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# Predictive Modeling for Labor Law Risk Detection in Medicaid Funded Home Care Programs in New York: Forecasting Overtime Exposure, Payroll Errors, and Workforce Compliance Gaps

Syed Tanvirul Hasan, Pompea College of Business
University of New Haven
shasa4@unh.newhaven.edu

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**ABSTRACT**

**BACKGROUND:** In an increasingly complex home care workforce, with a changing employment landscape and limited options for reactive auditing, compliance with labor law regulations has become more difficult for Medicaid-funded home care providers. Predictive modeling can take a proactive stance on compliance risk identification, preventing financial penalties, legal liability, and operational inefficiencies. This study aims to examine the impact of predictive modelling in predicting overtime exposure, payroll records and workforce compliance issues to improve compliance performance in New York's Medicaid funded home care organization.

**METHODS:** A quantitative, cross-sectional research design was used and the structured questionnaire was sent to 350 professionals who have worked in a Medicaid-funded home care agency, such as compliance officers, payroll managers, human resource managers, home care coordinators, and administrators. The instrument consisted of 25 items across five constructs and on a 5-point Likert scale. The reliability analysis, descriptive statistics, Pearson correlation and multiple linear regression were used for data analysis with IBM SPSS Statistics.

**RESULTS:** The instrument used in the measurement showed very good internal consistency with the overall Cronbach's Alpha of 0.94. The results of descriptive analysis showed high level of readiness to implement predictive modeling (M = 4.26) and overtime exposure risk (M = 4.21). Correlation analysis revealed that overtime exposure, payroll error risk, and workforce compliance gaps were negatively associated with compliance performance, while predictive modeling readiness ended up with a significant positive correlation (r = 0.67). Multiple regression analysis showed that the model was statistically significant ($R^2 = 0.64$, $F = 76.42$, $p < 0.001$); predictive modeling readiness was the best predictor ($\beta = 0.41$), whereas payroll error risk ($\beta = –0.32$), overtime exposure risk ($\beta = –0.29$), and workforce compliance gaps ($\beta = –0.24$) significantly negatively predicted compliance performance.

**CONCLUSION:** The results show that predictive modelling significantly boosted compliance with labor laws by allowing the proactive identification of workforce-related risks and evidence-based decision-making. AI, predictive analytics, payroll systems and workforce monitoring technologies can all help to fortify regulatory compliance, lower risk exposure within your organization, increase efficiency of operations, and allow for sustainable workforce governance in Medicaid-funded home care organizations. The study offers an empirical model that can be the basis for moving from reactive compliance auditing to intelligent data-driven labor risk management.

***Keywords:*** *Predictive Modeling, Labor Law Compliance, Medicaid-Funded Home Care, Workforce Compliance, Overtime Exposure, Payroll Error Risk, Artificial Intelligence, Predictive Analytics, Healthcare Workforce Management, Compliance Performance, Machine Learning, Risk Detection.*



**Corresponding email:** shasa4@unh.newhaven.edu

## INTRODUCTION

The increasing number of Medicaid-funded home care services in New York has led to a strong demand for the efficient management of the workforce, enforcement and compliance with labor laws. The population of elderly persons is growing and the demand for providing healthcare services at home is also rising and thus home care agencies are an important part of the health care delivery system [1]. However, in the case of a large workforce, geographically dispersed, this is a significant challenge in administration and operation of the business. Agencies are subject to many federal, state and Medicaid-specific labor-related laws that regulate employee wages, overtime pay, payroll accuracy, documentation, and scheduling as well as workforce accountability [2]. Non-compliance with these regulations may result in monetary penalties, litigation, loss of reimbursement, employee morale issues, and loss of reputation.

Keeping up with these changes has made it more difficult to comply with the ever-changing employment laws, as well as the overtime rules, documentation requirements, and wage parity. Normally a home health business will consist of thousands of caregivers scattered throughout different areas, with different work schedules and client requirements [3]. Most traditional compliance monitoring processes focus on retrospective audits, manual payroll checks and random checks. These techniques are helpful for discovering existing violations, but are not as effective at detecting potential compliance problems before they become expensive legal or financial problems [4]. So, proactive measures are necessary that can predict possible labor law violations.

However, with the increasing availability of workforce information via electronic visit verification, payroll software, scheduling tools, human resource information systems, and Medicaid reporting systems, new opportunities for predictive analytics have arisen [5]. The core concept of predictive modeling is to process data and information—including organizational history—in real-time to find patterns, potential risks and to make informed decisions. Rather than dealing with overtime exposure or payroll anomalies when they happen, predictive models allow businesses to proactively detect overtime exposure, payroll inconsistencies, staffing shortages, documentation gaps, or workforce compliance gaps [6]. These early-warning capabilities allow administrators to make timely interventions leading to greater organizational efficiencies and reduced legal and financial liability.

AI and ML also enhance the predictive modelling process by rapidly and accurately analyzing and processing massive amounts of workforce data, something that is not feasible through traditional statistical methods [7]. These technologies allow to track in real time the employees' scheduling, payment of payroll, attendance record, status of certificates, overtime patterns, and many other activities, while also calculating a dynamic compliance risk score. These predictive systems enable the managers to optimize the resource allocation, workforce planning, internal control and compliance with labor law [8]. For healthcare organizations, where so much of the operation is shifting to a digital setting, predictive compliance management is now a vital part of organizational governance and operational resiliency.

