

Fourth Judicial District of Minnesota Pretrial Evaluation: Scale Validation Study

Fourth Judicial District Research Division
Marcy R. Podkopacz, Ph.D.,
Research Director
October, 2006
www.mncourts.gov/district/4

Background

- Fourth Judicial District synonymous with Hennepin County which is composed of Minneapolis and the surrounding suburbs.
- Accounts for over one-quarter of the state's population and between 30-70% of the state's criminal filings – depending on the type of crime.
- MN is a 'right to bail' state.
- All suspects arrested for felony, gross misdemeanor and 'targeted' misdemeanor crimes (such as domestic assault, DUI, etc.) go through a Pretrial Evaluation to determine 'risk' of failing the pretrial conditions of: making all appearances and remain law abiding.

Background

- Prior to 1992 the pretrial release scale used in Hennepin County was a modified Vera scale.
- The current scale designed in 1992 has never been validated and it used in most of MN counties now.
- The population to be evaluated changed after the 1992 scale research was complete (included misdemeanants).
- The current scale items are a culmination of indicators based on prior research and policy issues.
- Pretrial Unit is composed of probation officers given discretion by the Court to release charged defendants pretrial if the defendant is not charged with an offense on the Judicial Review list and if a defendant's total pretrial score is less than 18.

Research Questions

- Is the scale valid?
 - Does it explain as much variance as the previous scale?
 - Are all of the items significant?
- Are the items racially biased?
- Are the same proportion of people being held pretrial as when the scale was designed?
- What effect does the probation override have on the release decision?
- Does the probation override introduce bias?

Research Design

- 7,000-8,000 pretrial evaluations done annually
- Random sample of 10% for each of five years: 2000-2004
- Matched data with the Fourth Judicial District court information system and with the MN Bureau of Criminal Apprehension data
- After eliminating cases of incomplete data, the final sample was 3,378.

Demographics

- 45% of the defendants are under 30 years old.
- 42% are white, 48% are black or African, 6% are Native and the remaining 2% are Asian or Hispanic
- Males make up 83% of the sample.
- Two-thirds of defendants have never married.
- Two-thirds have one child or more -13% 4 or more children.
- 26% have not completed high school, 28% high school graduates.

Pretrial Process

- 34% of defendants are charged with felony level offenses, 26% with gross misdemeanor offenses and the remaining 40% are misdemeanor charges.
- Of the non-felony defendants, over half (52%) are charged with domestic assault and 21% are charged with DUI.
- About 80% of defendants are released at some point while on pretrial status.
- 64% are released before or at the first appearance.

Average Scale Score over Time

| <i>Year</i> | <i>Mean</i> | <i>Median</i> | <i>Maximum Score</i> |
|-------------|-------------|---------------|----------------------|
| <i>2000</i> | 17.05 | 13 | 94 |
| <i>2001</i> | 15.97 | 13 | 99 |
| <i>2002</i> | 16.25 | 13 | 106 |
| <i>2003</i> | 17.31 | 13 | 79 |
| <i>2004</i> | 16.91 | 13 | 154 |

Analysis of Variance: $F=1.15$, significance level $p=.331$

No significant differences across years.

Pretrial Scale Points and Percent

| Pretrial Scale Items | Scale Score | Percent With Item |
|--------------------------------------------------------------------------------------------------|-------------|-------------------|
| Present Offense on the Judicial Review List (mostly felony against persons) | +9 | 52.2% |
| Weapon Used (MN Statute 609.11) | +9 | 11.2% |
| Present offense was a felony NOT on Judicial Review List | +3 | 21.0% |
| Age as of the booking date of 21 years old or younger | +3 | 15.8% |
| Living Alone | +1 | 14.7% |
| Employed less than 20 hours or, unemployed, or not a student, or not receiving public assistance | +3 | 38.8% |
| Current MN residence: 3 months or less | +1 | 4.9% |
| EACH prior felony or gross misdemeanor <i>person</i> conviction | +9 | 20.1% |
| EACH prior misdemeanor <i>person</i> conviction | +6 | 19.8% |
| One or more prior felony convictions | +3 | 31.2% |
| One or more prior 'other' gross misdemeanor/misdemeanor convictions | +1 | 61.0% |
| Failure to appear within the last three years | +6 | 30.6% |

