Assuring Quality Helps Ensure Justice

Sarah Chu, MS Sr. Forensic Policy Advocate

INNOCENCE PROJECT

2017 International Forensic Science Error Management Symposium • July 27, 2017 • Gaithersburg, MD

Ledura Watkins

- Convicted in 1976
- Exonerated in 2017 at age 61
- Represented by Cooley Innocence Project, case overturned with support of Wayne County DA's Office



Quality Management System

- I. Building Error Tolerant Systems
- II. Corrective Action Response to Error
- III. Corrective Action Ensuring Justice

Concepts from Organizational Analysis

Exploration

- Searching
- Generating variation
- Risk taking
- Experimenting
- Flexibility
- Innovating

Exploitation

- Refining
- Production
- Efficiency
- Selection
- Implementation
- Execution

"I was born to make mistakes, not to fake perfection."

-Drake



Photo Credit: Vaughn Ridley/Getty Images North America

Building Error Tolerant Systems

Just Culture

David Marx

Concept of Workplace Justice

Accountability

- Transparency
- Focus on behavior, not outcome

Human Error	At-Risk Behavior	Reckless Behavior
Product of Our Current System Design and Behavioral Choices	A Choice: Risk Believed Insignificant or Justified	Conscious Disregard of Substantial and Unjustifiable Risk
Manage through changes in: • Choices • Processes • Procedures • Training • Design • Environment	 Manage through: Removing incentives for at-risk behaviors Creating incentives for healthy behaviors Increasing situational awareness 	Manage through: • Remedial action • Punitive action
Console	Coach	Punish

Blind Proficiency Testing

Peterson et al, The Feasibility of External Blind DNA Proficiency Testing. I. Background and Findings, J Forensic Science (2003).

•"The results of our study clearly show that blind PT is possible. And blind testing is and has been done in some labs independent of this project."

NIJ Review Panel subsequently recommended:

• "In the extreme, blind proficiency testing is possible, but fraught with problems (including costs), and it is recommended that a blind proficiency testing program be deferred for now until it is more clear how well implementation of the first two recommendations are serving the same purposes as blind proficiency testing."

Blind Control Testing

Forensic errors are unknown positives

- Roger Koppl

- Ground truth is unknown
- Comparisons and Identification procedure designed to find positives
- Unknown negatives can leave the wrong person under suspicion
- Blind Control Testing
 - Catches drylabbing and misconduct
 - Identifies the frequency and sources of errors in the testing process at the lab and allows for remediation
 - Can also be used to identify errors from outside the lab

Disclosures and Complaints

Disclosure

- What does your lab disclose?
- To whom does your lab make disclosures?
- Is that entity an independent third party?
- Does the public have access to disclosures?

• Complaints

- Do you have a protocol for comprehensively addressing complaints?
- From whom do you take complaints?

Transparency

Transparency is a demonstration of public accountability

Publicly Accessible Quality Management Documents

- Corrective Action Reports
- Policies and Protocols
- Disclosures
- Validation Studies
- Other Quality Management Documents

If you're not doing this...why?

Examples of Radical Transparency



Source: http://www.dps.texas.gov/CrimeLaboratory/qualIncidents.htm

Source: http://www.hfscdiscovery.org/

JOE TEST NOBODY'S EVERYBODY's WATCHING



Corrective Action – Response to Error

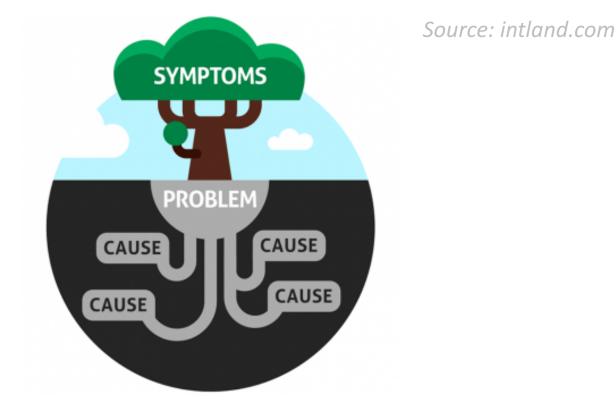
Integrating Practice

ASCLD/LAB voted to transition to ISO 17025 accreditation in 2003 and signed ILAC Mutual Recognition Agreement (MRA) in 2009.

