level ones. This study hypothesizes that medical opinions of MA-MNA organized by the municipal-level medical associations are more in favor of the defendants than those organized by the provincial- or national-level medical associations.

In practice, a medical negligence authentication report includes at least four major issues: (1) fault in the diagnosis and treatment; (2) causation between the fault and the damage; (3) the degree of causal contribution of the fault to the damage; and (4) the degree of severity of personal injury sustained by the plaintiff.[57] The legal issues of fault and causation are critical for establishing medical negligence liability, and the degree of causal contribution and the degree of severity of personal injury significantly influence the amount of damages awarded.[58] This study will look into medical opinions of MA-MNA and FA-MNA regarding each of the above four issues in order to test its hypothesis regarding adversarial bias.

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55. As noted in the part of "Data and Methods of the Research" below, the location variable was defined as the municipal level in this study.

56. *See* MMTM Measures, art. 3.

57. Zhang & Du, *supra* note 37.

58. *Id.*

Finally, with regard to judicial deference, some civil law jurisdictions report that court-appointed experts are likely to become the de facto decision-makers in determining contested technical issues.[59] English courts treated the medical professional with excessive deference in medical negligence litigation, but the position has changed recently.[60] There has been no empirical evidence, however, on judicial deference to expert opinions in China. In the vast majority of medical negligence cases, judges are assisted by medical experts through medical negligence authentication.[61] Only in exceptional cases do judges adjudicate without medical opinions, either because medical negligence authentication institutions refuse to accept the case or because they are unable to deliver expert opinions due to the lack of necessary case materials, such as medical records or an autopsy report.[62] To investigate judicial deference to expert opinions in the Chinese medical negligence litigation setting, this study will only investigate medical negligence cases with medical opinions given through medical negligence authentication, and will only examine judicial attitudes toward expert opinions regarding the four issues: fault, causation, degree of causal contribution, and degree of severity of personal injury. This study hypothesizes that, similar to judges in other civil law jurisdictions, Chinese judges present high judicial deference to expert opinions in medical negligence litigation.

III. DATA AND METHODS OF THE RESEARCH

After setting up the hypotheses regarding selection bias, adversarial bias, and judicial deference to expert opinions, this part of the article discusses the source, scope, and coverage of the data used to test these hypotheses, as well as the methods of coding major measurements. Moreover, this study surveyed

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59. Jurs, *supra* note 6, at 1389.

60. The Right Honourable the Lord Woolf, *Are the Courts Excessively Deferential to the Medical Professional?*, 9 MED. L. REV. 1, 9 (2001).

61. As noted above, partisan medical experts have seldom been invited to give expert opinions in Chinese medical negligence litigation, *see* Li & Deng, *supra* note *35*.

62. Wentao Xia, Silei Tao & Qing Xia, *Dangqian Yiliao Sunhai Jianding Yijianshu Changjian Wenti Pouxi (当前医疗损害鉴定意见书常见问题剖析) [Analysis on the Current Common Problems of Medical Negligence Authentication Reports]*, 99 ZHONGGUO SIFA JIANDING (中国司法鉴定) [CHINESE FORENSIC SCI.] 18, 21 (2018).

Chinese judges with experience in adjudicating medical negligence cases in order to further investigate social, legal, and institutional factors relevant to explain the findings.

A. Data

The DAD[63] database of medical negligence cases used in this study were collected from the Supreme People's Court's official online database, called "China Adjudication Decisions Online."[64] All Chinese courts have been required to upload adjudication decisions to this database since January 1, 2014, except those cases involving state secrets, business secrets, privacy issues, and adolescent criminals, in accordance with *Provisions of the Supreme People's Court on Online Publication of Judgments by the People's Courts*.[65] Medical negligence cases do not fall into the category of exceptional cases.

The author searched judgments of medical negligence cases by the cause of action "medical negligence liability,"[66] as stipulated in *Provisions on the Cause of Action of Civil Cases*.[67] Specifically, this study focuses on all judgments of medical negligence cases made in 2016 and published in "China Adjudication Decisions Online" as of October 30, 2017, which were used to establish the DAD database. This was for three reasons. First, in order to avoid sample bias and establish a complete DAD database, the author decided to use a full dataset of one-year of medical negligence judgments in China. Second, as of October 30, 2017, the author searched and found that the number of first-instance medical negligence cases were 3,093 in 2014, 3,416 in 2015, and 3,769 in 2016, showing that the case number increased annually by 10% from 2014 to 2016. The 2016 dataset presents the largest number of medical negligence

63. *Caipan Wenshu* (裁判文书) [Documents of adjudication decisions], *supra* note 22.

64. Zhongguo Caipan Wenshu Wang (中国裁判文书网) [China Adjudication Decisions Online], http://wenshu.court.gov.cn (last visited Nov. 20, 2019).

65. Zuigao Renmin Fayuan Guanyu Renmin Fayuan Zai Hulianwang Gongbu Caipan Wenshu De Guiding (最高人民法院关于人民法院在互联网公布裁判文书的规定) [Provisions of the Supreme People's Court on Online Publication of Judgments by the People's Courts] (promulgated by the Supreme People's Court, Nov. 21, 2013, effective Jan. 1, 2014, amended in 2016).

66. Yiliao Sunhai Zeren (医疗损害责任) [Medical negligence liability].

67. Minshi Anjian Anyou Guiding (民事案件案由规定) [Provisions on the Cause of Action of Civil Cases] (promulgated by the Supreme People's Court, Feb. 18, 2011, effective April 1, 2011).

cases available in recent years. Third, the uniform medical negligence authentication mechanism was not established by Tort Liability Law in the 2009 tort law reform, but was instead introduced by the local judiciary after the implementation of Tort Liability Law.[68] By the end of 2015, most local courts had adopted the uniform medical negligence authentication mechanism with the dual form of MA-MNA and FA-MNA.[69] The 2016 data therefore better serve the purpose of this research.

As some adjudication decisions were repeatedly uploaded by courts to "China Adjudication Decisions Online," after the author cleared the dataset, the DAD database of medical negligence cases finally included 3,619 medical negligence cases for 2016. It is common, however, for courts to delay uploading adjudication decisions to "China Adjudication Decisions Online."[70] Compared to the search results on judgments of medical negligence cases in 2016 as of December 31, 2018, the DAD database covered 57.19% of 5,823 first-instance cases, 7.16% of 3,130 appeal cases, and 60.75% of 107 retrial cases.[71]

B. Methods

The author developed a coding scheme and trained two independent coders for content analysis. The inter-coder reliability,

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68. Ding, *supra* note 45.

69. After the implementation of Tort Liability Law in July 2010, Chinese local courts (such as those in Zhejiang Province, Beijing, Xinjiang Uyghur Autonomous Region, Hubei Province, Shenzhen and Anhui Province) issued their local judicial interpretations on medical negligence liability from 2010 to 2015. Among them, Anhui Province was the last one, and its local judicial interpretations were promulgated in January 2015.

70. Deyun Han, JINYIBU WANSHAN FAYUAN CAIPAN WENSHU WANGSHANG GONGKAI GONGZUO (进一步完善法院裁判文书网上公开工作) [FURTHER IMPROVING THE WORK OF ONLINE PUBLICATION OF ADJUDICATION DECISIONS OF COURTS] (2015), http://www.npc.gov.cn/npc/dbdhhy/12_3/2015-03/09/content_1916981.htm; Chao Ma, Xiaohong Yu & Haibo He, *Dashuju Fenxi: Zhongguo Sifa Caipan Wenshu Shangwang Gongkai Baogao (大数据分析: 中国司法裁判文书上网公开报告) [Big Data Analysis: A Report on Online Publication of Chinese Documents of Adjudication Decisions]*, ZHONGGUO FALV PINGLUN (中国法律评论) [CHINA L. REV.] 195, 209, 231 (2016).

71. As exceptions, closed cases may be re-opened and re-tried where statutory conditions are met in the Chinese legal system, *see* Yaxin Wang, *Minshi Zaishen: Chengxu De Fazhan Ji Qi Jieshi Shiyong (民事再审：程序的发展及其解释适用) [Civil Retrials: The Development of the Procedure and the Application of the Relevant Judicial Interpretations]*, BEIFANG FAXUE (北方法学) [N. LEG. SCI.] 117, 117-119 (2016).

measured by Cohen's Kappa,[72] was 0.824.[73] First, the following basic information of cases were coded, including the level of the trial, the level of the court, the location of the court, the type of proceedings (i.e., summary procedure[74] or trial by collegial panel),[75] the characteristics of the patient-victim (urban or rural), the characteristics of the defendant–medical care providers, the level of the public hospital (from highest third-level to the lowest first-level hospitals),[76] the amount of the claimed compensation, and the amount of the damages award. In addition, the following seven major measurements were coded:

The first measurement was the existence of expert opinions given through medical negligence authentication. The cases with and without expert opinions given through medical negligence authentication were coded as 1 or 0, respectively.

The second was the form of medical negligence authentication involved in each medical negligence case: MA-MNA or FA-MNA. Because some cases only underwent medical negligence authentication once and others had re-authentications up to three times, all medical negligence authentications involved in the dataset were categorized into two groups: (1) those with medical opinions admitted and considered by the court for the purpose of making judicial decisions; and (2) those with medical opinions challenged by the parties and then replaced by the new medical opinions through re-authentication. The form of medical negligence authentications in both group 1 and group 2 were coded.