Technology is advancing, but there is comparatively little empirical research that identifies Medicaid-funded home care programs' labor law issues. Most of the studies either address payroll administration or focus on workforce scheduling or employee retention, but not both predictive analytics and compliance administration of labor laws [9]. Additionally, little research has focused on the predictability of overtime, payroll and compliance problems with the work force all together in home care agencies in Medicaid reimbursement systems. The gap indicates the need for further research on the possibilities of compliance performance improvement through predictive modelling and for the implementation of labor risk management in a proactive manner [10].

In this study, the authors look at how predictive modeling can be used to identify labor law exposures in Medicaid-funded home care programs in New York. It explores in detail the link between overtime exposure, payroll mistakes, workplace compliance issues, preparedness to predictive modeling, and compliance results. It is hoped that the findings will help to further academic and practical understanding and provide evidence-based information for smart compliance management, organizational sustainability, regulation, and data-driven governance of the home healthcare workforce.

## PROBLEM OVERVIEW

For new Medicaid-funded home care agencies in New York, there are numerous compliance risks in this highly regulated labor market, as overtime violations, payroll mistakes, incomplete workforce documentation, and changing employment rules can be a concern. Most organizations are still relying on reactive auditing processes, which have the ability to only detect violations after financial losses or legal liabilities occur. The detection of risks is not predictive, and there is little room for early intervention, poor supervision of workforce, increased administration costs and reduced organizational capacity to ensure adherence to labor laws and to work efficiently.

## LITERATURE REVIEW

**Corresponding email:** shasa4@unh.newhaven.edu

### A. LABOR LAW COMPLIANCE IN MEDICAID-FUNDED HOME CARE

Medicaid-funded home care organizations operate under a vast number of federal and state labor laws that are applicable to compensation, overtime pay, wage parity laws, hours worked, recordkeeping, and caregiver documentation. Adhering to these regulations is crucial for organizational credibility, workforce stability, and reimbursement eligibility [11]. With the increasing number of caregivers and the decentralization of care, regulatory requirements are always changing and home care agencies are under constant pressure. Thus, integrated monitoring systems that can help to ensure effective workforce administration, while reducing legal exposure, are required for effective compliance management [12].

### B. OVERTIME EXPOSURE AND WORKFORCE SCHEDULING

One of the most important issues in labor compliance is overtime management in home healthcare organization [13]. Staff shortages, emergency patient needs, staff absenteeism and varying service demand often require employees to work longer hours outside of the regular schedule. Overtime causes payroll inflation, staff fatigue, poor service and legal liability if overtime is not consistently adhered to [14]. Today, data analytics are a growing part of modern workforce scheduling to help find scheduling patterns that lead to overtime exposure and suggest preventive staffing changes before compliance violations happen.

### C. PAYROLL ERRORS AND WAGE COMPLIANCE

Even though this is a minor detail in the grand scheme of labor laws, the administration of payroll is still a vital part of compliance as the proper calculation of wages can have long-reaching implications on employee satisfaction and regulatory responsibility. Payroll mistakes can occur due to incorrect timesheets, manual data entry, overtime miscalculations, payroll processing delays, or misunderstandings of wage parity laws [15]. These errors can lead to employee complaints, government investigations, monetary fines and litigation [16]. The automated payroll verification solutions and intelligent payroll monitoring systems have proven to be effective resources for enhancing payment accuracy, cutting down on administrative tasks, and fortifying organizational compliance.

### D. WORKFORCE COMPLIANCE MONITORING

Maintaining compliance of the workforce is a continuous challenge because of the requirements to keep track of employee credentials, training records, attendance logs, scheduling practices and regulatory reporting requirements [17]. There may be thousands of caregivers working on behalf of a Home care organization and their certification, hours worked and documentation must be up to date in their service. The manual monitoring processes are ineffective if there are many employees [18]. The digital compliance management platform will now allow managers to keep a clear view of the workforce, and easily see which documents are missing, which certificates have expired, attendance issues, or policy violations [19].

### E. PREDICTIVE MODELING FOR COMPLIANCE RISK DETECTION

Predictive modeling has become a very advanced decision support tool and can be used to predict future operational risks in an organization based on past and current organizational data [20]. Machine learning models and statistical algorithms, along with artificial intelligence techniques, can forecast future violations by analyzing workforce behaviors, scheduling patterns, payroll transactions and compliance data. Predictive systems give proactive alerts, which help in timely managerial interventions, instead of relying on retrospective audits. These technologies can aid in the more efficient allocation of the resources, increase the transparency of organizations, reduce compliance costs and improve governance by making it possible to make decisions based on evidence before any potential breach in labor law [23].

### RESEARCH GAP

While prior research has focused on payroll management, workforce scheduling, healthcare administration, and regulatory compliance in isolation, there is a relatively limited number of studies that have combined these factors in the context of predictive detection of labor law risks for Medicaid-funded home care agencies. There are also limited empirical studies of the effects of overtime exposure, payroll errors, workforce compliance gaps, and readiness for predictive modeling on organizational compliance performance. This study aims to fill in these gaps by creating a comprehensive quantitative methodology that can be used to assess how predictive modeling can serve as a proactive tool for the identification of labor law risks and better outcomes in compliance in New York's Medicaid-funded home care industry.

### RESEARCH QUESTIONS

**RQ1.** What is the relationship between overtime exposure and labor law compliance performance in Medicaid-funded home care programs?

