2017

Root Cause Analysis: A Tool to Promote Officer Safety and Reduce Officer Involved Shootings Over Time

John Hollway
University of Pennsylvania Carey Law School

Calvin Lee
University of Pennsylvania

Sean Smoot
Police Protective & Benevolent Association of Illinois

2017]

ROOT CAUSE ANALYSIS: A TOOL TO PROMOTE OFFICER SAFETY AND REDUCE OFFICER INVOLVED SHOOTINGS OVER TIME

John Hollway,* Calvin Lee,** & Sean Smoot***

Introduction

POLICING in America is an important and often polarizing topic. The rise of cell phone video cameras has increased our nation's awareness of police/civilian interactions, and publicized numerous interactions that have resulted in officer-involved shootings (OIS) of civilians—some "justified" in the eyes of the law and self-defense, others not.

The rhetoric that surrounds OIS can be deafening, both from those who suggest that citizens bring on such events themselves and from those who suggest that our police operate with unchecked power and perpetuate socioeconomic disparities, particularly in low-income and minority communities. Underneath this rhetoric, however, are two facts that all should be able to agree on. First, any reasonable system of policing should seek to minimize the number of OIS that occur. Second, policing is inherently dangerous work and the job of police officer carries with it life-threatening risk on a daily basis.

This is not mere hyperbole—even a "simple" traffic stop carries life-threatening risk as an officer approaches an unknown vehicle. Will the driver comply with the officer's orders? Is the driver on drugs? Is the driver armed? Does the driver have any outstanding warrants? Will the driver try to flee, creating danger to the officer and others on nearby roads and sidewalks? Each of these questions may require the officer to make split-second decisions with life-altering consequences to the officer, the driver, and innocent bystanders. While training and protocol may provide guidance, they cannot predict all scenarios.

For his part, the driver has his own anxieties. Why have I been pulled over? Am I going to be late to where I was going? Do I have my papers? Was I pulled over because of my race? Does the officer know about my outstanding warrants? Are they going to want to search my car? And if I have anything illegal, will they find it? With so much unknown and so much at stake, perhaps it is not surprising that these seemingly innocuous everyday occurrences can rapidly escalate into an OIS. And if this is the level of stress confronting both officer and driver at a traffic stop, how much more likely is it that police patrolling a drug corner, or in an area

* Associate Dean and Executive Director of the Quattrone Center for the Fair Administration of Justice, University of Pennsylvania Law School.

** J.D., 2017, University of Pennsylvania.

*** Director and Chief Counsel for the Police Benevolent & Protective Association of Illinois and the Police Benevolent Labor Committee.

known for gun violence, will feel an enhanced need for the use of deadly force to protect themselves?

To date, efforts to reduce OIS have taken two forms: improved training protocols designed to improve officer decision-making, and a variety of accountability mechanisms designed to deter officer misconduct (usually defined as any departure from protocol, whether or not that departure was intentional or whether the OIS itself was intentional).[1] While each approach seeks to reduce the incidence of OIS in its own way, *it is not clear that our systems for evaluating a past OIS through administrative reviews, civilian oversight, or civil and criminal litigation are effective in understanding how to learn from past OIS or how to prevent the next OIS from occurring.*

In this Article, we propose a third form of evaluating OIS: Root Cause Analysis (RCA). RCA is a method of problem solving designed to identify core underlying factors, including environmental or systemic factors, that contributed (along with individual decision-making) to generate an undesirable outcome, organizational accident, or adverse event.[2] Once these core underlying causative factors have been identified, participants in the system can fashion remedies that will reduce or remove them from the system, thereby preventing future occurrences of the undesirable outcome (in this case, an OIS).[3]

RCA is part of a prospective, non-blaming "systems approach" to preventing error in complex human systems that has been successfully used to reduce errors in aviation, healthcare, manufacturing, nuclear power, and other areas.[4] One of its key precepts is that individuals in complex systems are acting rationally. Put differently, it assumes that an individual in a system will act in ways that are believed to benefit that individual at the moment the decision is made. Thus, while individuals may willingly deviate from established norms of behavior, they will do so with a rational purpose. To change outcomes in a system, we must change the decisions that lead to the outcome; to change those decisions, we must alter the circumstances so that the unwelcome decision no longer appears to benefit the decision-maker. This presumption that people are acting in

1. *See, e.g.*, *Officer Involved Shootings Data: Reducing Deadly Force Incidents*, DALLAS POLICE DEP'T, http://www.dallaspolice.net/ois/ois [https://perma.cc/ADE2-QAGD] (last visited Aug. 15, 2017); *see also* Leon Neyfakh, *A Police Department That's Embraced Reform*, SLATE (July 8, 2016, 12:10 PM), http://www.slate.com/articles/news_and_politics/crime/2016/07/the_dallas_police_department_has_been_a_model_for_reducing_officer_involved.html [https://perma.cc/N9QR-76FW].

2. *See What Is Root Cause Analysis (RCA)?*, AM. SOC'Y FOR QUALITY, http://asq.org/learn-about-quality/root-cause-analysis/overview/overview.html [https://perma.cc/9Z8R-ST46] (last visited Oct. 29, 2017); *see also Root Cause Analysis and Problem Solving*, IAQG (April 2014), http://www.nmgaerospace.com/wp-content/uploads/2014/08/IAQG-7.4.2_Root_Cause_Analysis_and_Problem_Solving_01_APR-2014.pdf [https://perma.cc/LC7T-YQNB].

3. *See* PAUL F. WILSON, ET AL., ROOT CAUSE ANALYSIS: A TOOL FOR TOTAL QUALITY MANAGEMENT 8–17 (1993).

4. *See Root Cause Analysis and Problem Solving*, *supra* note 2. For a discussion of Root Cause Analysis in other fields, see *infra* notes 7–10.

ways not designed to injure others, but instead simply to perform their tasks in the system effectively, is a core tenet of a "non-blaming" event review. As the Institute of Medicine recognized in its landmark publication *To Err Is Human*, punishment and blame have a role to play in keeping actors in line, but have a limited ability to deter good-faith behavior that leads to errors:

> [M]istakes can best be prevented by designing the health system at all levels to make it safer—to make it harder for people to do something wrong and easier for them to do it right. Of course, this does not mean that individuals can be careless. People still must be vigilant and held responsible for their actions. But when an error occurs, blaming an individual does little to make the system safer and prevent someone else from committing the same error.[5]

It is in this setting that an RCA takes place. As British organizational safety expert James Reason states, we "cannot change the human condition, [but] we can change the conditions under which humans work[,]" leading to a system that is safer and has fewer errors.[6] Industries like aviation,[7] medicine,[8] and manufacturing,[9] as well as emergency services such

5. INST. OF MED., TO ERR IS HUMAN: BUILDING A SAFER HEALTH SYSTEM 2 (Nov. 1999).

6. *See* James Reason, *Human Error: Models and Management*, 320 BRIT. MED. J. 768, 769 (2000) (proposing the Swiss-cheese model for systemic failure).

7. The National Transportation Safety Board (NTSB) undertakes RCA immediately after catastrophic events (e.g., airline crashes, train collisions, bridge collapses). *See generally* DAVID TOCHEN & THOMAS W. TOBIN, NAT'L TRANSP. SAFETY BD. & WILSON ELSER, THE ANATOMY OF AN NTSB ACCIDENT INVESTIGATION (Apr. 2013), https://www.wilsonelser.com/writable/files/Legal_Analysis/anatomy_of_an_ntsb_accident_investigation_tobin_tochen_april_2013.pdf [https://perma.cc/3MSD-7677]. These reviews are all separated from associated litigation and administrative reviews, with NTSB root cause investigators operating independently. As a result of continuous quality improvement driven by RCA, the aviation industry's safety record has dramatically improved in the past fifty years, moving from roughly 50 fatal accidents per 100,000 flights to less than 0.2 such accidents while the total number of flights has increased more than 500%. *See generally* BOEING, STATISTICAL SUMMARY OF COMMERCIAL JET AIRPLANE ACCIDENTS: WORLDWIDE OPERATIONS 1959–2016 17 (2016), http://www.boeing.com/resources/boeingdotcom/company/about_bca/pdf/statsum.pdf [https://perma.cc/8HM3-HKJ7].

8. Hospitals like the Montefiore Medical Center implement RCA on issues of medical malpractice that are independent from litigation. *See generally* Montefiore Medical Center, Just Culture Tool (on file with authors) (Montefiore Medical Center granted the Authors permission to use and reproduce its "Just Culture Tool," displayed as Figure 5 in this Article); *see also generally* MONTEFIORE MED. CTR., http://www.montefiore.org/about [https://perma.cc/J3HD-CYNN] (last visited Oct. 29, 2017).

9. *See* Kiran M et al., *Root Cause Analysis for Reducing Breakdowns in a Manufacturing Industry*, 3 INT'L J. EMERGING TECH. & ADVANCED ENGINEERING 211, 211 (2013) (discussing use of RCA in manufacturing industries).

as firefighters[10] and some aspects of law enforcement,[11] already implement RCA to fundamentally make their environments safer.

Existing retrospective accountability measures for law enforcement, such as internal affairs, OIS administrative reviews, civil rights litigation, civilian review boards, etc., are necessary to ensure official accountability for OIS that occur, and to secure appropriate compensation for civilians who may be innocent victims of an OIS. It cannot be seriously debated, however, that those mechanisms are insufficient in reducing the incidence or prevalence of OIS; according to the *Washington Post*, there were 991 individuals shot and killed by police in the United States in 2015, 963 in 2016, and 508 as of this writing in 2017.[12] The number of individuals shot and wounded ostensibly increases this figure considerably.

Existing review mechanisms are based on retrospective accountability and evaluate whether the officer, the individual who was shot, or some third party bears blame. Such measures which focus on individual culpability may deter police from shootings caused by deliberate or intentional

10. Firefighters around the country have access to an RCA service called firefighternearmiss.com, which allows firefighters to read, send, and receive the results of root cause analyses undertaken with near-miss and catastrophe data generated around the country. *See generally* NAT'L FIREFIGHTER NEAR MISS REPORTING SYS., FIREFIGHTER NEAR MISS 2016 ANNUAL REPORT (2016), http://firereports.nationalnearmiss.org/Portals/2/EasyDNNNewsDocuments/Annual%20Reports/2016%20Firefighter%20Near%20Miss%20Annual%20Report.pdf [https://perma.cc/L42Y-SMVK].

11. For a discussion on the application of RCA or Sentinel Event Reviews to policing, see James M. Doyle, *Learning About Learning from Error*, POLICE FOUND. IDEAS IN AM. POLICING, No. 14, May 2012, at 3, https://www.policefoundation.org/wp-content/uploads/2015/06/Doyle-2012-Learning-About-Learning-From-Error.pdf [https://perma.cc/XC8P-5XZG]. Currently, the Police Foundation is attempting a similar website to the firefighters called leonearmiss.org. For a discussion of these techniques to learn from error more broadly in criminal justice, the National Institute of Justice Sentinel Event Initiative has issued several publications, see generally NAT'L INST. OF JUSTICE, U.S. DEP'T OF JUSTICE, NIJ STRATEGIC RESEARCH AND IMPLEMENTATION PLAN: SENTINEL EVENTS INITIATIVE (2017), https://www.ncjrs.gov/pdffiles1/nij/250472.pdf [https://perma.cc/KU9E-ZSMM]; NAT'L INST. OF JUSTICE, U.S. DEP'T OF JUSTICE, PAVING THE WAY: LESSONS LEARNED IN SENTINEL EVENT REVIEWS (2015), https://www.ncjrs.gov/pdffiles1/nij/249097.pdf [https://perma.cc/3AZF-BKKQ]; NAT'L INST. OF JUSTICE, U.S. DEP'T OF JUSTICE, MENDING JUSTICE: SENTINEL EVENT REVIEWS (2014), https://www.ncjrs.gov/pdffiles1/nij/247141.pdf [https://perma.cc/VX2K-ELGY]. For recommendations on the conduct of RCA in a crime lab or forensics context, see NAT'L COMM'N ON FORENSIC SCI., U.S. DEP'T OF JUSTICE, DIRECTIVE RECOMMENDATION: ROOT CAUSE ANALYSIS (RCA) IN FORENSIC SCIENCE, (Aug. 11, 2015), https://www.justice.gov/ncfs/file/786581/download [https://perma.cc/QUQ8-MDQJ].

12. *See Fatal Force*, WASH. POST, https://www.washingtonpost.com/graphics/national/police-shootings-2017/ [https://perma. cc/FW4A-KHZN] (last visited July 6, 2017).

misconduct.[13] They have failed to reduce the occurrence of accidental or unintentional acts or encounters that escalate into an OIS.[14]

The reality is that many, and perhaps most OIS occur despite the fact that no one—neither the officer, nor the civilian, nor the general public—wants them to occur. Rather, a sequence of contributing events led the officer to feel that pulling the trigger is his or her best decision. An understanding of these multiple, contributing factors—environmental, informational, situational, supervisory, etc.—is essential to interrupting that sequence for the next officer and next civilian.

It is important to state at the outset that RCA is not a substitute for current mechanisms for accountability and remediation. Rather, it serves as a necessary complement to those retrospective mechanisms, providing a forward-looking form of event review focused on community and officer safety, seeking to prevent future undesired outcomes and gradually improving the safety of a system through targeted reforms over time.

We will first describe the application of non-blaming Root Cause Analysis to evaluate officer-involved shootings, permitting an understanding of all the contributory factors of a shooting, and provide a road map to guide policy reforms and reduce OIS over time. In Part II, we will explore the limitations of existing review mechanisms. In Parts III–IV, we will describe the principles of RCA, and discuss how and why RCA has such promise to improve the overall quality and safety of policing, lessons that may be applicable to OIS. And finally, in Parts V and VI, we will provide an example of how RCA might function in reviewing an OIS. Part VII concludes.