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72. *See generally*, Mary L. McHugh, *Interrater Reliability: The Kappa Statistic*, 22 BIOCHEMIA MEDICA 276, 276–82 (2012).

73. The value of kappa above 0.81 indicates very good agreement beyond chance or almost perfert in terms of strength of agreement. *See*, MARTIN BLAND, AN INTRODUCTION TO MEDICAL STATISTICS (4th ed. 2015).

74. Jianyi Chengxu (简易程序) [Summary procedure], *see* Civil Procedure Law, art. 157.

75. Heyiting (合议庭) [Collegial panel], *see* Civil Procedure Law, art. 39.

76. In China, public hospitals are classified into three levels (with several grades in each level) and a total of ten categories. The highest category of hospitals is "Sanjia Tedeng Yiyuan (三甲特等医院) [the special-grade of the third-level hospitals], and the lowest category is Yiji Bingdeng Yiyuan (一级丙等医院) [the third-grade of the first-level hospitals]. *See* Yiyuan Fenji Guanli Banfa (Shixing) (医院分级管理办法(试行)) [Interim Measures on the Management of the Classification of Hospitals] (promulgated by the Ministry of the Health, Nov. 29, 1989 effective Nov. 29, 1989).

The third coded measurement was the party who initiated medical negligence authentication. The initiator may be (1) the plaintiff-patient, (2) the defendant–medical care provider, (3) both parties, or (4) the court. In the re-authentication cases, the initiators also included these four categories.

The fourth was the location of MA-MNA and FA-MNA involved in medical negligence cases and the location of the defendant–medical care providers. The location variable was defined as the municipal level; that is, two cities within the same province were seen as different locations. When the location of the medical association and that of the defendants were the same, it was coded as 1. When they differed, it was coded as 0.

The fifth was the level of MA-MNA involved in medical negligence cases: municipal, provincial, or national levels.

The sixth was expert opinions given through MA-MNA and FA-MNA regarding the following four issues: (1) fault in the diagnosis and treatment ("fault"); (2) causation between the fault and the damage ("causation"); (3) the degree of causal contribution of the fault to the damage ("causal contribution"); and (4) the degree of severity of personal injury sustained by the patient-victim ("injury degree"). Specifically, expert opinions about the issues of fault and causation were either positive or negative, which were coded as 1 or 0, respectively. Expert opinions on the issue of causal contribution varied across a spectrum, as shown in Table 1, which was established by lower courts through their local judicial interpretations[77] and finally confirmed by the Supreme People's Court in Article 12 of SPC Interpretations on Medical Negligence Liability. Expert opinions on the issue of injury degree varied from death, injury grade 1 to injury grade 10, or no injury. The criteria on injury degree were established by *Classification Criteria for Medical Malpractice Cases (for Trial Implementation)*.[78]

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77. *See* Guangdongsheng Gaoji Renmin Fayuan Guanyu Renmin Fayuan Weituo Yiliao Sunhan Jianding Ruogan Wenti De Yijian (广东省高级人民法院关于人民法院委托医疗损害鉴定若干问题的意见(试行)) [*Interim Opinions of the High People's Court of Guangdong Province regarding Problems on Court-delegated Medical Negligence Authentication*], (promulgated by the High People's Court of Guangdong Province, Nov. 17, 2011, effective Nov. 17, 2011), art. 17.

78. Yiliao Shigu Fenji Biaozhun (Shixing) (医疗事故分级标准(试行)), (promulgated by the Ministry of Health, July 31, 2002, effective, Sept. 1, 2002) No. 32, Ministry of Health. It was replaced by Renti Sunshang Zhican Chengdu Fenji (人体损伤致残程度分级) [The Classification of Severity of Per-

The seventh measurement was judicial attitudes toward admitted medical opinions given through MA-MNA and FA-MNA regarding each of the above four issues. Depending on whether the courts accepted expert opinions, it was coded as 1 and 0, respectively.

To further investigate the social, legal, and institutional factors that contribute to selection bias, adversarial bias, and judicial deference to expert opinions, this study also did a small survey by questionnaire among two "senior judges"[79] and three judges who had adjudication experience of six, seven, eight, eleven, and fifteen years, respectively. Three of them were from Guangdong Province, and the other two were from Fujian Province and Sichuan Province, respectively. They all had experience in adjudicating medical negligence cases.

Table 1: The Spectrum of Causal Contribution of the Defendant's Fault

Classification of Causal Contribution	Percentage
No Contribution	0%
Slight Contribution	1-20%
Secondary Contribution	21-40%
Equal Contribution	41-60%
Primary Contribution	61-90%
Full Contribution	91-100%

Source: Author.

sonal Injuries] (promulgated by the Supreme People's Court, the Supreme People's Procuratorate, the Ministry of Public Security, the Ministry of National Security, and the Ministry of Justice, Apr. 18, 2016, effective Jan. 1, 2017).

79. Gaoji Faguan (高级法官). "Senior judge" is one of the professional titles applied to Chinese judges. It is lower than the professional title of "justice" and higher than the professional title of "judge." *See* Xuebin Hou, *Woguo Faguan Dengji Zhidu Zhi Jiantao (我国法官等级制度之检讨) [Review of the Judge Ranking System in China]*, FASHANG YANJIU (法商研究) [STUD. L. BUS.] 95, 96 (2013).

IV. FINDINGS OF THE RESEARCH

This part of the article reports the findings of this empirical research. It first presents an overview of the collected data on medical negligence cases in terms of the level of the trial, the level of the court, the type of proceedings, the location allocation, the characteristics of the parties, and the winning rate of the plaintiff-patients. More importantly, this part reports the major findings concerning selection bias, adversarial bias, and judicial deference, respectively. It also examines whether the findings support or contradict the hypothesis regarding selection bias, adversarial bias, and judicial deference to expert opinions set up in part two of this article.

A. Overview

Of the 3,619 medical negligence cases of 2016 in the DAD database, 1,143 cases (31.6%) were decided through summary procedure without a collegial panel and 2,476 cases (68.4%) through normal procedure with a collegial panel. Table 2 shows that 93.64% of cases were adjudicated by the district courts; most of them were first-instance cases and a few were retrial cases. 6.30% of cases were adjudicated by the intermediate courts; most of them were appeal cases. The DAD database only has a few cases adjudicated by the high courts. Table 3 shows that 92.01% of cases were first-instance cases, 6.19% were appeal cases, and 1.80% were retrial cases.

The location allocation of medical negligence cases nationwide is shown in Figure 1. The top five provinces in terms of number of cases were Jiangsu Province (348 cases), Jilin Province (335 cases), Shandong Province (271 cases), Henan Province (224 cases), and Anhui Province (221 cases). Among the four municipalities directly under the Central Government,[80] Shanghai (121 cases), Chongqing (121 cases), and Beijing (112 cases) had a similar quantity of cases, although Tianjin (43 cases) had much fewer.

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80. Within the administrative structure of the Chinese government, municipalities directly under the Central Government are at the same level with the province. There are currently four municipalities directly under the Central Government: Beijing, Shanghai, Tianjin, and Chongqing. *See* Zhonghua Renmin Gongheguo Xingzheng Quhua (中华人民共和国行政区划) [The Admin. Structure of the People's Republic of China], St. Council Gaz., http://www.gov.cn/test/2005-06/15/content_18253.htm (last visited Nov. 20, 2019).

Of the 2,072 medical negligence cases with valid data, 1,594 cases (76.9%) involved urban patient-victims and 478 cases (23.1%) involved rural patient-victims. Of the 2,973 medical negligence cases with valid data, the ratio of male patient-victims to female patient-victims is 53.4 to 46.6. Of the 2,916 medical negligence cases with valid data, the third-level public hospitals were sued in 1,593 cases (54.6%), the second-level public hospitals were sued in 938 cases (32.2%), the first-level public hospitals were sued in 4 cases (0.1%), community health care centers were sued in 235 cases (8.1%), and private medical care providers were sued in 146 cases (5%). Of the 3,582 medical negligence cases with valid data, 84.7% of the plaintiffs had lawyers and 84.5% of the defendants hired lawyers.

Table 4 is concerned with the winning rate of plaintiffs in the 3,559 medical negligence cases with valid data. Medical negligence cases always involve monetary remedies for personal injuries; one measurement is the plaintiff's compensation claim, and the other measurement is the court's damages award. In order to present not only the winning rate of plaintiffs, but also show the extent to which the courts supported their claims for compensation, the author used the ratio of the awarded amount to the claimed amount of compensation. The plaintiff lost the case when the ratio is 0; otherwise, the winning index varies from 0–0.25 (i.e., the court award accounted for one-quarter of the claimed amount, included), 0.25–0.5 (i.e., the court award accounted for one half of the claimed amount, included), 0.5–0.75 (i.e., the court award accounted for three-quarters of the claimed amount, included), 0.75–1.0 (excluded), 1.0 (i.e., the court fully awarded the claimed amount), and in rare cases >1.0 (i.e., the court's awarded amount was more than the claimed amount).[81]

Table 4 shows that the plaintiffs were not awarded compensation in 11.04% of the first-instance cases, 19.25% of the appeal cases, and 6.15% of the retrial cases. This means that the winning rate of the plaintiff in medical negligence litigation was 88.96% in the first-instance cases, 80.75% in the appeal cases, and 93.85% in the retrial cases, which are much higher

81. The percentage of litigation fees or authentication fees that the court decided the plaintiff should be responsible for did not necessarily match the winning rate of the plaintiff in medical negligence cases. Therefore, the author did not use litigation fees or authentication fees to measure the winning rate in this study.

than the winning rate of the plaintiff in other tort litigations, such as defamation cases.[82] Among these winning cases, the plaintiffs received compensation of more than one half the claimed amount in 40.22% of the first-instance cases, 25.67% of the appeal cases, and 26.15% of the retrial cases. The plaintiffs were compensated less than one half of the claimed amount in 48.75% of the first-instance cases, 55.08% of the appeal cases, and 67.69% of the retrial cases.

