Prioritizing Offenders and the Role of Crime Analysts in Offender-Focused Crime Prevention

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About the IACA Standards, Methods, and Technology Committee

The International Association of Crime Analysts (IACA) is committed to a continuing process of professionalization through standards and knowledge development. In 2011, the IACA chartered the Standards, Methods, and Technology Committee (SMT) for the purpose of defining "analytical methodologies, technologies, and core concepts relevant to the profession of crime analysis."[1] This document is part of a series of white papers produced by the SMT Committee that executes this purpose. The methodology for formulating the positions reflected in the white paper series includes 1) development of a draft paper through in-depth meetings and discussions of Subject Matter Experts[2], 2) review and feedback by the IACA Executive Board, 3) review and feedback from an independent editor with knowledge of crime analysis, and 4) review and feedback by IACA members facilitated through the IACA website (www.iaca.net). Any questions about this process can be directed to the chair of the SMT Committee at SMT@iaca.net.

Overview

Prioritizing offenders is a key proactive tactic that police agencies can employ to address crime and disorder. Prioritizing resources is crucial in 21st century policing, where there are limited police budgets and increased pressures on police agencies to be more efficient and evidence-based in their decision-making. Proactive police agencies strive to find effective ways to determine whom they should target and how to best direct their resources. Prioritizing offenders is a cost-effective method for streamlining scarce resources and reducing crime.

Relative to other types of analyses, one could argue that crime analysts and their agencies have not been as rigorous or methodical about how they identify and prioritize their offenders (Bruce, 2014). Typically target offender selection involves subjective nomination of who should be focused on. This is problematic for a variety of reasons including the potential for unequal due process and ineffectiveness.

Importantly, police can enhance their legitimacy when their decisions are (1) consistent/reliable, (2) accurate, (3) unbiased, and (4) timely/efficient (Henning & Stewart, 2015). Objective methods to assess an offender's risk are also ethically necessary:

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[1] This quote comes from the mission statement as written in the initial Standards, Methods, and Technology Strategic Plan completed April 2011.

[2] Subject Matter Experts are identified by the Standards, Methods, and Technology Committee based on special knowledge obtained through publications, presentations, and practical experience and their willingness to participate.

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Just as the civil liberties of individuals are respected by avoiding unnecessary deprivation of liberties, so is protection of the community respected by the confinement of truly dangerous individuals. Individuals released into the community after they are judged not to be a threat may subsequently reoffend-sometimes with tragic results. These are false negatives. Thus, the accuracy of prediction is not simply a technical concern but a concern that is meaningful in human and social terms (Andrews & Bonta, 2003, p. 233).

The genesis of this paper stems from survey responses contributed by members of the International Association of Crime Analysts. What is clear from the survey results is that there is not a standardized method for prioritizing top offenders. This paper seeks to provide a framework for developing a consistent, objective method that police agencies can use to prioritize their top offenders.

Focusing on Priority Offenders

There is growing recognition that public safety is better served through law enforcement strategies that can prevent crime without simply increasing the number of prisoners (Durlauf & Nagin, 2011). Recent law enforcement efforts to prevent crime have typically focused primarily on place and high-risk offenders. Place-based crime prevention is supported by research findings including (1) crime is not randomly distributed and that a small number of areas account for a majority of crime (Weisburd, 2015), and (2) directing additional police resources to hot spot areas are known to show reductions in crime in these locations (Braga, Papachristos, & Hureau, 2012) without appreciable displacement to surrounding areas (Bowers et al., 2011).

On the other hand, offender-focused crime prevention initiatives are based on studies that show that (1) a small number of people account for a majority of serious offenses in a community (Wolfgang, Figlio, & Sellin, 1972), (2) offender recidivism risks vary considerably (Blumstein et. Al., 1986), (3) enhanced law enforcement, coordination, communication, and oversight with high risk offenders (i.e., focused deterrence strategies) can reduce crime and recidivism (Braga & Weisburd, 2011), and (4) swift and certain sanctions for deterring crime work more effectively than severity of sanctions (Durlauf & Nagin, 2011). Law enforcement agencies targeting priority offenders focus on those who have demonstrated the most social harm in communities (including those who cross jurisdictions) and mitigate their harm through investigation, prosecution, intelligence gathering, and focused deterrence (Bruce, 2014).

Another objective for focusing on priority offenders is to ensure that they have appropriate supervision. In some jurisdictions, joint partnerships exist between police and corrections,

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sometimes referred to as Intensive Supervision Programs, where agencies work together to identify and continually monitor serious habitual offenders.

However, as Cohen et al. (2014) argue

> since not all active prolific offenders can be added to a prolific offender management list due to the limitations associated to departmental capacity and resources, police agencies must prioritize which offenders should receive the most aggressive forms of supervision. This strategy should also attempt to balance a meaningful response for other problem offenders who have not been placed on a prolific offender list (Cohen, Pleacas, McCormick, & Peters, 2014, p. 40).

