
# What Works? (What Does Not)? in the control of violent crime and how do you prove it?

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# Technology Investments in Public Safety in Illinois and IT Performance Measures


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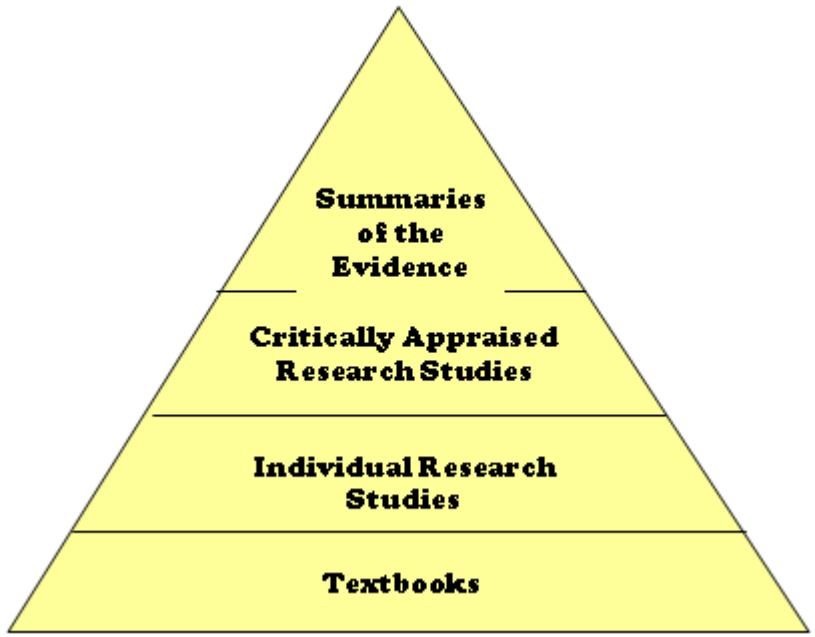
# I. Policy Questions for Illinois Criminal Justice: Murder and Criminal Justice Technology

- What is the relationship between investment in criminal justice technologies and the homicide rate in US cities and Illinois?
- What is the business case for IT investment in high murder cities?
- What was the impact of the introduction of new criminal justice information technologies on the reduction of murder rates in the 1990's?
- What will be the impact of the *next generation* of information technologies upon violent crime?
- Boots on the street or technology?: business case

# II. Frames of Reference: Evidence Based Research and IT investments: IT myths and science: what really works?

- Evidence-Based Paradigm



# Performance Metrics-Core Concepts-What types of IT technology have been considered in Illinois?

- Automated Fingerprint Identification System (AFIS)
- Automated Victim Notification System (AVNS)
- Computer Assisted Dispatch (CAD)
- COMSTAT/Crime Mapping
- Court Computer-Based Management System
- Criminal Justice Integration
- Domestic Violence, Order of Protection Database
- Drug Court Computer-Based Management System
- Electronic Criminal History Repository
- GLOBAL JXDM Implementation
- Handgun NICS Database

# Performance Measures-Program Summary Measure Examples

- Measure 1: Percent decrease in average law enforcement response time to priority calls for service

- Measure 2: Increase in percent of events (arrests, charging decisions, and court dispositions) that the responsible agency has posted to the state criminal history repository within 30 days of occurrence

# Types of Performance Measures

- **Output Measures:**

  Any product of a project activity. Output measures are usually indicators of the volume of work accomplished (e.g., number of traffic stops, number of officers attending training) as opposed to the intended results of that work (e.g., reduction in traffic fatalities, reduction in citizen complaints about officers' behavior).

# Types of Performance Measures

- **Efficiency Measures:**

  Measures that indicate the affect of the project on a criminal justice agency's efficiency in its use of resources (cost, time, personnel).

# Types of Performance Measures

- **Outcome Measures:**

  The consequences of a program or project. Outcome measures focus on what the project makes happen rather than what it does, and are closely related to agency goals and mission. These are measures of intended results, not the process of achieving them.

