Provider Fraud in California Workers' Compensation

Selected Issues

Nicholas M. Pace, Julia Pollak

For more information on this publication, visit www.rand.org/t/RR1703

Published by the RAND Corporation, Santa Monica, Calif.
© Copyright 2017 RAND Corporation

RAND® is a registered trademark.

Limited Print and Electronic Distribution Rights

This document and trademark(s) contained herein are protected by law. This representation of RAND intellectual property is provided for noncommercial use only. Unauthorized posting of this publication online is prohibited. Permission is given to duplicate this document for personal use only, as long as it is unaltered and complete. Permission is required from RAND to reproduce, or reuse in another form, any of its research documents for commercial use. For information on reprint and linking permissions, please visit www.rand.org/pubs/permissions.

The RAND Corporation is a research organization that develops solutions to public policy challenges to help make communities throughout the world safer and more secure, healthier and more prosperous. RAND is nonprofit, nonpartisan, and committed to the public interest.

RAND's publications do not necessarily reflect the opinions of its research clients and sponsors.

Support RAND

Make a tax-deductible charitable contribution at

www.rand.org/giving/contribute

www.rand.org

Preface

Workers' compensation fraud is thought to be one of the fastest-growing forms of insurance fraud, reportedly costing insurers and businesses billions of dollars each year nationwide. The California workers' compensation system is by no means immune to such problems, and fraud's adverse economic impacts on businesses, insurers, and state government—and, importantly, the compromised health and welfare of the people whom the system was designed to protect—justify a sense of strong outrage and betrayal from the public and policymakers alike. Unfortunately, fighting workers' compensation fraud is not an easy task because addressing shortcomings in the regulatory framework that permit certain bad actors (commonly referred to as *fraudsters*) to operate with apparent impunity is only one part of the answer. Whatever solutions are developed must always be designed and implemented in a way that minimizes the potential for unintended negative impacts on workers and on those on whom the system depends to deliver timely, adequate, and cost-effective benefits.

This report focuses on one particular form of workers' compensation fraud: the intentional manipulation of rules and procedures by providers, particularly those delivering health care services and supplies. The report describes our framework for conceptualizing the sources of and remedies for workers' compensation fraud in California, discusses various data-driven fraud-detection efforts that other governmental programs use, examines specific aspects of the California approach that might need addressing, and offers some high-level recommendations in that light for the consideration of regulators and legislators. To inform our discussion, we reviewed academic journal articles on methods used to detect and prevent fraud in the insurance, financial, and public sectors; academic and policy literature on the characteristics and sources of workers' compensation fraud; media articles on the use of fraud-detection technologies and their performance; and legal treatises describing the overall statutory and regulatory scheme for addressing employment-related injuries and illnesses in California. We also attended four days of public roundtables in June 2016 hosted by the California Department of Industrial Relations' Office of the Director, the California Department of Insurance, the Department of Industrial Relations' Division of Workers' Compensation, and the Commission on Health and Safety and Workers' Compensation. The meetings involved extensive discussions between the roundtable hosts and stakeholders representing insurers, employers, labor, government agencies and prosecutors, providers, third-party administrators, and applicants' attorneys. The California Department of Industrial Relations sponsored the research reported here.

This report should be of particular interest to policymakers seeking ideas on how provider fraud might be addressed. It builds on two decades of research that RAND Corporation analysts have conducted to measure and improve the adequacy and equity of workers' compensation in California.

RAND Institute for Civil Justice

The RAND Institute for Civil Justice (ICJ) is dedicated to improving the civil justice system by supplying policymakers and the public with rigorous and nonpartisan research. Its studies identify trends in litigation and inform policy choices about liability, compensation, regulation, risk management, and insurance. The institute builds on a long tradition of RAND Corporation research characterized by an interdisciplinary, empirical approach to public policy issues and rigorous standards of quality, objectivity, and independence.

ICJ research is supported by pooled grants from a range of sources, including corporations, trade and professional associations, individuals, government agencies, and private foundations. All its reports are subject to peer review and disseminated widely to policymakers, practitioners in law and business, other researchers, and the public.

ICJ is part of RAND Justice Policy within RAND Justice, Infrastructure, and Environment, a division of the RAND Corporation dedicated to improving policy- and decisionmaking in a wide range of policy domains, including civil and criminal justice, infrastructure protection and homeland security, transportation and energy policy, and environmental and natural resource policy.

Questions or comments about this report should be sent to the project leader, Nicholas M. Pace (nickpace@rand.org). For more information about the RAND Institute for Civil Justice, see www.rand.org/icj or contact the director at icjdirector@rand.org.

Contents

Preface ... iii
Tables ... vii
Summary ... ix
Acknowledgments ... xxi
Abbreviations ... xxiii
Chapter One. Introduction ... 1
  Motivation ... 1
  Approach ... 2
Chapter Two. What Constitutes Workers' Compensation Fraud? ... 5
  Common Types of Fraud ... 5
  A Framework for Analysis ... 8
Chapter Three. Detection: Using Advanced Analytics to Identify Fraud ... 11
  Background ... 11
    Common Approaches ... 11
    Key Steps ... 15
  Implementation Examples ... 18
    Medicare ... 18
    State Medicaid Agencies ... 20
    Social Security ... 22
    The Internal Revenue Service and State Taxation Agencies ... 22
    Other Workers' Compensation Programs ... 23
  Discussion ... 24
Chapter Four. Prevention: Bringing Postemployment Claims Back into the System ... 29
  Background ... 29
  Key Issues ... 33
  Discussion ... 36
Chapter Five. Remediation: Suspending Lien Claims When Holders Are Suspected of Fraud ... 41
  Medicaid Suspension ... 41
  Provider Authorization ... 43
  Discussion ... 45
    Comparison of Medicaid and New York State Workers' Compensation Board Approaches ... 45
    Comparison of Medicaid Approach with Recent Legislative Initiatives ... 49
    Conclusion ... 56
Chapter Six. Recommendations ... 59
  Suggestions for Change ... 59
  Final Thoughts ... 62
References ... 63

Tables

Table 2.1. Examples of Workers' Compensation Fraud 6
Table 5.1. Medicaid and New York State Workers' Compensation Board Approaches 46
Table 5.2. Medicaid, Labor Code § 4615, and Labor Code § 139.21 Approaches 54

Summary

Introduction

Workers' compensation fraud is thought to be one of the fastest-growing forms of insurance fraud, reportedly costing insurers and businesses billions of dollars each year nationwide. The California workers' compensation system is by no means immune to such problems, and fraud's adverse economic impacts on businesses, insurers, and state government—and, importantly, the compromised health and welfare of the people whom the system was designed to protect—justify a sense of strong outrage and betrayal from the public and policymakers alike. Unfortunately, fighting workers' compensation fraud is not an easy task because addressing shortcomings in the regulatory framework that permit certain bad actors (commonly referred to as *fraudsters*) to operate with apparent impunity must be done in a way that minimizes the potential for unintended negative impacts on workers and on those on whom the system depends to deliver timely, adequate, and cost-effective benefits.

This report focuses on one particular form of workers' compensation fraud: the intentional manipulation of rules and procedures by providers, particularly those delivering health care services and supplies. The report describes our framework for conceptualizing the sources of and remedies for workers' compensation fraud in California, discusses various data-driven fraud-detection efforts that other governmental programs use, examines specific aspects of the California approach that might need addressing, and offers some high-level recommendations in that light for the consideration of regulators and legislators. To inform our discussion, we reviewed academic journal articles on methods used to detect and prevent fraud in the insurance, financial, and public sectors; academic and policy literature on the characteristics and sources of workers' compensation fraud; media articles on the use of fraud-detection technologies and their performance; and legal treatises describing the overall statutory and regulatory scheme for recovery from employment-related injuries and illnesses in California. We also attended four days of public roundtables in June 2016 hosted by the California Department of Industrial Relations' (DIR) Office of the Director, the California Department of Insurance, DIR's Division of Workers' Compensation (DWC), and the Commission on Health and Safety and Workers' Compensation. The meetings involved extensive discussions between the roundtable hosts and stakeholders representing insurers, employers, labor, government agencies and prosecutors, providers, third-party administrators, and applicants' attorneys.

Fraud in the California Workers' Compensation System

Fraud can be characterized as the making of a knowingly false or fraudulent material statement or material representation for the purpose of deceiving others so that they act, or fail to

act, to their detriment. Such actions can rise to the level of a criminal offense. In this report, however, we use the term *fraud* in a more expansive sense and include false or fraudulent statements or representations that might not meet the legal requirements for criminal sanctions, as long as they were made for material gain or to negatively affect the rights of others. We also include deficient or improper actions that constitute what can be thought of as abuses of the workers' compensation program, even if such actions are not in and of themselves illegal. And finally, our definition also encompasses actions that constitute any knowing violation of statutes or regulations relevant to the workers' compensation program. Thus, in this report, *fraud* encompasses fraud in the traditional sense (whether or not it is subject to criminal prosecution), abuse, and intentionally illegal activities.

Workers' compensation fraud in California can be divided into six general categories: *provider* fraud (which typically involves the provision of medical services and supplies but can also include other services, such as transportation and interpretation), *employer* fraud, *worker* fraud, *attorney* fraud (including hearing representatives), *insurer* fraud (including independent insurance agents), and *claims adjuster* fraud. The category labels are useful for conceptualizing the *primary* drivers behind specific wrongful behaviors, although more than one type of actor can be involved in any particular scheme. We have been asked to concentrate this review on provider-related fraud, with a special emphasis on innovative techniques that use data analytics.

Proposals to address the problem of fraud in the California workers' compensation system are likely to embrace one or more of the following key goals: *prevention* (eliminating the possibility or profitability of future fraudulent behavior), *detection* (identifying fraudsters), *remediation* (stopping ongoing fraudulent behavior or profiteering), *restitution* (recovering defrauded funds), *retribution* (achieving a sense of justice), or *deterrence* (discouraging others from committing fraudulent behavior). The most effective way to build a comprehensive solution to the problem would be to implement an array of changes to existing policies and regulatory practices, with the individual components of that package designed to achieve different aims. Informed by our review of existing authority and the comments and suggestions stakeholders offered during the June 2016 roundtables, we feel that sufficient tools are already in place for achieving aims related to restitution, retribution, and deterrence and that enhancing such tools would not yield significant reductions, at least in the near future, in the types of provider-driven fraudulent activities that have been the focus of media articles and policymaker attention. We believe that, as a first step toward addressing provider fraud, a useful approach would be to focus on the first three goals: detection, prevention, and remediation. The recommendations in this report present one set of possible changes to existing rules and practices intended to help in accomplishing those specific goals.

Three Ways to Deal with Provider Fraud

Detect Fraud Through the Use of Advanced Analytics

The need to identify instances in which fraudsters exploit a social welfare system is not unique to the California workers' compensation program. Medicare, Medicaid, the Social Security Administration, and the Internal Revenue Service all have similar concerns regarding activities conducted by those who would intentionally violate rules or mislead others for the purpose of financial or personal gain.

In recent years, these entities have all taken significant steps toward combating the problem of fraud through the use of advanced analytics, a rapidly developing field of information science that involves intensive examination of large volumes of data in order to discover relationships across records, even those that exist in different locations or consist of a mix of structured and unstructured data. Advanced analytics can be used to look across the types of data that organizations routinely collect for business purposes and detect unexpected patterns suggesting suspicious behavior, as well as generating individualized rules for assessing the likelihood that a claim (or a service delivery or whatever aspect is of interest) might involve fraud. Such patterns or rules are often beyond the ability of human analysts to discern directly. Advanced analytics employs a wide variety of techniques, such as those incorporating predictive modeling, descriptive analytics, or social network analysis methods. One application often uses an array of such tools, tailoring the approach to best fit the questions being asked and the nature of the data being examined.

We reviewed various initiatives using advanced analytics to detect fraud launched by the Centers for Medicare and Medicaid Services, Medicaid Fraud Control Units run by various state attorneys general, the Social Security Administration, the Internal Revenue Service, and multiple workers' compensation programs. Medicare has gone furthest among these government initiatives into integrating data analytics technologies into the ordinary course of business, and the results have been generally favorable. There is little question that the use of advanced analytics offers similar promise regarding the detection of fraud in a complex, information-rich system, such as that in place in California for workers' compensation. The issue at hand is whether it makes sense for DIR to take the initial steps needed to deploy some sort of advanced analytics program at the present time. We believe that the science underpinning analytics is mature; the application of that science in the financial service industry (including the private workers' compensation insurer segment) is well tested and believed to justify the implementation costs; and the marketplace for advanced analytics services and software is robust, competitive, and competent. In our opinion, there are no external reasons for which DIR should not begin to plan for the incorporation of advanced analytics into its antifraud toolkit.

A more difficult question is whether the data currently available to DIR are broad enough and deep enough to support sophisticated uses of advanced analytics. One major concern focuses on the challenges that would be faced in integrating various data sources within DIR's control,

sources that are known to have problems in this area. Another concern we have arises from the fact that the technical difficulties associated with integration increase markedly when the source of the data is external to the organization. Presumably, DIR will be working with other state agencies to exchange information for the purpose of advanced fraud analysis. We recommend that discussions take place at the earliest possible point to reach agreement on interagency data access and on the means available to link information in each agency's control. Other concerns include the degree to which DWC receives information in paper form, reporting compliance issues (such as claims missing all medical transaction data or claims that have no electronically reported information beyond the first report of injury), and possible legal restrictions on how data already in DIR control might be employed when the primary purpose of an analysis is to identify people who might be committing illegal activities.

We do not believe that these data shortcomings are daunting enough to recommend that DIR delay starting the process toward implementing advanced analytics tools into its normal course of business. Even in its current state, DIR-controlled data can be subjected to an initial application of advanced analytics to yield information about fraud that is now unknown. As long as DIR consistently moves forward with efforts to better organize the collection and integration of transactional data regarding all aspects of the workers' compensation system, there is no reason not to use analytics on already-available information.

Prevent Fraud by Bringing Postemployment Claims Back into the System

What might be characterized as a postemployment workers' compensation claim involves an instance in which a former employee files a claim related to a work-connected injury only after separation from the employment believed to have caused the disability. Postemployment claims often include allegations of cumulative trauma (CT) arising from repetitive mentally or physically traumatic activities extending over a period of time.

An important difference between postemployment workers' compensation claims and those advanced while the worker is still on the job lies in the employer's potential degree of control over the choice of medical treatment provider. Outside of instances requiring emergency medical care, a currently employed person incurring an injury while at work would likely be examined initially by a physician with whom the employer has some type of a preexisting relationship, such as through an employer-contracted medical provider network (MPN) or, less commonly, an employer-contracted health care organization. Once the worker files the standard claim form, the employer would then be required to furnish up to $10,000 in medical treatment until the employer formally denies or accepts the claim. As was the case with the initial examination, the employer can limit the employee's discretion as to which doctors will be available to provide ongoing medical treatment under the $10,000 threshold. In situations in which the employer has established an MPN, the employee must obtain treatment only from a doctor within that MPN (the employee can switch doctors if desired, but only to one associated with the MPN). Presumably, such employer-selected providers would pay close attention to DWC's medical

treatment utilization schedule, the current set of official guidelines defining the extent and scope of approved medical treatment; comply with DWC's Official Medical Fee Schedule, guidelines setting forth maximum reasonable fees for various provider services; and be cognizant of the need to submit planned courses of treatment to the employer's internal utilization review process for prior approval.

An employer's ability to limit an injured worker's choice of treating physician during the $10,000 treatment window is available only as long as the employer has not rejected the claim. The employer's decision to deny has the arguably ironic effect of releasing the employee from any obligation to limit treatment to employer-selected medical providers. Some health care providers that the employee chooses will provide workers' compensation–related treatment to a patient with no up-front costs and eventually file a lien to establish the doctor's right to be reimbursed by the employer. Such lien-based treatment can continue for a considerable length of time as the employee's case works its way through the Workers' Compensation Appeals Board (WCAB) when challenging the employer's denial. Conceivably, these liens would be paid if and when the employee successfully concludes his or her claim for compensation, but, as a matter of practice, the liens' validity might not be determined until long after the case in chief is resolved, sometimes requiring relatively complex litigation over the necessity, extent, and value of what was provided to the injured worker.

Studies suggest that employers are almost twice as likely to deny postemployment CT claims as CT claims filed during the employee's tenure and more than seven times as likely to deny postemployment CT claims as non-CT claims of all types. Other studies reported that approximately 40 percent of all CT claims filed in California are filed after leaving employment and are heavily concentrated in southern California, especially in the Los Angeles metro area. The proportion of all claims that involve CT have more than doubled over a decade to about 18 percent, and such claimed injuries heavily rely on lien-based treatment: Almost half of all workers' compensation liens are CT-related. For liens generally, the top 10 percent of lien filers statewide were responsible for more than 75 percent of all liens, and, in the first three quarters of 2016, ten lienholders filed about 25 percent of all liens.

A striking difference between northern and southern California regarding CT medical liens involves how the value of initially presented liens compares with what was eventually paid to satisfy those liens. Medical liens in denied CT cases presented in Alameda, Sacramento, and San Francisco Counties were about two to three times larger than the amounts actually paid. In Los Angeles County, on the other hand, medical treatment liens in denied CT cases settled for just 10 cents on the dollar. One would assume that health care providers continually faced with losing about 90 percent of the asserted value of their services by offering to front the costs of care for their patients would cease their laudable generosity at some point, but the flow of liens seems to continue unabated.

These facts give rise to a suspicion that the high-dollar liens that certain providers in certain regions generate might not accurately reflect services actually rendered and were filed primarily

for the purpose of forcing the insurer to settle for what appears to be mere nuisance value but instead could be a significant source of profit. In other words, there is reason to believe that the frequency and severity of CT liens in southern California are being largely driven by intentionally fraudulent acts rather than by genuine instances of appropriate medical treatment for industrially caused CT first discovered postemployment.

We believe that, if the treatment of medical conditions discovered postemployment is handled in a manner more similar to how workers' compensation claims made while still on the job are handled, the generation of large numbers of liens of substantial size could be markedly reduced. Medical care providers subject to utilization review would be unlikely to order numerous separate procedures and prescriptions with claimed values in the tens of thousands of dollars, seemingly with the expectation that a profitable compromise could still be reached even if the ultimate reimbursement is a fraction of the original asking price.

The real problem regarding postemployment lien claims arises in a situation in which the former employer has decided to deny the claim. That decision might be tactically appropriate when there is a solid evidentiary basis for the denial, but, strategically, it might open the door to large-scale lien generation while the matter grinds its way through WCAB. Right now, the deny-or-accept options are currently the only ones available to the employer. We suggest that a middle ground might be useful here, *but only regarding postemployment claims*. Legislation could be drafted that would give employers a third choice in which the claim is denied within the 90-day decision period; nevertheless, they would still control the delivery of medical care related to the claim up to the $10,000 limit if the former employee wishes to continue treatment related to the injuries described in the initial claim form. If the employer chooses to exercise this option, it would bear no liability for relevant treatment that employee-selected providers delivered before exhaustion of the $10,000 limit. All other aspects of standard workers' compensation practice, including the duties and rights of all participants and applicable deadlines and procedures, would remain unchanged.

If a postemployment claim is being advanced solely for the opportunity to run up inflated lien totals, and not with any expectation that the entire case in chief will be resolved in the applicant's favor, there would be little reason for a claimant to avail himself or herself of the MPN-based care that would be available under our proposal because doing so would provide no opportunity for financial gain, and presumably the matter would simply fade away. Those applicants who legitimately believe that they have unmet medical needs will, however, continue to utilize MPN services.

Identifying the optimal instances for a former employer to select the deny-but-control option would be difficult,[1] but some panelists repeatedly claimed that they knew who the repeat fraudsters were and, just as importantly, knew where they were. If so, selective use of the new

[1] We might think of the binary choices now available to employers as *deny or accept*—that is, deny the claim and have no control or accept the claim and control the treatment. *Deny but control* is a potential third option.

option to target those problem providers and locations could help to undercut the pernicious incentives to churn out unjustified liens. For those employers in areas where inflated postemployment provider liens are not perceived to be a problem, the current options of either denying or accepting would presumably continue to be the predominant choices when evaluating new injury claims.

We think that our approach is a relatively simple one, allows employers to continue to operate in the same way that they do today if they so desire, is likely to be used in only a small fraction of workers' compensation claims (our estimate is less than 7 percent), places no restrictions on either postemployment or CT claims, preserves the traditional practice of incorporating lien-based care into the mix of benefits available to injured employees, and, most importantly, maintains the worker's right to adequate medical care.

Remediate by Suspending Lien Claims While Holders Are Suspected of Fraud

Some media stories in 2016 reported that a small number of medical care providers under criminal indictment for fraud nevertheless continued to file lien claims in staggering volumes. One estimate is that 17 percent of all liens in the system were filed by parties who are either under indictment or had been convicted. We believe that allowing those accused or convicted of committing provider fraud to continue to receive a steady stream of cash from the California workers' compensation system makes little sense. To address this issue, we considered the relative advantages and disadvantages of options that might be used as ways to push the pause button and halt the normal course of business until legal proceedings and administrative investigations have concluded.

One approach might be thought of as the "Medicaid suspension model." A provision in the Patient Protection and Affordable Care Act blocked federal financial reimbursements to states for Medicaid expenditures if they were for "any individual or entity to whom the State has failed to suspend payments under the plan during any period when there is pending an investigation of a credible allegation of fraud." Federal regulations now require states to investigate allegations or complaints of Medicare provider fraud and to consider such allegations or complaints credible if they have "indicia of reliability" after the state has reviewed all allegations, facts, and evidence carefully and acts judiciously on a case-by-case basis. When a determination of credibility is made, all Medicaid payments to the provider must be suspended, absent good cause. Thereafter, the state must refer the case to an appropriate law enforcement agency. The suspension would be temporary only in that it would end if it is determined that there is insufficient evidence of fraud by the provider or when legal proceedings are completed. The provider can challenge the payment suspension using whatever procedures are normally available for administrative review of a state agency action.

A key aspect of the Medicaid approach is that the basis for cutting off payments is grounded in administrative law rather than criminal, and, as such, the determining entity need not require proof beyond a reasonable doubt. Even more critical is the fact that the process for making the

determination need not be a formal one, with the state given essentially free rein to design procedures that respond quickly to evidence of malfeasance. It should be noted that nothing in the Medicaid rule prevents the health care provider from practicing medicine or operating a clinic or other facility. Indeed, the Medicaid approach does not result in a permanent loss of property rights given that the ability to seek payment would be restored even if the provider was convicted and perhaps imprisoned (it would be up to the prosecutors and the judge to determine whether to make forfeiture of the right to seek payment a condition of the sentence).

Another possible approach might be thought of as the "New York licensing model." Health care providers must first register with the New York State Workers' Compensation Board before treating patients under the state's workers' compensation program. The board's chair can withdraw that authorization after a "reasonable investigation." Grounds available for such a revocation include whether the health care provider participated in fee splitting or kickback schemes or committed other financial malfeasance; was guilty of professional or other misconduct or incompetency in connection with rendering medical services; knowingly made a false statement or representation as to a material fact in any medical report or testimony; or had solicited for himself or herself or others any professional treatment, examination, or care of an injured employee.

