

# Evaluating the Impact of Virtual Proceedings in Family Law Matters for Self-Represented Litigants: A Randomized Control Trial

## Final Report

June 6, 2026

Point of Contact and Co-Investigator: Renee L. Danser, Esq.  
Associate Director of Research and Strategic Partnerships, The Access to Justice Lab at Harvard  
Law School  
1607 Massachusetts Avenue, 3<sup>rd</sup> Floor  
Cambridge, MA 02138  
(617) 496-7992  
[rdanser@law.harvard.edu](mailto:rdanser@law.harvard.edu)

Principal Investigator: D. James Greiner  
S. William Green Professor of Public Law  
Faculty Director, The Access to Justice Lab at Harvard Law School  
Room 316  
1607 Massachusetts Avenue  
Cambridge, MA 02138  
(617) 496-4643  
[jgreiner@law.harvard.edu](mailto:jgreiner@law.harvard.edu)

Project Manager: Miguel von Fedak, [mvonfedak@law.harvard.edu](mailto:mvonfedak@law.harvard.edu)  
Data Analyst: Patricia Gansert, [pgansert@law.harvard.edu](mailto:pgansert@law.harvard.edu)

With thanks to Isabella Callahan; Emily LaGratta, LaGratta Consulting, LLC; Alejandra Maldonado; Jaya Nayar; and Jemma Nazarali

OSF Registration: <https://osf.io/4tx2f/>

## Contents

|                                                                          |                                     |
|--------------------------------------------------------------------------|-------------------------------------|
| Contents .....                                                           | <b>Error! Bookmark not defined.</b> |
| Table of Figures .....                                                   | 3                                   |
| I. Executive Summary .....                                               | 5                                   |
| II. Introduction.....                                                    | 7                                   |
| A. Setting the Stage .....                                               | 9                                   |
| B. Remote Court Appearances & Suggested Impacts.....                     | 10                                  |
| C. Summary .....                                                         | 12                                  |
| III. This Study .....                                                    | 13                                  |
| A. Baseline Information .....                                            | 13                                  |
| 1. The Status Quo Ante .....                                             | 13                                  |
| 2. The Pro Se Calendar .....                                             | 14                                  |
| B. The Study Process .....                                               | 15                                  |
| C. Random Assignment & Data Collection.....                              | 18                                  |
| 1. Random Assignment.....                                                | 18                                  |
| 2. Data Collection .....                                                 | 23                                  |
| IV. Covariate Comparisons .....                                          | 24                                  |
| V. Results.....                                                          | 26                                  |
| A. Enforcement/Modification.....                                         | 27                                  |
| B. Failure to Appear.....                                                | 29                                  |
| C. Time to Matter Resolution.....                                        | 35                                  |
| VI. Conclusions and Opportunities for Future Research .....              | 37                                  |
| A. Perceptions of Fairness & Effects on Case Outcomes.....               | 38                                  |
| B. Effects on Civility and Decorum .....                                 | 38                                  |
| C. Access and Bias.....                                                  | 38                                  |
| D. Conclusions .....                                                     | 38                                  |
| Appendix A: Notification of Initial Study Approval Including Waiver..... | 40                                  |
| Appendix B: Additional Details Regarding Case Events .....               | 42                                  |
| Appendix C: Additional Details of Case Events by Case Type.....          | 45                                  |
| Appendix D: Additional Details of Time between Case Events .....         | 48                                  |
| Appendix E: Additional Details of FTAs by Assigned Study Condition.....  | 57                                  |
| Appendix F: Covariate Detail .....                                       | 60                                  |

## Table of Figures

|                                                                                                                                    |    |
|------------------------------------------------------------------------------------------------------------------------------------|----|
| Figure 1: Study Process .....                                                                                                      | 17 |
| Figure 2: Randomization .....                                                                                                      | 19 |
| Figure 3: Average Compliance Rates for Cases Assigned to Virtual Appearances .....                                                 | 20 |
| Figure 4: Average Compliance Rates for Cases Assigned to In Person Appearances .....                                               | 21 |
| Figure 5: Compliance Rates for Hearings Assigned to Virtual Appearances .....                                                      | 22 |
| Figure 6: Compliance Rates for Hearings Assigned to In Person Appearances .....                                                    | 22 |
| Figure 7: P-values for Covariate Comparisons, In Person Versus Virtual, All Cases .....                                            | 25 |
| Figure 8: Mean Number of Case Events by Study Condition During the Follow-Up Period .....                                          | 28 |
| Figure 9: Mean Number of Hearings per Case by Assigned Study Condition Within the Follow-Up Period .....                           | 29 |
| Figure 10: Proportion of Cases with FTA by Party Type .....                                                                        | 31 |
| Figure 11: Proportion of Litigants with FTAs by Assigned Condition .....                                                           | 32 |
| Figure 12: Proportion of FTA in Divorce Cases by Litigant Type and Assigned Medium .....                                           | 33 |
| Figure 13: Mean Proportion of FTA for Litigant Type by Assigned Study Condition Within the Follow-Up Period .....                  | 34 |
| Figure 14: Survival Curves by Treatment Condition, All Cases .....                                                                 | 36 |
| Figure 15: Survival Curves by Treatment Condition, Divorce Cases Only .....                                                        | 37 |
| Figure 16: Enforcement Case Event Distribution by Assigned Hearing Medium Within the Follow-Up Period .....                        | 42 |
| Figure 17: Modification Case Event Distribution by Assigned Hearing Medium Within the Follow-Up Period .....                       | 43 |
| Figure 18: Resolution Case Event Distribution by Assigned Hearing Medium Within the Follow-Up Period .....                         | 44 |
| Figure 19: Mean Total Hearings by Case Type Within the Follow-Up Period .....                                                      | 45 |
| Figure 20: Distribution of Cases by Mean Total Hearings and Assigned Study Condition Within the Follow-Up Period .....             | 46 |
| Figure 21: Total Hearings by Hearing Type and Study Condition .....                                                                | 47 |
| Figure 22: Proportion of Cases Missing a Case Event by Hearing Medium Within the Follow-Up Period .....                            | 50 |
| Figure 23: Case Length Within Follow-Up Period .....                                                                               | 51 |
| Figure 24: Mean Number of Weeks Between Case Events by Study Condition Within the Follow-Up Period .....                           | 52 |
| Figure 25: Mean Number of Weeks Between Case Events by Case Type Within the Follow-Up Period .....                                 | 53 |
| Figure 26: Time to Resolution by Case Type and Study Condition Within the Follow-Up Period .....                                   | 54 |
| Figure 27: Distribution of Time to Resolution by Number of Weeks and Study Condition Within the Follow-Up Period .....             | 55 |
| Figure 28: Distribution of Durability of Court Order by Number of Weeks and Assigned Study Condition Within Follow-Up Period ..... | 56 |
| Figure 29: Distribution of Participants Assigned to Appear In Person by Proportion of FTA Within the Follow-Up Period .....        | 57 |

|                                                                                                                             |    |
|-----------------------------------------------------------------------------------------------------------------------------|----|
| Figure 30: Distribution of Participants Assigned to Appear Virtually by Proportion of FTA Within the Follow-Up Period ..... | 58 |
| Figure 31: Mean Proportion of FTA by Case Type Within Follow-Up Period .....                                                | 59 |
| Figure 32: Age Data Missingness.....                                                                                        | 60 |
| Figure 33: Mean Age of Study Participants by Study Condition .....                                                          | 61 |
| Figure 34: Mean Age of Study Participants by Case Type.....                                                                 | 62 |
| Figure 35: Proportion of Petitioner Sample by Gender Across Study Conditions.....                                           | 63 |
| Figure 36: Proportion of Respondent Sample by Gender Across Study Conditions .....                                          | 64 |
| Figure 37: Proportion of Petitioner Sample by Race Across Assigned Study Conditions .....                                   | 65 |
| Figure 38: Proportion of Respondent Sample by Race Across Assigned Study Conditions.....                                    | 66 |

## I. Executive Summary

This report discusses the Access to Justice (A2J) Lab's findings with respect to the evaluation of virtual as compared to in person court appearances for self-represented litigants in family law matters. The randomized field study took place in the Family Court of the Third Judicial District in Utah, which is situated in Salt Lake City. This research investigated whether the medium (remote or in person) in which self-represented litigants in family law proceedings appeared affected time to resolution, durability of court orders, and failure to appear. Additionally, the A2J Lab worked with LaGratta Consulting, LLC to consider the impact of medium of litigant perceptions of fairness. If the medium did not materially affect these metrics, the case for incorporating greater use of online appearances as an option for pro se litigants strengthened.

The take-away result of this study was as follows. The court deviated from the randomization protocol in ways that the research team could not model adequately. Because the hearing medium was not random, the research team was unable to draw conclusions as to the effect of in person versus online hearings.

Noncompliance with treatment assignment might have resulted from the possibility that certain Commissioners disproportionately imposed one or the other hearing medium. It might also have resulted from the possibility that circumstances existed at particular time points in the court or in Salt Lake City that caused a need or preference for one or another hearing medium, and that certain Commissioners happened to receive more cases at those times. The data available were insufficient to allow the A2J Lab to rule out any explanation.

When the A2J Lab shared its preliminary findings with the court, the Commissioners were surprised to learn of the scale of the noncompliance, causing researchers to hypothesize that it was unintentional and done on a case-by-case basis without considering the research-related consequences. The Court identified one apparent custom that could explain deviation but the A2J Lab found that compliance with that custom was scattershot. Without knowing the cause for departure from assigned condition, the A2J Lab was unable to model noncompliance statistically.

In terms of outcomes, the research team observed no difference in proxies for court burden between the group assigned to participate online as compared to the group assigned to participate in person. But the research team was unable to tell whether the lack of an effect from assignment to one condition or the other was the result of no outcome differences from hearing medium or because the medium actually used matched the randomized assignment too rarely.

The A2J Lab had hoped this study would support the notion that courts can offer a choice to litigants regarding how to appear at hearings without affecting key metrics of judicial efficiency. It remains possible that notion is true. However, this study produced no credible evidence either way.

The evaluation launched with its first enrolled case on October 1, 2022. The A2J Lab enrolled the final, 625th case on September 30, 2023. The team collected court case data for the life of the

case prior to enrollment and for the entire data collection period, which concluded June 30, 2025. This report details the study setting, mechanics, and findings, and it offers recommendations for future research.

The A2J Lab is grateful for the opportunity to engage in this project with the Commissioners of the Third Judicial District in Utah. The A2J Lab is also grateful for the partnership with Emily LaGratta.

## II. Introduction

When the United States realized the extent of the COVID-19 pandemic, it rushed to limit public and community spread by halting many businesses and services. But at least with respect to some legal matters, access to civil justice is a constitutional right which cannot remain unavailable for long. Courts needed to reconstitute during the ongoing pandemic. Doing so required transitioning from thinking of a court as a place – the courthouse – to the perhaps more enlightened thinking of a court as a service.

Debates regarding if and how to use the Internet to modernize the justice system bubbled pre-pandemic and became more salient as the pandemic raged. In his 2019 book, *Online Courts and the Future of Justice*, Richard Susskind summarized the conflicting views.<sup>1</sup> Prioritizing adjudicatory outputs over procedural justice, proponents of online justice contended that it was not the courthouse proceeding itself that delivered justice and thus not the court itself that the public needed or wanted.<sup>2</sup> Rather, it was the output/ruling of the justice event, backed by the coercive power of the government, that did or did not deliver the justice that people needed. That output conceivably could occur without the trappings of a courthouse or a physical courtroom. In contrast, opponents to online justice contended that the real motive for moving justice online was to save the judicial system money rather than to provide meaningful access to justice.<sup>3</sup> Under this view, the justice system did not need more of an online presence. Rather, it required more legal services to help with those who could not afford to hire their own lawyer.

Most agreed that a strong research and evaluation program should accompany any return to in person hearings or any more permanent move to online adjudication.<sup>4</sup> The concerns were various, and some were context dependent.<sup>5</sup> For example, both online and in person hearings raised concerns of accessibility, albeit in differing ways. In online proceedings, concerns focused on lack of access to high-speed Internet and lack of familiarity with the required software. For In Person proceedings, concerns focused on distance to the physical courthouse, inconvenient

---

<sup>1</sup> Richard Susskind, *Online Courts and the Future of Civil Justice* 27 (2019); see also Ayelet Sela, e-Nudging Justice: The Role of Digital Choice Architecture in Online Courts, 2019 J. of Disp. Resol. 127, 127 - 8 (2019) (noting that proponents of online courts contend that they lessen problems of confusing and complex process, lack of access, voluminous case filings, and costliness, while perhaps increasing settlement rates); Harold Hongju Koh, The “Gants Principles” for Online Dispute Resolution: Realizing the Chief Justice’s Vision for Courts in the Cloud, 62 B.C. L. Rev. 2768, 73 (2021) (noting gains in efficiency from online courts but suggesting a cost in the form of reduced access for those without resources and sophistication); Ayelet Sela, Diversity by Design: Improving Access to Justice in Online Courts with Adaptive Court Interfaces, 15 The L. & Ethics of Human Rights 1:125, 128 (2021) (arguing that it is “widely recognized” that online courts promote efficiency, effectiveness, accessibility and fairness).

<sup>2</sup> See e.g., Ellen Lee Degnan, Thomas Ferriss, D. James Greiner, & Roseanna Sommers, Using Random Assignment To Measure Court Accessibility for Low-Income Divorce Seekers, 118 Proc. Nat. Acad. Sci. (2021), <https://doi.org/10.1073/pnas.2009086118> (documenting enormous differences in the experiences of lawyerless versus lawyered litigants in a substantively simple legal proceeding).

<sup>3</sup> Susskind, *supra* n. 1.

<sup>4</sup> Molly Treadway Johnson, Elizabeth C. Wiggins, Videoconferencing in Criminal Proceedings: Legal and Empirical Issues and Directions for Research, 28 Law & Pol. 211 (2006).

<sup>5</sup> See Renee L. Danser, D. James Greiner, Elizabeth Guo, & Erik Koltun, Remote Testimonial Fact-Finding, *Legal Tech & the Future of Civil Justice* (Cambridge Univ. Press, Feb. 2023), 109, <https://doi.org/10.1017/9781009255301>.

scheduling, or lack of reliable transportation. The comparative costs and benefits of the two formats were unclear. In short, there was equipoise.

Similarly, the trade-offs of in person versus online hearings from the standpoint of court efficiency were unknown. Some trade-offs depended on the concerns articulated immediately above, as courts could not adjudicate well if litigants did not attend hearings. Some trade-offs were internal to the court system. Infrastructure necessary to adjudicate online required initial and continued investment of time and money into technology and education. On the other hand, a post-pandemic return to in person proceedings required initial and continued investment of time and money into physical offices, utilities, and personnel for in person appearances required. No one knew whether the promise of increased efficiency from online proceedings was real.

The impact of virtual hearings was thus wholly unknown. There was at the time no evaluation at all, much less a credible one, that investigated the effects of virtual versus in person court hearings.<sup>6</sup>

Such was the case in 2021, when the nation began to emerge from the pandemic. With respect to credible research, the situation remains largely the same. In particular, any research studying the effects of virtual court appearances in family law matters is scant. Credible research is non-existent. Most research takes the form of non-causal surveys.<sup>7</sup> Few articles exist on online family court proceedings, with only two conducting non-trivial examinations. Both of those two come from a 2020 edition of one publication, *Family Law Quarterly*. Elizabeth Thornburg wrote “Observing Online Courts: Lessons from the Pandemic.” Lynda Munro and Nicole Riel wrote “Our Virtual Reality: Facing the Constitutional Dimensions of Virtual Family Court.”<sup>8</sup> Thornburg’s methodology included observing online family court proceedings and interviewing family court judges, trial lawyers, and staff.<sup>9</sup> Law students attended chosen hearings and filled out forms evaluating proceedings.<sup>10</sup> Two family lawyers wrote the other article, expressing concerns based on their academic thinking.<sup>11</sup> Neither research design produces credible causal evidence.

---

<sup>6</sup> Lisa Bailey Vavonese, Elizabeth Ling, Rosalie Joy, & Samantah Kobor, *How Video Changes the Conversation: Social Science Research on Communication Over Video and Implications for the Criminal Courtroom*, (Sept. 2020) [https://www.innovatingjustice.org/wp-content/uploads/2020/11/Monograph\\_RemoteJustice\\_12032020.pdf](https://www.innovatingjustice.org/wp-content/uploads/2020/11/Monograph_RemoteJustice_12032020.pdf) (last accessed Aug. 5, 2025).

<sup>7</sup> Jenia I. Turner, *Remote Criminal Justice*, 53 *Tex. Tech L. Rev.* 197, 199 (2021) (reporting results of a survey intended to assess the advantages and disadvantages of online criminal proceedings by asking survey respondents about their own experiences. Researchers limited survey respondents to “Texas state and federal judges, prosecutors, and defense attorneys.”); Pameal Beatse & David McNeill, *Utah Survey of Court Users: The Impact of Remote Hearings on Access to Justice*, (June 2022). [https://assets-global.website-files.com/5d0a70f56c1bd5798b364f72/64cc3010633c59243c9fa007\\_Court%20User%20Survey%20Report%20FN%20\(2022.06.15\).pdf](https://assets-global.website-files.com/5d0a70f56c1bd5798b364f72/64cc3010633c59243c9fa007_Court%20User%20Survey%20Report%20FN%20(2022.06.15).pdf) (last accessed Aug. 5, 2025).

<sup>8</sup> Elizabeth G. Thornburg, *Observing Online courts: Lessons from the Pandemic*, 54 *Fam. Law. Q.*, 181, 198-9 (2020); Lynda B. Munro & Nicole M. Riel, *Our Virtual Reality: Facing the Constitutional Dimensions of Virtual Family Court*, 54 *Fam. Law. Q.*, 245, 261 (2020).

<sup>9</sup> Thornburg, *supra* n. 8, at 184.

<sup>10</sup> *Id.* at 186-7.

<sup>11</sup> Munro and Riel, *supra* n. 88, at 248.

As courts consider the sustainability of COVID-related change in a post-pandemic world, courts should focus on understanding how these changes affect the delivery of justice. This study was to be the first RCT to investigate the effect of the pre-pandemic status quo of in person hearings versus the pandemic status quo of virtual hearings. The setting for this study is divorce and custody cases in Utah.

Part III of this report discusses the elements of both status quos and the mechanics of study implementation. Part IV presents covariate comparisons. Part V turns to results. Part VI closes with conclusions and suggestions for future research.

The remainder of this Part proceeds as follows: first section A provides the setting for the study by identifying the prevalence of self-represented litigants in family law matters and the importance of adjudication of family law matters in the civil justice system. Section B returns to the current knowledge base regarding virtual hearings, including the fears and opportunities arising from anecdote. Section C concludes with the Lab's hypothesis.

### A. Setting the Stage

80% of litigants self-represent in family court, a figure higher than in other judicial settings.<sup>12</sup> While there is no definitive understanding of why people engage in court proceedings without lawyers, financial challenges are likely part of the picture. Attention has focused on both lack of funding for legal aid for low-income individuals or the way legal service business models price out middle-income individuals and families.<sup>13</sup> Because there is no federal constitutional right to counsel in most family court proceedings,<sup>14</sup> parties must choose whether to hire an attorney or try to manage the case on their own. Sometimes the financial challenges noted make the “choice” for them.

Family law can encompass private civil litigation in the areas of divorce, custody, paternity, spousal and child support, and civil protection orders. It can also include child welfare and juvenile justice matters in which the state, through one of its executive branch offices, initiates a case. This study focused on child custody and divorce. Excepting the uncommon remedy for contempt of a support order, jail time was typically not an available sanction in such cases.<sup>15</sup> Some legal services agencies, already underfunded and unable to meet demand, did not serve family law litigants at all, prioritizing other case types.<sup>16</sup>

---

<sup>12</sup> California Judicial Council Center for Families Children and the Courts, Model Self-Help Pilot Program A Report to the Legislature, 1 (2005). See also Russell Engler, And Justice for All—Including the Unrepresented Poor: Revisiting the Roles of the Judges, Mediators, and Clerks, 67 Fordham L. Rev. 1987, 2047 (1999).

<sup>13</sup> Paula Hannaford-Agor & Nicole Mott, Research on Self-Represented Litigation: Preliminary Results and Methodological Considerations, 24 The Just. System J. 163, 163 (2003).

<sup>14</sup> See *Gideon v. Wainwright*, 372 U.S. 335 (1963) (determining the right to counsel extends to criminal proceedings in which a defendant faces a loss of freedom).

<sup>15</sup> See *Turner v. Rogers, et. al.*, 564 U.S. 431 (2001) (holding that the right to counsel may not extend to defendants in contempt proceedings when incarceration is a potential remedy if other procedural safeguards exist).

<sup>16</sup> See Legal Services Corporation, The Justice Gap: The Unmet Civil Legal Needs of Low-Income Americans (2002). <https://lsc-live.app.box.com/s/xl2v2uraitbbrhuwtjlgj0emp3myz1> (last accessed, August 21, 2025).

The area of family law was no stranger to interventions intended to improve outcomes for litigants and the court. These interventions included types of mediation,<sup>17</sup> the use of standardized child support award guidelines,<sup>18</sup> domestic violence screening training for judges,<sup>19</sup> judicial interviews with children in child custody cases,<sup>20</sup> and efforts by judges to incorporate therapeutic approaches into the courtroom.<sup>21</sup> Researchers generally measured the effectiveness of these interventions in terms of parties' satisfaction with proceedings, time to resolution, changes in co-parenting relationships, and equity in award amounts, among other outcomes. Researchers did not measure outcomes in terms of "wins" or "losses" or who prevails. Most researchers did not use quantitative methods and results were not causal. The same was true for research regarding effects of virtual appearances in family law.

As noted above, research regarding use of remote court engagement in family law matters consisted of two articles, one discussing observations of students and academics, the other reporting on the authors' subjective experiences and thoughts. These two articles suggested that litigants and witnesses might have experienced more problems in online family courts than in person ones.<sup>22</sup> Efforts to uncover additional articles through independent search, reviewing articles cited by these pieces, and examining references that cited these pieces revealed nothing further. Neither piece purported to assess impact on case outcomes and results.

Thus, only anecdotes were available to develop hypotheses regarding the impact of remote appearances in family law proceedings.

## B. Remote Court Appearances & Suggested Impacts

Some believed online formats helped to equalize inequities by reducing the opportunity cost of attending in person proceedings. The theory was that self-represented litigants who faced time burdens, such as inability to take time off work or difficulty in accessing childcare, could attend

---

<sup>17</sup> Lori Anne Shaw, *Divorce Mediation Outcome Research: A Meta-Analysis*, *Conflict Resol. Q.* 27(4):445 (2010) (These studies focused on traditional mediation, shuttle mediation, and videoconference mediation as compared to traditional litigation, and measure effectiveness in terms of parties' process and outcome satisfaction ratings, feelings of safety, and later hostility in co-parenting relationships.)

<sup>18</sup> Kathryn D. Rettig and Carla M. Dahl, *Impact of Procedural Factors on Perceived Justice in Divorce Settlements*, *Soc. Just. Resch.* 6(3):301, 311-312 (1993) (examining the importance of procedural justice in divorcing couples' perceptions of justice through mailed questionnaires asking questions about the child support system in Minnesota and coding responses based on procedural fairness and distributive justice principles); Cécile Bourreau-Dubois, Myriam Doriât-Duban, Bruno Jeandidier, and Jean-Claude Ray, *Do child support guidelines result in lower inter-judge disparity? The case of the French advisory child support guidelines*, *Eur. J. of L. Econ.* 55:87,95 (2023) (examining the impact of standardized guidelines on inter-judge disparities in child support award amounts).

<sup>19</sup> Debra Pogrud Stark, Jessica M. Choplin, and Sarah Elizabeth Wellard, *Properly Accounting for Domestic Violence in Child Custody Cases: An Evidence-Based Analysis and Reform Proposal*, *Mich. J. of Gender & L.* 26(1) (2019). The researchers did not offer evidence about what the actual effect this training would have on parent and child outcomes.

<sup>20</sup> Fiona E. Raftt, *Hearing children in family law proceedings: can judges make a difference?*, *Child & Fam. L. Q.* 19(2):204-224 (2007). Raftt did not use any quantitative metrics to measure the effect of judicial interviews with children.

<sup>21</sup> Vicki Lens, *Against the Grain: Therapeutic Judging in a Traditional Family Court*, *L. & Soc. Inquiry* 41(3):701,706-707 (2015). This study did not measure the effectiveness of these techniques on any measurable courtroom outcomes, such as rates of compliance with court orders or time to resolution.

<sup>22</sup> See Vavonese et. al., *supra* n. 6.

court without commuting and with less time spent waiting in hallways.<sup>23</sup> Others noted that the elderly, disabled, and poor, especially those in rural communities, struggled getting to court in person,<sup>24</sup> but simultaneously expressed the concern the digital divide might replicate accessibility problems with remote participation.<sup>25</sup> For example, some scholars reported that access to technology remained dependent on socioeconomic status.<sup>26</sup> One study found that 14 million households in urban and suburban areas, and 4.5 million in rural areas, did not have broadband subscriptions, and poor communities struggled most of all.<sup>27</sup>

There were other concerns. Clothing and appearance might have affected judges' perceptions of litigants, whether In person or online.<sup>28</sup> In the online setting, perhaps judges evaluated litigants' homes from their online backgrounds.<sup>29</sup> Family court rulings often turned on household matters, and judges might have fallen victim to implicit biases when determining, say, custody rights.<sup>30</sup> Alternatively, online proceedings might have allowed litigants, especially self-represented litigants, to engage in hearings from a low-stress location, facilitating their ability to express themselves and improving civility and possibly safety. In particular, some research reported that children testify more accurately in familiar environments such as their homes.<sup>31</sup> And in one of the studies cited above, family court judges perceived greater participation in online hearings than in person hearings.<sup>32</sup>

Some worried about the effect of non-verbal cues in both in person and remote hearings and argued that courts should ban fact-finding based on virtual proceedings because judges and juries cannot accurately detect witness deception or mistake online. There was strong research concluding that this worry was misplaced, i.e., that the medium did not affect deception or mistake detection. The reason was that human ability to interpret non-verbal cues accurately was underwhelming. Research showed that humans had just above a 50-50 chance ability to detect

---

<sup>23</sup> Id. at 188; Munro and Riel, *supra* n. 8, at 259. See also Ayelet Sela, Streamlining Justice: How Online Courts Can Resolve the Challenges of Pro Se Litigation, 26 Cornell J. L. Pub. Pol'y 331 (2016) for a broader discussion, extending beyond family law, of how online courts can help SRLs better obtain justice.

<sup>24</sup> David A. Hoffman & Anton Strezhnev, Longer Trips to Court Cause Evictions, at 12 (2023) [https://scholarship.law.upenn.edu/faculty\\_scholarship/2992/](https://scholarship.law.upenn.edu/faculty_scholarship/2992/) (last accessed Aug. 5, 2025) (showing correlation between distance to court using public transportation and default judgements).

