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Temporal Patterns of Arrest in a Cohort of Adults Receiving Mental Health Services: The Massachusetts Mental Health / Criminal Justice Cohort Study

William H. Fisher University of Massachusetts Medical School

Et al.

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Criminal Justice Involvement among Clientele is a Major Concern for State Mental Health Agencies

- Mental health and criminal justice systems provide services at various points along the interface of these systems to reduce offending and re-offending, including:
 - Diversion programsMental Health Courts
 - Re-Entry
- Little information about scope of offending to guide service development.
- This study provides data on the prevalence, type and temporal patterns of arrest for a large sample of adults followed for roughly 9.5 years

The Massachusetts Mental Health / Criminal Justice Cohort (N = 13,816)

Inclusion Criteria:

- Receiving case management, inpatient treatment or residential services from Massachusetts Department of Mental Health between 7/1/91 and 6/30/92
- 18 years of age or older

Tracking Arrest:

- Arrest data were obtained from the Massachusetts Criminal History Systems Board's "Criminal Offender Record Information" (CORI System)
- 3,856 cohort members (27.9%) experienced at least one arrest
- The group compiled 41,860 charges; 27,004 for felonies and 14,856 misdemeanors

Demographic Characteristics and 10-year Arrest Rates of Service Use Cohort Members

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	N	Percent	Arrest Rate ¹
Gender			
Male	7765	56.2	36.1
Female	6051	43.8	17.5
Race			
White	11144	82.8	26.5
Non-White	2414	17.8	33.3
Age in 1991			
18-25	1142	8.3	50.7
26-32	2188	15.8	43.8
33-40	3075	22.3	34
41-47	2827	20.5	26.4
48-54	1975	14.3	18
55 and older	2601	18.8	6.7
"Arrest rates" are the perc	centage of cohort members with	at least one arrest during the 10.	vear observation period

Arrest Types and Prevalence:

Crimes against Persons

- Serious Violent Crime: Murder; non-negligent manslaughter; forcible rape; robbery (including armed robbery); aggravated assault and battery (a) with a dangerous weapon, (b) against a person over 65, (c) against a disabled person, (d) to collect a debt (N=1874, 10.5%)
- Less Serious Crimes against Persons: Domestic violence (not resulting in a charge of "Serious Violent Crime"); simple assault; simple assault and battery; threatening / intimidation; indecent sexual assault (i.e., not rising to the legal definition of forcible rape), violation of a restraining order (N=1,096; 7.9%)
- Assault and Battery on a Police Officer (N=389, 2.8%)

Property Offenses

Serious Property Offenses: Burglary; larceny of an item worth more than \$500, welfare fraud; receiving stolen property; uttering (passing bad checks); breaking and entering; arson; motor vehicle theft (N=1,329; 9.6%)

Less Serious Property Crimes: Theft/shoplifting of an item worth less than under \$500; malicious destruction of property (N=1,446; 10.5%)

Motor Vehicle Offenses: Operating (a) without a license, or (b) without compulsory insurance, or (c) so as to endanger; attaching plates illegally; leaving the scene of an accident; driving while intoxicated (N=1,121; 8.1%)

"Nuisance," Drug and Other Offenses

Crimes against Public Order: Being a disorderly person; disturbing the peace; setting a false alarm; bomb hoax; trespassing; consuming alcohol in a public place (violation of "open container law) (N=2,231; 16.1%)

Crimes against Public Decency (sex offenses excluding forcible rape): Offenses related to "sex for hire" (soliciting sex, prostitution, "being a common night walker"); indecent exposure; lewd and lascivious behavior (N=503, 3.6%)

Drug-Related Offenses: Possession of a controlled substance; possession with intent to distribute, distribution or manufacture of, or trafficking in a controlled substance; conspiracy to violate Controlled Substance Act (N=720, 5.2%)

Firearm Violations: Carrying a dangerous weapon; illegally discharging a firearm; possession of a firearm without a license or permit (N=169; 1.2%)

Miscellaneous: Includes misdemeanors with low rates of occurrence not easily classified in the above categories (N=227; 1.6%)

Temporal Patterns of Arrest in a Cohort of Adults Receiving Mental Health Services: The Massachusetts Mental Health / Criminal Justice Cohort Study