Scale and Probation Recommendations

| Scale Score Recommendations | | |
|---------------------------------------|------------------|----------------|
| <i>Category</i> | <i>Frequency</i> | <i>Percent</i> |
| Unable to Score | 116 | 3.4 |
| No Bail Required Score of 0-8 | 837 | 24.8 |
| Conditional Release Score of 9-17 | 1,239 | 36.7 |
| Bail Required Score of 18 or above | 1,186 | 35.1 |
| Total | 3,378 | 100.0 |

| Probation Recommendations | | |
|---------------------------|------------------|----------------|
| <i>Category</i> | <i>Frequency</i> | <i>Percent</i> |
| Unable to Score | 40 | 1.2 |
| No Bail Required | 572 | 16.9 |
| Conditional Release | 879 | 26.0 |
| Bail Required | 1,887 | 55.9 |
| Total | 3,378 | 100.0 |

Distributions for both Scale recommendations and Probation recommendations were consistent across all five years of the study.

Agreement between Scale Score and Probation Recommendation

| | <i>Override Less</i> | <i>No Override</i> | <i>Override More</i> | <i>Total</i> |
|------------------|----------------------|--------------------|----------------------|--------------|
| <i>Frequency</i> | 356 | 1,672 | 1,155 | 3,183 |
| <i>Percent</i> | 11.2 | 52.5 | 36.3 | 100.0 |

Override Less = Scale score would recommend Conditional Release (CR) but Probation would recommend No Bail Required (NBR) – or – Scale would recommend Bail Required and Probation would recommend CR or NBR.

Override More = Scale would recommend NBR but Probation would recommend Conditional Release or Bail Required – or – Scale would recommend CR but Probation would recommend Bail Required.

Missing data=195

This agreement was consistent across all five years of the study.

When are Overrides asked for?

- In 39% of the felony cases, 61% of the gross misdemeanor cases and 53% of the misdemeanor level cases Probation Officers are asking for overrides.
- More restrictive release options (Override More) are asked for most often for: GM DUI cases (30%), misdemeanor domestic assault cases (27%), and property felonies (11%).
- Less restrictive release options (Override Less) most often asked for were: misdemeanor domestic assault cases (39%), property felony cases (19%), non-domestic non-DUI misdemeanor cases (10%).

Do the Overrides Introduce Race Bias?

| Racial Group | Override Less | No Override | Override More | Total |
|--------------|---------------|-------------|---------------|--------|
| Non-Whites | 211 | 1,108 | 500 | 1,819 |
| | 11.6% | 60.9% | 27.5% | 100.0% |
| Whites | 145 | 564 | 655 | 1,364 |
| | 10.6% | 41.3% | 48.0% | 100.0% |
| Total | 356 | 1,672 | 1,155 | 3,183 |
| | 11.2% | 52.5% | 36.3% | 100.0% |

Chi-square 148.02, degrees of freedom = 2, significance=.000

Probation officers didn't ask for less restrictive release options differently by racial group but they did differentiate by race when it came to asking for more restrictive release options. In about 28% of the cases that involved non-white defendants they asked for a stricter release option whereas they asked for this same level of release for 48% of the non-white defendants.

Dependent Variables

- Pretrial Failure defined as:
 - Failure to appear for a court appearance during pretrial window (from release from jail to disposition of the case). Overall 26% failure for our population.
 - Crime during pretrial window (new offense date between release from jail to disposition of the case) and the new crime is defined as convictions only. Overall 10% failure for our population.