82. Xin He & Fen Lin, *The Losing Media? An Empirical Study of Defamation Litigation in China*, 230 CHINA Q. 371, 383 (2017).

Table 2: Medical Negligence Litigation by Level of Court

	Frequency	Percent
District courts	3389	93.64
Intermediate courts	228	6.3
High courts	2	0.06
Total	3619	100

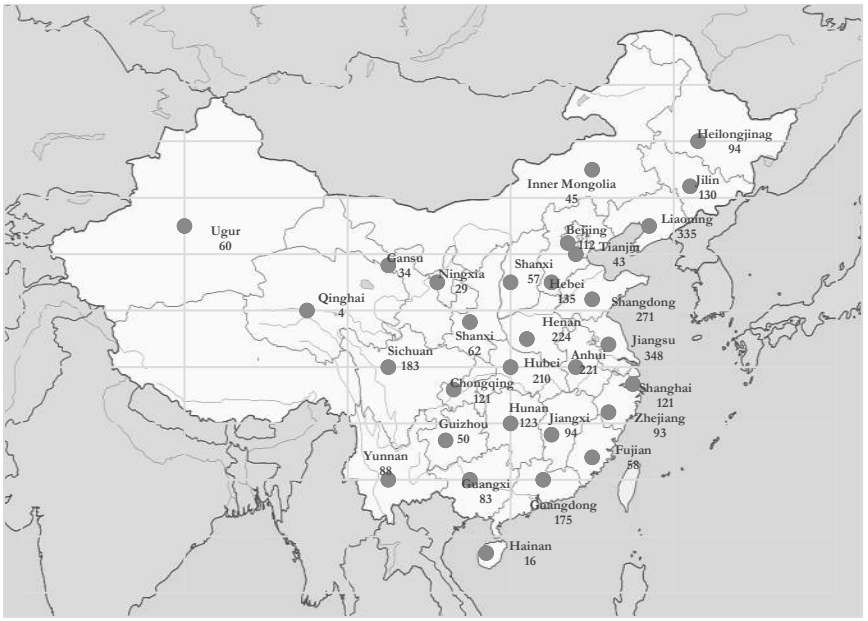
Sources: Author.

Table 3: Medical Negligence Litigation by Level of Trial

	Frequency	Percent
First-instance cases	3330	92.01
Appeal cases	224	6.19
Retrial cases	65	1.8
Total	3619	100

Sources: Author.

Figure 1: Medical Negligence Litigation by Location in Mainland China



Sources: Author.

Table 4: Plaintiff's Winning Rate in Medical Negligence Litigation

		First-instance		Appellate		Retrial		Overall	
Valid	0	365	11.04%	36	19.25%	4	6.15%	405	11.38%
	0-0.25	758	22.92%	44	23.53%	23	35.38%	825	23.18%
	0.25-0.5	854	25.82%	59	31.55%	21	32.31%	934	26.24%
	0.5-0.75	723	21.86%	17	9.09%	9	13.85%	749	21.05%
	0.75-1.0	470	14.21%	16	8.56%	5	7.69%	491	13.80%
	1.0	37	1.12%	4	2.14%	0	0.00%	41	1.15%
	>1.0	100	3.02%	11	5.88%	3	4.62%	114	3.20%
	Total	3307	100.00%	187	100.00%	65	100.00%	3559	100.00%
Missing		23		37		0		60	

Sources: Author.

B. Selection Bias

Of the total 3,619 medical negligence cases in the DAD database, 479 cases (13.24%) did not involve expert opinions given through MNA. Of the 3,140 medical negligence cases (86.76%) with expert opinions given through MNA, thirteen cases had no information on the form of medical negligence authentication. Of the 3,127 medical negligence cases with information on the form of medical negligence authentication, some involved several MNAs due to re-authentication. The DAD database included a total of 3,868 MNAs, 2,670 of them (69.03%) were FA-MNAs, and 1,198 of them (30.97%) were MA-MNAs.

Table 5 shows the form of MNA by the type of initiators. Of the 3,409 MNAs with information about initiators, the plaintiffs initiated MNA in 246 cases (7.22%), the defendants initiated MNA in 192 cases (5.63%), the parties jointly initiated MNA in 203 cases (5.95%), and courts initiated MNA in 2,768 cases (81.20%). Although most of the MNAs were initiated by courts, the data remain useful to demonstrate selection bias of the parties.

As Table 5 indicates, 71.14% of the plaintiff initiators preferred FA-MNA, and 82.81% of the defendant initiators preferred MA-MNA. When MNA was jointly initiated by the parties, FA-MNA were preferred in 67% of cases. These findings support the hypothesis that plaintiff-patients prefer to select FA-MNA while defendant–medical care providers prefer to select MA-MNA.

Turning to MNAs in re-authentication cases, 74.29% of the plaintiff-initiated re-MNAs were FA-MNA, and 88.89% of the defendant-initiated re-MNAs were MA-MNA; both are higher than the correspondent overall results. Of the jointly-initiated re-MNAs, 51.16% were FA-MNA, lower than the equivalent overall result. The re-MNA data support the hypothesis that both parties show a stronger selection bias in re-authentication cases, although the plaintiffs displayed a less strong preference for FA-MNA in the jointly-initiated re-authentication cases.

Table 5 also shows that courts preferred FA-MNA. Among the MNAs initiated by courts, 74.46% of them were FA-MNA, even higher than the correspondent result of the plaintiff-initiated MNAs. This measurement in re-authentication cases, however, decreased to 50.07%, which means that FA-MNA and MA-MNA had an equal chance to be selected by courts in re-authentication cases.

Table 6 is concerned with the form of court-initiated medical negligence authentication and shows the overall results, as well as the results excluding court-initiated MNAs in Jiangsu Province and Shanghai. Because court-initiated MNAs are required to use MA-MNA as priority due to the local interpretations of Jiangsu Province and Shanghai,[83] the courts therein do not have freedom of choice. Therefore, the results can more accurately reveal whether courts had selection bias by excluding court-initiated MNAs of Jiangsu Province and Shanghai. As Table 6 shows, once the data of Jiangsu Province and Shanghai are excluded, 89.12% of court-initiated MNAs were FA-MNA, and 79.81% of court-initiated MNAs were FA-MNA in re-authentication cases. These findings contradict the hypothesis that courts do not have selection bias. Indeed, courts have a very strong preference to select FA-MNA.

83. *Interim Opinions of the High People's Court of Jiangsu, supra* note 53, art. 2; *Interim Rules of the High People's Court of Shanghai*, *supra* note 53, art. 2.

Table 5: The Form of MNA by the Type of Initiators

	FA-MNA		MA-MNA		Cases	Chi-square
Types of initiators						284.76***
Plaintiff	175	71.14%	71	28.86%	246	
Defendant	33	17.19%	159	82.81%	192	
Both	136	67.00%	67	33.00%	203	
Court	2061	74.46%	707	25.54%	2768	
Total	2405		1004		3409	
Missing					459	
Types of initiators in re-MNAs						92.90***
Plaintiff	104	74.29%	36	25.71%	140	
Defendant	11	11.11%	88	88.89%	99	
Both	22	51.16%	21	48.84%	43	
Court	346	50.07%	345	49.93%	691	
Total	483		490		973	
Missing					133	

Sources: Author.

*Notes: * p<0.10, ** p<0.05, *** p<0.01.*

Table 6: The Form of the Court-Initiated MNA

	FA-MNA		MA-MNA		Cases
Court-initiated MNA					
All places	2061	74.46%	707	25.54%	2768
Exclude Jiangsu & Shanghai	2040	89.12%	249	10.88%	2289
Court-initiated MNA in re-MNAs					
All places	346	50.07%	345	49.93%	691
Exclude Jiangsu & Shanghai	340	79.81%	86	20.19%	426

Sources: Author.

C. Adversarial Bias

As noted in Part II of this article, the issue of adversarial bias of expert opinions in Chinese medical negligence litigation is examined from two perspectives: professional protectionism and local protectionism. As such, the empirical findings regarding adversarial bias are also presented from these two perspectives.

1. Professional Protectionism

Table 7 shows expert opinions on the four issues regarding medical negligence liability (that is, fault, causation, causal contribution, and injury degree) given through FA-MNA and MA-MNA. In terms of the fault issue, 97.72% of FA-MNAs found fault on the part of the defendant, while 82.17% of MA-MNAs found fault on the part of the defendant, with a difference of 15.55%. In terms of the causation issue, 95.63% of FA-MNAs found causation, while 69.87% of MA-MNAs found causation. The difference,25.76%, is much larger than the difference regarding the fault issue.