The power to revoke is exercised frequently. Suspensions are often characterized as "temporary," although, typically, the suspension remains in effect until further notice. Behaviors triggering the temporary suspension run the gamut from minor miscues (such as a failure to keep proper patient records or failing to return a set of interrogatories) to medical board disciplinary actions, criminal arrests, indictments, and convictions. In all such instances we examined on the board's web announcement of the decision, the chair expressly determined that the physician "may be guilty of misconduct, and that such misconduct would detrimentally affect the quality of care provided to injured workers." According to our informal review of the website notices, a second instance of professional misconduct typically triggers a permanent revocation of the authorization to treat workers' compensation patients.

After comparing the New York licensing model with the Medicaid suspension model by ease of implementation and impact on addressing liens submitted by suspect fraudsters, we felt that the Medicaid rule made more sense. The New York model would certainly give DIR considerable discretion to address a variety of physician issues that go beyond mere fraud, including failures to comply with any law or regulation related to the workers' compensation system, but it would also require the agency to take a far larger role in physician licensing and in managing physician behavior. In contrast, a Medicaid-style suspension would require DIR only to take certain minimum steps to determine whether an allegation of fraud was credible, and a suspension could apply to any *provider*, which could encompass physicians, of course, but other types of caregivers (such as nurses and physical therapists) and, most importantly, entities. It should be noted that a provider suspected of fraud or other misdeeds triggering a temporary payment suspension under the Medicaid model would nevertheless be able to receive all

compensation to which it was entitled once legal proceedings and administrative investigations have concluded. Requiring a convicted defendant seeking a more favorable sentence to withdraw all current liens connected with the fraud in question would be one way to avoid enriching a confirmed fraudster. A second means of permanently cutting off reimbursement of fraudulently submitted liens would rest in the hands of the judges of the WCAB, utilizing their broad equitable powers in instances in which fraud has occurred. It should also be noted that the Medicaid suspension rules do not specifically address the question of how to handle the submission of accounts receivable purchased by a third party when the underlying liens were originally issued by a provider later under investigation for fraud. Some additional language would be needed to make it clear that the taint of the original issuer follows the accounts receivable wherever they go.

We developed the above recommendation prior to the passage of Senate Bill 1160 and Assembly Bill 1244 in 2016. Section 7 of Senate Bill 1160 (now codified at California Labor Code § 4615) stays, at least temporarily, all medical liens when the associated physician or provider has been criminally charged for fraud regarding workers' compensation, medical billing (presumably covering billing to any party, including private patients), insurance, or Medicare or Medi-Cal. Once the criminal proceedings are disposed, the stay would be lifted. Section 1 of Assembly Bill 1244 (now codified as Labor Code § 139.21) requires the DWC administrative director to suspend from participating in the workers' compensation system those providers who have been convicted of various crimes (arising from fraud, abuse, or financial crimes related to workers' compensation, Medicare, Medi-Cal, or any patient; from conduct related to patient care; or from aspects related to the qualifications, functions, or duties of a provider); have been suspended from the Medicare or Medicaid program for fraud or abuse; or have had their credentials to practice medicine revoked or surrendered. Following a workers' compensation program suspension as a result of felony or misdemeanor convictions, all of the provider liens not subject to dismissal as a result of the triggering criminal conviction would be consolidated in a single special lien proceeding. There would be a rebuttable presumption at the proceeding that the liens arose from the conduct that led to the suspension and, as such, are invalid (the provider would have to prove by a preponderance of the evidence that some or all of the liens were unrelated to the suspension-triggering conduct).

We then compared our recommended Medicaid suspension policy with the recent statutory revisions regarding lien stays (Labor Code § 4615) and provider suspensions (including associated lien procedures; Labor Code § 139.21). Although the type of sanction (ranging from an inability to be compensated for certain services rendered to complete exclusion from participating in the workers' compensation system) is an obvious difference between the three approaches, perhaps the most important distinction is the threshold to be met in order for any lien-related sanctions to be imposed. The highest bar to be cleared arises from Labor Code § 139.21's requirement that the provider be convicted of certain types of felonies or misdemeanors before outstanding liens would be subject to special proceedings. A lower

threshold required by Labor Code § 4615 would involve only the filing of criminal charges, rather than actual conviction, before lien payments would be suspended. The lowest threshold used among the three approaches would be the Medicaid payment suspension policy's requirement of a credible allegation of fraud, needing only some "indicia of reliability" following whatever "due diligence" the state "deems necessary" in an examination of any suspicious behavior.

An important issue for all three of these tools for combating provider fraud involves how each would deal with outstanding liens. Once criminal charges are filed against a provider, Labor Code § 4615 imposes a temporary stay of all liens until the criminal case has been resolved in some way. The Medicaid suspension model essentially reaches the same result following an administrative determination of credible fraud allegations, although the stay would apply to any payment, even if sought by means other than a lien. Both approaches depend on prosecutors to address the issue of any unpaid liens when negotiating a plea bargain or advocating for conditions to be imposed as part of the sentencing order. A prosecutor's actions thus provide an opportunity to address a provider's entire portfolio of liens and not just those related to the specific criminal charges that led to the conviction. In contrast, there is a potential that Labor Code § 139.21's special lien proceedings will void only a fraction of the outstanding liens filed by a provider who is later convicted and subsequently suspended. A key phrase in the statute assumes that the tainted liens "arise from the conduct subjecting the physician, practitioner, or provider to suspension." Thus, if the provider's suspension was the result of a criminal conviction unrelated to workers' compensation (such as one arising from Medicare fraud), it would appear that none of the outstanding liens filed with DWC could be voided. If California workers' compensation fraud or abuse was involved in the conviction, a suspended provider might still have little difficulty sidestepping permanent voiding of most of his or her liens, if they involved patients who were never identified in the concluded criminal proceedings and, as such, were not a part of the *specific* conduct that led to the suspension. Thus, all three approaches available under Labor Code § 139.21, Labor Code § 4615, and the Medicaid fraud model require DWC to work closely with prosecutors with the goal of wiping out as many liens as possible at the sentencing stage.

Despite the considerable promise offered by Labor Code §§ 4615 and 139.21 regarding preventing those who are the subject of criminal proceedings from profiting from their wrongdoings, we continue to believe that the approach we recommend offers DIR another useful tool to combat workers' compensation fraud. A very serious threat from fraud comes from those health care providers who have never been prosecuted, let alone convicted, but are nevertheless the subject of credible allegations of wrongdoing. Requiring that prosecutors take the first step as is contemplated by Labor Code §§ 4615 and 139.21 makes little sense given that California workers' compensation is part of the *civil* justice system and is designed (at least in theory) to be a less formal, less adversarial, and more administratively oriented process than a prosecution or even ordinary tort litigation. Information gathered during an administrative investigation

contemplated by the Medicaid suspension approach, one conducted during a period in which the flow of money is temporarily halted, can absolve the provider of any suspicion of wrongdoing, lead to criminal proceedings, and help inform policymakers as they tailor the existing framework of laws to better control undesirable behavior.

Conclusions

A singularly focused approach to the analysis of workers' compensation data is required if the power and promise of advanced techniques to detect fraud and identify those who commit it are to be realized. Moreover, those data have to be easily and readily available to the analysts on an ongoing basis, without the need to repeatedly seek temporary access to externally held but nevertheless useful information each time a new hunt for fraudsters and their schemes is undertaken. As such, we believe that *a centralized and permanent workers' compensation fraud data unit enhances opportunities for detecting and addressing this very special species of fraud*. Such a unit would have primary control over the use of data analytics to look across different databases, perhaps serve as a single point of contact for the public and others when reporting suspicions of fraud, and help set priorities for investigations and enforcement activities in cooperation and consultation with other state and local agencies.

We also believe that it makes sense for DIR *to take immediate steps to incorporate the use of data analytics into its routine fraud-detection work*. Data analytics is not science fiction. It has become an indispensable tool for corporate organizations overseeing enterprises that are a fraction of the size of DIR's responsibilities; indeed, even relatively modest-sized companies now use predictive analytics when attempting to gain insight into large volumes of data. To the extent that DIR's data systems at the moment are lacking in quality and consistency and some information is being received in hard-copy form, seeing the power of analytics will provide incentives to do a better job in this area. DIR can no longer afford to collect information that cannot be mined effectively.

We also believe that *facilitating ways to bring postemployment treatment in from the cold*, as it were, will result in a win/win for former employees with legitimate claims and for employers and WCAB staff who, at the moment, have to deal with mountains of liens. Our proposed solution, one in which employers have the option of denying questionable claims while continuing to offer medical care under their control, can be applied only in those instances likely to involve employee-selected providers who repeatedly generate liens large in volume and claimed value. We believe that a nonlegitimate postemployment claim yielding the types of liens complained about at the June 2016 roundtables would quickly wither away if the only medical care possible was that provided by employer-selected doctors or if any nontrivial time was spent or costs incurred by the former employee's attorney. These sorts of schemes are profitable only when there are opportunities to generate substantial liens with minimal expenditures by the key actors involved. Importantly, our approach will not have an adverse impact on former employees

who truly have industrially caused injuries and illnesses, including conditions related to CT, that are discovered after ending their employment.

And finally, we believe that *the fraud suspension policy adopted by Medicaid presents a practical model* of how to take active fraudsters out of the workers' compensation system without DIR having to act in the expensive and complicated role of a licensing agency and without waiting for prosecutors to take the initial action. We also believe that a modified version of this policy would present an extremely useful addition to the new tools now available to administrators as a result of the enactment of Labor Code §§ 4615 and 139.21. Three caveats need to be taken into account if this approach is considered. First, it is important to make sure that such a policy is tailored so that the presentation of liens by third-party purchasers also falls under the suspension. Second, procedures must be in place to adequately notify current patients of providers who are anticipated to be the subject of payment suspensions. And third, the decision to suspend should be closely coordinated with the efforts of district attorney staff overseeing current or anticipated prosecutorial efforts against the fraudster.

This report attempts to examine a few narrowly drawn issues related to but a single type of workers' compensation fraud—namely, that in which health care providers knowingly violate legal rules or ethical principles in the pursuit of financial gain. Such fraud is resilient. Despite a number of comprehensive antifraud campaigns, fraud remains a continuing stain on what is otherwise a successful implementation of a fundamental social compromise that has served labor and business for a century. In that light, the modest recommendations we make in this report should be seen as small pieces of a very large puzzle.

Acknowledgments

We are grateful to David M. Lanier, secretary of the California Labor and Workforce Development Agency, and to Christine Baker, director of the California Department of Industrial Relations, for making this study possible. From the Division of Workers' Compensation, Raymond Meister, executive medical director; George Parisotto, acting administrative director; and Paige S. Levy, chief judge, all shared their insights with us. Eduardo Enz, executive officer of the Commission on Health and Safety and Workers' Compensation, also supplied background information important for this study. Amy R. Coombe, chief of policy and research, Office of the Director at the California Department of Industrial Relations, made sure that the RAND team had considerable access to information and people at every point in the research. Barbara O. Wynn and Frank Neuhauser provided helpful criticisms and contributions in their formal reviews of this report. We value all of their suggestions and hope that we have responded appropriately. Any errors in methodological approach, data collection, the conduct of the research, or the conclusions and recommendations presented in this report are, of course, solely our responsibility.

We especially wish to thank those who participated in the June 2016 stakeholder roundtables in Oakland, California, including the California Department of Insurance, members of law enforcement, insurers, employers, labor representatives, government agency personnel, providers, third-party administrators, and applicants' attorneys. Their thoughtful comments and frank descriptions of fraud in the California workers' compensation system were invaluable to our work.

Jamie Morikawa, associate director, RAND Institute for Civil Justice, was instrumental in making this report a reality. Lisa Bernard performed her usual professional and thorough job of editing and organizing the final version of the report. Anisa Spotswood handled the financial and contractual aspects of this work as effectively as always. Jayne Gordon provided invaluable administrative support throughout our effort.

Abbreviations

AB	Assembly bill
CDI	California Department of Insurance
CMS	Centers for Medicare and Medicaid Services
CT	cumulative trauma
DIR	California Department of Industrial Relations
DWC	Division of Workers' Compensation
EAMS	Electronic Adjudication Management System
EFDS	Electronic Fraud Detection System
FPS	Fraud Prevention System
GAO	U.S. Government Accountability Office
HCFAC	Health Care Fraud and Abuse Control Program
HHS	U.S. Department of Health and Human Services
IRS	Internal Revenue Service
MFCU	Medicaid Fraud Control Unit
MPN	medical provider network
OIG	Office of Inspector General
OMFS	Official Medical Fee Schedule
ROI	return on investment
RRP	Return Review Program
SB	Senate bill
SNA	social network analysis
UR	utilization review
WCAB	Workers' Compensation Appeals Board
WCB	New York State Workers' Compensation Board
WCIRB	Workers' Compensation Insurance Rating Bureau of California
WCIS	workers' compensation information system

Chapter One. Introduction

Motivation

Workers' compensation fraud is thought to be one of the fastest-growing forms of insurance fraud, reportedly costing insurers and businesses billions of dollars each year nationwide.[2] Workers' compensation programs are particularly susceptible to fraud because the underlying theoretical foundation for these systems—that the worker will give up his or her right to seek redress for work-related injuries and illnesses through tort litigation against the employer in exchange for an administrative system rendering swift and appropriate compensation and medical care with reduced transaction costs[3]—requires some important assumptions that could lend themselves to exploitation by those with improper motivations. For example, California's workers' compensation system tends to give the benefit of the doubt to the assertions of the injured worker in order to avoid placing an undue burden of proof on the shoulders of those already facing hardship.[4] It relies on medical care providers to act solely in the best medical interests of their patients, uninfluenced by the financial implications of various treatment options. It depends on the attorneys who represent workers, employers, insurers, and providers to discharge their duties in an ethical and professional manner at all times so that the state avoids having to spend resources to monitor their behavior. It assumes that insurers are operating in good faith when fulfilling their obligations to their insureds, their insureds' beneficiaries, and regulators. And, absent evidence to the contrary, it presumes that employers are complying with the rules regulating their financial responsibilities, as well as their postinjury relationships with their employees.

In a few well-publicized instances, however, these assumptions have clearly been breached to varying degrees, and intentional malfeasance on the part of some actors within the system has resulted in shocking headlines suggesting rampant avarice, a pattern of disregard for the rule of law and ethical behavior, and, in some cases, an unconscionable willingness to provide highly questionable "treatment" that might result in significant injury, all in the pursuit of material gain.[5] Although the evidence is overwhelming that the responsibility for these reprehensible actions is limited to a fraction of those connected with California workers' compensation, fraud's

---

[2] California Department of Insurance (CDI), 2016.

[3] See, e.g., *Shoemaker v. Myers*, 52 Cal. 3d 1, 16 (1990).

[4] California Labor Code § 3202 provides that the rules governing the state's workers' compensation system "be liberally construed by the courts with the purpose of extending their benefits for the protection of persons injured in the course of their employment," a command that "governs all aspects of workers' compensation," applying to "factual as well as statutory construction." *Arriaga v. City of Alameda*, 9 Cal. 4th 1055, 1065 (1995).

[5] See, e.g., California Department of Insurance, 2016; Davis, 2016; Davis, 2015; Branson-Potts, 2015.

adverse economic impacts on businesses, insurers, and state government—and, importantly, the compromised health and welfare of the people whom the system was designed to protect—justify a sense of strong outrage and betrayal on the part of the public and policymakers alike.

An understandable initial reaction to such examples of deplorable behavior by trusted people and organizations is to do whatever it takes to prevent its occurrence in the future. Rules might be tightened, guidelines narrowed, eligibility criteria heightened, and the level of scrutiny received by every actor in the system ramped up many fold, all for the sake of locking the door to fraud forever. But the reality is that total security from all forms of deceitful behavior is never practical or even desirable. For one reason, the achievement of a completely fraud-proof workers' compensation program would be prohibitively expensive because much of the existing delegation of responsibility to workers, providers, attorneys, and others would have to be replaced by intensive, unceasing, intrusive, and presumably costly oversight by regulators and law enforcement. For another, perhaps more compelling reason, rule changes that serve to eliminate all possible means to deceive and scheme might well have adverse collateral consequences for many of those who legitimately seek monetary and medical assistance for injuries and illnesses triggered as a result of their employment. In other words, the underlying foundation of the workers' compensation system, the "grand bargain"[6] struck more than a century ago, might be at risk. As a result, any solutions developed by those seeking to address shortcomings in the regulatory framework that permit certain bad actors (commonly referred to as *fraudsters*) to operate with apparent impunity must be implemented in a way that minimizes the potential for unintended negative impacts on workers and on those on whom the system depends to deliver timely, adequate, and cost-effective benefits.

This report focuses on one particular form of workers' compensation fraud: the intentional manipulation of rules and procedures by providers, particularly those delivering health care services and supplies. The report describes our framework for conceptualizing the sources of and remedies for workers' compensation fraud in California, discusses various data-driven fraud-detection efforts utilized by other governmental programs, examines specific aspects of the California approach that might need addressing, and offers some high-level recommendations in that light for the consideration of regulators and legislators.

Approach

To inform our discussion, we reviewed academic journal articles on methods used to detect and prevent fraud in the insurance, financial, and public sectors; academic and policy literature on the characteristics and sources of workers' compensation fraud; media articles on the use of fraud-detection technologies and their performance; and legal treatises describing the overall statutory and regulatory scheme for recovery from employment-related injuries in California. We

[6] See, e.g., Rubenstein, 2016.

also attended four days of public roundtables in June 2016 hosted by the California Department of Industrial Relations' (DIR) Office of the Director, CDI, DIR's Division of Workers' Compensation (DWC), and the Commission on Health and Safety and Workers' Compensation. The meetings involved extensive discussions between the roundtable hosts and stakeholders representing insurers, employers, labor, government agencies and prosecutors, providers, third-party administrators, and applicants' attorneys. The comments that stakeholders made at these sessions provided real-world guidance for our work.

Chapter Two. What Constitutes Workers' Compensation Fraud?

Common Types of Fraud

In what might be thought of as its purest form, fraud can be characterized as the making of a knowingly false or fraudulent material statement or material representation for the purpose of deceiving others or another so that they act, or fail to act, to their detriment. Examples in the context of the California workers' compensation system might include an employee filing a false injury claim in order to receive benefits, an employer intentionally misrepresenting the size of the company's payroll in order to pay reduced premiums to an insurer, or a health care provider knowingly submitting a bill for services that were never rendered. Depending on the language contained in various provisions in California's Insurance Code, Labor Code, Business and Professions Code, and Penal Code, the making of such material statements or representations can rise to the level of a criminal offense.

In this report, however, we use the term *fraud* in a more expansive sense and include false or fraudulent statements or representations that might not meet the legal requirements for criminal sanctions but nevertheless were made for material gain or to negatively affect the rights of others. We also include actions that constitute what can be thought of as abuses of the workers' compensation program—in other words,

> behavior that is deficient or improper when compared with behavior that a prudent person would consider reasonable and necessary operational practice given the facts and circumstances [including] the misuse of authority or position for personal gain or for the benefit of another

even if such actions are not in and of themselves illegal.[7] An example of such abusive behavior might be a doctor who knowingly orders unnecessary tests or procedures for an injured worker he or she is treating. *Deficient* or *improper* behavior would, by our definition, also encompass actions that constitute any knowing violation of statutes or regulations relevant to the workers' compensation program (for example, a violation of Insurance Code § 1871.7's prohibition on an attorney's use of third-party "steerers" to procure clients for his or her workers' compensation practice, even if the claims that would be advanced are wholly legitimate). Thus, in this report, *fraud* encompasses fraud in the traditional sense (whether or not subject to criminal prosecution), abuse, and illegal activities.

Conceptually, workers' compensation fraud in California can be divided into six general categories: *provider* fraud (which typically involves the provision of medical services and supplies but also can include other services, such as transportation and interpretation), *employer* fraud, *worker* fraud, *attorney* fraud (including hearing representatives), *insurer* fraud (including

[7] U.S. Government Accountability Office (GAO), 2014a, p. 40.

independent insurance agents), and *claims adjuster* fraud.[8] Table 2.1 presents various examples of fraudulent behaviors within each of these six broad categories, although the list of examples is by no means an exhaustive one.

Table 2.1. Examples of Workers' Compensation Fraud

Fraud Category	Example
Provider	Phantom billing (submitting claims for services not provided)
	Duplicate billing (submitting essentially the same claim after reimbursement)
	Up-coding (billing for a service with a reimbursement rate higher than the one associated with the service actually provided)
	Unbundling (submitting several claims for services that should be billed as only one service)
	Knowingly providing or ordering excessive or unnecessary services or supplies
	Knowingly presenting false or fraudulent claims
	Receiving kickbacks in exchange for directing patients to other service providers
	Making payments to health care providers for ordering certain prescriptions or medical equipment
	Directing patients to external service providers in which the referring provider or provider's family has an undisclosed financial interest
	Using "runners," "steerers," or "cappers" to solicit patients
	Operating fraudulent "medical mills" with physicians or other health care providers who lack proper or required credentials (or who do not exist at all)
Employer	Misclassifying employees as having jobs that carry less risk than their actual jobs do
	Making false or fraudulent statements in opposition to a work injury claim
	Acting to discourage workers from making or pursuing a claim
	Concealing claims filed by employees (perhaps by making direct payments to health care providers for treatment of work-related injuries) to avoid premium increases
	Underreporting payroll to gain lower premiums—e.g., by paying employees off the books or falsely presenting employees as subcontractors or independent contractors
	Failing to acquire workers' compensation insurance at all
	Evading experience modifications—e.g., by closing then reemerging as a new company on paper to avoid having premiums increased after unexpected claims
Worker	Faking injury claims
	Inflating or exaggerating claims regarding actual injuries
	Failing to report earned wages while receiving temporary disability benefits
	Claiming for injuries sustained outside of work

[8] These six categories represent what might be thought of as the most common forms of fraud in the California workers' compensation system, but certainly there could be others, such as wrongful acts committed by judicial officers, administrative agency staff members, or elected officials. It should also be noted that each category encompasses all actions by those associated with the person or entity identified in the category label. For example, we would still consider theft of a settlement check by a law office secretary to be attorney fraud, even if no attorney in that office had knowledge that such an act had or could have occurred.

Fraud Category	Example
Attorney	Knowingly presenting false or fraudulent claims
	Using "runners," "steerers," or "cappers" to solicit clients
	Cashing benefit or settlement checks intended for clients
	Receiving kickbacks in exchange for directing clients to service providers
Insurer	Knowingly and intentionally refusing to comply with workers' compensation obligations
	Failing to pay or delaying clearly legitimate claim payments in bad faith
	Receiving premiums as an agent but failing to forward to insurers
	Failing to pay taxes and other assessments to the state or regulators
Claims adjuster	Falsifying documents to avoid the imposition of penalties for delay
	Falsifying documents to justify the denial of claims
	Receiving kickbacks in exchange for directing claimants to certain service providers
	Triggering payments to nonexistent recipients for the adjuster's own benefit

The nice, neat divisions in Table 2.1 are, in fact, misleading: They imply that sole responsibility for a particular instance of fraud falls on a single category of actors within the workers' compensation framework. In reality, there can be significant "cross-pollination." Some instances of provider fraud, for example, involve the complicity of workers who receive financial compensation for their participation in schemes to present bloated bills for services to insurers, while attorneys might work closely with groups of providers in utilizing cappers or steerers to build sizable claimant inventories. Nevertheless, the categories are useful ones for conceptualizing the *primary* drivers behind particular wrongful behaviors.