Thus, prolific offender management programs can only monitor a subset of offenders who may in fact require monitoring for various reasons. Priority offenders are therefore those who do not specifically meet the criteria of the habitual offender management programs, but who still need some level of supervision because of their high risk to re-offend.

In addition, a recent white paper by the International Association of Crime Analysts (in press) highlights the importance of studying social networks among criminals. This paper suggests that there is significant investigative and predictive value in studying the relationships among criminals; for example, some offenders have key roles in their networks. In these key roles, the influence individual offenders have within the larger social network varies significantly. In some cases, this level of influence may make them a valuable target and a priority for law enforcement actions. These relationships are similarly examined when criminal intelligence analysts in police departments conduct criminal threat assessments.

The subsequent sections of this paper will first introduce a working definition of a priority offender. We will then discuss how crime analysts have typically been involved in police-led crime prevention efforts particularly related to place-based and offender-based analysis. We will also highlight how various police departments have been prioritizing their offenders based on various ranking methodologies, but also highlight an important consideration for police agencies to incorporate findings from offender risk assessments. These sections clearly suggest to police agencies to consider collaborative models with partnering agencies which we will also be exploring. Lastly, we will revisit the role of crime analysts in offender-led crime prevention.

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Defining a Priority Offender

First, it is important to provide a working definition of a priority offender. One suggestion comes from the Charlotte-Mecklenburg Police Department's Priority Offender Strategy Team (POST); where a "priority offender" is defined as an:

> individual whose criminal behavior significantly impacts the crime rate and/or the fear of crime in a community. The distinction is that POST recognized through the analysis that motivation may be exhibited in the form of a chronic offender who has been involved in criminal activity over a long period of time or a suspect currently involved in multiple offenses...Therefore, POST nominations may officially include persistent property and/or violent criminals" (Lail, 2011, p. 26).

Such a definition suggests that priority offenders can be habitual offenders with a lengthy criminal history or because they are suspected of being responsible for a series of offences based on criminal investigations and criminal intelligence (Osborne, 2009).

The Greensboro Police Department in North Carolina prefers to use the terminology "ranked offenders" instead of "priority offenders." Using the word "priority" may imply a subjective connotation where an offender is identified as a priority based on factors that are difficult to measure, whereas a "ranked" offender is someone who because of their multiple contacts with the police is objectively ranked higher (via a composite score, see below regarding ranking methodologies) compared to other offenders (Dr. L. Hunt, Greensboro Police Department, North Carolina, personal communication, July 14, 2015).

An important point then is that a priority offender is not just a person with a chronic history of offending. But rather the ranking may be based on recent incidents and include relatively "new" offenders suspected to be involved in multiple incidents. It is crucial that police departments dedicate resources to individuals who have a high risk for re-offending. In addition, police departments may also consider including data from partnering agencies in their efforts to prioritize offenders.

The Current Role of Crime Analysts in Offender-Focused Crime Prevention

The role of crime analysts in police-led crime prevention efforts has traditionally been producing place-based and offender-based related analyses. With respect to place-based strategies, crime analysts typically help with identifying and prioritizing high crime locations by using hot spot mapping techniques combined with temporal analyses. In addition, they may also use problem-oriented policing principles to help diagnose and understand hotspots while

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recommending solutions (e.g., using situational crime prevention techniques) (Clarke & Eck, 2005).

In contrast, the role of crime analysts in offender-based strategies is less defined. Indeed, Bruce (2014) identifies four topical areas that crime analysts focus on in their analyses: people, places (hotspots), patterns (tactical), and problems (strategic). He suggests that among these four areas, persons-based analyses are not as frequent. In addition, he argues that the study of repeat offenders (and even victims) is typically viewed from the intelligence analysis lens, where the focus is on "identifying, analyzing, and responding to top offenders, victims, organizations, and nexuses of activity".

Traditionally, identifying and prioritizing offenders has been completed using subjective means (Bruce, 2014) with little input from crime analysts. For example, for the Charlotte-Mecklenburg Police Department's POST, they begin with nominations from each of their patrol divisions, with the strong belief that "actionable intelligence regarding active offenders originates in patrol" (Lail, 2011, p. 20). While it may be argued that professional judgment is less reliable than actuarial assessments, it's important to recognize the value of objective criminal investigations and criminal intelligence that lead police agencies to prioritize certain offenders as key targets for enforcement and investigations that are not captured quantitatively using ranking methodologies or offender risk assessments.