<sup>25</sup> Erin K. Morris, Feature: Custody Quagmire: Covid-19 Has Forced Family Law Attorneys To Adjust, 81 Or. St. B. Bull. 20, (June 2021).

<sup>26</sup> Id; See also, Shira Schoenberg, Can a parent's right to a child be terminated via Zoom?, *Commw. Mag.*, Jan. 30, 2022; Victor D. Quintanilla, Kurt Hugenberg, Ryan Hutchings, & Nedim Yel, Accessing Justice with Zoom: Experiences and Outcomes in Online Civil Courts, at 46, (2003)

<https://www.repository.law.indiana.edu/facpub/3088/> (last accessed Aug. 5, 2025) ("those on the 'have-not' side of the digital divide who have concerns about attending these hearings with their devices risk many of the justice experience benefits available to those on the have side of the digital divide").

<sup>27</sup> Munro and Riel, *supra* n. 8, at 260.

<sup>28</sup> See Jacey Fortin, When Court Moves Online, Do Dress Codes Still Matter?, *The N.Y. Times* (2020). See also Debra Cassens Weiss, Lawyers are dressing way too casual during Zoom court hearings, judge says, *ABA J.* (2020). Authors of both articles wrote them because of comments made by a Florida judge regarding the judge's perception that lawyers dressed too casually when appearing by Zoom.

<sup>29</sup> Munro and Riel, *supra* n.8, at 255.

<sup>30</sup> Thornburg, *supra* n. 8, at 188 and 209; Munro and Riel, *supra* n. 8, at 259.

<sup>31</sup> Munro and Riel, *supra* n.8, at 256.

<sup>32</sup> Thornburg, *supra* n. 88, at 221.

lies, approximately 54% overall, rounded up.<sup>33</sup> Part of the reason for this inability to detect deception or mistake was that people relied on what they thought were non-verbal cues, such as fidgeting, increased arm and leg movement, or decreased eye contact, as indicative of lying. In fact, none were. While there might have been some verbal cues that could have been reliable for detecting lies, the vast majority of nonverbal cues were unreliable, and the few cues that might have been modestly reliable were counterintuitive.<sup>34</sup> Furthermore, because humans held inaccurate beliefs about what was and was not reliable, it was difficult for adjudicators to disregard the unreliable cues.<sup>35</sup> In a study that educated some participants on somewhat reliable nonverbal cues to look for, with other participants not getting this information, participants receiving information on the reliable cues had no greater ability to detect lying.<sup>36</sup> In short, research provided strong reason to doubt the lawyerly instinct that in person proceedings were best for fact-finding. Rather, the issues were those identified above. Do online or in person court proceedings have lower attendance rates? Is there a difference in court orders? Do litigants have different experiences vis-a-vis procedural justice?

The next section summarizes the discourse on this issue of which is better, virtual or in person proceedings, and discusses hypotheses.

### C. Summary

At most, the two articles discussed above on online court proceedings in family law suggested that as compared to in person hearings, online proceedings presented challenges to self-represented litigants and could detach litigants from hearings but did not affect case outcomes. No one knew how much the apparent diminished procedural justice (if real) affected durability or meaningfulness of final court orders.

Self-represented litigants faced enough barriers to access to justice under the traditional, in person system. If a shift to online proceedings worsened their performances, experiences, or outcomes, courts should have been wary of adopting virtual hearings. But the inquiry had to be comparative. Even if self-represented litigants did face barriers online, they might have been equally disadvantaged in person. The obstacles were already so high in person that moving online might not have made a difference either positively or negatively. Indeed, a non-causal study of virtual as compared to in person mediation suggested decisions regarding the medium used should be a litigant choice. This study contended that case nuance was too prevalent for the traditional one-sized-fits-all approach.<sup>37</sup> Research conducted while this study was in the field

---

<sup>33</sup> For example, Bond and DePaulo, in their meta-analysis of deception detection studies, place human ability to detect deception at 53.98%, or just above chance. Charles F. Bond Jr. & Bella M. DePaulo, Accuracy of Deception Judgements, 10 Personality and Soc. Psych. Rev. 214, 219 (2006).

<sup>34</sup> Bella M. DePaulo, James J. Lindsay, Brian E. Malone, and Laura Muhlenbruck, Cues to Deception, 129 Psych. Bull. 74, 95 (2003).

<sup>35</sup> Lucy Akehurst, Gunter Kohnken, Aldert Vrij, & Ray Bull, Lay Persons' and Police Officers' Beliefs Regarding Deceptive Behaviour, 10 Applied Cognitive Psych., 468 (1996).

<sup>36</sup> Hannah Shaw & Minna Lyons, Lie Detection Accuracy – the Role of Age and the Use of Emotions as a Reliable Cue, 32 J Police Crim. Psych. 300, 302 (2017).

<sup>37</sup> Anna deDufour, Karlee M. Naylor & Karen Lash, Mediating Parenting Solutions in the Age of Technology, 68 Wash. Univ. J. of Law & Pol'y. 1, 32 (2022).

also turned the focus to litigant preferences in the context of participation in high-volume dockets<sup>38</sup> and rural settings.<sup>39</sup>

The A2J Lab’s hypotheses emerged from this thinking: differences in adjudicatory outputs, court burden, and procedural justice by mode of hearing might be negligible. If so, the real focus should be on litigant choice.

This study was intended to test some of these hypotheses by comparing self-represented litigant outcomes in person and online for similar situations using a randomized control trial (“RCT”). RCTs produce causal evidence and are best used when a rigorous evidence base is lacking, resulting in inconsistent implementation of policy decisions<sup>40</sup> – as is the case with courts and appearance policies. RCTs focus on questions that do not have obvious answers<sup>41</sup> – as is the case here.

### III. This Study

This Part discusses how the court operated before the implementation of the study and as well as the study protocol, including data collection, and the limits court records imposed.

#### A. Baseline Information

This section describes adjudication of family law matters in Utah’s Third Judicial District. It discusses pre-study volume, methods used to manage high volumes of self-represented litigants while providing for their unique needs, and processes for litigants to request judicial officer review of challenging issues.

##### 1. The Status Quo Ante

Prior to the study, Domestic Relations Commissioners heard divorce and custody matters. Commissioners were quasi-judicial officers vested with authority through court rule promulgated by the Judicial Council.<sup>42</sup> In Utah, Commissioners had authority to hear family law matters but could not make final adjudications.<sup>43</sup> Commissioners had to refer recommendations to the District Court for ratification and issuance of orders. Presumably, this arrangement freed District Court judges to hear other matters and allowed for judicial officers with specialized knowledge of family law to preside over these cases.

---

<sup>38</sup> Quintanilla et al., *supra* n. 26, at 14 (using student-led observations and litigant surveys).

<sup>39</sup> Michele Statz, “It Is Here We Are Loved”: Rural Place Attachment in Active Judging and Access to Justice, 49 L. & Soc. Inq. 1 (2022).

<sup>40</sup> Charles Weijer, Karla Hemming, Spencer Phillips Hey, & Holly Fernandez Lynch, Reopening Schools Safely in the Face of COVID-19: Can Cluster Randomized Trials Help?, 18 Clinical Trials 371, 372 (2021).

<sup>41</sup> Megan T. Stevenson, Cause, Effect, and the Structure of the Social World, 103 B. U. L. Rev. 2001, 2035 (2023).

<sup>42</sup> 78A Utah Code 5-107(1)(a) (2023).

<sup>43</sup> UCJA Rule 6-401(2013) (see (4)(A) (“commissioners shall not make final adjudications”).

There were four Commissioners assigned to the family court in Utah's Third Judicial District at the time of the study. They heard between 480 and 490 cases total each year in the three years prior to study initiation.

Model time to resolution standards published by the National Center for State Courts suggested that 75% of divorce and custody cases should resolve within 120 days from the date of filing, 90% within 180 days, and 98% within 365 days.<sup>44</sup> 98% of post-judgement motions, in which a litigant might request a modification or enforcement of a resolution, should be resolved within 180 days of the filing of the post-judgement motion.<sup>45</sup> These were model times; actual data appear below.

## 2. The Pro Se Calendar

Prior to this research, Utah's Third Judicial District heard family law matters with self-represented litigants by scheduling designated times for *pro se* calendars, meaning they coordinated these cases and litigants specifically to isolate these matters. The court operationalized that principle as follows.

A petitioner in a family law case filed a petition to begin a custody or divorce case. The defendant/respondent had an opportunity to respond. As a matter of course, petitions included identifying information for each party, such as name, address, and contact information. Petitions themselves were not publicly available but each of these pieces of information appeared in the online court record.

A case in which at least one party was self-represented had all court appearances scheduled on the pro se calendar unless a party requested otherwise. If a party requested otherwise, the court might schedule their case on the "regular" calendar. A party could request a court appearance for any issue needing judicial resolution, meaning matters upon which the parties could not agree on their own. Matters ranged from the obviously consequential, such as the amount of custody time each parent might exercise or who might keep the marital residence, to the obviously inconsequential, such as whether a child should have broccoli for dinner every Tuesday or whether the parties should split the jointly purchased porcelain dishware by settings or by each individual cup and saucer. Scheduling of a court appearance occurred at the time of filing of the request for the court appearance and the court communicated the scheduling information to both parties through email or mail.

In the case of remote proceedings, the scheduling communication included information on how to connect to WebEx, the platform upon which the court relied. In the case of in person proceedings, the scheduling communication identified the courtroom and provided the address of the courthouse. At the time of the proceeding, the court offered a volunteer attorney to the self-represented litigant or, in the case of both parties being self-represented, to both self-represented litigants. Improving coordination with volunteer attorneys was one reason the court developed the pro se docket. The court offered other services during this docket as well. They included

---

<sup>44</sup> Richard Van Duizend, David C. Steelman, & Lee Suskin, Model Time Standards for State Trial Courts, Nat'l Ctr. for State Cts., 3 (2011).

<sup>45</sup> Id.

occasional facilitated mediation opportunities and self-help center staff presence for litigant assistance with procedural issues.

Prior to the COVID-19 pandemic, the court held all proceedings for the pro se calendar in person. During the COVID-19 pandemic, the court held all proceedings for the pro se calendar remotely using the WebEx platform or, before the adoption of WebEx, via telephone. Some Utah judges returned to in person hearings during the summer of 2021; others did not. Each judge made their own choice, resulting in different judges in the same court with a different status quo. In WebEx proceedings, volunteer attorneys could appear remotely and consult with clients remotely and privately. When proceedings were remote, Commissioners appeared remotely as well, albeit often from their courtroom.

If the respondent did not appear for a hearing, the court could proceed without that party if it determined that the non-appearing party had sufficient notice of the hearing. If the petitioner did not appear, the court could either dismiss the case (in which case the petitioner had to file new litigation) or strike the case from the calendar, effectively putting the case on hold until the petitioner requested a new date. These processes were the same regardless of the medium.

With respect to record-keeping, the court recorded party appearances, so that lack of a record of appearance allowed inference of a non-appearance. The appearance records were publicly accessible. The final resolution of a divorce or custody case took the form of an order of court filed in the court record and distributed to both parties by email or mail. Either party could subsequently request a modification. Also, either party could request the court enforce an order. A request to modify or enforce triggered the same process described above. All of these events appeared on the publicly accessible docket.

## B. The Study Process

This section discusses the intended study process designed by the A2J Lab and approved by its Institutional Review Board. It first relates why the court desired an investigation, then turns to ethics before closing with the way the A2J Lab designed the study to layer onto existing process.

Collectively, in 2021-22, the court's judges were unsure whether they should return to in person proceedings exclusively or sustain remote proceedings exclusively for the pro se calendar. This study hoped to investigate that question by randomly assigning cases to either (1) remote proceedings ("Virtual Group") (the status quo as recently as several months prior to the initiation of the study) or (2) in person proceedings ("In Person Group") (the pre-pandemic status quo). The research design dictated that cases became eligible to enroll in the study when a party requested judicial action and they were scheduled on the pro se calendar. Cases came into the study in different postures. Some entered at the first request for judicial action, others between the first filing and the initial resolution, still others between initial resolution and subsequent judicial attention.

Conducting research in the field required consideration of ethics. The clearest ethical basis for the study was equipoise, the idea that no one knew the effects of in person versus remote court

proceedings.<sup>46</sup> Even in situations of equipoise, research should not deny someone an entitled benefit or a right.<sup>47</sup> In this context, however, individuals participating in court cases never had the choice of how to appear. Prior to pandemic-related court closures, the court required litigants to appear in person. During pandemic closures, courts required litigants to appear virtually. During the research, the random assignment as designed would have required litigants to appear in one of these ways. In each scenario, the individual participating in the hearing did not have a choice on how they participated and thus were not at risk of losing an entitlement. They never had one.<sup>48</sup>

The lack of any entitlement to litigation medium also explained why there was no need to seek litigant consent to the study. As stated before, both in person and remote proceedings were a status quo in this jurisdiction. The court never afforded litigants the option of choosing the medium for participation in a court hearing before the study. Thus, the study did not result in a denial or removal of an option to choose the medium for court appearance. The “standard of care” (if that concept is relevant to legal proceedings) at the time of the study was both types of hearings, and it remained both types of hearings during the study. The Harvard Area Committee on the Use of Human Subjects, which served as the IRB for all A2J Lab research, approved a waiver of consent for the reasons articulated. (*See Appendix A: Notification of Initial Study Approval Including Waiver*).

To conduct the study, nothing about the typical process for filing and requesting judicial attention changed. Study participants were anyone scheduled for the pro se calendar with a divorce or custody matter. As before, the notice of the scheduled date and time included an indication of what medium the court would use: WebEx (pandemic-related status quo) or a courtroom/in person (pre-pandemic status quo). The A2J Lab determined assigned medium by random assignment. (See Figure 1: Study Process, for a graphical depiction of the study process used).

---

<sup>46</sup> See Access to Justice Lab at Harvard Law School, Are RCTs ethical?, [https://a2jlab.org/wp-content/uploads/2025/08/A2J\\_GeneralFlyer\\_v2.pdf](https://a2jlab.org/wp-content/uploads/2025/08/A2J_GeneralFlyer_v2.pdf) (last accessed Sept. 2, 2025).

<sup>47</sup> Stevenson, *supra* n. 41, at 374.

<sup>48</sup> Holly Fernandez Lynch, D. James Greiner, & I. Glenn Cohen, Overcoming Obstacles to Experiments in Legal Practice, 367 Sci. 1078 (2020); See Hon. Jennifer D. Bailey, Why Don’t Judges Case Manage?, 73 Miami L. Rev. 1071, 1131 (2019) (“[A]s the civil system currently exists, it is individually judge-dependent in choice, design, and execution.”).

Figure 1: Study Process



## C. Random Assignment & Data Collection

This section describes the intended research design including the intended random assignment and subsequent data collection efforts.

### 1. Random Assignment

For court convenience and to allow for quick random assignment at the time of scheduling, the A2J Lab leveraged the random assignment of case numbers. The clerk of court assigned case numbers to cases sequentially in the order of initiation through a filing. Litigants had no way to coordinate when they filed a case to ensure they received a specific case number, and there was little way that litigants could have known that the study was underway. Moreover, in Utah, case numbering was automated, and clerk of court staff members were unable to override this assignment. For these reasons, the research team assumed that timing of individual initiation filings was random and thus case number assignment was random.

Under the A2J Lab scheme, hearings in cases with even case numbers were to proceed in person; an odd case number meant assignment to virtual hearings. The randomization protocol contemplated that every hearing before a Commissioner in a particular case would proceed in the medium to which the case was assigned. The number of hearings occurring in a case might have been an indicator of complexity. In summary, cases comprised hearings with hearings being subunits of cases.

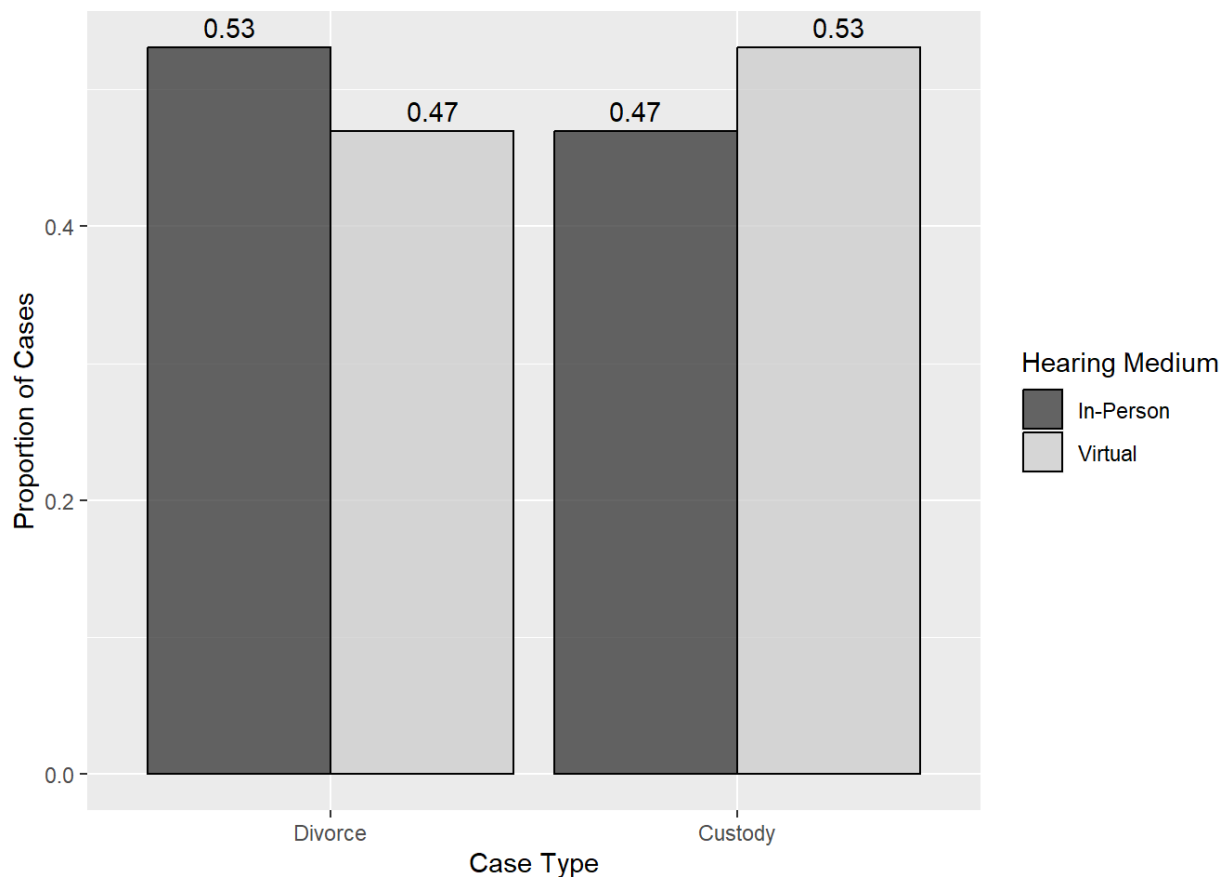
To understand when hearings occurred and in what medium, the research team used a combination of docket entries, minute entries, and transcripts. Docket entries were the register of actions that appeared on the public facing website entry for each case. Minute entries were a written transcript of what occurred at each event listed as a running document. Transcripts were the audio recording of each event. The research team wrote bespoke code to machine-read the dockets and minutes. Because minutes included more detail, the research team used minutes to understand when and in what medium events were scheduled as a proxy for the medium in which events actually occurred. It was rare for any of the data sources to denote in what medium an event actually occurred but when one did, the research team used that data rather than proxy data. The research team used transcripts as a check. To do so, the research team obtained transcriptions of audio recording of around two dozen hearings and human-coded the hearing medium for those transcripts that included this information. This check led the research team to determine that the results of the machine-reading of the minutes accurately reflected the labor-intensive and expensive human coding effort.

The research team enrolled a case in the study when a request for court action occurred. 488 divorce and child custody cases experienced a request for court action (a motion, a petition, or something else) that could have resulted in a need for a hearing before a Commissioner. In 124 of those cases the only hearing that occurred was the one that caused the case to enter into the study. In 28 cases, the research team could detect no hearing that occurred despite entry criteria requiring request for court action. The lack of a need for a subsequent hearing in many cases was normal and expected. Likely parties were sometimes able to resolve disputes that they bring to the court's attention either on the papers or without court involvement. There was no

statistically significant difference in fraction that these cases constituted to each randomization condition (.056 versus .045,  $p = .165$ ), and thus no concern of an effect on inference. The A2J Lab thus ignored these 28 cases and instead focused on the 460 cases in which a hearing was scheduled.

The 460 study cases featured 341 divorce and 119 child custody cases. The fraction randomized to In Person versus Virtual was statistically indistinguishable from 50-50 both within each case type and overall. In other words, the randomization scheme performed as expected in this regard. Figure 2: Randomization, so demonstrates.

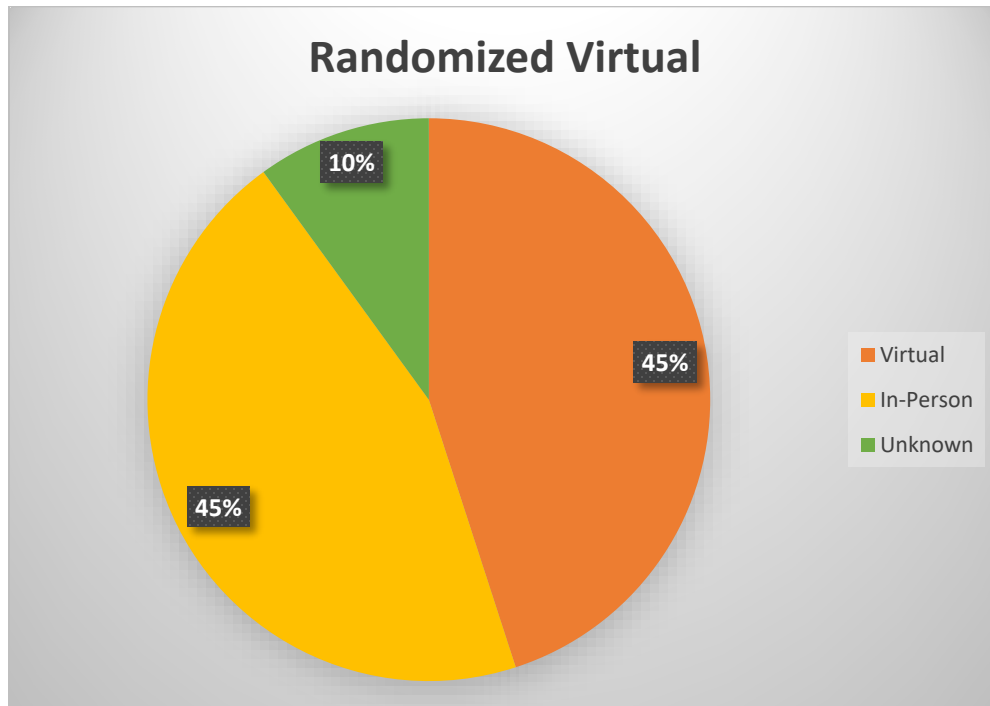
Figure 2: Randomization



*This figure depicts an even distribution of custody cases into each condition and an even distribution of divorce cases into each condition. The random assignment successfully divided cases evenly into the two study conditions. The total  $n$  for custody cases with hearings scheduled was 119 and for divorce cases was 341. The court scheduled virtual pro se calendars every other week with in person pro se calendars scheduled in-between. This practice resulted in all litigants appearing in the same medium on the same day of a particular week. Likelihood of assignment to either condition was not different from chance for either case type ( $p$  custody = 0.327,  $p$  divorce = 0.888) and proportion of cases assigned to the conditions did not differ between case types ( $p$  case type = 0.303).*

With respect to the 460 study cases, the A2J Lab expected some noncompliance with the randomly assigned medium. However, the noncompliance was greater than expected, far greater. The research team analyzed non-compliance by hearing in two ways: the average proportion of hearings in each medium per case, and the proportions of all hearings in each medium.<sup>49</sup> Figure 3: Average Compliance Rates for Cases Assigned to Virtual Appearances and Figure 4: Average Compliance Rates for Cases Assigned to In Person Appearances depict compliance rates by case.

Figure 3: Average Compliance Rates for Cases Assigned to Virtual Appearances

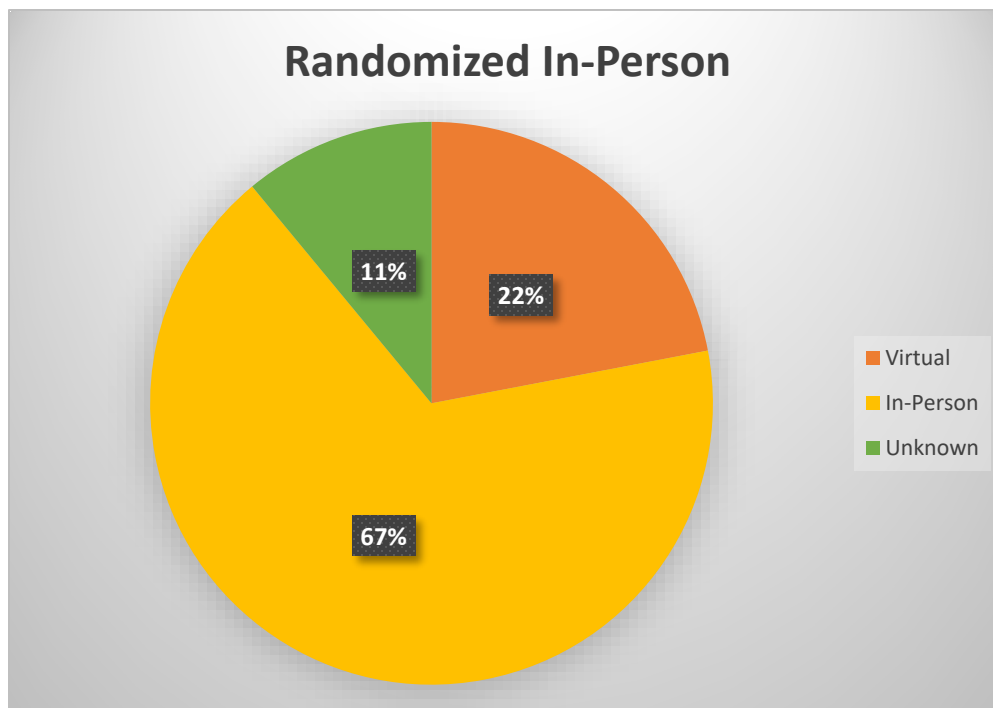


*This figure depicts average compliance rates for cases assigned to appear in the virtual medium. On average, in cases assigned to receive virtual hearings, 45% of hearings complied with the random assignment and 45% did not. On average, cases assigned to receive virtual hearings had 10% of their hearings in an undetermined medium.*

<sup>49</sup> To explain, suppose consider two cases. The first had three hearings scheduled, one held in person and two held virtually. The second had five hearings scheduled, four held in person and one held virtually. Under the first scoring system, which focused on the proportion per case, the cases had .33 and .80 held in person. Averaging these two fractions together shows .57 average proportion in person. Under the second scoring system, there were a total of eight hearings, five of which occurred in person, so the proportion of hearings held in-person is .625.