There is little question that any comprehensive effort to combat fraud in the California workers' compensation system must at least consider ways to address all six categories. There are distinct differences, however, in the financial impact of various types of fraud, suggesting that such efforts might be best focused, at least initially, on areas in which the overall need for reform is greatest. Evidence exists, for example, that employer fraud might be far and away the most costly category in the aggregate and perhaps the most damaging to honest employers that have to pay more than their fair share of the premium burden as a result.[9] However, we have been asked to concentrate this review on provider-related fraud, with a special emphasis on innovative techniques that use data analytics (we are given to understand that parallel DIR research and policy analysis will be addressing other areas, such as employer fraud). Even with such a focus, the tools that we discuss regarding provider fraud can have a spillover effect in terms of combating other categories as well, given the need for fraudulent providers to sometimes act in concert with attorneys, workers, and others who are knowingly participating in the illegal activity.

[9] Johnson, 2013.

A Framework for Analysis

Proposals to address the problem of provider fraud in the California workers' compensation system are likely to embrace one or more of the following key goals:

- *prevention:* building barriers to stop certain types of fraudulent behavior from being possible or profitable
- *detection:* identifying those who have acted fraudulently in the past or who are currently committing fraud
- *remediation:* taking steps to stop ongoing fraudulent behavior or profiteering from past activities after offending parties have been identified
- *restitution:* recovering defrauded funds with the intention of helping to restore victims to their prefraud condition
- *retribution:* achieving a sense of justice for both victims and for the public at large through sanctions, such as civil penalties, criminal fines, probation, or incarceration
- *deterrence:* transmitting signals to the larger community that fraudulent behavior is not worth the potential for detection, punishment, and other downside risks.

It is important to realize that even the most creative tool to target provider fraud would be unlikely to address all or even a majority of these goals. The most effective way to build a comprehensive solution to the problem would be to implement an array of changes to existing policies and regulatory practices, with the individual components of that package designed to achieve different aims. For example, one might consider the following:

- making modifications to existing statutes and regulations in order to close known loopholes that fraudsters continue to exploit
- using innovative approaches for the analysis of information collected about claims, payments, liens, and the like in order to flag suspicious patterns of behavior and identify potential fraudsters
- providing regulators with effective and easily deployed tools in order to prevent known bad actors from continuing to participate in the California workers' compensation system.

As might be apparent, these three prongs of a possible package address goals involving only detection, prevention, and remediation. Informed by our review of existing authority and the comments and suggestions that stakeholders offered during the June 2016 roundtables, we feel that sufficient tools are already in place for achieving aims related to restitution, retribution, and deterrence and that enhancing such tools would not yield significant reductions, at least in the near future, in the types of fraudulent activities that have been the focus of media articles and policymaker attention. For example, the California Workers' Compensation Appeals Board (WCAB) already has broad equitable powers to order restitution in the aftermath of fraud and need only apply the modest standard of proof necessary for civil, rather than criminal, fraud (courts generally have an inherent power to issue any order, process, or judgment that is

necessary or appropriate to carry out their duties and to prevent abuse, oppression, or injustice).[10] The penalties for making false material statements for the purpose of obtaining or denying compensation are already significant, and, under Insurance Code § 1871.4, criminal convictions can lead to jail time of up to a year and fines of up to $150,000 (or double the value of the fraud, whichever is greater), with the potential for sentencing enhancements in the case of repeat offenders. But doubling or even tripling these potential penalties, an approach that would be relatively straightforward to implement legislatively, is unlikely to reduce the frequency and severity of fraud within a limited time horizon. A substantial body of research has concluded that little evidence exists for the assertion that harsher sanctions always reduce crime rates.[11] In contrast, it is the *certainty* of punishment, rather than the *severity* of the punishment, that is most likely to deter undesired behavior.[12]

How best then to achieve such certainty? One way would be to provide local district attorneys with sufficient resources to successfully prosecute workers' compensation fraud, even when the amounts of money alleged to have been obtained through fraudulent means are small compared with the public costs typically incurred when seeking a conviction. It is our understanding that a funding mechanism for augmenting prosecutorial budgets for this specific purpose already exists. But an undeniable fact is that proving fraud in a criminal court of law is extremely challenging, given the reasonable-doubt standard, highly complex facts in some instances, the need to convincingly show overt criminal intent rather than a mere mistake or an error in judgment, highly competent private defense counsel, and sometimes sympathetic defendants. This appears to be especially true with regard to provider fraud. Our informal review of all reported workers' compensation fraud convictions in California during the 12-month period from July 2015 through June 2016 identified 610 successful prosecutions.[13] Of these, it appears that 11 involved provider fraud, 166 involved worker fraud, 400 involved employer or premium fraud, four involved an insurance agent or claims adjuster, and 29 were identified as involving participants in various roles other than as providers. The low number of provider prosecutions relative to other types of fraud is certainly understandable. These efforts can be labor- and time-intensive, sometimes taking years to complete the path from initial investigation to conviction, and can involve complexities not always present in criminal matters related to individual claimants or employers. They can also result in stopping large-scale schemes in which multiple providers, millions of dollars of fraudulent activities, and multiple dates of service are involved, suggesting that the aggregate impact of prosecutorial efforts in this area is

---

[10] See, e.g., *Blick v. W.C.A.B.*, 3 Cal. WCC 379 (Cal. App. 1 Dist. Mar. 5, 2009); *Bankers Indem. Ins. Co. v. Indus. Acc. Comm'n*, 4 Cal. 2d 89 (1935).

[11] See, e.g., Doob and Webster, 2003.

[12] See, e.g., Wright, 2010.

[13] CDI, undated; California Employment Development Department, 2017; California Employment Development Department, undated.

disproportionate to the number of actual convictions. That said, a provider conviction rate of less than one per month in a state with nearly 40 million residents is unlikely to have an immediate deterrent effect on the vast majority of providers now committing fraud who apparently have little problem with breaking the law or abusing their positions of responsibility. Something with a more tangible impact is also needed in the short run, especially with regard to providers whose activities might be operating just below the radar of prosecutors and agency investigators.

Although formal enforcement efforts are certainly important and need to be maintained,[14] we believe that taking additional steps now to address the first three goals (detection, prevention, and remediation) would be of great assistance in the fight against provider fraud. In Chapter Three, we discuss how advanced data analytics works and the manner in which various social welfare programs have used them for the detection of provider fraud. In Chapter Four, we explore some possible changes to existing law that might help minimize the opportunities for initiating one specific type of provider fraud in the first place. And, in Chapter Five, we discuss potential ways to remove suspected fraudsters' ability to continue to profit from the system's generosity and proworker orientation. Finally, in Chapter Six, we present recommendations and conclusions.

[14] CDI representatives have informed us that there are 40 pending prosecutions of medical provider fraud as of this writing.

Chapter Three. Detection: Using Advanced Analytics to Identify Fraud

The need to identify instances in which fraudsters are exploiting a social welfare system is not unique to the California workers' compensation program. Medicare, Medicaid, the Social Security Administration, and the Internal Revenue Service (IRS) all have similar concerns regarding activities conducted by those who would intentionally violate rules or mislead others for the purpose of financial or personal gain. In recent years, these entities have all taken significant steps toward combating the problem of fraud through the use of advanced analytics, a rapidly developing field of information science that involves intensive examination of large volumes of data in order to "discover deeper insights, make predictions, or generate recommendations."[15] Traditional analysis of data for business purposes has generally focused on performing queries and generating reports, such as those calculating the number of claims filed annually for the past ten years or listing the names of all claimants living within a particular ZIP Code. Advanced analytics differs in that it can be used to discover relationships across records, even those that exist in different locations or consist of a mix of structured and unstructured data. To varying degrees, these agencies have been using advanced analytics to subject the information they collect for routine business purposes to sophisticated techniques for detecting unexpected patterns suggesting suspicious behavior.

The discussion that follows begins with an overview of some basic concepts associated with advanced analytics. We then describe how some governmental entities concerned about fraud have employed these techniques. A key focus is on Medicare because both the federal health care system and the one in place for workers' compensation in California have been repeat targets of fraud initiated by medical providers and suppliers.[16] Finally, we discuss issues related to the potential implementation of advanced analytics in the context of workers' compensation in California.

Background

Common Approaches

One method businesses have traditionally used for detecting fraud through the analysis of in-house data is employing sets of rules to filter documents or groups of documents, then flagging

[15] Gartner, undated.

[16] Indeed, it is not unknown for essentially the same type of fraud (often involving the submission of claims for services that were never rendered) to be allegedly committed by the same provider in both systems. See, e.g., Lowes, 2015.

those identified as suspicious.[17] For example, non–workers' compensation insurance claims might be flagged for further examination if they occur within 30 days of the start of the policy, if the cost of medical care exceeds some set dollar amount, if the medical costs involved are more than two standard deviations above the norm, or if a claimant's claim frequency is three or more standard deviations above the mean. Such tests, although helpful in quickly identifying potential issues, might rely on historical patterns that become less relevant over time or on seat-of-the-pants guesswork that might be poorly supported by the evidence. For example, one such rule commonly noted in materials describing warning signs for possible workers' compensation fraud is that adjusters should more closely examine any claim first filed on a Monday, presumably due to an increased likelihood that the injury actually happened during the weekend when the worker was not on the job. Various empirical studies have called this assumption into question.[18] Yet even if the Monday filing "rule" accurately reflects actual historical experiences in some states, the underlying conditions in others might be quite different, and reliance on such inflexible guidelines might result in few instances of detected fraud and resources diverted from more-fruitful areas of investigation.

Where advanced analytics differs from this traditional approach is in its ability to look across data and essentially generate its *own* individualized rules for assessing the likelihood that a claim (or a service delivery or whatever aspect is of interest) might involve fraud.[19] Often, these rules, typically in the form of a complex set of criteria that take into account many different data elements rather than a single factor, such as the relative size of the medical claim or the time elapsed from policy start to claim filing, would have been beyond human analysts' ability to discern directly. Some businesses and government programs report that they have achieved substantial returns on investment (ROIs) in state-of-the-art advanced analytics systems that use sophisticated computer modeling techniques. In the private sector, financial service companies have taken the lead in this area and have long used such systems developed by business intelligence vendors, such as IBM, LexisNexis, Microsoft, Oracle, Qliktech, SAP, SAS, and Tableau.

In the discussion that follows, we first describe basic concepts involving predictive modeling, an advanced analytics technique often used for fraud detection because it works well in classifying records by the degree to which they are similar to others of interest (for example, claims that are known to involve fraudulent aspects). We then briefly describe two other techniques (descriptive analytics and social network analysis [SNA]) that are also being used in the context of fraud-prevention programs. It should be remembered, however, that advanced analytics is a rapidly evolving field, with continued development of new tools and the refinement of old ones. This is especially true regarding the use of advanced analytics to deal with fraud, as

[17] Kou et al., 2004; Major and Riedinger, 2002.

[18] See, e.g., Campolieti and Hyatt, 2006, and Card and McCall, 1996.

[19] Bolton and Hand, 2002.

a considerable body of research continues in this area, spurred by the potential financial benefits for businesses and government agencies. It is beyond the scope of this report to cover all methods by which advanced analytics is conducted. Moreover, few large-scale applications of advanced analytics in the private and public sectors use a single technique. A single application often uses an array of tools, tailoring the choice of technique to best fit the questions being asked or the nature of the data being examined.

Predictive Modeling

Statistical analyses using predictive models seldom provide conclusive evidence of fraud. Rather, they alert analysts to the fact that a particular observation is more likely to be fraudulent than others, so that it can then be investigated in more detail. Many fraud-detection analytics systems compute a fraud indicator score (sometimes referred to as a suspicion score or proximity score) for each claim, claimant, provider, or employer, depending on what is being investigated. Records with scores above a certain threshold are prioritized and become targets for further investigation. Because detailed investigations are costly, investigative resources can be used more effectively if they can focus on only those instances that are most likely to be fraudulent, rather than simply investigating random samples that are likely to contain many nonfraudulent cases.

In predictive modeling, a range of statistical methods is used in concert to rank records by the likelihood of fraudulent behavior. Predictive modeling involves a type of *supervised learning* in that the application uses samples of records (sometimes called *seeds* or *exemplars*) that a human reviewer designates as being either fraudulent or nonfraudulent to self-construct models that allow for the ranking of all remaining observations on a continuum from those with the lowest likelihood of fraud to those with the highest. Essentially, these models create a type of template describing characteristics of records that the human reviewers identify as involving fraudulent aspects and the degree to which each characteristic, either by itself or in concert with others, is associated with the known fraud group but not with the known valid group. The ranking of unknown records reflects how well each fits the template. In one common approach involving supervised machine learning, samples of the newly ranked records are pulled and again subject to eyes-on review, and the confirmed results help the application refine its models. The process is repeated until there is an acceptable level of agreement between the human reviewers and the application whenever samples are pulled for testing.

Descriptive Analytics

Predictive modeling is limited in that it can typically detect only forms of fraud that have occurred before. By contrast, an unsupervised learning approach that descriptive analytics methods use make few (or no) assumptions about the characteristics of fraudulent versus nonfraudulent behavior and instead seek to identify (i.e., describe) clusters and patterns

containing similar records based on criteria that the application discovers.[20] Unexpected clusters or patterns could suggest that a previously unknown variety of fraud scheme had developed. For example, a pattern might be detected in which recent records from a specific geographical location reflect characteristics notably different from historical experience in that same area (or from all other locations currently), such as a spike in certain types of claims brought by certain types of claimants using certain types of providers. It is up to the human analysts to determine whether such groupings evidence potentially fraudulent activities or at least to determine whether certain clusters should be the subject of additional analysis, perhaps using supervised predictive modeling or other advanced analytics techniques.[21] As a result, much of the labor cost associated with unsupervised learning approaches typically comes after the analysis is conducted; with techniques requiring supervised learning, those costs come during the earlier sampling and testing phases.

Social Network Analysis

The use of SNA to better understand the relationships between people and entities through the use of mapping and measuring is a decades-old field, but its application to fraud detection is relatively new.[22] Fraud-targeting SNA involves the analysis of internally and externally controlled data (including public records) to examine social linkages or connections in order to identify targets for investigation.[23] Such linkages might be found, for example, within and across claim forms (the names of the claimant and the initial treating physician), bills for medical devices (the names of the provider and the company manufacturing the equipment), state corporate registries (the name of the company, as well as the names of directors and other corporate officers), and court dockets (the names of the parties and their attorneys). Each link helps build a map of relationships in which each actor is represented as a node in a matrix with connections of various strengths to other nodes. The information is often displayed in an interactive graph, allowing the analyst to drill down to particular nodes for closer examination, but the underlying relationships are often difficult to discern visually, so other mathematical means (such as metrics for "betweenness") are used to identify areas of particular interest.

The approach usually takes one of two forms that roughly parallel the distinctions between supervised and unsupervised techniques described above. In egocentric SNA, the focus of the analysis begins with a given node of interest. For example, the social network surrounding a known fraudster, such as an indicted provider, would be displayed. As would be true for supervised predictive modeling, this approach first requires identifying at least some instances of fraud. In sociocentric SNA, the network as a whole is examined to identify patterns of

[20] Nian et al., 2016; Kou et al., 2004.

[21] Bolton and Hand, 2002.

[22] Lookman and Nurcan, 2015.

[23] See Chapter Five in Baesens, Van Vlasselaer, and Verbeke, 2015.

relationships that seem to differ in some way from others. As would be true for unsupervised descriptive analytics, those outlier patterns would be subject to additional investigation.

Key Steps

Researchers in this field have identified seven important steps required to implement an advanced analytics program in the context of fraud control:[24]

1. *Identify the business problem*. Thoroughly define the issues that need to be addressed.
2. *Identify the data sources*. Decide on the types of data that would have the maximum impact on the analysis and determine where they reside.
3. *Select the data*. Obtain the desired information and make it available for the analysis, either by gathering it into a single location or by taking steps to ensure remote access when needed.
4. *Clean the data*. Eliminate inconsistencies, perform deduplication, address missing values, standardize links between records (such as names of people or the formats used for record identifiers), and perform other tasks to enhance their quality.
5. *Transform the data*. Change the way in which data are presented in order to lend themselves more effectively to modeling (such as by grouping continuous values into smaller "bins" or modifying free-form information into a more structured format).
6. *Estimate the analytical model*. Apply advanced analytical techniques to the data, perform preliminary review of the results, and tailor the application as needed.
7. *Interpret, evaluate, and deploy the model*. Have human fraud analysts consider the results of the process, validate the findings, and put the model into production for routine business purposes.

The discussion that follows concentrates on a subset of these steps—namely, those that involve selecting, cleaning, and transforming the data. One estimate suggests that these tasks taken together require about 80 percent of the total effort required to develop an advanced analytics model.[25]

Collect Data of Sufficient Quality and Volume

To effectively deploy fraud-detection systems using advanced analytics, social welfare system administrators must first collect the right data elements with an appropriate level of quality and in sufficient volume to facilitate analysis. For some systems, however, building the kinds of databases that are basic requirements for sophisticated fraud analysis could take many years and require substantial expenditures. Here, credit card companies (a longtime consumer of cutting-edge techniques for identifying possible fraud) have a major advantage over social welfare systems because they automatically collect "accurate, real-time, and largely labeled data" in the routine course of business.[26] There are few instances in which human beings are

[24] The discussion here draws heavily from pp. 26–30 in Baesens, Van Vlasselaer, and Verbeke, 2015.

[25] Baesens, Van Vlasselaer, and Verbeke, 2015, p. 27.

[26] Travaille et al., 2011.

involved in the submission of vast quantities of information, other than to swipe a card at a terminal, and potentially expensive problems related to free-form, inconsistently coded, delayed, or missing data do not exist to any meaningful degree. Unfortunately, data of similar quality and volume might not be available at the present time in many governmental programs, some of which struggle with basic record-keeping or rely on external users, such as beneficiaries or medical evaluators, to fill out forms manually.

The costs of expediting improvements in data collection and management can be substantial, but the expense should be weighed against the benefits that could potentially be realized by introducing advanced analytics–based programs for the purpose of detecting more cases of fraud and, as a result, reducing expenditures for many stakeholders. One could argue that, because of the inexorable movement toward electronically stored information for all ordinary purposes in modern society, data quality and availability would rise anyway in the normal course of business, but it is important that any such improvements be made with an eye toward facilitating future data-mining initiatives. For example, an organization implementing an electronic document filing program (perhaps intended to reduce expenses associated with paper processing or storage) might continue to allow filers the option of using hard-copy forms in order to avoid imposing undue hardships. Such a program might be considered a success if no more than 10 percent of all filers made paper submissions. But such a policy might hamper an analytics-based approach to detecting fraud and abuse if the policy provides those with questionable intentions an easy means of escaping detection simply by opting to be one of the 10 percent sending data in hard-copy form only.

Integrate Across Systems and Data Sets

Before they can be analyzed efficiently, data from a wide range of public and private sources must be aggregated, at least virtually, into a single, large data repository—in other words, a centralized, secure, accessible platform for data management and analytics.[27] This can be a significant challenge. Even data maintained by a single organization are often siloed. For example, applications, claims, underwriting notes, billings, and other records can be stored in completely separate systems maintained by different departments or used for very different business purposes, each source employing different formats and definitions.[28] Indeed, one experienced observer in the area of governmental use of analytics to combat fraud has noted the many challenges created by the "considerable investment upfront in data cleansing, validation, and joining" required when pulling together data from sources within and external to the agency.[29] Even when the information collected uses the same terminology and layouts, there might be issues related to access, with various departments or agencies balking at giving

[27] Raj and Deka, 2014.

[28] Power and Power, 2015.

[29] New, 2016.

permission for "outside" analysts to examine their data without restrictions. Because the most effective application of advanced analytics for fraud detection means integrating the process into the normal course of business and running analysis applications on a routine basis, frequent access to all necessary data is optimal. Ultimately, the goal, once these challenges are met, is to create what might be thought of as a permanent "data lake," one that contains information across all the siloed systems and lends itself to being examined holistically and on demand.

One common problem during the integration step is that records are often tied to names rather than to truly unique identifiers. Not only is there to-be-expected variation in spellings, nicknames, use of initials versus full words, and the like; fraudsters are also perfectly aware of the benefits realized by changing names often.[30] Machine-learning and data-mining techniques can often be used to overcome these problems by inferring true values after accounting for misspellings, duplicate data, outdated information, typographical errors, missing fields, and the like. Nevertheless, unless groups of records involving the same subject can be reliably linked, advanced analytics will be unable to detect the subtlest patterns indicating fraudulent behavior.

Use the Analysis Effectively

The sophisticated analytics approaches described above, when conducted in conjunction with decision-support tools, can identify suspicious cases and then automatically route those findings to appropriate team members for further investigation. They can also be set up to trigger particular administrative actions automatically, thus reducing costs and placing the onus on those affected to contest the actions. Some steps that have been taken in the context of other programs include the following:[31]

- *law enforcement referrals:* referral of suspected fraud cases to law enforcement agencies for potential prosecution
- *payment suspension:* a temporary hold on an escrow account of all or a portion of payments to a provider or claimant
- *overpayment recoveries:* the generation and issuance of demand letters to providers and collection of overpayments
- *prepayment edits:* computer edits that revise or suspend all or part of a suspect claim
- *autodenial edits:* computer edits that automatically deny a suspect claim without making any payments
- *provider revocation:* elimination of a provider's billing privileges.

[30] Morley, Ball, and Ormerod, 2006.

[31] The list of administrative actions is adapted from U.S. Department of Health and Human Services (HHS), 2014.

Implementation Examples

Medicare

GAO has designated Medicare a "high-risk" program because of its size, complexity, and vulnerability to mismanagement and fraud.[32] The Centers for Medicare and Medicaid Services (CMS), the agency within HHS responsible for administering Medicare, uses an advanced analytics system first introduced in 2011 as one tool for identifying fraud.

The Small Business Jobs Act of 2010 required CMS to implement predictive analytics technologies to help identify fraudulent claims before they are paid.[33] In response, CMS awarded Northrop Grumman and IBM a contract worth $77 million over four years to develop the Fraud Prevention System (FPS), which performs advanced analytics on Medicare fee-for-service claim data to generate automatic alerts for suspicious activity.[34] Subcontractors involved in the effort included Verizon, which developed an automated fraud-detection platform, and National Government Services (a subsidiary of WellPoint), which provided Medicare fee-for-service expertise and helped design fraud algorithms. In early 2016, CMS awarded Northrop Grumman a second contract of $91 million to develop and implement a second-generation version of FPS with new capabilities and a better user interface.[35]

FPS is used in concert with other antifraud measures. In 2011, CMS invested in an Automated Provider Screening system, which uses data from credit histories, criminal records, death records, records of licensure suspensions and revocations, and other sources to come up with a risk score that estimates how likely providers are to be fraudulent. It has identified thousands of high-risk providers and suppliers and resulted in their removal from the Medicare program.