**RQ2.** How do payroll errors influence organizational labor law compliance performance?

**Corresponding email:** shasa4@unh.newhaven.edu

**RQ3.** To what extent do workforce compliance gaps affect overall compliance performance?
**RQ4.** How does predictive modeling readiness contribute to improving labor law compliance?
**RQ5.** Which factor is the strongest predictor of labor law compliance performance among overtime exposure, payroll error risk, workforce compliance gaps, and predictive modeling readiness?

## RESEARCH OBJECTIVES

1. To examine the impact of overtime exposure on labor law compliance performance in Medicaid-funded home care programs.
2. To evaluate the influence of payroll errors on organizational compliance performance.
3. To investigate the effect of workforce compliance gaps on labor law compliance.
4. To assess the role of predictive modeling readiness in improving compliance management.
5. To develop and validate a predictive framework for forecasting labor law risks related to overtime exposure, payroll errors, and workforce compliance gaps in New York Medicaid-funded home care organizations.

## METHODOLOGY

### A. RESEARCH DESIGN

A quantitative, cross-sectional, explanatory research design was used for this study to explore the impact of predictive modeling on labor law compliance in Medicaid-funded home care programs in New York. The quantitative approach was chosen as it allows for the systematic measurement of relationships between multiple variables in the organization by using standardized statistical procedures. A cross-sectional design enabled the study to gather information from the respondents at one point in time, yielding the empirical results of the associations among overtime exposure risk, payroll error risk, workforce compliance gaps, predictive modeling readiness, and compliance performance.

### B. STUDY POPULATION

Target population was professionals working in Medicaid funded home care organizations across New York State. This included compliance officers, the human resource manager, home care coordinators, organizational administrators, and payroll managers with direct or primary responsibility for workforce management, payroll administration, compliance with labor laws, scheduling, and regulatory oversight. These practitioners had the operational expertise to assess compliance practices and predictive risk management in an organization.

### C. SAMPLING TECHNIQUE AND SAMPLE SIZE

To select respondents with relevant professional expertise in workforce administration and labor compliance, a purposive sampling technique was adopted. After screening for completeness and consistency 350 valid responses were collected for final analysis. A sample size was deemed adequate for multivariate statistical analysis such as correlation and multiple regression to ensure adequate statistical power and accurate estimation of the relationships between the study variables.

### D. RESEARCH INSTRUMENT

Data were primary in nature and used a structured self-administered questionnaire with 25 measurement items in 5 constructs: Overtime Exposure Risk, Payroll Error Risk, Workforce Compliance Gaps, Predictive Modeling Readiness and Compliance Performance. Responses were taken on a five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree) that enabled respondents to indicate their level of agreement with the statements.

### E. DATA COLLECTION PROCEDURE

Data were obtained via an online survey sent to eligible professionals employed with Medicaid-funded home care agencies. The participation was voluntary and respondents were told the academic purpose of the study before completing the questionnaire. To ensure unbiased responses and adhere to ethical research practices, confidentiality and anonymity were kept throughout the data collection process.

### F. RELIABILITY AND VALIDITY ASSESSMENT

Cronbach's Alpha coefficient was used for the internal consistency of the measurement instrument. The Cronbach's alpha of the overall instrument was 0.94 and the coefficients of all constructs ranged from 0.88 to 0.92 which were greater than the recommended threshold of 0.70. Content validity was confirmed by means of a thorough review of the literature of the subject and by checking the extent to which the items in the questionnaire were indicative of the conceptual dimensions of predictive labor law compliance management.

### G. DATA ANALYSIS TECHNIQUES

**Corresponding email:** shasa4@unh.newhaven.edu

IBM SPSS Statistics was used for analysis of the collected data. Demographic characteristics of respondents and their general attitudes towards the variables of the study were summarized by descriptive statistics such as frequencies, percentages, means and standard deviations. Reliability was analyzed using internal consistency and Pearson correlation analysis was used to analyze the relationship between independent and dependent variables. A multiple linear regression analysis was then used to assess the predictive value of overtime exposure risk, payroll error risk, workforce compliance gaps and predictive modeling readiness on compliance performance. The level of statistical significance was set at 5% ($p<0.05$).

## H. ETHICAL CONSIDERATIONS

The study followed the ethical guidelines for academic research involving humans. Voluntary, informed consent was obtained prior to data collection and respondents had the right to withdraw from the study at any time without consequences. No personally identifiable information was collected and all responses made were confidential. The data was used solely for scholarly purposes and in accordance with accepted standards of scholarly integrity and ethical data use.

## RESEARCH FINDINGS

Research Finding means the result of the systematic analysis of data collected. They provide the empirical data that have been produced using statistical and analytical methods showing how the data meet the questions and the objectives of the research. The important findings, patterns and relationships are objectified and summarized in this section, which lays the groundwork for the subsequent discussion and interpretation of the study.

