

# Introducing Forensic Health Services Research

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**I**ntentional financial fraud and abuse are rampant within our healthcare system. Recent estimates suggest that 3% to 10% of total healthcare expenditures—\$68 to \$234 billion—are lost to fraud annually.<sup>1</sup> Healthcare fraud is a kaleidoscopic phenomenon that spans doctor-operated “pill-mills” to organized crime-backed sham clinics. Similarly, healthcare abuse encompasses a spectrum that ranges from systematic *up-coding* to medically unwarranted testing and interventions. Nomenclature notwithstanding, the consequences of fraud and abuse are borne by all Americans in the form of higher insurance premiums, greater out-of-pocket expenses, and the peril of clinically unnecessary care.

As part of a multi-pronged strategy to reign in healthcare costs, the Obama administration announced the “Campaign to Cut Waste” in 2010. Ambitiously, the operation pledged to reduce fraudulent and wasteful healthcare cost by cutting the Medicare error rate in half, recovering \$2 billion in improper payments and lowering payment errors by \$50 billion.<sup>2</sup> Despite this effort, a recent report from the Government Accountability Office (GAO) entitled, “Important Steps Have Been Taken, but More Could Be Done to Deter Fraud,” suggests limited success.<sup>3</sup> Why have we not been able to tackle fraud and abuse more efficiently?

The traditional definition of healthcare fraud rests on a legal paradigm. Medicaid fraud is defined under federal statute 42 C.F.R as an “intentional deception or misrepresentation made by a person with the knowledge that the deception could result in some unauthorized benefit to himself or some other person.” Similarly, Medicaid abuse is defined as “provider practices that are inconsistent with sound fiscal, business, or medical practices and result in an unnecessary cost to the Medicaid program or in reimbursement for services that are not medically necessary or fail to meet the professionally recognized standards of care.” Despite these exacting definitions, no “line-item” on a healthcare claim isolates intentional fraud or abuse. Rather, these practices exist as a mosaic within the complex portrait of healthcare. Thus, separating fraud from clinically appropriate care requires a prismatic viewpoint that refracts clinical from economic truths. Moreover, the legal focus on fraud and abuse may have constrained approaches that seek to address this problem. Quite possibly, the lack of inclusion of a medical focus to address “medical necessity” and practices that “meet professionally recognized standards of care,” has not only cost US dollars, but lives as well.

Financial fraud and abuse are rampant within our healthcare system. Recent estimates suggest that \$68 to \$234 billion is lost to fraud annually. Despite numerous efforts, current strategies have met with limited success in preventing and remediating this practice. Why have we not been better able to tackle this problem?

Current strategies aimed at preventing healthcare fraud and abuse fail to appreciate the spectrum that lies between clinically appropriate care and fraudulent practice. This oversight is critical, as what may be fitting treatment in one setting may just as easily be fraudulent in another. Therefore, in order to untangle the web of fraud and abuse, novel techniques and engagement of physicians who best understand these nuances are necessary.

In this commentary, we introduce “forensic health services research,” an extension of this scientific discipline that can best identify wasteful and fraudulent expenditure. The use of health services research in this fashion is not only synergistic with ongoing efforts, but greatly enhances current approaches. Despite the promise of this endeavor, important policy changes are needed to nurture this novel niche. We review these challenges and outline a path to move forward using this platform.

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## EXISTING METHODS TO DETECT FRAUD AND ABUSE

Extant approaches to curbing

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### Take-Away Points

- Financial fraud and waste are rampant within Medicare and Medicaid.
- Current approaches to tackle this problem may be short-sighted and have yielded minimal return on investment.
- Health services research is a well-established science that uses patient, provider and contextual information sources to analyze trends and patterns in care.
- The use of this science to combat fraud and waste represents a natural extension of this talent.
- Important changes in policy and innovation in design are necessary to align this science with this effort.