William H. Fisher, PhD, Steven M. Banks, PhD, Kristen Roy-Bujnowski, MA, Albert J. Grudzinskas, Jr., JD, Jonathan C. Clayfield, MA, Center for Mental Health Services Research, University of Massachusetts Medical School, Nancy Wolff, PhD, Center for Mental Health Services and Criminal Justice Research, Rutgers University

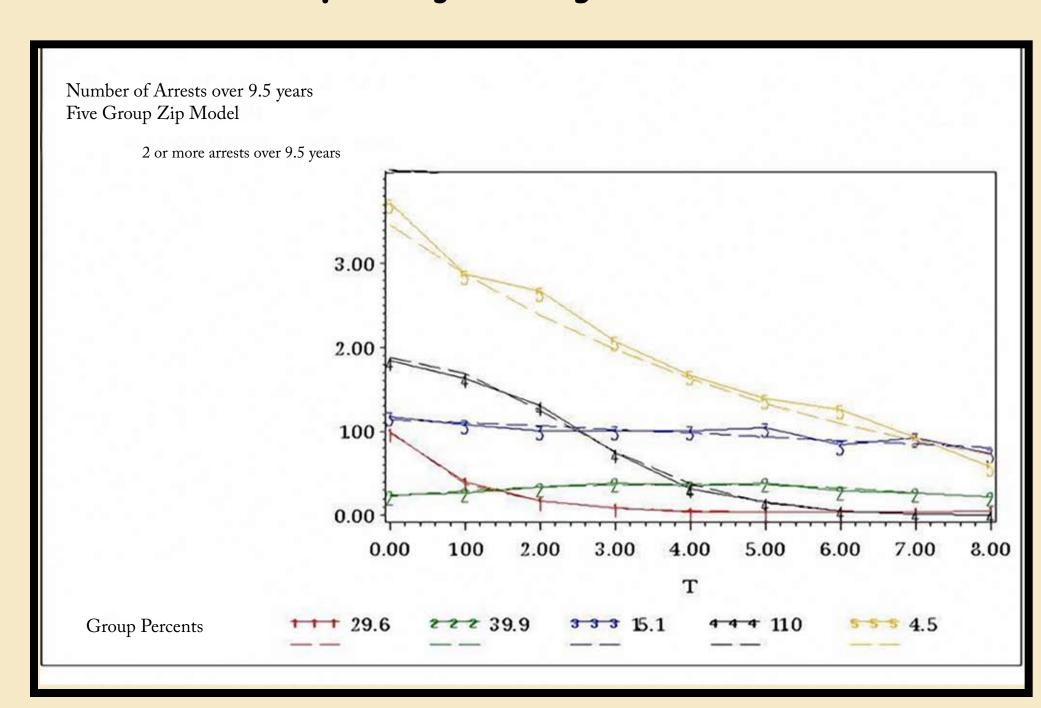
Trajectory Models: What Are They?