I. CURRENT METHODS OF EVENT REVIEWS FOCUS ON ACCOUNTABILITY FOR PAST ERRORS, RATHER THAN PREVENTION OF FUTURE ERRORS

Our nation's police officers work in hugely complex, rapidly changing, high-stress environments in which decisions with life-altering consequences must be made instantaneously with imperfect information and zero tolerance for error.

It is an unfortunate reality that police officers will occasionally use deadly force in the line of duty, and that use of force will sometimes result in injury to others. There can be no question that officer safety is of paramount concern, and officers should be empowered to protect themselves against threats to their well-being presented while they are serving their communities. While OIS may be unavoidable, however (e.g., a depressed individual provoking a deadly confrontation with an officer by threatening him with a handgun, or other situations colloquially referred to as "suicide by cop") our system of criminal justice defines any OIS—even one in

13. *See, e.g.*, Kami Chavis Simmons, *The Politics of Policing: Ensuring Stakeholder Collaboration in the Federal Reform of Local Law Enforcement Agencies*, 98 J. CRIM. L. & CRIMINOLOGY 489, 496 (2008).

14. *See, e.g.*, *Fatal Force*, *supra* note 12.

which all protocols were followed by the officer—as an undesirable outcome, and one worthy of review to understand how and why it occurred with the goal being its prevention in the future.[15]

It is important to note from the outset that defining an outcome as undesirable from the perspective of system design is not the same thing as stating that an individual officer is at fault for the outcome, or should be blamed or punished for his or her role in the outcome. Often, the facts surrounding an OIS show that the officer has followed all established protocols or "best practices," conducting him or herself with great professionalism. This is sometimes called a "clean shoot."[16]

The question of whether an OIS is a "clean shoot" is typically determined by an internal police administrative review, which may then be challenged by an external review board, a civilian review board, or litigation in criminal or civil court.[17] In each case, the inquiry into the shooting is focused on the question of the officer's competence or negligence in the moment, rather than asking why the encounter occurred in the first place.[18] This framing of the question is crucial, as it drives the lessons that we are able to take from the event. When we ask, "who is accountable for this OIS?" we limit our learning to the question of personal accountability—did the officer follow his training, protocols, and procedures? When we ask, "what are all of the contributing factors that led to this OIS?" we open our learning to a wide variety of factors. Did the officer follow his or her training but acted on inaccurate information from the police dispatcher? Did the police dispatcher follow his or her training but misunderstand information relayed from the scene? Did the officer follow his or her training but go to the wrong address because of a clerical error in the

15. *See* Alan Feuer, *The Nation: Desperadoes; Drawing a Bead on a Baffling Endgame: Suicide by Cop*, N.Y. TIMES (June 21, 1988) http://www.nytimes.com/1998/06/21/ weekinreview/the-nation-desperadoes-drawing-a-bead-on-a-baffling-endgame-suicide-by-cop.html [https://perma.cc/VWL2-HECX] ("The term suicide by cop was coined in 1983 by Karl Harris, a former California police officer with a Ph.D. in psychology who worked at a suicide hot line in Los Angeles after leaving the force. 'As a cop, I knew of a number of cases where it appeared that people had actually forced police officers to shoot them,' Dr. Harris said. 'In the suicide business I saw all the different ways people attempted suicide, and it occurred to me that maybe some people were actually forcing cops to shoot them because they wanted to die.'").

16. *See, e.g.*, 139 AM. JUR. 3D *Proof of Facts* § 69 (2017) (providing expert testimony of definition of "clean shoot").

17. *See* CMTY. ORIENTED POLICING SERVS., U.S. DEP'T OF JUSTICE, OFFICER-INVOLVED SHOOTINGS: A GUIDE FOR LAW ENFORCEMENT LEADERS 16 (2016), http://www.theiacp.org/portals/0/documents/pdfs/e051602754_Officer_Involved_v8.pdf [https://perma.cc/UT4R-WJNJ] (discussing that administrative investigations intend "to determine whether the involved officer's actions were justified, in accordance with agency policy, procedures, rules, and training").

18. *See, e.g.*, *Officer Involved Shooting FAQ*, S.F. POLICE DEP'T, http://sanfranciscopolice.org/officer-involved-shooting-faq [https://perma.cc/BS5V-W98C] (last visited Oct. 29, 2017) (explaining that administrative investigations determine whether officer involved violated policy or procedure during shooting).

search warrant? Did the officer follow his or her training but had an equipment malfunction due to a protocol regarding how the equipment was to be worn on the uniform? The modifications that would be proposed in response to each of these scenarios will be different, and only occasionally will disciplining the officer be sufficient to prevent the next OIS. Thus, something more than administrative accountability reviews is needed.

In fact, while clean shoots are rarely analyzed as unintended outcomes, they provide uniquely positive opportunities for improving our system of policing as they allow for a blame-free event review designed not to make the system more accountable, but rather to make it safer—to reduce the likelihood that the next officer, when confronted with the same situation, will have to rely on deadly force to successfully resolve the situation. Indeed, because the officer involved has already been absolved of blame, there can be no other justification for the RCA, and all participants can put away their fears of recrimination or discipline and join in the educational process of the RCA.

RCA, sometimes referred to as "sentinel event review"[19] or "just culture event review,"[20] is a form of quality improvement in complex human systems. Its forward-looking focus affixes no blame or criticism to the officer(s) involved in the incident, seeking to improve a system that has allowed an interaction between both officer and civilian to unfold in a manner that led to an unintended and undesirable outcome—the shooting of a civilian.[21] As such, it can be a useful tool to learn from error and to improve policing for officers and communities alike and should be added as a continuous process for enhancing officer and community safety alongside existing processes for accountability.

The purpose of law enforcement is crime prevention and public safety. We want our police to protect our citizens and communities by reducing crime—and over time preventing crime—within the limitations on police authority set forth in the Constitution. It is never a goal of our system of law enforcement that police injure members of the community, whether they are perpetrators of crime or innocents. Thus, while an officer shooting a civilian in legitimate self-defense may sometimes be unavoidable, it is never a desired outcome of a police/citizen interaction.

---

19. *See* STRATEGIC RESEARCH AND IMPLEMENTATION PLAN: SENTINEL EVENTS INITIATIVE, *supra* note 11; MENDING JUSTICE: SENTINEL EVENT REVIEWS, *supra* note 11.

20. *See Using Root Cause Analysis to Instill a Culture of Self-Improvement: Program Replication Materials*, INNOVATIONS IN CRIMINAL JUSTICE SUMMIT III, April 20–21, 2015, at 2, 4, http://www.apainc.org/wp-content/uploads/Montgomery-County-Implementation-Guide-2.pdf [https://perma.cc/K869-XPL9].

21. We recognize that there are those who feel that the shooting of an individual deliberately attacking a police officer may not be an "undesirable outcome." From the perspective of the design of the system, we posit that "alive and uninjured" is always the intended outcome of any police/civilian interaction and that our obligation is to strive for that outcome in all instances regardless of its ultimate attainability.

To confirm the undesirability of such events, one need only look to the myriad of approaches we have taken to distribute accountability and blame on the participants in an OIS when it occurs. We have a dizzying array of administrative reviews, civilian oversight committees, civil and criminal litigation procedures, and other processes built around the laudable goals of transparency, accountability, violence deterrence, protection of civilians, and victim compensation.[22]

These accountability mechanisms are unquestionably important and useful in establishing standards of police behavior, publicizing those standards and improving compliance with them. They are also important to address the plight of parties who are wronged or injured by police action.[23] At the same time, one might reasonably question the sufficiency of our punishment and deterrence-based approaches to reduce OIS over time, given that our rates of police shootings are not decreasing.[24] One also might question the completeness of the information we receive from event participants when the information can, and will be used against them (whether in a court of law, or settings with less due process).

Industries like aviation and healthcare may not seem immediately analogous to policing. However, if one thinks about policing as a hugely complex, rapidly changing, high-stress environment in which decisions with life-altering consequences must be made instantaneously with imperfect information and zero tolerance for error, the similarities among policing, medicine, and aviation become more apparent. As such, policing can benefit from the same tools and procedures that have emerged in aviation and medicine to protect not only the customers of these systems (patients, passengers, and citizens), but also professionals within the system (doctors, pilots, and police officers). The standard administrative accountability mechanisms commonly used in policing today are necessary but

22. *See* Nirej Sekhon, *Blue on Black: An Empirical Assessment of Police Shootings*, 54 AM. CRIM. L. REV. 189, 192 (2017) (analyzing Chicago's Independent Police Review Authority reports, which suggest limitations on post-hoc accountability mechanisms); *see also* Steven D. Clymer, *Compelled Statements from Police Officers and* Garrity *Immunity*, 76 N.Y.U. L. REV. 1309, 1369–70 (2001) (discussing how focus on officer Fifth Amendment protections and effective administrative investigation can exist in tension with officer discipline); John V. Jacobi, *Prosecuting Police Misconduct*, 2000 WIS. L. REV. 789, 811 (2000) (explaining how 18 U.S.C. § 242 focuses federal investigation on an individual officer's mens rea).

23. *See* Steve Schmadeke, *Van Dyke Indicted on 16 Added Counts for Each Shot to Laquan McDonald*, CHI. TRIB. (Mar. 23, 2017, 07:04 PM), http://www.chicagotribune.com/news/local/breaking/ct-laquan-mcdonald-jason-van-dyke-court-met-story.html [https://perma.cc/U6FZ-TMMF] (incident where officer allegedly shot a teenager in the side and back sixteen times); *see also* Cole Poland, *OK County DA Clears Officers in Use of Deadly Force Shooting from March*, NEWS9 (May 11, 2017, 10:40 AM), http://www.news9.com/story/35404866/ok-county-da-clears-officers-in-use-of-deadly-force-shooting-from-march [https://perma.cc/8YT6-7FX5] (clearing an officer who shot a motorist who was backing his car into the officer during a high speed chase).

24. *See Fatal Force*, *supra* note 12 (noting that in past two years, police have shot roughly 977 people each year and that in 2017 the rate remains similar).

insufficient to truly improve the safety and effectiveness of law enforcement, and RCA and a culture of continuous learning from error should be added to our arsenal of quality improvement initiatives in policing.

RCA[25] is used in aviation, healthcare, manufacturing, and other complex systems as part of a culture of safety and learning from error, helping practitioners learn from unintended outcomes, whether those outcomes were caused by good faith errors or mistakes (e.g., "accidents") or knowing or reckless violations of rules or procedures (e.g., "misconduct"). RCA creates a safe space for individuals involved in unintended outcomes to explain their decisions and motivations, and for evaluators to understand the various contributing factors that led otherwise well-intended police officers with specific training to nonetheless be involved in an unintended outcome. Its learnings are specific and tailored to the event in question, and its recommendations and reforms enable the thoughtful redesign of preventative procedures, techniques, and other systemic solutions.[26]

II. ADMINISTRATIVE REVIEWS, CIVILIAN OVERSIGHT BOARDS, AND CIVIL AND CRIMINAL LITIGATION: RETROSPECTIVE ACCOUNTABILITY REVIEWS

Despite the best efforts of all involved, OIS occur with alarming frequency.[27] Today, when an OIS occurs, our communities have developed a broad number of approaches to reviewing the event. While each jurisdiction creates its own rules and procedures for these, at a high level, OIS event reviews can be separated into administrative (e.g., internal) reviews, civilian oversight boards, and civil or criminal litigation.[28] These mechanisms differ on important points, but share one key characteristic: they are designed to determine retrospective accountability for the OIS on the part of the officer as an individual or the department as an organization, and spend very little time on forward-looking reforms that will prevent the

25. *See What Is Root Cause Analysis (RCA)?*, *supra* note 2 ("A root cause is a factor that caused a nonconformance and should be permanently eliminated through process improvement. Root Cause Analysis is a collective term that describes a wide range of approaches, tools, and techniques to uncover causes of problems.").

26. *Cf.* Steve Chapman, *Freddie Gray and the Rush to Judgment*, CHI. TRIB. (June 24, 2016, 02:25 PM), http://www.chicagotribune.com/news/opinion/chapman/ct-freddie-gray-justice-police-michael-brown-perspec-0626-md-20160624-column.html [https://perma.cc/VDY3-4RKL] (discussing how an elected prosecutor's responsiveness to public presumptions of wrongdoing resulted in a rush to prosecute in the case of Freddie Gray's death in police custody).

27. *See generally Fatal Force*, *supra* note 12.

28. *See* PETER FINN, NAT'L INST. OF JUSTICE, U.S. DEP'T OF JUSTICE, CITIZEN REVIEW OF POLICE: APPROACHES & IMPLEMENTATION 14, 17–66 (Mar. 2001) https://www.ncjrs.gov/pdffiles1/nij/184430.pdf [https://perma.cc/L5ES-EQCD] (discussing OIS event reviews in multiple oversight systems that include internal reviews, civil oversight boards, and civil or criminal investigations).

next officer in a similar situation from discharging his weapon (whether in justified fashion or not).[29]

Law enforcement is already a highly-regulated government function, with a multitude of review systems in place to hold actors accountable.[30] Police officers are subject to codes of conduct,[31] precinct regulations,[32] and binding case law[33] that govern their interactions with civilians and when use of force against civilians conforms to an "acceptable practice."