In terms of the causal contribution issue, FA-MNA found a "slight contribution" (13.40% versus 12.52%), "secondary contribution" (29.73% versus 21.69%), "equal contribution" (22.48% versus 8.62%), "primary contribution" (25.36% versus 22.14%), and "full contribution" (4.50% versus 4.45%) in a higher percentage of cases than MA-MNA did. Moreover, 30.58% of MA-MNAs found no contribution, much higher than 4.54% in FA-MNAs. Figure 2 presents a comparison between expert opinions of FA-MNA and MA-MNA regarding the causal contribution issue. Except for "no contribution," the FA-MNA line is always above the MA-MNA line. The gap between the two lines becomes much bigger for "secondary contribution" and is largest for "equal contribution." Because the issue of causal contribution influences the defendant's contribution to the plaintiff's damages for personal injury and the ultimate amount of damages award, the findings reveal that expert opinions of MA-MNA are more in favor of the defendants than those of FA-MNA in terms of lessening their medical negligence liability.

Turning to the issue of injury degree, medical experts have little discretion in determining cases involving injuries from death to level 10 because the current law has set out the clear

classifications of severity of personal injuries.[84] They do have some discretion, however, in determining cases between level 10 injury and no injury. The findings show that 26.48% of MA-MNAs found no injury, which is almost double the 13.58% found in FA-MNAs.

The above findings on expert opinions of FA-MNA and MA-MNA regarding the four issues support the hypothesis that expert opinions of MA-MNA are much more in favor of the defendant–medical care providers than those of FA-MNA, and vice versa.

84. *Interim Opinions of the High People's Court of Guangdong Province, supra* note 77.

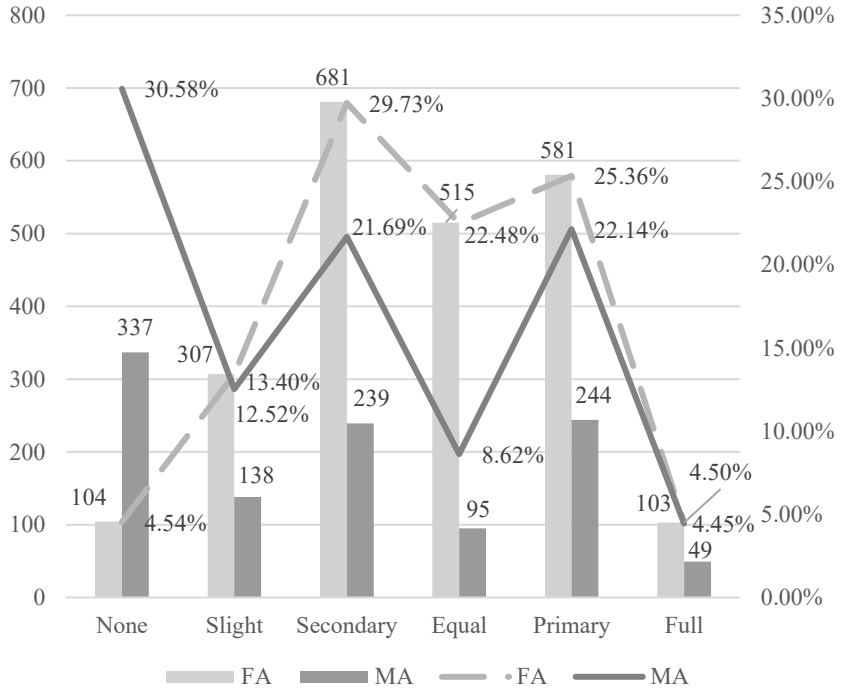
Table 7: Expert Opinions on the Four Issues of Medical Negligence Liability by the Form of MNA

	FA-MNA		MA-MNA		Cases	Chi-square
Fault						281.86***
No	56	2.28%	204	17.83%	260	
Yes	2401	**97.72%**	940	**82.17%**	3341	
Total	2457	100.00%	1144	100.00%	3601	
Missing					267	
Causation						462.57***
No	105	4.37%	339	30.13%	444	
Yes	2299	**95.63%**	786	**69.87%**	3085	
Total	2404	100.00%	1125	100.00%	3529	
Missing					339	
Causal contribution						489.06***
None	104	**4.54%**	337	**30.58%**	441	
Slight	307	**13.40%**	138	**12.52%**	445	
Secondary	681	**29.73%**	239	**21.69%**	920	
Equal	515	**22.48%**	95	**8.62%**	610	
Primary	581	**25.36%**	244	**22.14%**	825	
Full	103	**4.50%**	49	**4.45%**	152	
Total	2291	100.00%	1102	100.00%	3393	
Missing					475	
Injury degree						167.07***
None	313	**13.58%**	278	**26.48%**	591	
Level 8-10	582	25.25%	133	12.67%	715	
Level 5-7	261	11.32%	66	6.29%	327	
Level 1-4	197	8.55%	88	8.38%	285	
Death	952	41.30%	485	46.19%	1437	
Total	2305	100.00%	1050	100.00%	3355	
Missing					513	

Sources: Author.

*Notes: * p<0.10, ** p<0.05, *** p<0.01.*

Figure 2: Causal Contribution by the Form of MNA



Sources: Author.

2. Local Protectionism

Of the 1,133 MA-MNAs with valid data, the location of medical associations was different from that of the defendant in 316 MA-MNAs (27.89%). By contrast, of the 2,648 FA-MNAs with valid data, the location of forensic authentication agencies was different from that of the defendant in 1,759 FA-MNAs (66.43%). In other words, 72.11% of MA-MNAs involved local defendants, compared to 33.57% of FA-MNA cases.

A comparison was made of expert opinions of MA-MNA between medical associations with the same location as the defendants and those with a different location. They differ significantly in terms of finding fault (79.66% versus 87.74%), finding causation (66.62% versus 77.92%), and finding no injury (30.33% versus 18.75%). By contrast, expert opinions of FA-MNA do not significantly differ by the same or different location between forensic authentication agencies and defendants

in terms of finding fault (97.47% versus 97.84%), finding causation (96.07% versus 95.40%), and finding no injury (15.81% versus 12.39%).

Table 8 compares expert opinions of MA-MNA regarding the issue of causal contribution by the same or different location between the medical associations and the defendants. The difference is significant (chi-square = 21.59, $p < 0.001$). Figure 3 shows that when the medical association was located in the same city as the defendant, expert opinions of MA-MNA found more "no-contribution" cases (34.10% versus 21.93%) and "slight contribution" cases (13.34% versus 11.96%) but fewer "secondary contribution" cases (18.73% v. 28.24%), "equal contribution" cases (7.95% v. 8.97%), "primary contribution" (21.97% v. 23.26%) and "full contribution" cases (3.91% v. 5.65 %) than those of MA-MNA when the medical association and the defendant were not located in the same city.

For the purpose of comparison, Figure 4 provides expert opinions of FA-MNA regarding the issue of causal contribution by the same or different location between the forensic authentication agencies and the defendants. Expert opinions of FA-MNA do not differ between local and non-local defendants in "no contribution" and "slight contribution" cases. Interestingly, Figure 4 demonstrates an opposite tendency of local discrimination: expert opinions of FA-MNA found more "primary contribution" and "full contribution" cases, and fewer "secondary contribution" and "equal contribution" cases (i.e., less liability) in cases involving non-local defendants.

The above findings support the hypothesis that medical opinions of MA-MNA organized by medical associations in the same location as the defendant are more in favor of the defendants than those organized by medical associations from a different location from the defendant. By contrast, expert opinions of FA-MNA did not show local protectionism in this study.

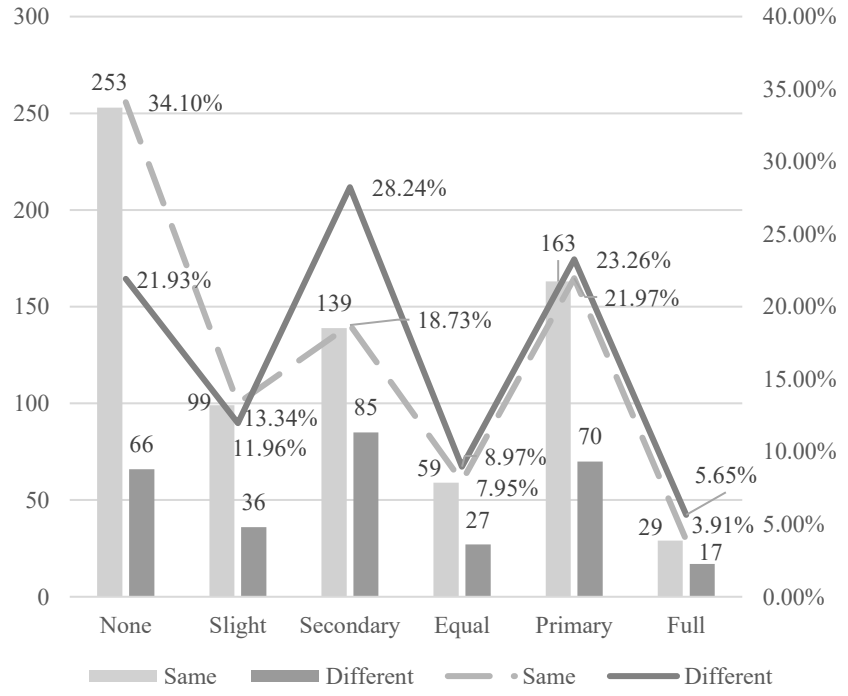
Table 8: Causal Contribution in MA-MNAs by the Same/Different Location of Medical Associations and Defendants

	Same		Different		Cases	Chi-Square
None	253	34.10%	66	21.93%	319	21.59***
Slight	99	13.34%	36	11.96%	135	
Secondary	139	18.73%	85	28.24%	224	
Equal	59	7.95%	27	8.97%	86	
Primary	163	21.97%	70	23.26%	233	
Full	29	3.91%	17	5.65%	46	
Total	742	100.00%	301	100.00%	1043	
Missing					155	

Sources: Author.