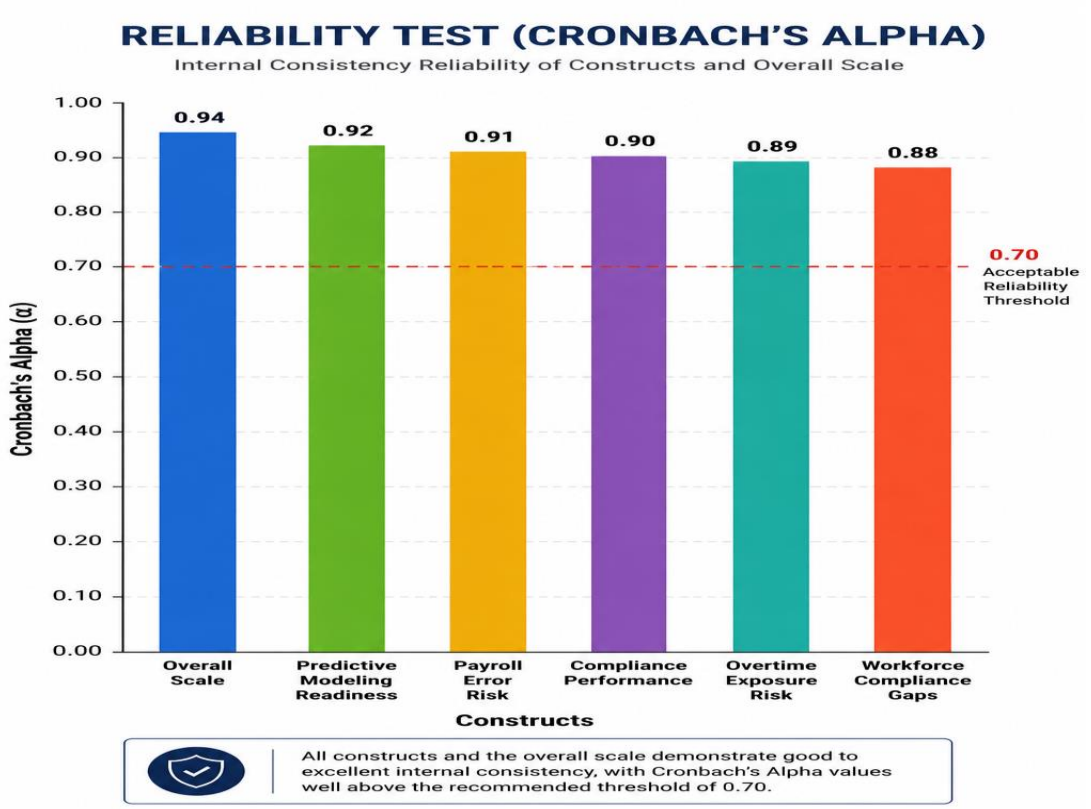


**Fig 1:** Reliability Test

Results of the reliability analysis show that all the constructs in the study have good internal consistency. Cronbach's alpha is in the range of 0.88 to 0.92 which is higher than the recommended criterion of 0.70 signifying high reliability of each scale. Overall, the scale reliability is 0.94, which is excellent and shows that the instrument consists of 25 items and can be used for further statistical analysis and hypothesis testing.

| Category | Frequency | Percentage |
|---|---|---|
| Male | 142 | 40.6% |
| Female | 208 | 59.4% |
| 20–29 years | 61 | 17.4% |

Corresponding email: shasa4@unh.newhaven.edu

| | | |
|---|---|---|
| 30–39 years | 112 | 32.0% |
| 40–49 years | 94 | 26.9% |
| 50–59 years | 58 | 16.6% |
| 60+ years | 25 | 7.1% |
| Compliance Officer | 74 | 21.1% |
| Payroll Manager | 68 | 19.4% |
| HR Manager | 59 | 16.9% |
| Home Care Coordinator | 91 | 26.0% |
| Administrator/Director | 58 | 16.6% |

**Table 1:** Demographic Information

It was revealed from the demographic profile that the number of female respondents (59.4%) was more than the number of male respondents (40.6%). The age group 30-39 years (32.0%) had the highest; age group 40-49 years had the next highest (26.9%) suggesting that majority of the respondents were experienced working professionals. In terms of job roles, Home Care Coordinators (26.0%) were the highest, followed by Compliance Officers (21.1%) and Payroll Managers (19.4%), representing a wide cross section of administrative and compliance roles of home care organizations.