A. *Criminal Review*

An officer's conduct in an OIS typically is reviewed rapidly by the officer's own department's homicide investigators (or those of a different agency) and then put before a state prosecutor for review.[34] Historically, public perceptions were that prosecutors, whose professional role requires substantial daily interaction with and cooperation from the police, would be unlikely to press charges against police officers unless the circumstances surrounding the OIS were egregious. Whether or not one accepts this premise, there is data to suggest that prosecutors across the United States are increasingly willing to file criminal charges against police officers involved in OIS.[35] Some of this is likely motivated by the same concerns that non-criminal justice professionals feel as a seemingly constant stream of cell phone videos parades across YouTube showing OIS that seem to show officers shooting defenseless suspects who appear to laypeople not to pose a threat of immediate physical danger. Some of it may also be motivated by political instincts: after the decisions not to charge the officers involved in the high-profile OIS of Tamir Rice in Cleveland, Ohio, for example, the elected prosecutor was defeated at the polls in his

29. *See* Simmons, *supra* note 13, at 504 (discussing retrospective nature of civil oversight reviews that makes it ill-suited to address misconduct before it occurs).

30. *See* FINN, *supra* note 28, at 14, 17–66.

31. *See, e.g.*, ROCHESTER POLICE DEP'T, ROCHESTER POLICE DEPARTMENT: RULES & REGULATIONS (2010), http://www.cityofrochester.gov/article.aspx?id=8589948901 [https://perma.cc/3TYB-GUGX]; *see also e.g.*, MILWAUKEE CTY. SHERIFF, LAW ENFORCEMENT CODE OF CONDUCT, http://county.milwaukee.gov/LawEnforcementCodeof9154.htm [https://perma.cc/7BLR-32FY] (last visited Aug. 15, 2017).

32. *See, e.g.*, CHI. POLICE DEP'T, ART. V: RULES OF CONDUCT, https://www.cityofchicago.org/dam/city/depts/cpb/PoliceDiscipline/RulesofConduct.pdf [https://perma.cc/PC94-VF5G] (last visited Oct. 29, 2017).

33. *See* 42 U.S.C. § 1983 (2012); *see also* Wyatt v. Cole, 504 U.S. 158, 161 (1992) (discussing purpose of § 1983 as deterring "state actors from using badge of their authority to deprive individuals of their federally guaranteed rights"); Carey v. Piphus, 435 U.S. 247, 253–54 (1978) (explaining purpose of § 1983).

34. *See* FINN, *supra* note 28, at 35 (providing example of police department's review policy).

35. *See, e.g.*, Ian Simpson, *Prosecution of U.S. Police for Killings Surges to Highest in Decade*, HUFFPOST (Oct. 26, 2015, 09:21 AM), http://www.huffingtonpost.com/entry/prosecution-police-killings_us_562e26aee4b0ec0a3894eb23 [https://perma.cc/BWT3-7UK9].

next election.[36] In a frustrating "Catch 22" for prosecutors, however, one of the long-cited reasons for not bringing charges against police officers acting in the line of duty is proving true: juries can be reluctant to convict.[37]

Criminal charges in OIS reflect an apparent contradiction among community responses to these tragic events, with the community simultaneously demanding that criminal charges be brought and yet refusing to impose the penalties they enable.[38] Perhaps the way to rationalize and understand that conflict is to observe that policing is hugely difficult and dangerous work, that the decision process and perceptions of police officers cannot be seen adequately in YouTube videos, and that often, upon the more detailed analysis afforded by a criminal trial, the officer's actions can be better understood. Two points arise from this trend: first, that the utility of criminal charges (imposing a punishment to the officer, providing the victim with a community response, or creating a deterrence for future unsafe conduct) is limited if those charges do not ultimately end in convictions; and second, that the disinclination of juries to impose criminal charges upon deeper reflection into the incident may reflect the reality that the officer in fact has no intent to engage in the OIS, but rather gets swept up in dynamic and unexpected events that leave the officer in the honest (and terrifying) belief that his or her life is in immediate danger, causing a reaction that the jury can understand, and potentially even sympathize with. If so, as we shall see below, we have identified precisely the situation for which a RCA has been designed.

B. *Administrative/Internal Affairs Review*

The second level of investigation or review is the department's own internal affairs or administrative review, which often occurs at the same time or parallel to the criminal review.[39] It is standard in these investiga-

36. *See, e.g.*, Richard Pérez-Peña, *Angered by Cities' Handling of Police Shootings, Voters Oust Two Prosecutors*, N.Y. TIMES (Mar. 26, 2016), https://www.nytimes.com/2016/03/17/us/angered-by-cities-handling-of-police-shootings-voters-oust-two-prosecutors.html?_r=0 [https://perma.cc/Y6XC-285J] (discussing prosecutor who did not pursue charges against police officer who killed Tamir Rice being defeated at polls).

37. *See* Mitch Smith, *Minnesota Officer Acquitted in Killing of Philando Castile*, N.Y. TIMES (June 16, 2017), https://www.nytimes.com/2017/06/16/us/police-shooting-trial-philando-castile.html?_r=0 (reporting the acquittal of the officer around the central question of he had reason to fear that Mr. Castile was reaching for his gun); *see also* Kevin Rector, *Charges Dropped, Freddie Gray Case Concludes with Zero Convictions Against Officers*, BALT. SUN (July 27, 2017, 08:57 PM), http://www.baltimoresun.com/news/maryland/freddie-gray/bs-md-ci-miller-pretrial-motions-20160727-story.html [https://perma.cc/LJ46-KHPU].

38. *See, e.g.*, *Minn. Cops Escape Charges in Controversial Shooting Death*, CBS NEWS (March 30, 2016, 12:11 PM), http://www.cbsnews.com/news/jamar-clark-shooting-prosecutor-no-charges-against-police/ [https://perma.cc/6PWL-RLTZ].

39. *See* CMMTY. ORIENTED POLICING SERVS., *supra* note 17, at 16–17 (discussing process of OIS investigations which includes criminal investigation and administrative review).

tions for an officer to be interrogated by a supervisor after being ordered to answer questions under threat of job forfeiture (e.g., a compelled *Garrity* Statement).[40] These investigations are usually adversarial[41] in nature as they are designed for use as a basis for departmental disciplinary purposes. Given that their main purpose is to determine discipline to the officer, it is reasonable to assume that the officer will provide as positive a depiction of the officer's performance as possible, and limit the transfer of negative information, thereby limiting the full understanding of the event in question.[42]

C. *Civilian Oversight Board Review*

In addition to the criminal and administrative reviews, many jurisdictions have adopted some form of civilian oversight review mechanism, often called a civilian review board (CRB).[43] These organizations can play a useful role as intermediaries between communities and police departments, providing communities with greater visibility into the police department and a better understanding of the department's views, while providing police departments with a (hopefully) less rancorous dialogue with the community regarding an OIS and a platform for explaining the event in greater detail and with greater nuance. On the other hand, many departments chafe at the concept of having their actions reviewed by civilians, many of whom will take what the officers feel is a simplistic and negatively biased view of police activity.[44] Under this school of thought, it is unfair for a police officer's career to be impacted by the views of unedu-

40. *Garrity* Rights, so named after the Supreme Court's decision in *Garrity v. New Jersey*, protect public employees from being compelled to incriminate themselves during investigatory interviews conducted by their employers. 385 U.S. 493 (1967). This protection stems from the Fifth Amendment to the United States Constitution, which declares that the government cannot compel a person to be a witness against one's self. *See id.* at 499.

41. Very few police departments have embraced the "Just Culture" concept described elsewhere in this paper, relying almost exclusively on what might be described as "punishment-based" discipline. While such a system may have its uses, it is quite different in focus than the "system approach" or the philosophy behind conducting an RCA. The former is interested in placing blame and punishing for policy or procedure violations, believing that people's ability and intentions are the main drivers of error, while the latter emphasizes problem identification and understanding, believing that policy or procedure modification, environment improvement, and education can improve the environment in which good people make reasonable decisions leading to better outcomes

42. *See* CMTY. ORIENTED POLICING SERVS., *supra* note 17, at 16–17 (explaining purposes of administrative investigations); FINN, *supra* note 28, at 57 (providing overview of San Francisco's oversight process).

43. *See Civilian Review Boards*, CATO INST: POLICE MISCONDUCT, https://www.policemisconduct.net/explainers/civilian-review-boards/ [https://perma.cc/TX63-A5GU] (last visited Aug. 15, 2017) (discussing civilian review boards used by police departments).

44. *See, e.g.*, Martin Kaste, *Police Are Learning to Accept Civilian Oversight, But Distrust Lingers*, NPR (Feb. 21, 2015, 10:18 AM), http://www.npr.org /2015/02/21/387770044/police-are-learning-to-accept-civilian-oversight-but-distrust-lingers

cated (at least in terms of policing) citizens, who are unlikely to understand or appreciate all of the training an officer receives, the underlying reasoning behind existing protocols, or the many factors that a trained police officer is considering or reacting to during an event that involves the use of deadly force.

There is a wide variety of CRB roles and areas of authority.[45] For instance, some CRBs sit in on actual internal investigation procedures regarding OIS.[46] Others may not participate in the review itself, but can review the department's internal investigations and make inquiries of the department's internal investigators.[47] While many lack the power to recommend discipline or approve or disapprove of investigation conclusions,[48] other CRBs have subpoena powers and full authority to recommend charges or even to mete out discipline.[49]

D. *Civil Litigation*

With or without an actual lawsuit being filed, an officer's conduct in an OIS or other use of deadly force is typically investigated or reviewed by his or her employer's (or the employer's insurance carrier's) civil defense counsel.[50] While ultimate liability will be determined against a heightened standard of qualified immunity given to police operating in their official capacity, and using the standard of the reasonably trained police officer under the circumstances as opposed to what a reasonably prudent individual might do, the fact remains that these cases often proceed to civil litigation against the officer, the department and the jurisdiction, or all three, irrespective of the officer's conduct.[51]

E. *Media Review*

The officer's conduct will also be scrutinized by the public and the news media, who typically obtain all materials produced by each of the aforementioned investigations, and may also obtain the foundational

[https://perma.cc/6KTV-QWRG] (discussing that police officers say civilian oversight boards are politicized and unfair to them).

45. *See* FINN, *supra* note 28, at 14, 17–66 (providing examples of police departments' review policies including roles of civilian review boards).

46. *See Civilian Review Boards*, *supra* note 43.

47. *See id.*

48. *See id.*

49. *See id.*

50. *See, e.g.*, S.F. POLICE DEP'T, *supra* note 18 (discussing purpose of Legal Division of San Francisco Police Department is "to assist Office of the City Attorney for future possible civil litigation in defense of the SFPD").

51. *See* CMTY. ORIENTED POLICING SERVS., *supra* note 17, at 7, 18–20 (discussing that civil or criminal litigation may be directed at officer or governing jurisdiction).

materials analyzed by the investigation, through public records requests or other sources.[52]

F. *Root Cause Analysis Seeks Forward-Looking Solutions*

Each of these mechanisms typically evaluates the officer's actions, and potentially the actions of the department as a whole, and of the victim(s), in hindsight, and generates a punishment—typically financial, though occasionally criminal—related to the level of accountability for the OIS. Thus, criminal or civil liability, or the administration of an internal sanction (e.g., citation, suspension, loss of job) are applied retrospectively as a deterrent to future error.[53] The logic is that punishing an officer for inappropriate use of a firearm will incent other officers to use their firearms more appropriately, and will incent jurisdictions to conduct additional training or supervision necessary to prevent or reduce additional errors.[54]

While such logic may be useful to reduce exceptional violations (deliberate departures from protocols designed to achieve the OIS as an outcome), the lack of reduction in OIS across the country over time suggests (a) that the majority of OIS are not so malicious and (b) that substantial amounts of community outrage, criminal charges, and huge civil settlements are having very little effect on the rate of OIS across the country, despite being a substantial topic in the national news cycle.

To be sure, accountability and some form of compensatory remedy to citizens and a community who may be injured by an "unjust" OIS is important and just. But if the reviews being conducted are not sufficient to reduce the incidence of unwanted OIS, a different approach is needed for all involved. Reducing OIS will protect police officers themselves, as well as civilians in the community, and will enhance police/community relationships and restore some much-needed legitimacy to community policing nationwide.

From the standpoint of the police officer, who is the "tip of the spear" in most if not all of these events, the prospect of adding yet another layer of conduct review, regardless of its laudable goal, following one of these events is likely to receive a very negative reaction.

---

52. *See id.* at 29–30 (explaining importance of media relations including social media and news media).

53. *See* Monell v. Dep't of Soc. Servs., 436 U.S. 658, 691–95 (1978) (holding that a municipality can be held liable under 42 U.S.C. § 1983 for systemic violations of citizens' constitutional rights); Candace McCoy, *How Civil Rights Lawsuits Have Improved American Policing*, *in* HOLDING POLICE ACCOUNTABLE 157, 165, 203–04 (Candace McCoy, ed. 2010).

54. *See, e.g.*, OFFICE OF CMTY. ORIENTED POLICING SERVS., U.S. DEP'T OF JUSTICE, THE PRESIDENT'S TASK FORCE ON 21ST CENTURY POLICING 51–61 (2015), https://cops.usdoj.gov/pdf/taskforce/taskforce_finalreport.pdf [https://perma.cc/VJ66-RGYJ] [hereinafter THE PRESIDENT'S TASK FORCE ON 21ST CENTURY POLICING] (recommending a variety of training reforms to help improve police/citizen interactions).

This is not to say that officers lack interest in learning from mistakes or errors. To the contrary, most police officers are conscientious, hard-working individuals who care deeply about their jobs and about not making mistakes. In fact, many joined the police force precisely because of the quality represented by the badge and its reputation for high standards and excellence. They have no desire to experience a bad outcome in the first place, much less to repeat it.

At the same time, given that (a) all of the mechanisms described above are essentially punitive, rather than educational or constructive in nature, and (b) are, in some instances, conducted by people who have not received police training, it should not be surprising that many police officers approach review processes with an ingrained sense of skepticism. This can have a chilling effect on lessons learned by creating a disincentive to provide information related to the OIS in the first place, or to actively block the investigation.