Although the two figures are similar in this hypothetical, one can see that they are not the same. The two scoring methods would differ substantially if a subset of cases had a large number of hearings per case, and the hearings in that subset of cases occurred substantially in the same medium.

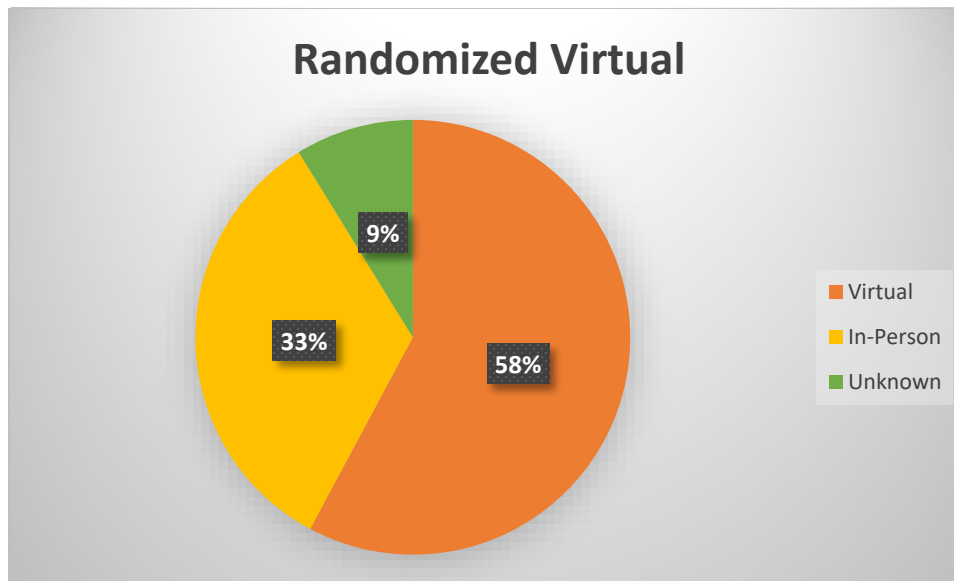
Figure 4: Average Compliance Rates for Cases Assigned to In Person Appearances



*This figure depicts average compliance rates for cases assigned to appear in the in person medium. For cases assigned to receive in-person hearings, an average of 67% of hearings complied with the random assignment, and an average of 22% did not. On average, cases assigned to receive in-person hearings had 11% of their hearings in an undetermined medium.*

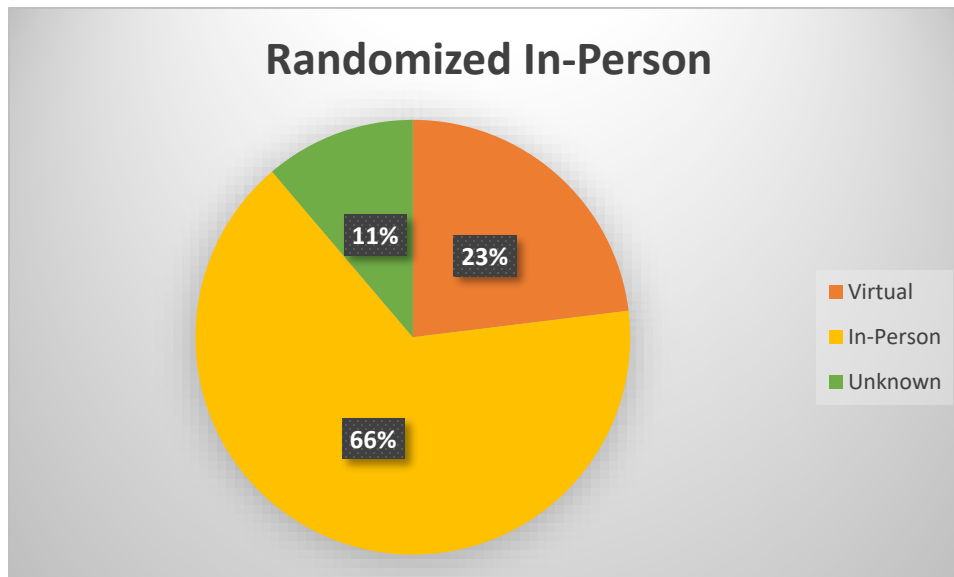
The research team also analyzed compliance for all hearings occurring during the study period. Figure 5: Compliance Rates for Hearings Assigned to Virtual Appearances and Figure 6: Compliance Rates for Hearings Assigned to In Person Appearances depict this analysis.

Figure 5: Compliance Rates for Hearings Assigned to Virtual Appearances



*This figure depicts compliance rates for hearings assigned to appear in the virtual medium. 58% of hearings complied with the random assignment. 33% of hearings did not comply with the random assignment. The research team could not determine the medium used for 9% of hearings.*

Figure 6: Compliance Rates for Hearings Assigned to In Person Appearances



*This figure depicts compliance rates for hearings assigned to appear in the in person medium. 66% of hearings complied with the random assignment. 23% of hearings did not comply with the random assignment. The research team could not determine the medium used for 11% of hearings.*

The above figures show the extent of non-compliance, which was high. It also reveals an apparent preference to conduct hearings in person.

Members of the court expressed surprise that they were non-compliant to this extent. Court staff checked the A2J Lab’s assumptions made to develop the code for the machine-reading, which looked for key words and phrases to identify hearings and mediums, and confirmed their accuracy. Court staff also reviewed a sample of cases and hearings, coded them, and shared their coding with the A2J Lab to confirm accuracy of A2J Lab’s coding. This effort confirmed accuracy.

Court staff explained, as described above, that there were some instances where they felt strongly that a hearing or case should not comply but they, anecdotally, thought that such occurrences were rare. In particular, members of the court highlighted hearing types when they believed custom would dictate non-compliance. For example, the court expressed a preference for scheduling what it termed “procedural” matters to occur virtually while it scheduled review hearings according to preference and availability. The research team narrowed its analysis to those hearing types to assess compliance with custom and found similar rates of non-compliance in that sample. In other words, this custom did not explain the level of non-compliance observed.

Ultimately, the research team could not articulate a patterned explanation for the high rates of departure from the assigned medium. That made it impossible for the research team to use statistical modeling to control for the noncompliance. Results cannot be causal.

## 2. Data Collection

The A2J Lab collected publicly available docket sheets and court minutes related to the custody and/or divorce matter through online court record searches via court-provided login credentials.<sup>50</sup> This dataset included dates of birth of the parties when available.<sup>51</sup> The A2J Lab collected data for the life of the case prior to enrollment and up to the conclusion of the two-year data collection period. Case information could go back many years into history, depending on when the case initiated. Some cases did not conclude or may not reflect a modification or enforcement request that eventually materialized after that two-year follow up period. All data accessed was publicly available, including dates of birth, even though the A2J Lab accessed it through a mechanism that is not available to the public, i.e., through the court-provided login credentials.

Primary outcomes included time to resolution of the matter that brought the parties to court (frequently but not always resolution consisted of a traditional judgment); durability of court order (as measured by the time between the resolution of the matter that brought the case to court and a request, if any, to modify or enforce the order); and rates of failure to appear (FTA). With respect to time to resolution, for purposes of data analysis, the phrase means as the time from request for the court to resolve an issue (which was when the case was effectively randomized to either online or in person hearings) to the date of resolution of that issue. Possible resolutions could include an initial dispositive order, an order disposing of an enforcement request, or an order disposing of a modification request. As mentioned above, cases in the study sample were

---

<sup>50</sup> See Utah Exchange, <https://pubapps.utcourts.gov/XchangeWEB/login> (last accessed Sept. 4, 2025).

<sup>51</sup> Records did not always include dates of birth. The Lab suspects litigants noted dates of birth only when filing a form that included this information, and that clerks entered the information only when it was present. Not all forms required dates of birth.

enrolled at different postures. It was impractical to attempt to measure time to resolution as time from case initiation to the initial dispositive resolution of that matter considering the varied and sometimes lengthy timing of custody and divorce matters. In addition, custody and divorce cases often activate, go dormant, and reactivate on idiosyncratic timescale.

Dockets detailed the register of actions for the case, i.e., litigant filings, court events, and judicial decisions. Minutes detailed a short description of each event, i.e., who appeared, what each person said, and when they said it. Both types of documents downloaded as .pdf files. The A2J Lab wrote bespoke code to machine-read these .pdf files to identify when events related to primary outcomes occurred.<sup>52</sup> Importantly, the A2J Lab did not attempt to characterize which party prevailed in the litigation. Absent interviews of litigants to elicit their goals, it was difficult to assess winners and losers in family law cases. This was apparent from the fact that parties are labeled as petitioners or respondents depending on who brings an issue to the court, a designation that changed within a piece of litigation.

The A2J Lab compared outcomes of hearings assigned to the remote condition directly to outcomes from hearings assigned to the In Person condition to understand differences between the two mediums. It also compared outcomes by case type, divorce and custody. As noted above, because of high non-compliance rates, effects are not causal.

## IV. Covariate Comparisons

This section analyzes whether randomization produced a balanced study population. Here, “balance” refers to statistically indistinguishable distributions of background variables, also called “covariates.” The idea is that if the randomization performed as expected, then the distribution of, for example, age, or race, in the In Person and Virtual Groups should be statistically the same. A balanced sample provides some assurance that the randomization successfully sorted study participants into groups similar on all other factors but for the intervention tested, and therefore increases confidence in results.

Although the available information included only a few covariates, those available suggest a balanced sample. Three useful covariates were age, imputed litigant gender, and imputed litigant race. Case files did not include age for about half of participants. The A2J Lab treated age missingness as its own covariate and assessed whether its incidence differed by treatment condition. The Lab imputed the other two demographic categories using a package from a standard statistical program that uses Census information to provide a probability vector for each

---

<sup>52</sup> The A2J Lab also received compiled data directly from the court. At the time of receipt, the Lab had already written its parsing code and begun processing data as described here. The Lab compared the data received from the court to the data it had obtained and processed itself. A comparison of 2024 initiation, resolution, and final event data demonstrated that the Lab’s parsed information was more accurate and more complete. The court-provided data did not include FTA and had considerable missingness. Almost all missingness was due to a case’s not being included at all in the court-provided file. This experience is an example of the difficulty courts face in extracting their own data from their case management systems. See Todd Venook, *Enterprise Justice: Tyler Technologies at the Privatizing Court*, Yale L. J., §III(A)(iii), 50 et. seq. (forthcoming June 2025), Available at SSRN: <https://ssrn.com/abstract=5281098> or <http://dx.doi.org/10.2139/ssrn.5281098>. This process increased confidence in the Lab’s own downloading and parsing process. Data analysis on this point – the comparison of the two data sources - is available upon request.

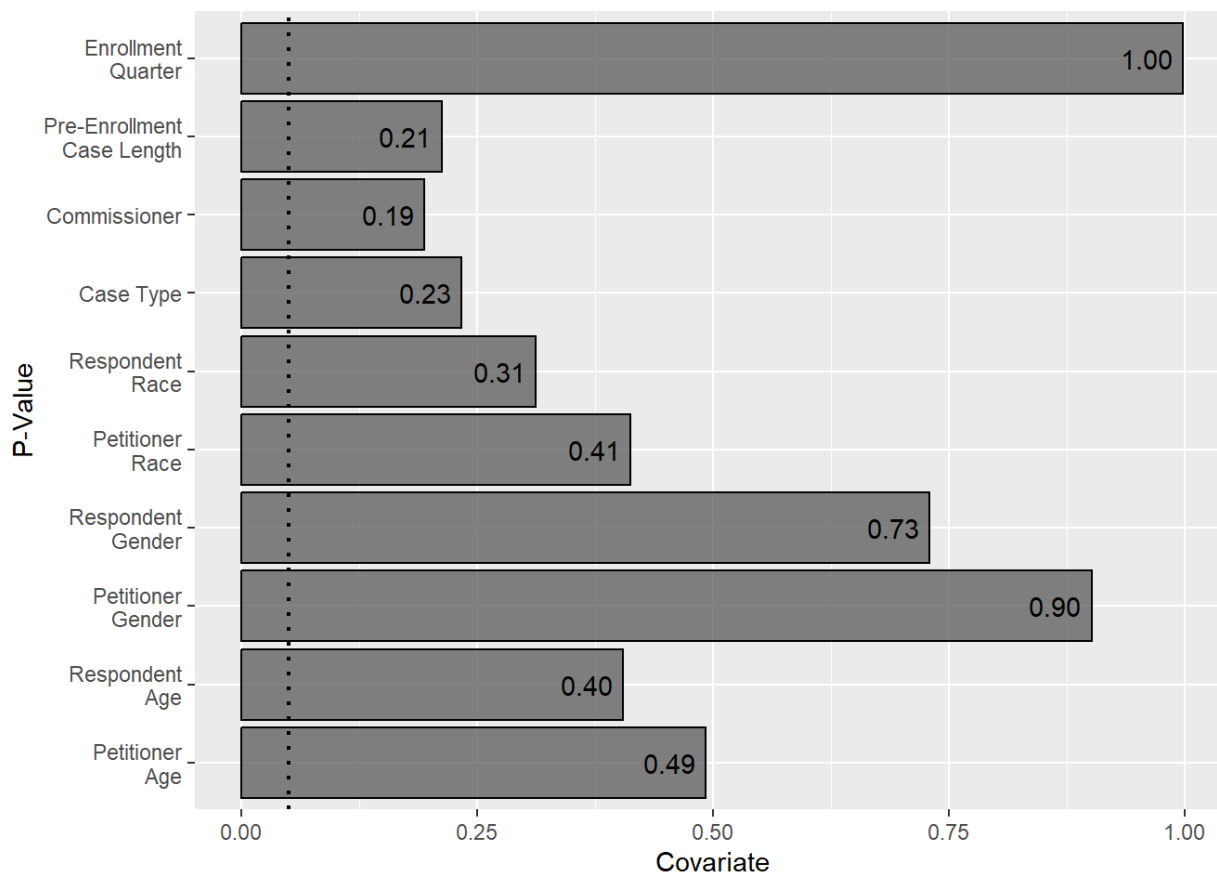
of gender (based on first name) and race (based on last name). The package could not impute gender for about 10-15% of litigants and race for about 15-20%, so the Lab treated “missing” as a third gender and a separate race.

Records also provided information on pre-randomization case activity. The A2J Lab examined length of case and number of filings pre-randomization.

As just suggested, the A2J Lab compared the distribution of each covariate looking for statistically significant differences between the In Person and Virtual groups. Each comparison resulted a “P-value” corresponding to the probability that a difference between the two groups as large or larger could be due to chance. By convention, a P-value less than .05 is deemed small enough to raise the inference that a difference between the two groups is suspect.

Figure 7: P-values for Covariate Comparisons, In Person Versus Virtual, All Cases depicts the P-values for the A2J Lab’s covariate comparisons. None are close to .05. The covariate balance resulted in increased confidence in the study results.

Figure 7: P-values for Covariate Comparisons, In Person Versus Virtual, All Cases



*This table depicts P-values from the comparison of distributions of each covariate across In Person versus Virtual Groups. P-values of .05 indicate a possibly imbalanced study population. The fact that no P-values are close to .05 suggests that the randomization produced a statistically balanced study population, increasing confidence in results.*

In addition, the covariates provided a rough picture of the litigants. Litigants (when age was known) were on average in their early forties. Child Custody litigants were on average about a decade younger than Divorce litigants. Litigants for which race and gender could be imputed appeared to be about 60% female and about 60% white. Pre-randomization case length varied widely from years to nothing.

The upshot is that covariate comparisons suggested a balanced study population, increasing confidence in results. More detail appears in *Appendix F: Covariate Detail*.

## V. Results

This Part discusses what the study's results would have been had there been a sufficiently high level of compliance with assigned medium to allow for causal inferences. As discussed previously, there was not a sufficiently high level of compliance with assigned medium to allow for scientific results. Thus, the discussion below is a depiction of what this study might have produced. The A2J Lab provides it to guide future research into In Person versus Virtual hearings. To reiterate, none of the results below are causal, and none provide credible evidence as to differences or lack thereof between holding hearings in person versus virtually.

This Part starts by reviewing elements depicting court burden, particularly the number and timing of motions or petitions to enforce or modify a resolution of the matter that brought the litigants to court. It continues with analysis of participant-focused outcomes, such as FTA. It then discusses the time needed to resolve the matter that brought the litigants to court. The high rates of non-compliance render results, particularly of participant-focused outcomes, non-causal, meaning all should be reviewed with caution.

In this report, the term “resolution” refers to a court ruling or a settlement adjudicating the matter that induced the case to be randomized. As discussed above, cases in this study arrived for randomization in different postures. Between half and two-thirds were pre-disposition, to resolution consisted of first adjudication of the divorce or child custody matter. The remainder were post-disposition, so resolution consisted of adjudicating an enforcement motion, or perhaps a modification petition.

All comparisons in this Part referred to events taking place during a two-year follow-up period for each case, except sometimes for so-called “survival” analyses, which can tolerate follow-up periods of varying lengths. Thus, for example, counts of case events, FTAs, etc. were with respect to a two-year post-randomization period for each case.

## A. Enforcement/Modification

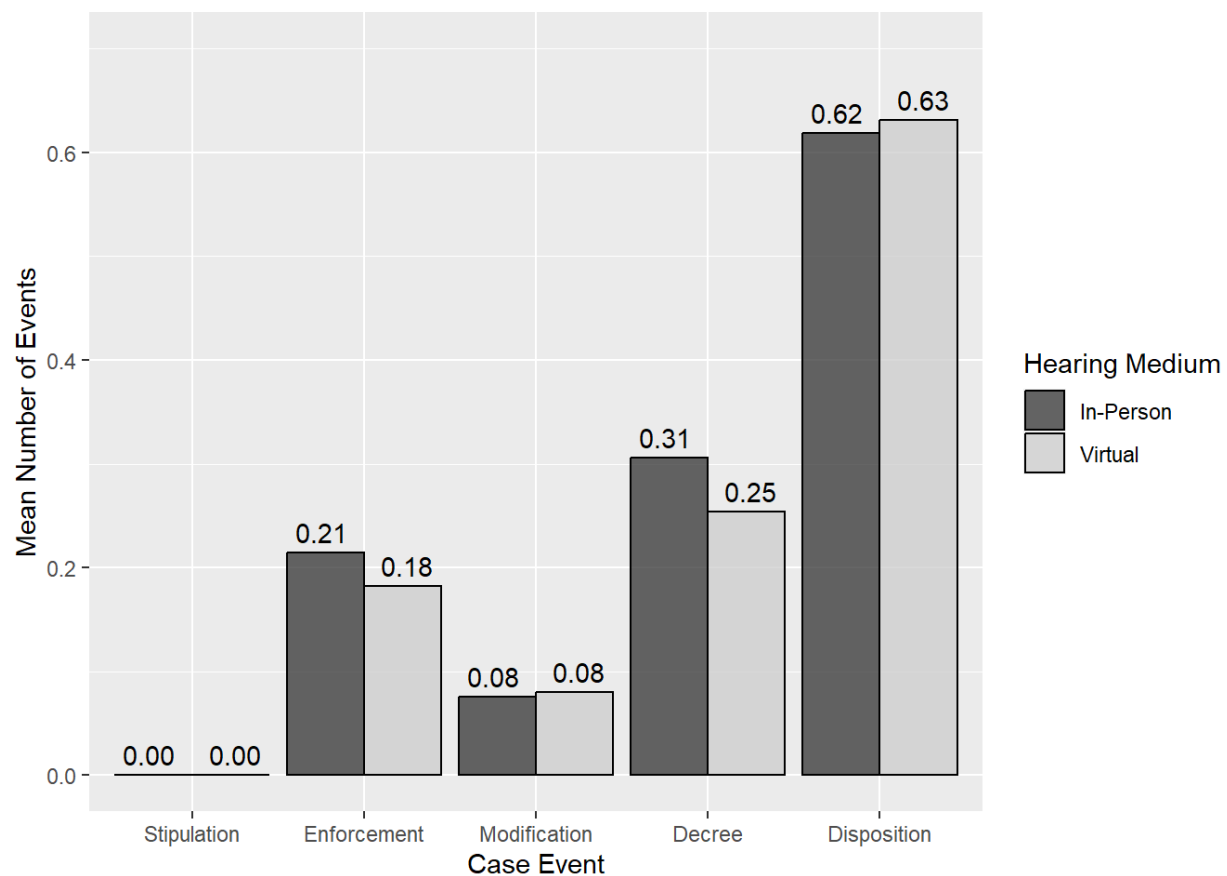
This section reviews type and number of events for each case during the follow-up two-year post-randomization follow-up period. Both are approximations of court burden, the theory being the more events and hearings, the more judge time expended.<sup>53</sup> The A2J Lab had information suggesting that some event types imposed more of a burden on the court than others, so the Lab addressed the possibility that such was the case by comparing event types. Counts of case events came from court docket sheets. There was little chance of missingness; court docket sheets tend to record all major case events.

The rates of case events were nearly identical across treatment condition. Randomization hearing medium had no statistically significant effect on how cases progressed. See Figure 8: Mean Number of Case Events by Study Condition During the Follow-Up Period, for a depiction of the case events during the two years post-randomization.).

---

<sup>53</sup> Analysis of these results by case type (divorce versus child custody) is available upon request.

Figure 8: Mean Number of Case Events by Study Condition During the Follow-Up Period



This figure depicts the mean number of events that occurred within 92 weeks of enrollment (the amount of time between the last enrolled case and the final data collection).<sup>54</sup> There were no group differences ( $P$  stipulations = 1.00,  $P$  enforcements = 0.66,  $P$  modifications = 0.886,  $P$  decree = 0.269,  $P$  resolutions = 0.683). Additional details on these outcomes appear in Appendix B.

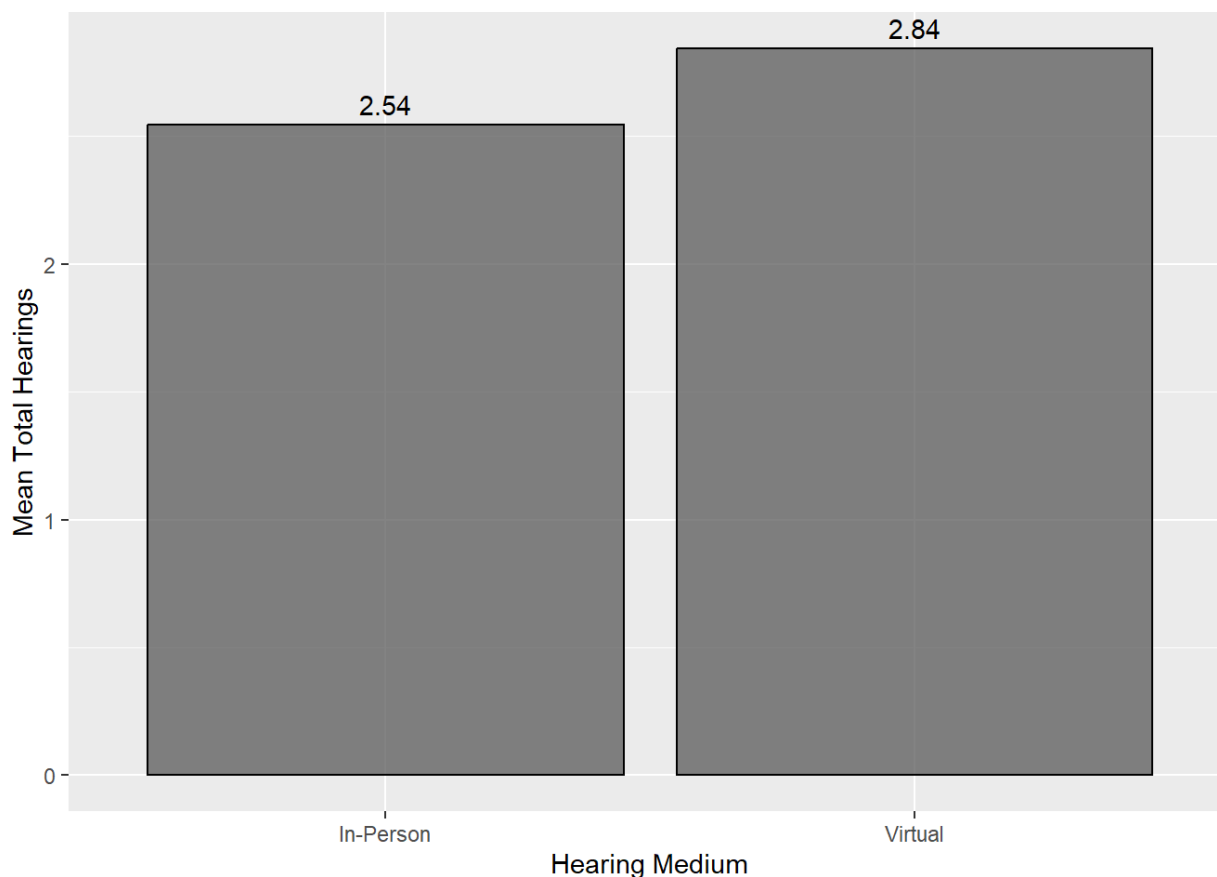
Interval estimates for the differences that this figure depicts shows confidence intervals tight enough to render implausible medium-sized effects. 95% intervals for the effect sizes are as follows: for enforcements (-.23, .14); for modifications (-.08, .09); for decrees (-.14, .03); and for dispositions (-.07, .11). Perhaps the most important results are those for modifications and enforcements, which are a rough measure of the durability of court orders/resolutions. There is no evidence that the group assigned to utilize virtual hearings resulted in less durable resolutions.

Comparison of the number of hearings during the two-year follow-up period, another measure of court burden, leads to the same conclusion, i.e., that the assigned hearing medium had no effect on how cases progressed. There was no statistically significant difference in the mean number of

<sup>54</sup> The research team applied 92.86 weeks of observation to all cases as the follow-up period. It calculated this number based on the number of weeks between the date of enrollment for the last enrolled cases and the date the data collection period closed. This is the longest window of observation that applied to all study cases.

hearings by treatment condition. The interval for the effect of randomized medium on the number of hearings,  $(-.09, .68)$ , was tight enough to render implausible medium-sized effects.

