Prioritizing Prevention:

Value-for-Money in Anti-Fraud Efforts

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March 2025

Program Integrity Alliance

About the Program Integrity Alliance

The Program Integrity Alliance (PIA) is a non-profit initiative to strengthen integrity and fraud prevention in government through data, evidence, and collaboration. PIA is fiscally sponsored by the Project on Government Oversight (POGO) while awaiting its 501(c)(3) status.

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The United States loses hundreds of billions of dollars per year to fraud against public programs. The main paradigm for anti-fraud policy is "pay and chase", where government agencies use after-the-fact enforcement to catch and punish fraud. Preventative measures are often much more effective than pay and chase, but their effects are harder to quantify. This paper argues that Value-for-Money (V4M) should be the standard for evaluating anti-fraud policies and activities, as it better reflects the effectiveness of prevention.

Key Takeaways

- Federal agencies favor pay and chase anti-fraud actions due to a focus on recovery as a measure of effective anti-fraud policy.

- The appropriate measure of effective anti-fraud policy is V4M. The value includes both recovery dollars but also dollars not lost to fraud due to effective prevention.

- A growing academic literature shows that preventative measures can be extremely low-cost and effective at preventing fraud against public programs.

- Prevention is substantially harder to measure than recovery, because instead of observing inflows, prevention leads to money not spent. Nevertheless, dollars not spent are real funds that government agencies should count as value produced by anti-fraud actions.

- Data are necessary both for fraud prevention and measurement of V4M. Data are under-utilized in anti-fraud actions, which exacerbates the undervaluation of preventative efforts.

- Agency leadership should prioritize preventative anti-fraud measures, adopt V4M standards and invest in capacity and skills for measuring V4M of preventative activities.

Contents

Introduction

The United States government spends trillions of dollars per year to provide goods and services through public programs as wide ranging as health care, defense spending, infrastructure, and education. Throughout public spending, fraud is a problem, wherein bad actors exploit public programs for their own gain, including through falsified billing on public works projects, illegitimate claims to public health insurance programs, and misrepresentation of need by beneficiaries of public benefits and stimulus programs. These issues are the focus of numerous US policymakers, administrators, and oversight bodies, including the Government Accountability Office, the Pandemic Response Accountability Committee, the federal program Offices of the Inspector General, and multiple Congressional committees.

The US uses a combination of strategies to combat fraud, but heavy relies on *ex-post* detection, which is often referred to as "pay and chase." Under the pay and chase paradigm, the United States government pays the vast majority of claims filed against it and then relies on a series of enforcement actions to target fraud if it is detected. These enforcement actions include civil and criminal lawsuits, audits, and exclusions. These enforcement actions are generally conducted by the US Department of Justice as well as Offices of the Inspector Generals located within federal departments and agencies. The goal of pay and chase is to recover stolen funds, as well as to provide deterrence against would-be-fraudulent actors.

In contrast to pay and chase, up-front preventative mechanisms show promise to reduce fraud in even more efficient and cost-effective ways. The primary concern with prevention is that additional up-front regulations or mechanisms can slow government processes and unnecessarily burden legitimate recipients. However, a growing body of research has shown that prevention can be achieved with major reductions in fraudulent spending and minimal downsides, including low hassle costs to beneficiaries and low administrative overhead. Much of this relies on improved technological capabilities, which can be used to detect and eliminate fraud before claims are ever paid. Preventative mechanisms have shown increased usage over the past decade, including in the Medicare and Medicaid programs and Unemployment Insurance. However, there are still numerous examples of clear preventative actions that were not taken to ensure program integrity, with billions of dollars of fraud resulting from these failures.

The appropriate measure for evaluating anti-fraud actions is Value-for-Money (V4M), which compares spending on anti-fraud efforts to the value they produce[1]. Currently, however, the Value included in V4M calculations is often limited in scope to dollars recovered by anti-fraud actions, such as settlements from lawsuits or recoveries from audits. Recovery dollars are only a share of the value produced by anti-fraud actions, because these actions also produce deterrence effects, i.e. money not spent on fraud because anti-fraud policies either eliminate future frauds or prevent the rise of frauds in the first place. Deterrence effects are also often referred to as prevention or loss aversion in the program integrity community, and these terms are used interchangeably in this paper. Crucially, both deterrence and recovery must be included for V4M calculations to be accurate. Moreover, preventative measures only produce deterrence effects, and no recovery. The current pay and chase paradigm focuses on recoveries, which prejudices administrative decision-making away from preventative measures.