CMS's antifraud efforts contribute to some joint initiatives between the HHS Office of Inspector General (OIG), CMS, and the U.S. Department of Justice. The Health Care Fraud and Abuse Control Program (HCFAC) has coordinated federal, state, and local law enforcement activities to combat fraud committed against all health plans, both public and private, for about two decades. In addition, the Health Care Fraud Prevention and Enforcement Action Team investigates and prosecutes Medicare fraud. OIG, CMS, and the U.S. Department of Justice have also joined with private insurers, states, and associations in creating the Healthcare Fraud Prevention Partnership to conduct studies, exchange information, and develop best practices.

---

[32] GAO, 2015a.

[33] Pub. L. 111-240, 2010, § 4241.

[34] GAO, 2012; Censer, 2012.

[35] Dickson, 2016.

Successes

According to CMS, OIG, and GAO, FPS has achieved substantial success and met or exceeded legislative requirements and timelines. Reportedly, it achieved a positive ROI in its very first year, with ROI growing in each subsequent year. The program is claimed to have allowed Medicare to shift away from a "pay-and-chase" system focused on recovering fraudulent payments after they have been paid to one focused on preventing payments as soon as suspicious billing patterns are detected.[36]

Savings resulting from actions triggered by the program are said to have increased each year. FPS is asserted to have helped identify or prevent $655 million in inappropriate payments during calendar year 2015, with an ROI of nearly $11.50 for every dollar spent by the federal government. These costs include not only those for the contractor but also expenditures related to management (government salaries with benefits and other indirect costs, including training and travel) and investigation. In total, it is claimed that the program has saved about $1.5 billion since inception.[37]

Reportedly, FPS' positive benefits were felt almost immediately. By contrast, the first-year ROI of HCFAC, with a more traditional approach to combating fraud, was reported as just $1.30 for every dollar invested. However, such programmatic comparisons should be viewed in light of their somewhat different missions. The ROI for HCFAC was lower because the program focuses on investigating and prosecuting cases of fraud and recovering losses after the fact, both of which require large amounts of time and resources and are often unsuccessful. The Congressional Budget Office projects that HCFAC's ROI might diminish if program funding increases: Most initial funding was directed toward the most-egregious cases of fraud, and additional funding will probably be directed toward lower-level cases with less certain outcomes or smaller losses.[38]

Challenges

Despite the favorable ROI estimates, some members of Congress have raised questions about FPS since its inception. Some have stated concerns about its high cost. Others have questioned whether savings attributed to the program could have been achieved at lower cost in another way.[39] An advocacy group called Citizens Against Government Waste has voiced skepticism about these savings estimates and argues that continuing an existing initiative using private vendors to review, audit, and identify improper Medicare payments (the Recovery Audit Contractor program) would have been more cost-effective.[40] A professor of health finance at the

---

[36] CMS, 2012; HHS, 2014; GAO, 2012.

[37] CMS, undated.

[38] Congressional Budget Office, 2014.

[39] Sullivan, 2012; U.S. House of Representatives, 2015; Muchmore, 2016.

[40] Citizens Against Government Waste, 2015.

University of Minnesota has also been a vocal critic of the program's implementation, although not of the idea of using advanced analytics for these purposes, arguing that the savings it has achieved have been a mere fraction of what could have been possible.[41] He argues that CMS should stop payments of suspicious claims automatically with greater frequency, rather than waiting for humans to conduct costly investigations first.

Defenders of the program argue that health care data are more complex than credit card data and that automatic actions based on the results of the analysis are not always practical because CMS needs to take care to avoid erroneously stopping legitimate payments and, in turn, angering patients and physicians.

Several OIG and GAO reports have revealed shortcomings with CMS' information sources, an obviously critical issue because the quality and breadth of such data directly affects the results obtainable by advanced analytics software. For example, an OIG report found that the Medicare enrollment system has "incomplete, inconsistent, and inadequate" data and that there are wide variations between the records kept by Medicaid and Medicare. For example, most provider names in the Medicare enrollment database do not match the names filed with state Medicaid agencies.[42] Other concerns have been raised about the quality of the software CMS uses. For example, GAO found flaws in the approach used to verify providers' practice location addresses (in other words, the actual physical sites where health care is delivered). About 22 percent of addresses that the GAO investigators examined were invalid, identified vacant properties, or were for commercial mail receivers (such as United Parcel Service stores), despite CMS software being designed to flag such errors.[43] The GAO report also highlighted a problem related to the identification of providers who have had histories of adverse actions, such as those arising from disciplinary proceedings conducted by state licensing boards. More than 100 doctors were found to be participating in the Medicare program despite having adverse histories reflecting significant misconduct, simply by using a variety of valid license numbers issued by multiple states.[44] One can imagine that the ability to accurately and consistently identify provider names, provider practice locations, and provider license statuses would be foundational requirements for any comprehensive and practical fraud-detection system.

State Medicaid Agencies

GAO has also identified Medicaid as a high-risk program.[45] Because Medicaid is a federal–state partnership, CMS shares responsibility with state Medicaid programs for the integrity of the overall system. States license the health care providers, establish payment policies, contract with

---

[41] Parente et al., 2012.

[42] HHS, 2016b.

[43] GAO, 2015b, p. 16.

[44] GAO, 2015b, pp. 29–31.

[45] GAO, 2015a.

managed care entities, process claims, and pay for services. CMS, in turn, provides federal matching funds for their expenditures; guidance on meeting statutory and regulatory requirements; and technical assistance, including data and tools, such as fraud-detection technologies. CMS also collects and maintains several data sets for state Medicaid programs.[46]

Since its inception in 2001, CMS's Medicare–Medicaid Data Match Program, or Medi–Medi project, has mined combined data from both programs to detect suspicious billing patterns and flag possible cases of fraud. The effort has uncovered multiple vulnerabilities in the programs and identified large sums in potential overpayments.[47] It began as a pilot project in California but gradually expanded to other states, beginning with those that accounted for most of Medicaid's expenditures.

In 2013, Medicaid Fraud Control Units (MFCUs) run by various state attorneys general were given the ability to invest in their own fraud analytics capabilities and apply data-mining techniques to Medicaid data. As a result, MFCUs no longer have to rely on CMS for data analytics but can instead develop their own fraud analytics plans with federal matching funds. Many state MFCUs have since introduced systems designed by the software company SAS, for example.[48]

Several state Medicaid programs have also developed their own analytics-based fraud-detection programs. For example, MassHealth—Massachusetts's Medicaid program—introduced a predictive analytics system in 2013 that uses BAE Systems' NetReveal fraud-detection software, employing data analytics and business rules to route suspicious claims to investigators.[49] During its first six months of operation, the system reportedly enabled MassHealth to recover $2 million in improper payments and avoid paying hundreds of thousands of dollars in fraudulent claims.[50] Similarly, Illinois's Medicaid program has adopted a fraud-detection platform using SAS software.[51]

In March 2016, California's Medi-Cal Program Integrity Data Analytics procurement team awarded a contract to an Oncore Consulting–led group of vendors that included Pondera Solutions and LexisNexis Special Services.[52] The Oncore team has been asked to produce a data-driven, automated fraud-detection platform that will identify suspicious cases and create a data infrastructure for investigators to use.

---

[46] HHS, 2012.

[47] Giannangelo, 2007.

[48] SAS Institute, 2013.

[49] Marlin, 2014.

[50] Yasin, 2014.

[51] SAS Institute, 2014.

[52] admin, 2016.

Social Security

The Social Security Administration is the target of several forms of fraud, including identity theft in applications for Old-Age and Survivors Insurance and Supplemental Security Income and, notably, from physician-assisted fraud regarding claims for disability insurance. In 2014, Social Security announced that it would invest in data analytics technologies and develop computer models that detect potentially fraudulent claims using the characteristics of past fraud cases.[53] The initiative is still in a fairly early stage of development, but Social Security states that it is committed to using predictive models and automation tools and to exploiting data analytics to reduce fraud in coming years.

Social Security is also expanding the use of data exchanges and has negotiated computer matching agreements with various federal partners to obtain benefit payment data, wage data, unemployment data, fugitive felon identification, savings securities, workers' compensation, residency information, and nursing-facility admission data that will help analysts determine beneficiary eligibility and offset benefits. For example, Social Security now uses Department of Homeland Security travel data to identify Supplemental Security Income beneficiaries who are outside the United States.[54] It also uses Medicare nonuse data to identify the names of people who are receiving disability benefits but are in fact deceased.[55]

Previously, many of Social Security's practices made detecting fraud difficult. For example, it generally assigns claims randomly, so staff are unlikely to review evidence from the same physician twice and cannot detect suspicious patterns across claims. GAO believes that the development of a centralized big data analytics platform with a user-friendly interface could allow analysts to view and analyze provider claims and categorize them in a more productive manner.[56]

The Internal Revenue Service and State Taxation Agencies

The IRS is another agency that has made substantial investments in advanced analytics for the purpose of fraud detection. The agency uses analytics tools from a range of vendors, including SAS, IBM, and Booz Allen Hamilton.[57] These tools are used in conjunction with a large staff of economists and statisticians tasked with identifying the sources of fraud.

The IRS first developed its Electronic Fraud Detection System (EFDS) in 1994, which evolved into the agency's "primary frontline system for detecting fraudulent returns."[58] The

---

[53] Kanowitz, 2014.

[54] Social Security Administration, 2013.

[55] Social Security Administration, 2015.

[56] GAO, 2014b.

[57] Brown, 2016; Booz Allen Hamilton, undated.

[58] U.S. Department of the Treasury, 2015b.

EFDS used set rules to determine whether a filed return was suspicious, such as by searching for multiple returns sharing the same address or bank account numbers. Despite reportedly preventing $16 billion in revenue loss in 2012, the EFDS was felt to have "fundamental limitations in technology and design."[59] In 2011, the IRS awarded SAS Institute a $6.25 million contract to provide analytics software for the IRS's new Return Review Program (RRP), the modern replacement for the EFDS.[60] The system was piloted in 2012 and was used to analyze tax returns as they were being processed to detect identify theft, mistakes, and fraud and to identify professional tax preparers who were behaving suspiciously. That early effort reportedly prevented several hundred million dollars in erroneous tax refund payments.[61] In 2014, the IRS piloted an improvement on the RRP. That year, the upgraded system identified more than 300,000 potentially fraudulent returns that the old system had missed. Using a combination of methods, the IRS reportedly prevented more than $15 billion in payments of refunds in more than 2 million confirmed cases of fraud or identity theft.[62]

One challenge has been making all of these systems accessible, user-friendly, and, perhaps most importantly, secure. An audit by the Treasury Inspector General for Tax Administration identified security vulnerabilities in the RRP and reported that overall system security needed improvement.[63]

Several states have also introduced data analytics programs to detect and reduce fraud in state tax returns. For example, Georgia, Indiana, and Louisiana use LexisNexis Solutions' algorithms to screen returns. After Georgia began using the system in 2011, it reportedly cost $3 million to implement but caught $25 million worth of fraudulent refunds in its first year.[64] One downside of the system is the large number of false positives, which results in delays of legitimate tax return payments. The systems are said to be flexible enough, however, to allow each state to strike what it decides is an acceptable balance between speed and accuracy.

Other Workers' Compensation Programs

Some workers' compensation programs have begun to employ data analytics technologies for fraud-related purposes, although none has yet integrated such use into the ordinary course of business to the same degree as Medicare has, and the number of sites with such capabilities is relatively small.

North Carolina's Noncompliant Employer Targeting System, implemented in 2014 and developed in a partnership with SAS, seeks to identify employers in the state that lack current

[59] Booz Allen Hamilton, undated; U.S. Department of the Treasury, 2015b.

[60] Montalbano, 2011.

[61] Harbert, 2012.

[62] Brown, 2016.

[63] U.S. Department of the Treasury, 2015a.

[64] Weisbaum, 2014.

workers' compensation coverage, using data collected from the state's Industrial Commission, Department of Revenue, Division of Employment Security, and Rate Bureau.[65] Reportedly, the state has been able to increase total annual penalty collections about fivefold as a result of using this tool.[66]

U.S. Postal Service employees receive the equivalent of workers' compensation benefits through the Department of Labor's Office of Workers' Compensation Programs under the authority of the Federal Employees' Compensation Act.[67] Facing challenges similar to those of any state workers' compensation system, the Postal Service's OIG has been building predictive models to mine data for identifying claimants and providers who are most likely to be engaging in fraudulent behavior.[68] It is not clear, however, whether the benefits of this approach have been fully assessed.

The state of Washington reportedly has a single employee dedicated to looking for inconsistent provider billing patterns and reviewing leads from the public about possible provider fraud. Using what is termed *technology-assisted data-mining efforts*, this employee was reportedly able to identify more than $3 million in estimated overpayments to providers.[69]

Louisiana, Ohio, and the County of Los Angeles are all said to employ or have employed data mining to help identify suspected workers' compensation fraud, although the results of the implementation of these programs have not been well reported.

Discussion

There is little question that the use of advanced analytics offers considerable promise for detecting fraud in a complex, information-rich system, such as the one in place in California for workers' compensation. Government agencies have been somewhat slower to perceive the need to use these tools than the private sector has, but the day is probably not far off when advanced analytics is employed as a matter of routine business practice in just about any large organization that faces serious problems with fraud.

The issue at hand is whether it makes sense for DIR to take the initial steps needed to deploy some sort of advanced analytics program at the present time. Considering our review of the literature in this field, we believe that the science underpinning analytics is mature, the application of that science in the financial service industry (including the private workers' compensation insurer segment) has been well-tested and is believed to justify the implementation costs, and the marketplace for advanced analytics services and software is robust, competitive,

---

[65] North Carolina Industrial Commission, 2015.

[66] "NC Industrial Commission Fraud Team Collects Nearly $1 Million for Public Schools," 2015.

[67] 39 Stat. 742, 1916.

[68] Petrakis and Ruppel, 2015.

[69] Washington State Department of Labor and Industries, 2015.

and competent. Although government entities' experience using these methods so far is relatively limited outside the Medicare context, we could find little indication of significant dissatisfaction with how the tools are being implemented or what benefits they are achieving. In our opinion, there are no external reasons that DIR should not begin to plan for the incorporation of advanced analytics into its antifraud toolkit.

A more difficult question is whether the data currently available to DIR are broad enough and deep enough to support sophisticated uses of advanced analytics. One major concern focuses on the challenges that would be faced in integrating various data sources within DIR's control. For example, DWC has implemented its workers' compensation information system (WCIS), an important step in building a comprehensive warehouse for workers' compensation–related data.[70] Current regulations require that a claims administrator electronically transmit a first report of injury to WCIS within ten business days after becoming aware that a claim has been filed. Additional regulations require transmission of reports related to any benefit payments or notification of employee representation and of medical bill information after a payment or denial. The submission of an annual summary of benefits for every claim with benefit activity in the preceding year is also required. DWC also maintains a separate Electronic Adjudication Management System (EAMS) as a case-management system for administering disputes handled by its workers' compensation courts.[71] Much of EAMS is focused on basic court-related needs, such as scheduling and case tracking, but an important feature includes the ability to receive filings from parties in electronic form. Much of the "business" of California workers' compensation is transacted in such pleadings (e.g., requests for allowances of medical treatment liens, compromise and releases, and applications for adjudications) and therefore potentially recorded in EAMS. Ideally, WCIS (collecting data on claims, costs, and medical care) and EAMS (collecting data on interactions between different actors in the adjudicatory process) would jointly provide a rich source of information for identifying potentially fraudulent activity at the claim and benefit levels. But perhaps because they were developed essentially independently and for different purposes, WCIS and EAMS identify DWC workers' compensation claims and WCAB cases differently, and the process for linking the records in the two systems is not currently automatic.[72] To realize the full potential of advanced analytics, whatever application is put into place will need to view both transactional record-keeping systems seamlessly and will need to accurately discern relationships between individual claims and the instances in which those claims have evolved into formal cases. At a minimum, WCIS and EAMS should be integrated going forward at least to the point at which all WCAB cases and proceedings associated with a single workers' compensation claim and all claims associated with a single WCAB case or proceeding can be readily identified without eyes-on effort. Similar

[70] See, e.g., DIR, 2011b.

[71] See, e.g., DIR, 2016d.

[72] DIR, 2016f.

efforts would be needed to facilitate the linkage of records in other DWC-maintained databases to the maximum extent practical.

Another concern we have arises from the fact that the technical difficulties associated with integration increase markedly when the source of the data is external to the organization, even if the contributing site is a closely related governmental agency. Presumably, DIR will be working with agencies, such as CDI, the California Employment Development Department, the Medi-Cal Fraud Control Unit of the California Department of Justice, the California Secretary of State, and the Medical Board of California, to exchange information for the purpose of advanced fraud analysis. Unless that integration occurs smoothly and within a reasonably short event horizon, the full promise of advanced analytics will not be realized. We recommend that discussions take place at the earliest possible point to reach agreement on interagency data access and on the means available to link information in the control of each agency. "Memorandum of Understanding on Identifying Workers' Compensation Related Fraud," jointly executed by DIR and CDI in December 2016 and formalizing each agency's expectations for sharing data for the purpose of fraud detection provides a good example of such an agreement.

Yet another concern involves the degree to which DWC (or DIR more broadly) receives information in paper form. At the present time, for example, participation in DWC's "e-billing" program (in which medical bills are transmitted in digital form to payers) is strongly encouraged but nevertheless optional for medical providers.[73] Information that passes through DWC's control that is not available in electronic form is essentially lost in terms of its ability to be examined by advanced analytics software. Nevertheless, there certainly are instances in which the option to submit information in hard copy makes sense, particularly regarding injured workers who attempt to navigate the workers' compensation system independently. For some injured workers, requiring electronic filing would present significant challenges. DWC's current approach requires hard-copy filers to use paper forms specially designed to facilitate the use of optical character recognition software to convert printed information into a digitized form.[74] This appears to be a reasonable workaround, but only as long as the paper filings are quickly scanned when received and the information on such forms is used to populate database fields just as if the form had been originally submitted as an electronic document. DWC can no longer afford to warehouse mountains of paper forms even if it has good intentions to scan them at some future but uncertain point.

The paper-form issue might be a minor one compared with a more pressing problem with reporting compliance. Discussions with some who are intimately familiar with analyzing WCIS data suggest that a substantial proportion of claims is missing all medical transaction data or has no electronically reported information beyond the first report of injury. Adequately addressing

[73] DIR, 2016a.

[74] See, e.g., DIR, 2011a.

whatever problems exist in this regard should be made a top priority as advanced analytics are integrated into DIR's normal operations.

Finally, there might be legal restrictions on how data already in DIR control might be employed when the primary purpose of an analysis is to identify people who might be committing illegal activities.[75] Similar restrictions might be in place for data that other state agencies hold, and they might also have legal limitations on what can be shared with DIR.[76] It would behoove DIR to review controlling statutes and regulations to identify impediments in this regard and, if necessary, seek legislative and regulatory amendments that would minimize such obstacles.

Are these data shortcomings daunting enough to recommend that DIR defer starting the process toward implementing advanced analytics tools into its normal course of business, waiting instead until a time when all information under its control has already been transformed into analysis-ready condition? We do not believe that to be the case. Even in their current state, DIR-controlled data can be subjected to an initial application of advanced analytics to yield information about fraud that is now unknown. For example, predictive modeling could be performed on WCIS as a stand-alone data source, using claims that have already been identified as fraudulent as seeds for developing templates for assigning fraud indicator scores to other records. Identifying and applying lessons learned when employing such applications at this early stage would help identify areas in which improvements in data-related practices are needed. As long as DIR consistently moves forward with efforts to better organize the collection and integration of transactional data regarding all aspects of the workers' compensation system, there is no reason not to use analytics on available information.

[75] For example, Labor Code § 138.7 contains provisions that restrict how WCIS can be used. Relatedly, Insurance Code §§ 1877–1877.5 set forth guidelines for the exchange of information related to workers' compensation fraud.

[76] There might be, for example, restrictions on the sharing of confidential criminal investigation materials.

Chapter Four. Prevention: Bringing Postemployment Claims Back into the System

Background

Some participants at the June 2016 roundtable sessions voiced their suspicion that some providers were engaging in fraudulent activities in relation to what might be called "postemployment" workers' compensation claims. These involve instances in which a former employee files a claim related to a work-connected injury only after separation from the employment asserted to have caused the disability. A postemployment claim can be submitted a considerable time after ending the job because, under California law, a workers' compensation claim can be filed up to a year from the date of injury (Labor Code § 5405). Any sort of allegedly work-related medical condition might be at the center of a postemployment claim, but, presumably, relatively few would involve what might be characterized as an *acute* or *specific* injury, the sort of trauma or exposure that arises from an event of sudden and identifiable onset, such as a slip and fall, a motor vehicle collision, or a chemical fire. Those types of incidents during the course of employment would likely result in immediate medical treatment and diagnosis, in turn placing certain responsibilities on the employer, employee, and medical care providers that would lead to the filing of a claim while the person was still employed.

Instead, postemployment claims often involve allegations of "cumulative injury" arising from "repetitive mentally or physically traumatic activities extending over a period of time, the combined effect of which causes any disability or need for medical treatment" (Labor Code § 3208.1). Because no single event is clearly associated with the triggering of the condition, conceivably, someone with a cumulative injury might not realize before leaving employment that some work-related aspect caused, or at least exacerbated, health problems. Within the California workers' compensation community, the term *cumulative trauma* (CT) is perhaps the most common way to express the concept of cumulative injury.

Such CT claims (as well as those related to occupational diseases, such as asbestosis) have the potential to be initially filed years after the end of employment. This is because the date of injury when CT is involved is defined as "the date upon which the employee first suffered disability therefrom, and either knew, or in the exercise of reasonable diligence should have known, that such disability was caused by his present or prior employment" (Labor Code § 5412).[77] According to case law interpreting this definition, a former employee's

[77] For injuries not involving CT or occupational disease, the date of injury is more narrowly defined as "that date during the employment on which occurred the alleged incident or exposure, for the consequences of which compensation is claimed" (Labor Code § 5411). For such injuries, the maximum possible limit for filing a claim

realization that he or she has some sort of medical condition must also be accompanied by knowledge that the condition is "industrially caused" (i.e., both occurring in the course of employment and arising out of the employment itself, thus triggering the right to medical treatment)[78] and therefore potentially compensable, knowledge that can generally come only through the receipt of medical or legal advice linking the condition to employment.[79] For example, someone might seek medical advice from a health care professional about a condition that has been bothersome or painful for quite some time, only to learn during examination that the condition might well be related to a past employment.

Another reason CT injuries are the focus of many postemployment workers' compensation claims is that they have a reduced likelihood of being affected by restrictions set forth in Labor Code § 3600(a)(10) on claims that an employee brings after being fired or laid off (sometimes called the *posttermination defense*) rather than after voluntarily quitting or retiring.[80] Workers' compensation benefits for postemployment claims when the employer initiated the separation are generally barred by the posttermination defense outside of narrowly drawn exceptions.[81] One of those exceptions applies when the date of injury in a CT claim "is subsequent to the date of the notice of termination or layoff" (Labor Code § 3600[a][10][D]). Given the liberal definition of CT injury date under Labor Code § 5412, as long as the requisite knowledge that the medical condition was industrially caused first came after employment ended, the claim can go forward regardless of whether the separation was initiated by the employer or employee.