Figure 9: Mean Number of Hearings per Case by Assigned Study Condition Within the Follow-Up Period



*The groups were not significantly different ( $P = 0.113$ , 95% confidence interval  $(-.09, .68)$ ). There was no evidence that randomization medium changed how frequently a hearing occurred. This result did not change when the A2J Lab conducted this analysis by case type. (See Appendix C: Additional Details of Case Events by Case Type, for more).*

## B. Failure to Appear

This section discusses failure to appear. Although FTA occurred with some regularity, there was no evidence that assigned hearing medium affected FTA, with the possibility of an effect for respondents in Divorce cases, who might have been more likely to FTA for virtual hearings. Non-compliance rates make this result difficult to confirm without further research. For reasons discussed, the A2J Lab does not consider the difference in FTA rates for respondents in Divorce cases to be relevant. Researchers have uncovered evidence-based interventions to reduce FTA; should the court be interested, the A2J Lab can provide some advice on this matter. For the purposes of this report, the key trend to consider is there may be little difference in failure to appear rates based on assigned medium.

Based on the court minutes, researchers determined for each hearing whether the petitioner and respondent were present. Court minutes noted which parties and, when relevant, attorneys were present for each hearing. The A2J Lab coded the absence of a notation of presence as FTA.<sup>55</sup>

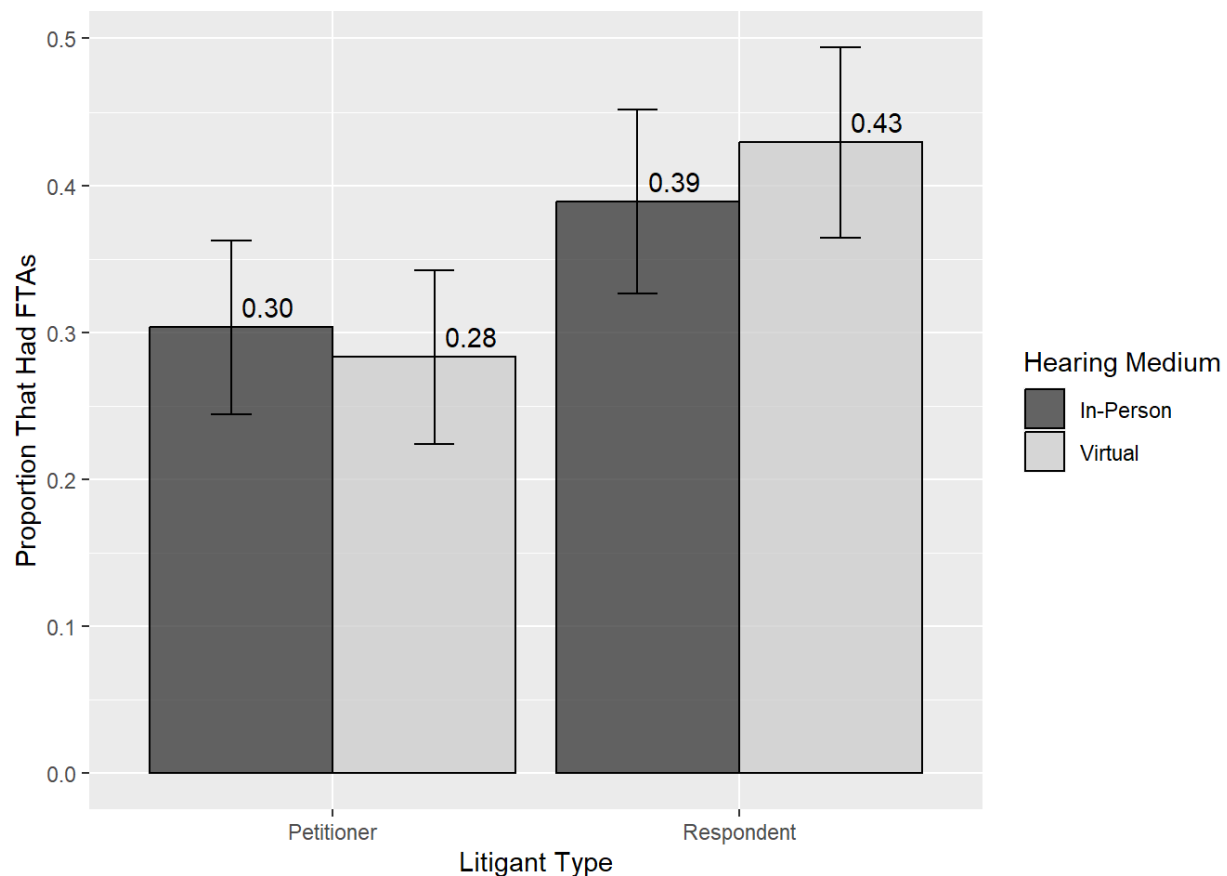
The A2J Lab coded FTA in various ways. To begin, the A2J Lab examined the fraction of cases that experienced at least one FTA during the two-year follow-up period.

Figure 10 depicts these fractions for all cases, with results divided by petitioner versus respondent on the theory that petitioners (who brought the case to court) were less likely to FTA than respondents.

---

<sup>55</sup> This method of coding assumes that court clerks accurately noted which parties were present and that both parties had to be present at all hearings. Conversations with court personnel suggested that both assumptions were plausible.

Figure 10: Proportion of Cases with FTA by Party Type



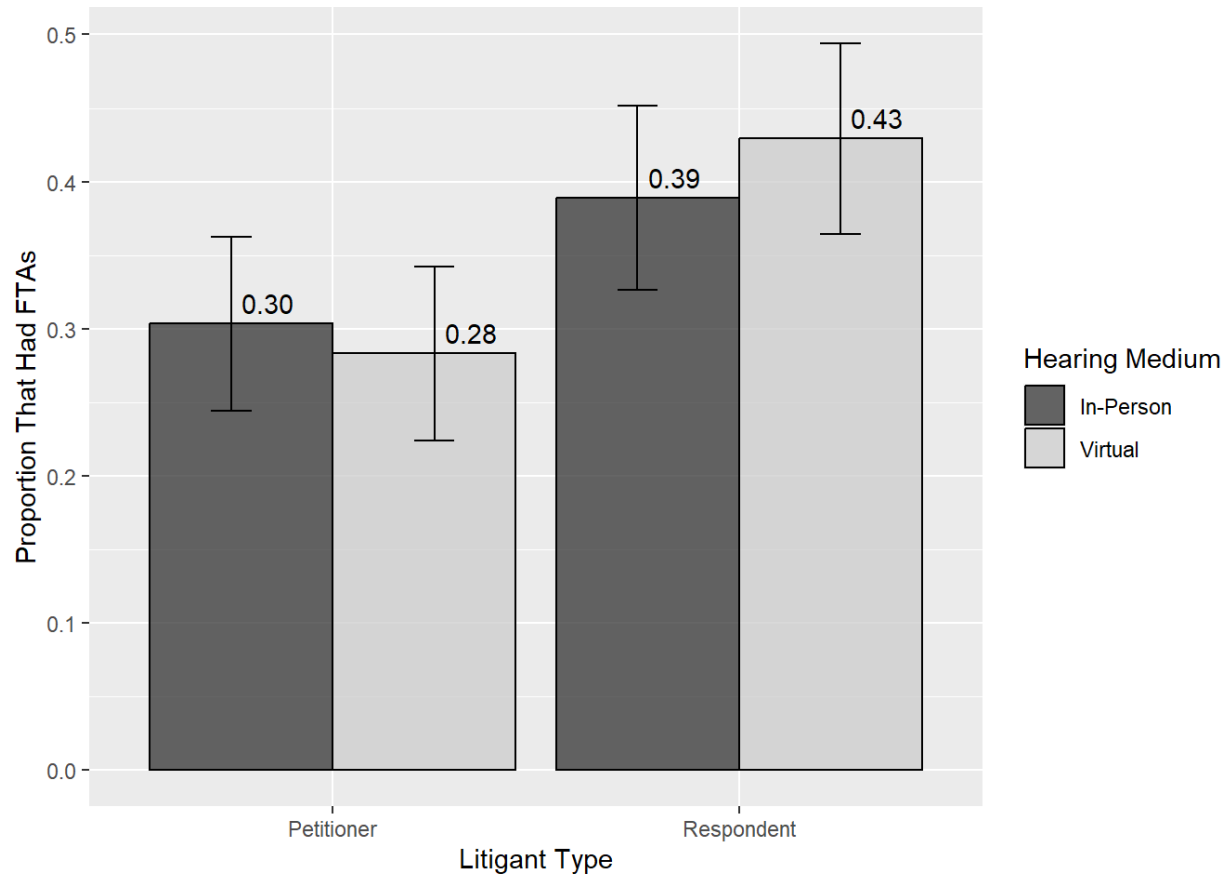
*This figure depicts the fraction of cases that experienced at least one FTA by the petitioner (left bars) and by the respondent (right bars) during the two-year follow-up period. FTA rates were nearly identical for petitioners and close for respondents. P-values were not close to .05 (.685 for petitioners, .408 for respondents). The 95% confidence intervals provided in the text rendered medium-sized effects statistically unlikely. 33 cases had no hearings during the follow-up period and are not included in this analysis.*

These results show no statistically significant differences. 95% confidence intervals for the differences in petitioners (-.10, .07) and respondents (-.05, .13) render medium-sized effects unlikely. A 95% interval for this metric combining petitioners and respondents (-.08, .10) again shows no statistically significant difference and again renders medium-sized FTA effects statistically unlikely.

The A2J Lab also fit logistic regression models to assess whether conditioning on covariates allowed for more precise estimates of effects. The model conditioned on gender (two categories), race (three categories), Commissioner (four), enrollment quarter (five), and length of case initiation to enrollment. The Lab fit models for any party's FTA, petitioner FTA, and respondent FTA. The coefficient for randomization condition was statistically significant for none of the models. 95% intervals for the effect of assigned randomization medium were as follows: for any

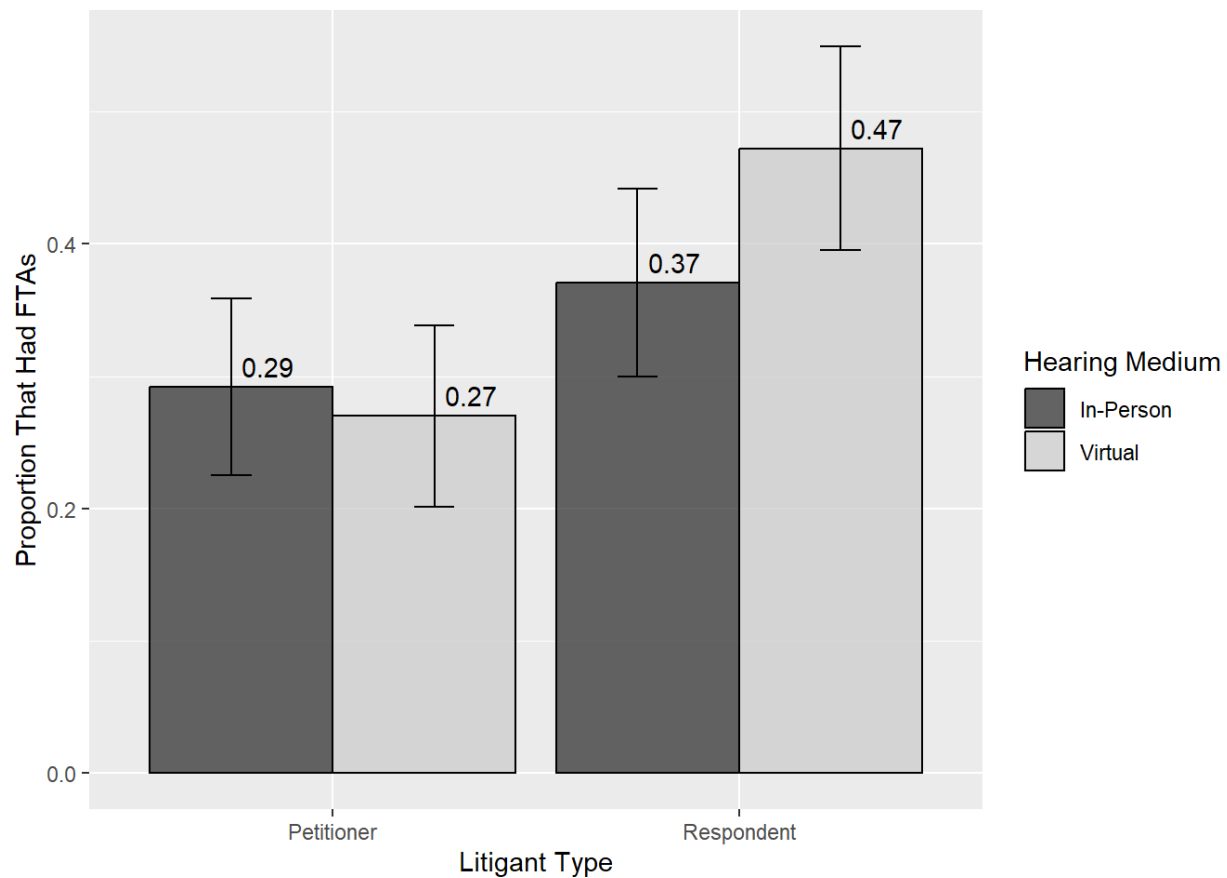
party's FTA (-0.08 , 0.10); for petitioner FTA (-0.10 , 0.07); and for respondent FTA (-0.05 , 0.13). Figure 11: Proportion of Litigants with FTAs by Assigned Condition provides a visual depiction.

Figure 11: Proportion of Litigants with FTAs by Assigned Condition



The same analysis for Divorce cases only revealed no statistically significant difference for petitioners or respondents. Figure 12: Proportion of FTA in Divorce Cases by Litigant Type and Assigned Medium depicts this.

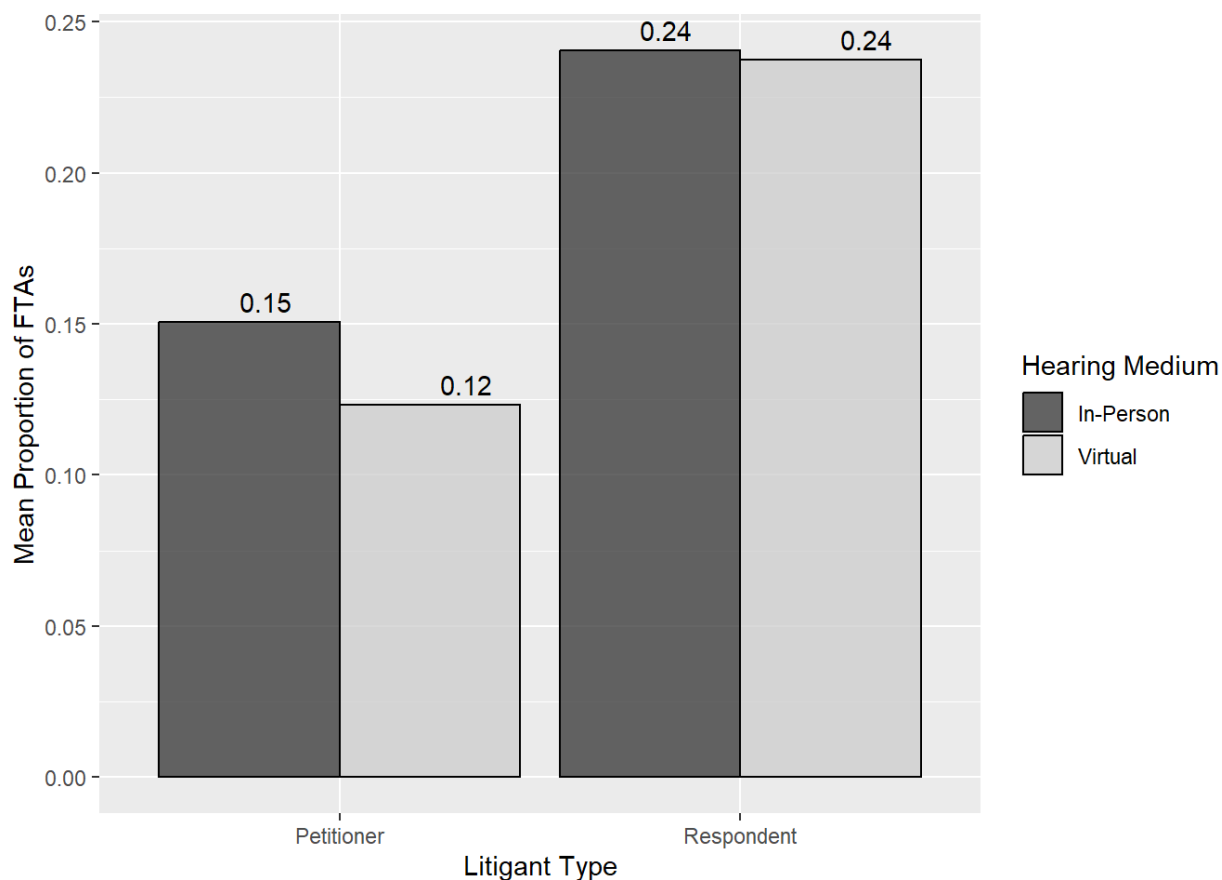
Figure 12: Proportion of FTA in Divorce Cases by Litigant Type and Assigned Medium



*This graph shows the proportion of divorce cases where, during the observation period, litigants had at least one FTA (shown separately for petitioners and respondents). There was no difference by assigned hearing medium for petitioners or respondents ( $P$  petitioners = .731,  $P$  respondents = 0.062).*

The A2J Lab coded FTA in other ways, including for example as a numeric interval variable representing the count of FTAs and as a numeric continuous variable representing the proportion of hearings for which a party failed to appear. The latter is displayed below. Said another way, the figure below depicts the average FTA per case (See Figure 13: Mean Proportion of FTA for Litigant Type by Assigned Study Condition Within the Follow-Up Period).

Figure 13: Mean Proportion of FTA for Litigant Type by Assigned Study Condition Within the Follow-Up Period



*This figure displays the mean proportion of hearings for which an individual petitioner or respondent failed to appear, not the mean total number of FTAs for all petitioners or respondents. Respondents failed to appear more often than petitioners. The assigned study conditions did not differ ( $P$  petitioners = 0.272,  $P$  respondents = 0.939). For cases assigned to the virtual hearing medium, the proportion of a petitioner's hearings where they failed to appear was 0.03 percentage points higher than for cases assigned to the in person hearing medium (95% CI of -0.07 to 0.02). For cases assigned to the virtual hearing medium, the proportion of a respondent's hearings where they failed to appear was a statistically insignificant 0 percentage points higher than for cases assigned to the in person hearing medium (95% CI of -0.06 to 0.06). To be clear, this graph depicts FTA rates for the study period – from enrollment to the end of the follow-up period. 460 cases had at least one hearing. (See Appendix E: Additional Details of FTAs by Study Condition for more). As with all other analysis by hearing medium, non-compliance rates render results noncausal.*

In short, there was no evidence that the assigned randomized hearing medium affected FTA. This may mean that hearing medium did not affect FTA. Again, non-compliance rates prevent the A2J Lab from making any credible inferences.

### C. Time to Matter Resolution

As mentioned, the research team followed cases for at least two years beyond enrollment, but for cases randomized early in the study, the Lab was able to observe a longer follow-up time. The Lab expected some cases would not experience an initial resolution or a resolution of a modification or enforcement request within that time, and expected some cases would have a modification or enforcement request beyond that date that did not occur during the follow-up period. The research team accounted for this problem using statistical methods termed survival analysis. Survival analysis allows comparison of resolution times across treatment conditions even if not all cases have reached resolution by the end of a follow-up period, and it further allows consideration of different follow-up times for different cases.<sup>56</sup>

For time to resolution, if a case “survived” the model, it means it did not dispose within the time period plotted. One says that the case “survived” resolution. Conversely, “death” in this instance was a case that did resolve within the time period plotted. In other words, “survival” was undesirable in this situation. Survival models produce survival “curves,” graphs showing (roughly speaking) probability that a case survives over time. These curves appear below for all cases (with models that included gender (two categories), race (three categories), and quarter (five categories)) and for Divorce cases only (same covariates).<sup>57</sup> To produce the curves, covariates are held at their sample means.

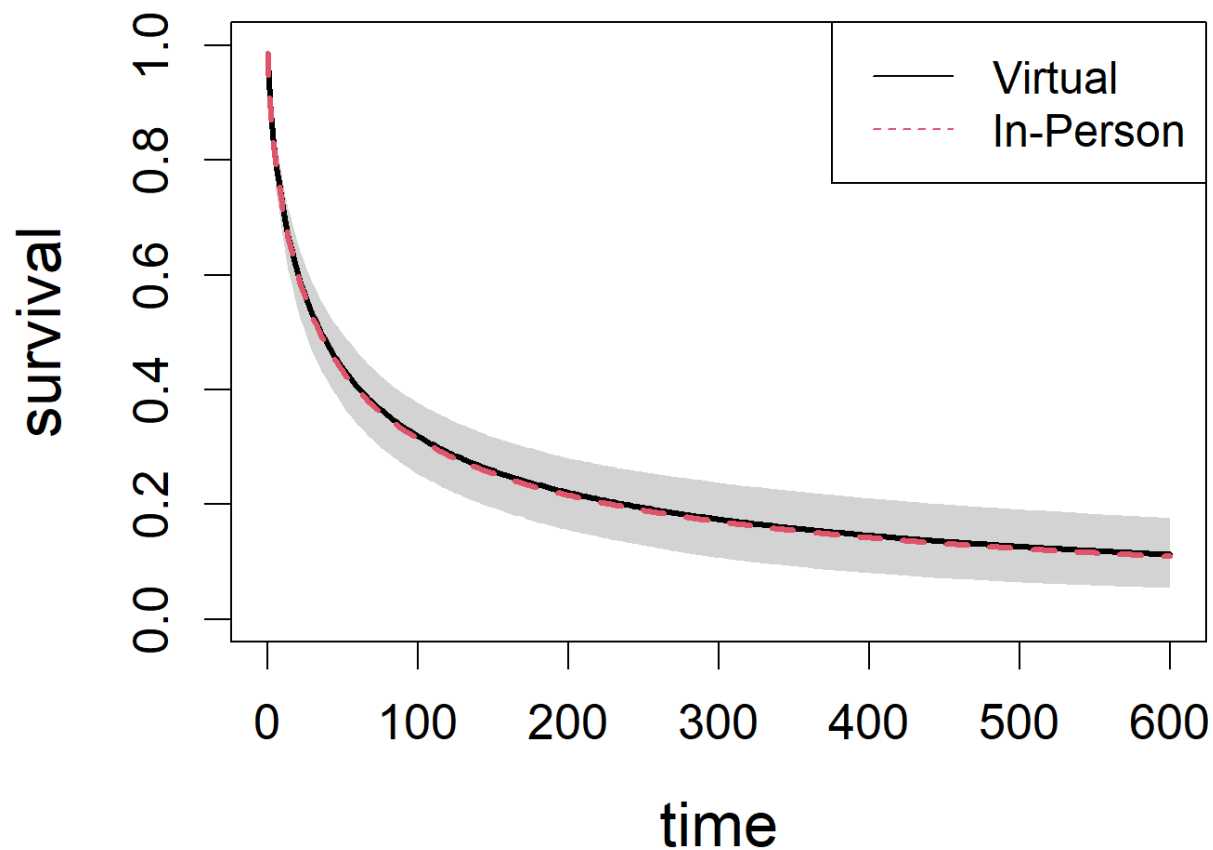
Figure 14: Survival Curves by Treatment Condition, All Cases shows the survival curves for In Person versus Virtual hearings for all cases. The survival curves are so nearly identical that it is difficult to distinguish them. Another way to understand the models is as follows: after one year, cases assigned in person hearings had a predicted probability of reaching resolution of 85%, versus 84% for cases assigned Virtual hearings (P-Value .830, 95% confidence interval (-.06, .06).

---

<sup>56</sup> Lydia Hamblin, Paula Hannaford-Agor, Civil Justice Initiative Evaluation of the Civil Justice Initiative Pilot Project (CJIPP), Nat’l Ctr. for State Cts. at 12-3 (2019) <https://ncsc.contentdm.oclc.org/digital/collection/civil/id/177/> (last accessed Aug. 5, 2025).

<sup>57</sup> Model-fitting checks advised removing Commissioner, pre-enrollment case length, and case type from the survival model for all cases, and Commissioner and pre-enrollment case length for Divorce only cases. As a robustness check, we fit survival models for both insisting that Commissioner be retained. That resulted in advice that pre-enrollment case length be removed from both analyses, advice we followed. The resulting survival curves, P-values, and confidence intervals were almost identical to those shown above. These results are not surprising. It appears that the data were insufficient to separate the predictive value of Commissioner from enrollment quarter.

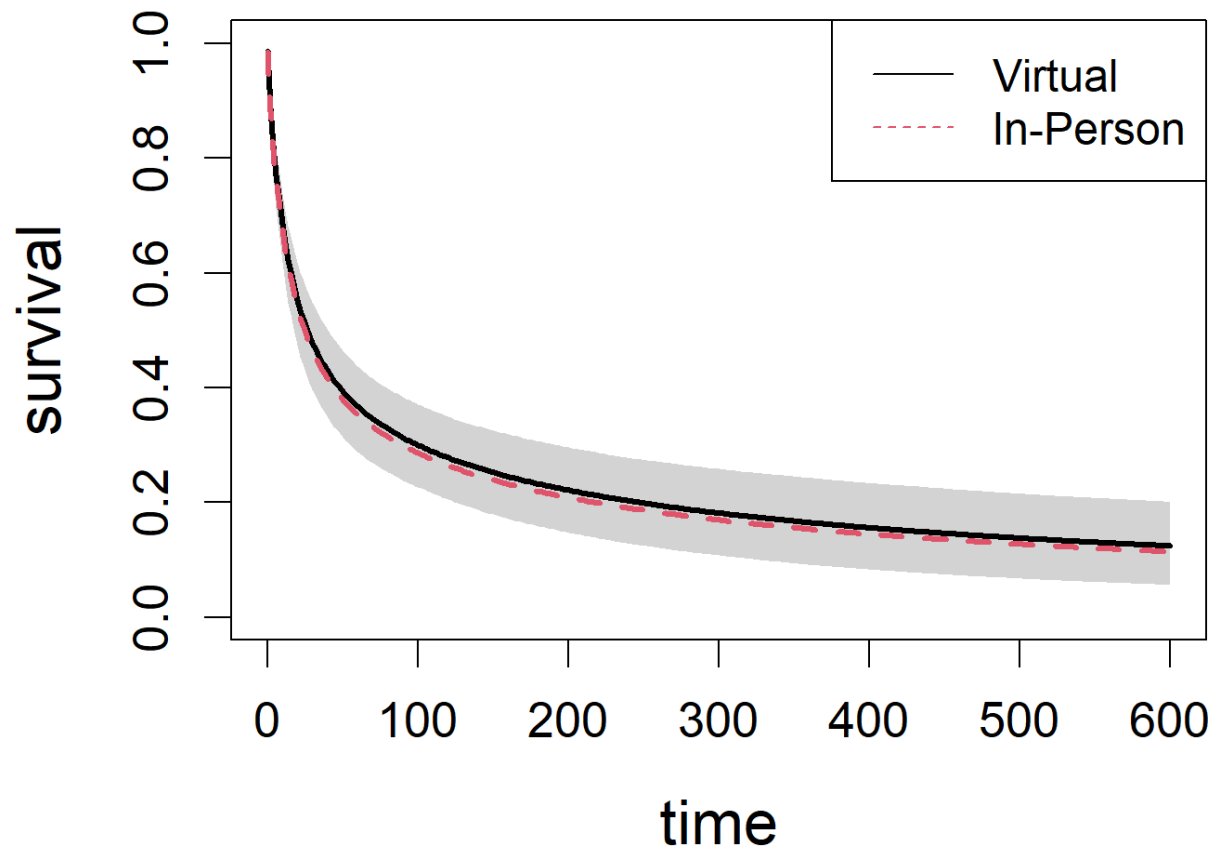
Figure 14: Survival Curves by Treatment Condition, All Cases



*This figure depicts model-based probability of "survival" for all cases by assigned randomization medium. In this context, "survival" means no resolution and is thus undesirable. There is no evidence that assigned randomization medium had a significant effect. As the text discusses (by providing one-year survival figures), confidence intervals are tight enough to render medium-sized effects unlikely. However, because non-compliance rates were high, these results provide no basis for inferences of causation.*

The results are the same for Divorce cases. Figure 15 shows the results. The survival curves are so similar as to be nearly indistinguishable. After one year, cases assigned to the In Person condition had a predicted probability of reaching resolution of 86%, versus 86% for cases assigned to the Virtual condition (P-Value .985, 95% confidence interval (-.08, .06)). However, because non-compliance rates are high, these results do not allow for credible inference.