As another example, the Washington, DC, Metropolitan Police Department's Repeat Offender Project's (ROP) (Martin & Sherman, 1986) utilized a subjective approach to identify the targets for their project. Specifically, targets were selected based on their "catchability", deservedness, long-term yield, and methods of apprehending or monitoring the repeat offenders were based on the squad's "working style" (p. 11). "Catchability" focused on warrant targets and sufficient information that would allow law enforcement to successfully execute the warrant. "Deservedness" however "was related to an officer's belief that the target deserved to be arrested and punished" (p. 11). "Yield" refers to the value of the target in terms of their influence within social networks, whether they would lead to more arrests or other targets, and whether they could be immediately arrested. Finally, ROP squads were "hunters", "trappers" or "fisherman". Hunters were focused on warrant targets, trappers were most focused on investigations with the primary goal of clearing cases, recovering stolen property, and arrest target's associates. Trappers were involved in other arrests such as "buy/bust operations, followed up on 'hot tips', arrested some on warrants, and made 'serendipitous' arrests by street cruising" (p. 11). "Fisherman" did not have a specialty.

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The overarching question here is that given a list of offenders, how do police agencies determine whom to focus on? Who is at greatest risk to re-offend? Would the method(s) be reliable? Would two different people select the same target? Are the offenders targeted (or not targeted) truly at higher risk? Is there any subconscious bias in decision-making? Would the decision process being used lead to more or less confidence and trust in the criminal justice system? Is the practice evidence based? In corrections, actuarial risk assessments (based on characteristics of selected groups) have greater validity and reliability than professional judgment, which will be discussed in the following section.

Identifying Priority Offenders

Traditionally, offenders become a priority for police because of criminal investigations, criminal intelligence, and tactical crime analysis (e.g., a crime analyst studies a crime pattern and searches for a suspect). Crime stoppers tips, DNA, video surveillance, actionable active warrants on suspects resulting from investigations, and street checks assist with investigations. On the other hand, criminal intelligence analysts may use association charts and social network analysis to determine the influence of key individuals in criminal networks (International Association of Crime Analysts, in press). For a further discussion on identifying suspects see Perry, McInnis, Price, Smith, and Hollywood (2013). The following section though highlights the utility of offender ranking and risk assessments in prioritizing offenders and how they are used in policing. This section will also consider the usefulness of collaborative models.

Offender Ranking Methodologies

Many police agencies are plagued with long lists of career criminals and prolific offenders that are simply not actionable or practical to maintain regards to sustained targeted enforcement (Osborne, 2009). One way of determining top offenders is through a ranking methodology based on a summary of scores on various measures from standard police databases; some police agencies have adopted a weighting system on some of these measures. Osborne (2009) suggests considering:

> The number of arrests, specific charges (for example, firearm charges weighted more than shoplifting charges), registered sex offenders, felony arrests, misdemeanor arrests, current probationer, current parolee, warrants, contact with police, appearing as a suspect or witness on field interview reports, violent crime convictions, weapons offense, use of an alias in a past arrest, history of absconding or failure to appear, ICE detainer on file, and involvement in crime or repeated police contact since a juvenile. The weighted values vary by jurisdiction, you have to decide what scoring makes sense to your jurisdiction. Trial and error may be the case before you decide what actually makes sense. Work with your analysts to help you figure that out (para. 5).

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Extending on this research, survey respondents from the International Association of Crime Analyst listserv agencies indicated that their ranking methodology included factors such as:

- The types of criminal offences (e.g., where different weights are assigned to the severity/seriousness of a crime): Police agencies could employ a weighting factor for different offences with more weight given to more serious offences, yet there is no standardized way that agencies use to determine the weights for the offences, but they may be considered jurisdictional sentences, empirical literature and the agency's preferences (Bruce, 2014).
- The role/involvement of the offender in the incident (suspect or arrestee).
- Non-crime/disorder offences; CAD data and field interviews (Bruce, 2014).
- Drug, gang, or gun presence in offences (Bruce, 2014).
- Subsequent incidents after a police intervention (e.g., Chula Vista Police Department's work on reducing domestic violence includes the number of subsequent interactions with police).
- Employment status.
- Whether or not the offender was under the influence of alcohol or drugs during the incident.
- Whether or not the offender is transient.
- The responding officer's prediction of the likelihood of a future repeat incident.
- The victim's prediction on future incidents.

As a further example, the Greensboro Police Department (Dr. L. Hunt, Greensboro Police Department, North Carolina, personal communication, July 14, 2015) includes composite scores, such as a violent and drug score. For their violent/drug score, they ratio violent/drug involvements plus whether or not a person had violent/drug 'flags'/alerts on the police records management system to the person's age. Those who have more violent/drug incidents relative to their age are thus deemed as a greater priority. This type of composite score could be useful for identifying young offenders who have had a "high rate" based on their age.

Some agencies have considered a "decay constant" in their algorithm. This decay constant reflects the number of days elapsed since the offence. It may be argued that historical offences could be weighed less than those that have occurred more recently (Bruce, 2014). Some have also considered how some scores for certain offences should not decay as quickly as other offences (Hunt 2015). Police agencies may wish to track when offences have occurred and how much time has elapsed since the last offence. Persons who have more frequent contact with police and thus have fewer days between their offences, should clearly be a priority.