This skeptical mindset on the part of officers poses potential problems for the utility of RCA, and must be addressed early and often throughout an RCA process. RCAs are inherently a cooperative effort, involving an understanding of the actions and motivations of all of the participants in the event (including trainers and supervisors who may not have been on the scene).

To be sure, the accountability mechanisms and redress mechanisms described in the preceding paragraphs are necessary and important. Innocent civilians injured in an OIS should be fairly, appropriately, and rapidly compensated for their injuries and suffering. Furthermore, to the extent a police officer committed a violation—that is, an intentional departure from established rules or norms of safety—retrospective accountability measures may be effective in deterring future intentional behavior.

To the extent that one of the goals of post-hoc accountability reviews is to reduce the frequency of future shootings, however, they are only useful to address that limited subset of intentional violations. By definition, post-hoc accountability mechanisms cannot deter unintentional error, as the error was made for reasons having nothing to do with the fear of discovery or discipline.

Furthermore, current retrospective review mechanisms can encourage an unhelpful hindsight, leading to a mistaken belief that the factors causing the undesired outcome have been addressed. The familiar phrase "Monday morning quarterbacking" is both symbolically and literally useful in this context. When an NFL quarterback throws an interception, for example, it is easy for observers and pundits to blame the person who threw the ball and question his proficiency and his fitness for the role. Coaches, quarterbacks, and other players on the team, however, know the truth: every NFL quarterback is one of the very best in the world at his craft, and has been painstakingly trained by the most accomplished trainers in his field. In the midst of a football play, with twenty-two men mak-

ing instantaneous decisions in concert with one another towards divergent goals based on dynamic information, it is possible for the quarterback to misread a signal, or for another player to fail to pick up a blitz, or for an opponent to disrupt an expected opening. In these situations, the quarterback may believe that a specific pass leads to his best possible outcome, only to experience the unintended consequence of an interception. It may be that the quarterback bears responsibility for the interception; it seems unlikely that the responsibility is his alone. And while judgment and criticism can encourage increased focus for the next play, they do little to address the play design, practice, field conditions, and execution of the other twenty-one people on the field. Accordingly, benching your quarterback is unlikely to ensure that the next quarterback who runs that play will experience a different result.

In such an environment, errors enabled by systemic and environmental factors must be clearly understood, and distinguished from violations. This is where RCA provides unique awareness.

III. A SYSTEMS VIEW OF OFFICER-INVOLVED SHOOTINGS

Existing review mechanisms are designed to determine who should be held accountable for the shooting—the officer, the individual who was shot, or some third party.[55] These procedures may be useful to the extent that our goal is to assess whether the officer departed from existing procedures, or other facts useful in assessing blame or appropriate compensation for the OIS. If, on the other hand, our goal is to prevent OIS over time, then retrospective accountability assessments are necessary but not sufficient to achieve our goal. Their focus on individual culpability and existing policies and procedures will identify officer departures from procedures, and may deter that subset of those departures that is done knowingly. But they will fail to reduce the incidence of accidental or unintentional acts contributing to the OIS. More importantly, *they fail to address the reality that the vast majority of OIS occur despite the fact that no one wants then to occur.* Neither the officer pulling the trigger nor (certainly) the victim desires the OIS—but through a sequence of contributing events, the participants reach a moment where the officer feels that pulling the trigger is the most positive next action. Without understanding these multiple contributing factors—involving the environment, information flow, situation assessment, supervision, training, and potentially dozens of other factors that combine to enable an OIS to occur despite the best desires of the participating individuals—we cannot hope to interrupt that sequence for the next officer and prevent injury to the next OIS victim.

There are many ways to catalogue systemic errors (i.e., unintended outcomes) and violations (e.g., deliberate or intentional departures from

55. For a discussion of existing review mechanisms, see *supra* notes 43–50 and accompanying text.

system rules). The framework of errors and violations provided by Dr. James T. Reason is particularly helpful in understanding the myriad contributing factors that allowed the error to occur, permitting the design of useful preventative measures to avoid recreation of the error in similar circumstances in the future.[56]

A. *Identifying and Addressing Error in a System: James Reason's Swiss Cheese Model*

At its highest level, policing is a system of human interaction designed to protect our communities from crime. In any such system of human interaction, mistakes will be made. While intentional departures from the system's rules of safety can occur, it is more likely that errors—whether called, accidents, adverse events, unintended outcomes, or (in the forensic laboratory context) protocol "nonconformities"—occur not *because* of an actor's devious manipulations, but rather *despite* their intentions and best efforts, and despite existing protocols and safety checks and balances designed to prevent those errors.[57] As organizational management expert James Reason says, "Humans are fallible and errors are to be expected, even in the best organisations."[58] In a "systems approach" to error reduction, errors are seen as consequences of environmental or upstream systemic factors that must be addressed to prevent the recurrence of the circumstances that led to the unintended outcome.[59] Systemic defenses, however, remain prone to errors that may persist at multiple defense levels.

Reason's oft-cited Swiss Cheese Model of error presents an elegant illustration of the challenge.[60] In Reason's model, our system (in this case, policing) can be thought of as a block of Swiss cheese.[61] The system starts with police initiating (or responding to) a community interaction, and proceeds through various stages: individual stops, arrests, bookings, interrogations, case adjudication, incarceration, parole, etc. Each of these person-to-person interactions between law enforcement and civilian can be thought of as a single slice in that block of cheese, and each interaction includes opportunities for error, represented by holes in the Swiss cheese.[62]

---

56. *See* Reason, *supra* note 6, at 769–70; *see also* NAT'L COMM'N ON FORENSIC SCI., *supra* note 11, at 5–7.

57. *See* Reason, *supra* note 6, at 768.

58. *See id.* at 768.

59. *See id.* ("Countermeasures are based on the assumption that though we cannot change the human condition, we can change the conditions under which humans work.").

60. *See id.* at 769. (proposing the Swiss-cheese model for systemic failure).

61. *See id.* (demonstrating how holes between layers can align).

62. *See id.* at 769 ("Usually, [failure] can happen only when the holes in many layers momentarily line up to permit a trajectory of accident opportunity . . . .").

Normally, when an error occurs, that error is identified and resolved by a later, or downstream, component of the system.[63] To address the risk of error by officers or detectives leading an investigation phase, for example, most police departments will require an independent case review by a police sergeant prior to booking.[64] This review ensures that the investigation has yielded an accurate arrest of the actual perpetrator of a crime using techniques permissible under the Constitution, and that the charges filed match the conduct observed by the arresting officer. The sergeant's review ensures that errors that proceed through the "hole" in our Swiss cheese slice for the investigation do not continue farther into our process.

In any effective system, other checks and balances, or "safety stops," are implemented throughout the system for the express purpose of improving safety and reducing errors.[65] This is true in policing as well, both generally and in the OIS context specifically. Examples of checks and balances designed to reduce OIS might include the provision of non-lethal restraints (handcuffs, tasers), training on methods of event de-escalation, rules of conduct (i.e., prohibitions on shooting at moving vehicles), and others.

Despite our best efforts, however, from time to time a situation will arise in which an error occurs and is supported by either additional downstream errors or the failure of checks and balances to work as intended.[66] In these cases, errors bypass defense systems, causing damage to victims.[67] In extreme cases (e.g., the Challenger space shuttle explosion, the Chernobyl nuclear meltdown,[68] a "wrong-side" surgery, or some other type of "never event" that a system insists must not be permitted to occur), we may call the resulting catastrophe a "sentinel event."[69] Sentinel events are sufficiently serious that they typically galvanize a system to undertake a substantial top-to-bottom, multi-stakeholder review of all contributing factors, because all participants can acknowledge that the system's ongoing legitimacy is threatened if such events are allowed to recur.[70] It is our contention that the OIS falls in this category.

63. *See id.* (citing high technology systems as examples of defenses in layers that are effective in protecting potential victims from systemic failures, but also noting that such systems nevertheless have their own weaknesses).

64. *See, e.g.*, CMTY. ORIENTED POLICING SERVS., *supra* note 17, at 16.

65. *See* Reason, *supra* note 6, at 770 (explaining how "high reliability organisations" routinely rehearse familiar error scenarios while constantly checking for new errors).

66. *See id.* at 769.

67. *See id.*

68. *See id.* at 768–69.

69. *See id.*; THE JOINT COMM'N, SENTINEL EVENTS (SE) 2012 COMPREHENSIVE ACCREDITATION MANUAL FOR HOSPITALS 1 (Jan. 2013), https://www.jointcommission.org/assets/1/6/CAMH_2012_Update2_24_SE.pdf [hereinafter SENTINEL EVENTS] ("A sentinel event is an unexpected occurrence involving death or serious physical or psychological injury, or the risk thereof. Serious injury specifically includes loss of limb or function.").

70. *See* SENTINEL EVENTS, *supra* note 69, at 15–16.

B. *Active and Latent Errors*

Of course, there are as many potential errors as there are potential actions or reactions in a system, and understanding the nature of the specific error is key to solving it. An intentional departure from protocol caused by corruption requires an understanding of the motivation for the corruption, and may lead to both discipline for the corrupt individual and a modification of the system to remove the incentive(s) in question. Such solutions would have less effect in addressing unintentional or "good faith" errors, even if they lead to the same outcome.

To address this, and to aid in designing useful interventions to prevent errors, Reason has created a lexicon of system errors.[71] He first divides the universe into errors (good-faith, unsafe acts based on skill and training) and violations (willful disregard of rules and regulations).[72] Errors can then be subcategorized as "active errors" (unsafe acts committed by people in direct contact with the system) and "latent errors" (inevitable problems that stem from system design, environmental factors or management decisions).[73] This division accounts for the ways in with both individual performance and systemic design can lead to unsafe acts.

C. *Systemic Errors*

An error is based on skill and training issues affects the judgment of front-line actors, such as individual police officers.[74] They may be decisional, perceptual, or skill errors.

Reason's work includes a lexicon of potential errors, including errors of flawed decision-making, mistaken perceptions, and skill-based errors, and evaluating errors of action and omission, as well as errors impacted by supervision or environmental tendencies.[75] Decisional errors are errors characterized by a lack of information, knowledge, or experience, or the misinterpretation of existing information,[76] such as misinterpreting a suspect's attempt at compliance for threatening behavior. Perceptual errors are those resulting from a lack of sensory input,[77] such as patrolling in a dark stairwell. Skill errors are errors resulting from an officer engaging in

71. *See* Reason, *supra* note 6, at 768 (describing the longstanding approach of dividing unsafe acts by the most closely situated employees into errors and violations under the person approach).

72. *See id; see also* NAT'L COMM'N ON FORENSIC SCI., *supra* note 11, at 5.

73. *See* Reason, *supra* note 6, at 769.

74. *See* NAT'L COMM'N ON FORENSIC SCI., *supra* note 11, at 5; *cf. FAA Aviation Safety Information Analysis and Sharing*, FED. AVIATION ADMIN., http://www. asias.faa .gov/pls/apex/f?p=100:1 [https://perma.cc/HP3S-X4WH] (last visited Oct. 30, 2017).

75. *See* NAT'L COMM'N ON FORENSIC SCI., *supra* note 11, at 5.

76. *See* Reason, *supra* note 6, at 768; NAT'L COMM'N ON FORENSIC SCI., *supra* note 11, at 5.

77. *See* Reason, *supra* note 6, at 769; NAT'L COMM'N ON FORENSIC SCI., *supra* note 11, at 5.

a familiar task, focused on a comfortable situation that nonetheless turns out differently than expected,[78] such as approaching from the wrong angle during a traffic stop that causes the officer to be struck by a passing car.

D. *Systemic Violations*

"Violations," in the Reason lexicon, is used to describe instances in which an actor willfully disregards established procedures and customs, whether for a nefarious purpose (corruption) or for a perceived efficiency (workarounds, or "cutting corners" in procedure).[79] A "routine" violation is a habitual and repeated departure from accepted practice, enabled by rule bending,[80] such as neglecting to check on detained prisoners as frequently as is mandated. An "exceptional" violation, on the other hand, is a willful departure from accepted practice that is not condoned by management[81]—beating a suspect to coerce a confession, for example, or as a punishment for an infraction against the officer or the community.

IV. ROOT CAUSE ANALYSIS: FORWARD-LOOKING EVENT REVIEW TO PREVENT OIS OVER TIME

RCA can be a useful addition to the accountability-based options for post-event review described above. It is a systematic process for identifying the "root causes" of problems or events and an approach for responding to them.[82] A root cause is "a factor that caused a nonconformance and should be permanently eliminated through process improvement."[83] As Figure 1 illustrates, it is often buried several levels below the proximate cause of an unintended event, mistake, error, accident, nonconformance, or other negative occurrence, and is "'the evil at the bottom' that sets in motion the entire cause-and-effect chain causing the problem(s)."[84] Even generally safe organizations are subject to adverse events, and even unsafe systems may escape detection for extended periods of time.[85]

78. *See* NAT'L COMM'N ON FORENSIC SCI., *supra* note 11, at 5.
79. *See id.* at 5–6; *cf.* FED. AVIATION ADMIN., *supra* note 74.
80. *See* NAT'L COMM'N ON FORENSIC SCI., supra note 11, at 5.
81. *See id.*
82. *See generally id.*
83. *See What Is Root Cause Analysis (RCA)?*, *supra* note 2.
84. *See id.*
85. *See* NAT'L COMM'N ON FORENSIC SCI., *supra* note 11, at 4.