Figure 15: Survival Curves by Treatment Condition, Divorce Cases Only



*This figure depicts model-based probability of "survival" for Divorce cases only by assigned medium. In this context, "survival" means no resolution and is thus undesirable. There is no evidence that assigned medium had a significant effect. As the text discusses (by providing one-year survival figures), confidence intervals are tight enough to render medium-sized effects unlikely. However, because non-compliance was high, these results do not allow for credible inference.*

In short, hearing medium may not affect time to resolution, but non-compliance rates do not allow for credible inference.

## VI. Conclusions and Opportunities for Future Research

The A2J Lab had hoped to unveil simple results showing there was no evidence that randomization medium affected case resolution time or FTA rates or measures of court burden. However, non-compliance rates did not allow realization of this hope. Trends in the data may be suggestive of the truth of the A2J Lab's hypotheses or they may simply be the result of non-compliance; there is unfortunately no way to know.

## A. Perceptions of Fairness & Effects on Case Outcomes

The A2J Lab worked with Emily LaGratta, of LaGratta Consulting, LLC, to incorporate some review of litigant perceptions. This did not include identifiable information from litigants to match that data with their outcomes data from the RCT, meaning it is not causal evidence. Emily identifies some shortfalls in perceptions of fairness when litigants participate online.<sup>58</sup> Litigants may perceive greater procedural unfairness online, but this fact may not affect their outcomes. Litigants may feel detached, but not obtain worse outcomes in practice. Future research should explore this with a causal design. It is possible that when courts empower litigants to choose the medium that works best for them, perceptions of fairness improve. Scholars should evaluate this possibility with an RCT.

## B. Effects on Civility and Decorum

Questions about whether the medium improves or impedes safety, civility, and decorum remain. For example, concerns that virtual proceedings may foster unsafe adjudicatory spaces for victims of abuse by allowing perpetrators of abuse to lurk in the background just out of camera sight remain. This study does not address that. Similarly, this research does not address concerns that litigants may not feel the same gravity of the proceeding online and thus may not treat the event with the same respect. And concerns that requiring individuals in contentious litigation to report to the same courtroom and wait in the same spaces only foments incivility but may be mitigated by virtual appearances remain. Rigorous analysis is especially important in these areas. At present, existing knowledge relies exclusively on observational analysis and conjecture to assert these issues are or are not present.

## C. Access and Bias

This study does not address interventions designed to compensate for issues of access. This research does not address concerns about technology access or socioeconomic inequalities. It is possible such interventions, for example, may result in those who never appear, appearing some of the time. This research also does not address whether issues of access and the manner in which people do appear when they are able to appear, allow for judicial bias to enter into decision-making. Causal research is critical in these areas also.

## D. Conclusions

The United States is six years out from the peak of pandemic-related court closures and a mandate for remote court proceedings. But courts and their stakeholders still struggle with the decision of whether to mandate a medium for appearances. They still experiment generally with a focus on service to the court and litigators, rather than the people relying on the court to resolve

---

<sup>58</sup> See LaGratta Consulting, LLC, What's Better: In Person or Remote Hearings? <https://static1.squarespace.com/static/5d260fabfdbd0000011668cb/t/65328a4ee212ea36075134d0/1697811148611/remote+vs+inperson> (last accessed, Sept. 2, 2025).

difficult family legal issues.<sup>59</sup> The Utah courts themselves continued to grapple with these concepts during and after this evaluation, adopting a rule of civil procedure to modify the default from judicial discretion dictating medium to judicial discretion dictating medium unless a party requests otherwise and the judicial officer does not have good cause to deny this request.<sup>60</sup> This is a move toward flexibility, but continues to consider judicial preference as supreme. If courts want to achieve the 100% access directive from the Conference of Chief Justices and Conference of State Court Administrators,<sup>61</sup> more flexibility, and a focus on litigant choice is required.

RCTs, while not widely adopted (yet) to evaluate legal interventions,<sup>62</sup> remain useful to evaluate interventions implemented with little change to the status quo – interventions where the system itself remains largely intact.<sup>63</sup> This RCT intended to embody that concept. The general principles of the adversarial system of law were unchanged. But, the study hoped to interrogate the different ways to engage with that system. It did not intend to change the status quo. Thinking of it from this high-level, giving litigants choice in how they engage is really not that radical. The system itself, whether flawed or not, remains intact. The lens from which it is assessed just shifts slightly from a focus on judges and lawyers to litigants, a view *of* the bench rather than *from* it.

---

<sup>59</sup> See, e.g., Mark Wells, New Pilot Program to Expand Remote Court Access in Southern Illinois, 104.9 WFIW, Jun. 18, 2025, <https://www.wfiwradio.com/2025/07/18/new-pilot-program-to-expand-remote-court-access-in-southern-illinois/> (last accessed Aug. 5, 2025) (announcing a pilot program to allow legal aid attorneys to appear remotely as a cost savings mechanism for those offices).

<sup>60</sup> U.R.C.P. 87 (Sept. 1, 2024); Supreme Court Advisory Committee Utah Rules of Civil Procedure, *Meeting Materials*, (Dec. 6, 2023), <https://legacy.utcourts.gov/utc/civproc/wp-content/uploads/sites/10/2023/12/Materials-Dec-2023.pdf> (last accessed Oct. 17, 2025).

<sup>61</sup> See Conference of Chief Justices, Conference of State Court Administrators, *Resolution 5: Reaffirming the Commitment to Meaningful Access to Justice for All* (2015), <https://ccj.ncsc.org/resources-courts/reaffirming-commitment-meaningful-access-justice-all> (last accessed Oct. 17, 2025).

<sup>62</sup> Lynch et al., *supra* note 48; see also, [www.a2jlab.org](http://www.a2jlab.org) (last accessed Aug. 5, 2025). The mission of the Access to Justice Lab at Harvard Law School is to pursue RCTs in the law in an effort to use “empirical research to make the U.S. justice system work better for everyone.”

<sup>63</sup> Stevenson, *supra* n. 41, at 2042.

## Appendix A: Notification of Initial Study Approval Including Waiver



**HARVARD**

Human Research Protection Program

Harvard University-Area  
Committee on the Use of Human Subjects  
44-R Brattle, Suite 200 (2nd floor)  
Cambridge, MA 02138  
IRB Registration - IRB00000109  
Federal Wide Assurance - FWA00004837

### Notification of Initial Study Approval

September 7, 2021

James Greiner  
jgreiner@law.harvard.edu

**Protocol Title:** Evaluating the Impact of Virtual v. In-Person Proceedings in Family Law Matters  
**Principal Investigator:** James Greiner  
**Protocol #:** IRB21-1127  
**Funding Source:** None  
**Review Date:** 9/7/2021  
**STUDY Effective Date:** 9/7/2021  
**IRB Review Type:** Expedited  
**IRB Review Action:** Approved

The Institutional Review Board (IRB) of the Harvard University-Area approved this Initial Study. This approval does not expire and you will not be required to submit an annual renewal application. However, you are responsible for submitting the following to the IRB, as applicable. Any change or update to the research must be submitted in ESTR via a Modification. Once the study is eligible for closure, a closure request must be submitted in ESTR via the Close Study activity. All reports of new information must be submitted in ESTR via the Report New Information activity. If you are unsure what to submit, contact the Harvard University-Area IRB office for further assistance.

The documents that were finalized for this submission may be accessed through the IRB electronic submission management system at the following link: [IRB21-1127](#)

The IRB made the following determinations:

- Waivers: Waiver/alteration of the consent process
- Risk Determination: No greater than minimal risk
- Research Information Security Level (based on Harvard Research Data Security Policy): Non-Sensitive

Please contact me at 617-496-5593 or [elizabeth\\_parsons@harvard.edu](mailto:elizabeth_parsons@harvard.edu) with any questions.

Sincerely,

---

University Area IRB <http://cuhs.harvard.edu>  
Harvard Longwood Campus IRB <http://www.hsph.harvard.edu/orarc>

HRP-510: Template v5/15/2020



**Elizabeth Parsons**  
**IRB Administrator**

---

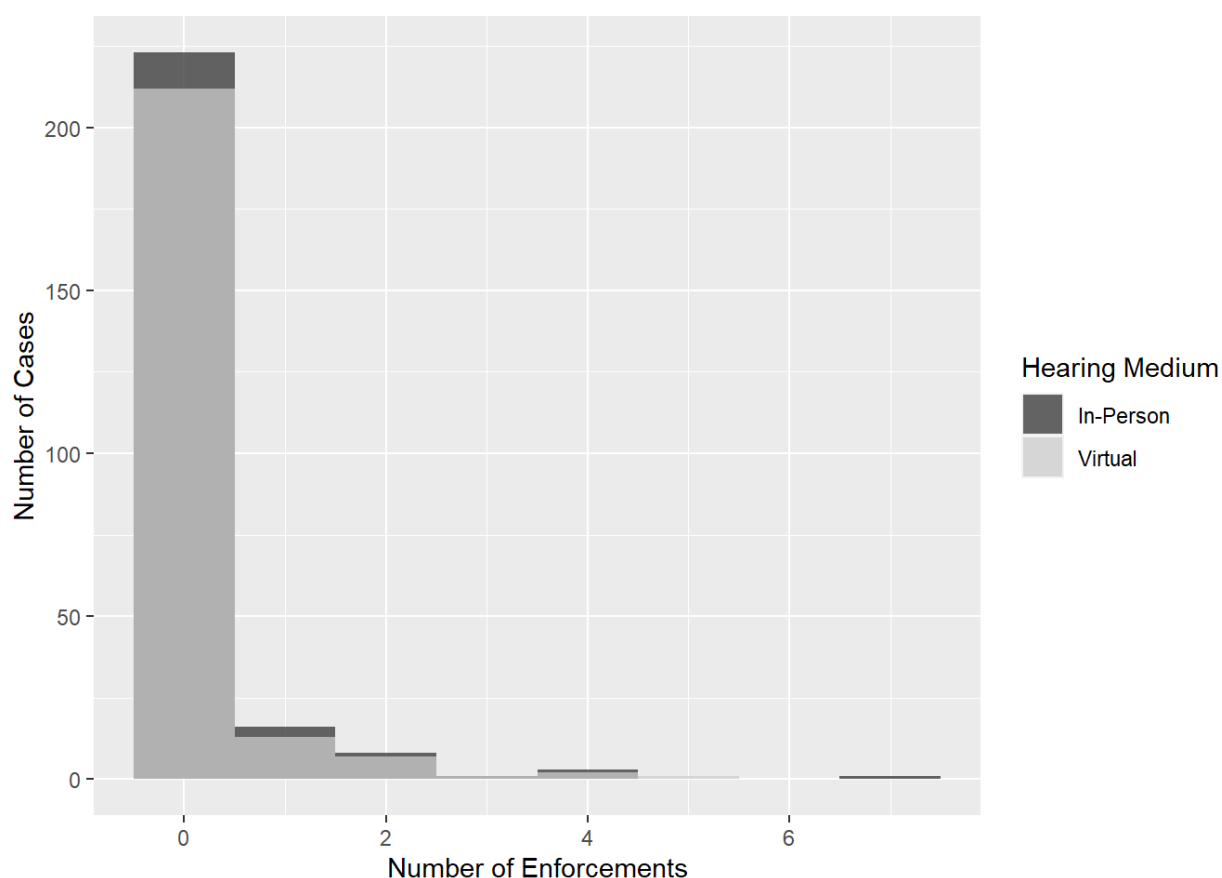
University Area IRB <http://cuhs.harvard.edu>  
Harvard Longwood Campus IRB <http://www.hsph.harvard.edu/orarc>

HRP-510: Template v5/15/2020

## Appendix B: Additional Details Regarding Case Events

Drilling down into case event categories, this appendix presents distributions by assigned hearing medium for enforcement and modification requests, and resolutions. (See Figure 16: Enforcement Case Event Distribution by Assigned Hearing Medium Within the Follow-Up Period, to see the count of cases with enforcement requests filed by study condition within the follow-up period, Figure 17: Modification Case Event Distribution by Assigned Hearing Medium Within the Follow-Up Period, to see the count of cases with modification requests filed by assigned study condition within the follow-up period, and Figure 18: Resolution Case Event Distribution by Assigned Hearing Medium, to see the count of case events with resolutions by assigned study condition within the follow-up period).

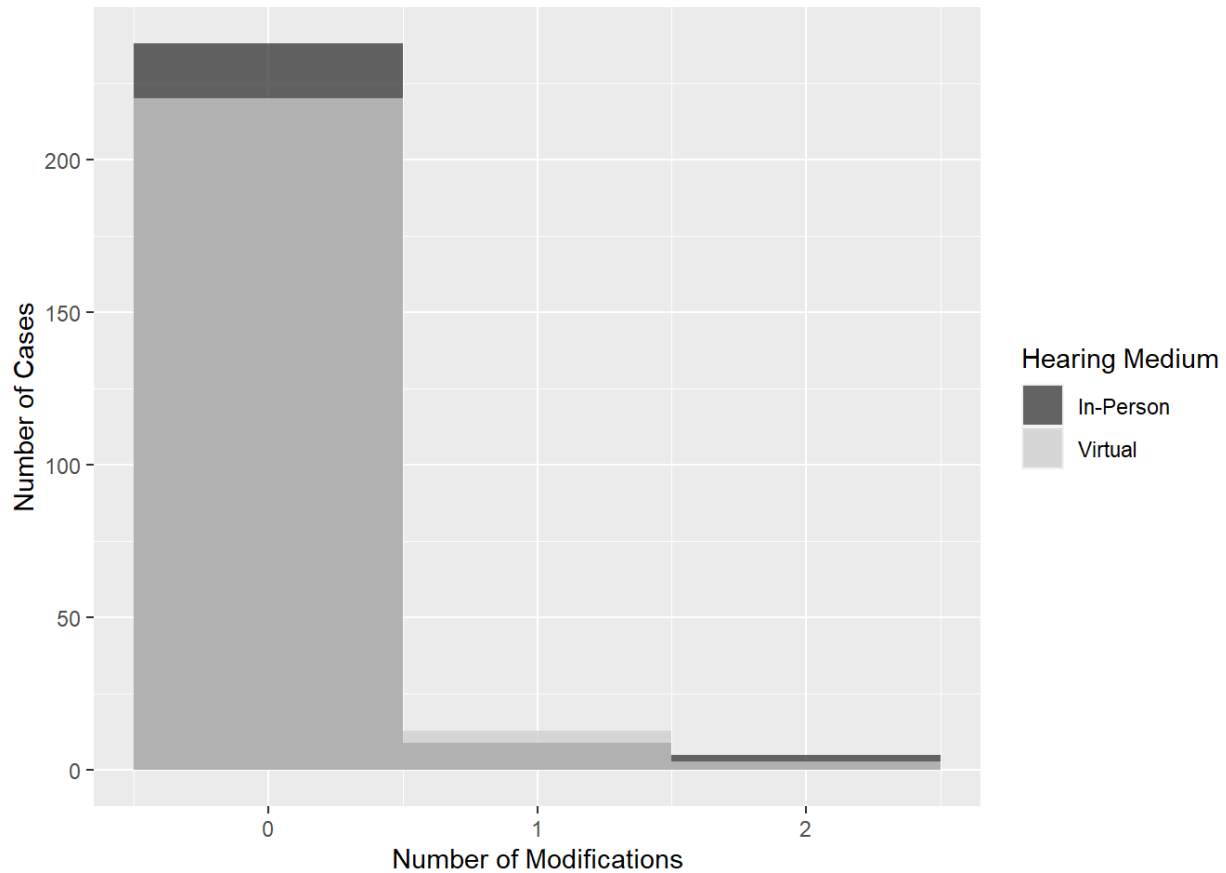
Figure 16: Enforcement Case Event Distribution by Assigned Hearing Medium Within the Follow-Up Period



*This histogram layers bars on top of one another to depict when one assigned study condition includes more cases than the other. When the shading is a shade that falls in-between those of each assigned study condition as depicted in the key, it means the assigned conditions have parity on this point. Here most cases in both assigned mediums did not include an enforcement request filed, and when a case did include an enforcement request, usually the case included between one and four requests. The assigned medium did not significantly affect this outcome. as discussed above, non-compliance rates prevented the A2J Lab from drawing conclusions on whether the medium actually used affected this (or any other) outcome. There are cases that included up to thirteen enforcement requests filed.*

Next this appendix reviews this same type of analysis for modification requests.

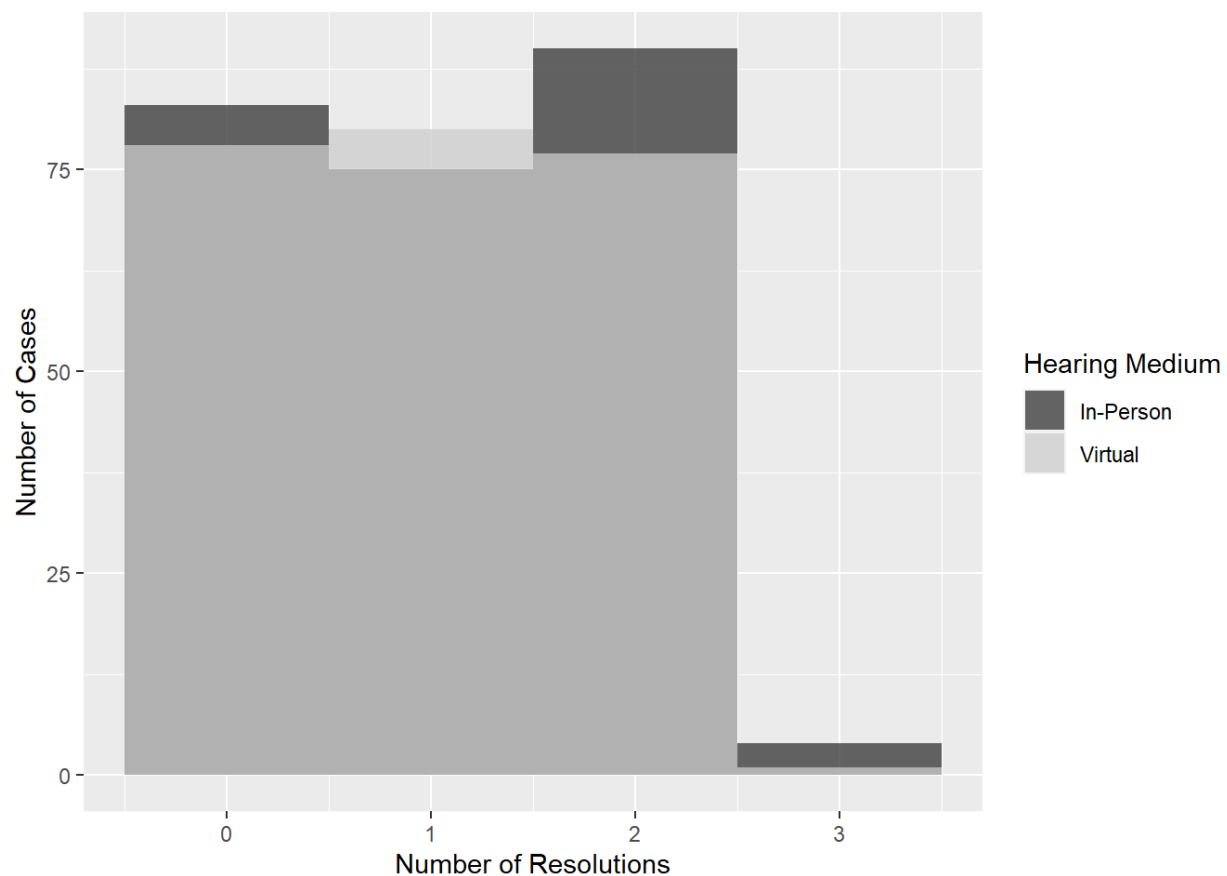
Figure 17: Modification Case Event Distribution by Assigned Hearing Medium Within the Follow-Up Period



*Just as with enforcement requests filed, most cases did not include a modification request filed. The assigned medium did not significantly affect this outcome, and non-compliance rates prevented inferences about whether actual medium had any effect. Again, when modification requests existed, some cases had more than ten modification requests, but all cases included two or less.*

Now this appendix turns to distribution of resolutions. For the remainder of the figures incorporating resolutions, resolutions and decrees are combined into one resolution category.

Figure 18: Resolution Case Event Distribution by Assigned Hearing Medium Within the Follow-Up Period



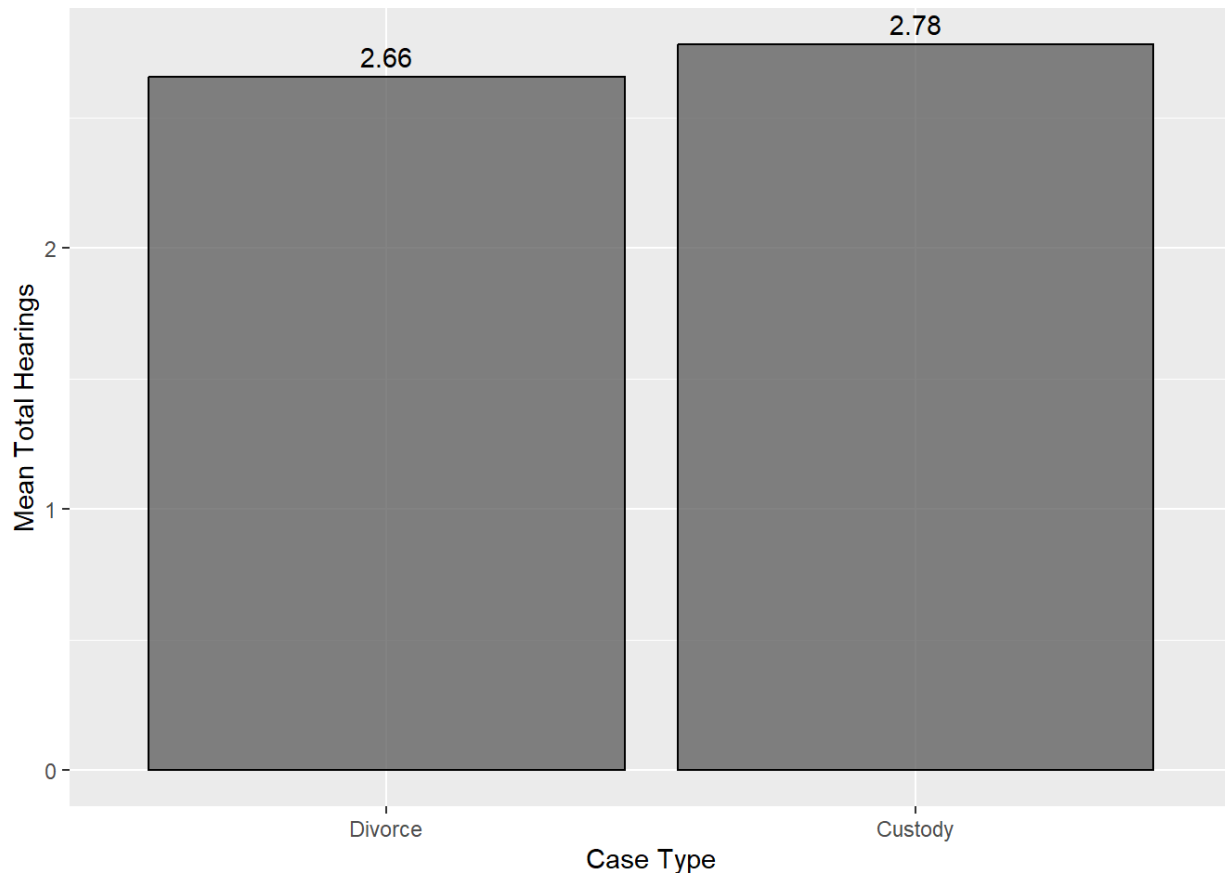
*Some cases did not reach initial resolution. It makes sense that if a case did not reach initial resolution, it would also not register a modification or enforcement request, because there is nothing to modify or enforce. This may contribute to the points made in the above two figures, that most cases did not include a modification or enforcement request. This, coupled with the idea that some cases will never have a modification or enforcement request filed because the court order remains durable in perpetuity, may explain why we see that large bar at the zero mark.*

Turning back to this figure, subsequent resolutions beyond one is an indicator of a resolution of a modification or enforcement request. As mentioned, family law cases can dispose, go dormant, and reactivate. Depiction of subsequent resolutions beyond the first also depicts that concept.

There may be important differences between the cases which had zero enforcements or modifications and those with multiple. For example, zero modifications or enforcements could indicate the case never reached initial resolution during the follow up period or could indicate that study participants were satisfied with their dispositive court order, making it more durable. The former is probably true for the under 75 cases with zero resolutions depicted above. The latter is probably true for the nearly 175 cases with one resolution depicted above. Multiple modification or enforcement requests likely indicate study participants were dissatisfied with their dispositive court orders, making them less durable.