An important difference between postemployment workers' compensation claims and those advanced while the worker is still on the job lies in the employer's potential degree of control over the choice of medical treatment provider (in this report, we generally use the term *employer* to include the employer's workers' compensation insurance carrier or claims adjuster, if applicable, when discussing legal and financial liabilities and duties related to workers' compensation). Outside of instances requiring emergency medical care, a currently employed person incurring an injury while at work would likely be examined initially by a physician with whom the employer has some type of a preexisting relationship. Often, the physician is one within an employer-contracted medical provider network (MPN) or, less commonly, an

---

would be just under a year after leaving the employment, but only under the unlikely scenario that the incident or exposure happened on the very last day on the job.

[78] *Employment Mut. L. Ins. Co. v. Indus. Acc. Comm'n*, 41 Cal. 2d 676 (1953).

[79] *Zenith Ins. Co. v. W.C.A.B.*, 75 Cal. Comp. Cases 1303 (Cal. W.C.A.B. Oct. 14, 2010).

[80] It should be noted that, although the Workers' Compensation Insurance Rating Bureau of California (WCIRB) and many others involved in the California workers' compensation system use the term *posttermination* to characterize any compensation claim first presented after the end of employment, we describe these claims as being *postemployment* to avoid any confusion with matters affected by the posttermination defense under Labor Code § 3600(a)(10).

[81] Nationally, about 31 percent of all job separations are employer-initiated (U.S. Bureau of Labor Statistics, 2016).

employer-contracted health care organization.[82] Once the worker subsequently files the standard claim form necessary for putting the employer on notice that a work-related injury has occurred and requesting all compensation benefits to which he or she is entitled, the employer would then be required to furnish up to $10,000 in medical treatment until the employer formally denies or accepts the claim.[83] As was the case with the initial examination, the employer can limit the employee's discretion as to which doctors will be available to provide ongoing medical treatment under the $10,000 threshold. In situations in which the employer has established an MPN, the employee must obtain his or her treatment only from the doctors within that MPN (the employee can switch doctors if desired, but only to one associated with the MPN). Presumably, such employer-selected providers would pay close attention to DWC's medical treatment utilization schedule, the current set of official guidelines defining the extent and scope of approved medical treatment; comply with DWC's Official Medical Fee Schedule (OMFS), guidelines setting forth maximum reasonable fees for various provider services; and be cognizant of the need to submit planned courses of treatment to the employer's internal utilization review (UR) process for prior approval. In the wake of the reforms brought about by 2012 Senate Bill (SB) 863, the landmark overhaul of the California workers' compensation system (as well as subsequent changes to statutory and regulatory law), some assert that these rules and oversight are a contributing factor to costs for employers being controlled compared with those in the pre–SB 863 environment even though benefits for injured workers increased.[84]

In a postemployment claim, the opportunities for employer control over provider choice can be reduced, at least initially. Because the relationship between the employer and former employee has essentially ended, the necessary diagnosis linking the condition to the prior work would be made by a physician of the former employee's own choosing. The former employee is then required to submit the initial claim form to the employer within certain time limits after learning of the industrial nature of the medical condition. Doing so changes who is in charge of selecting the treating provider. The receipt of the claim now gives the employer an opportunity to limit provider choice until the $10,000 reserve theoretically available for treatment expenses is exhausted.

As a matter of practice in postemployment settings, however, that control will almost certainly end long before $10,000 in medical services is delivered. An employer's ability to limit an injured worker's choice of treating physician during the $10,000 treatment window is available only as long as the employer does not reject the claim. Once a claim is denied, the worker will have to request that a WCAB judge review his or her case and, hopefully, issue a

---

[82] Under certain circumstances, the employee can predesignate his or her personal physician or medical group for the purpose of workers' compensation–related treatment.

[83] Labor Code § 5402.

[84] One estimate places the annual net savings to the workers' compensation system arising from the SB 863 reforms at $1.3 billion, or 7 percent of total system cost (WCIRB, 2016b).

favorable ruling establishing the right to compensation, medical treatment, and other benefits. Although not all postemployment claims are CT claims, many are, for the reasons discussed previously, and such claims are "typically denied" by employers according to some experienced participants in the California workers' compensation system.[85] One study suggests that employers deny about 88 percent of postemployment CT claims, compared with 46 percent for CT claims filed during the employee's tenure.[86] By way of comparison, only about 6 percent of non-CT claims are disputed.[87] Such denials might be related to the absence of an immediately obvious connection between the claimed injury and the former employment; to the difficulties inherent in establishing, in the early stages of a claim in which substantial medical evidence has not yet been accumulated, that the injury arose out of the employment and occurred in the course of the employment; or even to many employers' general reluctance to acknowledge the underlying medical validity of CT injuries. Whatever the reason, the employer's decision to deny (which terminates the employer's mandated liability for up to $10,000 worth of initial medical care) has the arguably ironic effect of releasing the former employee from any obligation to limit his or her treatment to employer-selected medical providers. As long as he or she files an application for adjudication of claim with WCAB, the former employee now has an essentially unlimited right to control the identity of those providing postdenial medical care, although the expenses associated with such care would be covered only if there is a favorable result after WCAB formally adjudicates the underlying compensation claim or if the employer later agrees to pay all or part of such expenses as the result of a settlement.

Although the former employee could conceivably pay for any services that his or her personally chosen physician provides and seek to recover those expenses later from the employer, the high costs of medical care make this option impractical for many workers in the state. Some health care providers will nevertheless provide workers' compensation–related treatment to a patient with no up-front costs and eventually file what is often characterized as a *green lien* to establish the doctor's right to be reimbursed by the employer.[88] Conceivably, these liens would be paid if and when the employee successfully concludes his or her claim for compensation, but, as a matter of practice, the liens' validity might not be determined until long "after the case-in-chief is resolved via trial, settlement, or abandonment."[89] Because that determination could involve relatively complex litigation over the necessity, extent, and value of what was provided to the injured worker (potentially requiring a trial solely over lien-related issues), some have suggested that "defendants often feel pressured to settle liens that lack

[85] Willis Towers Watson, 2016.

[86] WCIRB, 2016a, Exhibit 10.

[87] Jones, David, and Hayes, 2016, p. 12.

[88] Green was the color of the hard-copy form used at one time.

[89] Pollak and Tolman, 2016, § 22:161.

substantive merit, as the costs associated with protracted litigation outweigh the value of the liens sought."[90]

Key Issues

Some representatives of employers, insurers, third-party administrators, and regulators voiced four related concerns at the June 2016 roundtables. First, the initial diagnosis and much of the subsequent treatment for these postemployment claims can take place outside of the oversight of the employer's MPN and the internal UR process, oversight that would have likely been in effect had the injury been discovered during employment. Second, postemployment medical liens were said to have the potential to accumulate rapidly following an employer's denial of compensability, a denial that is made more likely by the fact that the alleged discovery of the condition came about months or even years after end of employment.[91] Third, some representatives asserted that, when the accumulated value of the liens is sufficiently large, employers have little option other than to settle such liens even when the legal and medical basis for the overall compensation case or the liens themselves is believed to be weak. And finally, they implied that, in at least some instances, the claimed value of some postemployment liens when presented appear to be inappropriately inflated beyond what might be expected given the nature of the alleged injuries or illnesses and the typical course of treatment for such conditions. They said that the unusual volume of postemployment medical liens originating from a relatively small number of medical providers who repeatedly settled such liens for a mere fraction of asserted value justified such suspicions of fraudulent behavior.

What is known about postemployment claims, claims involving allegations of CT, and any associated medical liens? A recent WCIRB study reported that approximately 40 percent of all CT claims,

> despite longstanding statutory limitations on the compensability of post-termination claims, were reported post-termination. These post-termination cumulative injury claims were much more likely to involve multiple insurers, psychiatric injuries or multiple body parts and nearly all of these claims involved attorney representation and were filed in Southern California.[92]

There has also been a sharp rise in CT claims generally in recent years. About 8 percent of all indemnity claims during the mid-2000s involved allegations of CT, but, by 2014, that proportion

---

[90] Forsythe and Johnson, 2012.

[91] As one workers' compensation defense attorney has written, "denial of all compensability releases the injured worker from having to limit treatment to doctors within a designated MPN," thus allowing the applicant to "procure treatment with any doctor or medical group that will willingly run up tens of thousands of dollars of treatment costs on a lien basis" (Stevens, 2009).

[92] WCIRB, 2016a, p. 3. It should be noted that the term *posttermination claims*, as WCIRB uses it, might be referring to any claim first brought after the end of employment and not just to those brought after the employee was terminated (i.e., fired or laid off).

had risen to about 18 percent.[93] CT claims also offer a fertile environment for the submission of liens related to self-procured medical treatment. In 2016, for example, more than 45 percent of all liens involved cumulative injuries.[94] CT claims have also become an increasingly important component of the workers' compensation landscape in the Los Angeles metro area. In the early 2000s, the proportion of indemnity claims involving CT allegations was roughly the same in both the Los Angeles metro area and the San Francisco Bay Area.[95] By 2014, the proportion in the Los Angeles metro area was nearly double that found in the Bay Area and all other regions combined.

At the same time, the total number of nonexempt liens (meaning other than those originating with health care service plans, publicly funded benefit programs, and the like) filed each month with WCAB has more than doubled in less than two years and is now holding at about 30,000 per month.[96] Not all of these liens involve postemployment claims, but most have been characterized as arising from treatment outside the employer's control and therefore lacking UR procedures to determine whether the underlying treatment was reasonable and necessary.[97] What is interesting about these liens is that, like CT claims generally, they are characterized by a heavy concentration of filings in Southern California as a whole (about 95 percent of the total), with 67 percent of recent filings originating in the Los Angeles basin alone.[98] Moreover, the top 10 percent of medical lien filers statewide were responsible for about 75 percent of the number and aggregate value of all liens, accounting for more than $2 billion in projected total annual claims (the total for the other 90 percent of filers was a far more modest $7.4 million per year).[99] In fact, just a handful of filers drive a substantial proportion of the lien machine: In the first three quarters of 2016, ten lienholders filed about one-quarter of all liens.[100]

Geography also factors into lien value, particularly in regard to CT and cases in which the employer questions the claim's compensability. As described previously, denial of a presented claim greatly expands the potential for medical care outside of employer control, should the employee's provider choose to continue delivering services solely on a lien basis. In Alameda and San Francisco Counties, the average size of medical treatment liens presented in CT cases that are denied are not very different from those in cases in which the employer has not denied compensability (about 8 percent higher in Alameda, about 25 percent higher in San

[93] WCIRB, 2016a, p. 2.

[94] Email from Christine Baker, director, DIR, February 10, 2017, to the authors.

[95] WCIRB, 2016a, Exhibit 18.

[96] DIR, 2016e, Figure 1.

[97] DIR, 2016e, p. 5.

[98] DIR, 2016e, p. 5.

[99] DIR, 2016e, p. 6; DIR, 2016b, slides 12 and 13.

[100] WCIRB, 2016b, Exhibit 8.

Francisco).[101] In Sacramento, the size of presented liens in denied CT cases is about 28 percent less, on average. The situation is quite different in southern California: In Los Angeles, Orange, and San Diego Counties, average medical liens in denied CT cases are more than double the size of those in their nondenied counterparts.

Perhaps the most striking difference between northern and southern California regarding CT medical liens involves how the value of initially presented liens compares with what was eventually paid to satisfy those liens. Many liens are settled for less than their originally claimed value, in part because allowable charges authorized under the OMFS reflect policies designed to tightly control medical expenditures in California workers' compensation claims. A similar result occurs when a private health insurer pays only what it considers to be the reasonable, usual, and customary charge for a specific service, which is often significantly less than the amount stated on the provider's original medical bill. Other reasons for reductions can include provider uncertainties about a lien's underlying validity (such as questions about medical necessity or the potential availability of various claim-file defenses) or an employer's decision to accept an offer to compromise in order to avoid future legal expenditures in fighting the lien. Focusing on denied CT cases, we find that medical liens originally presented in Alameda (about $8,500 on average), Sacramento (about $4,200), and San Francisco (about $6,700) Counties were about two to three times larger than the amounts actually paid.[102] In San Diego County, however, presented liens (about $16,700 on average) were more than five times the size of the final payments, while, in Orange County (about $32,000), they were more than seven times larger.[103] In Los Angeles County, medical treatment liens in denied CT cases settled for just 10 cents on the dollar, reduced from about $45,000 on average in claimed services and supplies to about $4,700 in actual payments.[104] One would assume that health care providers continually facing losing about 90 percent of the asserted value of their services by offering to front the costs of care for their patients would cease their laudable generosity at some point, but the flow of liens seems to continue unabated.

These facts give rise to a suspicion that the high-dollar liens that certain providers in certain regions generate might not accurately reflect services actually rendered and were filed primarily for the purpose of forcing the insurer to settle for what appears to be mere nuisance value but instead could be a significant source of profit. In other words, there is reason to believe that the frequency and severity of CT liens in southern California are being largely driven by intentionally fraudulent acts, rather than genuine instances of appropriate medical treatment for industrially caused CT first discovered postemployment.

---

[101] DIR, 2016c, slide 6. Values described are approximations derived from our analysis of DIR's charts.

[102] DIR, 2016c, slide 6. Values described are approximations derived from our analysis of DIR's charts.

[103] DIR, 2016c, slide 6. Values described are approximations derived from our analysis of DIR's charts.

[104] DIR, 2016c, slide 6.

Discussion

As mentioned earlier in this report, a foundational assumption of the California workers' compensation system is that an injured worker must be given the benefit of the doubt when advancing a claim for compensation, absent good-faith knowledge that the claim does not involve a covered injury. That assumption is well represented by rules about when a claim for CT or occupational disease can be presented for compensation. There is no time limit under the labor code as to when one must acquire the requisite knowledge that a disability of this type is work-related. This is a reasonable approach, especially given what is known about lengthy latency periods for certain diseases related to toxin and carcinogen exposure, as well as for the subtle onset of injuries involving repetitive motions and other CTs. The question then becomes how best to reduce the seemingly ever-increasing volume of postemployment liens related to medical treatment outside the current cost controls in California's workers' compensation system without having the unintended consequence of cutting off or deterring legitimate claims or preventing the delivery of necessary medical care.

Based on what we heard from stakeholders and our review of the literature and legal treatises, it would not be unreasonable to assume that, if the treatment of medical conditions discovered postemployment is handled similarly to how workers' compensation claims made while still on the job are handled, the generation of large numbers of liens of substantial size could be markedly reduced. Medical care providers subject to UR would be unlikely to order numerous separate procedures and prescriptions with claimed values in the tens of thousands of dollars, seemingly with the expectation that a profitable compromise could still be reached even if the ultimate reimbursement is a fraction of the original asking price.

We think that it is clear that allowing a former employee who is asserting that he or she is experiencing a recently discovered industrial injury liberal discretion to receive the bulk of relevant medical care outside of SB 863's medical cost controls has no obvious benefit for the individual or the system as a whole. We understand that, in a postemployment claim situation, some lien-based treatment might be unavoidable when the condition is first diagnosed and for whatever immediate care thereafter is needed. But once the claim is filed, subsequent treatment should be rendered through an MPN (if the former employer has one in place for current employees) or by some other employer-selected provider to the maximum extent possible.[105]

A related issue that can arise involves the former employee continuing to receive treatment on a lien basis even though the employer is now, at least theoretically, in charge of choosing the provider until the $10,000 in benefits are exhausted or the claim is denied. In some instances, the responsibility for any delays in shifting care from the former employee's initial treating provider to one that the employer selects falls directly on the employer's shoulders because of "neglect or

[105] A similar requirement would be in place if the former employer had a contract with a health care organization to provide managed care for injured workers.

refusal reasonably" to provide timely treatment.[106] But, in others, it is the former employee who is failing to attend an initial medical evaluation and to start treatment within the MPN. In such instances, Labor Code § 5502(b)(2) provides a tool for employers to enforce the provision by requesting expedited hearings to seek orders for treatment and transfer of care into the MPN and obtaining corresponding orders regarding no liability for any non-MPN treatment.[107] Such enforcement efforts can involve nontrivial transaction costs for the employer and, because they require WCAB decisionmaking, can be a drain on public resources as well. Some sort of simplified procedures for reaching the same goal without active litigation would be helpful here.

The real problem with postemployment lien claims, however, arises in a situation in which the former employer has decided to deny the claim. That decision might be tactically appropriate when there is a solid evidentiary basis for the denial, but, strategically, it might open the door to large-scale lien generation while the matter grinds its way through WCAB. Part of the fault here lies with the employer. Discussions with workers' compensation attorneys suggest that employers are not always aggressively litigating these cases, preferring instead to issue a quick denial, then keep their legal costs low with as little in-courtroom activity as possible in the hope of resolving the matter quietly at some future point. This reactive approach (i.e., letting the applicant's attorney set the pace of litigation) might be a reasonable strategy in a case involving a current employee or one with a low likelihood for accumulating substantial liens, but, in a postemployment claim (especially those involving CT aspects), in which the opportunities for generating inflated medical liens or providing unnecessary or phantom treatment are enhanced, sitting back and doing little for long periods of time can eventually prove to be an expensive decision.

Conceivably, the employer could deny and then push the matter toward a quick conclusion in a situation in which a postemployment claim is truly believed to be of questionable merit and in which aspects of the case (such as the fact that it involves CT allegations in a region of the state in which such claims are unusually common) suggest the potential for large bills from worker-selected providers. The issue here is that postdenial liens can be generated quite quickly even when the litigation moves smartly toward resolution. Anecdotes and war stories do not always make for solid empirical evidence, but it is hard to ignore the tale that one participant told at the June 2016 roundtables. The participant described accidentally receiving a new-patient package in the mail from what might be described as a *lien mill*, a package that contained a busy schedule of preset appointments with a wide variety of providers along with various medications and creams already prescribed for the worker's "benefit" even before the first in-person examination. In theory, all medical care provided to an injured worker, regardless of whether the doctor was selected by the employee or the employer or whether the services were compensated directly by the employer or reimbursed through the lien process, must be limited to medically necessary

[106] Labor Code § 4600a.

[107] See, e.g., *Eun Jae Kim v. B.C.D. Tofu House, Inc*., 79 Cal. Comp. Cases 140 (Cal. W.C.A.B. Feb. 7, 2014).

services consistent with the medical treatment utilization schedule, with the provider entitled to no more than amounts allowed under the OMFS. However, the reality is that a determination of whether lien-based services complied with these standards might never happen at all. This is especially true when the liens remain unresolved long after the case in chief has concluded and are offered for settlement at a substantial discount. In such instances, it makes good short-term sense to settle for pennies on the dollar and avoid a costly lien trial, but doing so has seemed to encourage an entire cottage industry built around these types of cases.

Right now the deny-or-accept options are currently the only ones available to the employer. We suggest that a middle ground might be useful here *but only regarding postemployment claims*. Legislation could be drafted that would give employers a third choice in which the claim is denied within the 90-day decision period, but, nevertheless, they would still control the delivery of medical care related to the claim up to the $10,000 limit if the former employee wishes to continue treatment related to the injuries described in the initial claim form. If the employer chooses to exercise this option, it would bear no liability for relevant treatment delivered by employee-selected providers during the period prior to the exhaustion of the $10,000 limit. Although it does seem paradoxical that an employer believing that a claim is without substantial merit would nevertheless wish to pay for continued medical care, presumably, there will always be instances in which the employer would prefer to have SB 863's medical cost controls in place while the matter is adjudicated, even if there is a risk that some or all of those costs could have been avoided with an outright denial. Following denial, it would be up to the former employer to move the case along to its conclusion, with the potential for continued medical expenditures providing the proper incentives for a more aggressive defense.

We think that the special circumstances surrounding postemployment claims merit this type of option. If the complaints of some of the June panelists are accurate, a substantial number of postemployment claims are being advanced solely for the opportunity to run up inflated lien totals, and not with any expectation that the entire case in chief will be resolved in the applicant's favor. In such situations, there would be little reason for a claimant to avail himself or herself of the MPN-based care that would be available under our proposal because doing so would provide no opportunity for financial gain on the part of the provider operating the scam, and, presumably, the matter would simply fade away. Those applicants who legitimately believe that they have unmet medical needs will, however, continue to use MPN services. Identifying the optimal instances for a former employer to select the deny-but-control option would be difficult, but some panelists repeatedly claimed that they knew who the repeat fraudsters were and, just as importantly, knew where they were located. If so, selective use of the new option to target those problem providers and locations could help to undercut the pernicious incentives to churn out unjustified liens. In instances in which an employer is confident that its position defending the claim is a strong one (such as when certain posttermination defenses related to layoffs or firings are likely to be available), a traditional denial with cessation of employer-provided medical treatment would seem to make the most sense, assuming that the matter is moved smartly toward

conclusion. For those employers in areas in which inflated postemployment provider liens are not perceived to be a problem, the current options of either denying or accepting would presumably continue to be the predominant choices when evaluating new injury claims.

It should be made clear that selecting this proposed deny-but-control option would not constitute an admission of guilt on the part of the former employer or support a presumption of compensability. All other aspects of standard workers' compensation practice, including the duties and rights of all participants and applicable deadlines and procedures, would remain unchanged except for the employer's ability to continue to limit the choice of medical care provider until the exhaustion of the $10,000 cap. Employers would have no rights to discovery postdenial beyond what they currently enjoy. Nor would they be required to pay temporary disability benefits for wage loss. A claimant who disputes the qualified denial would still need to file an application for adjudication (if he or she has not already done so) and take the usual steps toward pursuing the claim.[108] The claimant would also have all rights currently available to him or her to challenge the employer's choice of provider or the type of care being received.

Note that we are not suggesting that Labor Code § 5402 should be amended regarding claims made by current employees. There does not seem to be substantial evidence that the problem of inflated liens after claim denial in such cases is similar in scope to what has been reported in postemployment settings. Nor do we think that treating postemployment claims differently in this regard is unusual or unjustified or creates undue complexities. There are already different rules for such claims regarding the statute of limitations related to the initial filing. More salient is the fact that law completely bars many postemployment claims simply because of how the worker ended his or her employment (as indicated previously, Labor Code § 3600[a][10] allows postemployment claims if the worker had quit or retired but not if he or she was terminated or laid off). In this regard, the legislature has clearly taken a position that postemployment claims are a unique species of workers' compensation, necessitating a unique set of rules.[109]

How often would this new option be used? Our proposal is limited to claims brought postemployment, although, in actual practice, only those postemployment claims with cumulative-injury aspects that would have been denied under current rules are likely to be affected. As described elsewhere in this chapter, recent estimates are that 18 percent of all indemnity claims involve CT, and 40 percent of such CT claims were reported to be brought

---

[108] If our proposal is adopted, it might be prudent to also bar reimbursement for all lien-based medical services received during the period beginning when the former employer issued its deny-but-control decision until the point at which the former worker files an application for adjudication. This would prevent a situation in which liens are accumulated for a considerable time after employer-controlled treatment has ended without any obvious sign that the decision would be subsequently challenged in WCAB.