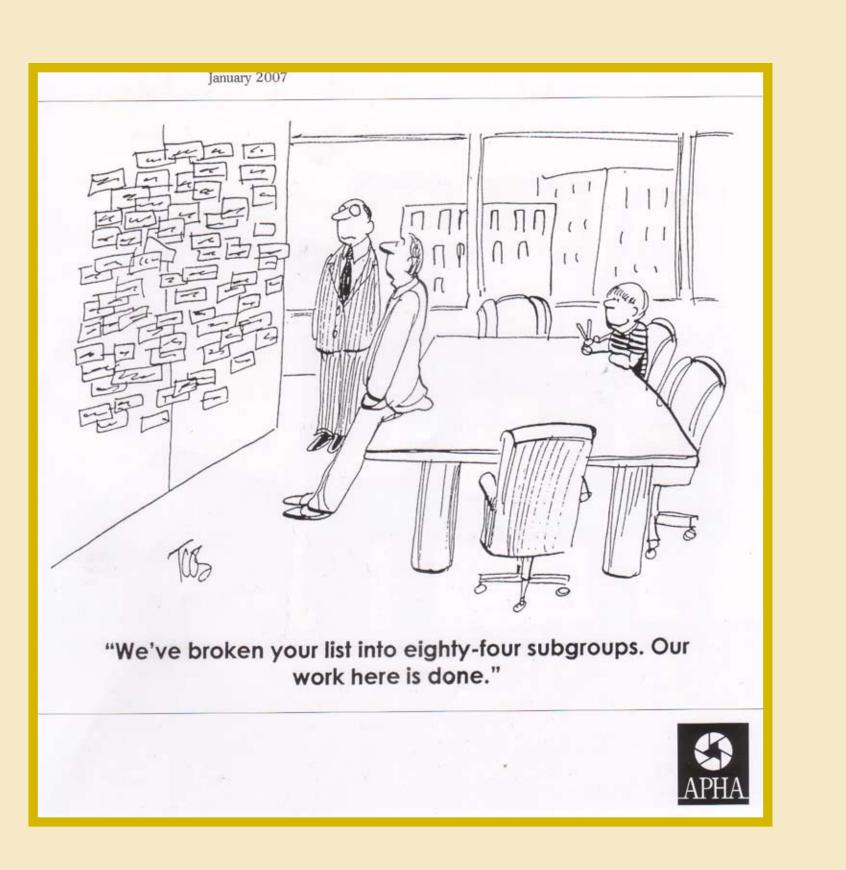
- Derive from the "growth curve" methodology
- Technically, "Zero-Inflated Poisson" models
- Statistically An iterative process which attempts to derive a solution consisting of a set of groups whose members have temporal activity patterns in common The solution represents the optimal mathematical fit of the model to the data
- Operationally, somewhat akin to cluster analysis in creating a set of groups, membership in which can be modeled

Examining Temporal Patterns of Arrest: Trajectory Analysis

- 2,744 (% of arrestees) were arrested once; 1,112 (% of arrests) 2 or more times
- For those with multiple arrests (i.e., 2 or more, 1,112) we attempted to identify temporal patterns over the observation period
- Examined 1,112 arrest patterns individuals who had
- 2 + arrests; obtained a solution in which five trajectories (and thus five groups of individuals reflecting them) proved to be the mathematically optimal model

Five-Group Trajectory Model





The Five Trajectories: A Thumbnail Sketch Mix of Offenses **Trajectory Group 4** Trajectory Group 1 (11%) Begins period averaging 2 per year, drops steadily over the period (29.6%) One charge early, drops off to average near 0 Motor Vehicle Crimes A & B on a Police Officer Misc. Crimes Misc. Crimes Drug Crimes Conspiracy Crimes Sex Crimes Not Forcible Rape Conspiracy Crimes Sex Crimes Not Forcible Rape Minor Property Crimes Serious Property Crimes Minor Property Crimes Crimes Against Persons NOS Serious Property Crimes Crimes Against Persons NOS Trajectory Group 3 (15.1%) Average one arrest per year through period Firearms not included; mean less than 0 Motor Vehicle Crimes A & B on a Police Officer ¹ Firearms not included; mean less than 0 Conspiracy Crimes Trajectory Group 5 Trajectory Group 2 Sex Crimes Not Forcible Rape (4.5%) Starts high (average of 5 in the first year) but descends; ends period with average of one (39.9%) Stable across the time period; average one arrest every 2 years Minor Property Crimes Serious Property Crimes Motor Vehicle Crimes Motor Vehicle Crimes Crimes Against Persons NOS A & B on a Police Officer A & B on a Police Officer Misc. Crimes Drug Crimes ¹ Firearms not included; mean less than 0 Conspiracy Crimes Conspiracy Crimes Sex Crimes Not Forcible Rape Sex Crimes Not Forcible Rape Nuisance Crimes Nuisance Crimes Minor Property Crimes Minor Property Crimes Serious Property Crimes Crimes Against Persons NOS Crimes Against Persons NOS Firearms not included; mean less than 0 ¹ Firearms not included; mean less than 0

Implications

- Arrestees receiving mental health services display varying patterns of offending over time
- These patterns likely reflect different system management problems
- Simple demographic and diagnostic data do not predict group membership well
- To make these useful to service system planners, more data that would predict individuals' likely trajectories is needed
 Also critical is an understanding of how service use patterns are associated with these trajectories

Acknowledgement

The data analysis presented here would not have been possible without the perseverance, guidance and consistently congenial mentoring of our beloved colleague, Dr. Steven Banks.