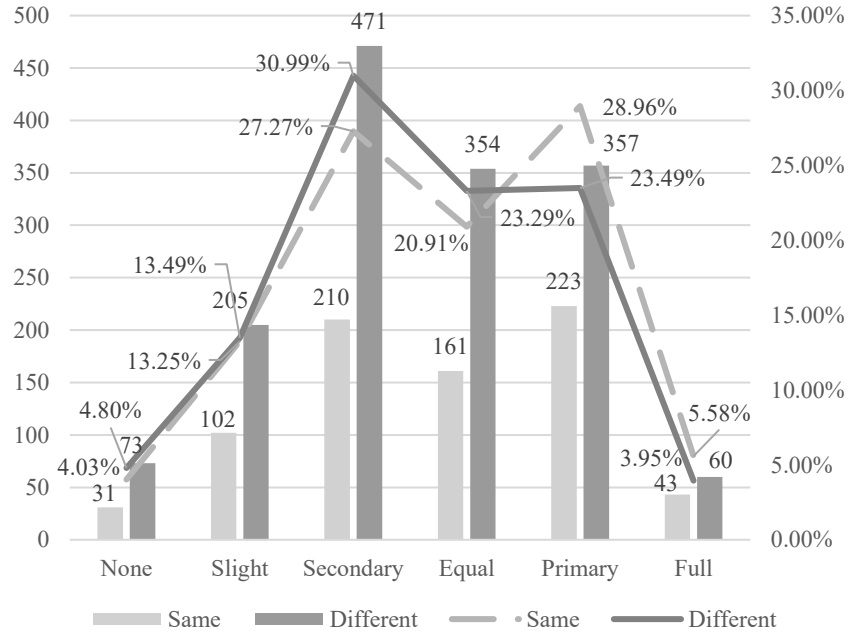
*Notes: * p<0.10, ** p<0.05, *** p<0.01.*

Figure 3: Causal Contribution in MA-MNAs by the Same/Different Location of Medical Associations and Defendants



Sources: Author.

Figure 4: Causal Contribution in FA-MNAs by the Same/Different Location of Forensic Authentication Agencies and Defendants



Sources: Author.

Table 9 is concerned with expert opinions of MA-MNA on the four issues regarding medical negligence liability (that is, fault, causation, causal contribution, and injury degree) by the level of medical associations: municipal, provincial, and national. Because the number of MA-MNA at the national level is too small, the author only compared expert opinions of MA-MNA conducted at municipal and provincial levels. As Table 9 shows, 79.30% of the municipal-level MA-MNAs found fault, which is lower than the 86.52% of the provincial-level MA-MNAs that found fault. The difference is significant (chi-square = 10.51, $p < 0.05$).

Turning to the issue of causal contribution, 45.39% of the municipal-level MA-MNAs found either "no contribution" or "slight contribution" compared to 39.95% of provincial-level MA-MNAs. 24.75% of the municipal-level MA-MNAs found either "secondary contribution" or "equal contribution," compared to 38.97% of provincial-level MA-MNAs, although 29.87% of

municipal-level MA-MNAs found "primary contribution" and "full contribution" compared to 21.08% of provincial-level MA-MNAs. The difference regarding the issue of causation and the issue of injury degree by the level of MA-MNA is found to be not significant. The findings primarily support the hypothesis that expert opinions of the municipal-level MA-MNA are more in favor of the defendant–medical care providers than those of the provincial-level MA-MNA.

Table 9: Expert Opinions on the Four Issues of Medical Negligence Liability by the Level of MA-MNA

	Municipal		Provincial		National		Cases	Chi-Square
Fault								10.51**
No	147	20.70%	57	13.48%	0	0.00%	204	
Yes	563	79.30%	366	86.52%	5	100.00%	934	
Total	710	100.00%	423	100.00%	5	100.00%	1138	
Missing							60	
Causation								3.59
No	220	31.61%	118	28.23%	0	0.00%	338	
Yes	476	68.39%	300	71.77%	5	100.00%	781	
Total	696	100.00%	418	100.00%	5	100.00%	1119	
Missing							79	
Causal contribution								33.08***
None	220	32.21%	116	28.43%	0	0.00%	336	
Slight	90	13.18%	47	11.52%	1	20.00%	138	
Secondary	121	17.72%	114	27.94%	2	40.00%	237	
Equal	48	7.03%	45	11.03%	1	20.00%	94	
Primary	164	24.01%	77	18.87%	1	20.00%	242	
Full	40	5.86%	9	2.21%	0	0.00%	49	
Total	683	100.00%	408	100.00%	5	100.00%	1096	
Missing							102	
Personal injury								10.85
None	186	28.93%	90	23.94%	1	20.00%	277	
Level 8-10	92	14.31%	41	10.90%	0	0.00%	133	
Level 5-7	41	6.38%	25	6.65%	0	0.00%	66	
Level 1-4	40	6.22%	27	7.18%	1	20.00%	68	
Death	284	44.17%	193	51.33%	3	60.00%	480	
Total	643	100.00%	376	100.00%	5	100.00%	1024	
Missing							174	

Sources: Author.

*Notes: * p<0.10, ** p<0.05, *** p<0.01.*

D. Judicial Deference

Of the 3,409 MNAs with the information about initiators in the DAD database, 10% of them were not admitted by the courts. Table 10 shows the non-admission rate by the form of medical negligence authentication and the type of initiators. In total, 6.69% of FA-MNA were not admitted by courts, much less than the 17.93% of MA-MNA that were not admitted by courts. The non-admission rate of FA-MNA reduced downward according to the type of initiators: from the plaintiff-initiated FA-MNAs (44.57%), the defendant-initiated ones (15.15%), the jointly-initiated ones (5.15%), to the court-initiated ones (3.44%). The difference is significant by the types of initiators (chi-square = 444.09, $p < 0.001$). By contrast, the non-admission rate of MA-MNA generally keeps steady among the different type of initiators, although it is highest (24.53%) for the defendant-initiated MA-MNAs.

Table 10: Admitted and Not-Admitted MNAs by the Form of MNA and the Type of Initiators

	FA-MNA				Case	Chi-Square	MA-MNA				Case	Chi-Square	MNA	
	Admitted		Not-admitted			441.09***	Admitted		Not-admitted			6.19		
Plaintiff	97	55.43%	78	44.57%	175		57	80.28%	14	19.72%	71		246	37.40%
Defendant	28	84.85%	5	15.15%	33		120	75.47%	39	24.53%	159		192	22.92%
Both	129	94.85%	7	5.15%	136		57	85.07%	10	14.93%	67		203	8.37%
Court	1990	96.56%	71	3.44%	2061		590	83.45%	117	16.55%	707		2768	6.79%
Total	2244	93.31%	161	**6.69%**	2405		824	82.07%	180	**17.93%**	1004		3409	**10.00%**

Sources: Author.

*Notes: * $p<0.10$, ** $p<0.05$, *** $p<0.01$.*

Of the 3,127 medical negligence cases with expert opinions and information on the form of medical negligence authentication, courts further excluded expert opinions in eight cases: three of them due to incomplete expert opinions, and the others due to unreliable medical records used in medical negligence authentication. Of the 3,119 medical negligence cases with admitted expert opinions given through MNA, Table 11 shows that courts followed expert opinions regarding the fault issue in 98.97% of cases, expert opinions regarding the causation issue in 98.07% of cases, expert opinions regarding the causal contribution issue in 93.71% of cases, and expert opinions regarding the degree of severity of personal injury issue in 99.87% of cases. Table 11 also shows that the form of medical negligence authentication made no substantial difference in terms of judicial deference to expert opinions, although courts had a slightly higher acceptance rate for expert opinions of FA-MNA regarding each legal issue than those of MA-MNA. The findings therefore support the hypothesis that judges present high judicial deference to expert opinions in medical negligence litigation. The degree of judicial deference, however, is so high that it exceeded expectations.

Table 11: Courts' Attitudes on Expert Opinions by the Form of MNA

	FA-MNA		MA-MNA		Cases	Chi-square
Fault						2.907
Disagree	17	0.75%	15	1.78%	32	
Agree	2259	**99.25%**	828	**98.22%**	3087	
Total	2276	100.00%	843	100.00%	3119	
Causation						2.907
Disagree	38	1.67%	22	2.62%	60	
Agree	2237	**98.33%**	819	**97.38%**	3056	
Total	2275	100.00%	841	100.00%	3116	
Causal contribution						0.118
Disagree	141	6.20%	55	6.54%	196	
Agree	2132	**93.80%**	786	**93.46%**	2918	
Total	2273	100.00%	841	100.00%	3114	
Personal injury						0.3
Disagree	2	0.09%	2	0.24%	3115	
Agree	2275	**99.91%**	840	**99.76%**	4	
Total	2277	100.00%	842	100.00%	3119	

Sources: Author.