[109] Labor Code § 3600(a)(10) appears to have been enacted primarily to eliminate any possibility that someone who was fired or laid off could subsequently file a fraudulent claim in order to retaliate against the former employer. See, e.g., *Helmsman Management Services v. W.C.A.B.*, 63 Cal.Comp.Cases 858 (Cal. W.C.A.B. 1998), and *Marquez Auto Body et al. v. W.C.A.B.*, 61 Cal.Comp.Cases 408 (Cal. W.C.A.B. 1996). The possibility that a fired or laid-off employee might, in fact, file a legitimate claim does not appear to have figured in creating this distinction.

postemployment. With the rate of denial for postemployment CT claims estimated at 88 percent, just 6.3 percent (0.18 × 0.40 × 0.88) of all claims would be potential candidates for deny-but-control treatment. Presumably, employers would pick and choose among those candidates to target only the most-problematic providers, so the proportion of claims ultimately affected would be smaller.

What other options might be available for controlling what appears to be an obvious problem with the liens generated in postemployment claims? Some potential solutions that would undoubtedly end the pattern and practice about which participants complained at the June 2016 roundtables—such as eliminating liens entirely, as is true in many other states; completely ending all ability for an injured worker to select a health care provider outside of an employer network; requiring liens to be resolved with the case in chief or be dismissed; or imposing real-time UR controls on all health care delivered for industrial injuries regardless of provider—present far greater challenges in terms of overhauling the system with new or amended statutes and regulations. The more-radical notions of eliminating all claims for CT, eliminating all postemployment claims, or eliminating just those CT claims brought postemployment seem to us to be draconian, baby-out-with-the-bath-water responses to a problem that is created by only a tiny fraction of all providers. We think that our approach is a relatively simple one, allows employers to continue to operate in the same way that they do today if they so desire (i.e., choosing only between accepting a claim and denying it); is likely to affect less than 7 percent of all workers' compensation claims; preserves the traditional practice of incorporating lien-based care into the mix of benefits available to injured employees; and, most importantly, maintains workers' rights to adequate medical care.

Chapter Five. Remediation: Suspending Lien Claims When Holders Are Suspected of Fraud

Recent stories involving a small number of medical care providers (and, on occasion, their attorney coconspirators) who have treated the California workers' compensation system as a sort of bottomless automated teller machine have shocked our collective consciousness with the apparent depth of their avarice. But what might be the most outrageous aspect of all of these stories is that, despite strong evidence that fraud had been committed and criminal prosecutions were under way, some of the most notorious fraudsters nevertheless continued to file lien claims in staggering volumes.[110] One such physician entered a guilty plea that acknowledged his acceptance of bribes of up to $100,000 each month to send patients to other doctors who, in turn, performed what one journalist has characterized as "invasive and risky spinal surgeries."[111] Notwithstanding that admission, at about the time the plea made was being made, that same physician's medical group filed nearly 800 lien claims with WCAB. A recently indicted medical management corporation's chief executive, accused of participating in kickback schemes, nevertheless advanced liens worth $58 million in payments for the same medicated "pain creams" that were alleged to be the focus of the kickbacks. The same year, when another physician was indicted for using bribes to enhance his treatment center's business, he was still able to submit more than 10,000 liens for payment.[112]

Although some of these stories involve people whose guilt or innocence on criminal charges have not yet been fully determined in accordance with the law, a situation that allows those accused or convicted of committing provider fraud to continue to receive a steady stream of cash from the California workers' compensation system makes little sense. In the discussion that follows, we consider the relative advantages and disadvantages of options that might be used as ways to push the pause button and halt the normal course of business until legal proceedings and administrative investigations have concluded.

Medicaid Suspension

The situation described above, in which payments were made to those accused of malfeasance, would likely not been allowed to occur if the social welfare system in play was Medi-Cal or any other state's Medicaid program. A provision in the Patient Protection and

[110] One estimate is that 17 percent of all liens in the system were filed by parties who are either under indictment or have been convicted (DIR, 2016e, Table 1).

[111] Jewett, 2016.

[112] Jewett, 2016.

Affordable Care Act (Pub. L. 111-148, 2010) blocked federal financial reimbursements to states for Medicaid expenditures if they were for

> any individual or entity to whom the State has failed to suspend payments under the plan during any period when there is pending an investigation of a credible allegation of fraud against the individual or entity, as determined by the State in accordance with regulations promulgated by the Secretary . . . unless the State determines in accordance with such regulations there is good cause not to suspend such payments . . . .[113]

Regulations[114] promulgated by CMS in response to this legislative imperative provide a relatively simple way to suspend payments to those being investigated for "a credible allegation of fraud:"[115]

- When an allegation or complaint of fraud is received from such sources as "fraud hotline complaints, claims data mining, or patterns identified through provider audits, civil false claims, and law enforcement investigations," a state must determine the allegation's or complaint's validity. There are, however, no set standards as to what that review would entail.
- In the determination of credibility, the state can "conduct whatever due diligence it deems necessary, including informal consultation with other agencies and/or law enforcement."
- Allegations and complaints are considered credible if they have "indicia of reliability" and the state has reviewed all facts and evidence carefully and acts judiciously.
- When a determination of credibility is made, all Medicaid payments to the provider must be suspended, absent "good cause not to suspend, or to suspend only in part."
- Situations that might justify good cause exceptions include
  - when a payment suspension might compromise or jeopardize an investigation
  - when other remedies more effectively or quickly protect Medicaid funds
  - if written evidence submitted by the target of the suspension convinces the state that the suspension should be removed
  - if health care to a small community or designated medically underserved area would be compromised.
- Notice of suspension need not be given before the suspension is put into effect, but it must be sent within certain time frames and contain the types of specific information that the regulation requires.
- The state must refer the case to an appropriate law enforcement agency.
- Providers can seek administrative review when the laws of the state provide for such review.
- The suspension would be temporary only in that it would end when either of these conditions is met:

---

[113] 42 U.S.C. § 1396b(i)(2)(C).

[114] 42 C.F.R. § 455.23. Other pertinent regulations include 42 C.F.R. § 455.2, 42 C.F.R. § 455.14, and 42 C.F.R. § 455.15.

[115] CMS, 2014.

- The agency or the prosecuting authorities determine that there is insufficient evidence of fraud.
- Legal proceedings are completed.

It is difficult to see why an approach essentially similar to the one Medicaid employs could not be replicated for use, with some minor tweaking, in the California workers' compensation system to address requests for lien reimbursements. A key aspect of the Medicaid approach is that the basis for cutting off payments is grounded in administrative law rather than criminal, so the determining entity need not require proof beyond a reasonable doubt. Even more critical is the fact that the process for making the determination need not be a formal one, with the state given essentially free rein to design procedures that respond quickly to evidence of malfeasance.

Note that nothing in the Medicaid payment suspension policy prevents the health care provider from practicing medicine or operating a clinic or other facility. Practitioners are free to earn an income, although one particular source for income would be eliminated, at least temporarily. Moreover, the Medicaid approach does not result in a permanent loss of property rights given that the ability to seek payment would be restored even if the provider was convicted and perhaps imprisoned (it would be up to the prosecutors and the judge to determine whether to condition the sentence on, among other things, forfeiting the right to seek payment). And rights for due process would still be in place, given that Chapter Five in California's version of the Administrative Procedures Act provides a ready-made template for affording an aggrieved party a fair hearing.[116]

Provider Authorization

Another possible approach is the one employed in New York for addressing provider malfeasance in the workers' compensation context, although it goes far beyond simply preventing suspected wrongdoers from being paid. A fundamental basis for that approach is the state's longstanding requirement that health care providers first register with the New York State Workers' Compensation Board (WCB) before treating patients under the state's workers' compensation program. In actuality, the application for authorization is initially screened by the medical society in the county in which the provider practices before forwarding to the WCB chair for final approval. New York's Workers' Compensation Law § 13-b provides that

> [n]o person shall render medical care or conduct independent medical examinations under this chapter without such authorization by the chair, provided, that:
>
> (a) Any physician licensed to practice medicine in the state of New York may render emergency medical care under this chapter without authorization by the chair under this section; and

[116] Government Code § 11340 et seq.

> (b) A licensed physician who is a member of a constituted medical staff of any hospital may render medical care under this chapter while an injured employee remains a patient in such hospital; and
>
> (c) Under the active and personal supervision of an authorized physician medical care may be rendered by a registered nurse or other person trained in laboratory or diagnostic techniques within the scope of such person's specialized training and qualifications . . . .

The procedure for withdrawing such authorization (§ 13-d) first puts the responsibility on the county medical society to "investigate, hear and make findings with respect to all charges as to professional or other misconduct of any authorized physician as herein provided under rules and procedure to be prescribed by the medical appeals unit." If the medical society fails to move forward with an investigation and submit advisory findings and recommendations to WCB, the board can conduct its own hearing.

Ultimately, it is the WCB chair who makes the decision as to whether to revoke the authorization after a "reasonable investigation." Grounds available under § 13-d for revocation include whether the health care provider meets any of these conditions:

- has been guilty of professional or other misconduct or incompetency in connection with rendering medical services
- has exceeded the limits of his or her professional competence in rendering medical care or in conducting independent medical examinations under the law
- has made materially false statements regarding his or her qualifications in his or her application
- has failed to transmit copies of medical reports to a claimant's attorney or licensed representative
- has failed to submit full and truthful medical reports of all his or her findings to the employer and directly to the WCB within applicable time limits
- knowingly made a false statement or representation as to a material fact in any medical report or in testifying or otherwise providing information
- has solicited or has employed another to solicit, for himself or herself or for another, professional treatment, examination, or care of an injured employee
- has refused to appear, testify, submit to a deposition, answer a legal question, or produce materials as required
- has participated in fee splitting, kickback schemes, or committed other financial malfeasance.

The power to revoke is exercised frequently. The WCB website contains a regularly updated list of all providers who have had their authorizations canceled,[117] and notices of the chair's decisions in this regard are posted as well.[118] Suspensions are often characterized as "temporary," although, typically, the suspension remains in effect until further notice. Behaviors triggering the temporary suspension run the gamut from minor miscues (such as a failure to keep

[117] WCB, 2017.

[118] WCB, undated.

proper patient records or failing to return a set of interrogatories) to medical board disciplinary actions, criminal arrests, indictments, and convictions. In all such instances we examined, the chair always determines that the physician "may be guilty of misconduct, and that such misconduct would detrimentally affect the quality of care provided to injured workers." According to our informal review of the website notices, a second instance of professional misconduct typically triggers a permanent revocation of authorization.

Discussion

Comparison of Medicaid and New York State Workers' Compensation Board Approaches

Either of the two approaches discussed above would have serious potential consequences for arrested, indicted, or convicted health care providers who have been accused of fraud (Table 5.1). The Medicaid approach can arguably be triggered by a mere allegation (albeit a credible one) of fraud, while the New York provider authorization rules appear to require a more formal determination of prohibited activities (in New York, for example, the WCB chair would have to reach a conclusion that a health care provider actually participated in fee splitting, while the Medicare rule would be satisfied by a simple allegation of same). On the other hand, only fraud will trigger a Medicaid suspension, while a wide range of behaviors (sexual battery, for example) will constitute misconduct in New York.

Table 5.1. Medicaid and New York State Workers' Compensation Board Approaches

Characteristic	Medicaid Suspension	Provider Authorization
Target	Any provider (including nonphysicians) whom the program compensates	Physicians who have been previously authorized to treat patients under the program
Triggering event	Credible allegation of fraud after investigation	Any behavior that the agency head determines constitutes misconduct
Key sanctions	Temporary suspension of all payments for delivering medical services or supplies under the program	Inability to treat patients under the program
Duration of sanctions	Until investigation determines insufficient evidence of fraud *or* upon completion of legal proceedings	Until the agency head decides otherwise
Opportunity for review	Depends on state rules for challenging administrative decisions but is likely	None appears available
Effect on practice	Can still treat patients in and out of program, although the provider receives no payment for in-program treatment	Can treat only out-of-program patients; cannot treat former program patients on a private basis
Effect on fees or charges incurred before the sanction was applied	Temporary suspension	No effect
Effect on purchasers of presanction accounts receivable	Unclear	No effect

If the sole interest here was to prevent lien filings by suspected fraudsters, the Medicaid approach, if adapted for California's workers' compensation system, is the one that would work best and with the least logistical overhead. No payments would be made, at least temporarily, and the sole investments by the state (presumably DIR) would be to set up a process for investigation, make a determination of credible allegations, provide notice to the affected parties, and remove the suspension if needed. What is not clear under the Medicaid rules is whether purchasers of accounts receivable would nevertheless be able to seek the payment of liens given that they are not technically the provider who was the target of a fraud investigation. In contrast, the New York approach would have no effect on postsanction lien submissions and moreover would require a substantial effort to persuade physicians across the state to seek proper authorization. DIR or whatever other state agency is charged with issuing (and revoking) provider authorizations would effectively be placed into the role of a licensing board, presumably requiring the ongoing monitoring of provider behavior in terms of provider interactions with the state medical board and the criminal courts.

The key question here is whether DIR perceives a need to move beyond the postarrest lien submission issue and take a far larger role in managing health care provider behavior. The New York model would certainly give DIR considerable discretion to address a variety of physician issues that go beyond mere fraud, including failures to comply with any law or regulation related to the workers' compensation system. Nevertheless, we recommend that an approach similar to

the Medicare suspension rule be adopted. Critically, it can apply to any *provider*, which can encompass physicians, of course, but other types of caregivers (such as nurses) and, most importantly, entities. One striking takeaway from the June 2016 roundtables was that provider fraud is often organization fraud, in which the "bad actor" in question is not a single credentialed doctor but instead a patient clinic, radiology lab, a company offering shockwave therapy or medicated pain creams, a sleep test center, a hospital, or the like. Although it is true that the corporate identities of these entities can shift in a flash, the language in the Medicaid rule provides broad flexibility to apply the suspension sanction to any suspect enterprise if need be, even if its ownership changes hands regularly. Unless whatever approach adopted can also prevent organizations from being compensated for their misdeeds, the specter of suspected fraudsters continuing to be paid is not likely to go away anytime soon.

One issue that has arisen in the context of the Medicaid rule relates to the potential effect on patients who are currently receiving treatment from a provider whose ability to recover expenses associated with such treatment is about to be curtailed. As noted in Table 5.1, there would be no legal barriers against the provider continuing workers' compensation–related treatment (the same would not be true under the New York model), but, presumably, the provider would be unwilling to serve those patients going forward given the substantial risk that there might never be an opportunity for reimbursement. If the Medicaid rule is adopted in California, we would hope that procedures would be set up to give current patients adequate notice of the impending decision in order to provide sufficient time to obtain the services of a different treating physician. An example of what might happen without such notice involved a sweeping suspension of Medicaid payments to about half of all home health care aides in the District of Columbia as a result of an investigation uncovering credible allegations of fraud. Patients in the district affected by the sudden decision had few alternatives available to them for continuing their care, given that the remaining providers not under payment suspension might not have the capacity to absorb large numbers of new clients quickly. The situation led to what one judge described as "chaos" before being mitigated by the judge forcing the providers under suspension to continue to treat without compensation until alternative care could be arranged.[119] Our assumption is that DIR would use its power to suspend payment sparingly and never to the point at which wide-scale disruptions of the health care delivery system would result. It should be noted that the revocation of provider authorization under the New York model would have the same risk of adversely affecting the treatment of current patients if adequate notice is not given.

At first glance, our recommendation that a rule similar to the one used for Medicaid be adopted for the California workers' compensation system seems to fall short of a permanent solution to instances of ill-gotten gain. Under the proposed rule, a provider suspected of fraud or other misdeeds that triggered a temporary payment suspension would nevertheless be able to

[119] *ABA, Inc. v. D.C.*, 40 F. Supp. 3d 153, 157 (D.D.C. 2014). This treat-without-payment solution, one that raised serious concerns when employed at the time, would not be possible in the California workers' compensation system.

receive all compensation to which it is entitled once legal proceedings and administrative investigations have concluded.[120] What benefit is being served if a convicted fraudster can still profit from his or her misdeeds, even while incarcerated? One answer to that question lies within the broad powers afforded the California criminal courts to craft sentences imposing a wide variety of obligations on a convicted defendant. Such sentences are often the outgrowth of plea negotiations in which the defendant agrees to various conditions in the hopes of a shorter period of incarceration or probation.[121] Requiring a convicted defendant seeking a more favorable sentence to withdraw all current liens connected with the type of fraud in question would be one way to avoid enriching a confirmed fraudster. A second means of permanently cutting off reimbursement of fraudulently submitted liens would rest in the hands of WCAB. It has long been held that the board has broad equitable powers in instances in which fraud has occurred.[122] With a criminal conviction used as a clear basis for its decision, precluding a lienholder with "unclean hands" from being reimbursed should not present any substantial legal difficulties. Regardless of whether the effective cancellation of tainted liens is initiated by a superior court judge during sentencing or a by a workers' compensation judge at a lien hearing, neither remedy would be possible at all unless a suspension had been previously imposed to prevent quick payment while the prosecution was unfolding.

One serious shortcoming we see with copying the Medicaid rules too closely is that they do not specifically address the question of how to handle the submission of factored "paper" by a third party when the underlying liens were originally issued by a provider who subsequently became the target of a fraud investigation. Making it clear that the taint of the original issuer follows the accounts receivable wherever they go will close that potential loophole from almost certain repeated exploitation. Labor Code § 4903.8(a) already mandates that payment of liens be

---

[120] It should be noted that what is popularly known as the exclusion statute (42 U.S.C. § 1320a-7) bars a provider from participating in any federal health care program once it has been convicted of certain crimes, including health care–related fraud, theft, or financial misconduct. A notable consequence of such exclusion is that barred providers might not bill federal health care programs, such as Medicaid or Medicare, for any services that they order or perform. Although this would appear to resolve the ironic problem we have noted here in which temporary suspensions of Medicaid payments as result of allegations of fraud would be lifted once the provider is convicted, in fact, the exclusion statute is only prospective in its application: "[S]uch an exclusion shall be effective with respect to services furnished to an individual on or after the effective date of the exclusion." See also HHS, 2015. Thus, payments for services rendered prior to the effective date of the formal exclusion would still be possible, assuming that all other requirements for reimbursement are met.

[121] For a discussion of the broad powers of the criminal courts to order restitution in instances of workers' compensation fraud convictions, see, e.g., *People v. Brown*, 2010 WL 5167696 (Cal. Ct. App. Dec. 20, 2010) (no abuse of discretion when there is a factual and rational basis for the amount of restitution ordered). Under California Penal Code § 1203.1,

> [the] court may impose and require . . . other reasonable conditions, as it may determine are fitting and proper to the end that justice may be done, that amends may be made to society for the breach of the law, for any injury done to any person resulting from that breach, and generally and specifically for the reformation and rehabilitation of the probationer . . . .

[122] See *Bankers Indem. Ins. Co. v. Indus. Acc. Comm'n*, 4 Cal. 2d 89, 98 (1935).

made only to those who were originally entitled to reimbursement, leaving it up to any third-party assignee to recover the money from the lien seller. This would seem to forestall an assignee from submission of liens when the original provider is under suspicion and a temporary suspension is in place, but § 4903.8(a) makes an exception when the provider "has ceased doing business in the capacity held at the time the expenses were incurred," a distinct possibility when the business or its owners are the subject of prosecution or other legal proceedings. Thus, some additional statutory language would be needed for suspending payments to not only the original provider but also to any holders of factored liens originating with that provider.

Comparison of Medicaid Approach with Recent Legislative Initiatives

Senate Bill 1160 and Assembly Bill 1244

The recommendations set forth above were developed prior to the passage of SB 1160 and Assembly Bill (AB) 1244 in 2016. SB 1160 addressed many different aspects of the California workers' compensation system, notably regarding UR, but of particular interest here are the provisions contained in § 7 of the bill (now codified as Labor Code § 4615):

> (a) Any lien filed by or on behalf of a physician or provider of medical treatment services under Section 4600 or medical–legal services under Section 4621, and any accrual of interest related to the lien, shall be automatically stayed upon the filing of criminal charges against that physician or provider for an offense involving fraud against the workers' compensation system, medical billing fraud, insurance fraud, or fraud against the Medicare or Medi-Cal programs. The stay shall be in effect from the time of the filing of the charges until the disposition of the criminal proceedings. The administrative director may promulgate rules for the implementation of this section.
>
> (b) The administrative director shall promptly post on the division's Internet Web site the names of any physician or provider of medical treatment services whose liens were stayed pursuant to this section.

Essentially, the statute stays, at least temporarily, all medical liens when the associated physician or provider has been criminally charged for fraud regarding workers' compensation, medical billing (presumably covering billing to any party, including private patients), insurance, or Medicare or Medi-Cal. Once the criminal proceedings are disposed, the stay would be lifted.

Related legislation contained in AB 1244 focused on a different aspect of provider misbehavior. Section 1 (codified as Labor Code § 139.21) requires the DWC administrative director to suspend from participating in the workers' compensation system those providers who have been convicted of various crimes, have been suspended from Medicare or Medicaid for fraud or abuse, or had their legal authorization to provide health care terminated:

> (a)(1) The administrative director shall promptly suspend . . . a physician, practitioner, or provider if the individual or entity meets any of the following criteria:
>
> > (A) The individual has been convicted of any felony or misdemeanor and that crime comes within any of the following descriptions:
> >
> > > (i) It involves fraud or abuse of the Medi-Cal program, Medicare program, or workers' compensation system, or fraud or abuse of any patient.
> > >
> > > (ii) It relates to the conduct of the individual's medical practice as it pertains to patient care.
> > >
> > > (iii) It is a financial crime that relates to the Medi-Cal program, Medicare program, or workers' compensation system.
> > >
> > > (iv) It is otherwise substantially related to the qualifications, functions, or duties of a provider of services.
> >
> > (B) The individual or entity has been suspended, due to fraud or abuse, from the federal Medicare or Medicaid programs.
> >
> > (C) The individual's license, certificate, or approval to provide health care has been surrendered or revoked.
>
> [. . .]
>
> (b)(2) The administrative director shall furnish to the [provider] written notice of the right to a hearing regarding the suspension . . . . The notice shall state that the administrative director is required to suspend the [provider] pursuant to subdivision (a) after 30 days from the date the notice is mailed unless the [provider requests] a hearing and, in that hearing, . . . provides proof that paragraph (1) of subdivision (a) is not applicable. The [provider] may request a hearing within 10 days from the date the notice is sent by the administrative director. The request for the hearing shall stay the suspension . . . . Upon the completion of the hearing, if the administrative director finds that paragraph (1) of subdivision (a) is applicable, the administrative director shall immediately suspend the [provider].

