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# **Applying Risk Management Principles to Law Enforcement Investigative Case Management**

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# Why this Discussion?

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**Law enforcement personnel are typically intuitive risk managers**

**This is strongest at a tactical level**

- Talent and training kick in

**Formal risk management strategies are usually applied at operational and strategic decision making levels**

- Opportunities to analyze, refine priorities, and direct resources come in

**Analysts, policy advisors and managers try to find ways to improve investigative case management**

**This discussion presents the fundamental ideas and principals to consider how they apply to investigative case management**

# Law Enforcement, Investigative and Risk Analysis

## Decades of study from different angles

- Crime Analysis – the overall discipline of collecting data, using information and developing knowledge that helps to prevent and solve crime
  - Often discrete and stove-piped on particular problems
  - Sometimes broad and integrative, focused on issue resolution
- Problem Analysis – in-depth, systematic analysis and assessment of various aspects of an issue, with a synthesized focus on addressing issues
  - Aggressively not stove-piped
  - A useful approach in the Crime Analyst's tool kit

## No strong history of formal Risk Analysis and Management

- Risk Analysis – a form of problem analysis that explicitly focuses on supporting decisions that are challenged by uncertainty
  - Risk analysis synthesizes data, information, knowledge and beliefs about:
    - What can go wrong?
    - How likely is it to go wrong?
    - How bad would it be if it did go wrong?

# Risk Management Principles

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**Risk\* is the expected loss from events or conditions that have adverse impacts**

**Risk management uses knowledge about risks to avoid or reduce adverse impacts**

**Risk management is focused on achieving the greatest good (risk reduction) with scarce resources**

**The knowledge about risk that is needed varies, depending on:**

- Events or conditions in question
- Types of decisions to be made
- Quality of data to consider

\* Risk is the potential for an unwanted outcome resulting from an incident, event, or occurrence, as determined by its likelihood and the associated consequences (*DHS Risk Lexicon*)

# Risk Management Insights

Well resourced organizations think less about risk management

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With resource constraints, we ask “How can we do this better?”

Risk analysis and management processes must be tied to decisions and should be as transparent and simple as possible

Risk management often simply provides an analytic foundation that explains intuitive judgments

Findings give greater confidence, transparency and metrics

Sometimes unusual findings require decision makers to:

- Reconsider intuition
- Question the analysis
- Question the available information or the assumptions
- Improve their plans

Risk management should be informed by risk. There are other factors to be considered as well

# Investigative Case Management

## Sample Decisions

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How do I allocate scarce investigative resources?

How do I prioritize cases?

How do I reprioritize cases that get cold?

How do I measure my unit's effectiveness?

How do I justify requests for additional resources?

How do I plan for changes in priority in a fluid threat environment?

# Examples from State & Local

## ***Felony Investigation Decision Model: An Analysis of Investigative Elements of Information February 1977 (SRI study and Experiments in Oakland PD)***

- Provided and tested examples of analytic tools that could be used to improve case management
- Addressed some risk management issues
  - Screen out those that are unlikely to be solved
  - Increase focus on those that could be solved
  - Increase focus on those that were highly consequential
  - Consequence issues: Combination of societal consequences and organizational consequences
- Not applicable to many investigations

## ***The Rand Criminal Investigation Study: Its Findings and Impacts to Date, July 1979***

- Made a number of recommendations
- Not all appeared to be easily implemented
- Subsequent years have likely seen most implemented
- Addressed some risk management issues:
  - Conclusions that you cannot decrease the likelihood of crime
  - You may decrease the likelihood that it will be identified and apprehended

# Examples from State & Local (cont.)

## **Case Routinization in investigative police work; *Social Problems*, 1981**

- Simplification of investigation into information processing
- Needs information and processing capabilities
- Processing includes collection, analysis and decision-making from evidence
  - Less controllable variable is information
  - More controllable variable is processing
- Screening based on information availability leads to prioritization based on solvability
- Additional considerations of the victims' characteristics were observed
  - Member of a community marked by uncooperative relations with police, less attention
  - More powerful and apt to follow up, greater attention

## **Crime prevention and the displacement phenomenon. *Crime and Delinquency*, 1976**

- Focus on high-probability of clearing cases may increase clearance and arrest for low probability cases
  - May increase confessions for low probability cases

## **Case Screening in Criminal Investigations: A Case Study of Robberies 1983**

- Applied principles of prior case screening decision models in a simplified form and in a rural police department (Kentucky State)
- Focus on eliminating the competition for investigative resources of those cases that are probably unsolvable

# Basic Assumptions\*

Majority of arrests are attributable to routine patrol police work

Investigative efforts address those that cannot be solved this way

An overwhelming load of difficult cases builds up, many unsolvable

Caseload management is a significant problem, sometimes with hundreds of cases per investigator

Screening systems should be able to help prioritize cases

Supervisors/managers typically do not have time and attention for caseload management, nor are investigators typically trained for it

Caseload management tools must be quick and easily understood

\* Related to the index offense investigations by S&L in studies

# Our Further Assumptions\*

Federal agencies have similar problems, but not as much diversity

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They still have some degree of diversity and case overload