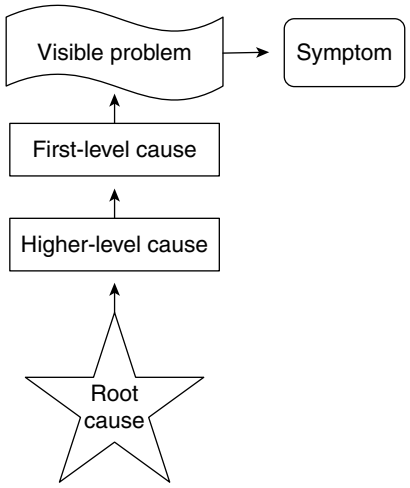

FIGURE 1. ROOT CAUSE VISUALIZED[86]

RCA is based on the idea that effective management requires more than merely "putting out fires" for problems that develop, but also finding a way to prevent them.[87] In contrast with accountability reviews, RCA is largely unconcerned with compensating individuals who may have suffered an injury because of the error.[88] In addition, questions of who is to blame or who should accept responsibility for the error are at best second-tier assessments. Rather, RCA is focused on identifying the contributing factors that allowed a mistake, error, or adverse event to occur so that those contributing factors can be addressed and improved.[89] RCA is a learning tool that identifies the causes of systemic errors, creates action plans to prevent recurrences, and identifies necessary systemic changes to reduce risk.[90]

RCA operates without the presumption that someone is "blameworthy."[91] Its presumption of good faith participation in the system, and its emphasis on prevention rather than punishment[92] have led other industries to employ RCA successfully to reduce catastrophic recurrences with

86. *What Is Root Cause Analysis (RCA)?*, *supra* note 2.

87. *See, e.g.*, *Using Root Cause Analysis to Instill a Culture of Self-Improvement: Program Replication Materials*, *supra* note 20, at 4.

88. Hence the need for separate compensatory mechanisms, e.g. civil litigation or professional insurance.

89. *See* NAT'L COMM'N ON FORENSIC SCI., *supra* note 11, at 5.

90. *See id.* at 5–7.

91. *See id.* at 5.

92. For intentional or reckless behavior, a RCA including a "just culture" would suggest both improving deterrent or preventative measures and including accountability mechanisms designed to deter the intentional misconduct. *See, e.g.*, *Using Root Cause Analysis to Instill a Culture of Self-Improvement: Program Replication Materials*, *supra* note 20, at 5. An example of this might be increasing video surveillance of an evidence locker where evidence is being mishandled, while also in-

as much information as possible. These different industries apply RCA with the assumption that their equivalent "catastrophic events" (e.g., airline crashes) are unacceptable tragedies that should never be an outcome of a properly functioning system.[93] The blame-free analysis is crucial to RCA because blaming and punishing people with good intentions for adverse events alienates the very people who may be in the best position to prevent the problem from occurring, or have the most relevant knowledge of how to design solutions.[94]

One way to think of the difference between the accountability-based approaches (e.g., internal affairs, civilian oversight boards, or civil litigation) and RCA as problem-solving approaches is that the accountability approaches are focused on *who* should be accountable for *what* behaviors in the past, while the RCA is much more consumed with *why* an individual acted in the way he did given the information available to him at the time to modify the actions of others in the future.[95] This focus on understanding why an actor makes the decisions he does is reflected in one of the most common tools of RCA investigation, called simply the "Five Whys."[96] The individual conducting the RCA asks participants to answer increasingly deeper levels of the question "why" until true base contributing factors are revealed. Often, these basic contributing factors would have been hidden had the successive "why" questions not been asked, as shown in this example from the auto industry:

> PROBLEM: The vehicle will not start.
> WHY? The battery is dead.
> WHY? The alternator is not working.
> WHY? The alternator belt is broken.
> WHY? The alternator belt was worn past its useful lifespan and not replaced.
> WHY? The vehicle was not regularly maintained.
> SOLUTION: Schedule regular maintenance checks.[97]

An incapacitated car is an obviously undesirable outcome—and the proximate cause of this particular incapacitation is a dead battery. Without digging deeper, however, we might simply replace the battery, or the alternator belt, and continue onward. While this would solve the instant

creasing the penalty for an officer found to have intentionally removed evidence for improper use.

93. *See* NAT'L COMM'N ON FORENSIC SCI., *supra* note 11, at 4–5.

94. *See id.* at 5.

95. *See Guidance for Performing Root Cause Analysis (RCA) with Performance Improvement Projects (PIPs)*, QUALITY ASSURANCE & PERFORMANCE IMPROVEMENT, https://www.cms.gov/medicare/provider-enrollment-and-certification/qapi/downloads/guidanceforrca.pdf [https://perma.cc/U5TK-VXWH] (last visited Aug. 13, 2017).

96. *See id.*

97. *See* Daryl L.L. Houston, *Why, Why, Why, Why, and Why*, DAILY POST (May 31, 2012), https://dailypost.wordpress.com/2012/05/31/why-why-why-why-and-why/ [https://perma.cc/5XKL-FZ6E].

issue, if we have not learned the benefit of regular maintenance, we will certainly repeat our broken alternator belt in the future. Note, too, that another potential action might be to take the car to a different mechanic in the future—but "firing" the mechanic would likewise be useless to resolve problems that are actually caused by a lack of regular maintenance. Only by asking "why" five levels deep can we truly understand the root causes of the problem, and only after the root causes are clearly identified can a system participant (in this case the driver) take useful corrective actions (precise system maintenance) that will prevent the recurrence of the undesired outcome. Corrective actions minimize or eliminate the risk of repeating nonconformity once it has been identified.[98] Discovery of systemic problems also enables preventative actions, which proactively identify needed improvements and sources of nonconformities.[99] In practice, these actions can take the form of guidance, training, focused investigations, recommendations, communication, implementing safe harbors, and increased documentation.[100]

A. *RCA as Part of Systems Quality Improvement*

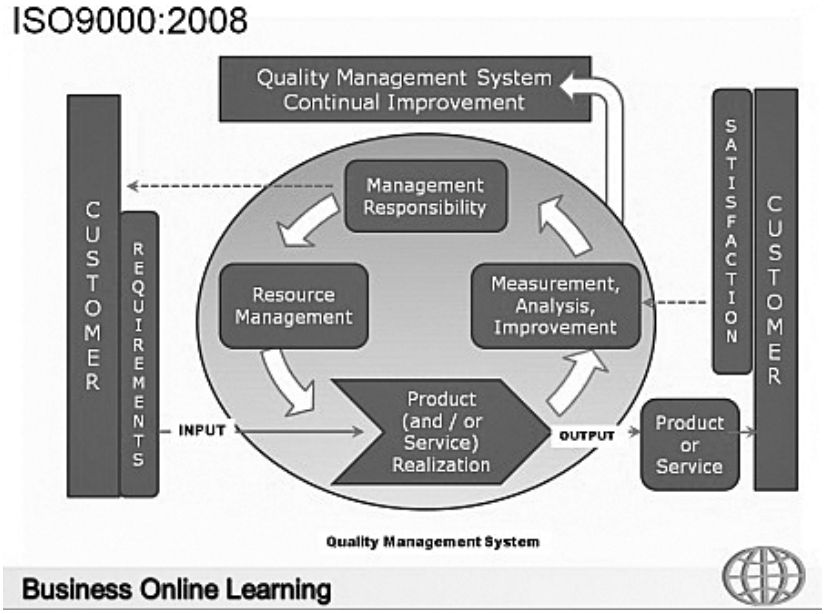

FIGURE 2. QUALITY MANAGEMENT SYSTEMS VISUALIZED[101]

98. *See* NAT'L COMM'N ON FORENSIC SCI., *supra* note 11, at 1.

99. *See id.* at 4.

100. *See id.* at 2.

101. *Quality Management Concepts*, BIS. ONLINE LEARNING, http://www.business-online-learning.com/quality-management-concepts.html [https://perma.cc/UUU6-U28L] (last visited Oct. 31, 2017).

As Figure 2 illustrates, quality is an iterative process of defining how a system is supposed to work and comparing the outcomes to the satisfaction of "customers"—people who use the system. One can think of policing as a system of human interactions designed to reduce crime and support public safety. Using this as our definition, a "high-quality" criminal justice system, or a "high-quality" system of policing within the criminal justice system, is one that achieves these goals while maximizing civilian liberty. In this model, improving policing occurs as an iterative cycle: the police devise protocols that are designed to reduce crime and protect civilians, while customers—defined here not only as members of the community, but also as witnesses, suspects, perpetrators of crime, and police officers themselves—provide feedback on the effectiveness and utility of the protocols.

In an OIS, we can see the competing requirements of the different stakeholders. Police need to be able to prevent crime and to protect the citizenry. Citizens, even those perpetrating crime, deserve the protection of their bodily integrity. Of course, this includes police officers as well. It is foreseeable that the perpetrator of a crime, when confronted by a police officer seeking to prevent that crime, might react with force directed towards the police officer, creating a danger for the officer. Thus, we have designed protocols informed by past events that are designed to prevent the officer from initiating physical force and will allow the officer to respond with the minimum amount of force necessary to (a) protect the officer's bodily integrity and (b) minimize the potential for injury both to uninvolved individuals and to the individual posing a physical threat to the officer.

In this context, any injury to any individual could be (and we believe *should* be) defined as an "error" from the systems perspective.[102] Thus, we can recognize that a police shooting may have been both deliberate by the officer and unavoidable under the circumstances, while at the same time labeling the injury as an "error" from the perspective of the system as a whole. When an officer follows all established protocols and nonetheless discharges his firearm in the proportionate use of force or self-defense, the *officer* has acted correctly, but the *system* has failed. An administrative review would stop here and rule that no further action is necessary. An RCA, on the other hand, would ask, "Why did the officer need to discharge his weapon?" and would seek to construct a different environment in which the escalation to force could be avoided without allowing the perpetrator of a crime to avoid capture and accountability. In other words, while administrative reviews of the Ferguson, Missouri shooting focused on the blameworthy aspects of Michael Brown's and Darren Wilson's actions, and on the appropriateness of the Ferguson prosecutor's

102. Whether we ultimately believe that physical injury is useful as a punishment to the perpetrator of a crime is up to the community; the instant point is limited to the police/individual interaction during investigation or upon discovery of a crime.

management of a grand jury; an RCA of the Ferguson shooting would seek to identify moments during the build-up to the explosive interaction in which the system could have provided support to each man that might have avoided a confrontation that ended with one young man bleeding to death in the street, and another as an unemployed former police officer and community pariah.

The policies and procedures that are in place as of the date of the event being reviewed provide the starting point of a RCA, and the task is to determine which, if any of these policies and procedures, can be modified to incorporate the learnings from the event to prevent the next unintended outcome. One of two possibilities exist. Either policy was not followed, in which case we need to understand why not, and propose modifications that will increase conformance to the existing protocols; or policy was followed, in which case the policy was not adequate to prevent the unintended outcome, and we need to design improvements that will ensure the policy covers this new and unexpected scenario.

By way of example, suppose that standing department policy on transporting arrestees was not followed in an incident that resulted in the death of an arrestee.[103] The violation would suggest that RCA on the decision-making of the involved officers would be helpful in determining exactly why they made decisions inconsistent with department policy.

B. *Non-Blaming Review*

A fundamental difference between RCA and existing methods of review is that RCA does not presume that the root cause is an individual capable of legal blame and consequences.[104] This does not mean that individual culpability should not be assessed—but the purpose of an RCA is to change *future* behavior by preventing the occurrence of the undesired event, not to assess blame, punishment, or discipline for prior actions. Thus, in the event the RCA discovers intentional wrongdoing by any system participant, the information should be passed on to appropriate individuals with disciplinary ability, while the RCA will continue to devise checks and balances making both misconduct and error harder to achieve.[105]

---

103. *See, e.g.*, Mariam Khan, *Prosecutors Say Baltimore Police Officer Edward Nero Did Not Follow Protocols with Freddie Gray*, ABC NEWS (May 12, 2016, 10:19 PM), http://abcnews.go.com/US/prosecutors-baltimore-police-officer-edward-nero-follow-protocols/story?id=39064198 [https://perma.cc/Z55F-5HVR]; Donna Owens, *Baltimore Cop Failed to Follow Protocol: Freddie Gray Prosecutor*, REUTERS (May 12, 2016, 06:25 AM), http://www.reuters.com/article/us-baltimore-police-idUSKCN0Y317R [https://perma.cc/8LXA-9PBN] .

104. *See* NAT'L COMM'N ON FORENSIC SCI., *supra* note 11, at 5 (highlighting that RCA is blame-free analysis).

105. *See id.* at 8 (stating disciplinary processes should be separate from RCA and appropriate persons involved in disciplinary action should be informed).

Part of the reason for a non-blaming perspective is to encourage individuals to participate fully and openly; after all, it is safe to assume that participation in an accountability review with the potential for disciplinary or other punitive action will create an incentive for the individual being investigated to minimize his or her role in the incident, with potentially catastrophic impact to our ability to understand the genesis of the unintended outcome and thus to prevent its recurrence.[106]

C. *Who Should Participate in a RCA?*

RCAs work best as multi-stakeholder processes with a coordinator or a moderator.[107] RCAs are best performed by an interdisciplinary team that understands the various roles and working environments of all of the individuals who participated in the event.[108] This allows the group to benefit from multiple perspectives and multidisciplinary personnel whose backgrounds encompass the various parts of the technical analysis and management systems, and ensure a holistic review of contributing factors that might otherwise be overlooked.

The number of participants conducting the RCA can vary depending on the nature of the event, though most scholars recommend a group of four to ten people.[109] For more substantial events, RCAs often work best when performed by multidisciplinary teams, from all levels of staff, with fundamental knowledge of the specific area involved.[110] For example, an RCA when performed after an airplane crash might include experts in air traffic control procedures, mechanical engineering, meteorology, human factors in instrumentation design, aviation safety procedures, etc.

