

A Preliminary Assessment of Risk and Recidivism of Illinois Prison Releases

David E. Olson & Gipsy Escobar

**Department of Criminal Justice
Loyola University Chicago**

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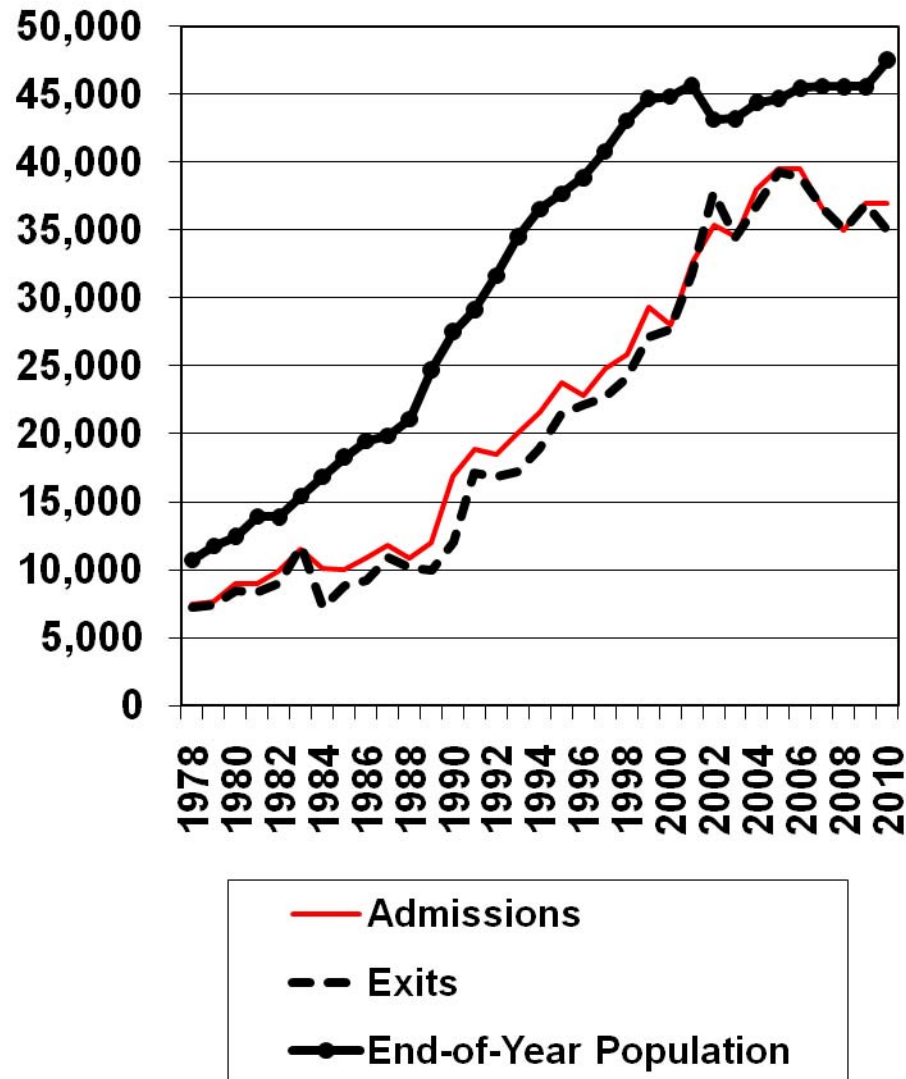
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Background & Introduction

- Limited capacity within Illinois Department of Corrections (IDOC) to conduct recidivism analyses beyond reincarceration
- IDOC's Automated Reception & Classification System (ARCS) implemented by 2002;
- Automated Disciplinary Tracking System (DTS) implemented by 2000
- Illinois Criminal Justice Information Authority (ICJIA) capacity to generate detailed, automated criminal history record information for research purposes
- Illinois Crime Reduction Act passed in 2009, established the Risk, Assets and Needs Assessment (RANA) Task Force
- Currently, no formal assessment to determine levels of supervision on Mandatory Supervised Release (MSR)(Parole); length of MSR based on felony class of current offense