It is natural for federal agencies to lag behind State and local police departments in applying risk management principles

- The discipline is most used where it is most needed

Law Enforcement personnel have very practical needs

- Give me a tool
- Make it reliable
- Make it defensible in court
- Keep it from getting my department in trouble

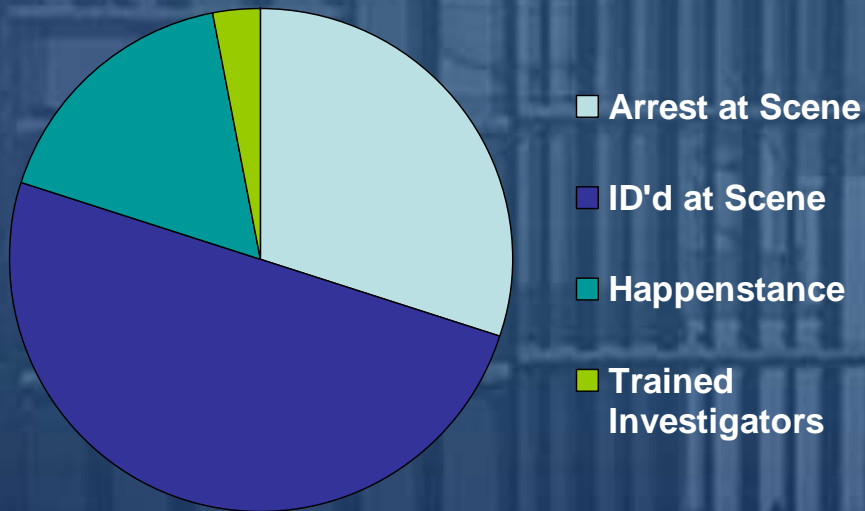
Little time and patience for contemplation of management challenges

\* Related to the applying lessons or risk management principals today

# Insights from the '70s

Example from Rand Study, focused on Index Offenses\*

Percentage of Index Arrests



What factors influence reaching arrest?

# Reported crimes per sworn officer.

- More crimes per officer,
- Fewer arrests per officer.

What was not a major influence:

- Organization or management of investigative activities.

\* Index offenses are serious crimes against unwilling victims.

# Investigative Decision Models

## Robbery

<b>Suspect named</b>	<b>10</b>
<b>Suspect known</b>	<b>10</b>
<b>Suspect previously seen</b>	<b>10</b>
<b>Evidence technician used</b>	<b>10</b>
<b>Physical evidence</b>	
<b>Each item matched</b>	<b>6.1</b>
<b>Vehicle registration</b>	
<b>Query info available</b>	<b>1.5</b>
<b>Stolen</b>	<b>3.0</b>
<b>Useful info returned</b>	<b>4.5</b>
<b>Registered to suspect</b>	<b>6.0</b>
<b>Offender movement</b>	
<b>On foot</b>	<b>0</b>
<b>Vehicle (not car)</b>	<b>0.6</b>
<b>Car</b>	<b>1.2</b>
<b>Car color given</b>	<b>1.8</b>
<b>Car description given</b>	<b>2.4</b>
<b>Car license given</b>	<b>3.0</b>
<b>Weapon used</b>	<b>1.6</b>

## Burglary

<b>Est. time since occurrence</b>	
<b>Less than 1 hour</b>	<b>5</b>
<b>1-12 hours</b>	<b>1</b>
<b>12-24 hours</b>	<b>.3</b>
<b>&gt; 24 hours</b>	<b>0</b>
<b>Witness report of offense</b>	<b>7</b>
<b>On-view report of offense</b>	<b>1</b>
<b>Usable fingerprints</b>	<b>7</b>
<b>Suspect info developed</b>	
<b>description or name</b>	<b>9</b>
<b>Vehicle description</b>	<b>0.1</b>

Decision models use weights associated with this factor's relevance to the decision.

Robbery model developed SRI for Oakland PD in a 1977 study

Burglary model developed by SRI more generally in a 1972-1973 study

# Decision Models

**Decision models try to reduce subjectivity of data and how it is interpreted**

**Takes relevant information and uses it to “weight” options that should be more conducive to a good decision**

**Decision models rarely produce comparable results\*, and often do not translate well from one problem/environment to another**

- Each authority, each violation, would need its own model

**Managers and investigators need to be suspicious of models, until they are demonstrated to be reliable**

\* Sometimes results appear comparable but are not transparent.