A major challenge in including deterrence and prevention in anti-fraud V4M is measurement. Recovery dollars are easy to measure, because those who are caught committing fraud must repay the government. In contrast, deterrence effects require an estimation of how much money was not spent on fraud due to successful prevention. Recent research has shown how these amounts can be consistently estimated (Leder-Luis, Andriola, & Gracia, Measuring the Value of Health Care Anti-Fraud Efforts, 2024); however, deterrence estimation has had incomplete uptake, and the pay and chase paradigm is still pervasive. This highlights the importance of considering deterrence effects and the V4M benefits that could arise from a shift toward preventative measures.

A major force underpinning the failure to adopt preventative measures, and to measure V4M more broadly, is a lack of data use by anti-fraud practitioners. Data are necessary for preventative measures because preventative measures require the detection and elimination of loopholes and schemes that allow fraudulent claims to persist and be paid. Data are also necessary for computing V4M, because V4M requires an understanding of how much money is not spent by not paying fraudulent claims. Weaknesses in the technological capabilities of the United States have led to undermeasurement of V4M across public programs. Because of that, investments in improved data capabilities would be extremely high value.

[1] V4M relates to return on investment (ROI), but also incorporates a broader, non-financial interpretation of "value", including other policy objectives such as access to services and eliminating unnecessary hassles or frictions.

Recommended Actions

1. The federal government can enhance anti-fraud activities by making prevention a central focus, reducing dependence on the pay and chase model of spending first and recovering later.
2. V4M measurement provides a framework for federal agencies to assess the effectiveness of anti-fraud policies and activities.
    - Calculations of V4M should consider deterrence effects.
    - Measuring deterrence effects requires estimation. These estimates can be made consistent across agencies through the adoption of standard measurement methodologies.
    - Legislation, or changes to Congressional Budget Office rules, may also be necessary for consistent use of V4M that include deterrence effects for securing program integrity funding.
3. For V4M measurement to be effective as a decision-making tool for management, agency leadership must drive its adoption by prioritizing it within program integrity efforts and ensuring its integration into anti-fraud strategies at the agency or program level.
    - As this paper demonstrates, opportunities exist for leadership in agencies that administer benefit programs to improve V4M measurement, such as the Department of Health and Human Services, the Department of Labor, and the Department of Housing and Urban Development. This can be done in conjunction with existing program integrity staff and groups, such as the Center for Program Integrity at the Centers for Medicare and Medicaid.
4. In some agencies, program integrity authority to prevent improper payments, including fraud, is vested in the agency's Inspector General. Inspectors General can play a vital role in V4M measurement by providing inputs through existing audit and investigation workflows to ensure that preventative measures are strengthened when addressing newly discovered frauds and emerging risks.
5. Agencies can ensure that data pipelines are designed not only to detect fraud, but also to support V4M measurement.
    - Program integrity staff and leadership have the primary responsibility for ensuring data are consistently produced and used for V4M

measurement and that program integrity staff have sufficient technical capability for measuring deterrence effects.

- Entities that support government-wide initiatives, such as the Office of Management and Budget, the General Services, Administration, the US Department of Government Efficiency service (DOGE), and others, can ensure improvements to technological capacity, data sharing, and data reuse prioritize prevention and V4M measurement.

6. The U.S. Congress and federal agencies can allocate budgets for enhanced fraud prevention, recognizing that while it requires upfront investment, it delivers high V4M in the long run.

The Effectiveness of Preventative Measures

Why and how do up-front preventative measures work in stopping fraud? This section reviews existing studies that show the effectiveness of preventative measures including up-front regulations and closures to loopholes that have successfully eliminated fraud against public programs.

Case Study: Ambulance Taxis in Medicare

New research highlights the exact mechanisms by which prevention outperforms pay and chase. A recent study "Ambulance Taxis: The Impact of Litigation and Regulation on Health Care Fraud," provides a general framework for the comparison between pay and chase ex-post anti-fraud tools and up-front anti-fraud preventative measures (Eliason, League, Leder-Luis, McDevitt, & Roberts, 2025). The context of this study is the market for dialysis ambulance transportation, a Medicare benefit for patients with end-stage renal disease. Ambulances are not available for normal transportation to and from dialysis, but patients with medical necessity – specifically, those who cannot safely travel in any other way to and from dialysis – are eligible for a non-emergency ambulance ride. However, there was widespread overuse of this benefit and rampant fraud, including allegations of organized crime involvement. Fraudulent ambulance companies engaged in aggressive tactics to steal government funds, including paying kickbacks to patients to induce them to ride in ambulances, and opening new ambulance companies when existing companies were caught (Eliason, League, Leder-Luis, McDevitt, & Roberts, 2025).