**Illinois Prison Population
by State Fiscal Years**



Primary Research Questions

- Degree to which *existing* information collected by the Illinois Department of Corrections (IDOC) through their *automated* information systems, and from the Illinois State Police, can be used to predict overall recidivism and violence-specific recidivism
- Influence of individual- and community-level characteristics on overall recidivism as well as violence-specific recidivism
- Consistency and inconsistency in what predicts overall recidivism and violent recidivism, among all prison releasees and separately for male and female releasees



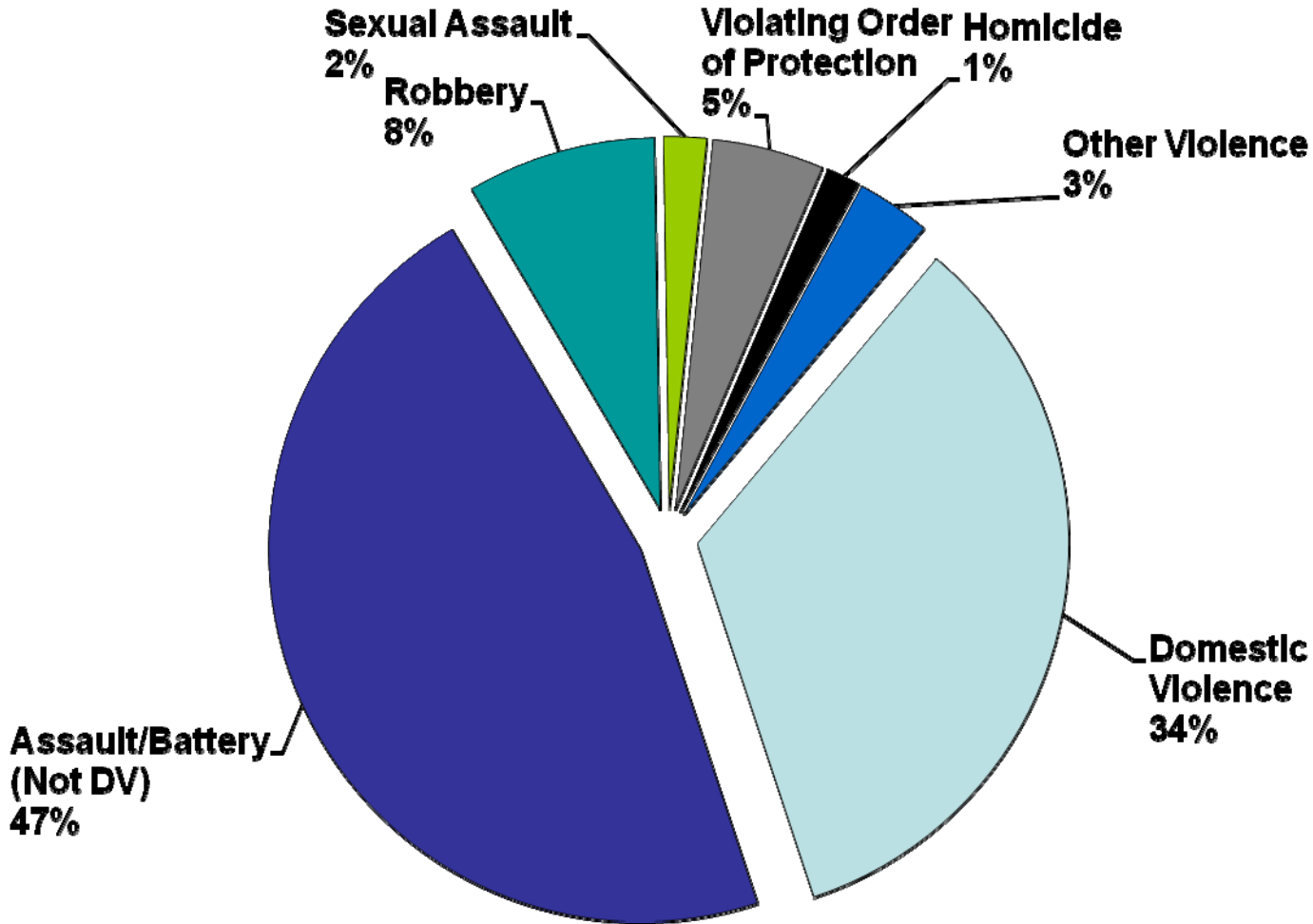
Methodology

- Sample includes all adults released from Illinois prisons in State Fiscal Year (SFY) 2007 (July 1, 2006 to June 30, 2007)
 - When there were multiple exits during the same year for an individual, the first exit was the one included in the sample
- Total cases in the sample roughly 32,000
- Data Sources
 - Illinois Criminal History Record Information (CHRI)
 - Detailed prior & post-prison release arrests as of April 30, 2010
 - IDOC data from intake interviews conducted by IDOC counselors and psychologists via the Automated Reception and Classification System (ARCS)
 - IDOC data regarding disciplinary incidents during prison stay via the Disciplinary Tracking System (DTS)