The RCA team typically is made up of people who did not themselves participate in the specific incident, to ensure objectivity in the review—but it is essential that as many of the actual participants as possible also participate in the RCA, to truly understand what they were thinking in then-current terms as they made decisions that contributed to the progression of the event.

D. *Barriers to RCA*

The administrative review processes described above—particularly civil or criminal litigation—may actually serve as a barrier to the conduct of a robust RCA if information generated by the RCA is immediately acces-

106. *See* Interview with Sean Smoot, Director and Chief Counsel for the Police Benevolent & Protective Association of Illinois and the Police Benevolent Labor Committee (Feb. 21, 2017).

107. NAT'L COMM'N ON FORENSIC SCI., *supra* note 11, at 7–8.

108. *See id.*

109. *See Guidance for Performing Root Cause Analysis (RCA) with Performance Improvement Projects (PIPs), supra* note 95.

110. *See* NAT'L COMM'N ON FORENSIC SCI., *supra* note 11, at 7–8; *see also Guidance for Performing Root Cause Analysis (RCA) with Performance Improvement Projects (PIPs), supra* note 95.

sible to plaintiff's counsel in a civil litigation. To maximize a jurisdiction's enthusiasm for RCA, then, we may benefit from certain "safe harbor" protections.

Similar protections are provided in the medical and transportation contexts,[111] which have recognized that the goals of an RCA—that is, encouraging the reporting of unintended outcomes and participation in reviews—are furthered by providing criminal justice professionals with limited protections in exchange for their candor on conduct that could result in disciplinary measures being taken against the reporting individual. Without these protections, those administering the RCA run a risk that those officers most directly involved in the event may not provide fully accurate information about the event and won't be motivated to fully participate, thereby reducing the utility of the RCA in identifying how things really work and what really happened.

E. *Overcoming Barriers with Participation Incentives: Non-Disciplinary Review, Confidentiality, and Transparency*

In a perfect world, RCAs should be isolated from internal event reviews focused on accountability and discipline. In aviation, for example, the Aviation Safety and Reporting System (ASRS) has been established to conduct event reviews using anonymized data collection and reporting techniques.[112] Individuals who report safety concerns to the ASRS are given an anonymized receipt in exchange for providing information about the event; if the Federal Aviation Administration, a regulatory agency with disciplinary authority, follows up with the individual, the individual can

111. RCA in a health care context benefits from Peer Review Protection Acts, laws in many states that protect the privacy of participants, provide immunity for their good faith statements made in a RCA, and limit the disclosure of information from the RCA that is provided to external observers. *See, e.g.*, Peer Review Protection Act, 63 PA. STAT. AND CONST. STAT. ANN. § 425.3 (West 2017). This allows medical professionals participating in an RCA, with the goal of improving the overall quality and safety of the system, to do so without threat of prosecution or discipline for their participation in the review, and without the fear that their statements will later be disclosed to the press or a plaintiff's attorney. Note that these peer review protection acts do nothing to disrupt the ability of any plaintiff or victim to pursue appropriate remedies in court, which may include the separate deposition or other interview of the individuals participating in the RCA. A slightly different approach has been taken in the transportation field, where the NTSB's conclusions and data are public and available, but not admissible as evidence, forcing plaintiffs' counsel to hire their own experts to analyze the data gathered by the NTSB and reach their own independent conclusions.

112. *See, e.g.*, *Confidentiality and Incentives to Report*, AVIATION SAFETY REPORTING SYS., https://asrs.arc.nasa.gov/overview/confidentiality.html [https://perma.cc/KZN3-7ART] (last visited Aug. 12, 2017) [hereinafter *Confidentiality and Incentives to Report*] (discussing ASRS procedure for reviewing reports); *see also Immunity Policies*, AVIATION SAFETY REPORTING SYS., https://asrs.arc.nasa.gov/overview/immunity.html [https://perma.cc/62B4-TEPU] (last visited Aug. 12, 2017) [hereinafter *Immunity Policies*].

produce the ASRS receipt and receive qualified immunity in exchange for his contribution to improving the safety of the overall system.[113]

Another incentive to participation shown in the ASRS process is confidentiality.[114] While the events are known, it may behoove the organization to anonymize interviews, and to shield personally identifiable information from evaluations or reports about the event to ensure that individuals feel free to participate fully. At the same time, it is essential that the final assessment of why the event occurred, listing the various contributing factors and proposing solutions to prevent those facts from occurring in the future, be published and shared widely, so that other jurisdictions can learn from the errors contained in the report rather than having to relive them.[115] Thus, departments conducting and reviewing RCAs should willingly agree to exclude the RCA investigation and report from being used as evidence in any employment proceedings involving the participating officer(s). Note that those evaluations can continue unfettered but would be barred from piggybacking upon the RCA investigation and would instead have to conduct their own independent investigations. In this way, incentives to provide incomplete information to the RCA are removed, while the system's overall ability to allocate appropriate accountability and recompense remains uninhibited.[116]

F. *Timeliness of RCAs*

As with most things involving memory, RCAs are best performed as proximate to the occurrence in question as possible. RCA investigators benefit from access to critical information at the time of incident, before self-protection incentives threaten to alter or distort accounts and data surrounding a shooting.[117]

Notwithstanding this desire for proximity of time, RCA can be useful in a criminal justice setting when conducted years, or even decades after the event itself.[118] The closer the RCA is to the event itself, however, the more useful it will be in identifying contributing factors and proposing and implementing useful reforms. The good news about an OIS as opposed to other potential errors in criminal justice (e.g., a wrongful conviction) is that the OIS is identified at the moment it occurs, while wrongful arrests or convictions often cannot be identified for years or decades.

---

113. *See Immunity Policies*, *supra* note 112.

114. *See Confidentiality and Incentives to Report*, *supra* note 112; *Immunity Policies*, *supra* note 112.

115. *See* Interview with Sean Smoot, *supra* note 106.

116. *See id.*

117. *See id.*

118. *Cf.* John Hollway, *A Systems Approach to Error Reduction in Criminal Justice* 11–15, PENN LAW: LEGAL SCHOLARSHIP REPOSITORY (Feb. 2014), http://scholarship.law.upenn.edu/cgi/viewcontent.cgi?article=1975&context=faculty_scholarship [https://perma.cc/W2XC-LZXN].

G. *When to Conduct an RCA*

While all errors should be critically evaluated, not all errors rise to the level of a full, multi-stakeholder RCA. A police officer putting the wrong date on a report, while technically an error, does not rise to the level of the acts and omissions that occurred during the shooting of Michael Brown in Ferguson, Missouri for example. To determine when RCA is appropriate, the National Commission on Forensic Science (NCFS) implements a matrix that charts the severity and frequency of unsafe acts.[119]

		Severity			
		Catastrophic Systemic errors in procedure that affect several outcomes or reported results; intentional misconduct or recklessness in execution of role	Major Casework or proficiency test error that affects outcome or reported result. Potential problems that may affect the reliability, accuracy or performance of a test procedure or policy; serious negligence in execution of role	Moderate Clerical nonconformity affecting result but corrected during the review process prior to reporting; nonconformity that does not affect outcome or reported result	Minor Clerical nonconformity that does not affect outcome or reported result
Probability	Frequent Likely to occur multiple times in 1 year	3	3	2	1
	Occasional May occur several times in 1-2 years	3	3	2	1
	Uncommon May happen once in 2-5 years	3	2	1	1
	Remote May happen once in 5+ years	3	2	1	1

RCA Required for 3, Recommended for 2, Optional for 1

FIGURE 3. WHEN TO CONDUCT RCA[120]

As Figure 3 illustrates, the need to conduct a full-blown RCA depends on both the severity of the error (i.e., the injury inflicted) and its likelihood of recurrence. RCAs should be used to evaluate all catastrophic events, while other frequent errors (e.g., entering the wrong date in the notes of a witness interview) may not require such a detailed event review. This differentiation is necessary to minimize the inefficient use of resources that could occur.

H. *The Role of "Near Misses" in RCAs*

RCA also offers advantages in data collection over existing review systems by analyzing "near misses." A near miss is a narrowly averted error, one that that would have occurred but for a fortuitous event that allowed the error to be detected in time and avoided.[121] Because all of the necessary prerequisites for the error occurred, but the psychological barrier of the error's actual occurrence has been avoided, the near miss can be an

119. *See* NAT'L COMM'N ON FORENSIC SCI., *supra* note 11, at 10.

120. *Id.*

121. *See, e.g.*, James M. Doyle, *Learning from Error in American Criminal Justice*, 100 J. CRIM. L. & CRIMINOLOGY 109, 129 (2010).

extremely valuable learning tool, and should be studied in exactly the way it would be studied if the undesired event had actually occurred.

Examples of near misses might include errors (e.g., arresting the wrong person), violations (e.g., depriving an arrestee of due process), and situations when officers narrowly avoid being injured or killed (e.g., an officer is nearly shot while executing an arrest warrant).[122] When these near misses are treated as actual errors, they can be excellent training tools, providing all of the opportunities for learning about error without the reluctance of participants to tell their stories for fear of consequences in the parallel administrative and civil accountability processes.

In an officer's interactions with civilians, systemic and human factors may elevate the risk of violence but not necessarily result in violence occurring. Because accountability reviews only begin after an incident has occurred, they are inadequate in reviewing risky conduct that before it culminates in an incident. By examining "near misses," RCA can identify risky patterns of conduct with specific offices and individual officers to enable policy adjustments to prevent the next shooting. Thus, near misses should be studied in RCA analysis as if they were real errors.[123]

V. BENEFITS OF ROOT CAUSE ANALYSIS IN POLICING

A. *Increased Disclosure Leads to More Accurate Solutions*

In theory, the separation of RCA from accountability review systems will encourage more disclosure by all parties involved.[124] With greater information comes greater accuracy in the implementation of systemic reforms.[125] Instead of solutions focused on the accountability of individual officers, RCA allows the creation of systemic solutions that address habitual rule-bending, perpetuators of reckless office culture, and training deficiencies among officers. Potential examples in the Ferguson shooting might be: recommendations to improve the cultural awareness of Ferguson police officers with regard to the needs of or situations of individuals in the community; requirements that all Ferguson Police Department officers carry non-lethal forms of restraint (e.g., tasers); protocols that prescribe additional distance between officers apprehending suspects using their vehicles as barriers; additional training on de-escalation protocols; the use of dashboard or body cameras; requirements that all patrols consist of two officers rather than just one; and other possible recommendations.[126] Any of these might have allowed for a different result in the shooting of Michael Brown.

122. *See* Interview with Sean Smoot, *supra* note 106.

123. *See* NAT'L COMM'N ON FORENSIC SCI., *supra* note 11, at 2 n.2, 10 n.11, 11.

124. *Compare* Reason, *supra* note 6, at 768, *with* CMTY. ORIENTED POLICING SERVS., *supra* note 17, at 15–20.

125. *See, e.g.*, Hollway, *supra* note 118, at 17–19.

126. *See* U.S. DEP'T OF JUSTICE, INVESTIGATION OF THE FERGUSON POLICE DEPARTMENT 90–102 (2015), http://www.justice.gov/sites/default/files/opa/press-

B. *Quality Improvements over Time, Leading to Greater Safety for Officers and Citizens*

To the surprise of no one, the conduct of RCAs will not immediately stop all errors from occurring. Rather, RCAs function as part of a mature and productive safety improvement and quality management system to identify risks in the system and mitigate those risks going forward. Thus, the system becomes safer for all who participate in it in a gradual process over time. It is through the application of RCA and other associated initiatives over more than forty years that crashes in aviation, as Figure 4 illustrates, have declined to very near zero. At the same time, it is worth noting two important facts: first, while the rate of accidents in aviation may be *near* zero, the perfection of zero errors has yet to be achieved, and likely never will be achieved.[127] Second, the reduction in accidents was not immediate, but rather a gradual decline over the past four decades.[128] Reducing OIS and improving officer and civilian safety will likewise happen over time, through the persistent and iterative application of RCA and the conscious implementation of reforms.

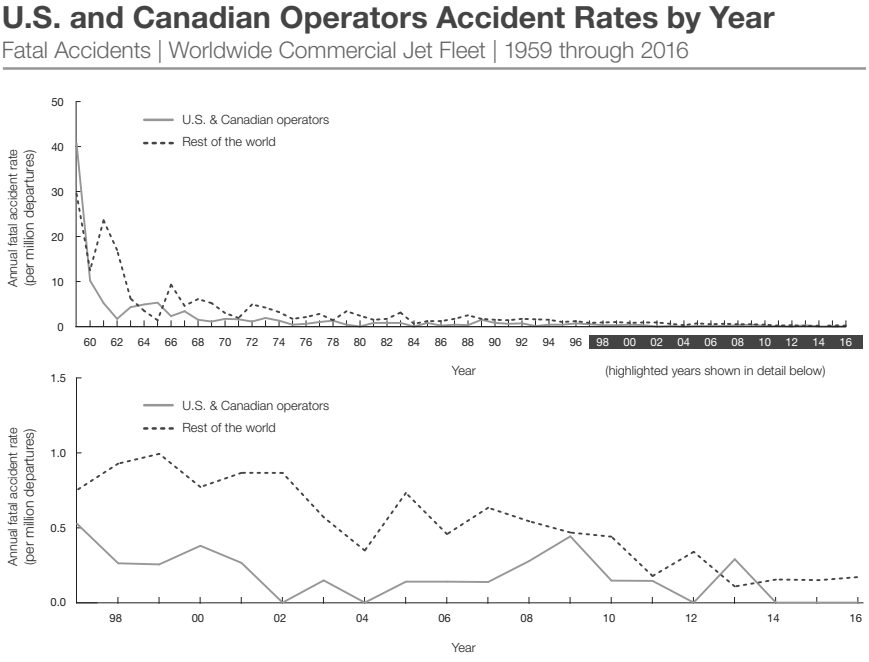

FIGURE 4. DECLINE IN U.S. AND CANADIAN AVIATION ACCIDENTS BY YEAR[129]

releases/attachments/2015/03/04/ferguson_police_department_report.pdf [https://perma.cc/6ZNT-L63X] [hereinafter DOJ FERGUSON REPORT].