# Risk Models

**Decision models can be risk models**

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**Intentional focus on risk draws managers to consider more things**

**Classical quantitative risk assessments to support investigative case management do not seem warranted:**

- Too complex
- Too resource intensive
- Inadequately dynamic

**Qualitative assessments and use of decision models is a good plan:**

- Should be approached with a view toward continuous improvement
- Weights derived from statistics will be skewed by:
  - Styles of past investigators
  - Judgments and biases that are hard to recognize

**It may be time to invest in research to create new, potentially standardized approaches for similar challenges (i.e., similar model for burglary extendable to multiple jurisdictions)**

# Risk Analysis and Communication

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**Studies in the 1970s that looked at characteristics of the suspect and trends with MOs provided potentially useful information**

**Interesting cross-violation discoveries**

**Insufficient analysis (normal for early work), created results that were badly communicated and interpreted**

**Racial and gender profiling, etc.**

**Risk communication focuses on how to communicate about risks so that:**

- They are not misunderstood
- The public and decision makers are equipped to take action
- The authority is not misunderstood (perceived as over-reacting, prejudiced, or providing inadequate guidance)

# Example: Prior Criminal Histories\*

Prior Offense	Most Recent Offense			
	ADW	Robbery	Car Theft	Rape
No Prior	19.8	18.7	14.2	12.5
Robbery	14.9	25.4	17.7	25.0
Felony Assault	21.4	13.4	14.8	18.8
Burglary	28.6	46.3	47.3	56.3
Homicide, willful	2.8	1.5	1.8	0
Rape or attempted rape	2.8	4.4	4.7	18.8
Theft	42.9	54.5	74.5	46.4
Narcotics	22.5	29.9	29.6	43.8
Stolen Property	7.1	9.0	21.3	12.5
Vehicle Violation	32.4	23.1	32.0	43.8
Other, and not indicated	67.1	69.4	71.0	75.0

Not all patterns are indicative. Analysts should watch for this and communication should control for this.

\* Felony Investigative Decision Model...SRI 1977

# High-Level Outcome of '70s Policy Recommendations\*

<b>RECOMMENDATION</b>	<b>IMMEDIATE OUTCOME</b>
<b>Increase role of patrol in initial investigation</b>	<b>Patrol officers were less efficient. Took more time.</b>
<b>Develop formal systems for case screening</b>	<b>Case screen often highly subjective, regardless of criteria</b>
<b>Supervisors should be more active in managing case</b>	<b>No significant change in arrest or clearance rates attributable to changes in management</b>
<b>Police-Prosecutor collaboration increase</b>	<b>Significant increase in the number of cases accepted for prosecution</b>
<b>Establish statistical reporting systems to monitor effectiveness</b>	<b>Methods were not adequate</b>

Overall: Efforts to implement innovative recommendations were typically unsuccessful at the beginning. Some success emerged over time.

\* The Rand Criminal Investigative Study, 1979

# Observed Correlation to Risk Management

<b>RECOMMENDATION*</b>	<b>SOCIETAL RISK</b>	<b>PROGRAM RISK</b>
<b>Increase role of patrol in initial investigation</b>		<b>Investigators doing delayed collection of routine evidence will increase likelihood of failure</b>
<b>Develop formal systems for case screening</b>	<b>Repeat offenders are responsible for the majority of crime</b>	<b>Screening cases focused resources on cases most likely to be solved and successfully prosecuted</b>
<b>Supervisors should be more active in managing case</b>		<b>Supervisors can organize teams of investigators to have greater effectiveness</b>
<b>Police-Prosecutor collaboration increase</b>	<b>Higher likelihood of good convictions of high priority cases protects public</b>	<b>Higher likelihood of good convictions protects PD</b>
<b>Establish statistical reporting systems to monitor effectiveness</b>		<b>Statistical reporting should be less subjective and more indicative of what led to case clearance</b>

# Improved Correlation to Risk Management

RECOMMENDATION	SOCIAL RISK	PROGRAM RISK
Organize task distribution to maximize the successful collection and processing of evidence. Increase the use of professional teams for phases of the investigation	Increase the rate of arrest and conviction of the most harmful criminals	Reduce the likelihood that important solvable cases will get no attention because they are lost in individuals' caseloads
Base screening on seriousness of case and perpetrator as well as ease of clearance	Screening cases should increase focus on serious cases and those with a likelihood of recidivism	Screening cases should continue focus resources on cases most likely to be solved and successfully prosecuted
Supervisors should be more active in managing cases	Management across violations should prioritize serious crimes and those likely to repeat or escalate	Foster cross-disciplinary and cross-violation teaming to enhance ability to identify escalating criminals
Police-Prosecutor collaboration increase	Higher likelihood of good convictions protects public	Higher likelihood of good convictions protects PD
Establish statistical reporting systems to monitor effectiveness	Statistical reporting must reflect correlation between reduction in societal and program risk	Statistical reporting should be less subjective and more indicative of what led to case clearance

# Extension to Federal Investigations

**Investigative case management techniques and data will be different from those in the State and local environment**

**Principals of risk management can convey to help prioritize federal investigations**

**Easiest application is where agents carry large case loads**

- Immigration
- Drugs

**Complex cases with organized crime, counterintelligence, counterterrorism, etc. would require different approaches**

**In most case, current investigative case management is already informed by risk management principles**

# Benefits to Federal Investigations

## Improved performance monitoring and statistics

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- Shift towards outcome-based metrics, from activity and output-based metrics

## Ready answers to senior executives and administration officials

- Why do we have the workload distributed as we do?
- What would we do (more or better) if we had more resources?
- What would we sacrifice if we lost resources?

## Increase defense against political agendas

- Priorities based on valid risk management principals are likely to be transparent and defensible
- Legislative or administrative political priorities can be incorporated and compared easily
- Status quo priorities are harder to defend against political agendas

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