 - Data from existing Offender Tracking System (OTS) regarding length of stay, conviction offense, demographics, and release community/zip code
 - Data from U.S. Census and various state agencies regarding community characteristics

Dependent Variable

- Rearrested for a new crime between release date (sometime between July 1, 2006 and June 30, 2007) and April 30, 2010;
 - One-half (49%) returned to prison; 20% of overall sample returned to prison more than once;
 - Of those returned, mean=422 (median=343) days to return
 - 90% of those returned to prison were also rearrested
 - Overall rearrest rate for any crime of 69%, 70% for males, 61% for females
 - Of those rearrested, mean=298 (median=197) days to rearrest
 - Overall rearrest rate for a violent crime of 29%, 31% for males, 15% for females
 - Of those rearrested, mean=478 (median=419) days to rearrest

Nature of Violent Post-Release Arrests



Analytic Approach

- Frequencies & bivariate analyses to assess data quality
 - Prevalence of many measures inconsistent with literature and other prevalence surveys
 - Prior drug use, need for substance abuse treatment, prior physical and sexual abuse, and mental health history
- Hierarchical Generalized Linear Model (HGLM)
 - Individual-level characteristics (Level 1) (N=31,428)
 - Zip-code-level (Level 2) (N=1,051)
 - County-level (Level 3) (N=99)
 - Model 1=Level 1, Model 2=Levels 1 & 2, Fully Conditional Model =Levels 1, 2 & 3



Independent Variables

(Level 1, Page 1 of Appendix 1)