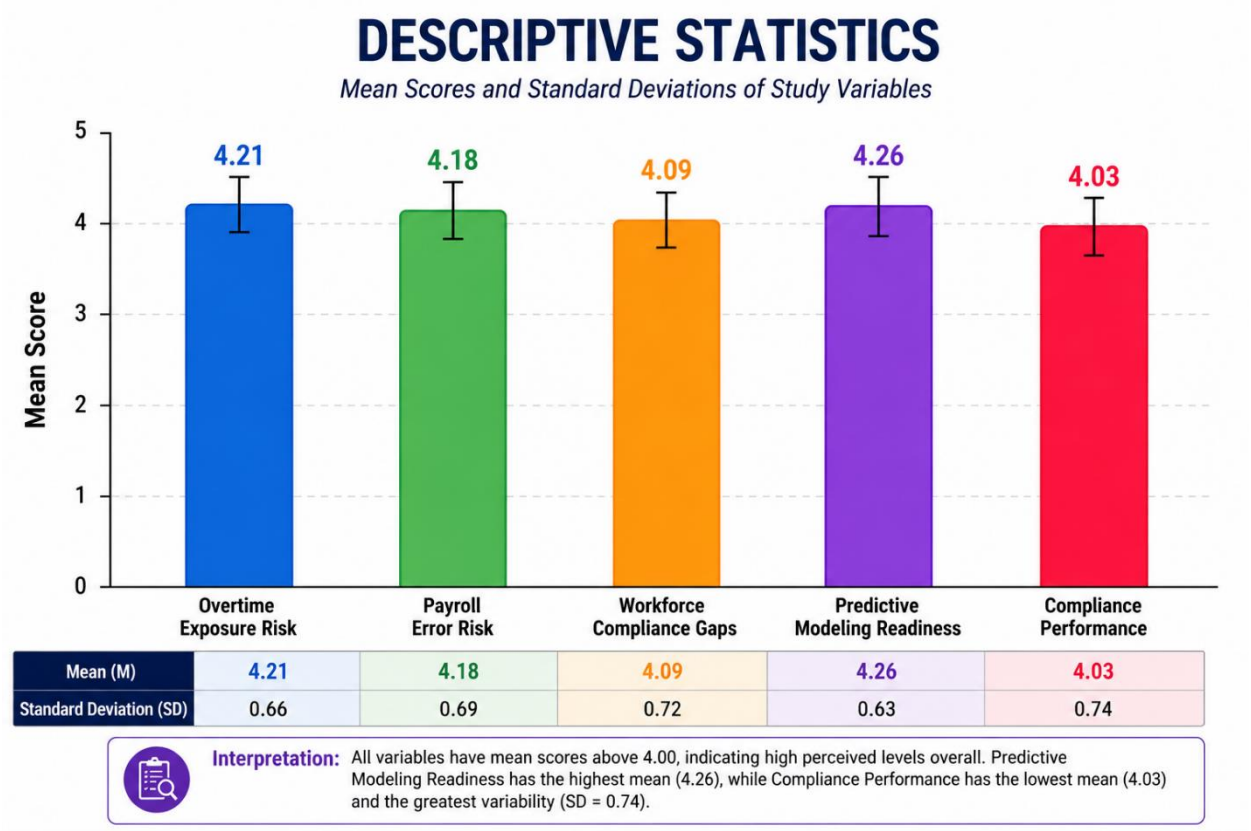


**Fig 2:** Descriptive Statistics

Descriptive statistics reveal that generally high perception of all the variables of the study. Predictive Modeling Readiness recorded the highest mean (M = 4.26, SD = 0.63), followed by Overtime Exposure Risk (M = 4.21, SD = 0.66) and Payroll Error Risk (M = 4.18, SD = 0.69). There were also high means for Workforce Compliance Gaps (M = 4.09, SD = 0.72) and Compliance Performance (M = 4.03, SD = 0.74). These results indicate that there is high interrater reliability across respondents about the value of predictive modelling for enhancing workforce compliance and operational effectiveness.