The Sonoma County Sheriff's Department (M. Harris, personal communication, July 17, 2015) used the "Harris-Bruce" model and their "decay constant" reflected a certain decrease for a person's ranking value for each day elapsed; for "each day that goes by after the occurrence of a crime reduces its point value by 0.03 points" (Bruce, 2014). The "Harris-Bruce" model also set a minimum value to the person's composite score and argued that specific offences should never "disappear off a person's record" (i.e., the offender's minimum overall score will never be zero but instead gets set to a minimum value, which may be set to a fifth of the person's total score).

Ranking Considerations

Research into ranking methodologies also yields a very important consideration, specifically the importance of ensuring up-to-date, accurate, and comprehensive records. As an example, Osborne (2009) and the Greensboro Police Department (Hunt, 2015) pointed out that the algorithm must consider whether or not the person is incarcerated/deceased. Likewise, agencies may want to consider having a follow-up component or "status" variable, which would reflect whether an offender has been incarcerated, deceased, has moved away, is currently under community supervision, or has breached their community supervision conditions. Moreover, if this is the case, there should be a close relationship between the police agency and corrections so they are aware of released offenders and thus latest information on where the offender is will then be incorporated into their ranking methodology.

To the point of maintaining up-to-date and accurate databases, Bruce (2014) suggests that in developing a priority offender database, agencies must pay close attention to the accuracy and completeness of their master name table. This is especially important when drawing upon data from various sources and jurisdictions. It's at this point that name de-confliction needs to occur.

Likewise, as will be discussed in subsequent sections, it is vital for crime analysts and their agencies when prioritizing offenders to seek out data and resources from partnering agencies. Sonoma County Sheriff's Department (Harris, 2015) notes that in extending their ranking methodology, they would include data from courts, jail, and probation to gather information on an offender's probation, parole, and custody status as well as warrants. In this way, police agencies are able to gather a more comprehensive understanding of which offenders they should prioritize based on their own data as well as those from partnering agencies.

An effective ranking and prioritization methodology must consider both objective measures and operational considerations (e.g., whether a person has active warrants, availability of resources) that will influence the size and composition of the list. As noted at the beginning of this section, it's ineffective for a police department to have a long list of career and prolific

offenders without available resources or sustainable plans for dealing with them. Indeed, the Sonoma County Sheriff's Department states that they assigned a certain cut-off value to their list.

High Point Police Department (Sumner, 2014) as well as West Yorkshire's Police Department (Hammer, Griffiths, & Jerwood, 1999) response models to domestic violence use a tiered response to enforcement; those committing repeat offences then get increased sanctions. In this way, each set of offenders are assigned a specific group (e.g., those who need immediate prosecution vs. those who need face-to-face notification). In this way, agencies seeking a ranking methodology may wish to consider tiers of offenders and similarly tiers of responses.

Offender Risk Assessments

One of the most important objectives for prioritizing offenders is to reduce the opportunities for offenders to repeat their criminal behaviour. The above discussion on ranking methodology points to the importance of determining an offender's risk for recidivism. One way of assessing this risk is using offender actuarial risk assessments; the results of these assessments can help police agencies differentiate between high and low risk offenders (Bonta, 1999). The purpose of an offender risk assessment is to measure an offender's level of risk or their probability of committing a new offence based on social and personal-demographic information within a certain follow-up period (Bonta, 2002b, Henning & Stewart, 2015).

Historically, various methods of assessing an offender's recidivism risk have been employed. Informal clinical assessments characterized the first generation of offender risk assessments in corrections (Andrews & Bonta, 2003). Likewise, while it's possible for police officers and clinicians to attempt to use their professional and clinical opinions about an offender's risk, years of research has consistently shown that objective actuarial risk assessments perform better than subjective assessments or professional clinical judgments (Bonta, 2002a; Bonta, 2002b; Bonta, 1997).

Professionals must use explicit, objective assessments for offenders so that they do not incorrectly conclude that an offender is at high risk for re-offending when they are not or alternatively incorrectly concluding that an offender is at low risk and then release them into the community (Henning & Stewart, 2015). Some challenges associated with unstructured judgments include: (1) the choice of factors that may not reliably associate with recidivism; (2) the overconfidence in the ability to predict or failure to consider previous errors in prediction; (3) poor inter-rater reliability (i.e., two assessors come to different conclusions); and (4) the potential assessor biases. It's therefore suggested that police agencies employ the results of actuarial risk assessments when attempting to assess an offender's risk for recidivism.