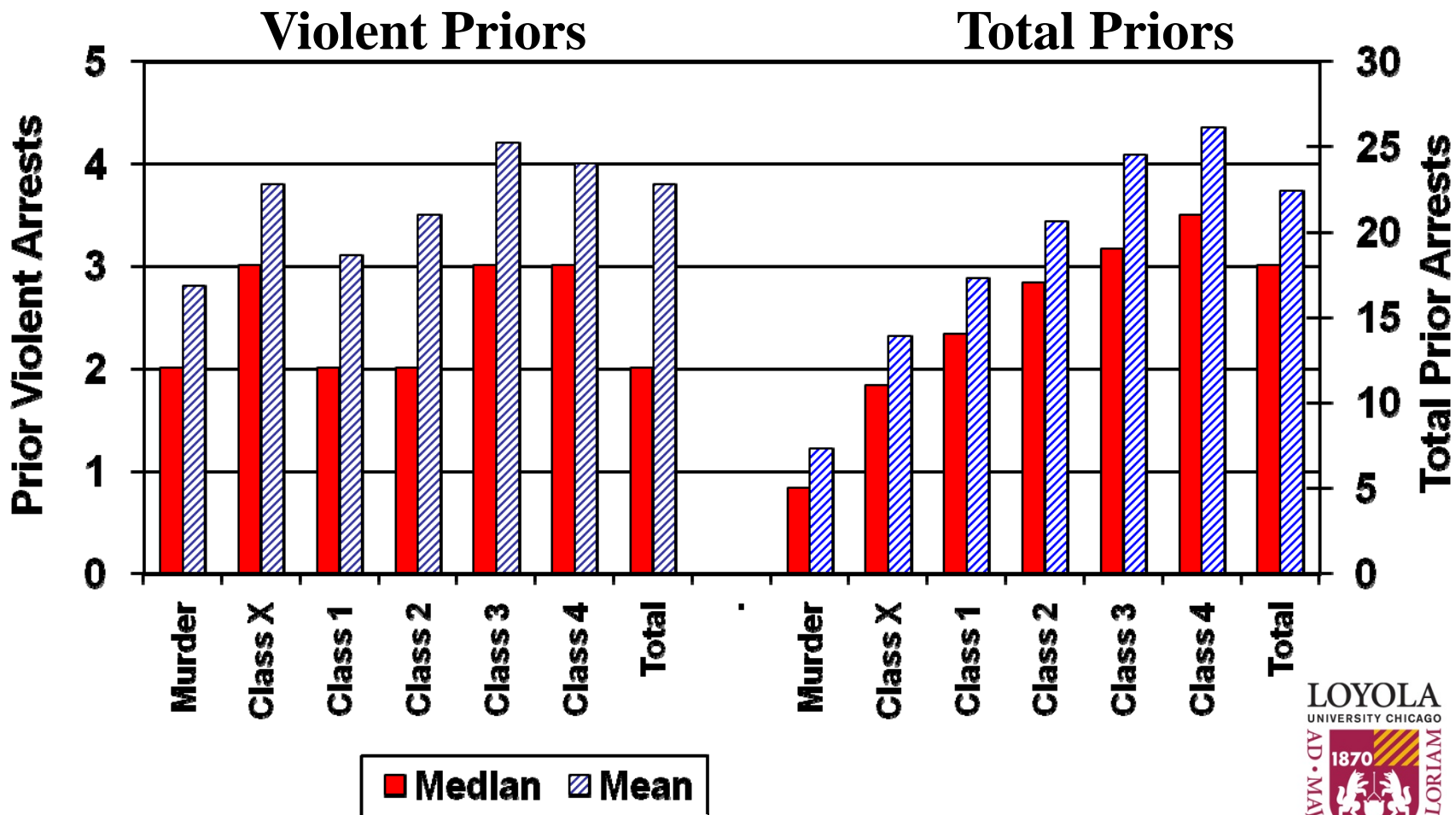
- Inmate Demographic & Socio-economic Characteristics
 - Age, race, gender, marital status, number of children, & education level
- Current & Past Criminal History
 - Current conviction offense and felony class, current gang involvement, prior prison sentences, prior arrests (total, drug-law violations, domestic violence, violation of an order of protection, overall violence)
- Substance Abuse, Mental Health, and Victimization History
 - *Use of drugs and/or alcohol during current offense or previously*, recommended substance abuse treatment, *prior physical abuse*, *prior mental health treatment*, prior suicide attempts, receipt of drug treatment while incarcerated
- Prison Disciplinary Record
 - Overall number of disciplinary infractions during current period of incarceration, violent disciplinary infractions, major disciplinary incidents



Some “Interesting” Patterns in the Data

- Extensive & varied prior criminal history
 - Inverse relationship between seriousness of current felony class, and extent of prior criminal history
 - Definition of “violent” offenders; most releasees have history of violence, but most not rearrested for violence
- Large proportion of prison exits serving relatively short periods of incarceration
 - Mean=14.5 months, Median=6 months
 - Range was 1 month to 588 months (49 years)
 - 10% served 30 or more months
- Extent and nature of disciplinary infractions
 - Large proportion with none, varies by crime class/time served; less variance with standardized time period