*Notes: * p<0.10, ** p<0.05, *** p<0.01.*

V. DISCUSSION AND ANALYSIS

Based upon the empirical findings presented and a survey of judges with experience in adjudicating medical negligence cases, this part of the article further analyzes the social, legal, and institutional factors that contribute to selection bias, adversarial bias, and judicial deference to expert opinions in the Chinese medical negligence litigation setting. Before developing the analysis, the reasons for why plaintiff-patients choose litigation to solve medical negligence disputes are briefly discussed.

A. Why Litigation?

The courtroom is not the common battlefield for medical negligence disputes in China;[85] most of these are solved through "medical people's mediation."[86] Moreover, not all medical negligence cases filed in courts end with a judgment; a large proportion of cases[87] end by the withdrawal of the parties[88] or "judicial mediation."[89] This study found that the winning rate of the plaintiff in medical negligence litigation is 88.96% in first-instance cases, 80.75% in appeal cases, and 93.85% in retrial cases. It also found that the plaintiffs who won the case were awarded compensation of more than half of the claimed amount in 40.22% of first-instance cases, 25.67% of appeal cases, and 26.15% of retrial cases. This demonstrates the likelihood and extent of success for plaintiffs in medical negligence cases if they make persistent efforts to undergo the costly proceedings of medical negligence litigation. Comparatively, the winning rate of plaintiffs in medical negligence litigation is close to that of medical people's mediation. Damages awards, however, are generally larger in amount than compensation for damages agreed by the parties through medical people's mediation. The average amount of a damages award found in this study was RMB 175,634, and the highest was RMB 3,581,711, while the average amount of compensation for damage in the

85. Chunyan Ding, *A Dose to Cure "Medical Chaos:" Medical Mediation in China*, 10 J. COMP. L. 158, 160 (2015).

86. Yiliao Jiufen Renmin Tiaojie (医疗纠纷人民调解) [medical people's mediation]. Medical people's mediation is a unique form of community-based dispute resolution organized by local people's mediation committee to solve medical disputes by experienced folk mediators. Since 2010, the Chinese government has enthusiastically promoted medical people's mediation in China. *See* Guanyu Jiajiang Yiliao Jiufen Renmin Tiaojie Gongzuo De Yijian (关于加强医疗纠纷人民调解工作的意见) [Opinions on Strengthening the Work of Medical People's Mediation] (promulgated by the Ministry of Just., the Ministry of Health and the Ins. Reg. Comm., Jan. 8, 2010, effective Jan. 8, 2010).

87. GUANGZHOU YILIAO JIUFEN SUSONG QINGKUANG BAIPISHU (广州医疗纠纷诉讼情况白皮书) [WHITE BOOK ON LITIGATION OF MEDICAL DISPUTES] (2015), Guangzhou Intermediate People's Ct.; 2015-2017 YILIAO SUNHAI ZEREN JIUFEN ANJIAN SHENPAN BAIPISHU (2015-2017医疗损害责任纠纷案件审判白皮书) [WHITE BOOK ON ADJUDICATION OF MEDICAL NEGLIGENCE LIABILITY CASES], (2018), Shanghai Huang Dist. People's Ct.

88. *See* Civil Procedure Law, art. 145.

89. Sifa Tiaojie (司法调解) [Judicial mediation], *see* Liming Wang, *Characteristics of China's Judicial Mediation System*, 17 ASIA PAC. L. REV. 67, 67 (2009).

practice of medical people's mediation was reported at RMB 57,166.[90] This may help explain why plaintiffs persist in litigation but not medical people's mediation in seeking much higher monetary remedies when they have a strong case, despite the time, financial, and psychological costs of litigation.

B. Selection Bias

The selection bias of the plaintiff-patients and that of the defendant–medical care providers are evident in this study. Although MA-MNA is an optional form of authentication with competent medical experts, the public has doubted their neutrality because of professional protectionism and local protectionism ever since its predecessor, "medical malpractice technical authentication,"[91] was introduced into law in 1987.[92] This study confirms the public distrust of MA-MNA in the strong preference of the plaintiff-patients for FA-MNA. In contrast, the defendant–medical care providers, who may not deny the criticisms about the lack of neutrality of MA-MNA,[93] highly doubt the competence of medical experts of FA-MNA.[94] This helps explain why the defendants in this study demonstrated an even stronger preference for MA-MNA than the plaintiffs' preference for FA-MNA.

This study also demonstrates the very strong selection bias of courts when they initiated medical negligence authentication in medical negligence litigation. Excluding the courts of Jiangsu Province and Shanghai because they are not free to select,

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90. Chunyan Ding, *Negotiations and Settlement of Medical Disputes and Insurance Involvement: A Case of Ningbo* (working paper, 2019) (on file with the author).

91. Yiliao Shigu Jishu Jianding (医疗事故技术鉴定) [Medical malpractice technical authentication].

92. *See* Yiliao Shigu Chuli Banfa (医疗事故处理办法) [Measures for Handling Med. Malpractice Cases] (promulgated by the State Council, June 29, 1987, effective June 29, 1987, abolished in 2002) St. Council., chapter 4.

93. Gao Feng, *Qiantan Yixuehui Yiliao Sunhai Jianding Zhuanjia Chuting Zuozheng (浅淡医学会医疗损害鉴定专家出庭作证) [Discussion on Presence in Court of Medical Experts of Medical Negligence Authentication Organized by Medical Associations]*, ZHONGGUO WEISHENG FAZHI (中国卫生法制) [CHINA HEAL. LEGIS. SYS.] 61, 62 (2014).

94. Liu Xin & Ma Qianhui, *Yiliao Sunhai Jianding Mianlin De Tiaozhan Yu Duice (医疗损害鉴定面临的挑战与对策) [Challenges and Countermeasures of Medical Negligence Authentication]*, 33 ZHONGGUO FAYIXUE ZAZHI (中国法医学杂志) [CHINESE J. FORENSIC SCI.] 1, 3 (2018).

the findings show that courts overall chose FA-MNA in 88.08% of cases and chose FA-MNA in 71.19% of re-authentication cases. The survey of judges revealed that two institutional and practical factors have contributed to the court's selection preference for FA-MNA.

First, the lower courts in China have their local lists of medical negligence authentication institutions for judges to properly appoint medical experts when they initiate medical negligence authentication in medical negligence litigation. Two respondent senior judges stated that medical experts of MA-MNA normally have rich clinical experience and are capable of giving expert opinions, while the competence of medical experts of FA-MNA varies significantly. For the purpose of quality control, lower courts selectively include in their local lists some forensic authentication agencies with quality experts and good market reputation, as well as local medical associations. The number of listed medical associations, however, is considerably smaller than that of listed forensic authentication agencies for two reasons. One is that forensic authentication agencies have significantly increased in number in the country in recent years.[95] The other reason is that non-local forensic authentication agencies can also be listed, while only local medical associations are listed due to the locality rule. In practice, when courts initiate medical negligence authentication and the disputing parties cannot agree on the selection of the authentication institution, courts will first filter out some listed institutions based upon the will of each party. The plaintiffs often filter out some listed medical associations, thus making the available listed medical associations even fewer. Courts will then randomly select an authentication institution out of the pool that has been narrowed down by the filtering process. Because there are more forensic authentication agencies than medical associations in the pool, the former is more likely to be chosen than the latter in the random selection, which may result in the courts' apparent selection preference for FA-MNA.

Second, although all respondent judges expressed that they do not have personal selection bias, they admitted that medical associations have institutional disadvantages compared to fo-

95. Hou Jia, *Woguo Sifa Jianding Jigou De Shichanghua Fazhan Yanjiu (我国司法鉴定机构的市场化发展研究) [Study on the Marketized Development of Forensic Authentication Agencies in China]*, FAZHI YU JINGJI (法治与经济) [LEGAL SYST. ECON.] 100, 101 (2017).

rensic authentication agencies. Medical associations, as quasi-governmental organs, are often bureaucratic, less efficient, and generally charge a lower authentication fee than forensic authentication agencies. Moreover, medical experts of MA-MNA often refuse when they are called to present themselves in court and answer questions under cross-examination,[96] while medical experts of FA-MNA are relatively more willing to follow a court order.[97]

Additionally, four respondent judges pointed out that the public generally distrust MA-MNA because of professional protectionism and local protectionism. One senior judge expressed that he is inclined to appoint medical experts from a different province to conduct medical negligence authentication when a case requires medical experts specializing in a particular area of medicine but there is a small circle of medical specialists within the defendant's province. In that situation, only FA-MNA can be considered for selection because, unlike MA-MNA, FA-MNA is not subject to the locality rule. Given these disadvantages of MA-MNA, courts have become more hesitant to include medical associations in the local lists of medical negligence authentication institutions. For example, one respondent judge explained that the local list of the city of Guangzhou includes no medical association for both first-time authentication and re-authentication. On the list, two-fifths of the listed institutions for first-time authentication and two-thirds of the listed institutions for re-authentication were non-local forensic authentication agencies. Therefore, selection bias of courts against MA-MNA partially results from its institutional disadvantages.

