Static-99R

&

Static-2002R

Evaluators' Workbook

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This version updates and replaces the October 19, 2016 *Static-99R & Static-2002R Evaluators' Workbook* and all other previous versions. From the 2016 version, new 10-year sexual recidivism rate norms for Static-99R with routine/complete samples have been added and their 5-year norms have been updated. For all recidivism estimate tables, 20-year projections have been added. A new section has been added on accounting for time offence-free since release from the index offence. Some comments have been added on using both Static-99R and Static-2002R. Lastly, we have modified and expanded the report writing templates and resources. All other normative data (e.g., 5-year estimates for Static-2002R, risk ratios for Static-99R and Static-2002R, percentiles for Static-99R and Static-2002R) remain unchanged from the 2016 version.

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What's New in 2021!

Previous versions of the Evaluators' Workbooks are available from our website, www.saarna.org (previously www.static99.org).

To watch a video outlining key changes in this workbook (with helpful graphs), see https://www.youtube.com/watch?v=0pPeeuBrNuA

Introduction to SAARNA

More than 20 years after the development of Static-99, much has changed. Karl Hanson and David Thornton have retired from their government positions where they developed the STATIC scales and where they had access to certain resources (e.g., funding for research assistants). The scales have been widely adopted around the world and undergone revisions (normative data, coding rules, time free adjustments). This has necessitated a global team of people to assist with training, implementation, and resources. We have identified a need for change and a succession plan that would allow for Static-99R and the associated measures (e.g., Static-2002R, STABLE-2007, and ACUTE-2007) to grow and continue to contribute to quality risk and need assessments into the future. Consequently, we are pleased to introduce a new Canadian-based non-profit organization:

SAARNA
(Society for the Advancement of Actuarial Risk Needs Assessment)
www.saarna.org

The goal of SAARNA is to promote high-quality research and implementation of tools for the assessment of risk and intervention needs relevant to sexual, violent, and general recidivism. We are committed to keeping the STATIC/STABLE/ACUTE measures available to users free of charge, but users will have the option of becoming affiliates and accessing additional resources. Revenue generated will be used for website maintenance, additional resources, training and knowledge dissemination, administrative support, and small grants to improve research, training, or implementation. The STATIC development team is excited by this new phase and is looking forward to you joining us in this new endeavour. Information and resources for our scales can be found at our website, www.saarna.org.

Updated 5-Year and New 10-Year Normative Data for Static-99R with Routine/Complete Samples

Previous normative data for routine/complete correctional samples included only 5-year data as there were insufficient numbers of recidivists for credible 10-year estimates. Lee and Hanson (2021) have updated the samples, allowing for the creation of 10-year routine recidivism norms, and an update to the 5-year norms.

These updates also include more data from the United States. Specifically, one California sample was updated, and two new samples were added, one from California and one from New Jersey. Further information on these new samples is available in the later sections of this workbook that describe the samples in the normative data.

Projecting Long-Term Sexual Recidivism Rates

The recidivism norms also include 20-year projections, which can be thought of as a lifetime estimate. The method used to derive these estimates differs from our previous norms and will be briefly discussed.

Actuarial risk assessment instruments are accompanied by tables showing the recidivism rate associated with each score over defined follow-up periods. For Static-99R and Static-2002R, these follow-up periods have traditionally been 5 years and 10 years. It has long been known that additional recidivism occurs after the first 10 years of the follow-up period. For example, Hanson, Morton, and Harris (2003), based on a sample of nearly 5,000 men sentenced for sex offending, used survival analysis to estimate sexual recidivism rates over 5-, 10-, 15-, and 20-year follow-ups. The 20-year rate was about twice the 5-year rate and about 1.35 times the 10-year rate. Very little sexual recidivism appears to occur after a 20-year follow-up so the 20-year rate can be regarded as very close to a “lifetime rate” (Hanson, Harris, et al., 2018).

Information about relative risk is often sufficient to guide resource allocation decisions, such as who should be prioritized for treatment or for more intense supervision. When absolute recidivism rates are of interest, however, lifetime rates may be particularly relevant. Lifetime rates account for delayed relapse into criminal behavior as well as late reporting of offences; importantly, very long-term (20 year) rates maximize the opportunity for the least persistent individuals to be detected. Furthermore, in some forensic contexts, it is specifically lifetime risk that is legally relevant.