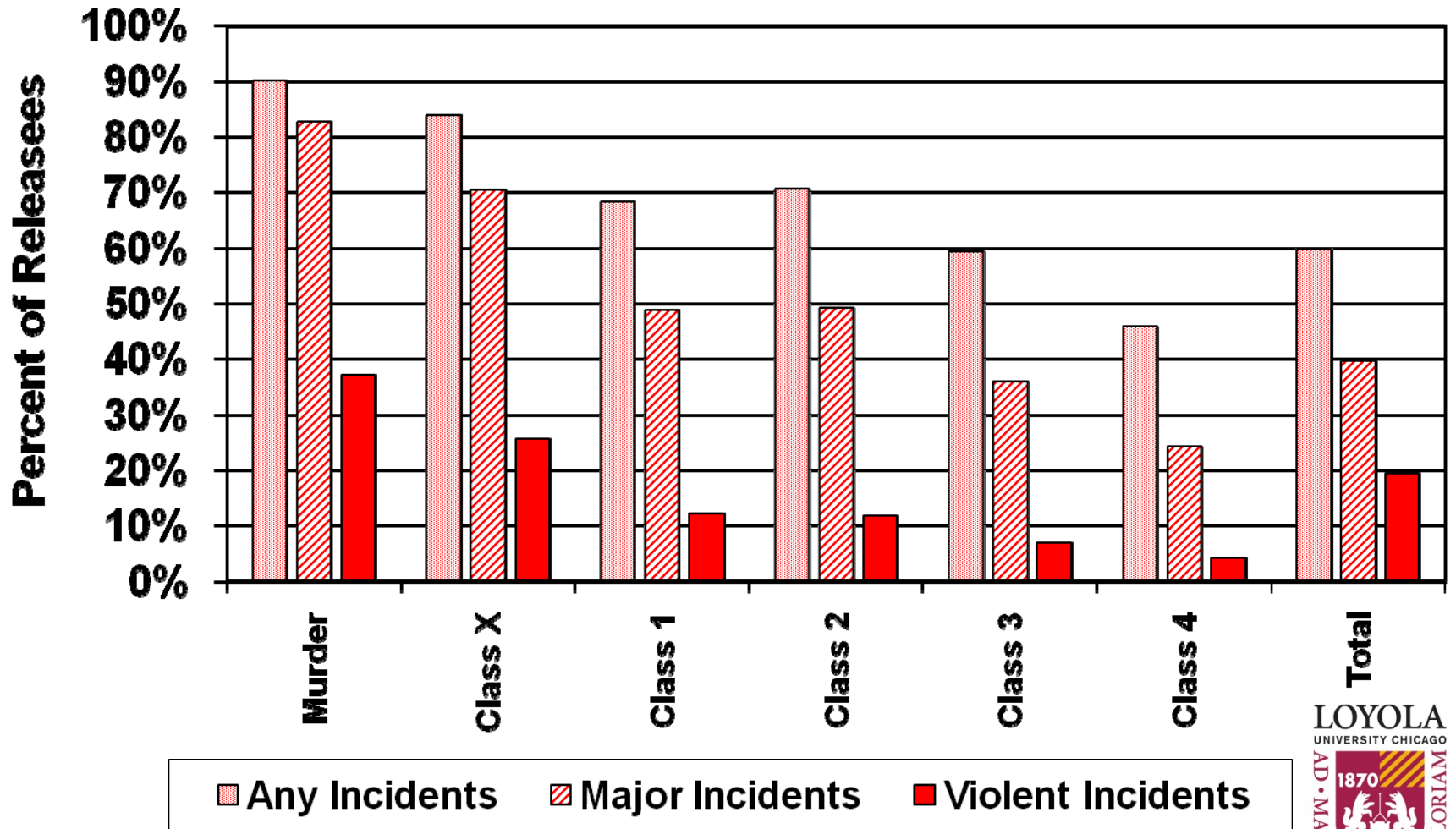
Prior Criminal History by Current Conviction Offense Class