## Appendix C: Additional Details of Case Events by Case Type

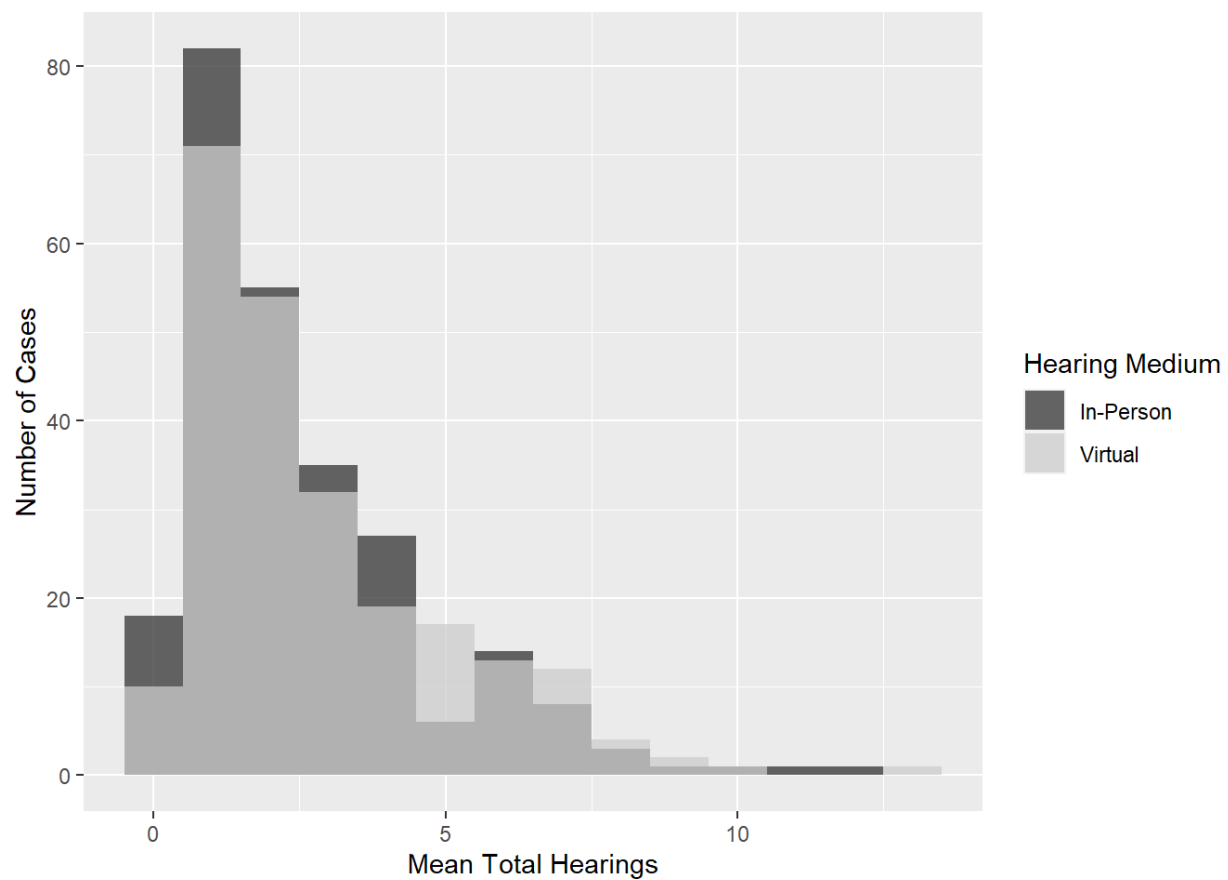
Figure 19: Mean Total Hearings by Case Type Within the Follow-Up Period



*The means did not significantly differ by case type. The assigned medium did not affect the number of hearings for each case, even when we consider the nuances within the case types. However, non-compliance rates are high muddying the water of these results. Number of hearings is likely affected by complexity of the case, buttressed by emotions. When considering this hypothesis, those factors will exist regardless of the medium in which litigants appear and the medium should not dampen or ignite those factors in any consistently meaningful way among all litigants. In that sense, when the medium is the explaining factor for increased hearings, it is likely anecdotal and random.*

When we review the distribution of hearings within the assigned medium, most cases had less than ten hearings, but a small number had large numbers of hearings. (See, Figure 20 **Error! Reference source not found.**, for a depiction of the mean number of hearings by amount of cases within assigned study conditions).

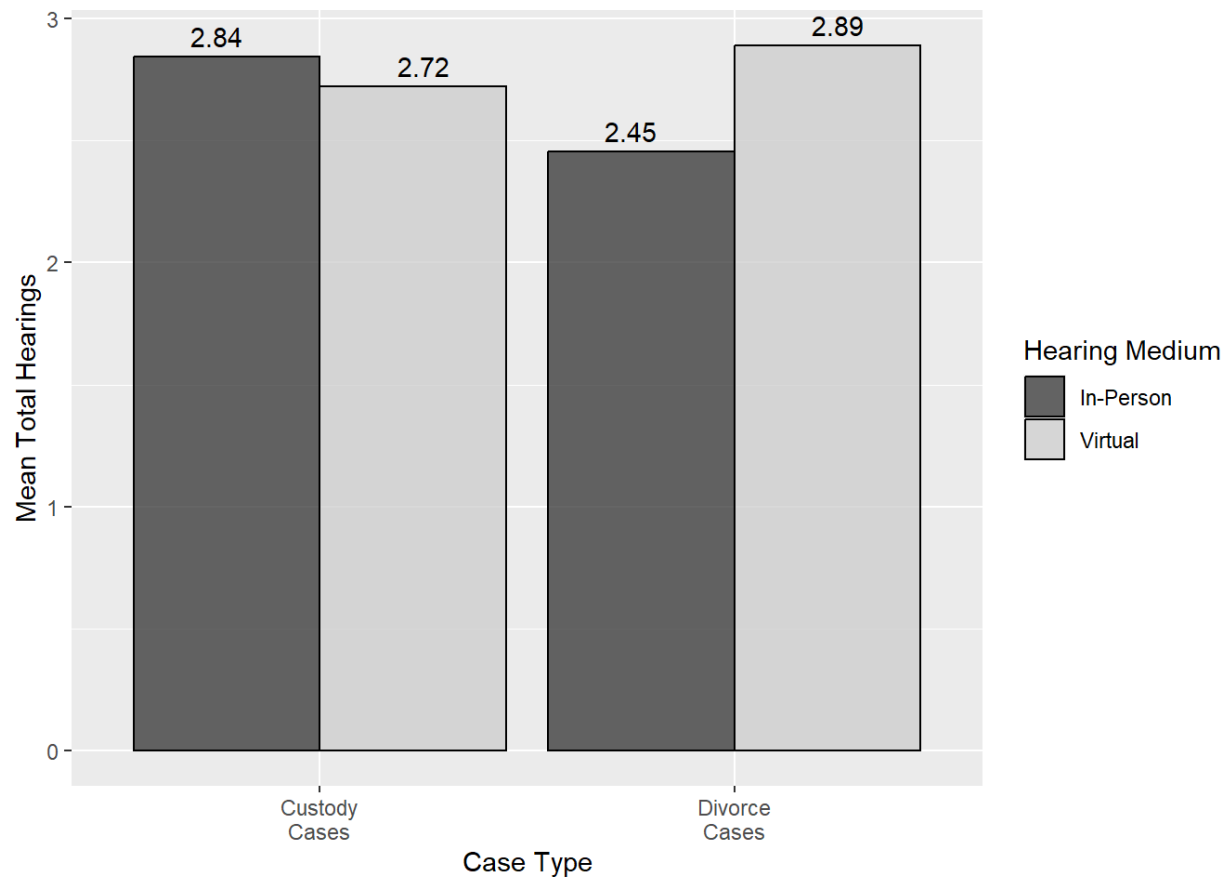
Figure 20: Distribution of Cases by Mean Total Hearings and Assigned Study Condition Within the Follow-Up Period



*Many cases had zero hearings within the follow-up period. There is one outlier with 13 hearings. The assigned medium does not change this distribution. Interpret results with caution because noncompliance rates are high.*

Putting this all together, total hearings by conditions is displayed here. (See, Figure 21: Total Hearings by Hearing Type and Study Condition).

Figure 21: Total Hearings by Hearing Type and Study Condition



*The assigned conditions were not significantly different within custody ( $P = 0.744$ ) or divorce ( $P = 0.064$ ) cases. There was also no significant difference between case types ( $P = 0.607$ ).*

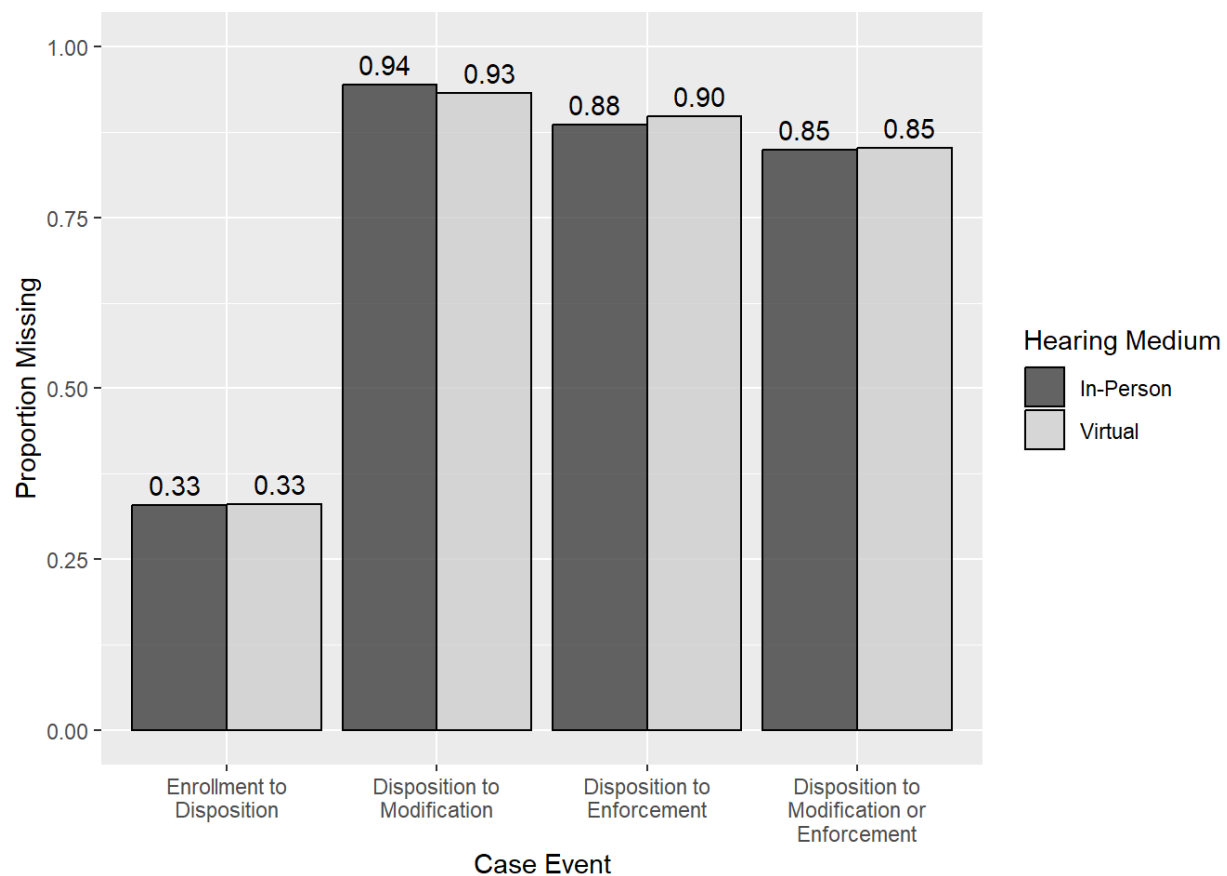
## Appendix D: Additional Details of Time between Case Events

This includes the time between the initial filing of the case and its initial resolution; the time between the initial resolution and the first enforcement or modification request; and the time between an enforcement or modification request and its resolution. For the final item, only data for the first enforcement or modification, if any exist, is presented. All these variables were continuous numeric variables in the form of numbers of weeks.

Missingness is analyzed first. (See,

Figure 22: Proportion of Cases Missing a Case Event by Hearing Medium Within the Follow-Up Period, for a depiction when an event in one of the categories listed above was missing in the dataset).

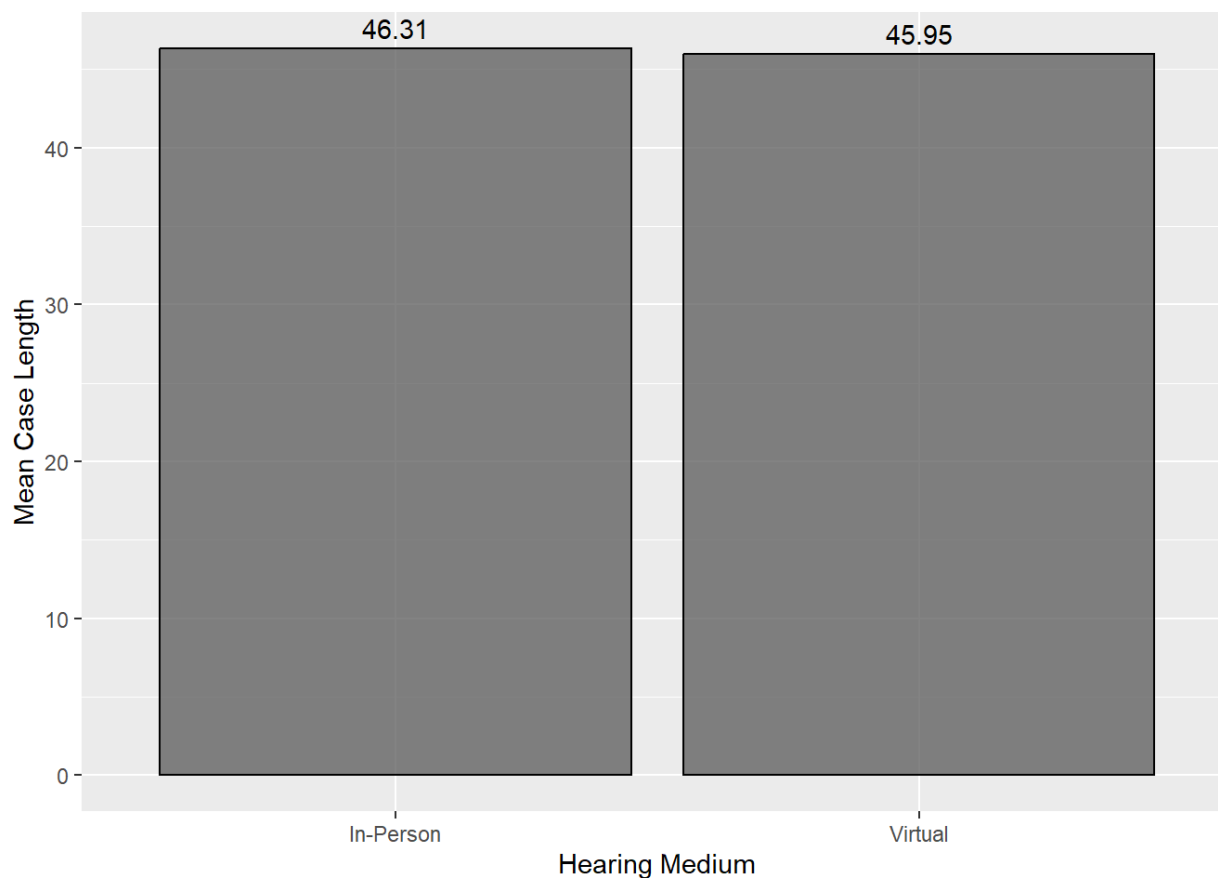
Figure 22: Proportion of Cases Missing a Case Event by Hearing Medium Within the Follow-Up Period



*Note these variables (the time between case events) were missing if either of the relevant dates was missing. When a relevant date was missing, researchers interpreted that to mean the event did not occur during the period of time in which they reviewed the case information. For example, if a case did not reach resolution during the follow-up period, it appeared as missing in the “Initiation to Resolution” category. Similarly, if a party never filed a modification request in a case during the follow-up period, that case appeared as missing in the “Resolution to Modification” category. Researchers expected to see higher missingness in the resolution to modification, resolution to enforcement, or the pooled resolution to modification or enforcement. This is because they did not expect all cases would include a request to modify or enforce. Researchers considered orders more durable when these events did not exist. It was rare for cases to have more than one resolution. Missingness was not different across assigned mediums and most cases reached resolution.*

The assigned hearing medium did not change how long cases took to dispose. However, because of high noncompliance, readers should interpret this result with caution. (See, Figure 23: Case Length Within Follow-Up Period, for a depiction of the length of time between study enrollment and case resolution within the follow-up period).

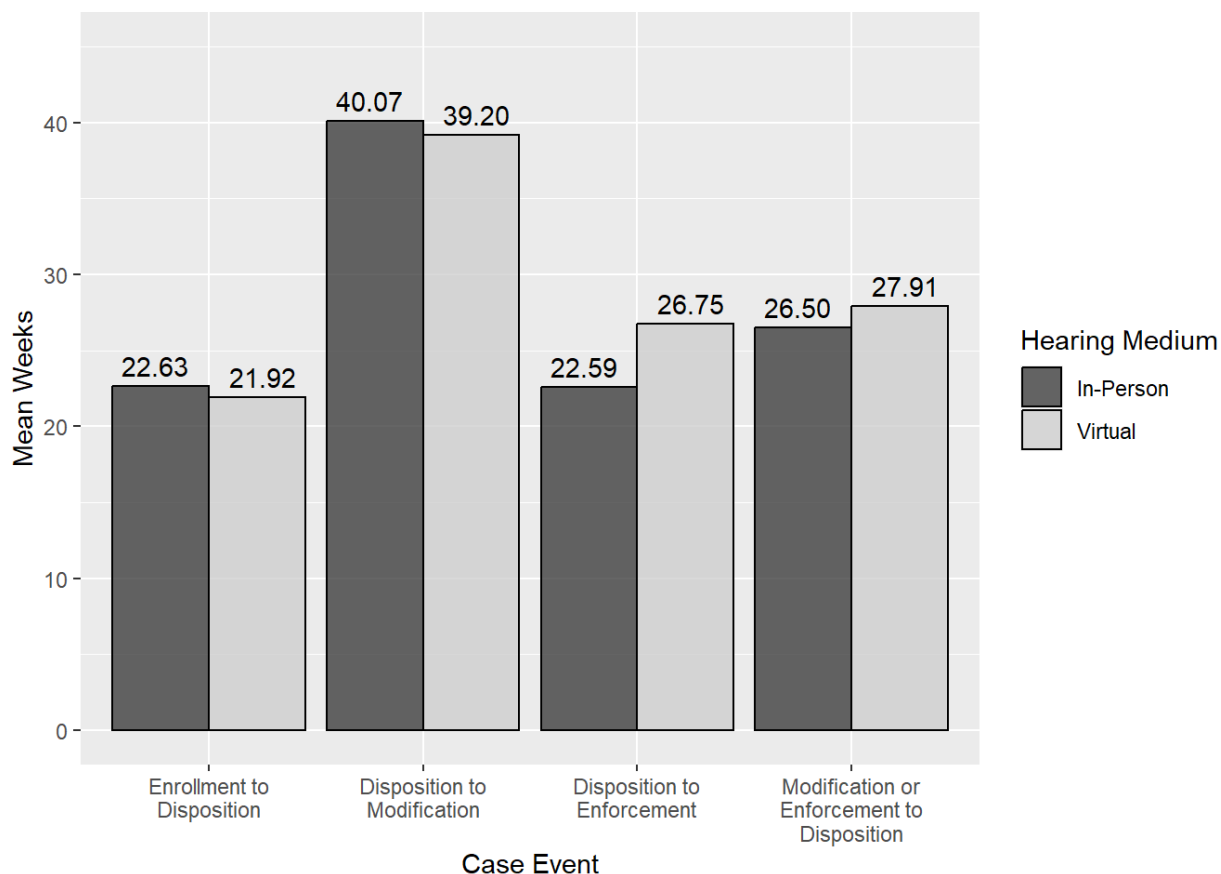
Figure 23: Case Length Within Follow-Up Period



*This figure shows the mean number of weeks between study enrollment and case resolution. The assigned groups did not significantly differ ( $P = 0.907$ ). Cases assigned to virtual hearings took on average 0.37 more weeks to be disposed (95% CI of -6.67 to 6.45). Recall participants enrolled when the case activated during the study enrollment period. This means study participants enrolled with cases in different postures. Many participants enrolled after their initial resolution but at a time when they needed subsequent judicial attention to resolve an issue, such as an enforcement or modification request. In that instance, researchers measured time to resolution as the time between the event resulting in study enrollment and the resolution of that event so that they could assess the impact of the assigned medium on that time to resolution. Measuring time from filing to initial resolution may give us an idea of complexity of the case. Results may not be useful for measuring effect of medium due to high noncompliance rates.*

Mean time between relevant case events is analyzed next. (See, Figure 24: Mean Number of Weeks Between Case Events by Study Condition Within the Follow-Up Period, to see length of time between case events within the follow-up period broken down by assigned study condition).

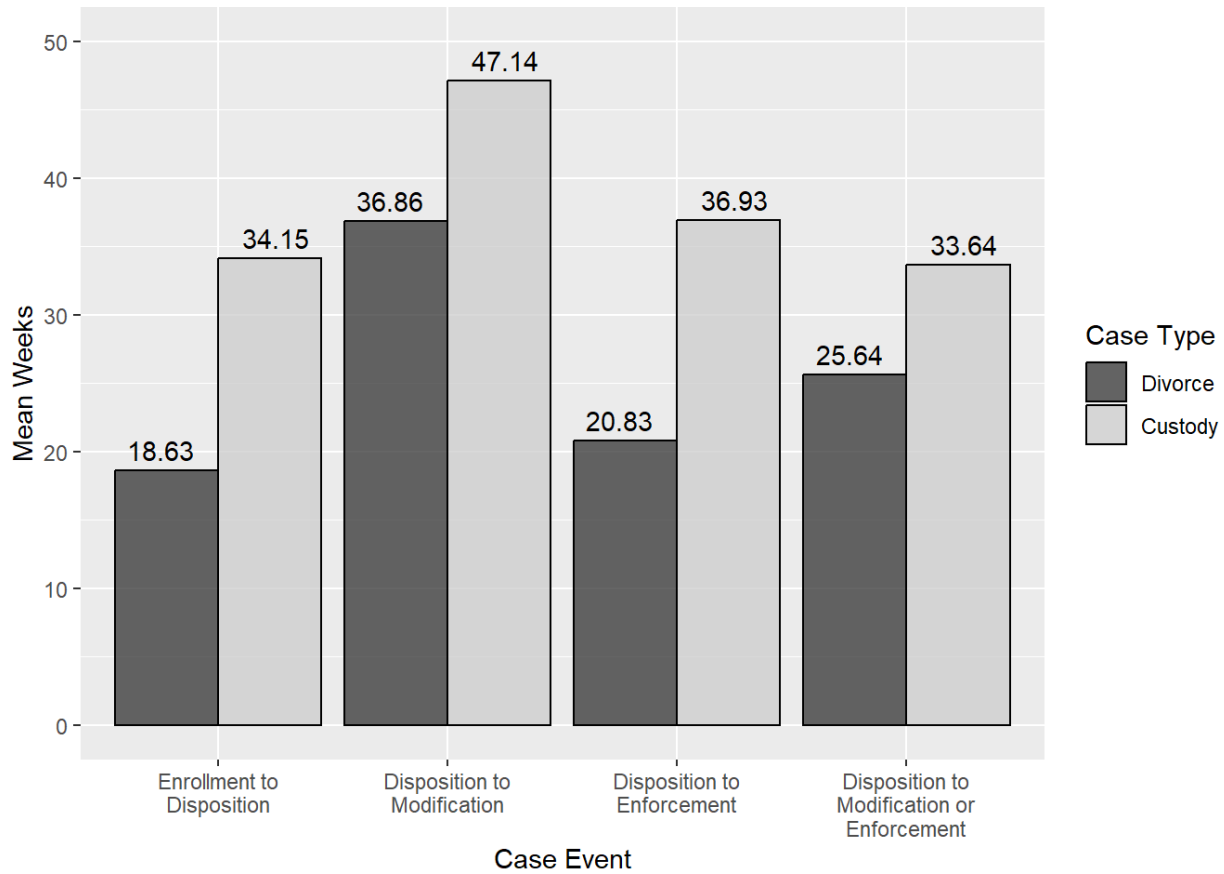
Figure 24: Mean Number of Weeks Between Case Events by Study Condition Within the Follow-Up Period



*This figure shows that the assigned medium did not change the length of time for the case on the whole nor did it change the length of time between events. However, high noncompliance rates means that many cases did not proceed in the assigned medium meaning analysis for assigned medium may not translate to actual medium. The assigned medium seemed to provide no relative gains for time to resolution for courts. There were no significant differences between assigned conditions for any of the defined periods ( $P$  time from initiation to resolution = 0.771,  $P$  time from resolution to modification = 0.914,  $P$  time from resolution to enforcement = 0.518,  $P$  time from resolution to either a modification or enforcement = 0.792). For the time from enrollment to resolution, cases assigned to virtual hearings took on average 0.72 fewer weeks to be disposed (95% CI of -5.60 to 4.51). For the time from resolution to modification, cases assigned to virtual hearings took on average 0.88 fewer weeks to be modified (95% CI of -17.18 to 17.15). For the time from resolution to enforcement, cases assigned to virtual hearings took on average 4.16 more weeks to be enforced (95% CI of -7.98 to 16.84). For the time from resolution to modification or enforcement, cases assigned to virtual hearings took on average 1.4 more weeks to be modified or enforced (95% CI of -8.85 to 12.22).*

If analyzed by case type, rather than assigned medium, time to initial resolution in custody cases was longer, but orders were more durable. (See, Figure 25: Mean Number of Weeks Between Case Events by Case Type Within the Follow-Up Period, for a depiction of length of time between events broken down by case type during the follow-up period).