AB 1244 also set forth rules in Labor Code § 139.21 for adjudicating liens when the originating provider has been suspended from the workers' compensation program as a result of felony or misdemeanor convictions. First, it made clear that plea agreements and other criminal case resolutions intended to dismiss liens would have the effect of law regarding workers' compensation proceedings. All suspended provider liens not subject to dismissal by that means would be identified by a DIR or DWC attorney appointed by the administrative director and then consolidated in a single special lien proceeding to be heard by a designated workers'

compensation judge. Importantly, a rebuttable presumption would be in effect during the proceeding that the liens arose from the conduct that led to the suspension and are therefore invalid. The provider would have to prove by a preponderance of the evidence that some or all of the liens were unrelated to the suspension-triggering conduct in order to move forward in seeking payment:

> (e)(1) If the disposition of the criminal proceeding provides for or requires, whether by plea agreement or by judgment, dismissal of liens and forfeiture of sums claimed therein, as specified in the criminal disposition, all of those liens shall be deemed dismissed with prejudice by operation of law as of the effective date of the final disposition in the criminal proceeding, and orders notifying of those dismissals may and shall be entered by workers' compensation judges.
>
> (2) If the disposition of the criminal proceeding fails to specify the disposition to be made of lien filings in the workers' compensation system as set forth in paragraph (1), all liens pending in any workers' compensation case in any district office within the state shall be consolidated and adjudicated in a special lien proceeding as described in subdivisions (f) to (i), inclusive.
>
> [. . .]
>
> (g) It shall be a presumption affecting the burden of proof that all liens to be adjudicated in the special lien proceeding, and all underlying bills for service and claims for compensation asserted therein, arise from the conduct subjecting the [provider] to suspension, and that payment is not due and should not be made on those liens because they arise from, or are connected to, criminal, fraudulent, or abusive conduct or activity. A lien claimant shall not have the right to payment unless he or she rebuts that presumption by a preponderance of the evidence.
>
> [. . .]
>
> (i) If it is determined in a special lien proceeding that a lien does not arise from the conduct subjecting a [provider] to suspension, the workers' compensation judge shall have the discretion to adjudicate the lien or transfer the lien back to the district office having venue over the case in which the lien was filed.

To quickly implement Labor Code § 139.21, DWC proposed emergency regulations in mid-December 2016 that addressed procedures related to suspending providers, provider requests for hearings, the issues to be considered at such hearings, and notifications of suspensions. Interestingly, no emergency regulations were proposed for the purpose of implementing Labor Code § 4615's provisions regarding automatic temporary stays of liens when the originating provider has been criminally charged, nor were emergency regulations proposed for the conduct of the special lien proceedings found in Labor Code § 139.21. The emergency regulations related to provider suspension became effective January 6, 2017.[123] The regulations will be in effect until mid-2017, during which time DWC would have the opportunity to proceed with the regular rulemaking process.

[123] Cal. Code Regs. tit. 8, § 9788.1–§ 9788.4.

The emergency regulations clarify provisions found in Labor Code § 139.21:

- "Suspension from participation" means that the provider is prohibited from providing any goods or services related to occupational injuries or illnesses and would have any certification as a qualified medical evaluator terminated.
- The provider would be prohibited from seeking payment or reimbursement, either directly or indirectly, for any goods or services related to an occupational injury or illness provided following the suspension.
- Thirty-day notice to the provider would be required before imposing the suspension.
- The provider would have ten days to submit a written request for a hearing to argue that the criteria for suspension are not applicable.
- Requests for such a hearing would temporarily stay the suspension.
- The hearing must be held within 30 days of the submission of the request. Liberal rules of evidence would apply at the hearing.
- The DWC hearing officer would have ten days to rule on the suspension, and the administrative director of DWC would have another ten days to adopt or modify the hearing officer's decision.

DIR and DWC wasted little time before using the new procedures, and, in February 2017, suspension notices were issued to ten providers who had already been convicted of workers' compensation fraud or suspended by the Medicare or Medicaid programs for fraudulent activities.[124] Three of the ten providers appealed the notices, and their suspensions were temporarily stayed until a hearing could take place, but the other seven failed to make a similar request in a timely manner. It was reported that the seven providers were responsible for at least 8,500 liens with a claimed aggregate value of at least $59 million.

How Our Recommendation Differs

Table 5.2 again presents the Medicaid suspension policy we believed would provide a tested model for dealing with lien submissions by suspected fraudsters but compares it with the recent statutory revisions regarding lien stays (Labor Code § 4615) and provider suspensions (including associated lien procedures; Labor Code § 139.21). Although the types of sanctions available (ranging from an inability to be compensated for certain services rendered to complete exclusion from participating in the workers' compensation system) are obvious differences between the three approaches, perhaps the most important distinction is the threshold to be met in order for any sanctions to be imposed. The highest bar to be cleared arises from Labor Code § 139.21's requirement that the provider be convicted of certain types of felonies or misdemeanors. As discussed elsewhere, convictions of providers for crimes related to the California workers' compensation system are relatively rare events, with just 11 over a 12-month period between 2015 and 2016. That rate might change in the near future as some recent high-profile prosecutions involving provider fraud move their way through the courts. Nevertheless, the

[124] DIR, 2017.

number of individuals and entities affected by Labor Code § 139.21 is likely to remain quite low if the focus of the suspension efforts is solely on those found guilty of workers' compensation crimes. A much larger potential pool exists with those providers convicted of Medicare, Medicaid, financial, or health service crimes outside the workers' compensation system. It is not possible to precisely estimate the number of providers in California eligible for such sanctions, but one indicator might be the number of people and entities that have been excluded (essentially a type of suspension) by the HHS OIG from participating in Medicare, Medicaid, and other federal health care programs. OIG reports that, during a six-month period ending in March 2016, 1,662 exclusions resulted "from convictions for crimes relating to Medicare or Medicaid, for patient abuse or neglect, or as a result of license revocation," criteria very similar to that described in Labor Code § 139.21.[125] If California is assumed to represent about 12 percent of the total population of the United States, and if it is also assumed that these federal exclusions are proportionally distributed, each year perhaps about 400 people and entities in California could be subject to Labor Code § 139.21 suspensions under criteria similar to federal health care program exclusions. This assumes that all of the federal exclusions involved providers; that the number of providers treating workers' compensation patients in California is at least as large as the numbers of providers in the state treating Medicare and Medi-Cal patients; and, most importantly, that DIR would make a concerted effort to identify all convictions involving fraud, patient abuse, and other malfeasance committed by health care providers in California, even if those convictions were unrelated to workers' compensation. A successful effort in this last regard has historically been challenging, though we assume that DIR would work closely with CDI and the Medical Board of California in this area.

[125] HHS, 2016a, p. 24.

Table 5.2. Medicaid, Labor Code § 4615, and Labor Code § 139.21 Approaches

Characteristic	Medicaid Suspension	Labor Code § 4615	Labor Code § 139.21
Target	Any provider (including nonphysicians) whom the program compensates	Physician or provider of medical treatment services or medical–legal services	Any physician, practitioner, or provider participating in the workers' compensation system
Triggering event	Credible allegation of fraud after investigation	Filing of criminal charges involving fraud related to workers' compensation, medical billing, insurance, or Medicare or Medi-Cal programs	Felony or misdemeanor conviction related to specific types of fraud, abuse, financial crimes, suspension from Medicare or Medicaid programs, or adverse licensing actions
Key sanctions	Temporary suspension of all payments for delivering medical services or supplies under the program	Automatic but temporary stay of liens filed by or on behalf of target physicians or providers	(1) Suspension from participating in the workers' compensation system (2) Consolidation of liens in special proceeding with a rebuttable presumption that the liens are related to the conviction and are therefore not valid (3) Liens generated for services after suspension are always invalid.
Duration of sanctions	Until investigation determines insufficient evidence of fraud *or* upon completion of legal proceedings	Until disposition of criminal proceedings	Suspension appears to be permanent.
Opportunity for review	Depends on state rules for challenging administrative decisions but is likely	None at present (regulations might be promulgated by mid-2017)	(1) Hearing available to contest the conclusion that an eligible criminal conviction had occurred (2) Special proceeding with relaxed rules of evidence to prove that presuspension liens are unrelated to the conviction
Effect on practice	Can still treat patients in and out of program, although the provider receives no payment for in-program treatment until the suspension is lifted	Can still treat patients in and out of program, although no payment for in-program treatment until stay is lifted	Cannot treat patients in program (out of program okay); no payment for in-program, postsuspension treatment
Effect on fees or charges incurred before the sanction was applied	Temporary suspension	Temporary stay	No payment for in-program presuspension treatment unless shown to be unrelated to underlying conviction
Effect on purchasers of presanction accounts receivable	Unclear	Unclear	Unclear

A lower threshold to clear would involve only the filing of criminal charges, rather than actual conviction, as required by Labor Code § 4615. Here again, we do not believe that the pool of providers meeting this criteria will exceed more than a handful if the focus is only on criminal prosecutions for workers' compensation provider fraud. Although the set of all criminal cases is always larger than the subset of criminal convictions, district attorneys in the state generally

target their limited resources for complex financial prosecutions on those investigations with the best chances for conviction. Annual conviction rates in California for all felony arrests other than for violent crimes or drug crimes usually exceed 70 percent,[126] so that, for every 100 convictions, no more than an additional 43 prosecutions were unsuccessful. Given that the number of health care provider convictions related to workers' compensation barely exceeds single digits annually, it is unlikely that the additional number of provider prosecutions in this area that did not result in conviction are of considerable size. But, as suggested above regarding Labor Code § 139.21's suspension criteria, the pool of qualifying provider prosecutions outside the workers' compensation context might be far larger.

Another avenue for Labor Code § 139.21 suspensions would be when the provider's "license, certificate, or approval to provide health care has been surrendered or revoked." Although such adverse credentialing actions would not require a criminal prosecution to trigger a workers' compensation suspension, only about 100 licenses for all California providers were surrendered or revoked in 2016, and it is unlikely that most had been issued to those delivering services to workers' compensation clients.[127]

The lowest threshold among the three approaches (and therefore the largest potential net) would be the Medicaid suspension policy's requirement of a credible allegation of fraud, needing only some "indicia of reliability" following whatever "due diligence" the state "deems necessary" in an examination of any suspicious behavior. Criminal prosecutions, including those that have led to convictions, would certainly provide a sufficient foundation for imposing payment suspensions but presumably so also would administrative investigations and other DIR actions that determine an allegation to be credible, even prior to the filing of criminal charges or any notice that a provider's license had been compromised.

An important issue for all three of these tools for combating provider fraud involves how each would deal with outstanding liens. Once criminal charges are filed against a provider, Labor Code § 4615 imposes a temporary stay of all liens until the criminal case has been resolved in some way. The Medicaid fraud model essentially reaches the same result following an administrative determination of credible fraud allegations, although the stay would apply to any payment, even if sought by means other than a lien. Both approaches depend on prosecutors to address the issue of any unpaid liens when negotiating a plea bargain or advocating for conditions to be imposed as part of the sentencing order. A prosecutor's actions thus provide an opportunity to address a provider's entire portfolio of liens, not just those related to the specific criminal charges that led to the conviction. Although it remains to be seen how Labor Code § 139.21 is implemented in practice, the new law might affect only a fraction of the outstanding liens filed by a provider who is later convicted and subsequently suspended. Although it is true that the provider must overcome, by a preponderance of the evidence, a

[126] California Department of Justice, 2016, Table 39.

[127] Medical Board of California, undated.

presumption that outstanding liens "arise from, or are connected to, criminal, fraudulent, or abusive conduct or activity" before payment will be allowed, a key phrase in the statute assumes that the tainted liens "arise from the conduct subjecting the physician, practitioner, or provider to suspension." Thus, if the provider's suspension was the result of a criminal conviction unrelated to workers' compensation (such as one arising from Medicare fraud) or because of a medical license revocation outside California, it would appear that none of the outstanding liens filed with DWC would be voided. If California workers' compensation fraud or abuse was involved in the conviction that led to the suspension, the scope of voidable liens would obviously be greater but still not necessarily encompassing all outstanding liens. Not only are prosecutors highly selective when choosing those against whom they will bring criminal charges; they must also be highly selective when deciding which charges will be filed and what incidents will be used for proving those charges. The availability or unavailability of compelling evidence drives much of that decisionmaking, and a prosecutor might believe that the best chances of conviction lay in advancing a very strong case involving but a single incident of workers' compensation fraud involving a single patient, even where there is a pervasive belief among law enforcement agencies and DIR personnel that the same illegal behavior occurred many other times regarding many other victims. In such instances, a suspended provider might have little difficulty sidestepping permanent voiding of most of his or her liens, simply because they involved patients who were never identified in the concluded criminal proceedings and therefore not a part of the *specific* conduct that led to the suspension. Thus, all three approaches available under Labor Code § 139.21, Labor Code § 4615, and the Medicaid payment suspension model require DWC to work closely with prosecutors with the goal of wiping out as many liens as possible at the sentencing stage.

Conclusion

Despite the considerable promise offered by Labor Code §§ 4615 and 139.21 regarding preventing those who are the subject of criminal proceedings from profiting from their wrongdoings, we continue to believe that the approach we recommend offers DIR a useful tool to combat workers' compensation fraud. Our primary concern in this report is provider fraud conducted to circumvent the rules and goals of the grand bargain between labor and employers. A very serious threat to stakeholders in that regard comes from those health care providers who have never been prosecuted, let alone convicted, but nevertheless are the subject of credible allegations of wrongdoing. As discussed in the previous chapter, one repeated comment at the June 2016 roundtables was that the identities of those behind some of the most-egregious workers' compensation abuses were common knowledge among attorneys, insurers, and agency administrators, even if they had not yet been ensnared by the criminal justice system. The suggestion that many well-known fraudsters have remained beyond the reach of law enforcement is not surprising, given the high standard of proof required for conviction and equally compelling demands on the time and resources available to prosecutors in California. There are obvious and

well-founded reasons for that high standard, given the serious implications of imposing criminal fines and imprisonment, but, in California, workers' compensation is part of the *civil* justice system and is designed (at least in theory) to be a less formal, less adversarial, and more administratively oriented process than a prosecution or even ordinary tort litigation. The rationale behind the Affordable Care Act's mandates that Medicaid payments to providers be temporarily halted in order to provide an opportunity for administrators to conduct an investigation of possible wrongdoing makes equal sense in the context of California workers' compensation. Health care providers who flaunt the spirit and letter of compensation statutes and regulations for personal gain should not assume that they can continue to do so unmolested as long as they are careful not to stray so far as to find themselves the target of a criminal prosecution. Information gathered during an administrative investigation, one conducted during a period in which the flow of money is temporarily halted, can either absolve the provider of any suspicion of wrongdoing or lead to criminal proceedings. Importantly, such investigations can also help inform policymakers as they tailor the existing framework of laws to better control undesirable behavior.

We believe that the Medicaid suspension option would be a welcome addition to the tools already available to DIR and DWC as a result of the enactments of Labor Code §§ 4615 and 139.21. Its potential application in instances in which there is only "a credible allegation of fraud" would be far more expansive than the prosecution-only or conviction-only approaches employed in the new labor code sections, and the sanctions that would ensue are appropriate in light of what would essentially be an administrative action. It provides a flexible, civil law–based means for addressing potential fraud, one that can be employed as needed early in a situation that would otherwise fester for years until prosecutors find the time and resources to move forward.

Chapter Six. Recommendations

Suggestions for Change

Although the seemingly endless capacity of human beings to figure out clever ways to game a system for profit might be the primary reason fraud continues to exist today, a close second could be that fraudulent behavior thrives in the considerable shadows afforded by what is a massive, largely self-operating system of compensation and care for 15 million employees working for 900,000 employers.[128] With about 580,000 occupational injuries and illnesses reported each year and 130,000 new WCAB cases opened as formal disputes, program administrators simply cannot closely monitor every aspect of the system each and every day. As such, fraudsters can operate with a high degree of confidence that much of what they do is essentially undetectable by administrative or law enforcement agencies.

Part of the reason for fraudsters' ability to hide in what is essentially plain sight is a problem we noted in Chapter Three: A Balkanization of information that prevents the holistic analysis of what is taking place within the workers' compensation system at any given moment. There is little question that the types of advanced analytics techniques we described will become commonplace tools for workers' compensation administrators just as they are now for the financial service sector, but, to be able to exploit the vast potential that these techniques offer, information from multiple sources needs to be accessible from a single location. Even the most sophisticated, cutting-edge applications hunting for suspicious patterns of behavior will find little to flag if the focus of such efforts is on but a single source or type of data. As the media reports of late suggest, the criminal enterprises that cause the largest amount of loss related to provider fraud have an astonishing degree of vertical integration, capturing much of what might be thought of as the workers' compensation supply chain: medical device suppliers, interpreters, pharmacies, attorneys, transportation providers, physical therapists, outpatient clinics, surgical centers, laboratories, imaging centers, and even copy services. Unless analytics applications have ready access to data that capture how all of these pieces fit together, the chances of overlooking anomalies are increased. But to truly exploit the power of analytics, even more information is needed: reports of injuries, lien filings, WCAB calendars, employer insurance coverage, employer payrolls, criminal court dockets, health care provider licensing, and corporate ownership records for providers. In terms of a data-driven hunt for fraud, at least, more is always better.

What organizational infrastructure needs to be in place for utilizing such a wealth of data? Our review of relevant literature and discussions with state personnel suggest that, at the present

[128] Commission on Health and Safety and Workers' Compensation, 2015.

time, various aspects of fraud detection, remediation, and enforcement touching on the workers' compensation system in some way are spread across multiple state agencies. Although there is no centralized coordination of all their activities (potentially leading to a lack of uniformity regarding priorities), there is also nothing inherently deficient about siloing certain aspects of workers' compensation antifraud efforts in different entities, in part because each can bring its own unique perspectives, expertise, and capabilities to aid in the fight against fraud. That said, a singularly focused approach to the analysis of workers' compensation data is required if the power and promise of advanced techniques to detect fraud and identify those who commit it are to be realized. Moreover, those data have to be easily and readily available to the analysts on an ongoing basis, without the need to repeatedly seek temporary access to externally held but nevertheless useful information each time a new hunt for fraudsters and their schemes is undertaken. As a result, we believe that *a centralized and permanent workers' compensation fraud data unit enhances opportunities for detecting and addressing this very special species of fraud*. Such a unit would have primary control over the use of data analytics to look across different databases, perhaps serve as a single point of contact for the public and others when reporting suspicions of fraud, and help set priorities for investigations and enforcement activities in cooperation and consultation with other state and local agencies. Where such a unit is located is less important than making sure that staff with a similar focus are nearby and can share information.

We also believe that it makes sense for *DIR to take immediate steps to incorporate the use of data analytics into its routine fraud-detection work*. Although, as noted above, we feel that the optimum application of these tools is achieved when a vast array of information from multiple sources is available for a holistic assessment, that day might not come as soon as one might wish. Nevertheless, there is little reason not to get started now. Data analytics is not science fiction. It has become an indispensable tool for corporate organizations overseeing enterprises that are a fraction of the size of DIR's responsibilities; indeed, even relatively modest-sized companies now use predictive analytics when attempting to gain insight into large volumes of data.[129] The potential ROI for implementing an analytics program, as the Medicare experience described in Chapter Three suggests, is certainly attractive. We also think that integrating analytics into the normal course of business now will give DIR a solid foundation for assessing future data-collection initiatives and technological upgrades as they are realized. To the extent that DIR's data systems at the moment are lacking in quality and consistency and some information is being received in hard-copy form, seeing the power of analytics will provide incentives to do a better job in this area. DIR can no longer afford to collect information that cannot be mined effectively.

We also believe that *facilitating ways to bring postemployment treatment in from the cold*, as it were, will result in a win/win for former employees with legitimate claims and for insurers and WCAB staff who, at the moment, have to deal with mountains of liens (Chapter Four). Our

[129] See, e.g., Hirani, 2016.

proposed solution, one in which employers have the option of denying a questionable claim while continuing to offer medical care under their control, can be applied in just those instances likely to involve certain employee-selected providers who repeatedly generate liens large in volume and claimed value once the ongoing oversight available under SB 863's cost controls no longer apply directly. Narrowly focusing a reform on just a specific type of fraud does run the risk of the "Whack-A-Mole" problem in which the fraudsters make minor changes in the way they do business and essentially the same scheme pops up later in a slightly altered form. Nevertheless, postemployment claims offer those who would bend the rules for financial gain a particularly target-rich environment, in part because the former employee making the claim has had little or no recent contact with the employer or the employer's MPN and in part because the claim has a near-certain likelihood of being denied. It should be noted that the option available to an employer to continue to offer treatment while working to resolve the case in its own favor would be effective only as long as that same employer takes a proactive approach toward the litigation. We believe that a nonlegitimate postemployment claim that would yield the types of liens about which participants complained at the June 2016 roundtables would quickly wither away if the only medical care possible was that provided by employer-selected doctors or if any nontrivial time was spent or costs incurred by the former employee's attorney. These sorts of schemes are profitable only when there are opportunities to generate substantial liens with minimal expenditures by the key actors involved. Without the potential for profit, such questionable claims will not continue to be brought. Importantly, we feel that our approach will not have an adverse impact on former employees who truly have industrially caused injuries and illnesses, including conditions related to CT, but who first discover the problem after ending their employment.

And finally, we believe that *the payment suspension policy adopted by Medicaid presents a practical model* of how to take active fraudsters out of the workers' compensation system without DIR having to act in the expensive and complicated role of a licensing agency and without having to wait for prosecutors to take the initial action (Chapter Five). We also believe that a modified version of this policy would present an extremely useful addition to the new tools now available to administrators as a result of the enactment of Labor Code §§ 4615 and 139.21. Three caveats need to be taken into account if this approach is considered. First, it is important to make sure that such a policy is tailored so that the presentation of liens by third-party purchasers also falls under the suspension. Second, procedures must be in place to adequately notify current patients of a provider who is anticipated to be the subject of a payment suspension. And third, the decision to suspend should be closely coordinated with the efforts of district attorney staff overseeing current or anticipated prosecutorial efforts against the fraudster because, once a conviction is achieved, the suspension must be lifted. Only if the waiving of any outstanding liens is incorporated into the sentencing process (something that prosecutors are in the best position to ensure) will the cash flow halt permanently.

Final Thoughts

This report attempts to examine a few narrowly drawn issues related to but a single type of workers' compensation fraud—namely, that in which health care providers knowingly violate legal rules or ethical principles in the pursuit of financial gain. As we discussed in Chapter Two, however, fraud in our highly complex system of administrative compensation takes on many forms, involves a wide variety of actors, and is facilitated by numerous and often unrelated causes. It is also resilient. Comprehensive antifraud campaigns involving the entire California workers' compensation community have been launched on a routine basis over the past few decades, consuming the immediate attention of stakeholders, policymakers, and the public and producing creative solutions and carefully crafted proposals for reform.[130] And yet fraud remains a continuing stain on what is otherwise a successful implementation of a fundamental social compromise that has served labor and business for a century. In that light, the modest recommendations we make in this report should be seen as small pieces of a very large puzzle.

[130] See, e.g., the discussion of antifraud efforts dating back to the early 1990s in McBirnie, 2001.

References

admin, "Oncore Consulting with Pondera and Lexis-Nexis Win California Medi-Cal Fraud Award," *TechLeader.TV*, March 16, 2016. As of July 30, 2016: http://www.techleader.tv/?p=6292

Baesens, Bart, Veronique Van Vlasselaer, and Wouter Verbeke, *Fraud Analytics Using Descriptive, Predictive, and Social Network Techniques: A Guide to Data Science for Fraud Detection*, John Wiley and Sons, 2015.

Bolton, Richard J., and David J. Hand, "Statistical Fraud Detection: A Review," *Statistical Science*, Vol. 17, No. 3, August 2002, pp. 235–255.