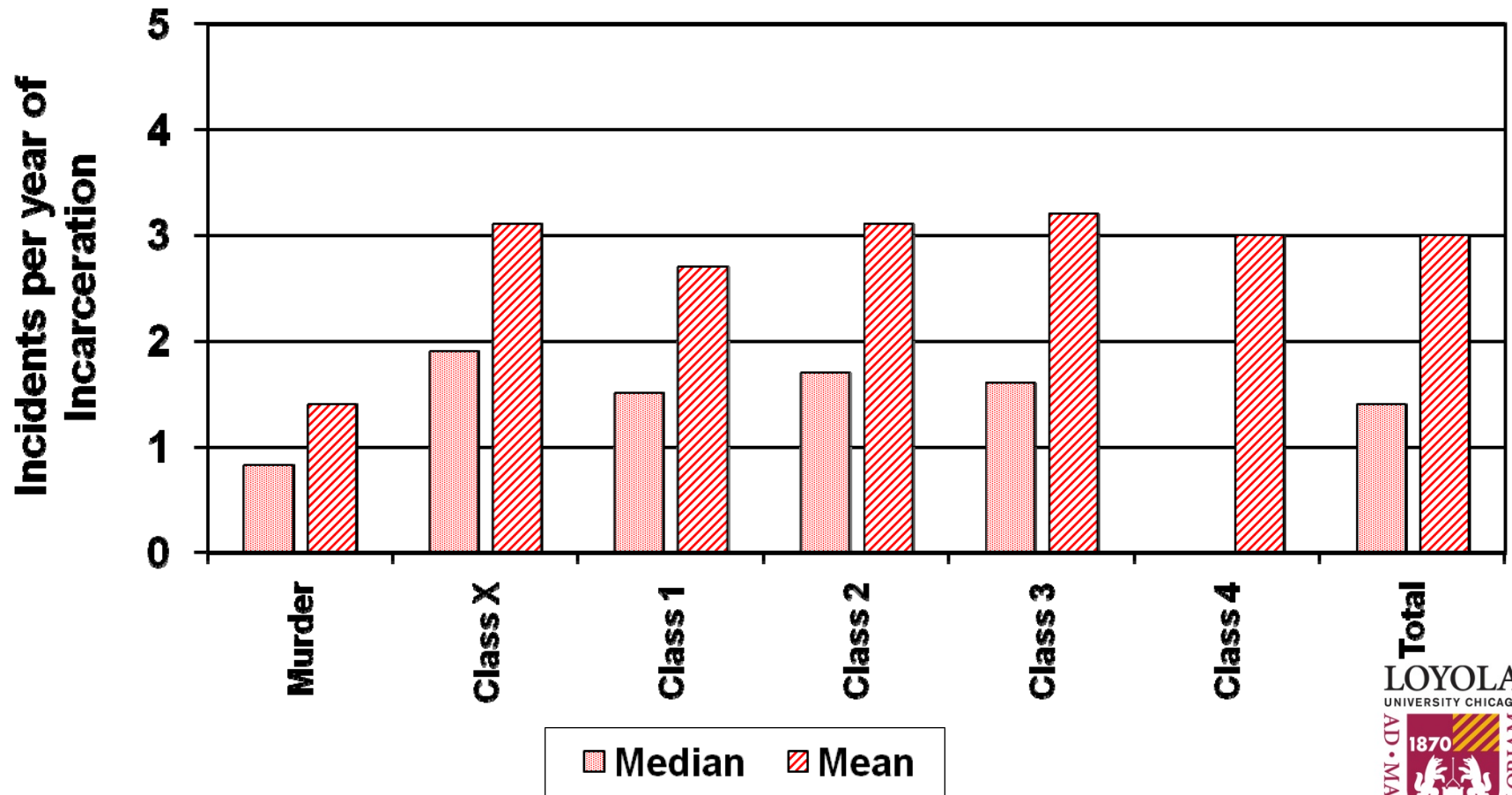
Definition of Violent Offender

- Violent Current Conviction Offense 25.7%
- Prior Arrests for Violent Offense 80.0%
 - 75% of those with non-violent *current* conviction offense have *prior* arrests for violent offenses
- Violent Disciplinary Incident 9.2%
- At least 1 of the previous 3 82.0%
- Violent Post-Release Rearrest 29.1%
 - Of those arrested for a violent offense post-release, 89% had prior violent arrests; of those not rearrested for a violent offense, 72% had a prior violent arrest
 - Of those arrested for a violent offense post-release, only 12% had a violent disciplinary incident