127. *See* BOEING, *supra* note 7, at 17 (identifying U.S. and Canadian operators' accident rates by year).

128. *See id.* (showing gradual decline of accidents).

129. *Id.*

RCA is also a powerful tool in maintaining active awareness of best practices.[130] By accounting for the near misses that are often overlooked by the system, RCA provides officers with training opportunities that react to their experiences in the field in real-time. This should both minimize the recurrence of dangerous scenarios (e.g., situations where officers draw their firearms on civilians), and help officers avoid situations where their own lives may be jeopardized by risky behavior. Institutions that use RCA to learn from prior OIS can implement both environmental modifications and individualized training that will help officers see farther ahead, identifying situations more likely to escalate to a shooting, and reducing the exposure of officers and civilians to danger by knowing when to de-escalate, when to call for support, or when non-lethal force is the obvious answer.[131]

B. *RCAs Contribute to Procedural Justice and Police Legitimacy*

The rigor of RCA and its systematic application have great potential to improve the legitimacy of the police and restore the public's confidence in policing. Despite a more effective, better equipped, and organized law enforcement apparatus, the public's confidence in law enforcement has stagnated and even dropped, particularly in communities of color.[132] As community videotaping of events becomes more and more prevalent, and public awareness of police encounters through social media soars, it is increasingly the case that an inappropriate OIS in one jurisdiction serves to increase citizen skepticism of officer interactions in *all* jurisdictions—thus, a low quality interaction in Ferguson contributes to citizen anger in Philadelphia, which has the potential to put Philadelphia police officers at increased risk of an explosive interaction through no fault of their own. This confidence gap traces to a pervasive sentiment that the police do not offer procedural justice and uniform treatment under the law.[133] Such a

130. *See, e.g.*, FED. AVIATION ADMIN., *supra* note 74.

131. The Philando Castile shooting in Falcon Heights, Minnesota serves as a tragic example of the failure to identify a dangerous situation until too late. *See, e.g.*, Mitch Smith, *Minnesota Officer Acquitted in Killing of Philando Castile*, N.Y. TIMES (June 16, 2017), https://www.nytimes.com/2017/06/16/us/police-shooting-trial-philando-castile.html [https://perma.cc/N7GL-GP9Y]. This OIS evolved from an innocuous traffic stop due to a broken brake light. Mr. Castile, the driver, identified himself and stated that he had a concealed weapon in the car—for which he had a permit. The police officer immediately moved into a personal protection mode, aggressively telling Mr. Castile not to pull out the weapon. Mr. Castile continued moving, and the officer fired seven shots into the car, killing Mr. Castile. Had the officer stepped back and into a position of physical safety, and had Mr. Castile fully stopped all movements until the officer had regained his calm, this tragedy could have been avoided. What other factors were involved in this incident? An RCA is needed to understand how best to learn from this event, which is repeated on American streets every day.

132. *See* PRESIDENT'S TASK FORCE ON 21ST CENTURY POLICING, *supra* note 54, at 9.

133. *See id.* at 12–13.

risk is not lost on the Philadelphia police, of course, and their conduct reflects an increased level of fear and tension, which is both directly injurious to the police and further inflames the situation.

1. *Respect and Legitimacy*

In many communities in America, civilians view the police with distrust over a perceived lack of accountability and lack of transparency.[134] Ironically, the many accountability review systems in place fail to suggest to the public that the police value procedural justice.[135] Because accountability systems limit review to the conduct of individual officers, they are ill-equipped to demonstrate to the public that systemic problems are being seriously considered.[136]

2. *Uniformity in Policing*

This legitimacy issue is compounded among communities of color, which view police forces with suspicion.[137] Many communities of color do not perceive police officers as enforcing the law equally. When officers use disrespectful language and reinforce implicit bias, they may fuel sentiments against the police as oppressors, rather than guardians. By including the victims of OIS and others who may have been involved from the community, the police can learn how any why the individual may have contributed to the occurrence of the OIS, and can learn valuable information about the community's perceptions of and reactions to the police. These learnings may influence officer training and offer more useful de-escalation techniques that can be standardized across the force, and provide the community with concrete evidence that the police force is sincerely trying to improve its service to the community. Each of these things improves police legitimacy and community relations.

---

134. *See* Walter Katz, *Enhancing Accountability and Trust with Independent Investigations of Police Lethal Force*, 128 HARVARD L. REV. FORUM 235, 237 (2015) (explaining that "legitimacy crumbles when civilians are treated unfairly," which leads to conclusion that "police agencies are not accountable"); *see also* Helen Ubiñas, *Lack of Police Transparency Breeds Anger and Mistrust*, PHILLY.COM (Feb. 19, 2015, 03:01 AM), http://www.philly.com/philly/columnists/helen_ubinas/20150219_Lack_of_police_transparency_breeds_anger_and_mistrust.html [https://perma.cc/KZ2G-CXXF].

135. *See* Simmons, *supra* note 13, at 494–95, 506.

136. *See id.* (discussing individual officer reviews and inability of traditional remedies to address systemic police misconduct).

137. *See* PRESIDENT'S TASK FORCE ON 21ST CENTURY POLICING, *supra* note 54, at 1 ("The public confers legitimacy only on those whom they believe are acting in procedurally just ways. In addition, law enforcement cannot build community trust if it is seen as an occupying force coming in from the outside to impose control on the community.").

3. *Creating a Cultural Change Focused on Learning from Error, Rather Than Denying Errors Occur*

Bias and racism are recognized cultural problems among some police forces.[138] Although these problems may be exposed by accountability review through the lens of an individual officer's actions, RCA would offer concrete starting points to address culturally driven intentional misconduct and recklessness without the same level of punishment, and therefore with a higher chance of adoption by the officers themselves.

In fact, President Obama's 21st Century Task Force on Policing recommended incorporating internal procedural justice in the management of police departments.[139] Because behavior is more likely to conform to culture than rules,[140] solutions that fail to address systemic risk factors beyond the reach of an office's rules will fall short of altering a force's conduct. Because RCA identifies the background systemic and human errors and violations, it is much better positioned to find the starting points for larger-scale cultural shifts within police forces.

Perhaps the most important contribution made by RCA to improving the legitimacy of the police is in its transparency. Consider the difference in the Ferguson shooting as it transpired without RCA, and how different the community reaction might have been in an RCA scenario. In the latter, the Chief of Police in Ferguson would have called a press briefing and said something like, "at this time in the investigation, we believe that this shooting was in accordance with all existing police protocols and best practices. Should our administrative reviews reveal otherwise, we will of course proceed with appropriate disciplinary procedures. Either way, we are convening a Root Cause Analysis to understand how this tragic event could have been avoided, and we would expect to publish the results and recommendations of that process for public comment within the next sixty-to-ninety-days." This allows the community to hear an acknowledgement of the event as an error while still protecting the police officer. Transparency is important here too—people see the police engage in open self-evaluation and see change happen as a result.

VI. USING "JUST CULTURE" CONCEPTS TO BALANCE INDIVIDUAL SAFETY AND ACCOUNTABILITY

As outlined in this Article, Root Cause Analysis is a non-blaming approach to learning from error and a tool in the gradual improvement in a system's quality and safety over time. At the same time, police officers are highly trained professionals and are held to a high standard of personal conduct. Indeed, this high standard of professional and personal deportment is often what attracts individuals to join the police force in the first

138. *See, e.g.*, DOJ FERGUSON REPORT, *supra* note 126, at 62.

139. *See* PRESIDENT'S TASK FORCE ON 21ST CENTURY POLICING, *supra* note 54, at 14.

140. *See id.* 12.

place. Accordingly, an important part of the RCA process is to understand and communicate the various contributing factors that helped cause the unintended outcome. In an OIS situation, communication about the event must be tempered with care and support for the officer(s) who participated in the shooting. Whether the officers acted within protocols or not, there are no "winners" in an OIS, and the officer who discharges his weapon does so knowing that the full gamut of accountability review processes, in addition to a tidal wave of media coverage, will consume his or her life for the foreseeable future, most likely accompanied by a period of administrative leave that may separate him from his trusted colleagues and friends on the force.

Managers and supervisors on the force face an important challenge at this time. The officer involved in the shooting is suffering, the victim's family and the community are suffering, and other police officers are watching closely to see how the department will react. Striking the right balance between supporting the officer and acknowledging the injury in the community is essential, and the acceptance of the department's actions will condition the enthusiasm of the officers on the force for accepting the recommendations for change generated by the RCA.

But what is the "right" response to the officers involved in an OIS? Obviously, it will be dependent on circumstances. The RCA can and must differentiate between good faith conduct that nonetheless led to an error in the high-pressure, rapidly changing and dangerous work of a police officer on the one hand, and reckless, grossly negligent, or even intentional misconduct by a bad actor who knowingly deviated from professional standards of conduct on the other. The ability to make these determinations accurately, consistently, and in a way that can be clearly communicated to all officers will make the difference between policies and managers who are respected and trusted, and those who are scorned and ignored by the rank and file.

Healthcare has found itself in similar circumstances, specifically with residents in surgical wards. Like police, residents are highly trained professionals following specific protocols for specific procedures. Also like police, the real-life situations they may face can change in an instant from something manageable and familiar to something that is life-threatening and terrifying, and for which the protocol may be inapplicable or ill-defined. How can RCA reviewers evaluate the individual's performance in the event and make recommendations to help that person both deal with the aftermath of the surgical error and learn from it?

Healthcare's answer is the pursuit of a "Just Culture." The Just Culture is one that "recognizes that competent professionals make mistakes and acknowledges that even competent professionals will develop unhealthy norms (shortcuts, "routine rule violations"), but has zero toler-

ance for reckless behavior."[141] By separating conduct that is outside of protocols from conduct that is below an acceptable threshold of professional department, the Just Culture concept allows managers to devise appropriately measured responses to individual behaviors. Thus, by infusing a RCA with Just Culture teachings, a police force can identify and improve system and environmental errors while treating the officers involved in the event, many of whom may be suffering from the trauma of shooting or killing another human being, with compassion while at the same time upholding the highest standards of policing.

A. *The Just Culture Tool*

One embodiment of a "Just Culture" process can be seen in the Just Culture Tool developed by the Montefiore Medical Center in New York City.[142] Montefiore uses this tool to guide decision making regarding the appropriate response to various participants in an adverse event or unintended outcome that is reviewed via a RCA.[143]

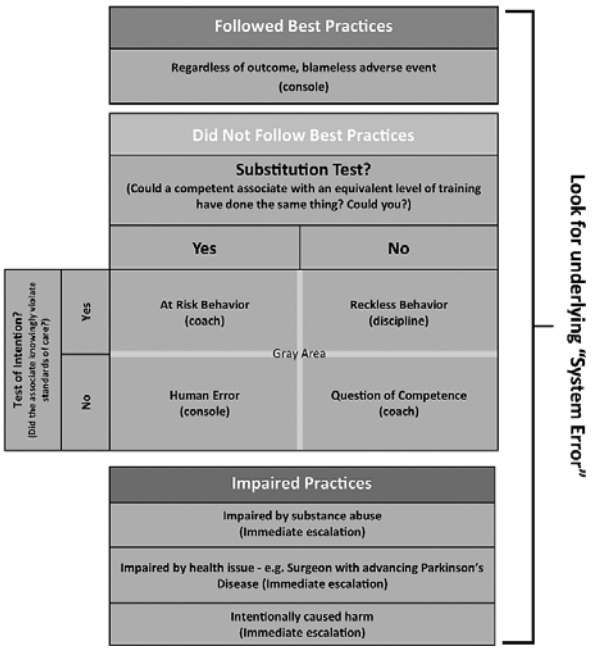

FIGURE 5. MONTEFIORE MEDICAL CENTER JUST CULTURE REVIEW TOOL[144]

141. *Just Culture*, AGENCY FOR HEALTHCARE RESEARCH & QUALITY GLOSSARY, http://psnet.ahrq.gov/popup_glossary.aspx?name=justculture [https://perma.cc/T97N-BJP8] (last visited Oct. 31, 2017).

142. *See* Just Culture Tool, *supra* note 8.

143. *See* Figure 5; *infra* note 144.

144. *See* Just Culture Tool, *supra* note 8. This image is a high-resolution digital reproduction of the original figure embedded within the Just Culture Tool. *–Ed.*

The Just Culture Tool adopts a two-part approach.[145] It first asks whether the actions of the individual constituted misconduct (e.g., intentional departures from policy) or good-faith errors (e.g., departures from protocols that were intended as "short cuts" or "workarounds" without an intent to subvert the spirit of the process).[146] Based on the answer to that question, the tool guides reviewers to appropriate responses to ensure that the participants in the event are treated in a way that is optimized for future safety of the system.[147] A hypothetical application of this Just Culture tool in an OIS setting follows.

B. *Distinguishing Error from Misconduct*

A Just Culture recognizes the differentiation between an intentional *act*—that is, an act that was deliberately and knowingly done—and an intentional *misdeed*, defined as an act that was intended to subvert system safety or deliberately disobey system rules. Intentional acts that are conducted in good faith are viewed as good faith errors, rather than misconduct. Importantly, not all departures from protocol or best practice are misconduct, if their intent is to enhance or improve the efficiency of the work, rather than to avoid a system protection.