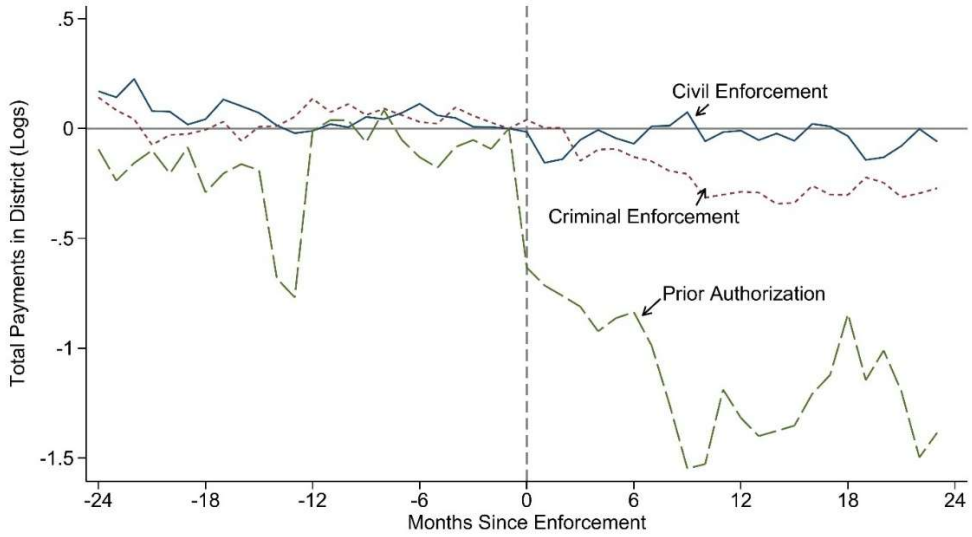
Data analysis of the Ambulance Taxis case shows the scope of this fraud. Dialysis non-emergency ambulance transportation is a minor benefit of a subpart of the Medicare program, yet fraud was rampant and expensive. Using 100% of claims on US dialysis patients, this research shows that between 2003 and 2017, Medicare spent $7.7 Billion on 37.5 million nonemergency dialysis ambulance rides given by over 3,000 companies (Eliason, League, Leder-Luis, McDevitt, & Roberts, 2025).

Ambulance Taxis provides an ideal case study for comparing the effectiveness of pay and chase to preventative measures. As the fraud grew, the US Department of Justice conducted pay and chase anti-fraud lawsuits against fraudulent ambulance companies. This research discusses 69 such lawsuits across 26 different federal judicial districts, including 43 criminal lawsuits and 26 civil lawsuits, starting as early as 1996. Yet fraud persisted, and by 2011, dialysis ambulance taxi spending rose to $700 Million per year.

When pay and chase failed, Medicare finally implemented preventative anti-fraud measures. In 2014, in response to the concerns about unchecked fraud and growing spending, Medicare introduced prior authorization, an up-front preventative measure by which nonemergency dialysis ambulance claims were not paid without proof of medical necessity documentation signed by a physician. Notably, Medicare required prior authorization for patients who needed multiple round-trip visits, which still allowed the use of the ambulance in circumstances of acute and immediate need.

In combatting ambulance fraud, prevention substantially outperformed pay and chase. Using 100% claims data from all dialysis patients, this research uses the staggered roll-out of criminal and civil lawsuits and of prior authorization to compare the treatment effects of these programs. Figure 1 shows the comparative effects of these policies. The rollout of prior authorization caused a 68% immediate and persistent drop in spending on ambulance taxis. In contrast, civil litigation had roughly 0 effect on fraudulent ambulance spending, and criminal enforcement reduced this fraud by about 20%. Subsequent analysis shows that the 68% reduction due to prior authorization was extremely well-targeted, with no effects on patient attendance of dialysis sessions, no increase in hospitalization, and no increased patient mortality. Closing the fraud loophole through prior authorization was a clear win for anti-fraud policy.

Figure 1: Comparative Effectiveness of Prevention vs Ex-Post Enforcement



Source: *Ambulance Taxis: The Impact of Regulation and Litigation on Health Care Fraud* by Paul Eliason, Riley League, Jetson Leder-Luis, Ryan McDevitt, and James Roberts, Journal of Political Economy, accepted for publication 6/26/2024; https://www.journals.uchicago.edu/doi/10.1086/734134; Copyright 2024, The University of Chicago.

A V4M framework shows that prior authorization was extremely efficient. This research estimates that Medicare would have saved an additional $4.8 Billion if it had implemented prior authorization in 2003, at an administrative cost of only $28 Million per year. In contrast, pay and chase enforcement was very low value-for-money. Moreover, this research estimates that litigation cost roughly $250,000 per case, with no value to civil cases and limited value to criminal cases.