Alternatively, more objective offender risk assessments involve the "systematic collection of a standard set of information about the offender, assigning numerical values to the information and then evaluating whether the information is predictive of criminal behaviour" (Bonta, 1997, p.15). These assessments contain research-informed items, where the presence of an attribute/risk factor is scored as 1, the absence is scored as 0, and ultimately the items are added together to provide a summary score. They contain both static and dynamic risk factors that assess both the likelihood of criminal recidivism but also opportunities for intervention and rehabilitation.

Actuarial risk assessments contain both static and dynamic risk factors. Static, historical factors (e.g., age at first offence and prior criminal history) are useful for assessing risk for long-term recidivism (Bonta, 1999). However, it became clear over time that it was important to study factors influential in changing an offender's behaviour – hence the introduction of dynamic factors.

Assessments based on theory, while longer and more comprehensive, address the dynamic "criminogenic needs of offenders" and thus opportunities for risk reduction (Bonta, 2002a). Dynamic risk factors are changeable because they assess a person's attitudes, values, and beliefs, which are cognitive and emotional, (Andrews & Bonta, 2003) and are key targets for intervention and programming (Bonta, 1999). Examples of dynamic or changeable risk factors include (Henning & Stewart, 2015): (1) education and employment, (2) housing, (3) mental health, (4) peer association, (5) family relationships, (6) attitudes, (7) leisure activities, and (8) alcohol and drug use. Third generation risk assessments were important because they addressed amendable dynamic risk factors and opportunities for intervention (Andrews & Bonta, 2003). Importantly these risk assessments asked two questions: (1) what is the risk that the offender will re-offend and (2) what can we do to reduce this risk? (Bonta, 1999) Third generation risk assessments included potentially dynamic risk factors so as to identify crime-related need areas. If such crime-related need areas are successfully addressed, they could lower risk for recidivism, which could ideally be reflected in re-assessments of risk and/or assessments of change.

From general personality and social psychological theory which informs the Personal, Interpersonal, and Community-Reinforcement (PIC-R) Perspective of Criminal Conduct (Andrews & Bonta, 2003), Andrews and Bonta suggest four sets of factors, "The Big Four", that have been found to be most influential in predicting future criminal behaviour. These factors are (1) antisocial behaviour/personality, (2) criminal history, (3) antisocial thinking/attitudes, and (4) antisocial supports/associates (Olver, Stockdale, & Wormith, 2014; Bonta, 1997). Over the past 20 years, researchers have found several dynamic risk factors and have noted that the

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best-validated risk factors according to research have been now deemed to be the "Big Eight", which include the "Big Four" as well as "problematic circumstances at home (family/marital), problematic circumstances at school or work, problematic leisure circumstances, and substance abuse" (Andrews & Bonta, 2003, p. 86). Researchers have found that these factors have greater predictive accuracy than static factors. Police agencies can thus consider:

> … a combination of past offending or conviction history; a history of failures to successfully complete community-based sentences, such as parole; persistent underlying issues such as substance dependence or mental health family background, both protective, such as being married, and risk-based, such as familial criminality; and current lifestyle and activities suggesting involvement in crime, such as living beyond one's means or having known criminal associations (Braga, 2010) (from Cohen, Pleacas, McCormick, & Peters, 2014, p. 42).

Police agencies are thus encouraged to explore behavioral and lifestyle indicators (Osborne, 2009) and seek the assistance of partnering agencies to gather this information.

Henning & Stewart (2015) suggested a methodology where police agencies and crime analysts could develop their own offender risk assessments with their own data. They suggest the following steps:

1. Review existing research on recidivism

   a. Evaluate other scales already available
   b. Basic research on recidivism – identify potential risk factors
   c. Review items available in police RMS or other data systems.
   d. Review other well-established risk factors (decades of research), which can include the "Big Four" as well as demographics (marital status, residential instability), poor work history/unemployment, family problems, low IQ/cognitive impairment/poor school performance, substance abuse, and violations after supervised release. Some of these factors are potentially found in a police RMS.

2. Identify the specific population or group you are trying to make predictions about.

3. Specify what you're trying to predict (outcome)

4. Find prior cases to use in developing scale (training sample)

5. Collect information on each case (i.e., possible risk factors) at time 1, initial intake, prior to intervention.

6. Code outcome at the end of the follow-up time for each case (time 2, after intervention) (e.g., was there recidivism?)

7. Identify individual factors that predict the outcome (bivariate analyses; through correlation)

8. Combine individual risk factors to obtain most efficient and robust prediction. Does the addition of a new variable add enough unique value to prediction of recidivism to include it in the final risk scale?

9. Identify item weights (not always employed)

10. Score all cases in the sample and calculate total risk score.

11. Examine the distribution of the scores & recidivism rates at each level to create risk groups/classifications (e.g., low, medium, and high); there is no universally accepted threshold for determining "low" or "high" risk.