C. Adversarial Bias

The adversarial bias of the two forms of medical negligence authentication is also evident in this study. Expert opinions of MA-MNA found fault and causation in a smaller percentage of cases, and found the plaintiff suffers "no injury" in a greater percentage of cases than those of FA-MNA. The factor of causal contribution involves a relatively discretionary decision by

96. Gao, *supra* note 93, at 62; Liu & Ma, *supra* note 94, at 3.

97. 2015-2017 YILIAO SUNHAI ZEREN JIUFEN ANJIAN SHENPAN BAIPISHU (2015-2017医疗损害责任纠纷案件审判白皮书) [WHITE BOOK ON ADJUDICATION OF MEDICAL NEGLIGENCE LIABILITY CASES], *supra* note 87.

medical experts[98] and has a significant impact on the defendant's contribution to the plaintiff's damages, as well as the ultimate amount of the damages awarded. Expert opinions of MA-MNA found "secondary contribution," "equal contribution," and "primary contribution" in a much lower percentage of cases than those of FA-MNA, thus significantly restricting the extent of medical negligence liability when the fault and causation requirements have already been satisfied. The selection bias of the parties is merely based upon their subjective perception and speculation that two forms of medical negligence authentication have adversarial bias. This study's findings on the adversarial bias of MA-MNA and FA-MNA, however, provide empirical evidence to justify both the public's dislike of MA-MNA and the medical professionals' dislike of FA-MNA.

The verified adversarial bias of the two forms of medical negligence authentication will further reinforce the selection bias of the parties for medical negligence disputes, as well as the public perception about the differences between MA-MNA and FA-MNA in terms of the neutrality of the medical experts. Although the uniform medical negligence authentication mechanism legally treats the two forms as equal options for medical negligence authentication, the dichotomy between MA-MNA and FA-MNA in the mind of the public and medical professionals is rooted in medical negligence litigation, as well as other medical dispute resolutions. This may further harm the patient-physician relationship[99] and make the parties to medical negligent disputes more adversarial in China. This study also suggests that Chinese patients value the neutrality and trustworthiness of experts more than their competence, which supports Tyler's legitimacy theory that procedural justice concerns, including concerns about the neutrality of decisionmaker, are central to the legitimacy of decisions.[100]

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98. Han Min & Xiao Liuzhen, *Jiangsusheng Yiliao Sunhai Jianding Guanli Banfa Pingxi (江苏省医疗损害鉴定管理办法评析) [Comments on Medical Damage Appraisal Mgmt. in Jiangsu Province]*, YIXUE YU FAXUE (医学与法学) [MED. L.] 66, 68 (2018).

99. Song Hua et al., *Dui Yihuan Guanxi De Duowei Sikao (对医患关系现状的多维思考) [The Multi-Dimentional Reflection of the Current Physician-Patient Relationship]*, 19 ZHONGHUA YIYUAN GUANLI ZAZHI (中华医院管理杂志) [CHINESE J. HOSP. ADMIN.] 517, 517 (2003).

100. Tom R Tyler & Gregory Mitchell, *Legitimacy and the Empowerment of Discretionary Legal Authority: The United States Supreme Court and Abortion Rights*, 43 DUKE L. J. 703, 798 (1994).

The adversarial bias of expert opinions of MA-MNA can be explained from two perspectives. From an individual perspective, medical experts of MA-MNA are always medical practitioners working in local medical institutions because of the locality rule. They fully understand the various implications of medical negligence liability to the defendant–medical care providers and their medical staff, such as the negative impact on hospital accreditation and reputation, the career development of individual physicians,[101] and the financial burdens that their employers may request them to bear due to the hospital's internal recourse mechanism.[102] This study shows that the defendants in 54.6% of medical negligence lawsuits are third-level public hospitals, where quality local medical practitioners generally work.[103] At the same time, these quality medical practitioners often serve as medical experts in MA-MNA organized by the local medical associations. It is highly likely that they personally know and sympathize with the alleged negligent physicians involved in the medical negligence cases for which they need to provide expert opinions. This is especially true when medical negligence cases require medical experts specializing in a particular area of medicine, which means that medical experts of MA-MNA and the alleged negligent physicians inhabit an extremely small "circle of acquaintance."[104] Although the plaintiffs are entitled to request the recusal of an expert in theory,[105] in practice it is difficult for them to know or prove such subtle personal connections between medical experts and alleged negligent physicians. Also, medical experts are likely to treat their peers leniently in the hope that they will be treated by their peers the same if they are sued by a patient for medical negligence liability in the future.

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101. XIAOZHUO ZHU, YILIAO JIUFEN "NINGBO JIEFA" YANJIU (医疗纠纷"宁波解法"研究) [STUDY ON NINGBO-STYLE MEDIATION OF MEDICAL DISPUTES] 201 (2016).

102. *Id*.

103. Yu Xue et al., *Yiliao Weisheng Ziyuan Peizhi Gaige Yu Chengzhenhua Xiezheng Fenxi (医疗卫生资源配置改革与城镇化协整分析) [Analysis on the Reform of Health Rescoures Allocation and Urbanization]*, HENAN SHEHUI KEXUE (河南社会科学) [HENAN SOC. SCI.] 47, 54 (2016).

104. Wang Xiaoyan, *Lun Yiliao Sunhai Jianding Zhidu De Gaizao (论医疗损害鉴定制度的改造) [On the Reform of Medical Negligence Authentication System]*, 37 YIXUE YU ZHEXUE (医学与哲学) [MED. PHILOS.] 1, 3 (2016).

105. *See* MMTM Measures, art. 20.

From an institutional perspective, medical institutions and local medical associations have a close connection as both are under the direct supervision of the local health bureau. Under Chinese law, medical institutions need to bear vicarious liability for the medical negligence of their staff and be the defendants in medical negligence litigation.[106] Therefore, a medical institution where the alleged negligent physician works has great interest in medical negligence cases. As this study shows, most of the defendants in medical negligence litigation were third-level and second-level public hospitals. They are directly supervised and regulated by the local health care bureau, which is the public authority that not only supervises the local medical care practice, but also voices and safeguards the interests of public hospitals.[107] On the other hand, although a local medical association is a self-regulatory body of medical professionals and nominally separate from the local government, it is in effect a quasi-governmental organization.[108] This is because it remains affiliated to, and supervised by, the local health bureau, wholly or partially receives financial support from it, and has personnel connections with the local government.[109]

D. Judicial Deference

Courts are supposed to examine both the relevance and reliability, as well as the scientific merit of expert opinions before using them to determine a case. In Chinese medical negligence litigation, courts at the first stage examine the relevance and reliability of medical opinions in determining whether to grant leave to re-authentication. Article 27 of Provisions on Evidence in Civil Procedures sets out four statutory grounds for re-authentication: (1) unqualified authentication institution or authenticator; (2) serious procedural violation in the authentication process; (3) ungrounded conclusion; and (4) other circumstances where the authentication conclusion cannot be admitted after the cross-examination.[110]

The respondent judges all confirmed that they decided whether to approve re-authentication by complying with this

106. *See* Tort Liability Law, art. 54.
107. Wang, *supra* note 104, at 1.
108. Ding, *supra* note 45, at 155.
109. Lin, *supra* note 45, at 199.
110. *See* Provisions on Evidence in Civil Procedures, art. 27.

provision. In practice, the major grounds for re-authentication are "procedural violation in the authentication process" and "unreliable medical records used to make authentication conclusions."[111] This study finds that a much higher percentage of MA-MNAs were not admitted by courts compared to FA-MNAs (17.93% versus 6.69%), especially when MA-MNA was initiated by the defendant–medical care providers. This implies that MA-MNAs more often commit procedural violations and use unreliable medical records in the process of authentication. Because the type of initiators does not make a substantial difference in non-admitted MA-MNAs, it may be inferred that medical associations encounter institutional management problems in supervising the process of MA-MNA in accordance with the procedural requirements and in ensuring expert opinions are made based upon reliable case materials.

By contrast, in this study, the type of initiators made a difference in not-admitted medical opinions of FA-MNAs; the non-admission rate decreased in a downward trajectory from the plaintiff-initiated FA-MNAs, the defendant-initiated ones, the jointly-initiated ones, to the court-initiated ones. As noted above, there are a large number of forensic authentication agencies in the market, and their competence and quality vary significantly. The decreasing non-admission rates of FA-MNA by the type of initiators may be explained as follows: First, courts, as repeat players,[112] are in an advantageous position in terms of selecting FA-MNA capable of providing good quality expert opinions. As such, the non-admission rate of the court-initiated FA-MNA is the lowest. Second, in the case of jointly-initiated FA-MNA, as the two disputing parties often bargain for a forensic authentication agency acceptable to both of them, they are more likely to conduct research into the competence of forensic authentication agencies available on the market and reach a consensus over a fairly good one. Therefore, the non-admission rate of the jointly-initiated FA-MNA is the second lowest. Third, the defendant–medical care providers have relatively more experience than the plaintiff-patients in selecting a quality FA-MNA. The defendants are also less sensitive to the

111. GUANGZHOU YILIAO JIUFEN SUSONG QINGKUANG BAIPISHU (广州医疗纠纷诉讼情况白皮书) [WHITE BOOK ON LITIGATION OF MEDICAL DISPUTES] (2010-2014), *supra* note 87.