Booz Allen Hamilton, "Stop IRS Fraud Without Slowing Checks," undated. As of May 16, 2017: https://www.boozallen.com/d/insight/thought-leadership/irs--stop-refund-fraud--without-slowing-down-the-checks.html

Branson-Potts, Hailey, "Five Charged in Alleged Spinal Surgery Kickback Scheme," *Los Angeles Time*s, November 24, 2015. As of April 21, 2017: http://www.latimes.com/local/california/la-me-1125-surgery-scam-20151125-story.html

Brown, Meta S., "Analytics and the IRS: A New Way to Find Cheaters," *Forbes*, January 28, 2016. As of July 29, 2016: http://www.forbes.com/sites/metabrown/2016/01/28/analytics-and-the-irs-a-new-way-to-find-cheaters/#5218dbf75b8b

California Department of Industrial Relations, Division of Workers' Compensation, "OCR Form Filers," October 2011a. As of September 23, 2016: http://www.dir.ca.gov/dwc/eams/EAMS_OCRFilers.html

———, Division of Workers' Compensation, *Workers' Compensation Information System (WCIS): California EDI Implementation Guide for Medical Bill Payment Records—Version 1.1*, November 15, 2011b. As of December 1, 2016: https://www.dir.ca.gov/dwc/DWCPropRegs/WCIS_Regulations/EDIGuide_Final.pdf

———, Division of Workers' Compensation, "e-billing," May 2016a. As of September 26, 2016: http://www.dir.ca.gov/DWC/EBilling/EBilling.html

———, *Workers' Compensation System: Overview of Anti-Fraud Efforts*, presentation at June 2016 round tables, June 2016b.

———, *Cumulative Trauma (CT) Claims and Bills in California Workers' Compensation 2008–2015*, unreleased presentation (copy on file with the authors), July 2016c.

———, Division of Workers' Compensation, "Electronic Adjudication Management System (EAMS)," August 2016d. As of September 27, 2016: http://www.dir.ca.gov/dwc/eams/eams.htm

———, "Issue Brief: Issues and Impact of Lien Filing in California Workers' Compensation System," August 19, 2016e. As of December 23, 2016: https://www.dir.ca.gov/dwc/sb863/Lien-issue-brief.pdf

———, Division of Workers' Compensation, "WCIS Jurisdiction Claim Number (JCN) Search," September 2016f. As of November 2, 2016: https://www.dir.ca.gov/dwc/jcn/JCNsearch.asp

———, "DIR and Division of Workers' Compensation Suspend Seven Providers for Fraud," news release 2017-12, February 16, 2017. As of April 21, 2017: https://www.dir.ca.gov/DIRNews/2017/2017-12.pdf

California Department of Insurance, "Workers' Compensation Fraud Convictions," undated. As of July 23, 2016: http://www.insurance.ca.gov/0300-fraud/0100-fraud-division-overview/25-wc-conv/

———, "Medical Professionals Indicted in Multi-Million Dollar Kickback and Bribery Scheme," press release, January 28, 2016. As of July 26, 2016: http://www.insurance.ca.gov/0400-news/0100-press-releases/2016/release012-16.cfm

California Department of Justice, *Crime in California 2015*, c. 2016. As of February 23, 2017: https://oag.ca.gov/sites/all/files/agweb/pdfs/cjsc/publications/candd/cd15/cd15.pdf

California Employment Development Department, "EDD Actively Prosecutes Fraud," undated. As of February 23, 2017: http://www.edd.ca.gov/About_EDD/EDD_Actively_Prosecutes_Fraud.htm

———, *Archived Fraud Convictions*, 2017.

Campolieti, Michele, and Douglas E. Hyatt, "Further Evidence on the 'Monday Effect' in Workers' Compensation," *Industrial and Labor Relations Review*, Vol. 59, No. 3, 2006, pp. 438–450.

Card, David, and Brian P. McCall, "Is Workers' Compensation Covering Uninsured Medical Costs? Evidence from the 'Monday Effect,'" *Industrial and Labor Relations Review*, Vol. 49, No. 4, 1996, pp. 690–706.

CDI—*See* California Department of Insurance.

Censer, Marjorie, "Two Local Contractors Handling Two-Pronged CMS Approach to Fraud," *Washington Post*, June 3, 2012. As of April 21, 2017: https://www.washingtonpost.com/business/capitalbusiness/two-local-contractors-handling-two-pronged-cms-approach-to-fraud/2012/06/01/gJQA74p7BV_story.html?utm_term=.4139ffd78bee

Centers for Medicare and Medicaid Services, "Fraud Prevention System Return on Investment: Fourth Implementation Year," undated. As of July 28, 2016: https://www.cms.gov/about-cms/components/cpi/downloads/fraud-prevention-system-return-on-investment-fourth-implementation-year-2015.pdf

———, *Fraud Prevention System: First Implementation Year*, 2012.

———, Center for Program Integrity, "Medicaid Payment Suspension Toolkit," September 2014. As of July 29, 2016: https://www.cms.gov/Medicare-Medicaid-Coordination/Fraud-Prevention/FraudAbuseforProfs/Downloads/medicaid-paymentsuspension-toolkit-0914.pdf

Citizens Against Government Waste, "CMS Brags About New Fraud Prevention System, Ignores Successful RAC Program," press release, July 14, 2015. As of July 27, 2016: http://www.cagw.org/media/press-releases/cms-brags-about-new-fraud-prevention-system-ignores-successful-rac-program

CMS—*See* Centers for Medicare and Medicaid Services.

Commission on Health and Safety and Workers' Compensation, *2015 Annual Report*, December 2015. As of July 25, 2016: http://www.dir.ca.gov/chswc/Reports/2015/CHSWC_AnnualReport2015.pdf

Congressional Budget Office, *How Initiatives to Reduce Fraud in Federal Health Care Programs Affect the Budge*t, October 2014. As of July 29, 2016: https://www.cbo.gov/sites/default/files/113th-congress-2013-2014/reports/49460-ProgramIntegrity.pdf

Davis, Kristina, "Feds Say Patients Bought, Sold in Bribery Scheme," *San Diego Union-Tribune*, November 10, 2015. As of May 12, 2017: http://www.sandiegouniontribune.com/sdut-chiropractor-bribery-insurance-scheme-2015nov10-story.html

———, "Probe Widens in Workers' Comp Insurance Fraud Ring," S*an Diego Union-Tribune*, January 28, 2016. As of April 21, 2017: http://www.sandiegouniontribune.com/sdut-workers-comp-fraud-investigation-widens-2016jan28-story.html

Dickson, Virgil, "Northrup Grumman Wins $91 Million CMS Contract for Fraud Detection," *Modern Healthcare*, April 7, 2016. As of July 29, 2016: http://www.modernhealthcare.com/article/20160407/NEWS/160409912

DIR—*See* California Department of Industrial Relations.

Doob, Anthony N., and Cheryl Marie Webster, "Sentence Severity and Crime: Accepting the Null Hypothesis," *Crime and Justice*, Vol. 30, 2003, pp. 143–195.

Forsythe, Lisa Anne, and Francine Johnson, *Workers' Compensation Liens in California: The History, the Opportunity, and a Model for Change*, Franklin, Tenn.: Coventry Workers' Comp Services, May 2012.

GAO—*See* U.S. Government Accountability Office.

Gartner, "Advanced Analytics," *IT Glossary*, undated. As of November 16, 2016: http://www.gartner.com/it-glossary/advanced-analytics/

Giannangelo, Kathy, "Mining Medicare and Medicaid Data to Detect Fraud," *Journal of the American Health Information Management Association*, Vol. 78, No. 7, July 2007, pp. 66–67. As of July 31, 2016: http://bok.ahima.org/doc?oid=71891#.WHNWBFMrLyM

Harbert, Tam, "IRS Implements Analytics for Compliance, Fraud Detection and Workforce Management," *Data Informed*, September 19, 2012. As of July 31, 2016: http://data-informed.com/irs-implements-analytics-for-compliance-fraud-detection-and-workforce-management/

HHS—*See* U.S. Department of Health and Human Services.

Hirani, Saad, "Big Data Solutions for Small Firm," Pantas and Ting Sutardja Center for Entrepreneurship and Technology, University of California Berkeley, March 14, 2016. As of December 24, 2016: http://scet.berkeley.edu/big-data-solutions-for-small-firms/

Jewett, Christina, "Fraud Accusations Grow in California's Embattled Workers' Comp System," *Reveal*, June 1, 2016. As of July 30, 2016: https://www.revealnews.org/blog/fraud-accusations-grow-in-californias-embattled-work-comp-system/

Johnson, Denise, "Employers: The Real Problem Behind Workers' Comp Fraud," *Claims Journal*, June 24, 2013. As of July 30, 2016: http://www.claimsjournal.com/magazines/claims-review/2013/06/24/231495.htm

Jones, Stacy L., Rena B. David, and Steve Hayes, "Cumulative Trauma in California Workers' Compensation," California Workers' Compensation Institute, research note, December 2016.

Kanowitz, Stephanie, "Social Security to Step Up Fraud Detection with Predictive Analytics," *GCN*, April 22, 2014. As of July 29, 2016: https://gcn.com/Articles/2014/04/22/SSA-fraud-detection.aspx

Kou, Yufeng, Chang-Tien Lu, Sirirat Sirwongwattana, and Yo-Ping Huang, "Survey of Fraud Detection Techniques," *Proceedings of the 2004 IEEE International Conference on Networking, Sensing and Control*, 2004, pp. 749–754. As of July 29, 2016: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.472.1297&rep=rep1&type=pdf

Lookman, Sanni, and Selmin Nurcan, *A Framework for Occupational Fraud Detection by Social Network Analysis*, CAISE Forum 2015, Stockholm, Sweden, June 2015. As of December 15, 2016: https://hal-paris1.archives-ouvertes.fr/hal-01217355/document

Lowes, Robert, "Fraud Ring 'Bought and Sold Patients Like Cattle,' Say Feds," *Medscape*, November 12, 2015.

Major, John A., and Dan R. Riedinger, "EFD: A Hybrid Knowledge/Statistical-Based System for the Detection of Fraud," *Journal of Risk and Insurance*, Vol. 69, No. 3, September 2002, pp. 309–324.

Marlin, Laura, first deputy auditor, Massachusetts Office of the State Auditor, "Investment in Data Analytics by the Massachusetts Office of the State Auditor," slide deck, January 15, 2014. As of July 31, 2016: http://montgomeryaga.org/images/meeting/011514/slides_for_fraud_january_webinar.pdf

McBirnie, Thomas J., *Report on the Workers' Compensation Anti-Fraud Program*, California Commission on Health and Safety and Workers' Compensation, August 2001. As of July 31, 2016: http://www.dir.ca.gov/chswc/finalfraudreport0801.html

Medical Board of California, *Disciplinary Actions/License Alerts*, undated. As of May 22, 2017: http://www.mbc.ca.gov/Publications/Disciplinary_Actions/alerts-actions_2016.xls

Montalbano, Elizabeth, "IRS Uses Analytics to Help Collect Delinquent Taxes," *Information Week*, December 7, 2011. As of August 1, 2016: http://www.informationweek.com/applications/irs-uses-analytics-to-help-collect-delinquent-taxes/d/d-id/1101723

Morley, Nicola J., Linden J. Ball, and Thomas C. Ormerod, "How the Detection of Insurance Fraud Succeeds and Fails," *Psychology, Crime and Law*, Vol. 12, No. 2, 2006, pp. 163–180. As of July 30, 2016: http://www.tandfonline.com/doi/pdf/10.1080/10683160512331316325

Muchmore, Shannon, "CMS Lambasted for Failing to Curb Medicaid, Medicare Fraud and Abuse," *Modern Healthcare*, May 24, 2016. As of November 2, 2016: http://www.modernhealthcare.com/article/20160524/NEWS/160529959

"NC Industrial Commission Fraud Team Collects Nearly $1 Million for Public Schools," *WorkCompWire*, August 11, 2015. As of July 24, 2016: http://www.workcompwire.com/2015/08/nc-industrial-commission-fraud-team-collects-nearly-1-million-for-public-schools/

New, Joshua, "5 Q's for Justin Abold-LaBreche, Acting Director of the Office of Compliance Analytics at the IRS," Center for Data Innovation, August 23, 2016. As of December 3, 2016: https://www.datainnovation.org/2016/08/5-qs-for-justin-abold-labreche-acting-director-of-the-office-of-compliance-analytics-at-the-irs/

New York State Workers' Compensation Board, "Subject Numbers Concerning Health Providers' Authorization to Treat Workers' Compensation Claimants and/or Conduct Independent Medical Examinations," undated. As of July 31, 2016: http://www.wcb.ny.gov/content/main/SubjectNos/subjectNos_docs.jsp

———, provider status list, updated April 21, 2017. As of April 25, 2017: http://www.wcb.ny.gov/content/main/hcpp/ProviderStatus.pdf

Nian, Ke, Haofan Zhang, Aditya Tayal, Thomas Coleman, and Yuying Li, "Auto Insurance Fraud Detection Using Unsupervised Spectral Ranking for Anomaly," *Journal of Finance and Data Science*, Vol. 2, No. 1, March 2016, pp. 58–75. As of July 31, 2016: http://ac.els-cdn.com/S2405918816300058/1-s2.0-S2405918816300058-main.pdf?_tid=6871a23e-d64f-11e6-903b-00000aacb361&acdnat=1483954902_f529394f972b1ed3accd3214b50505db

North Carolina Industrial Commission, "Fraud Unit Steps Up Investigations of Uninsured Businesses," news release, March 16, 2015. As of July 28, 2016: http://www.ic.nc.gov/NCICFraud-031615NewsRelease.pdf

Parente, Stephen, Brian Schulte, Allen Jost, Thomas Sullivan, and Allan Klindworth, "Assessment of Predictive Modeling for Identifying Fraud Within the Medicare Program," *Health Management, Policy and Innovation*, Vol. 1, No. 2, December 2012, pp. 8–37.

Petrakis, Ingrid, claimant fraud specialist and special agent, U.S. Postal Service Office of Inspector General, and Tracey Ruppel, provider fraud specialist and special agent, U.S. Postal Service Office of Inspector General, "Building a Model to Combat Workers' Compensation Fraud," presentation given at the National Health Care Anti-Fraud Association Institute for Health Care Fraud Prevention 2015 Annual Training Conference, November 19, 2015.

Pollak, David L., and Roger A. Tolman, Jr., *California Workers' Compensation Law and Practice*, rev. 13, James Publishing, 2016.

Power, Daniel J., and Mark L. Power, "Sharing and Analyzing Data to Reduce Insurance Fraud," *MWAIS 2015 Proceedings*, Paper 19, May 14, 2015. As of July 27, 2016: http://aisel.aisnet.org/cgi/viewcontent.cgi?article=1018&context=mwais2015

Raj, Pethuru, and Ganesh Chandra Deka, *Handbook of Research on Cloud Infrastructures for Big Data Analytics*, Advances in Data Mining and Database Management Book Series, Hershey, Pa.: Information Science Reference, 2014.

Rubenstein, Richard B., "The Grand Bargain on Life Support: What Is the Future of Workers' Compensation?" *LexisNexis Legal Newsroom: Workers Compensation Law*, October 4, 2016. As of November 8, 2016: https://www.lexisnexis.com/legalnewsroom/workers-compensation/b/recent-cases-news-trends-developments/archive/2016/10/04/the-grand-bargain-on-life-support-what-is-the-future-of-workers-compensation.aspx

SAS Institute, "How Can Medicaid Fraud Control Units Use Data Mining to Support More Efficient and Effective Investigations?" Government Solution Brief, 2013. As of July 24, 2016: http://www.sas.com/content/dam/SAS/en_us/doc/solutionbrief/government-medicaid-fraud-control-units-106767.pdf

———, "Detect and Prevent Medicaid Fraud and Improper Payments to Improve Your State Budget," Solution Brief, 2014. As of July 24, 2016: http://www.sas.com/content/dam/SAS/en_us/doc/solutionbrief/detect-prevent-medicaid-fraud-107258.pdf

Social Security Administration, Office of the Inspector General, *Usefulness of Department of Homeland Security Travel Data to Identify Supplemental Security Income Recipients Who Are Outside the United States*, Audit Report A-01-11-01142, February 2013. As of July 31, 2016: http://oig.ssa.gov/sites/default/files/audit/full/pdf/A-01-11-01142.pdf

———, Office of the Inspector General, *Using Medicare Data to Identify Disabled Individuals Who Are Deceased*, Audit Report A-08-13-13038, April 2015. As of July 31, 2016: https://oig.ssa.gov/sites/default/files/audit/full/pdf/A-08-13-13038.pdf

Stevens, Howard, "The Downside of Denial: A California Perspective," *LexisNexis Legal Newsroom: Workers Compensation Law*, July 14, 2009. As of September 15, 2016: https://www.lexisnexis.com/legalnewsroom/workers-compensation/b/workers-compensation-law-blog/archive/2009/07/14/the-downside-of-denial_3a00_-a-california-perspective.aspx

Sullivan, Thomas, "Senators Look for Report on CMS Fraud Prevention System," *Policy and Medicine*, November 14, 2012. As of July 27, 2016: http://www.policymed.com/2012/11/senators-look-for-report-on-cms-fraud-prevention-system.html

Travaille, Peter, Roland M. Müller, Dallas Thornton, and Jos van Hillegersberg, "Electronic Fraud Detection in the U.S. Medicaid Healthcare Program: Lessons Learned from Other Industries," *Proceedings of the Seventeenth Americas Conference on Information Systems*, c. 2011. As of July 31, 2016: http://doc.utwente.nl/78000/1/Travaille11electronic.pdf

U.S. Bureau of Labor Statistics, U.S. Department of Labor, "Job Openings and Labor Turnover: October 2016," news release, USDL-16-2254, December 7, 2016. As of April 21, 2017: https://www.bls.gov/news.release/archives/jolts_12072016.htm

U.S. Department of Health and Human Services, Office of Inspector General, "Preventing and Detecting Medicare and Medicaid Fraud," Management Issue 3, 2012. As of July 28, 2016: http://oig.hhs.gov/reports-and-publications/top-challenges/2012/issue03.asp

———, Office of Inspector General, *The Fraud Prevention System Identified Millions in Medicare Savings, but the Department Could Strengthen Savings Data by Improving Its Procedures*, A-01-13-00510, June 2014. As of July 27, 2016: https://oig.hhs.gov/oas/reports/region1/11300510.pdf

———, Office of Inspector General, Advisory Opinion 15-02, February 9, 2015.

———, Office of Inspector General, *Semiannual Report to Congress: October 1, 2015 to March 31, 2016*, OEI-05-13-00520, 2016a. As of January 23, 2017: https://oig.hhs.gov/reports-and-publications/archives/semiannual/2016/SAR_Spring_2016.pdf

———, Office of Inspector General, *Medicaid Enhanced Provider Enrollment Screenings Have Not Been Fully Implemented*, OEI-05-13-00520, May 20, 2016b. As of November 3, 2016: https://oig.hhs.gov/oei/reports/oei-05-13-00520.pdf

U.S. Department of the Treasury, Inspector General for Tax Administration, "The Return Review Program Enhances the Identification of Fraud; However, System Security Needs Improvement," press release, September 22, 2015a. As of October 3, 2016: https://www.treasury.gov/tigta/press/press_tigta-2015-29.htm

———, "IRS's Electronic Fraud Detection System Replacement Process Needs Improvement," press release, November 25, 2015b. As of November 1, 2016: https://www.treasury.gov/tigta/press/press_tigta-2015-40.htm

U.S. Government Accountability Office, *Medicare Fraud Prevention: CMS Has Implemented a Predictive Analytics System, but Needs to Define Measures to Determine Its Effectiveness*, Washington, D.C., GAO-13-104, October 15, 2012. As of April 21, 2017: http://www.gao.gov/products/GAO-13-104

———, *Standards for Internal Control in the Federal Government*, Washington, D.C., GAO-14-704G, September 10, 2014a. As of April 21, 2017: https://www.gao.gov/products/GAO-14-704G

———, *SSA Disability Benefits: Enhanced Policies and Management Focus Needed to Address Potential Physician-Assisted Fraud*, Washington, D.C., GAO-15-19, November 10, 2014b. As of April 21, 2017: https://www.gao.gov/products/GAO-15-19

———, *High-Risk Series: An Update*, Washington, D.C., GAO-15-290, February 11, 2015a. As of April 21, 2017: https://www.gao.gov/products/GAO-15-290

———, *Medicare Program: Additional Actions Needed to Improve Eligibility Verification of Providers and Suppliers*, Washington, D.C., GAO-15-448, June 25, 2015b. As of April 21, 2017: https://www.gao.gov/products/GAO-15-448

U.S. House of Representatives, Committee on Ways and Means, "Republican Oversight Leaders Question CMS on Fraud Prevention System," Washington, D.C., press release, October 27, 2015. As of January 3, 2017: https://waysandmeans.house.gov/republican-oversight-leaders-question-cms-on-fraud-prevention-system/

Washington State Department of Labor and Industries, *Improving Integrity and Accountability in the Workers' Compensation System: 2014 Annual Report to the Legislature*, LR 14-09, January 2015. As of December 14, 2016: http://app.leg.wa.gov/ReportsToTheLegislature/Home/GetPDF?fileName=ImprovingIntegrityAccountabilityWorkersCompSystem_6c802f37-72ab-49cc-adea-42fc086a2c97.pdf

WCB—*See* New York State Workers Compensation Board.

WCIRB—*See* Workers' Compensation Insurance Rating Bureau of California.

Weisbaum, Herb, "Big Data Used to Catch Fraudulent Tax Returns," CNBC, March 18, 2014. As of July 28, 2016: http://www.cnbc.com/2014/03/18/ed-to-catch-fraudulent-tax-returns.html

Willis Towers Watson, "California Workers' Compensation: Current Reform and Legislative Update," *You Should Know*, March 2016. As of April 21, 2017: http://www.willis.com/documents/services/Claim%20and%20Risk%20Control/15283%20PUBLICATION_YSK%20Cali%20Workers%20Comp.pdf

Workers' Compensation Insurance Rating Bureau of California, *Analysis of Changes in Indemnity Claim Frequency: January 2016 Update Report*, January 7, 2016a. As of August 6, 2016: http://www.wcirb.com/sites/default/files/documents/january_2016_claim_frequency_report-complete.pdf

———, *Senate Bill No. 863 WCIRB Cost Monitoring Report: 2016 Retrospective Evaluation*, November 17, 2016b. As of January 2, 2017: http://www.wcirb.com/sites/default/files/documents/sb_863_cost_monitoring_report_2016.pdf

Wright, Valerie, *Deterrence in Criminal Justice: Evaluating Certainty vs. Severity of Punishment*, Washington, D.C.: Sentencing Project, November 2010. As of April 21, 2017: http://www.sentencingproject.org/wp-content/uploads/2016/01/Deterrence-in-Criminal-Justice.pdf

Yasin, Rutrell, "How MassHealth Cut Medicaid Fraud with Predictive Analytics," *GCN*, February 24, 2014. As of July 26, 2016: https://gcn.com/Articles/2014/02/24/masshealth.aspx