Police agencies and crime analysts in determining "low" or "high" risk offenders should also consider both stable and dynamic risk factors and the duration or changes in the offender's "low" or "high" risk; for example, an offender may be considered "low" risk at a specific time, but may in fact change as more information comes to light (Dr. K. Stockdale, Saskatoon Police Service, personal communication, August 24, 2015).

Likewise, to examine the predictive ability of the risk assessment, a simple methodology can be used (Andrews & Bonta, 2003). First, the individual is assessed prior to intervention and then they are assessed after intervention. This change then is assessed against its ability to predict a third measure of future criminal conduct. For example, an offender is observed to demonstrate a high level of risk on the first assessment and then a significantly lower degree at the second assessment. We would therefore anticipate that such an offender would have a lower likelihood of recidivism.

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Examples of Offender Risk Assessments

Similar to prisons, probation, or parole, police agencies can benefit from categorizing or "classifying" offenders into different categories based on their risk level. This can be cost-effective and can allow police agencies to take a tiered approach to their offenders (Andrews & Bonta, 2003). Some risk assessment tools that have benefited police agencies include the Level of Service Inventory-Revised (LSI-R), the Ontario Domestic Assault Risk Assessment (ODARA), and the Spousal Assault Risk Assessment Guide (SARA). Readers who wish to learn more about the LSI and ODARA can explore http://www.justice.gc.ca/eng/rp-pr/cj-jp/fv-vf/rr09_7/p4.html and https://www.unb.ca/saintjohn/ccjs/_resources/pdf/odarapoliceresponse2012.pdf for the ODARA, https://www.mhs.com/product.aspx?gr=saf&prod=lsi-r&id=overview for the LSI-R, and lastly Belfrage, Strand, Storey, Gibas, Kropp, and Hart (2012) describe the use of the SARA tool by Swedish police departments and its efficacy in reducing domestic violence recidivism.

Without going into specific detail of each program and the details of every risk assessment tool, interested readers are recommended to explore the following tools, but it's important to note that various tools assess risk for different types of offending including general offending, violence, domestic violence, and sexual offending for example:

Police Department[3]	Program	Risk Assessment Tool Used
Saskatoon Police Service	Serious Violent Offender Response (SVOR) Team	Saskatchewan Primary Risk Assessment (SPRA); Static 99; ODARA
Portland Police Bureau	Domestic Violence Reduction Unit	(internally developed) Portland's Domestic Violence Risk Scale (revised)
Maryland Police Department	Lethality Assessment Program	Lethality Screen
	Johnson County Lethality Assessment Program	(internally developed)

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[3] Saskatoon Police Service: (Dr. K. Stockdale, personal communication, August 24, 2015), Portland Police Bureau: Henning and Stewart (2015), Maryland Police Department: https://www.ncjrs.gov/pdffiles1/nij/grants/247456.pdf, Johnson County Lethality Assessment Program: http://ucsjoco.org/Uploads/Domestic-Violence-Lethality-Assessment-Report.pdf

In a complementary way, the Johnson County Lethality Assessment tool is informative for both analysts and their agencies. Perry et al. (2013) point out:

> Different from the more structured behavioral instruments used by correctional systems and those used to identify violence among populations of young boys, the lethality assessment is a semi-structured interview that allows the officer greater leeway in assessing the domestic condition and the tools to take informed action quickly. Variation in the level of "control" an interviewer has over the interaction determines the interview approach (i.e., the less control results in a less structured interview, and the more control means more structure). With less structured interview protocol, an interviewer exerts limited control over the course of the discussion. Although the responses may be rich, they may also be more difficult to assess and compare to other standards. Some expert interviews to determine criminal market spaces and forecast crime trends may be conducted with an unstructured interview protocol. A semi-structured interview will incorporate a guide for the questions and topics, as well as an established method to evaluate the potential responses. Highly structured interview protocols, like the behavioral instruments described earlier in this chapter, are much more rigid in their design but may be more statistically reliable and valid (p. 100).

In this sense, police agencies and their analysts are encouraged to develop their own risk assessment tools that are not only practical, but ensure that these tools are tested for reliability and validity. Risk assessments have been designed for criminal behaviour, (individual and organized) domestic violence, and mental health. Readers are also highly encouraged to read more about various types of risk assessments, their application and limitations particularly as it applies to predictive policing and for agencies wishing to see how risk assessments can be applied to understanding individual and organized crime (see Perry et al., 2013).

Collaborative Models. Some police agencies are adopting strategic models where they work with other government partners to identifying priority individuals, not just those who are arrested and charged for criminal offences, but those who drain multi-system resources from varying human service providers in addition to police. The purpose of such a proactive approach is holistic and comprehensive. Not only do they attempt to identify these multi-system priority individuals but also to understand their risk factors from varying social service lenses, recognizing that they may be drawing upon several systems habitually over time. Such collaborative approaches attempt to mitigate early risk factors and seek for immediate collaborative solutions that extend beyond traditional siloed approaches, and also highlight systematic service gaps. Importantly it underscores the importance of utilizing data about priority individuals from various human service providers to assess multi-dimensional risk.