Correlation Matrix

(N=2,689 – only those that were released prior to disposition)

| <i>Independent Variables</i> | <i>Pretrial Crime</i> | <i>Failure to Appear</i> |
|---------------------------------------------------------------------------------------------------------------|-----------------------|--------------------------|
| Present offense on the Judicial Review list (mostly felony against persons) (1=yes, 0=no) | -.068** | -.247** |
| Present offense was a felony NOT on Judicial Review list (1=yes, 0=no) | .106** | .224** |
| Weapon used (MN Statute 609.11) (1=yes, 0=no) | -.009 ns | -.085** |
| Age as of the booking date of 21 years old or younger (1=yes, 0=no) | .010 ns | .046* |
| Living alone (1=yes, 0=no) | -.020 ns | -.002 ns |
| Employed less than 20 hours or, unemployed, or not a student or not receiving public assistance (1=yes, 0=no) | .083** | .145** |
| Current MN residence: 3 months or less (1=yes, 0=no) | -.001 ns | .006 ns |
| Failure to appear within last three years (1=yes, 0=no) | .145** | .319** |
| Prior criminal conviction score (interval scale) | .123** | .079** |

*=significant at the .01 level; ** =significant at the .001 level; ns=not significant

No Multicollinearity between Independent Variables

Are independent variables (scale items) racially biased?

- Are the variables related to race and unrelated to the dependent variables?
 - Living alone is unrelated to either dependent variable and is related to race (more whites live alone, significant $p < .01$).
 - Weapon use is unrelated to pretrial crime and is related to race (more non-whites use weapons, significant $p < .001$).
 - 21 or younger at booking for the main offense is not related to pretrial crime but is related to race (non-whites are more often 21 or younger than white defendants, significant $p < .001$).

Testing the Hennepin County Pretrial Scale

Logistic Regression Coefficients (n=2,689)

| <i>Independent Variables</i> | <i>Pretrial Crime</i> | <i>Failure to Appear</i> |
|---------------------------------------------------------------------------------------------------------------|-----------------------|--------------------------|
| Present offense on the Judicial Review list (mostly felony against persons) (1=yes, 0=no) | -.333* | -1.018*** |
| Present offense was a felony NOT on Judicial Review list (1=yes, 0=no) | .330* | .301** |
| Weapon used (MN Statute 609.11) (1=yes, 0=no) | .171 ns | -.186 ns |
| Current MN residence: 3 months or less (1=yes, 0=no) | .281 ns | .411 ns |
| Does the defendant live alone? (1=yes, 0=no) | -.257 ns | -.017 ns |
| Employed less than 20 hours or, unemployed, or not a student or not receiving public assistance (1=yes, 0=no) | .373** | .438*** |
| Age as of the booking date of 21 years old or younger (1=yes, 0=no) | .089 ns | .206 ns |
| Failure to appear within last three years (1=yes, 0=no) | .809*** | 1.454*** |
| Prior criminal conviction score (interval scale) | .027*** | .012** |
| Constant | -2.854 *** | -1.467 *** |
| Model Characteristics | | |
| Nagelkerke R-squared (Variance Explained) | 9.3% | 23.8% |
| Model Chi-square (9 degrees of freedom) | 118.84 *** | 477.74 *** |
| Percent Correctly Classified | 90.4% | 77.0% |

*=significant at the .05 level; **=significant at the .01 level;*** =significant at the .001 level; ns=not significant

Testing the Hennepin County Pretrial Scale

Logistic Regression Coefficients

Parsimonious Models

(n=2,689)

| <i>Independent Variables</i> | <i>Pretrial Crime</i> | <i>Failure to Appear</i> |
|---------------------------------------------------------------------------------------------------------------|-----------------------|--------------------------|
| Present offense on the Judicial Review list (mostly felony against persons) (1=yes, 0=no) | -.457*** | -1.058*** |
| Present offense was a felony NOT on Judicial Review list (1=yes, 0=no) | .313* | .320** |
| Employed less than 20 hours or, unemployed, or not a student or not receiving public assistance (1=yes, 0=no) | .428** | .473*** |
| Failure to appear within last three years (1=yes, 0=no) | .838*** | 1.452*** |
| Prior criminal conviction score (interval scale) | .027*** | .010* |
| Constant | -2.730 *** | -1.433 *** |
| Model Characteristics | | |
| Nagelkerke R-squared (Variance Explained) | 8.7% | 23.8% |
| Model Chi-square (9 degrees of freedom) | 111.89 *** | 471.514 *** |
| Percent Correctly Classified | 90.4% | 77.4% |