- ASCLD/LAB Guidance on the Estimation of Measurement Uncertainty published in 2011
- ASCLD/LAB began offering RCA trainings in 2014

Meaningful Root Cause Analysis

More than an SOP



"RCA is widely applied without sufficient attention paid to what makes it work in its contexts of origin...as a result, its potential has remained under-realized and the phenomenon of organizational forgetting remains widespread."

Peerally et al., "The problem with root cause analysis," BMJ Quality and Safety (2017)

Central Role of the Customer

Quality management (QM): The application of a quality management system in managing a process to achieve maximum customer satisfaction at the lowest overall cost to the organization while continuing to improve the process.

Customers matter

Without intervention or protections...

- The customer focus predisposes the lab to one side of the adversarial system.
- Customer determines the limits or expansiveness of the work
- Customer influences organizational learning, practice

Audits and Retrospective Reviews

Exhaustive search for cases

Plan for old cases

- Publicly accessible protocols in advance of audits
- Publicly available final reports
- Overseen by diverse stakeholders (Sentinel Reviews) and not limited to those with a conflict of interest

How will your audit be affected if...

- Your customer is driven by productivity?
- Your customer wants to keep errors hidden?



Photo Credit: H. Armstrong Roberts / Corbis

Corrective Action – Ensuring Justice

ISO 4.14.2

When audit findings cast doubt on the effectiveness of the operations or on the correctness or validity of the laboratory's test or calibration results, the laboratory shall take timely corrective action, and shall notify customers in writing if investigations show that the laboratory results may have been affected.

Total Recall

"Class A hazards warrant the highest level of attention. They call for a company to take immédiate, comprehensive, and expansive corrective action measures to identify and notify consumers, retailers and distributors having the defective product and to remedy the defect through repair or replacement of the product, refunds, or other measures."

> -Consumer Product Safety Commission <u>Recall Handbook</u> (p. 14-15)

Defendant Notification

- ALL defendants' cases must be reviewed*
- Any identified errors deserve notification
 - Save evaluation of relevance and materiality for courts
- Publicly available policy, established in advance
- Initiated by labs, but integrate institutional stakeholders
- Notifications are multimedia, multimethod
 - Telephone hotline
 - Company website
 - Joint letters or side by side letters from prosecution and defense
 - Social media, digital and mobile communication platforms
- Require attempts to make multiple points of contact
- Lab must have a procedure for monitoring the notification and documenting feedback/response

What you can do today...

Define your Customer

- Who is your customer?
- How would your labs' work if you change the identity of the customer changed?
- What would it take to broaden the definition of the customer?

Summary

I. Building Error Tolerant Systems

- Just Culture
- Blind Control/Proficiency Testing
- Disclosures and Complaints Review
- Transparency
- II. Corrective Action Response to Error
 - Meaningful RCA
 - Definition of Customer
 - Audits and Retrospective Reviews
- III. Corrective Action Ensuring Justice
 - Defendant Notification



Source: Highlands County Sheriff's Office Property and Evidence Room (FL), http://www.highlandssheriff.org/community_relations/property_and_evidence.php

Every case matters.

Acknowledgements

Henry Swofford Defense Forensic Science Center

Outcome Engenuity

Jim Doyle Sentinel Events Review

Dr. Roger Koppl Syracuse University

Thank you!

Contact:

Sarah Chu, MS Sr. Forensic Policy Advocate Innocence Project <u>schu@innocenceproject.org</u> (212) 364-5989