## How can ABA improve Efficiency and Accessibility?

In an effort to better achieve the overarching goal of the American Bar Association to provide equal legal services across the United States, we will be focusing on the efficiency and accessibility of ABA.

The efficiency questions we addressed were as follows: Are human resources used effectively? How can the resources be better allocated? How long does it take for lawyers to solve legal issues? Can we increase efficiency by pre-training the human resources about high-demand questions? Throughout the years measured in data, the relative frequency of the questions asked was the highest in the "Family and Children" category. In 2022, the Family and Children category accounts for about 40.6 percent of the whole category, while the second highest category accounted for 18%. Because the clients overwhelmingly ask the family and children issues, we closely examined the conversation per unique client under that category: What specific issues do the clients have? According to the Latent Dirichlet Allocation model (topic modeling method) and Keyword Extraction, the most often brought up topics were property and family law (topic 1) and child support and guardianship (topic 2). Thus, ABA may specifically focus on these topics when pre-training the volunteers and attorneys. Furthermore, we suggest creating a documentation or FAQ section on the website containing basic legal knowledge of those topics so that human resources may only have to focus on more complicated issues amidst increasing demands over time.

However, all categories could benefit from a more robust FAQ and alternative non-human resources such as chatbots. For conversations exceeding a certain threshold, it could be more efficient to recommend clients take on another program to speak directly with a lawyer. We made an equation that finds the "true time" of the conversation – the time between the attorney taking on the question and their last chat log – as opposed to the total time of the conversation, which may include the "dead time" which may lag on either end of the conversation. We found that the mean conversation length was 18.31 days, and the median conversation length hovered around 10.8 minutes. 58% of questions were resolved within twenty minutes. This means these problems do not necessarily need an Attorney to be solved. They could be solved by simply having a more enhanced FAQ or by having a paralegal or intern answer these questions instead; questions they deem tough/long would be passed down to an attorney. This would help reallocate resources appropriately, give attorneys more time to analyze more complex cases, and use budget more effectively (a paralegal's salary is less than an attorney's salary) while also helping people gain experience in the field.

Accessibility questions we addressed were as follows: Are people getting the help they need? Are clients' questions getting answered? Is the service equally available for every state? We looked into which states had the most unanswered questions, which categories had the most unanswered questions, and which states had the most ABA lawyers. We found that some states and categories had far lower proportions of answered questions than others. Indiana, for example, had a zero percent rate for answering questions. Pennsylvania, Arizona, Iowa, Georgia, and California, too, all had less than 50% rate for answered questions. This can be explained by the fewer number of attorneys allocated in some states. A prime example of a state that suffers from this problem is Georgia. More than 70% of questions go unanswered in Georgia and this is because it has some of the highest cases per attorney- 100 for 1. To make the services better in such states, ABA needs to allocate resources equally per state. So