*=significant at the .05 level; **=significant at the .01 level;*** =significant at the .001 level; ns=not significant

Testing the Hennepin County Pretrial Scale

Logistic Regression Coefficients

Parsimonious Models with PO Override

(n=2,689)

| <i>Independent Variables</i> | <i>Pretrial Crime</i> | <i>Failure to Appear</i> |
|---------------------------------------------------------------------------------------------------------------|-----------------------|--------------------------|
| Present offense on the Judicial Review list (mostly felony against persons) (1=yes, 0=no) | -.261 ns | -1.068*** |
| Present offense was a felony NOT on Judicial Review list (1=yes, 0=no) | .356* | .298* |
| Employed less than 20 hours or, unemployed, or not a student or not receiving public assistance (1=yes, 0=no) | .406** | .453*** |
| Failure to appear within last three years (1=yes, 0=no) | .823*** | 1.417*** |
| Prior criminal conviction score (interval scale) | .027*** | .008 ns |
| Probation officer agreed with the scale (1=yes, 0=no) | -.176 ns | .321*** |
| Constant | -2.730 *** | -1.433 *** |
| Model Characteristics | | |
| Nagelkerke R-squared (Variance Explained) | 9.2% | 24.0% |
| Model Chi-square (9 degrees of freedom) | 117.38 *** | 481.74 *** |
| Adding PO override Chi-square change | 1.55 ns | 10.23 *** |
| Percent Correctly Classified | 90.4% | 77.4% |

*=significant at the .05 level; **=significant at the .01 level;*** =significant at the .001 level; ns=not significant

What is the effect of the Override?

| Probation Override? | Failed to Appear | | Made all Appearances | |
|------------------------|---------------------|-------|-------------------------|--------------|
| | Non-white | White | Non-white | White |
| Override Less | 14.9% | 14.1% | 10.5% | 9.8% |
| No Override | 60.6% | 54.6% | 61.0% | 38.1% |
| Override More | 24.4% | 31.2% | 28.5% | 52.1% |

Chi-square for pretrial failure to appear: 3.96, 2 df, sig.=.138

Chi-square for no pretrial failure to appear 151.15, 2 df, sig.=.000

Answers to Research Questions

- Is the scale valid?
 - Does it explain as much variance as the previous scale?
 - Yes and more.
 - Are all of the items significant?
 - No four of them are not (weapon used, live alone, MN resident, under 21 at offense).
- Are the items racially biased?
 - Some of them are and they are the ones that are not important in the logistic regression (weapon use, live alone, under 21 at offense).
- Are the same proportion of people being held pretrial as when the scale was designed?
 - Yes (scale average hasn't changed and the target percentage of 60% being released at or before the first court appearance has been met).
- What effect does the probation override have on the release decision?
 - It does help predict failure to appear for whites (for those who end up making their appearances).
 - It does not help predict failure to appear for non-whites.
 - It does not help predict pretrial crime.
- Does the probation override introduce bias?
 - Yes, probation officers are asking for more restrictive release options for whites compared to non-whites.

Recommendations

- Remove items on the pretrial scale that are racially biased.
- Add items that help to better explain the variation in pretrial crime and failure to appear in order to improve the predictive ability.
- Analyze reasons for probation overrides to explore what is missing from the scale that would give probation officers confidence to use the scale recommendation consistently.
 - Conduct a content analysis of written reasons given for overrides. We took a 15% random sample of override cases to explore the reasons.
 - Reviewed results with the probation officers for validity of the content analysis.
- Improve data collection elements in our computerized court system to capture the judicial release decision as we move to our new court information in July of 2007.