One example of this distinction can be seen in the recent incident in Baltimore involving the death in custody of Freddie Gray. In that case, one of the arresting officers testified that he deviated from protocol in failing to properly secure Mr. Gray to a seat using a seatbelt in the back of a police van.[148] His reason for this deviation was a stated belief that the act of reaching for the seatbelt put his service revolver in proximity to the arrestee and therefore put the officer at physical risk.[149] If for purposes of this example we take the officer at his word, such a deviation was not intended to put Mr. Gray at risk of injury, but rather to protect the officer from harm. This would be a deliberate deviation from protocol, but one that is classified as a good faith error for just culture purposes. If, on the other hand, the officer's intent was to subject Mr. Gray to bodily harm through a "rough ride" in the van, he has committed misconduct, and a different managerial response is warranted.

By distinguishing error from misconduct, the investigator can expose and target behavior that was designed to cause a bad outcome from behavior that was intended to achieve a positive result, but nonetheless resulted in a bad outcome. The logical organizational response to each is different.

---

145. *See id.*

146. *See id.*

147. *See id.*

148. *See* Owens, *supra* note 103 (describing officer's failure to follow seatbelt protocol).

149. *See* Khan, *supra* note 103 (explaining Officer Nero's concern for his own safety).

The Montefiore Just Culture Tool divides the question into three categories, translated to police work as follows.[150] First, if the officer followed all protocols and procedures, the officer is not at fault, and the event is treated as a "blameless adverse event."[151] This equates to a "clean shoot," and deserves a RCA, but no further investigation into officer accountability.

Second, if the officer was "impaired" in some way, the system and its safety mechanisms have been subverted by deliberate actions of the officer. Examples of this would be firing a service weapon while intoxicated, serving with a physical or emotional disability that might lead to overly aggressive behavior (e.g., a mental illness that is untreated), or a deliberate action on the part of the officer—for example, a murder.

Thus, the first two scenarios are relatively straightforward. When an officer clearly follows all protocols, we know the officer should be supported and the system improved. When an officer clearly was impaired or intentionally subverted the system, we know the officer should be removed from duty and the other contributing factors that prevented detection of the impairment should be addressed. The more complex decision process is reserved for a situation where the participant did not follow best practice.

C. *Forming Appropriate Managerial Responses to Error: The Intention Test and the Substitution Test*

How should police managers and RCA reviewers react to an OIS in which the officer did not intentionally subvert protocols, but also did not completely follow protocols? Should an officer be fired for the role in an OIS for a minor breach of a safety protocol that, no matter how unintentional, contributes to an OIS (e.g., his taser was uncharged, forcing him to draw his gun)? Will such a policy help the organization, and the people in it, grapple with, recover from, and improve by learning from the OIS? The Just Culture Tool offers a process to frame the RCA review's recommendations.[152]

In a situation where an officer involved in an OIS deviated from protocols but did not intend for the deviations to lead to the OIS, RCA reviewers combine two assessments into a two by two "option grid."[153] Reviewers apply the Intention Test ("Did the officer intend to act outside of best practices?") and the Substitution Test ("Would a competent officer with similar training have done the same?").

The answer to each of these yes/no questions helps to determine the appropriate response. We distinguish among:

150. *See* Just Culture Tool, *supra* note 8.

151. *See id.*

152. *See id.*

153. *See id.*

> *Human error*: an inadvertent action; inadvertently doing other than what should have been done; a slip, lapse, mistake;
> *At-risk behavior*: behavior that increases risk where risk is not recognized, or is mistakenly believed to be justified; and
> *Reckless behavior*: behavioral choice to consciously disregard a substantial and unjustifiable risk.[154]

Human error occurs when the event participant's intent was to stay within best practices, and an appropriately trained officer would have acted in the same way. In healthcare, suppose a doctor intends to order hydroxyzine for a patient, but instead accidentally orders hydralazine, which lowers a patient's blood pressure, causing the patient to fall and hurt himself. The doctor deviated from protocol by not confirming the names, but in an unintentional way. Given the similarity of the names, this could have happened to a similarly situated competent physician.[155] Thus, hearkening back to James Reason in the prior sections, we cannot change the human condition—physicians may get confused when ordering drugs with similar names but different therapeutic effects—but we can change the conditions under which humans operate.[156] Perhaps a computerized drug ordering system would flag the difference, and the FDA has worked to modify drug names to make them less similar to existing drugs on the market, for example.[157]

The situation can easily be analogized to policing. Consider an officer who in the heat of the moment fires his weapon believing it is his taser when in fact he has grabbed and is firing his firearm. In that instance, a situation in which the officer intended follow protocols, deploying the minimum force necessary to subdue the individual without subjecting the officer to bodily harm, becomes an OIS, without any intent at all on the part of the officer.[158] Another example might include instances where officers execute an arrest warrant at the wrong address (e.g., 323 S. Wilson Ave. instead of 323 S. Wilson St.), leading to negative out-

154. *See* Alison H. Page, *Making Just Culture a Reality: One Organization's Approach*, ASS'N OF HEALTHCARE RES. QUALITY: PATIENT SAFETY NET (Oct. 2007), https://psnet.ahrq.gov/perspectives/perspective/50/making-just-culture-a-reality-one-organizations-approach [https://perma.cc/54GR-ACK2].

155. *See* Just Culture Tool, *supra* note 8; *see also* Philip G. Boysen, *Just Culture: A Foundation for Balanced Accountability and Patient Safety*, 13 OCHSNER J. 400, 405 (2013) (explaining combination of models that includes second step of determining if similarly situated caregiver would react the same way in a similar situation).

156. *See* Reason, *supra* note 6, at 768.

157. *See How FDA Reviews Proposed Drug Names*, FOOD & DRUG ADMIN., at 1 https://www.fda.gov/downloads/drugs/drugsafety/medicationerrors/ucm080867.pdf [https://perma.cc/22E4-9MBH] (last visited Aug. 12, 2017) (discussing how FDA works to increase safe use of drug products by refining policy for reviewing proposed proprietary name).

158. *See, e.g.*, Sarah Okeson, *Officer Who Fired Gun, Not Taser, Faces Charge*, USA TODAY (July 10, 2014, 05:43 PM), https://www.usatoday.com/story/news/nation/2014/07/10/officer-shot-panhandler/12493779/ [https://perma.cc/YHG8-QRXA].

comes. The RCA should provide recommendations for change, and the department's consolations should include the OIS victim and victim's family as well as the officer involved.

"At-Risk Behavior" occurs when the deviation from the protocol is intentional, but a similarly competent officer would have reacted similarly under the circumstances.[159] Here we know that an error might occur, but there is a considered reason for taking that risk that is deemed more important by the participant.

In healthcare, such a situation might occur when a nurse intentionally deviates from a protocol by preparing medications for three patients at once. There is a risk of administering the wrong drug to the wrong patient. In the nurse's mind, however, it is more important to prepare the medications quickly and believes the error will be avoided.[160]

In policing, consider an officer responding to a radio call reporting a disturbance of the peace. Upon arriving at the scene, the officer encounters a person suffering from a mental health crisis. Although the officer has not received Crisis Intervention Training (CIT), the officer decides to address the individual rather than requesting and waiting for additional officers (who may have CIT training if either the dispatcher or the officer newly on the scene can request it). The officer's attempt to take the person into custody alone leads the individual to become combative as the officer starts shouting commands, leading to an unanticipated, undesired, and unnecessary escalation that results in minor injuries to both the officer and the individual.

Ideally, the at-risk behavior results in a near-miss, rather than an OIS. In such cases, it is ideal to coach the participant and other similarly situated officers on how to avoid the situation in the future. However, such behavior should be closely monitored by the officer's supervisors. The RCA will provide changes in the environment designed to help the officer avoid such behavior in the future—for example, limiting the dispatch message to officers with CIT training, or providing the dispatcher with the responding officer's CIT certification (or lack thereof), and training the dispatcher on how to communicate with officers in each circumstance given the training disparities.

Reckless behavior occurs when the participant intentionally deviated from the protocol in a way that departs from the reasonably expected behavior of a similarly situated, competently trained officer. While the participant did not intend the adverse event to occur, the individual acted in a way that knowingly created risk and should reasonably have been avoided. Suppose a surgeon needed to insert a femoral central line into a

159. *See* Boysen, *supra* note 155, at 404 (discussing at-risk behavior and mechanism of breach of duty).

160. *See* Just Culture Tool, *supra* note 8; *see also* David Marx, *Patient Safety and the "Just Culture"*, JUST CULTURE CMMTY. (2007), https://www.health.ny.gov/professionals/patients/patient_safety/conference/2007/docs/patient_safety_and_the_just_culture.pdf [https://perma.cc/R56S-RJQX].

morbidly obese patient but a fat pannus was blocking the way. Instead of following well-known safety methods for lifting away the fat pannus, the surgeon simply pushes the pannus out of the way with his left hand. If his grip slips and he ends up incorrectly inserting the femoral central line, the surgeon has acted recklessly, creating a risky situation that he should have handled differently. The surgeon should be subject to discipline.[161] Similar examples of reckless police behavior might involve reckless pursuit of fleeing suspects or when responding to emergency calls.

Finally, the RCA may confront situations in which the participant deviated from the protocol unintentionally, and in a situation where a competent officer would not have been expected to. Such actions raise questions of competence for the role. Such can be seen in a physician with five years of experience who fails to notice a critical medical condition revealed by an EKG.[162]

In policing, lack of competence by a responding officer may escalate a situation further while needlessly putting himself and other police in danger. The San Francisco OIS of Mario Woods is a cautionary tale, in which a San Francisco Police Department Officer put himself in harm's way in an attempt to prevent Mr. Woods from fleeing after Mr. Woods had said "You better . . . kill me."[163] In such a situation, additional training and remedial attention should be provided to the officer, and the officer should be supervised more closely and have a heightened standard for future participation on the police force. Another potential solution would be to improve tactical command in these larger scale response teams so that commanding officers can intervene sooner when junior officers needlessly place themselves in harm's way. The larger RCA, in the meantime, should focus on environmental, supervisory, or other changes that might prevent the circumstance as well.

VII. CONCLUSION

Every day, tens of thousands of police officers across the country work diligently to satisfy the oath they swore to protect and serve the individuals in their communities. In the name of public safety, these officers participate in countless community interactions with individuals from all walks of life. Interactions can become confrontations, and confrontations can turn violent or life-threatening in an instant.

---

161. *See, e.g.*, Just Culture Tool, *supra* note 8; *see also* Marx, *supra* note 160 (stating that reckless behavior should be managed through punitive action).

162. *See* Just Culture Tool, *supra* note 8.

163. *See* Phil Matier & Andy Ross, *Mario Woods' Last moments: "You better squeeze that . . . and kill me"*, SFGATE, (Feb. 9, 2016, 04:41 PM) http://www.sfgate.com/bayarea/article/Mario-Woods-last-moments-You-better-6778777.php [https://perma.cc/Y4WU-5NAQ] (Officer Charles August stepped into Mr. Woods' path, and his partners opened fire to defend Officer August).

Our system of policing has developed rules and norms designed to protect both our officers and our citizens from harm. Despite our best efforts, however, we continue to experience OIS at an alarming rate.[164]

We believe that every OIS is a tragedy—an unacceptable outcome to a police/civilian interaction, and one that is desired neither by the officer, nor certainly by the victim of the shooting. It is an essential requirement for every jurisdiction in the country that we do our best to learn from each OIS, studying the contributing factors that combined to create a circumstance where a police officer believed he faced the threat of deadly force and responded in kind.

The retrospective accountability reviews currently deployed in response to OIS, including internal administrative reviews, civilian oversight boards, and civil and criminal litigation, have important roles in a system for officer and department accountability and for remediation to victims. Such retrospective reviews are unlikely to provide forward-looking guidance to prevent the next OIS, and their utility as preventive deterrents has been limited, a fact made clear by the continued high incidence of OIS across the country.

RCA is a technique that has been used successfully for decades in other complex, dynamic, high-stress, zero-tolerance for error systems, such as aviation, healthcare, and nuclear power.[165] Its principles of non-blaming, forward-looking event review should be deployed alongside the aforementioned accountability mechanisms to generate proactive reforms to reduce OIS over time. By coupling the RCA with a Just Culture tool to appropriately assess the actions of the officer(s) participating in the OIS, managers will be able to generate implementable reforms that will improve officer and community safety, will improve officer morale, reassure the community, and restore police legitimacy in the wake of the undesired OIS. RCAs should be required for all OIS in each police force in the country, with a report on the incident and the recommendations of the RCA published for the betterment of all.

---

164. *See Fatal Force*, *supra* note 12.

165. *See* Matt Lillywhite & Paul Dyer, *Root Cause Analysis*, CIV. AVIATION AUTHORITY 1 (June 29, 2016), https://www.caa.co.uk/uploadedFiles/CAA/Content/Standard_Content/Commercial_industry/Aircraft/Airworthiness/Seminars/Corporate_aviation_June_2016/FWM20160629_09_Root%20Cause%20Analysis.pdf [https://perma.cc/JUU8-F8ML] (explaining Root Cause Analysis in aviation); *see also* INT'L ATOMIC ENERGY AGENCY, ROOT CAUSE ANALYSIS FOLLOWING AN EVENT AT A NUCLEAR INSTALLATION: REFERENCE MANUAL 1 (Jan. 2015), http://www-pub.iaea.org/MTCD/Publications/PDF/TE-1756_web.pdf [https://perma.cc/3VWG-YL5Z] (explaining Root Cause Analysis in nuclear power); *Root Cause Analysis*, AGENCY FOR HEALTHCARE RES. & QUALITY: PATIENT SAFETY NETWORK, https://psnet.ahrq.gov/primers/primer/10/root-cause-analysis [https://perma.cc/QQY5-3PHW] (last visited Oct. 31, 2017) (explaining Root Cause Analysis in healthcare).