112. Marc Galanter, *Why the 'Haves' Come out Ahead: Speculations on the Limits of Legal Change*, 9 LAW & SOC'Y REV. 95, 97 (1974).

cost of the authentication fee than the plaintiff-patients when the price normally influences the competence of experts. This helps explain why the non-admission rate of the plaintiff-initiated FA-MNA is the highest, and that of the defendant-initiated FA-MNA is the second highest.

At the second stage, courts examine the scientific merit of medical opinions after admitting them. This study shows that courts followed expert opinions in terms of the fault, causation, and degree of personal injury issues in more than 98% of cases, and the form of medical negligence authentication did not make a substantial difference. Courts followed expert opinions regarding the issue of causal contribution in 93.71% of cases because this issue involves some discretion, and judges are more comfortable making modifications compared to the other three issues. All respondent judges surveyed confirmed that such high rates of judicial acceptance of expert opinions are consistent with their adjudication experiences. In deciding medical negligence cases, the judges usually approve expert opinions on fault, causation, and injury degree, and sometimes make a modest modification to the value of causal contribution.

The respondent judges surveyed also provided three major reasons for judicial deference to medical opinions in Chinese medical negligence litigation. First, the vast majority of judges do not have sufficient medical knowledge or experience in judging the scientific merit of expert opinions, and there is no better alternative to assist them in making decisions in medical negligence litigation. Although individual partisan experts may be invited by the parties to question or supplement expert opinions given through medical negligence authentication, this seldom happens when medical negligence authentication has been conducted. Second, only a small percentage of medical experts are successfully called and questioned by the court and the parties under cross-examination.[113] It is difficult for judges to evaluate the scientific merit of medical opinions without cross-examination. Third, judges have their own concerns about the risk of appeal or the risk of being complained about by parties if they change expert opinions given through medical negligence authentication, especially when parties have already un-

113. Sun Fanfan, et al., *Lun Woguo Yiliao Sunhai Jianding Yijian Zhizheng Chengxu (论我国医疗损害鉴定意见质证程序) [On Cross-Examination Procedure of Opinions of Medical Negligence Athentication]*, 29 YIXUE YU SHEHUI (医学与社会) [MED. & SOC.] 63, 64 (2016).

dergone the costly "battle of the experts" through the process of re-authentication. Judges' deference to expert opinions meets their personal interests in the Chinese court setting.[114] Only one respondent judge mentioned that legal judgment concerning the fault issue and the causation issue should be different from medical judgment. He said that, as a judge, he sometimes scrutinizes medical opinions to see whether they are capable of withstanding logical analysis, which shares a similarity with the *Bolitho* test concerning judicial deference to medical opinions under English law.[115]

CONCLUSION AND IMPLICATIONS

Based upon a large set of DAD database, supplemented by a small survey of judges, this article has explored the operation and role of expert opinions in Chinese medical negligence litigation, finding that the plaintiff-patients won in the vast majority of cases and were awarded more than half of the claimed amount in two-fifths of cases. Indeed, the practical determinants of litigation outcomes lie in expert opinions that courts have admitted and used for the resolution of medical negligence disputes because courts display very strong judicial deference to medical opinions. Courts only work as gatekeepers to exclude unreliable or irrelevant expert opinions when deciding whether to grant leave to re-authentication, while medical experts are the de facto decision-makers in deciding both technical and legal issues regarding medical negligence liability. Under the uniform medical negligence authentication mechanism, established after China's 2009 reform of medical negligence law, MA-MNA and FA-MNA are treated equally in terms of the application, scope, and legal status. These empirical find-

114. *See also* Ji Li, *The Power Logic of Justice in China*, 65 AM. J. COMP. L. 95, 120 (2017).

115. The *Bolitho* test, established by the English case *Bolitho v. City and Hackney Health Authority* [1996] 4 All ER 771, qualified the classic and well-known *Bolam* test, under which a doctor would be free from negligence if he had acted in accordance with a practice accepted as proper by a responsible body of medical practitioners. According to the *Bolitho* test, peer medical opinion that purportedly represents evidence of responsible medical practice can be departed from if that expert opinion is determined by the court to be not capable of withstanding logical analysis. In other words, the *Bolitho* test clarified that it is the court, but not the medical professional, that has the final say of medical breach. *See* Alasdair Maclean, *Beyond Bolam and Bolitho*, 5 MED. L. INT'L. 205, 208 (2002).

ings, however, demonstrate a strong selection bias of plaintiffs against MA-MNA, and a strong selection bias of defendants against FA-MNA. The dichotomy of the two forms is rooted in the perception of patients as well as medical professionals.

This study's findings also support the institutional adversarial bias of FA-MNA in favor of the plaintiffs, and that of MA-MNA in favor of the defendants, due to the personal and institutional connections of medical experts of MA-MNA with the defendant–medical care providers. Professional protectionism and local protectionism of MA-MNA are real, but these are not the same findings for FA-MNA. Furthermore, this study finds that courts also have a strong preference bias against MA-MNA when they initiate medical negligence authentication for a variety of reasons, including the institutional adversarial bias of MA-MNA, bureaucratic inertia, and inefficiency of medical associations, as well as the unwillingness of their medical experts to present themselves in court for cross-examination. This study found that four-fifths of medical negligence authentications are initiated by courts and 7% by the plaintiffs; FA-MNA has become the dominant form to deliver expert opinions in medical negligence litigation.

These findings have useful implications for the ongoing reform of China's medical negligence authentication mechanism. In October 2018, the National Health Commission and the Ministry of Justice jointly published the draft *Regulatory Measures on Medical Negligence Authentication (For Public Consultation)*.[116] The Draft sets out a number of proposals: (1) a "common list of medical experts" for MA-MNA and FA-MNA, which will be jointly established by the two bureaus of health care and justice under the administration of the former (Articles 9 and 10); (2) the principle of "specialist peer review,"[117] which means that neither forensic experts can provide expert opinions regarding clinical medicine, nor medical specialists in one area of medicine can offer expert opinions regarding other areas of medicine (Article 3); and (3) the locality rule applied to the listing of medical experts of medical associations as well as

116. Notice of the National Health Commission and the Ministry of Justice on Public Consultation of the Regulatory Measures on Medical Negligence Authentication (For Public Consultation), *supra* note 23.

117. Tonghang Pingyi (同行评议) [Specialist peer review].

the selection of a medical negligence authentication institution and medical experts in individual cases.[118]

When keeping the locality rule, the Draft furthermore attempts to prevent forensic experts from providing expert opinions on clinical medicine, thus weakening the role of FA-MNA in the practice of medical negligence authentication. This results in voicing the interests of medical professionals and medical institutions, but not those of patients.[119] Based upon this study's empirical evidence on professional protectionism and local protectionism of medical experts of MA-MNA, however, the Draft is unlikely to help change the public perception of MA-MNA to win the public's support for its proposed medical negligence authentication mechanism reform because it not only fails to address, but also aggravates, the problems of professional protectionism and local protectionism. As a result, it thus worsens the lack of neutrality of MA-MNA. This article suggests that reform of the medical negligence authentication mechanism must face these fundamental problems in the current practice of medical negligence authentication and provide effective solutions to restore the public trust in MA-MNA. The most pressing is to abolish the locality rule.[120]

This study further provides food for thought on judicial deference to medical opinions and the proper roles of courts in medical negligence litigation. In light of their lack of medical knowledge and experience, Chinese judges seem too reluctant to exercise their judicial power in scrutinizing the scientific

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118. Notice of the National Health Commission and the Ministry of Justice on Public Consultation of the Regulatory Measures on Medical Negligence Authentication (For Public Consultation), *supra* note 23, art. 11, 14, 19, 10.

119. Xiao Liuzhen, *Tongyi Yiliao Sunhai Jianding De Gongshi Ji Duice Yanjiu (统一医疗损害鉴定的共识及对策研究) [Study on the Consensus on the Uniform Medical Negligence Authentication and Countermeasures]*, 26 ZHENGJU KEXUE (证据科学) [SCI. EVIDENCE] 441, 444–45 (2018).

120. *See also* Jiangsu Province has recently reformed its local medical negligence authentication mechanism in Jiangsusheng Yiliao Sunhai Jianding Guanli Banfa (江苏省医疗损害鉴定管理办法) [*Measures of Jiangsu Province on the Administration of Medical Negligence Authentication*], (promulgated by the High Court of Jiangsu Province, the Health and Family Planning Commission of Jiangsu Province, and the Bureau of Justice of Jiangsu Province on Oct. 23, 2017, effective Oct. 23, 2017) Although Article 11 of this local enactment still gives priority to local medical experts in terms of selecting medical experts for individual cases, Article 8 allows local medical authentication institutions to take non-local medical negligence cases. This may be seen as local efforts of making a step towards the abolishment of the locality rule.

merit of expert opinions in medical negligence cases. As a result, the medical judgment dominates the decision-making process when judges surrender their judicial power to medical experts, allowing them to become the de facto adjudicators in medical negligence litigation. This article suggests that courts have a responsibility to examine the scientific merit of medical opinions through logical analysis, which is a defined skill of legal professionals. Moreover, courts should strictly implement the requirement that experts offering opinions be called to the court and questioned under cross-examination. Moreover, courts need to effectively make use of the existing procedural rule regarding individual partisan experts to assist them in evaluating the scientific quality of expert opinions in medical negligence litigation.