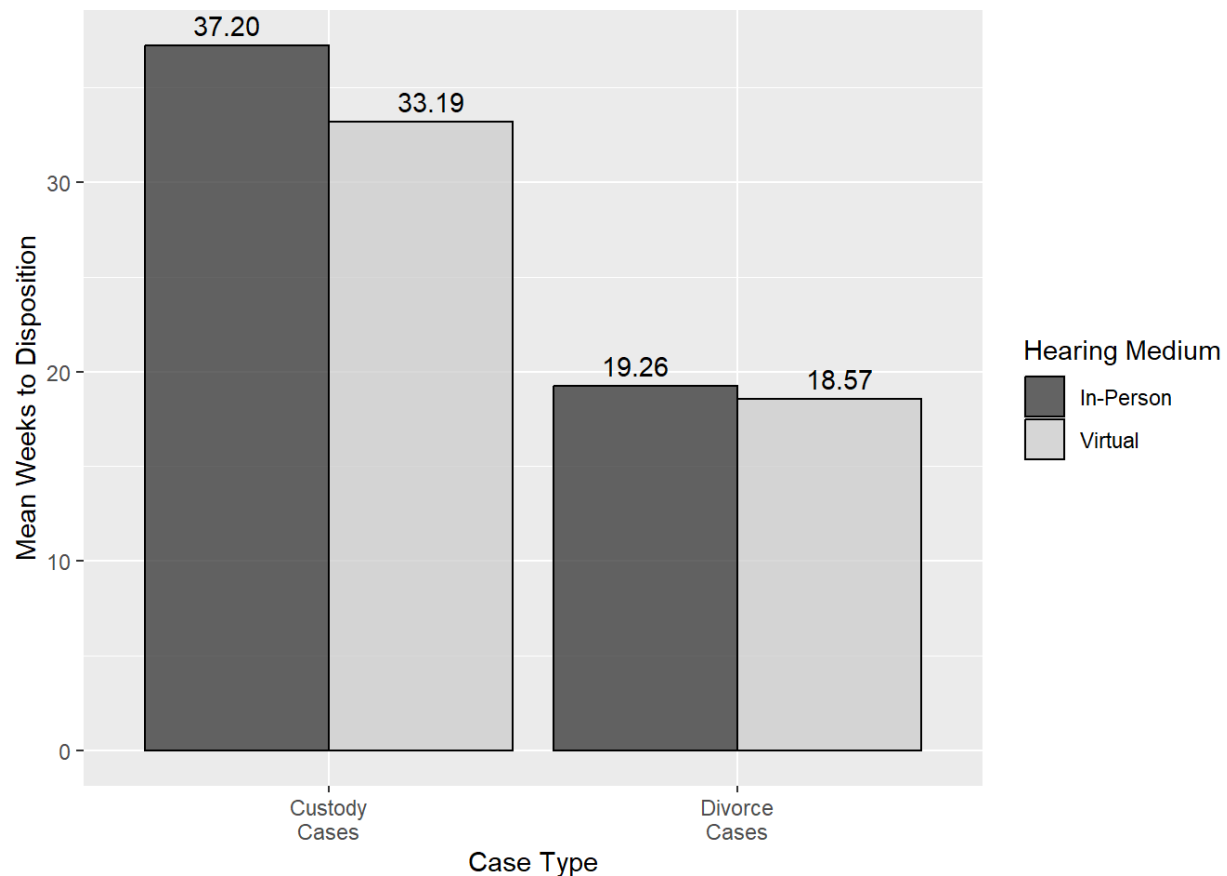
Figure 25: Mean Number of Weeks Between Case Events by Case Type Within the Follow-Up Period



*This figure shows custody cases took longer than divorce cases. The time between initiation and resolution was significantly longer for custody cases as compared to divorce cases. The same is true for time between resolution and enforcement in custody matters. No other differences were significant. These two figures together show us that assigned medium did not affect length of time, but case type may. Regardless of the medium a litigant was assigned to appear, judges would find custody cases linger on their dockets longer before a resolution and also take longer to reactivate. Judges may wish to investigate mitigation methods to reduce the time to resolution. For the time from enrollment to resolution, custody cases took on average 15.52 more weeks to be disposed (95% CI of 9.03 to 21.63). For the time from resolution to modification, custody cases took on average 10.28 more weeks to be modified (95% CI of -12.62 to 31.06). For the time from resolution to enforcement, custody cases took on average 16.01 more weeks to be enforced (95% CI of 0.65 to 31.85). For the time from resolution to modification or enforcement, custody cases took on average 8.00 more weeks to be modified or enforced (95% CI of -6.46 to 22.35).*

Doing a combined analysis, divorce cases disposed quicker than custody cases, but assigned medium did not affect the length of time. (See, Figure 26: Time to Resolution by Case Type and Study Condition Within the Follow-Up Period, for a depiction of this point).

Figure 26: Time to Resolution by Case Type and Study Condition Within the Follow-Up Period



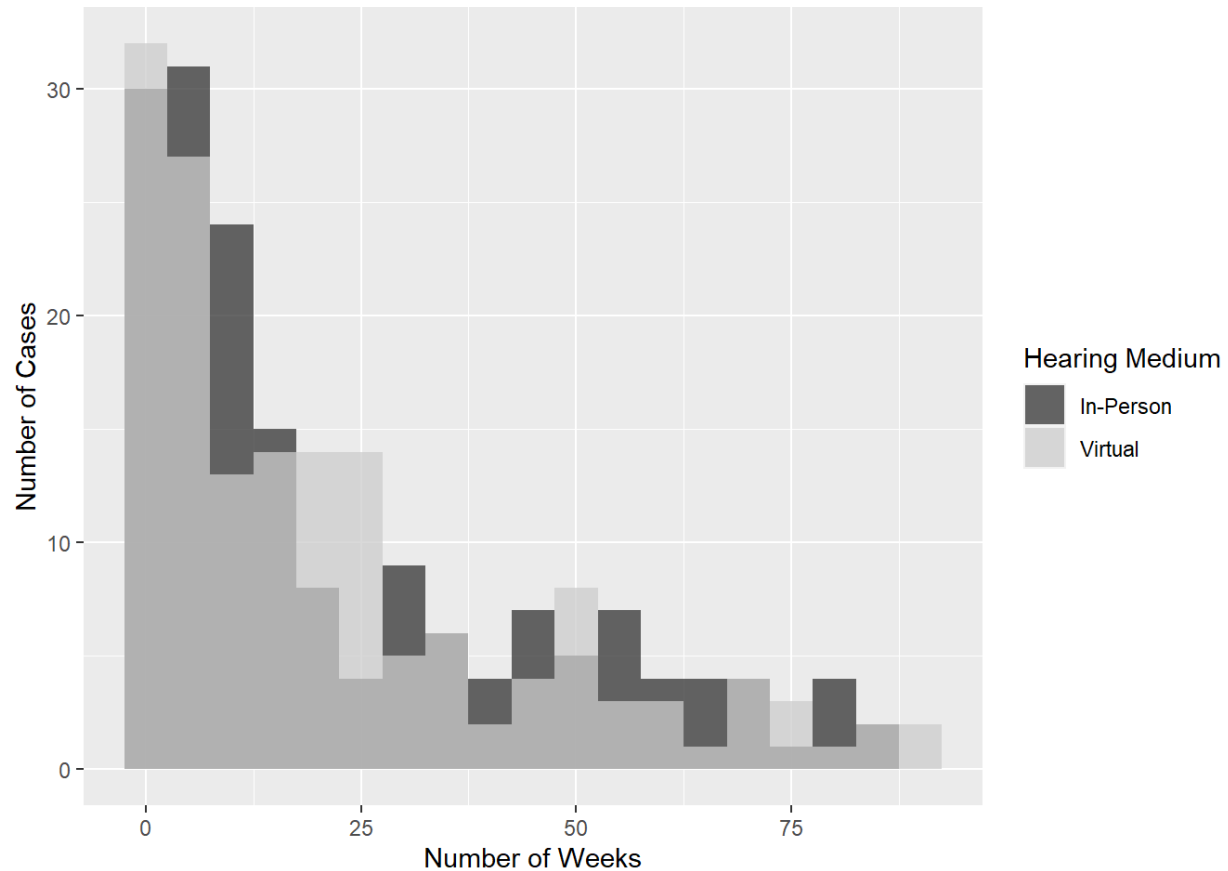
*Note that this analysis included only those cases that disposed. The assigned conditions did not differ within custody ( $P = 0.516$ ) or divorce ( $P = 0.797$ ) cases. There was a significant difference between case types, however, with custody cases taking longer to be disposed ( $P < .001$ ). For custody cases, those assigned to virtual hearings took an average of 1.20 weeks fewer to be disposed (95% CI of -12.60 to 12.01). For divorce cases, those assigned to virtual hearings took an average of 2.40 weeks more to be disposed (95% CI of -3.98 to 8.16). Comparing by case type, divorce cases took an average of 16 weeks fewer to be disposed (95% CI of -3.15 to 7.64).*

The assigned medium did not change time to resolution. Case type may. Reading the above figures together, despite the statistically significant difference in time to resolution between divorce and custody cases, the assigned medium did not affect this difference. In other words, divorce cases took the same amount of time whether study participants were assigned to appear remotely or in person, and custody cases took the same amount of time whether study participants were assigned to appear remotely or in person. For both case types, that amount of time was lengthy. But divorce cases took less time overall than custody cases. Because noncompliance with assigned conditions was high, readers should interpret results regarding medium with caution.

Looking at the distribution of time to resolution, the assigned mediums are similar. (See, Figure 27: Distribution of Time to Resolution by Number of Weeks and Study Condition Within the

Follow-Up Period, for a depiction of the distribution of time to resolution and total length of case by study medium within the follow-up period).

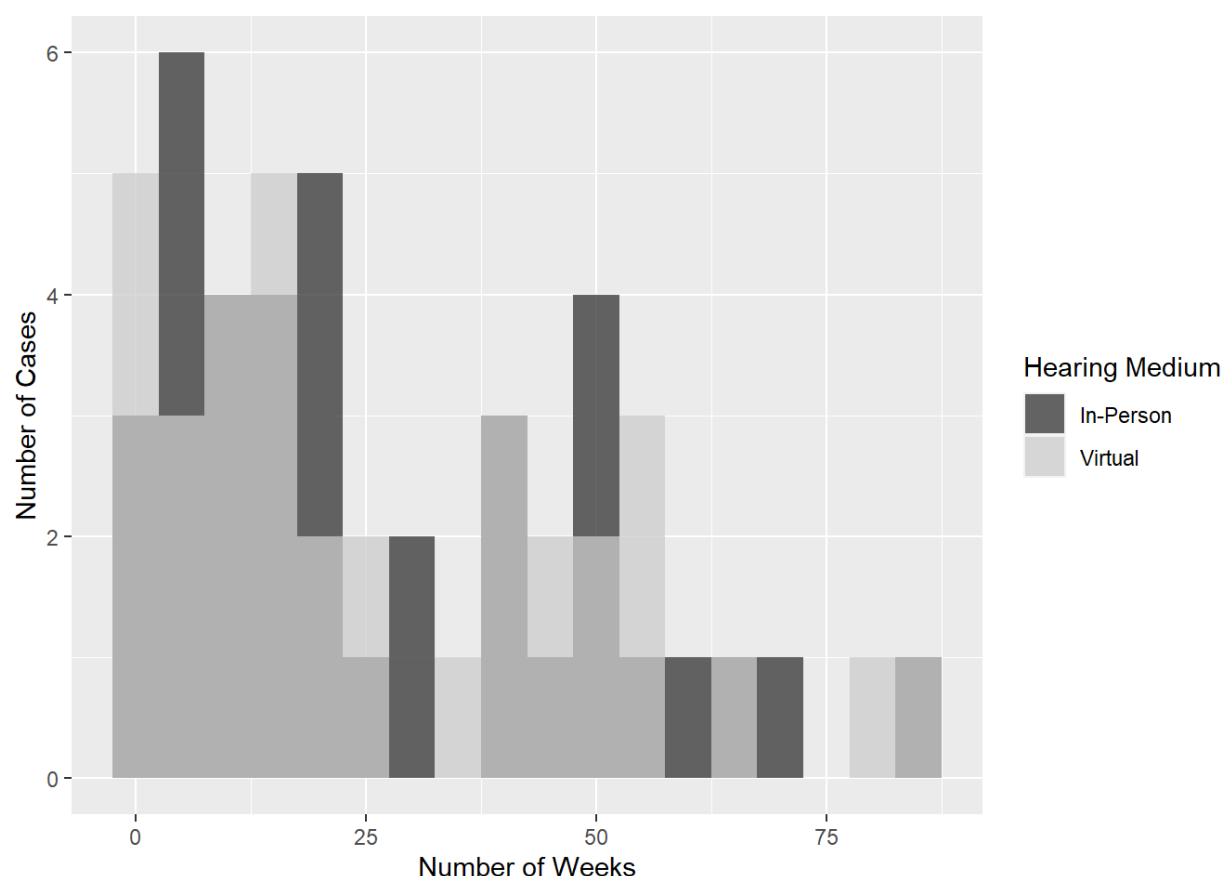
Figure 27: Distribution of Time to Resolution by Number of Weeks and Study Condition Within the Follow-Up Period



*Many cases did not reach resolution during the data collection period. Those that did mostly resolved within 90 weeks. Such was true both for cases in which study participants were assigned to appear virtually and for cases in which study participants were assigned to appear in person.*

Similarly, there was no evidence that assigned hearing medium affected durability of court order. (See, Figure 28: Distribution of Durability of Court Order by Number of Weeks and Assigned Study Condition Within Follow-Up Period).

Figure 28: Distribution of Durability of Court Order by Number of Weeks and Assigned Study Condition Within Follow-Up Period<sup>64</sup>



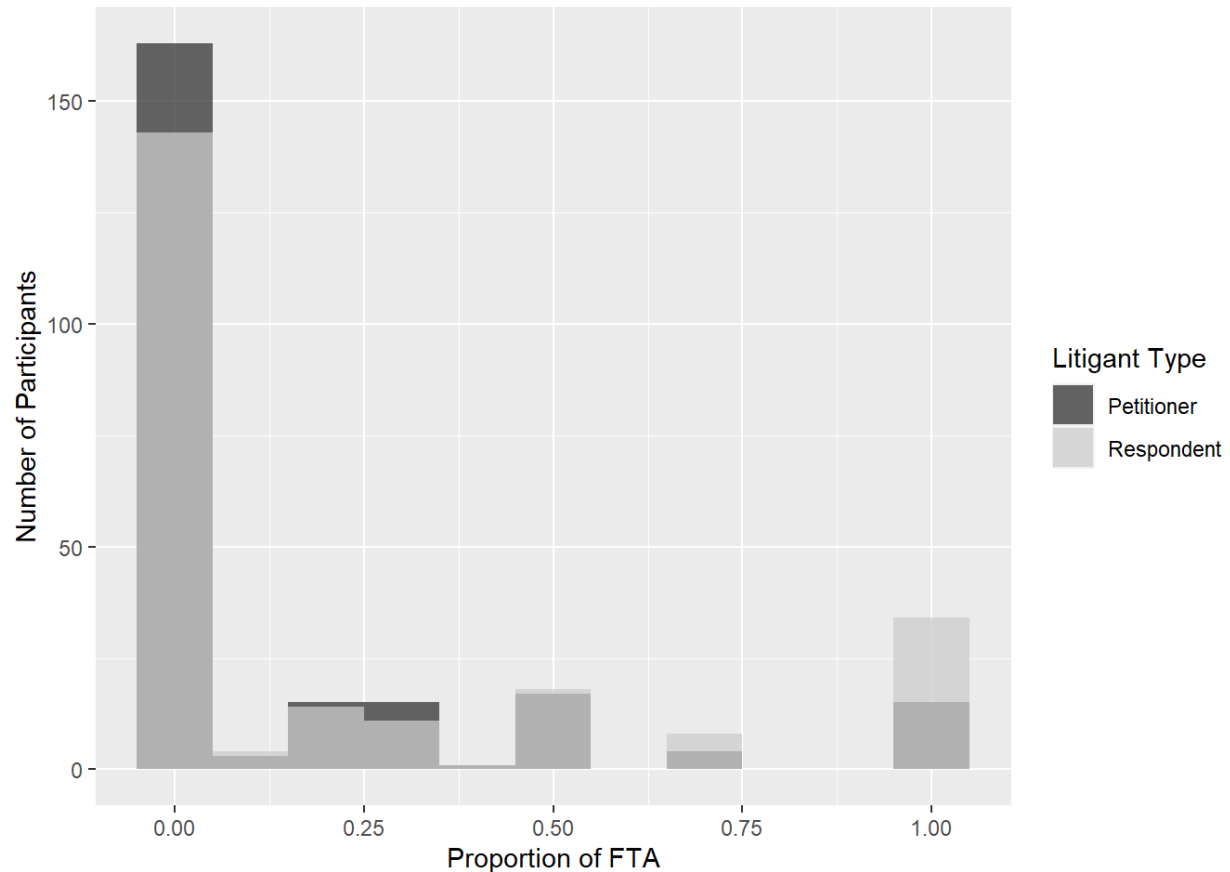
*This figure displays the number of weeks between resolution and the first modification or enforcement request by assigned hearing medium and within the follow-up period. Many cases did not request a modification or enforcement during the data collection period, but for those that did, they were relatively evenly distributed among assigned hearing mediums. The assigned hearing medium did not affect whether a study participant made a modification or enforcement request, nor did it affect how long it took to dispose of that request. Durability of court order was not affected by assigned hearing medium. Because noncompliance rates were high, researchers cannot confirm these results remain constant with respect to actual medium.*

<sup>64</sup> Individual graphs displaying durability of court order by modification and by enforcement requests are available upon request. We do not include them here as duplicative.

## Appendix E: Additional Details of FTAs by Assigned Study Condition

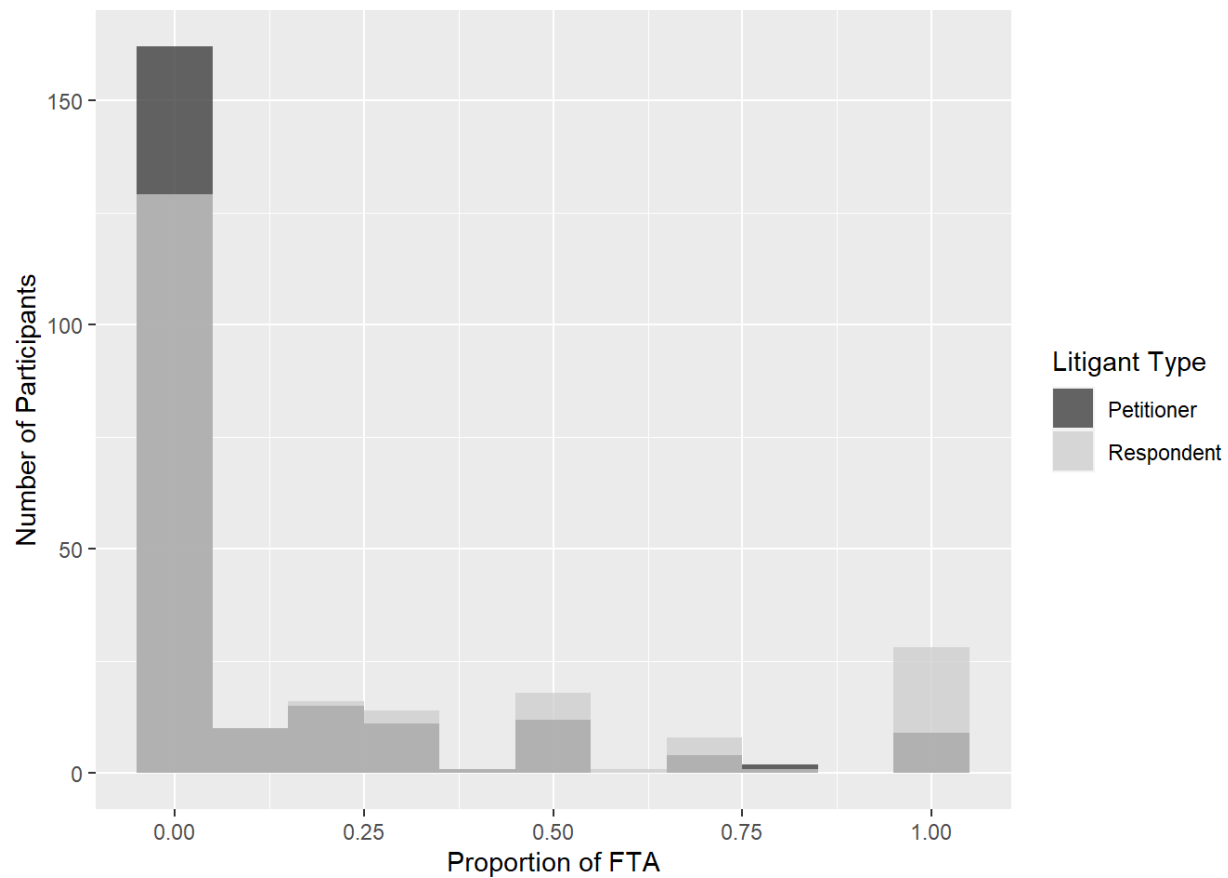
The distribution of FTA by assigned study condition shows that the majority of participants attended all of their hearings. (See, Figure 29: Distribution of Participants Assigned to Appear In Person by Proportion of FTA Within the Follow-Up Period, and Figure 30: Distribution of Participants Assigned to Appear Virtually by Proportion of FTA Within the Follow-Up Period).

Figure 29: Distribution of Participants Assigned to Appear In Person by Proportion of FTA Within the Follow-Up Period



*Most study participants assigned to appear in person did not FTA. But, noncompliance rates were high meaning this result may not hold true for actual medium used.*

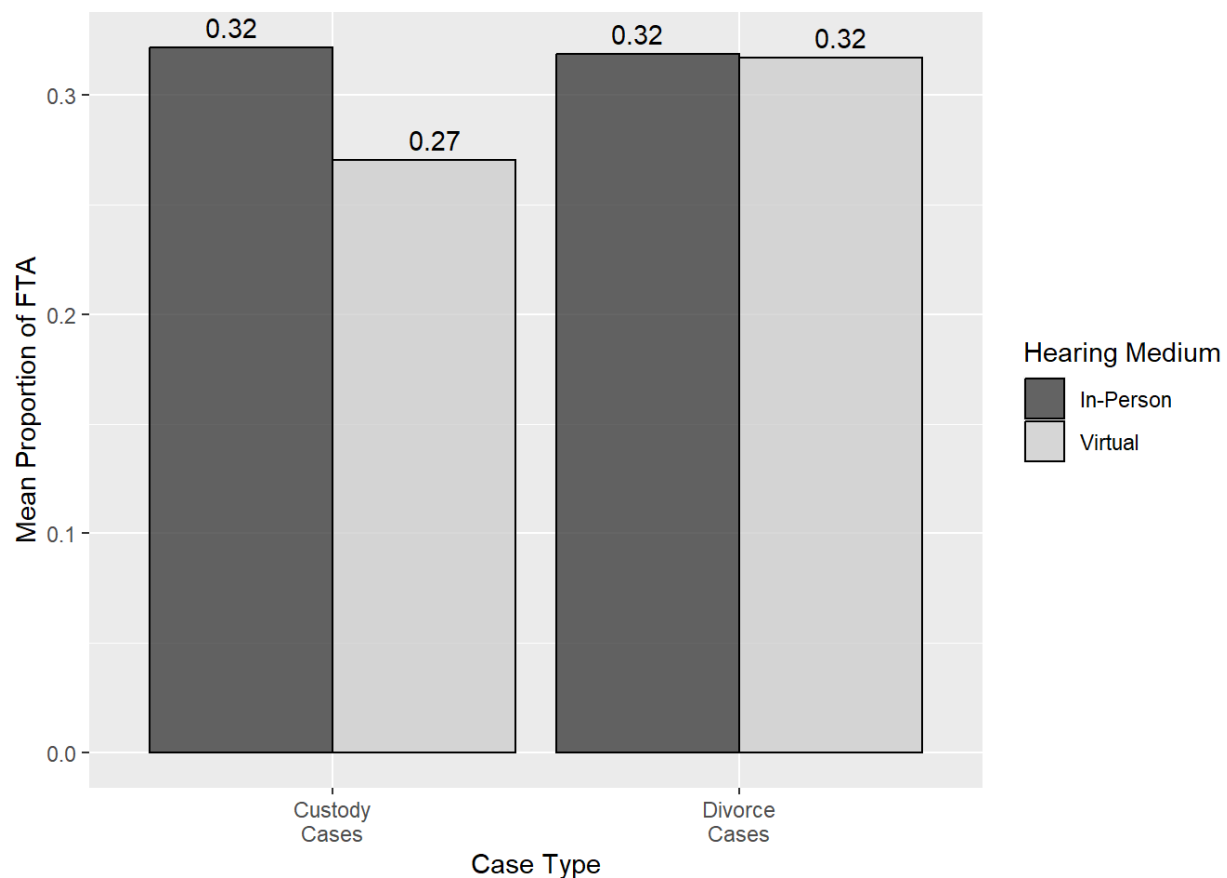
Figure 30: Distribution of Participants Assigned to Appear Virtually by Proportion of FTA Within the Follow-Up Period



*As with those assigned to appear in person, this figure shows that those assigned to appear virtually, for the most part, did not FTA. But, the same caution regarding noncompliance rates exists here as well. These figures display that most individuals appeared at all of their hearings. However, there is a notable subgroup that appeared at none of their hearings. The assigned medium did not affect whether or not a study participant appeared at their scheduled court events, but actual medium may, we do not know.*

The next figures shows the analysis of this outcome by case type to see if assigned medium made a difference in FTA rates based on case type. The result did not change. (See, Figure 31: Mean Proportion of FTA by Case Type Within Follow-Up Period).

Figure 31: Mean Proportion of FTA by Case Type Within Follow-Up Period

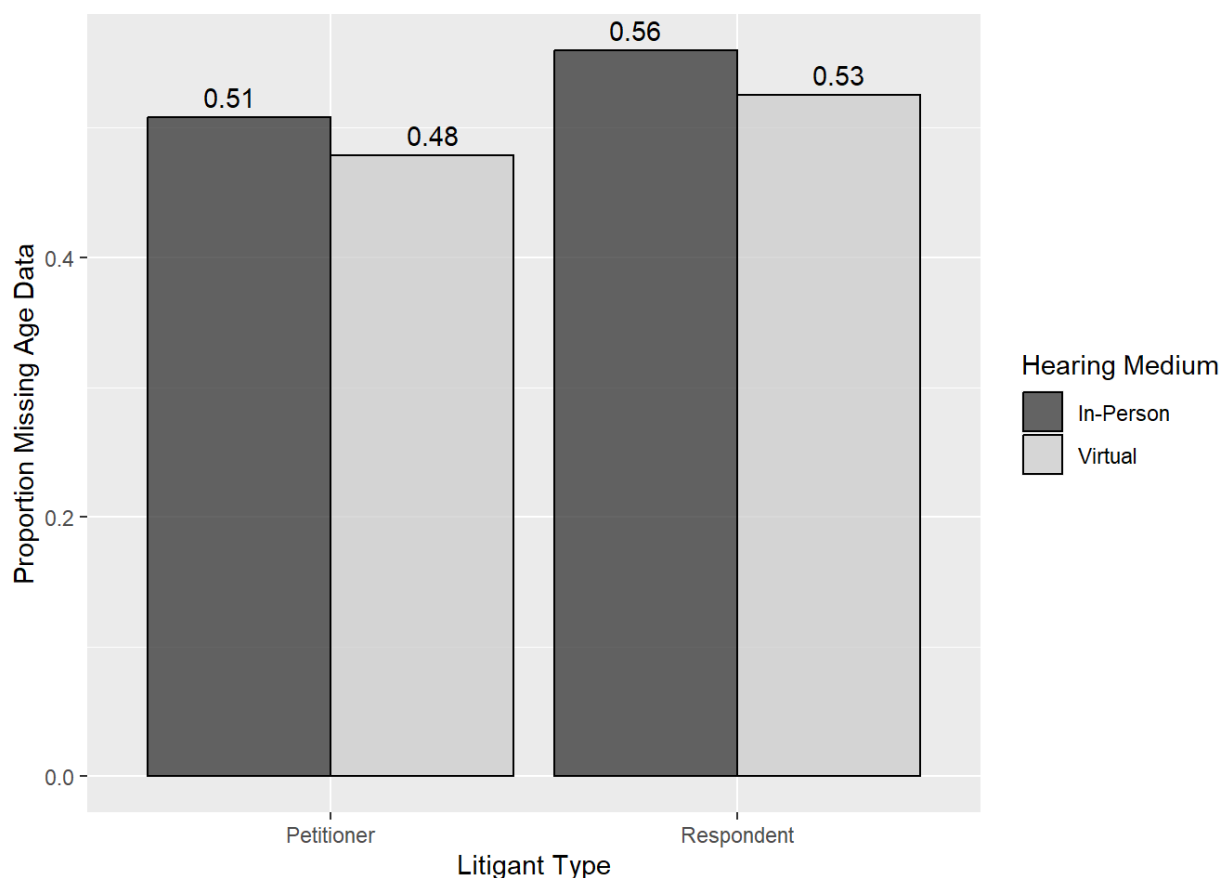


*The outcome remained constant. The assigned conditions were not significantly different within custody ( $P = 0.435$ ) or divorce ( $P = 0.917$ ) cases. There was also no significant difference between case types ( $P = .553$ ). For custody cases, in cases assigned to virtual hearings the proportion of hearings where either litigant failed to appear was 0.05 percentage points lower than in cases assigned to in person hearings (95% CI of -0.18 to 0.08). For divorce cases, in cases assigned to virtual hearings the proportion of hearings where either litigant failed to appear was 0 percentage points higher than in cases assigned to in person hearings (95% CI of -0.08 to 0.08). All results regarding assigned medium cannot be causal for actual medium because of high noncompliance rates. Comparing by case type, in divorce cases the proportion of hearings where either litigant failed to appear was 0.02 percentage points higher than in custody cases (95% CI of -0.10 to 0.05). Note, graphs display the proportion of hearings for which there was an FTA for either party.*

## Appendix F: Covariate Detail

Court records did not include age for roughly half of participants. Researchers treated age missingness as a covariate and assessed whether its incidence differed by assigned treatment condition. There was no statistically significant difference. (See Figure 32: Age Data Missingness, to see the proportion of cases missing age data broken down by study condition).