# Requirements and Constraints in building measures

- Measures must be clear and valid indicators of project results
- Results must be expressions of important criminal justice goals
- Measure must be feasible for the grantee agency to implement

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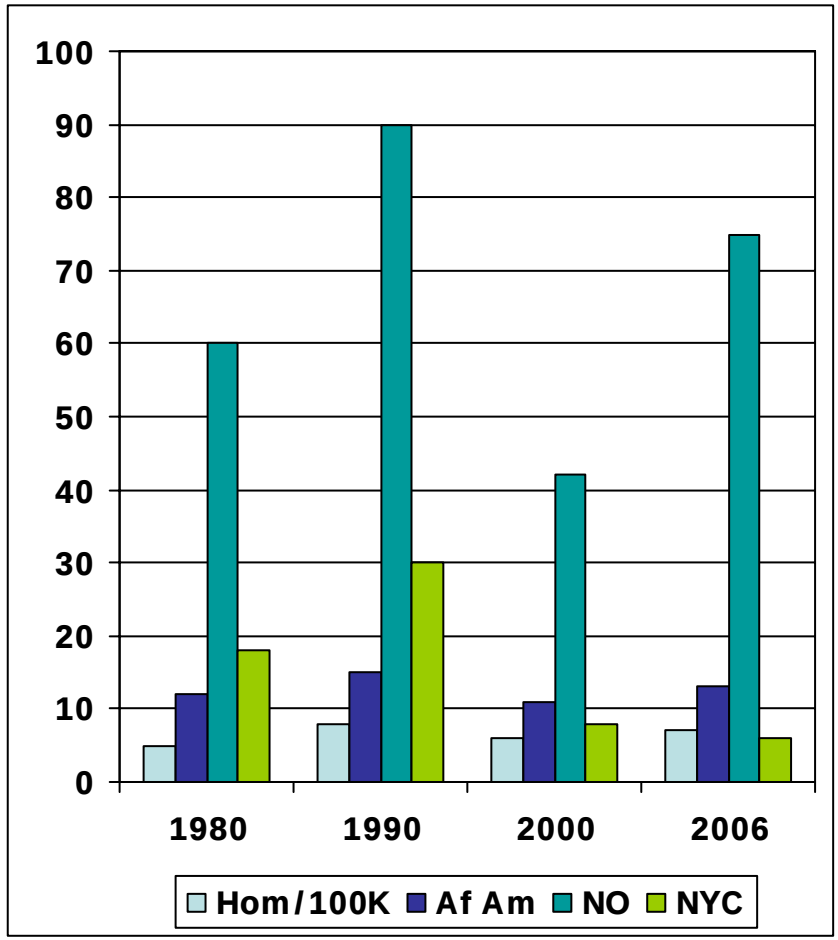
# III. Realities, Evidence and Performance Metrics: US Homicide Patterns: 1980-2006

- Rise in homicides in 1980's.
- Increased link to "crack" use.
- African-American Youth homicide patterns (Blumstein)
- Decline in 1990's.
- Second wave epidemic evident since 2004.
- Why the decrease in the 1990's?
- Why the increase now?



# Variability in Urban Homicide Rates

| Table 2: Homicide in Major US Cities | | | | | | | |
|---|---|---|---|---|---|---|---|
| | City | Homicide Rate | | | | | |
| | | **2005** | **2004** | **2003** | **2002** | **2001** | **2000** |
| **Very high** | New Orleans, | **73.6** | **54.8** | **56.8** | **53.3** | **43.8** | **42.1** |
| **High** | Birmingham, | **44.3** | **24.3** | **35.0** | **26.8** | **30.1** | **32.5** |
| **High** | Richmond, | **43.0** | **47.7** | **48.2** | **39.5** | **35.9** | **36.9** |
| **High** | Baltimore, | **42.0** | **43.4** | **42.3** | **38.3** | **38.7** | **40.1** |
| **Mid** | Chicago | **15.6** | **15.5** | **20.6** | **22.1** | **22.9** | **21.8** |
| **Low** | Boston | **12.9** | **10.5** | **6.6** | **10.1** | **11** | **6.6** |
| **Very low** | NYC | **6.6** | **7.0** | **7.4** | **7.3** | **8.2** | **8.4** |

# What Does a Murder Cost?

- The murder of a teenager costs about $1 million in lost and accrued costs (CSLJ: Geerken, 2002).
- A child disabled by gunshot costs about $2 million in lifelong social costs (CSLJ: Geerken, 2002).
- Correctional costs are approaching $60 billion, or $30,000 annualized cost per inmate (ACA, 2007).
- The loss of business investment and out-migration of talent may be additional costs of violent crime.
- What would be the impact if these costs could be largely eliminated?

