



## Minnesota Screening Tool Assessing Recidivism Risk 2.0 (MnSTARR 2.0)

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### *What is the MnSTARR 2.0?*

It's a fully-automated, gender-specific recidivism risk assessment that has been developed and validated on the Minnesota prisoner population. The DOC has used the MnSTARR 2.0 to assess recidivism risk since November 2016.

### *Has the MnSTARR 2.0 changed since November 2016?*

No. The MnSTARR 2.0 has not changed at all over the last two years. What has recently changed is how the DOC has used the MnSTARR 2.0 to make post-release supervision decisions. Mandatory placement on intensive supervised release (ISR) is now based on:

- A violent recidivism probability of 30% or higher
  - The top 15% for violent recidivism risk
- A sex offense recidivism probability of 10% or higher
  - The top 15% for sex offense recidivism risk

Discretionary ISR now includes anyone who is Very High on the MnSTARR 2.0 (more on how that is determined below) who does not meet the mandatory criteria.

### *Is the MnSTARR 2.0 a needs assessment?*

No. It's designed strictly to predict recidivism. As such, it tells us who we should be prioritizing for correctional interventions.

This does not mean, however, that the MnSTARR 2.0 is a static assessment. On the contrary, it contains both dynamic and static items. The dynamic items are not designed to identify an individual's criminogenic needs. However, the dynamic items do indicate whether needs areas have improved or grown worse while a person is in prison.

Example: Anti-social peers is a major criminogenic needs area, and the MnSTARR 2.0 contains a risk item (security threat group or STG involvement) and a protective item (prison visits) for this domain. Offenders with STG involvement are generally more committed to preserving ties with anti-social peers, and this is borne out by the fact that STG involvement increases recidivism risk. On the other hand, prison visits, which are associated with reduced recidivism, generally provide inmates with sources of pro-social support.

### *What are the areas considered by the MnSTARR 2.0?*

- Prior criminal convictions
  - Includes severity level (felony) and
  - Types of Offenses, such as:

- Violent
  - Drug
  - Property
  - Other
- Type of Admission to Prison
  - New court commitment, probation violator or supervised release violator
- Index Offense Type (most serious offense for those serving multiple sentences)
- Discipline convictions in prison
- Involvement in security threat groups
- Age at release
- Marital status
- Length of stay in prison (months)
- Educational achievement
- Prison visits
- Participation in prison-based programming, including:
  - Thinking for a Change, chemical dependency treatment, sex offender treatment, EMPLOY, CIP, Prison Fellowship Academy, work release, and earning a degree (secondary or post-secondary)
- Discharged from prison or released to supervision

***What types of recidivism does the MnSTARR 2.0 predict?***

- Felony
- Non-violent
- Violent
- Repeat sexual offending (only for males)
  - This comes from the MnSOST-3.1.2, which is scored by the DOC's Risk Assessment/Community Notification (RA/CN) unit.

***What do the probabilities mean for each type of recidivism measure?***

The probabilities signify an individual's likelihood of reconviction within three years of release from prison. For sex offense recidivism (for males only), the probability reflects the likelihood of a sex offense reconviction within four years of release from prison.

Example: A male prisoner has a violent recidivism probability of 40 percent. This is this person's likelihood of having a violent offense reconviction within three years of release from prison. Among male Minnesota prisoners, a violent recidivism probability of 40 percent would place this person at the 93<sup>rd</sup> percentile; in other words, only 7 percent of male Minnesota prisoners have a higher violent recidivism probability.

***How long is the MnSTARR 2.0 valid?***

The MnSTARR 2.0 is valid for up to four years post-release for sex offense recidivism and up to three years post-release for the other recidivism measures—violent, non-violent and felony

***How do the recidivism probabilities translate to risk levels?***

As with the MnSTARR, inmates will continue to be placed in one of four risk levels

- Very High (top 20 percent)
- High (21-40 percent)
- Medium (41-60 percent)
- Low (bottom 40 percent)

Each recidivism measure has a cut point for the four risk levels. For example, below are the risk level cut points for felony recidivism for males:

Very High: 72 percent or higher

High: 52-71 percent

Medium: 42-51 percent

Low: Below 42 percent

Risk levels are determined by the recidivism probability (or probabilities) that meet(s) or exceed(s) the highest risk level cut point. If the recidivism probabilities for a male inmate (who doesn't have a prior sex offense conviction) fall in the Medium range for non-violent and violent recidivism but within the Very High range for felony recidivism (a probability of 72 percent or higher), this individual would be classified as Very High risk.

***Does participation in, or completion of, effective DOC programming reduce risk?***

Yes. Participation in one of the interventions included on the MnSTARR 2.0 (see above) will decrease risk for at least one of the recidivism measures.

***Does participation in, or completion of, effective DOC programming result in a risk level reduction?***

Sometimes. Please note, however, that a reduction in recidivism risk is not exactly the same as a risk level reduction.

It generally depends on several factors. First, participation must be in one of the interventions included on the MnSTARR 2.0 (see above). Second, whether participation/completion of an effective intervention produces a risk level reduction depends on whether the recidivism probabilities are close to a risk level cut point. Third, it also depends on whether the individual has had any discipline convictions or had any STG involvement while in prison.

Example: An individual is Very High risk because he has a felony recidivism probability of 74 percent, which exceeds the Very High cut point of 72 percent for felony recidivism for males. Completing chemical dependency treatment reduces his felony recidivism probability from 74 percent to, say, 68 percent. In doing so, it drops his risk level from Very High to High.

Another individual is Very High risk because he has a felony recidivism probability of 95 percent. Completing chemical dependency treatment reduces his felony recidivism probability from 95 percent

to, say, 85 percent. This individual would remain Very High risk, even after completing treatment, because his felony recidivism probability (85 percent) still exceeds the cut point for Very High (72 percent).

***Why is the DOC using the MnSTARR 2.0 (instead of another assessment)?***

Compared to either the LSI-R or the LS/CMI, both the MnSTARR and the MnSTARR 2.0 have been shown to be vastly superior in predicting recidivism for the Minnesota prisoner population. Just as important, because the MnSTARR 2.0 is fully automated, it is a much more efficient and cost-effective assessment that has substantially expanded the DOC's capacity to assess risk.

***How was the MnSTARR 2.0 developed and validated?***

The sample used to create the MnSTARR 2.0 consisted of 35,506 males and 3,849 females released from prison between 2006 and 2011. The MnSTARR 2.0's predictive models were developed on the individuals released from 2006-2009 (23,838 males and 2,546 females). The performance of these predictive models was then evaluated on those released in 2010 and 2011 (11,668 males and 1,303 females).

More technical details: regularized logistic regression is the classification algorithm used for all predictive models, and split-sample, k-fold and bootstrap resampling methods were used to select predictors and validate the models. Multiple metrics were used to evaluate predictive performance.