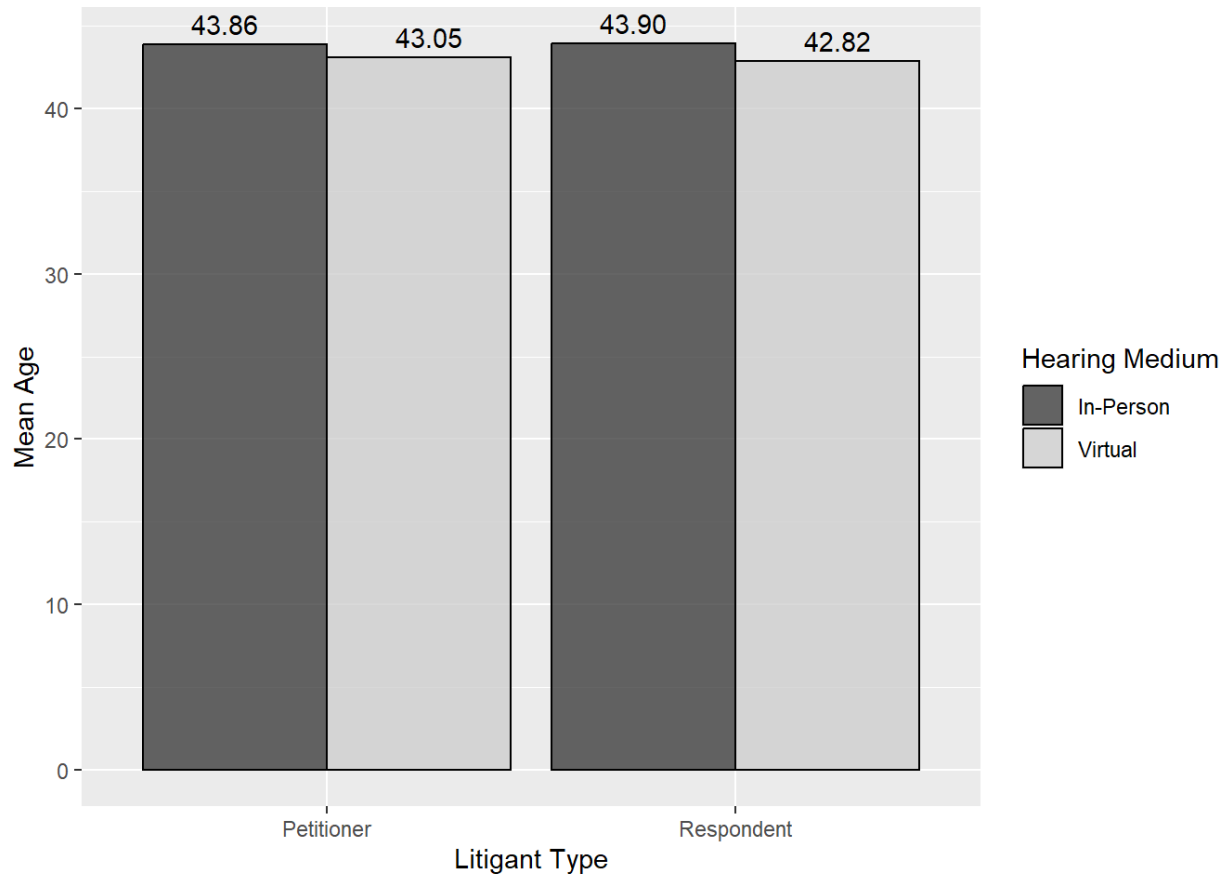
Figure 32: Age Data Missingness



*This figure shows the frequency of missing age data for each party type across assigned study conditions. For clarity, petitioners are the filing party in a family law matter. Petitioner and respondent designation can change throughout the life of a family law case as each party may be the filing party for any given issue brought to the court. For study purposes, researchers assigned a party as the petitioner based on the filing that caused enrollment in the study. Missingness of petitioner age and missingness of respondent age do not differ by hearing type ( $p$  petitioner age missingness = 0.542,  $p$  respondent age missingness = 0.477).*

When age data were available, there were no statistically significant differences across assigned study condition. (See, Figure 33: Mean Age of Study Participants by Study Condition, for a depiction of the balanced sample on age when it existed).

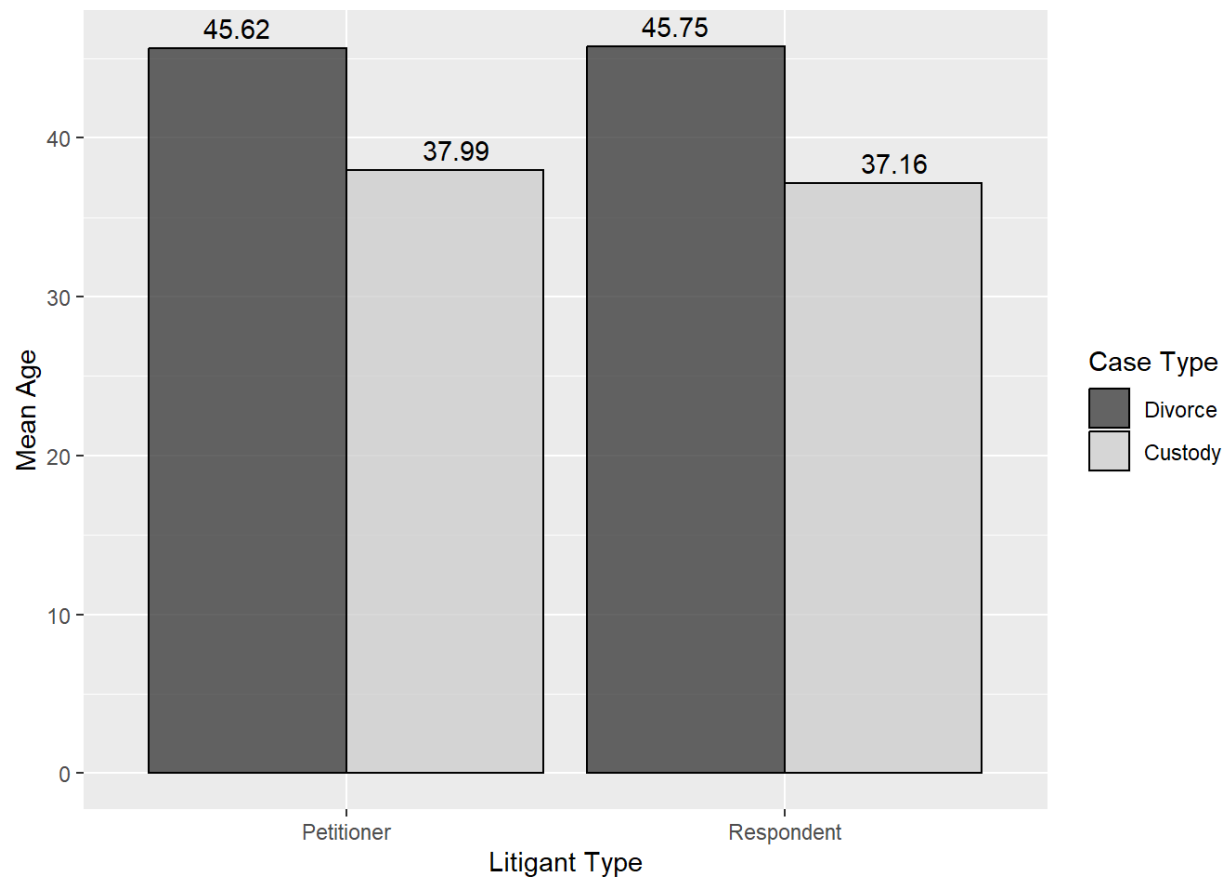
Figure 33: Mean Age of Study Participants by Study Condition



*Mean age was similar across petitioners and respondents and for both when assigned to in person and virtual hearings ( $P$  petitioner = 0.522,  $P$  respondent = 0.385).*

To understand the study population better, the A2J Lab separated age by case type (divorce versus custody) and by litigant posture (petitioner versus respondent). These comparisons are not useful to assess balance but do provide a greater understanding of the study population. On average, participants were on the younger side of middle age, with divorce participants almost a decade older than custody litigants. Average ages of petitioners and respondents were almost identical. (See, Figure 34: Mean Age of Study Participants by Case Type, for a depiction of the difference in age of study participants across case types).

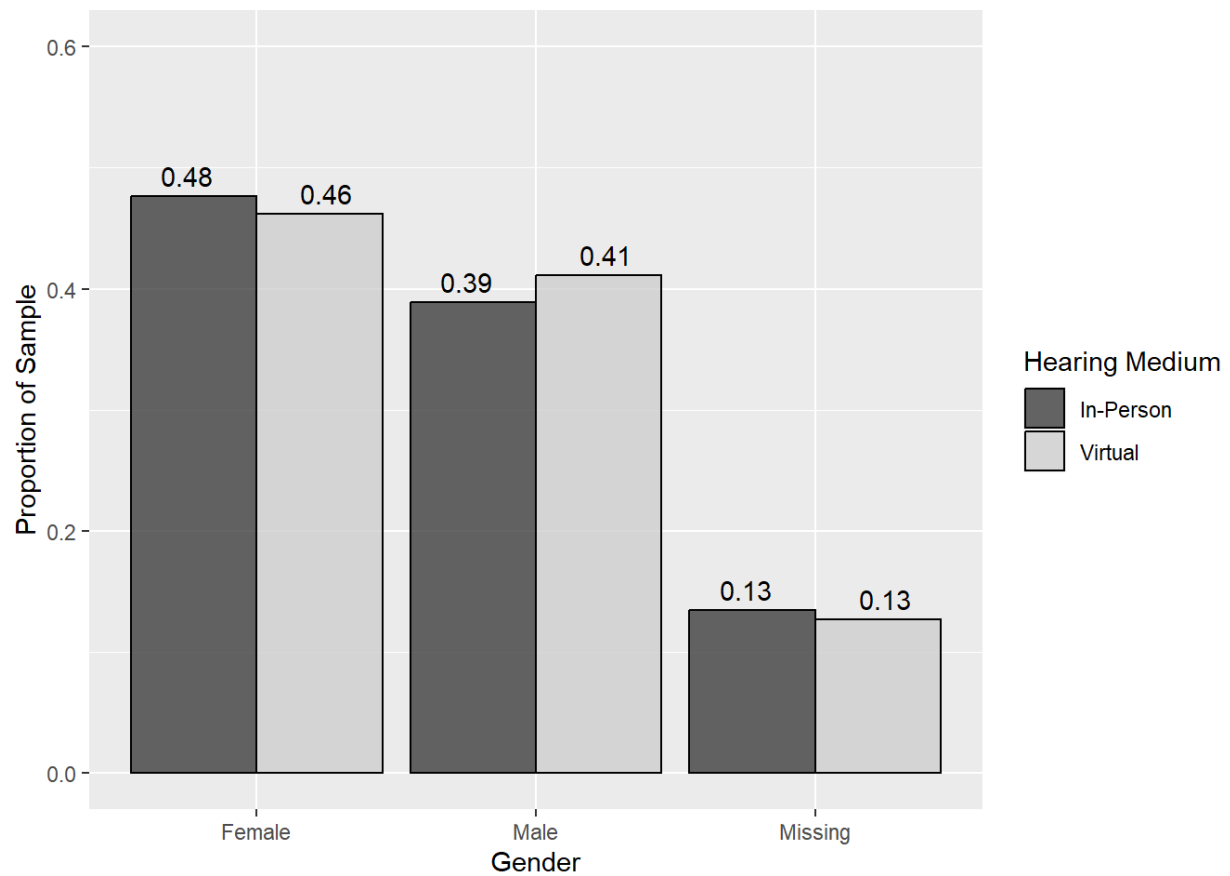
Figure 34: Mean Age of Study Participants by Case Type



*Mean age was lower for both petitioners and respondents in custody cases. Divorcing couples tended to be nearing middle age while parents resolving custody disputes in the court system tended to be younger. Most participants fell within a twenty-year age distribution.*

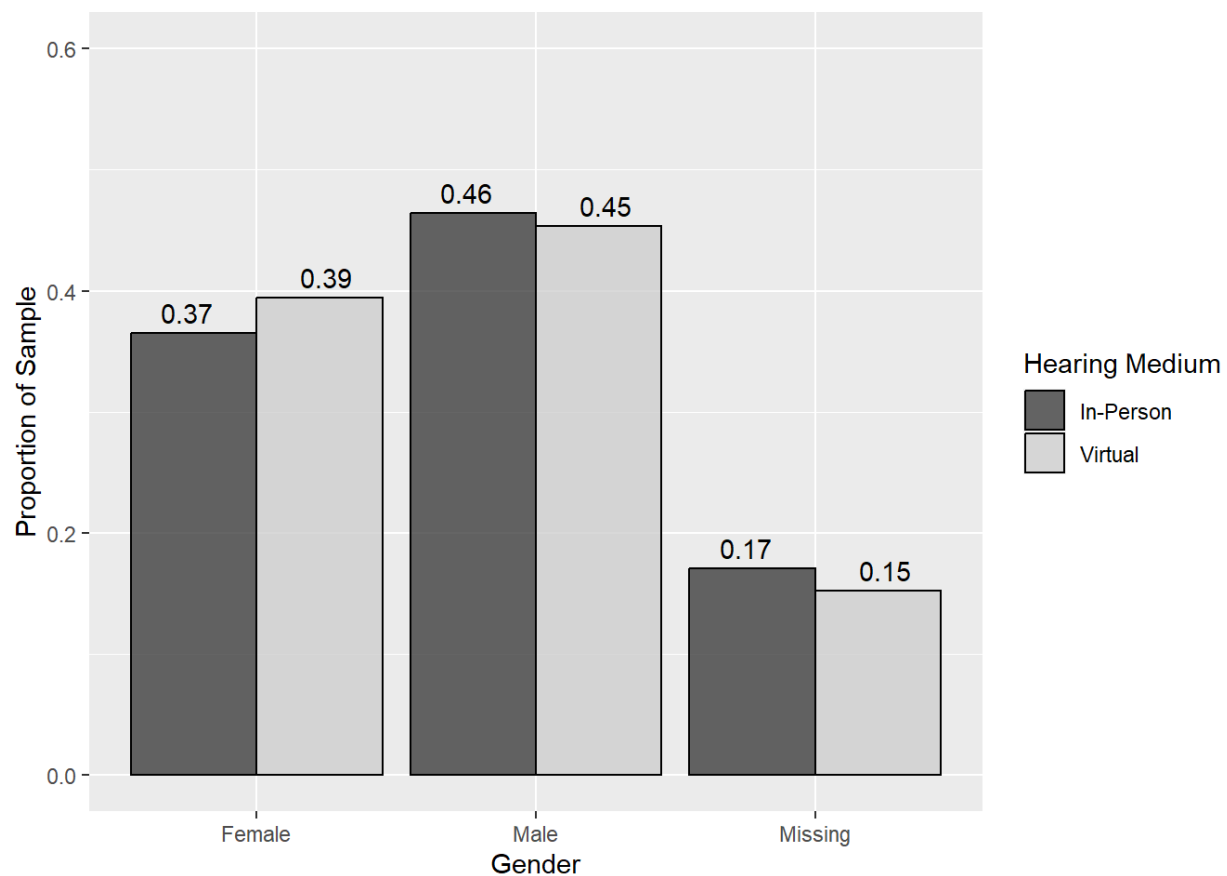
Gender information was not available in the data. The Lab imputed gender using R's `predictrace` package. This package assigns a binary gender based on the probability of the individual's given name being male or female, based on census data. The package is not sophisticated enough to assess other gender identities simply based on census data and name. The package was unable to impute gender for 10-15% of participants because given names did not appear in its census-based reference dataset. The Lab thus treated "missing" as a third gender. (See, Figure 35: Proportion of Petitioner Sample by Gender Across Study Conditions and Figure 36: Proportion of Respondent Sample by Gender Across Study Conditions, to see the results of this analysis).

Figure 35: Proportion of Petitioner Sample by Gender Across Study Conditions



*This figure shows gender balance in the sample among petitioners across assigned study conditions. The package could not assign a gender to about ten percent of the petitioner sample. Petitioner gender balance was similar across assigned randomization conditions ( $P = 0.694$ ).*

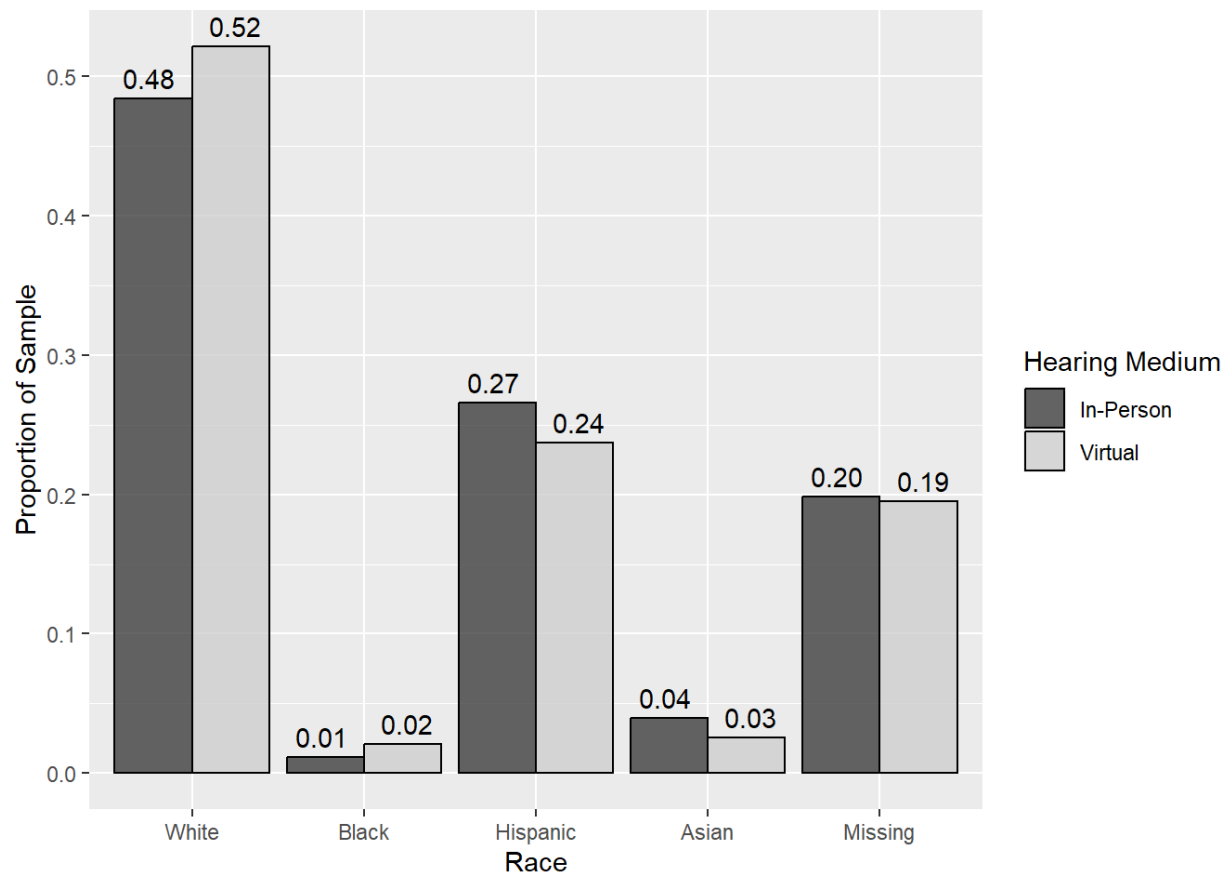
Figure 36: Proportion of Respondent Sample by Gender Across Study Conditions



*This figure shows gender balance in the sample among respondents across assigned study conditions. The package could not assign a gender to about fourteen percent of the respondent sample. Respondent gender balance was similar across assigned randomization conditions ( $P = 0.615$ ).*

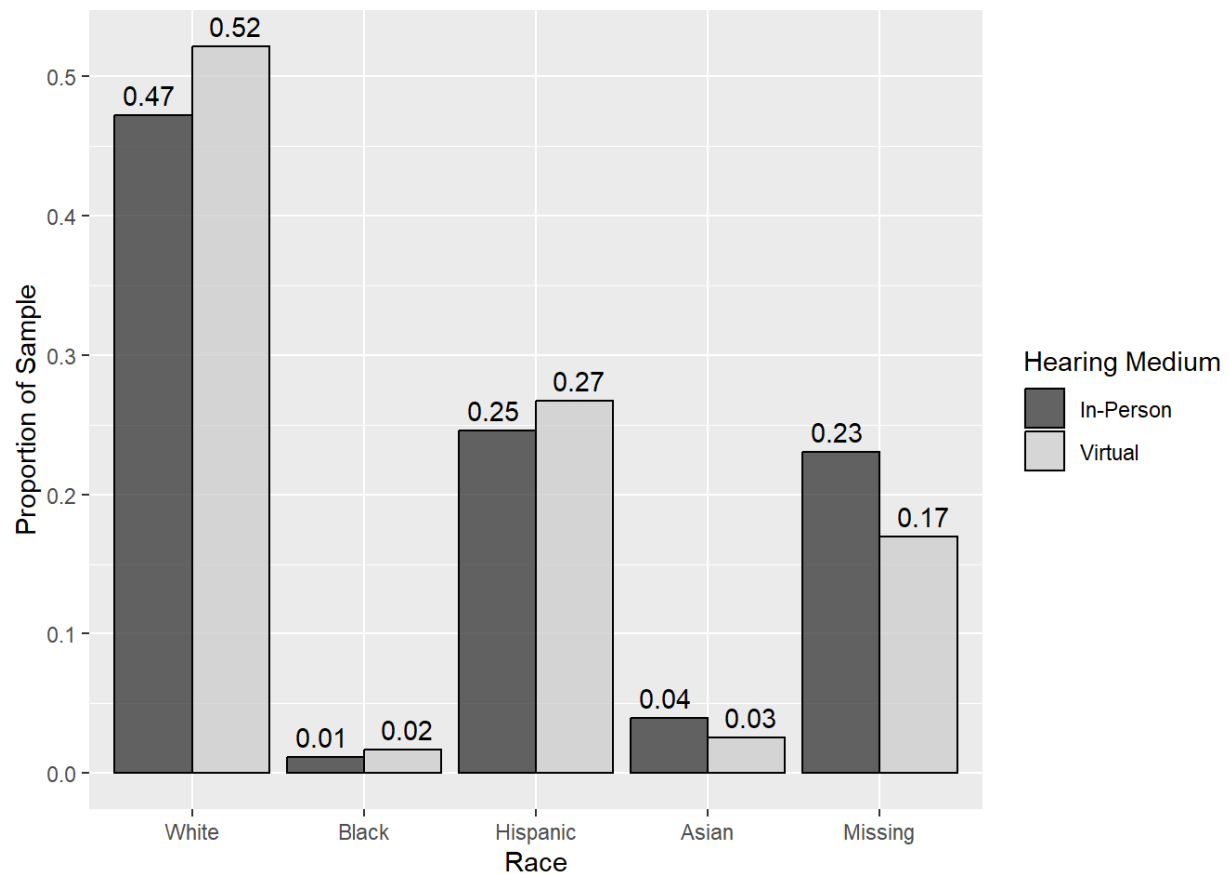
The predictrace package also imputes race, this time based on surname, subject to the same missingness issues. The names in the study population resulted in the package assigning only White, Black, Hispanic, and Asian races to petitioners and respondents. The package imputed a probability vector, and the Lab compared average composition across assigned treatment condition. (See, Figure 37: Proportion of Petitioner Sample by Race Across Assigned Study Conditions, and Figure 38: Proportion of Respondent Sample by Race Across Assigned Study Conditions for depictions of the racial make-up of the study sample across party type and assigned medium).

Figure 37: Proportion of Petitioner Sample by Race Across Assigned Study Conditions



*This figure depicts the racial make-up of the petitioner sample. The package could not assign a race to almost twenty percent of the petitioner sample, but this rate did not differ across assigned mediums. About half of the sample was White. Due to small category sizes for Black and Asian participants, the Lab assessed balance only based on White vs non-White, thus pooling the other three racial categories into one. The assigned conditions did not differ ( $P = 0.390$ ).*

Figure 38: Proportion of Respondent Sample by Race Across Assigned Study Conditions



*This figure depicts the racial make-up of the respondent sample. The package could not assign a race to almost twenty percent of the petitioner sample, but this rate did not differ across assigned mediums. About half of the sample was White. Due to small category sizes for Black and Asian participants, the Lab assessed balance only based on White vs non-White, thus pooling the other three racial categories into one. The assigned conditions did not differ ( $P = 0.839$ ).*