Content Analysis of Probation Overrides

- A content analysis of the reasons for the overrides suggests that probation officers find other indicators on the full bail evaluation (that are not on the Pretrial Scale itself) to be the driving force behind the overrides.
- For example, they cite victim safety, chemical dependency issues, mental health issues or refusal by the defendant to stay on his/her medication as reasons to request an override.
- In addition probation officers often ask for more restrictive release decisions when they do not have all of the information available to them, such as when they have not seen the police report, have not been able to contact the victim or when they are unable to determine whether a weapon was used in the commission of the crime.
- Finally, in the area of prior history the scale does not differentiate whether the defendant had one or ten prior non-person offenses and the same was true for failure to appear – six points are added to the scale score for one missed appearances or ten missed appearances. For defendants with multiple past non-person convictions or multiple failures to appear probation would ask for more restrictive overrides.

Other Critical Issues

- We reviewed the Judicial Review list and found it was badly in need of updating.
 - Items had been added over the years but nothing had been removed
 - No one was in charge of updating the repealed statutes
 - We removed offense that were not explicitly person offenses
- We asked the County Attorney's office to review the Person Conviction list and update it.
- Review Conditional Release
 - What conditions are we currently using for which types of offenders?
 - What do we know about how well these conditions are working?
 - What does the national research tell us about what conditions work best for what type of offender?

Bench has made the following decisions

- Probation will no longer provide a recommendation to the bench. The pretrial tool will only be used for to gather objective information consistently across all defendants and to provide the bench with a numerical score.
- Probation will still provide comments to the bench on facts that they think might inform the pretrial decision but will not provide a recommendation.
- The vote on the new tool is occurring this morning at the Executive Committee and we expect it to pass without controversy.

Conditional Release

- The bench has not finalized this part of the process yet – it is still being worked on in committee. But the final decisions should be done by the end of June.

Proposed New Scale....

| <i>Type</i> | <i>Item</i> | <i>Weight</i> |
|----------------------------------------------------------|----------------------------------------------------------------------------------------------|---------------|
| <i>Charged Current Offense Information</i> | Felony level offense on Judicial Review list | 12 points |
| | Felonies not on the Judicial Review list and non-felony person offenses | 6 points |
| | Gross Misdemeanor DWI | 3 points |
| <i>Personal Information on the Defendant</i> | Employed less than 20 hrs/week, not a student, not receiving public aid (if yes) | 3 points |
| | Homeless – or – 3 or more addresses during the past 12 months (if yes) | 1 point |
| | Current problematic chemical use (if yes) | 2 points |
| <i>Past History Of Failure to Appear And Convictions</i> | Prior bench warrant for FTA within last 3 years (if one or two) | 6 points |
| | Prior bench warrant for FTA within last 3 years (if three or more) | 9 points |
| | Each Prior Felony <i>Person</i> convictions | 9 points |
| | Each Prior Non-felony <i>Person</i> convictions | 6 points |
| | Each Prior Felony <i>Non-person</i> conviction | 2 points |
| | Each Prior Non-felony <i>Non-person</i> conviction (EXCLUDE non-alcohol traffic offenses) | 1 point |

How we assessed this without a full validation

- We took an entire week of defendants and rescored the defendant on the new scale.
- A panel of judges reviewed all the information (the full bail evaluation form, prior history (crimes and FTA), pretrial scale items and total score.
- They found that the new scale did not change the % of defendants in each of the three groups (NBR, CR, bail) – but it changed who was in each group.
- The old scale identified serious offenders quite well but the new scale identified both the serious offenders and chronic offenders.

Next Steps

- After the Pretrial Scale is finalized we will begin training staff and our bench on the new tool.
- Programming for the changes will be completed by September/October and once that is done we will implement the new Pretrial Scale.
- Validate the new Pretrial Scale and Conditional Release within the next three years.

Fourth Judicial District of Minnesota Pretrial Evaluation: Scale Validation Study

Fourth Judicial District Research Division
Marcy R. Podkopacz, Ph.D.,
Research Director
October, 2006
www.mncourts.gov/district/4