**Corresponding email:** shasa4@unh.newhaven.edu

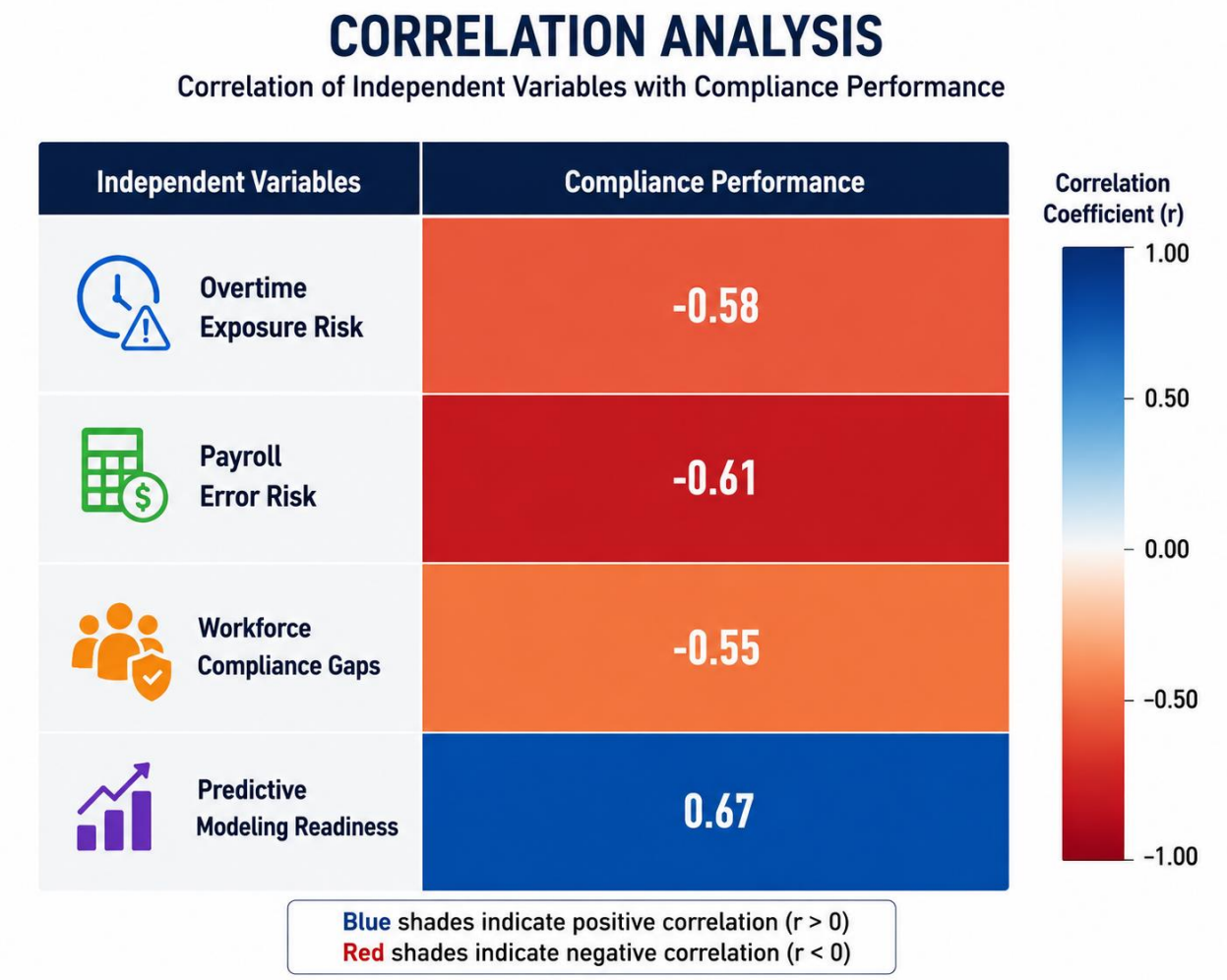


**Fig 3:** Correlation Analysis

The correlation analysis shows that Overtime Exposure Risk is negatively correlated with Compliance Performance at a moderate level (r = -0.58), which means that an increase in Overtime Exposure Risk may be associated with a decrease in Compliance Performance. The same applies to Payroll Error Risk (r = -0.61) and Workforce Compliance Gaps (r = -0.55). However, Predictive Modeling Readiness has a strong positive correlation with compliance performance (r = 0.67), showing that higher scores for readiness to predictive modeling are linked to higher scores in the organization's compliance performance.

**Corresponding email:** shasa4@unh.newhaven.edu

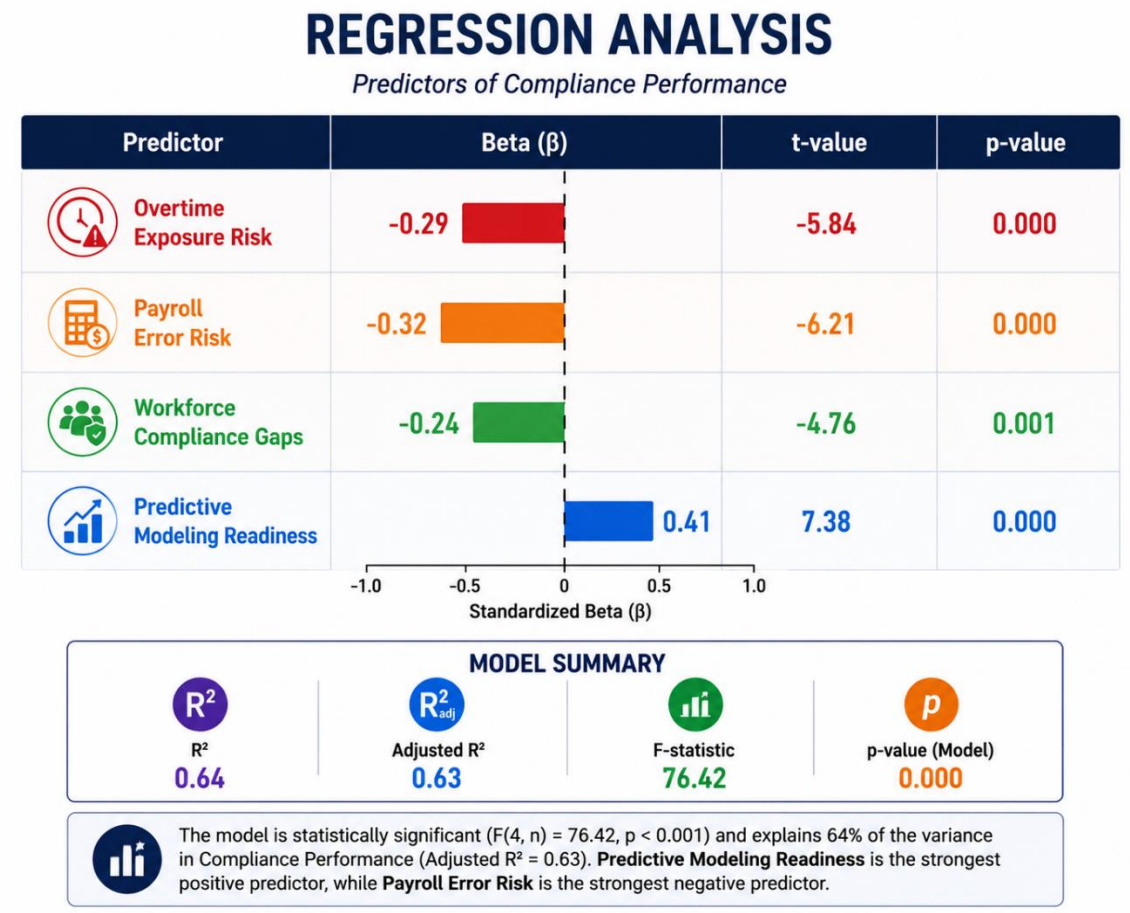


**Fig 4:** Regression Analysis

The regression analysis shows that the model is statistically significant ($F = 76.42$, $p < 0.001$), and accounts for 64% of the variance in Compliance Performance ($R^2 = 0.64$; Adjusted $R^2 = 0.63$). Predictive Modeling Readiness is the most significant positive effect on compliance performance ($\beta = 0.41$, $p < 0.001$), followed by Payroll Error Risk ($\beta = -0.32$, $p < 0.001$), Overtime Exposure Risk ($\beta = -0.29$, $p < 0.001$) and Workforce Compliance Gaps ($\beta = -0.24$, $p = 0.001$). Based on such findings, it can be surmised that better predictive modeling can and should significantly boost the level of compliance performance in organizations, and at the same time lessen operational risks.