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Ultimately, the ambulance taxis case is instructive about broader failures of the pay and chase paradigm. The US government ran nearly 70 lawsuits for the same fraud, over and over again, at millions of dollars in anti-fraud spending, but produced very limited results from this behavior. The fraud persisted, with egregious examples such as the son of a convicted fraudster opening his own company in the same district doing the same fraud. This highlights the fact that anti-fraud efforts, when they fail to close the relevant loophole with a targeted investment in preventative measures, can be extremely inefficient at eliminating widespread frauds.

Case Study: Pandemic Unemployment Insurance Fraud

The effectiveness of anti-fraud preventative measures is further highlighted by recent work on fraud in unemployment insurance (UI) during the Covid-19 pandemic. The recent study "Unemployment Insurance Fraud in the Debit Card Market" discusses the rise of UI fraud using data from debit cards, including pre-paid cards used to deliver UI benefits (Khetan, Leder-Luis, Wang, & Zhou, 2024). Through the pandemic, the US government widely expanded UI, disbursing over $800 Billion from 2020-2021. These funds were administered by state unemployment agencies, which have limited technological and bureaucratic capacity. UI fraud became a major problem, with wide reports of identity theft, wherein criminals applied for UI benefits on behalf of unknowing beneficiaries using stolen identities.

Fraud in the pandemic UI program and other programs was widespread and very expensive. The Government Accountability office has estimated that roughly $100 Billion was lost to UI fraud over this period (Government Accountability Office, 2023). Exact figures will likely never be known, and fraud was also prevalent in other pandemic programs such as the Small Business Administration's (SBA)Paycheck

Protection Program (PPP) program, discussed below. The scale of this fraud is staggering—$100 billion lost to UI fraud alone is about 5 times greater than the $20 Billion per year spent annual on the Children's Health Insurance Program. $100 billion lost to fraud is greater than the annual GDP of more than 100 of the countries of the world.

This research shows that preventative measures were effective in reducing UI fraud driven by identity theft. In the context of pandemic UI fraud, the appropriate preventative measure was identity verification, through services such as ID.me and LexisNexis. This is because a prevalent type of fraud was identity theft, where fraudsters would use stolen identities to apply on behalf of unknowing individuals. Under identity verification programs, states began requiring applicants for UI to prove their identity through a smartphone app before receiving payment, using photos of their driver's license and a selfie. This research identifies fraud using a large database of debit card transaction-level data that includes UI funds disbursed and spent. Using machine learning tools, it identifies cards with fraudulent patterns such as inappropriately high levels of UI and speedy withdrawal of balances into cash at multiple ATMs. The study pairs the rollout of these programs at a state level to the prevalence of fraud by debit cards within that state and finds that identity verification led to a 27% reduction in UI disbursements to the suspicious group.

A V4M approach shows that prevention was extremely cost-effective in reducing UI fraud. The study estimates that identity verification lowered UI fraud by $1.8 Billion among the states that implemented the programs, but that an additional $7.2 Billion would have been saved if these technologies had been implemented by all states prior to the pandemic onset in March 2020. In contrast, congressional and state documents indicate that total compensation to ID.me was under $60 Million, and the study estimates that the hassle costs to participants using the service (mostly the time spent conducting the identity verification through the app) was only about $188 Million.

Despite the clear benefits of prevention, the pay and chase paradigm is still prevalent in combatting UI fraud. The US Department of Justice continues to pursue lots of individual small cases, such as a recent criminal judgement against individuals who overbilled the UI program for $500,000 (Department of Justice, 2021). The comparison of these figures highlights not only the V4M of preventative efforts, but also their ability to operate at scale in a way that anti-fraud lawsuits cannot.

Case Studies: Wasteful Drug Spending

Recent studies have further shown the effectiveness of preventative measures on reducing unnecessary drug utilization, though they focus more on waste than explicit fraud. A study on prior authorization for Medicare Part D pharmaceuticals (Brot, Burn, Layton, & Vabson, 2023) shows that preventive measures reduce spending by $96 per beneficiary per year, or 3.6% of total spending, at a cost of roughly $10 in paperwork. Under a V4M framework, this is particularly valuable, as the US spends more than $100 Billion per year on Part D (Kaiser Family Foundation, 2024). However, to caution, the authors of the study are unable to rule out negative health effects for patients, as their findings give wide intervals of potential effects.