Earlier attempts to project lifetime recidivism rates were based on ratios. Doren (2009), for example, proposed that evaluators estimate lifetime rates by doubling the 5-year rates. This was not completely successful. As Wollert and Cramer (2012) noted, the use of a constant multiplier overestimates the observed, long-term estimates for individuals placed in the higher risk levels. A more robust approach is provided by using a more nuanced statistical model. Hanson, Harris, et al. (2018), applying discrete time survival analysis to a person-period dataset involving 105,347 observations, were able to show that “the change in yearly hazard rates for sexual recidivism was constant (in log odds units)”. This means that, given a recidivism rate for a limited period (say 5 years) it is possible to derive the initial hazard rate and then project forward, year by year, to estimate recidivism rates for any follow-up period. To estimate lifetime rates, the yearly rates can be accumulated to provide a projection over 20 years, after which the

risk for new sexual crimes is negligible. Thornton et al. (2021) demonstrate the calculations and provide tables showing the 20-year projected sexual recidivism rates associated with different Static-99R scores. A spreadsheet that operationalizes this process is available on the SAARNA website (see the Time-Free Calculator at www.saarna.org) and is described further below.

For the convenience of evaluators, the tables of recidivism rates provided in this workbook now include projected 20-year sexual recidivism rates. The examples assume that evaluators start from the logistic regression-based recidivism estimates reported in our tables. Note, however, the projections are not scale specific, and the Time-Free Calculator can be used to calculate 20-year rates based on any method of assessing risk at time of release. For example, you can input the recidivism estimates from the STABLE-2007 combined with Static-99R, Static-2002R, or Risk Matrix-2000 to derive long-term projections, or other risk scales such as the VRS-SO. Note that your overall confidence in the final projections should consider the quality of the recidivism estimates you inputted.

The 20-year rates can be estimated either from the 5-year rates or from the 10-year rates. Five-year rates are estimated from more samples and a larger cumulative sample size so they are known more precisely than 10-year rates. On the other hand, starting from 5-year rates involves projecting over 15 years while starting from 10-year rates involves projecting over only 10 years. Consequently, the error in estimating the projection equation will have a larger effect when starting from 5-year rates than the 10-year rates. As it turns out, regardless of whether you start from 5-year rate or from 10-year rates, you get similar estimates of 20-year rates. Because there are strengths and weakness to choosing the 5-year and 10-year rates, the 20-year rates shown in our tables are based on averaging these two sets of projections.

The specific Static-99R 20-year projections in this workbook were calculated using the methods specified by Thornton et al. (2021), but using the updated datasets from Lee and Hanson (2021). The Static-2002R 20-year projections used the data from Hanson, Thornton, et al. (2016).

Adjusting Risk Based on Time Offence-Free and Post-Index Offending

A series of papers have helped understand and model how risk declines post-release from the index sex offence (Hanson et al., 2014, 2018; Thornton et al., 2021). The longer the person stays sex-offence free, the lower their risk. Additionally, a new conviction for post-index non-sexual offending increases risk. This effect is additive to and independent from the time free effect. That means that if someone has been sex offence-free for 10 years, for example, a new conviction for something like theft or even assault (non-sexual) does increase their risk but does not fully erase the reductions in risk from their time sex offence free. There are two ways to incorporate these time free adjustments when using Static-99R (and one way when using Static-2002R).

1) The Chart – Available for Static-99R only (Hanson et al., 2018)

This workbook includes a chart denoting the Static-99R risk level upon release from the index offence, and reductions in risk level over time assuming no new sex offences have been detected. Note that the Static-99R score does not change. It is the interpretation of the score (here, the risk level) that can change over time.

When using this chart, time free refers to time in the community, so subtract time in custody for things like probation/parole violations, or new non-sexual offending. Additionally, having a new conviction for a non-sexual offence does not negate the time free adjustments. It has the effect of setting the person back 3.3 years.

2) The Time-Free Calculator – can be used for Static-99R/2002R and any other scale with absolute recidivism estimates (Thornton et al., 2021).

The Time-Free Calculator allows more detailed calculations. Input the date of release and a recidivism estimate, and a timeframe associated with that estimate. The calculator provides projections up to 20 years post-release, and calculates the recidivism probability estimates taking into account time sex offence free, as well as time in custody for non-sexual offences, and presence of a non-sexual conviction.

For both methods of adjusting for time free, new non-sexual convictions are accounted for once in total, not once per conviction. The time-free adjustments in this calculator are independent of the method used to assess initial risk, and evaluators using different risk tools can expect the same relative decline in risk.

The website (www.saarna.org) includes the Time-Free Calculator, its user manual, and the paper summarizing the methods used to develop it. There is also an 8-minute youtube video available to provide an overview of these materials (https://youtu.be/ZvvTfRCWTZc), and a more extensive webinar will be forthcoming on www.saarna.org.