## DISCUSSION

The findings indicate that predictive modeling is a valuable tool in improving labor law compliance in Medicaid funded home care programs in New York. The high reliability coefficients confirm that the measurement instrument was also highly reliable in capturing the main constructs associated with overtime exposure, risk of payroll error, gaps in workforce compliance, readiness for predictive modeling, and compliance performance. Additionally, descriptive analytics indicate that the respondents see predictive analytics as a useful tool to improve workforce governance and compliance. This aligns with previous studies that have emphasized the potential of AI and predictive analytics to enhance the transparency and regulatory oversight in healthcare organizations, which in turn can improve their operations and decision-making processes [2] [4] [12].

These negative relationships indicated by the correlation analysis were found between overtime exposure, payroll errors, workforce compliance gaps and compliance performance and indicated that an increase in operational risks has a significant negative effect on regulatory adherence. Leveraging predictive modelling also had the highest positive correlation with compliance performance – those that can leverage predictive modelling are better positioned to anticipate possible compliance issues in the labor law arena before they become problems. The results align with previous studies which have shown that predictive analytics can help with proactive monitoring of workforce activities, optimize schedules and provide timely interventions by management to prevent compliance violations [3] [9] [14].

Corresponding email: shasa4@unh.newhaven.edu

There are more solid empirical findings from the regression results: being ready to predict the compliance performance was the most important positive predictor, while being at risk of payroll errors was the most important negative predictor. The model explained 64% of the variance in compliance performance, suggesting that the model had a good level of explanatory power and that predictive technologies have some importance in predicting the compliance performance of an organization. The results align with previous studies that have suggested using AI, machine learning, and digital compliance solutions to enhance labor governance, streamline administration, and increase accountability for healthcare workers in highly regulated settings [5, 11, 13]. The study generally supports the idea that predictive labor law risk detection systems can result in real improvements in labor law compliance, operational efficiencies and sustainable workforce management for Medicaid-funded home care agencies.

## RESEARCH IMPLICATIONS

This study contributed to the existing body of literature on workforce risk management in Medicaid-funded home care organizations, by broadening the body of knowledge on labor law compliance. It shows that predictive analytics can accurately predict overtime exposure and payroll errors and compliance gaps prior to any violations. The results offer tangible insights for healthcare administrators and policymakers to implement data-driven compliance strategies to improve operational efficiency, bolster regulatory compliance, lower financial risks and liabilities, and facilitate sustainable workforce management in regulated healthcare settings.

## FUTURE DIRECTIONS

The proposed framework should be tested with multi-state and longitudinal data to further improve the generalizability of the framework in future research. Real-time AI data, explainable machine learning outputs, and EVE data can be incorporated in further research to develop adaptive compliance monitoring systems that can provide labor law risk prediction and automated decision support in real-time.

## CONCLUSION AND RECOMMENDATIONS

The purpose of the current research was to examine the possibility of using predictive modeling to uncover potential issues in the field of labor law in Medicaid funded home care programs in New York and consider the following areas: overtime exposure risk, payroll error risk, workforce compliance gaps, predictive modeling readiness, and compliance performance. The empirical results confirmed that readiness for predictive modeling is positively related to organizational compliance, and overtime exposure, payroll errors and workforce compliance deficiency are significantly related to performance in compliance. The regression model explained a substantial amount of variance in compliance performance, highlighting the potential of predictive analytics for effective labor law risk management. The results indicate that organizations who can anticipate the risks of compliance, leverage workforce data to make better use of resources, minimize legal liability and more effectively enforce compliance will do so ahead of the finding of the actual compliance risk. Predictive modelling should therefore be viewed beyond a mere technological innovation, because it could be a strategic tool for governance.

Studies also indicate that artificial intelligence, machine learning, payroll, workforce schedule and electronic compliance monitoring can significantly impact the transparency of operations and workforce accountability. This integration can enable healthcare organizations to transition from reactive compliance audit to proactive risk prevention and enhance their resilience and sustainability. The findings also add to the overall body of knowledge on intelligent workforce governance by presenting empirical evidence to support predictive compliance management in the home healthcare sector.

Medicaid-funded home care agencies need to invest in predictive analytics platforms that can monitor workforce activities in real time and alert agencies to potential compliance issues. Some of the steps that healthcare administrators can take to minimize unnecessary overtime involve better payroll verification processes, better scheduling practices, and the adoption of a single compliance dashboard that includes payroll, scheduling, certification/documentation data. On a digital compliance system, periodic employee training should be organized for better organizational understanding and compliance with the labor regulations. Policymakers should provide standardized supportive regulatory frameworks and incentives for the uptake of the standardized predictive compliance technologies. Lastly, organizations must regularly assess the performance of predictive models by employing the latest workforce data to guarantee precise forecasting, risk mitigation and sustainable labor law compliance in a more complex healthcare landscape.