The finding that preventative measures lower Medicare Part D spending has been replicated in new research on Medicaid drug utilization (Burn & Ristovska, 2025). This study finds that 70% of branded drugs are covered by prior authorization under Medicaid. Using data from Massachusetts state Medicaid, this study finds that prior authorization reduces use of a drug by 58%, with larger decreases for branded drugs with clear substitutes to cheaper generics. Given that Medicaid spends $80 billion per year on drugs (Medicaid and CHIP Payment and Access Commission, 2022), and assuming the paperwork costs are similar to the Brot et al Medicare study, a V4M interpretation would show that low paperwork costs (in the $10s of dollars per patient) can be used to save potentially billions to the Medicaid program.

The US government focuses on pay and chase, despite extensive evidence of its ineffectiveness.

The findings that prior authorization can lower wasteful spending with minimal paperwork burden highlight the importance of preventative screenings and the V4M framework. It also underscores differences in the public versus private administration of benefits programs. Private companies, which are more responsive to their own profits and losses than government agencies, rely heavily on preventative measures (Dillender, 2018) (Macambira, Geruso, Lollo, Ndumele, & Wallace, 2025). In contrast, the US government focuses instead on pay and chase, despite extensive evidence of its ineffectiveness.

Missed Opportunities for Prevention

The prevalence of preventative measures as anti-fraud tools highlights a number of circumstances where the US has failed to use prevention and lost billions to preventable frauds. Very little anti-fraud screening was used in SBA's PPP, which spent $800 Billion to help small businesses during the Covid-19 pandemic. However,

recent research estimates that more than $100 Billion was lost to PPP fraud (Griffin, Kruger, & Mahajan, 2023).

The same Griffin, et al. study also highlights how easy it would have been to do preventative screening for PPP fraud. The study detects PPP fraud using measures that were easily available during the administration of PPP, such as checking whether the business existed before the pandemic, or whether the same business was receiving multiple PPP loans. These screenings, by virtue of being relatively easy and highly preventative, would have had excellent V4M.

Recent research on fraud in Medicare hospitals (Leder-Luis, 2023) has shown that loopholes such as the outlier payment program were exploited to the tune of billions of dollars before pay and chase enforcement was enacted. The outlier payment program was a mechanism for hospitals to receive additional Medicare funds for treating expensive patients; however, hospitals gamed this system by manipulating their costs and charges, resulting in billions of dollars of overpayments. Eventually, hospitals faced False Claims Act litigation, resulting in nearly $1 billion in settlement. However, the vast majority of spending under this loophole was not recovered. Following litigation, CMS changed the outlier payment calculation and made rule changes that eliminated this loophole. These rule changes required no continuous screening, but rather a change in the payment formula for inpatient hospitalizations among expensive "outlier" payments to make it less gameable. The V4M of such a simple rule change, if it had been conducted more proactively, would have been billions of dollars at minimal cost. Instead, the US lost billions to fraud, and used civil lawsuits to try to punish those involved.

Why Preventative Measures Deliver Better Value Than Pay and Chase

The research discussed above highlights the fact that preventative efforts outperform pay and chase in two important ways. The first is that the government lacks the vast resources needed to go after all fraud actors, which makes their chances of getting caught quite low, emboldening them. In the Ambulance Taxis case, thousands of firms were responsible for overbilling Medicare, and in the PPP and UI fraud cases, potentially millions of fraudulent claims were filed by different businesses and beneficiaries. It is impossible for the US government to use pay and chase against so many fraudulent actors. Civil and criminal anti-fraud lawsuits are expensive, estimated at nearly $250,000 per case (Leder-Luis, 2023). Because of this, for example, the US saw only 1,212 total False Claims Act anti-fraud lawsuits in 2023, combining 712 initiated by whistleblowers and 500 initiated by the Department

of Justice directly (Civil Division, U.S. Department of Justice, 2023). When fraud is rampant, going after each case individually is inefficient and low V4M.

The second way pay and chase is less effective than prevention has to do with collectability. When small firms receive civil penalties, they are often unable to pay them, and these firms can close to avoid liability. This renders civil enforcement ineffective (Eliason, League, Leder-Luis, McDevitt, & Roberts, 2025). Criminal enforcement can enforce penalties such as jailtime even in the absence of recovery, but imprisonment comes with further costs to the government, and is difficult to deploy at scale. This lack of effective penalization exacerbates the failures of pay and chase. The US government understands this limitation, writing about criminal restitution that "Realistically, however, the chance of full recovery is very low. Many defendants will not have sufficient assets to repay their victims" (US Department of Justice, 2023). In the case of public program fraud, the victim is the government, which has the added issue that it also ends up paying for the enforcement and incarceration. These problems are exacerbated when fraud is done using identity theft, because it can be difficult to identify the perpetrator at all, even when the fraud is discovered.