Importantly, the model discussed above safely shares data in accordance with privacy standards. Osborne (2009) suggested,

> targeting chronic nuisance crime/disorder offenders (drunk, mentally ill, trespassers, etc.) is also a strategy to consider. These lower level criminals use up a lot of police resources. It is strategic to identify the problem individuals and find ways to reduce their drain on the system. This may require working with social service agencies and other community partners. Addressing quality of life issues can have an impact on more serious crime. Small jurisdictions will prioritize different sorts of criminals than large urban areas. Many of their career criminals won't be violent criminals; nevertheless they're a real problem (para. 11).

Example: Prince Albert HUB Model

One collaborative model that appears to be showing great promise has been developed in Prince Albert (Saskatchewan, Canada). Although beyond the scope of this paper, Nilson (2014) describes the HUB table as a place where,

> human service professionals…from a variety of disciplines…meet and collaborate on interventionist opportunities of addressing situations of acutely-elevated risk…the focus of these meetings is to identify complex risks of individuals or families that cannot be addressed by a single agency alone. When situations are brought to the table by one of the partner agencies, the appropriate human service professionals become engaged in a discussion, which results in a collaborative intervention to connect services and offer supports where they were not in place before. The goal of the Hub is to connect individuals-in-need to services within 24 to 48 hours (p. 9).

More relevant to our discussion on how police agencies and their partners can start prioritizing not just offenders but at-risk individuals (prior to a continued path of harm/victimization) is that discussions are brought forward about individuals or families who are at acutely-elevated risk but based on professional judgment and discussants accept or reject a discussion based on four criteria: significant interest at stake, probability of harm occurring, severe intensity of harm, and multi-disciplinary nature of elevated risk.

These discussants evaluate these situations based on their professional judgment. What's clear from our discussion of how best to evaluate risk however is not through the use of professional judgment, but through the use of actuarial risk assessment tools. Similarly, one of Nilson's recommendations include:

> [Community Mobilization Prince Albert (CMPA)] should work with its partner agencies to encourage an internal Hub referral screening process that requires the same rigor of

risk assessment across all sectors. The results of group interviews described herein show that each sector has its own perception of risk. However, all sectors do share an understanding of what risk is within the context of the Hub. Therefore, CMPA should lead a risk assessment discussion that helps all agencies come to the Hub table with situations of risk that are comparable to one another (p. 109).

This model is promising in that it heeds the advice that in order to prioritize not just policing resources but larger scale multi-agency comprehensive collaborative interventions directed to at-risk individuals or families, it is important that an objective risk assessment tool be utilized. Moreover, at these HUB tables, there are analysts involved in the process of not only assisting with entering, analyzing, and evaluating data, but have the opportunity to be involved in the development of an in-house (or collaborative) risk assessment tool.

An Expanded Role for Crime Analysts in Offender-Focused Crime Prevention

Based on the research and practice discussed throughout this paper, we recommend that crime analysts can play a much larger role in offender-focused crime prevention strategy by:

1. Acquiring a broader understanding of criminal recidivism and risk assessment. While crime analysts may be knowledgeable about criminal behavior (e.g., understanding behavioral patterns and understand the socio-economic, cultural, psychological, biological, environmental, and historical theories/influences on criminal behavior as well as victimology), this can be greatly enhanced by understanding more about risk assessment; recidivism; desistance from crime; primary, secondary, and tertiary prevention as well as mental health.

2. Designing and evaluating new (or test existing) actuarial/structured assessment strategies for police decision-making using their own data. Later sections of this paper will suggest a method that crime analysts can bring back directly to their agencies to develop and validate actuarial risk assessments based on their own data.

3. Implementing validated risk assessments to prioritize offenders – manage offender "target" lists for focused-deterrence/intervention efforts. It may be argued that police agencies themselves may not be adequately prepared to execute validated risk assessments, but an alternative may be to gather the findings of risk assessments made by correctional institutions.

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4. Educating police personnel about risk assessment and providing objective data regarding validity and reliability of assessments being used to enhance legitimacy of decision-making.

5. Designing better data systems to track high risk offenders on "target" lists and variables used to assess risk. (see attached Appendix for examples from varying police agencies on how they track high risk offenders).

    a. Systems should have the goal of increasing perceived risk for new antisocial behavior and ensure swift response.

    b. Systems should ensure immediate notifications to police, judges, parole and probation when a targeted offender is involved in high-risk activity (e.g., as a victim, offender, witness, or acquaintance, etc.).