# IV. Business case: Information technology-examples

- NYC (2270-539) Compstat and accountability
- NYC- Todd Clear/Marty Horn Correctional Risk Management Risk Tools
- Boston(l94-39), Richmond: Intelligence and Ceasefire
- Chicago(930-440)-CLEAR, distributed ICAM- SARA
- Richmond-Intelligence Gang Profiling (62 (2006) to 16(2007)
- New Horizon Technologies: *Real Time/Clear*

# The Case for Technology Investment:
## Programs that worked in Boston, Chicago, and New York in the 1990's

- Boston:
  - Youth murders down from 191 (1990) to 67 (2006).
  - Project *Ceasefire* – technology.
  - City-wide approach – health, education, community involvement.
  - BRIC (Boston Regional Intelligence Center).

- Chicago:
  - Change from over 900 (1990) to about 400 (2006).
  - Heavy investment in technology.
  - ICAM, CLEAR.

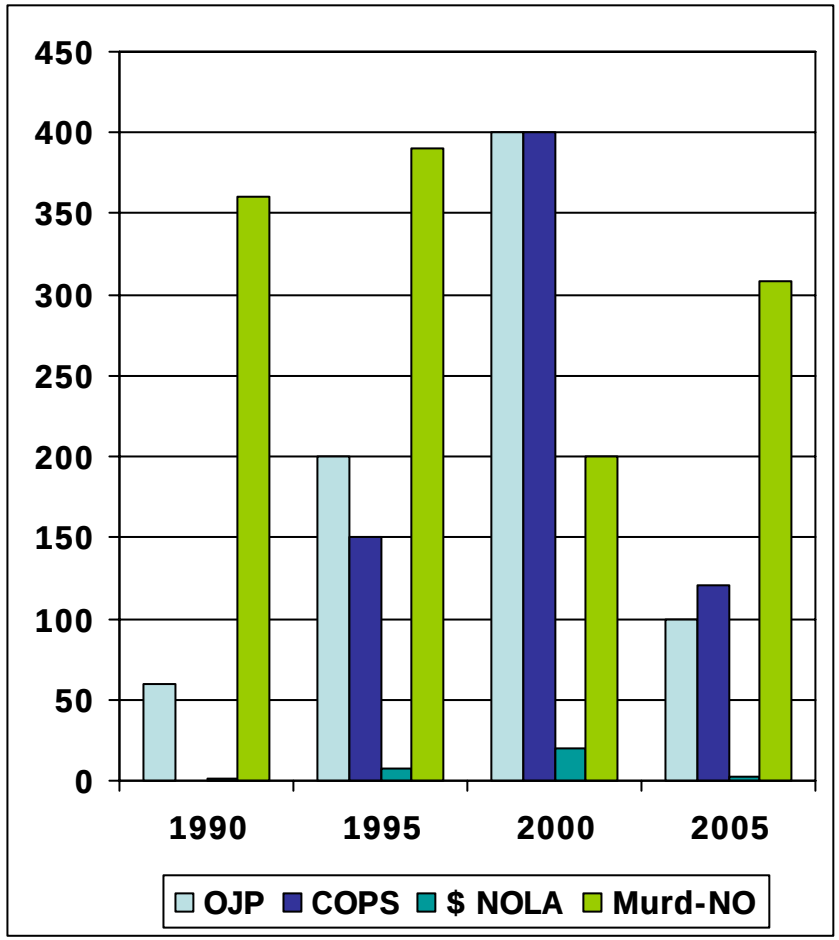
- New York:
  - Murders down from 2,400 (1990) to 530 (2006).
  - "ZT"
  - Compstat.
  - Reporting kiosks.
  - Reducing both murders and jail cells.