In contrast, upfront preventative anti-fraud measures can reduce frauds in ways that fix these issues. It is not necessary to chase thousands of fraudsters and try to enforce civil judgments against them if the money is never spent in the first place. Moreover, there are efficiency gains from preventative measures. Preventative measures can include screening of eligibility by trained staff and automated fraud detection with sophisticated data science tools. These are much more efficient – and higher V4M – than litigation in court by expensive and non-specialist US attorneys, who have responsibilities far beyond the scope of fraud including in immigration and drug crimes.

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Preventative regulation – not just in the context of anti-fraud – is regularly used in circumstances where responsibility is hard to assign *ex-post* (Shavell, 1984). Indeed, much of the justification for the use of administrative tools for up-front regulation is that harms can be difficult to address after the fact (Landis, 1938). The United States regulates securities through the SEC, environmental harm through the EPA, and workplace safety through OSHA all with the understanding that these harms, once committed, are hard to undo. The extension of prevention to anti-fraud policy is a natural extension of this form of effective governance with the understanding that pay and chase is an ineffective tool at remedying past harms.

Closing the Loop Between Enforcement and Prevention

An important point in considering increasing anti-fraud prevention is the role of litigation going forward. While pay and chase is an inefficient mechanism for catching and eliminating fraud broadly, it still has a role in the prevention of fraud: detecting fraud that can then be subject to preventative measures.

Litigation and *ex-post* enforcement through audits is a valuable way of generating signals of what changes need to be made to public programs to close loopholes and accomplish prevention. However, organizational factors have caused major gaps in these processes. In particular, *ex-post* enforcement is largely conducted by different organizations or parts of organizations than those responsible for setting payment rules and accomplishing up-front prevention. For example, enforcement through the Department of Justice for UI fraud will not necessarily translate into changes to the Department of Labor (especially the state level agencies) for future UI claims. Under the current system, the United States instead allows the same fraud to play out, often dozens of times, in anti-fraud lawsuits. Moreover, because enforcement is often siloed – e.g. into the 94 different Department of Justice districts – this has led to the re-emergence of the same frauds, repeatedly, often with dozens of lawsuits all trying to fix an issue that could be solved by prevention.

When a fraud appears, public expenditure programs need to immediately turn upstream and examine the loopholes to see if there are clear prevention steps. This may involve rule changes, claim denials, identity verification, exclusions of obviously fraudulent contractors, or at the very least, communication about ineligible spending to other contractors. This is true in all areas of spending, from infrastructure to defense spending to health care. However, to do this effectively means mapping from lawsuits to new preventative measures, and there is no clear responsibility for which pay and chase enforcement arms are responsible for suggesting these changes. While the OIGs sometimes accomplish these proactive steps, they should be implemented as a formulaic response to every fraud that is caught. This responsibility lies with agency management.

Incentives That Undermine Fraud Prevention

The use of Value-for-Money (V4M) as the framework by which we evaluate anti-fraud efforts reflects the fact that anti-fraud enforcement is an investment. Because fraud is pervasive, and anti-fraud efforts can have wide-ranging effects, anti-fraud investment can pay for itself many times over when it is successfully implemented.

However, deciding whether anti-fraud actions are good V4M requires the use of rigorous program evaluation to ensure resources are expended on the most effective and least costly programs.

A major issue underscoring V4M calculations of preventative anti-fraud efforts is that prevention is relatively hard to measure. Pay and chase actions produce recoveries, and recoveries are easy to measure: settlements, judgements, and refunds all result in top-line values that can be counted. The Department of Justice regularly publishes press releases about settlements and judgements from fraud cases, often as low as a few hundred thousand dollars. Notably, in many cases, criminal judgements are unable to be collected due to the limited assets of the defendants, yet they are still lauded as very successful and generate headlines. The Ambulance Taxis example discussed above conducted Freedom of Information Act requests on every Department of Justice district to find receipts related to settlements and judgments and found that roughly 50% of the money is ever repaid (Eliason, League, Leder-Luis, McDevitt, & Roberts, 2025). Despite this clear failure of pay and chase, it has remained the paradigm for anti-fraud enforcement, and a major issue is that these recoveries are very easy to observe and measure.

A major issue underscoring V4M calculations of preventative anti-fraud efforts is that prevention is relatively hard to measure. Pay and chase actions produce recoveries, and recoveries are easy to measure: settlements, judgements, and refunds all result in top-line values that can be counted.

In contrast, measuring the deterrence effects of preventative efforts is more challenging. Measuring deterrence requires measuring a counterfactual: how much money would have been lost if the anti-fraud action hadn't been taken. This state of the world can't readily be observed – because the anti-fraud action *did* take place, but nevertheless, this estimation can be conducted. The US government regularly uses counterfactuals to guide policies, such as examining whether a proposed merger of companies will harm consumers, or whether a benefit program helped beneficiaries who otherwise wouldn't have had the service. However, this measurement is more challenging than measuring recoveries, which has led to widespread undercounting of these effects, undermining the use of V4M.