healthcare fraud and abuse rely on third-party recognition of aberrations in claims data. To this end, interventions such as cost-report auditing, random medical chart review, and benefit integrity have been implemented with mixed results. For instance, the Centers for Medicare & Medicaid Services (CMS) Program for Evaluating Payment Patterns Electronic Report uses a “pay and chase model” that has necessitated long-term financial support, additional expenses for recovery of payment and insignificant returns.<sup>3</sup> State-of-the-art technological solutions, such as a \$77 million computer, foiled just 1 suspicious Medicare payment of \$7,591.<sup>4</sup> The recovery of \$4 billion in fraudulent claims by special “Strike Force” teams was recently lauded as a major accomplishment; however, this represents but a fraction of total losses. The most sobering fact is this: less than \$20 million of the \$102 million spent on audits related to Medicare fraud has been recovered.<sup>5</sup>

It is clear that the web of healthcare fraud and abuse cannot be untangled through these methods. Innovative approaches are necessary to detect these behaviors.

## FORENSIC HEALTH SERVICES RESEARCH

Health services research (HSR) is a multidisciplinary scientific field that examines the associations between access to healthcare services, cost, delivery and patient outcomes. Because HSR investigates how social factors, organizations, financing systems and human behaviors interact to influence healthcare, it is well suited for forensic analysis of fraud and abuse. For example, HSR has developed a robust set of statistical tools necessary to understand nuances of clinical practice, including those dependent on the characteristics of patients and providers. Second, HSR actively uses claims and billing data to understand healthcare delivery and outcomes—thus, it speaks “the same language” as present-day fraud recovery measures. Third, HSR frequently targets conditions in which fraud and abuse are highly prevalent; those with high-cost and questionable impact on care.

Many examples of how HSR may be used to detect healthcare fraud and abuse exist. For instance, Lin and colleagues

found that guideline-recommended non-invasive cardiac testing does not predate many percutaneous coronary interventions, identifying providers that may be targets for further scrutiny.<sup>6</sup> Similarly, in a study examining cardioverter-defibrillator implantations in the United States, Al Khatib and colleagues reported that 1 out of every 5 defibrillators inserted did not meet evidence-based criteria for placement, highlighting dissonance between

clinical practice and professional standards.<sup>7</sup> In evaluating the timing of screening colonoscopy, Goodwin and colleagues found that 42% of average-risk Medicare enrollees underwent a repeat evaluation in fewer than 7 years compared with the recommended 10-year guideline-endorsed interval.<sup>8</sup> The authors also observed that patients seen by a high-volume endoscopist ( $\geq 1180$  colonoscopies during the study period) and those living in specific areas (Pueblo, Colorado, and Bryan, Texas), were more likely to undergo repeat screening than recommended by professional guidelines, thus identifying specific entities for examination.

The use of HSR in this fashion is not unusual; rather, these types of enquiries represent its very essence. However, using HSR to address healthcare fraud and abuse represents a novel implementation. Several changes in existing infrastructure and policy are needed to nurture this approach. First, innovative funding opportunities must be created to attract HSR investigators. As CMS is the largest stakeholder and retains the greatest oversight over healthcare expenditure, it is but logical that these calls fall under their purview. Second, local and national payers must come together to share detailed patient-, provider-, and procedure-level data to facilitate these types of analyses. Thus, clinically oriented information-exchange networks and databases are necessary. While CMS already has robust mechanisms for collecting billing data, enhancements with clinically relevant covariates specific to the question at hand are necessary for this implementation. Third, legislation indemnifying HSR investigators from repercussions that may arise from their work must be enacted. Without this safeguard, many may not engage in what may be considered “whistle-blowing.” Relatedly, we physicians must stop making excuses for those who systematically and predictably provide care outside accepted guidelines of practice. Instead, we must call this behavior exactly what it is—fraud and abuse.

## CONCLUSIONS

As healthcare expenditures escalate, so too will costs incurred by fraud and abuse. Despite the many systematic

examples where physician practice patterns transcend established guidelines, clinicians have largely remained silent on this issue. If we are to unearth the malevolence of allegedly benevolent healthcare, physicians must be part of the process. Creating a forensic HSR agenda aligns physicians with regulators and represents but a natural extension of this talent. Policy-makers should consider carving a niche for HSR initiatives to tackle the age-old adversary of healthcare-fraud and abuse.

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