6. Assisting with communication to offenders on target lists (e.g., offenders will not be deterred by certain/swift sanctions unless they know about them).

    a. Crime analysts can assist with disseminating information on recent offenders who were arrested & sanctioned directly to target groups (e.g., Freddie Cardoza case in Boston Ceasefire & ensuring other gang members understood the consequences, Kennedy, Braga, & Piehl, 2001, p. 14 & 37).

    b. Crime analysts can assist in notifying offenders of involvement in high-risk incidents (e.g., "Our records indicate that you were stopped by a patrol officer on date").

7. Assisting with evaluating the effectiveness of interventions.

Summary

The purpose of this paper to was identify what methodological approaches were available to police departments and how they could use these methods to prioritize and subsequently target their top offenders. While it is important to consider officer experience, it is clear that for police agencies who want to effectively and ethically use their resources appropriately; it is also important that police agencies ensure that decisions are made using approaches that are reliable, accurate, unbiased, and timely in order to enhance their legitimacy and strengthen public trust. This paper explored the definition(s) of a priority offender, why it is important to focus on priority offenders, how crime analysts could be involved in offender-focused crime prevention, and various methods of prioritizing offenders.

We recognize that police agencies have traditionally prioritized their offenders based on standard policing approaches including how certain offenders are a priority because there is an existing warrant for their arrest or that their DNA was found at a crime scene, but also added to the idea of "prioritizing offenders" by exploring in detail offender ranking methodologies and risk assessments with an effort to capture an offender's "priority" level based on an actuarial risk summary score and encouraging police agencies to start using information from well-supported actuarial risk assessments with the goal of reducing recidivism. Police agencies are encouraged to use the methods described above to develop new tools or validate existing tools for use in their jurisdiction, and incorporate findings from community safety partners.

In this paper, we discussed method(s) for crime analysts and police agencies to explore in developing their own risk assessment tool. In conclusion, we strongly encourage crime analysts and police agencies when prioritizing their resources on high-risk offenders, to seek information about offenders and collaborate with other human service providers such as health, schools, corrections, education, and social services.

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Appendix A – Tracking Offenders

The International Association of Crime Analysts listserv respondents demonstrated that there are various ways that police agencies keep track of their priority offenders. There were varied approaches ranging from using word processing documents to spreadsheets to desktop relational databases to commercial larger records management systems where system flags could be used to track priority offenders.

- Association charts and criminal intelligence development: One approach to tracking and developing priority offenders is through link association charting. Analysts could develop intelligence about criminals and their relationships to others. A link chart could be used to determine a key target based on their influence on a network. Using a word processor or commercial software like i2 Analyst's Notebook could be used to create such a chart.

- Desktop relational databases: Developing a desktop relational database for criminal resumes/profiles could also be used to track priority offenders. This database would be populated with known habitual/prolific offenders, their M.O., or offending pattern, co-associates, and recidivism risk factors. For example, recall that Chula Vista Police Department (Karin Schmerler, personal communication, July 15, 2015) works to reduce repeat domestic disturbances and violence calls for service. Their analysts have developed a master name database in Microsoft Access that lists suspects, victims, and subjects (for people involved in non-crime domestic disturbances). This database includes information from the county, district attorney data, jail data from the sheriff's department, and probation and parole, in an effort to identify and track repeat people and their most completed histories.

In addition, Chris Bruce (2014) worked on a Smart Policing Initiative project with the Cambridge Police Department in Massachusetts, where they implemented the Harris-Bruce model for offender ranking. They used a highly sophisticated Microsoft Access database, which incorporated various tables that mirrored the RMS structure of the Cambridge Police Department but combined data from partnering police agencies to capture cross-jurisdictional offenders. In this database, they captured incident data, a master name table, offences, and the person's role to name just a few variables.

- Commercial databases: Some agencies simply keep track of their priority offenders through system flags or a specifically designed database for their top/habitual offenders. As an example, the Saskatoon Police Service's Serious Violent Offenders Response (SVOR) team uses Microsoft CRM (Stockdale, personal communication, August 24, 2015). Such a specified habitual offender database could be used to

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monitor a specific set of offenders including their history of recidivism, which would be useful for evaluating the offender's progress, identifying systematic service gaps, and ultimately improve programs meant to target these offenders.

Secondly, the Delray Beach Police Department's (Rhea-Lyn Gerstenkorn, personal communication, July 13, 2015) RMS allows them to put "alerts" or system flags on people's police records. Flags are placed on people who have been arrested for certain crimes. These flags are searchable and allow them to prioritize their offenders. Likewise, the Greensboro Police Department's (Hunt, 2015) RMS allows them to track the involvement of each of their offenders (e.g., how many times has an offender been arrested/cited and what crimes have they committed). Their system allows them to add a flag for anyone they view as a "priority" in addition to standard flags such as gang affiliation or those on electronic monitoring. Likewise, the Sonoma County Sheriff's Department (Harris, 2015) use their flags to determine priority offenders based on geography and crime type.

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