There are straightforward methods for estimating the effects of prevention and deterrence measures, which government agencies should have the skills and capacity to do themselves. A recent white paper commissioned and published by the Healthcare Fraud Prevention Partnership arm of the Centers for Medicare and

Medicaid Services details consistent methodology for evaluating the deterrence effects of anti-fraud policies (Leder-Luis, Andriola, & Gracia, 2024). The idea is that the time trends of fraudulent spending allow us to estimate the deterrence effects of these policies. These estimates ask simple questions like: if the fraud had continued unchecked for 2 more years, how much more money would have been lost? These estimates are not complicated to produce and can be applied to estimate the effects of anti-fraud efforts in all contexts.

The same research discusses the pervasiveness by which V4M calculations are lacking. This study surveyed numerous public and private anti-fraud partners and found that the use of any data-driven measurement was inconsistent, and the measurement of deterrence varied widely, from some groups fully internalizing the idea of measuring preventative effects, but with many public anti-fraud arms doing no such measurement. This betrays a lack of consistent adoption of standards in accounting for anti-fraud V4M that has been documented in past research as well (National Health Care Anti-Fraud Association, 2018).

Fundamentally, a challenge to the adoption of prevention is a misunderstanding about the concreteness of money not spent, sometimes characterized by the notion that money not spent is not considered "real" money in the way that recovered funds are. Moreover, in many circumstances, anti-fraud programs are budgeted for as a function of their recoveries, but not as a function of the money not spent through prevention, due to institutional unwillingness to count the value of preventative measures as real dollars.

The failure of the pay and chase paradigm is exacerbated by counting recovery dollars but not counting prevention. Up-front measures produce no recoveries but can have large and valuable deterrence effects. Programs that only count recoveries will always undervalue prevention.

These problems get worse when fraud prevention gets better. Very good prevention efforts will result in **no** recoveries; but from the standpoint of funding future anti-fraud efforts, that can lead to lower budgets and therefore be perceived as an institutional failure.

Budgeting for recovery dollars creates incentives for fraud to persist (so it can be caught, funding anti-fraud efforts) rather than prevented, even if prevention is higher V4M. These are echoed in policy decisions such as the Congressional Budget Office Scoring rules, which prohibit counting preventative effects as savings. This is

true despite the fact that deterrence effects are often roughly 10 times larger than recoveries (Leder-Luis, 2023) (Howard & McCarthy, 2021).

These issues are further worsened by the limitations on measurement that come from truly valuable upstream interventions that limit fraud from propagating in the first place. The estimates in the related CMS White Paper (Leder-Luis, Andriola, & Gracia, 2024) rely on time trends to estimate counterfactual fraud spending. However, as prevention gets even better, these estimates can become even harder to make, because fraud is rooted out quicker and therefore produces less data on their trajectory. In the most extreme examples, frauds can be stopped entirely by changes to program design before they could ever propagate. Consider a rule change that takes a few dozen hours of administrative work – say, tens of thousands of dollars of cost – but prevents millions in fraud. These efforts will ultimately have major deterrence effects, zero recoveries, but critically, are very hard to measure in the data. Moving to a prevention paradigm does not fully solve this measurement issue, but at least pushes federal programs in the right direction.

The failure of the pay and chase paradigm is exacerbated by counting recovery dollars but not counting prevention. Programs that only count recoveries will always undervalue prevention.

The pay and chase framework has led to substantial undervaluation of high V4M preventative measures undertaken to eliminate public program fraud. In 2023, the Centers for Medicare and Medicaid services identified a growing fraud in urinary catheters and used internal fraud prevention tools to stop payment, resulting in $4.2 Billion of savings (Centers for Medicare and Medicaid Services, 2024). This preventative measure alone is larger than the largest federal False Claims Act whistleblower settlement in history, and almost double the total False Claims Act recoveries for the year 2023 (Civil Division, U.S. Department of Justice, 2023) – yet resulted in no major press or public accolades as a similarly large anti-fraud lawsuit settlement would have. The undervaluation of these preventative efforts is true across all public programs.

Data as the Foundation for Prevention and V4M Measurement

A major factor underpinning both the low utilization and undervaluation of preventative measures is the limited availability and use of data by government anti-fraud practitioners.