# Information Technology Investment: Best Evidence-based Arguments

- Certain – historic:
  - Cities in 1990's with strong declines invested in IT (outcome).
  - High IT investment is concurrent (not caused by) with reductions in violence in 1990's (outcome).
  - There appears to be savings in relationship to costs by IT initiatives targeted at high risk crime groups (efficiency).
  - Crime costs are enormous, stifle more productive use of funds (efficiency).
- Probable – prospective:
  - Emerging information technologies and early intervention programs will yield increased benefits re crime reduction (outcome).
  - Savings in crime control expenditures may be gained through use of technologies (efficiency).
  - New information technologies may offer outcome impact very different than earlier criminal justice information technologies.

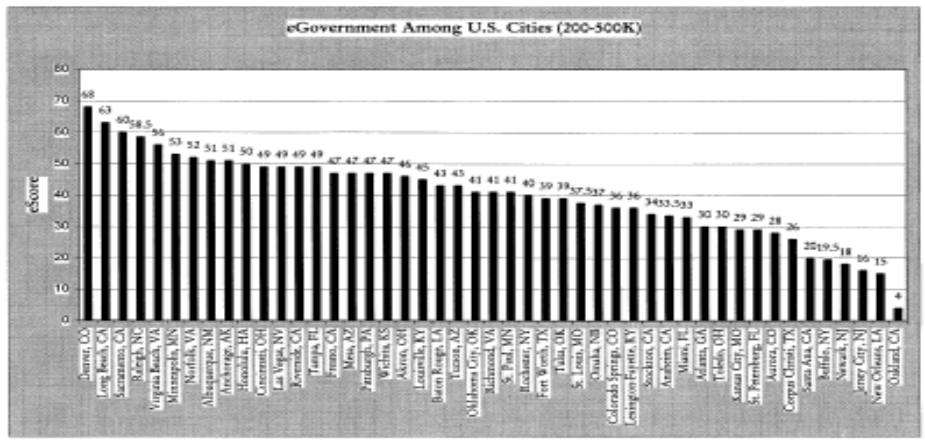
# Technology Investment and Murder Reduction-case of New Orleans

- Technology investment rises from 1994-2000 and then declines.
- Murder rates in major cities fall through the 1990's, then increase.
- What is the relationship between criminal justice technology investment and reduction in murder?
- Leavitt (2003) hypotheses on impact of policing, correctional policies – murder.
- Research on COMPSTAT, CEASEFIRE, EXILE.



# High Technology/Low Murder Rate or Low Technology/High Murder Rate

- Does low technology investment mean higher violent crime rates? What about early intervention programs?
- Lowest technology investment cities:
  - Oakland
  - New Orleans
  - Jersey City



# V. Developing Your Own Performance Measures: 4 Components

- Goals
- Chain
- Measure
- Format

# Component 1: Defining Goals Related to the Control of Violent Crime

- What is our IT project *for?*
- Will it reduce the risks of violent crime?
- What problems related to violence does our project solve?

# Sample Value Statements: violence

- Reduce gun violence in our communities through the use of information systems and technologies to restrict unlawful access to weapons by unauthorized individuals

- Improve identification and apprehension of wanted individuals by providing more accurate and complete information to justice users

# Component 2: Defining Chain of Results

- Why do we believe that our project will result in improvements re: violent crime in the way we do our job?

- What new information will be available as a result of the project to help manage violent crime risks?
- To whom will it be available?

# Component 3: Defining How Change is Measured

- ***Pre-post project measures of change***. These measures compare periods prior to and after implementation of the project. What is compared may be numbers in any of a variety of formats, but it is critical that the numbers be collected, as much as possible, in a comparable way.

# Component 3: Defining How Change is Measured

- ***But-for measures.*** These are measures that count outcome events that could only have occurred with project technology. For example, a new crime solving technology might have as an outcome measure the number of crimes solved with the technology that *would not have otherwise* been solved.

# V. Making the Case that Technology can reduce violent crime risks

- What is the evidence to date related to the suppression of murder rates (1990's) in US, and investment in information technology and effective early intervention programs?
- Can you make the case using these tools that technology has had an impact on violent crime?
- What was impact upon Chicago murder rates of infusion of technology (Macdonald and Ramsey)?
- Which technology programs were most effective? Argument by output, efficiency or outcome?
- New Sensor grids?

# Funding Priorities :suggestions and conclusions

1) Fund what works?
2) Fund highest priority needs?
3) Insist on performance measures?
4) Assure sufficient effort and quality to attain gains?
5) Improve programs based upon new knowledge-link research to programming