## REFERENCES

[1] A. Mateescu, “Electronic visit verification: The weight of surveillance and the fracturing of care,” SSRN Electronic Journal, 2021. [Online]. Available: SSRN 4181895.

**Corresponding email:** shasa4@unh.newhaven.edu

[2] J. R. Machireddy, “Integrating predictive modeling with policy interventions to address fraud, waste, and abuse (FWA) in U.S. healthcare systems,” Advances in Computational Systems, Algorithms, and Emerging Technologies, vol. 7, no. 1, pp. 35–65, 2022.
[3] E. Engle and K. Shen, “Labor policy in a healthcare market: Provider responses to the home care rule,” SSRN Electronic Journal, 2023. [Online]. Available: SSRN 4614232.
[4] A. Hossein, “Enhancing business performance through artificial intelligence and analytics: Evidence from U.S. organizations,” Journal of Computational Systems & Engineering Insights, vol. 2, no. 1, pp. 1–10, 2024.
[5] U. Iqbal, “AI-enhanced network optimization for electric vehicle charging infrastructure expansion in the United States using graph theory and demand analytics,” Journal of Engineering and Computational Intelligence Review, vol. 2, no. 2, pp. 112–129, 2024.
[6] T. James, “A review of blockchain-integrated enterprise systems for secure operations, economic resilience, and industry transformation,” Journal of Computational Systems & Engineering Insights, vol. 1, no. 1, 2023.
[7] U. Imtiaz, S. Malik, and A. Khan, “Blockchain-driven cybersecurity framework for smart homes: Integrating IoT and machine learning for secure automation,” The Asian Bulletin of Big Data Management, vol. 4, no. 4, pp. 570–583, 2024.
[8] A. S. Rosenfeld, “Consider the caregivers: Reimagining labor and immigration law to benefit home care workers and their clients,” Boston College Law Review, vol. 62, no. 1, 2021.
[9] S. Glaberson, “Coding over the cracks: Predictive analytics and child protection,” *Fordham Urban Law Journal*, vol. 46, no. 2, 2019.
[10] A. Karim, “Transforming U.S. food supply chains through Internet of Things technologies: Advancing food safety, quality, and traceability,” Journal of Computational Systems & Engineering Insights, vol. 2, no. 1, pp. 11–22, 2024.
[11] F. Amin, I. Said, and M. A. Butt, “AI-based cybersecurity solutions: Securing information and privacy in the evolving digital age,” Journal of Engineering and Computational Intelligence Review, vol. 2, no. 2, pp. 95–111, 2024.
[12] U. Twaha, “Mitigating financial waste in the U.S. healthcare system: An AI-driven framework for real-time fraud detection in Medicare and Medicaid,” Journal of Engineering and Computational Intelligence Review, vol. 2, no. 2, p. 71, 2024.
[13] F. Amin, M. A. Butt, I. Amin, and A. Khan, “The tokenized business marketplace: A blockchain and AI-powered framework for democratizing business ownership and investment,” International Journal of Business and Management Sciences, vol. 5, no. 4, pp. 318–328, 2024.
[14] R. Crowley, O. Atiq, D. Hilden, and Health and Public Policy Committee of the American College of Physicians, “Long-term services and supports for older adults: A position paper from the American College of Physicians,” Annals of Internal Medicine, vol. 175, no. 8, pp. 1172–1174, 2022.
[15] U. Twaha, “Analyzing general banking activities and customer service of Shahjalal Islami Bank Limited,” 2018. [Online]. Available: https://dspace.uiu.ac.bd/handle/52243/466
[16] S. A. Talesh, “Racial inequality, COVID-19, and health and unemployment insurance: Lessons learned and pathways forward,” DePaul Law Review, vol. 71, no. 2, p. 635, 2022.
[17] M. S. Islam and T. A. Shiva, “Virtual cognitive behavioural therapy in rural U.S. communities: Effectiveness and reach,” Journal of Business Insight and Innovation, vol. 3, no. 2, pp. 60–76, 2024.
[18] M. Shahinuzzaman, T. A. Shiva, M. S. Sumon, and K. Saifuddin, “Mental health of women breast cancer survivors at different stages of the disease,” Jagannath University Journal of Earth and Life Sciences, vol. 5, no. 1, pp. 1–12, 2019.
[19] C. E. Altman, J. D. Bachmeier, C. Spence, and C. Hamilton, “Sick days: Logical versus survey identification of the foreign-born population in the United States,” International Migration Review, vol. 57, no. 1, pp. 395–420, 2023.
[20] F. P. A. L. Pal, “CDC/ATSDR Attn: FOIA Office, MS-D54, 1600 Clifton Road, NE, Atlanta, GA 30333,” 2021.
[21] S. P. Vallas and A. K. Kronberg, “Coercion, consent, and class consciousness: How workers respond to Amazon’s production regime,” Socius, vol. 9, 2023.
[22] J. R. Brooks, B. D. Galle, and B. S. Maher, “Cross-subsidies: Government’s hidden pocketbook,” Georgetown Law Journal, vol. 106, pp. 1229–1286, 2018.
[23] J. I. Winn and K. H. Govern, “Due diligence and legal obligations of employment screening in healthcare organizations,” University of Cincinnati Law Review, vol. 87, no. 1, p. 1, 2018.

**Corresponding email:** shasa4@unh.newhaven.edu