First, data are necessary for measuring V4M. The appropriate framework for guiding anti-fraud policy is to consider which investments were successful and created the greatest benefits at the lowest cost. To do this requires rigorous program evaluation of spending and savings on anti-fraud actions – all actions, not just prevention. But without data analysis, this is impossible. The value produced must include deterrence amounts, and without data on the volume and trend of potentially fraudulent claims, it is impossible to measure this amount. Part of the reason why recovery dollars receive undue weight is because there are no data required to see the payment that the government receives from pay and chase enforcement.

The increased use of data will improve V4M measurement, even if the data are limited. While measuring the full deterrence effects of an anti-fraud action requires substantial data (e.g. the whole volume of claims paid or not paid over a period of possibly a few years), better use of available data can improve measurement even in the short term. For example, just adding up denied claims after loopholes are closed or providers are excluded can give an estimate of immediate preventative effects. These denied claims are real savings and can be substantial, as in the catheter fraud discussed above. Or, simply measuring the reduced volume of payments on the target service just after an anti-fraud action can give a rough estimate of total savings – if claims drop from $100 Million to $40 Million a month, even a single month of data can show meaningful positive signal that high V4M is achieved. However, none of this is feasible if data analysis is not conducted because data are not available.

Improving data pipelines will also result in better detection and preventative measures. The current pay and chase regime often waits until *ex-post* litigation to conduct data analysis, if ever, generally using claims data to estimate damages. However, better data usage can help inform preventative measures. Numerous signals can be inferred from claims data about potential fraud, including beneficiary identity and past claims behavior, firm-level statistics including billing trends, and comparison between vendors or providers to see how their claims compare to other providers. However, these comparisons cannot be performed without data. When signals of fraud are found, this can generate additional scrutiny, as well as help guide preventative efforts including claim denials or audits of suspicious activity. While this point seems obvious, high-level anti-fraud practitioners across areas of government have indicated they did not regularly use data to detect frauds, or that their data usage was limited at best.

A major factor in the underuse of data for detecting frauds and measuring V4M is the lack of analytical staff within anti-fraud groups. Many anti-fraud groups retain the culture of *ex-post* enforcement and are staffed either by lawyers or by police-adjacent career tracks such as OIG special agents. These careers, while extremely valuable, do not necessarily lend themselves to strong technical analytical capabilities such as building data pipelines and fraud screening algorithms. Moreover, data analysts have a competitive job market, and government analyst salaries often lag private compensation. This has led to difficulty staffing anti-fraud data teams.

The V4M framework reflects…the understanding that up-front prevention requires small amounts of additional spending to reform broken systems and prevent fraudulent payments rather than chase them.

Ultimately, well-functioning data pipelines and competent analysts to develop anti-fraud tools are an investment. The V4M framework reflects that investment and the understanding that up-front prevention requires small amounts of additional spending to reform broken systems and prevent fraudulent payments rather than chase them. However, the current paradigm treats the entire system – including the necessary technological investment – as a cost center rather than as an investment. Moving to a system where preventative measures are valued under a V4M model will encourage appropriate levels of investment in anti-fraud technology.

Conclusion

Anti-fraud policies in the United States are due for increased scrutiny given current administration priorities towards reducing spending. The banner idea in this space is that anti-fraud efforts are investments, and that Value-for-Money (V4M) is the appropriate metric by which these policies can be evaluated. The current paradigm of pay and chase that is used across the US government is inefficient and in need of reform. The rising academic literature on preventative efforts, as well as myriad examples of successful prevention and clear missed opportunities, highlight that preventative anti-fraud is the solution to the failures of pay and chase.

Implementation of increased anti-fraud prevention will require several changes across the system of anti-fraud practitioners. Foremost is the fact that anti-fraud prevention is currently undervalued and undermeasured. Federal program officers respond to the incentives they are given, and as long as preventative efforts are discounted in budget and scoring rules, anti-fraud prevention will have

underinvestment issues. Fixing this issue, through changes in budgets, reporting, and scoring rules, will be the most important first step for allowing preventative anti-fraud efforts to thrive. The effects of these changes, and the measurement of V4M in future anti-fraud policies, will require future studies and program evaluations.

The increased use of data recommended in this white paper will improve anti-fraud efforts both in terms of measurement and detection, but it can also have strong positive spillovers to better governance overall. The lack of technological capacity in the US government leaves it open to be defrauded, but also causes inefficiencies throughout government. Investments in improved technological capacity including hiring more data scientists and building better data pipelines will have positive spillovers to program administration more broadly, including higher accuracy and timeliness of payments and lower administrative overhead. In that sense, anti-fraud effectiveness is a microcosm of other issues in good governance, and these solutions are in line with renewed efforts to improve government efficiency.

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Citation

Leder-Luis, J. (2025, March). *Prioritizing prevention: Value-for-money in anti-fraud efforts*. Program Integrity Alliance.

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