Percent of Releasees w/ Disciplinary Incidents by Incident Type & Current Offense Felony Class



Mean & Median Total Disciplinary Incidents *per Year of Incarceration* by Current Conviction Offense Class



Independent Variables

(Level 2, Page 2 of Appendix 1)

- Zip-code Level (Level 2)
 - Rate of Returning Inmates
 - Number of inmates released to the zip code during SFY 2007 relative to total population of zip code
 - Development of a Concentrated Disadvantage Index
 - Principal Components Factor Analysis with Varimax Rotation to create the concentrated disadvantage index based on the following 2000 census variables:
 - Percent of population living below poverty line
 - Percent of population 25+ with a high school diploma/GED
 - Percent of female-headed households with children
 - Percent of population minority
 - Percent of owner occupied housing units
 - Median household income



Independent Variables

(Level 3, Page 2 of Appendix 1)

- County-Level (Level 3)
 - Population Density (residents per square-mile)
 - Unemployment Rate (average of 2007-2009)
 - Violent & Property Index Crime Rates (average of 2006-2007)
 - Index Crime Clearance Rate (average of 2006-2007)
 - Overall Drug-Arrest Rate (average of 2006-2007)
 - Police Officers Per Capita (average of 2006-2007)
 - Drug Treatment Admission rate (2007)
 - Homelessness & mental health services (2007)

Results of Logistic Regression / HGLM (Page 3, Appendix 1)

- Offender-Level

- Consistency between predictors of overall recidivism and violence-specific recidivism

- Age, gender, race, education, marital status, current admission type, crime type and felony class, time served in prison, prior prison sentences, total prior arrests, and prior non-marijuana drug possession arrests

- Inconsistency between predictors of overall recidivism (overall) and violence-specific (violent) recidivism

- Gang membership (violent), current crime type (change), total disciplinary incidents (overall), violent disciplinary incidents (violent), participation in drug treatment (overall), prior arrests for violent crimes (violent), prior arrests for domestic violence (violent), and prior drug use (overall)

- More predictors for male versus female releasees

HGLM Results

- Level 2 (Zip-code-level)
 - Consistency between overall and violent recidivism
 - Higher rate of returning inmates, lower odds of recidivism
 - Offenders returning to more disadvantaged zip codes have higher odds of recidivism



HGLM Results

- Level 3 (County-level)
 - Consistency between overall and violent recidivism
 - Higher county rate of violent crime, lower odds of recidivism
 - Inconsistency between overall and violent recidivism
 - Higher county drug treatment admission rate, lower odds of overall recidivism
 - Higher county rate of police per capita, higher odds of violent recidivism
 - Higher crime clearance rate, higher odds of violent recidivism
 - Higher the population density, lower odds of violent recidivism



Conclusions & Implications

- Importance of considering individual-level risks & assets, as well as community-level risks & assets
 - Concentrated disadvantage, relative volume of releasees returning, availability of treatment, nature of crime, police concentration & effectiveness (clearance rates)
- What information you use depends on what forms of recidivism you are seeking to predict
 - For example, prior drug use and treatment predicts overall recidivism, but not violent recidivism; prior violent arrests predicts violent recidivism, but not overall recidivism
- Use of current felony class to determine supervision levels or length of supervision is inappropriate
 - By law, Class 3 & 4 felons have 1 year of MSR, but the highest risk factors; Class 1-2 felons have 2 years of MSR, but relatively fewer risk factors



Conclusions & Implications (Continued)

- Implications of length of stay in prison
 - Large percent in for short stay, which limits ability to accurately assess risks and needs, participate in treatment, limits availability/accumulation of disciplinary record, and tied to Class 3 & 4 felons
- Information, processes and technology available to substantively improve assessment of releasee risk and better utilize limited resources