Using Both Static-99R and Static-2002R

Our research has found that both Static-99R and Static-2002R provide unique information in predicting sexual recidivism (Babchishin et al., 2012a; Lehmann et al., 2013). However, for many routine decisions it may not be necessary to score two static risk scales given that the added value of using both is small. However, for high stakes decisions (e.g., civil commitment or indeterminate incarceration), using both scales may be useful. The optimal way of combining the results from the scales is not fully clear, but Lehmann et al.'s (2013) analyses of risk ratios demonstrated that averaging was the best approach. For recidivism probabilities, it is likely that some kind of average would also be preferable, but this particular

metric has not been tested. Averaging should be based on the most up-to-date versions of the Static-99R and Static-2002R norms and results from current forms of these instruments should not be averaged with results from earlier forms.

Report Writing Guidance

There have been some updates to the optional report writing guidance/examples to provide additional suggestions and research resources, incorporate the 10-year and 20-year estimates, and to continue to refine and improve the language of the templates (e.g., adopting person-first language by using phrases like “individuals charged or convicted of a sexual offence” rather than “sexual offender”).

Static-99R and Static-2002R Risk Levels

Static-99R and Static-2002R risk levels are based on the US Council of State Governments Justice Center standardized risk level system (Hanson, Bourgon et al., 2017). For an overview of how they were applied to Static-99R and Static-2002R, see Hanson, Babchishin et al. (2017). See also Appendix A for further description of the Risk Levels.

Static-99R risk levels:
Level I – Very low risk (Scores of -3 and -2)
Level II – Below average risk (Scores of -1 and 0)
Level III – Average risk (Scores of 1 to 3)
Level IVa – Above average risk (Scores of 4 and 5)
Level IVb – Well above average risk (Scores of 6+)

Static-2002R risk levels:
Level I – Very low risk (Scores of -2 and -1)
Level II – Below average risk (Scores of 0 and 1)
Level III – Average risk (Scores of 2 to 4)
Level IVa – Above average risk (Scores of 5 and 6)
Level IVb – Well above average risk (Scores of 7+)

We recognize that evaluators tend to prefer labels for risk levels (e.g., “very low risk”) and we have provided them above. However, we also encourage evaluators to recognize biases, heuristics, and emotional reactions that are inherent in such common language terms. Consequently, we encourage evaluators to use “Level I” (and so forth) either instead of or in addition to the labels for each level.

Risk levels are most useful when they are linked to decisions (e.g., treatment or supervision resource allocation). Some jurisdictions may develop their own risk levels to tailor the utility of Static-99R or Static-2002R for their decision-making purposes. For example, if a jurisdiction wants to refer the 10% highest risk individuals for high-intensity treatment, then it may make sense to create a risk level defined by the top 10% of scores (using percentiles). Alternately, matching offenders to tiered services may necessitate reducing the five risk levels to three (if so, we would recommend clumping the first two levels together and the last two levels together). When evaluators or jurisdictions develop their own risk levels linked to specific policy actions, we recommend that different words are used to describe site specific levels (different from the standard language proposed above), and when the site-specific levels are identified as different from those proposed by SAARNA, that the definition of the site-specific risk levels are clearly described in the report.

Estimated Percentiles

Static-99R Score	Percentile Rank defined as mid-point average				Observed Percentages		
	Percentile	95% CI			Below	Same	Higher
-3	1.3	0	2.9		0	2.7	97.3
-2	4.2	2.4	6.1		2.7	3.0	94.3
-1	9.7	5.7	13.9		5.7	7.9	86.4
0	18.7	13.4	24.1		13.6	10.3	76.1
1	31.7	23.8	39.7		23.9	15.7	60.4
2	48.3	39.5	57.1		39.6	17.5	42.9
3	65.7	57.0	74.3		57.1	17.2	25.7
4	79.6	74.0	85.1		74.3	10.7	15.0
5	88.7	84.6	92.5		85.0	7.4	7.6
6	94.2	91.9	96.2		92.4	3.6	4.0
7	97.2	95.6	98.6		96.0	2.5	1.5
8	99.1	98.2	99.8		98.5	1.2	0.3
9	99.9	99.5	100.0		99.7	0.28	0.02
10+	99.99	99.8	100.0		99.98	0.02	0

Static-2002R Score	Percentile Rank defined as mid-point average				Observed Percentages		
	Percentile	95% CI			Below	Same	Higher
-2	1.4	0	3.0		0	2.8	97.2
-1	4.2	2.6	6.1		2.8	2.9	94.3
0	9.0	5.5	12.8		5.7	6.7	87.6
1	17.3	12.3	22.5		12.4	9.7	77.9
2	30.1	22.2	38.3		22.1	16.0	61.9
3	47.1	38.1	56.1		38.1	17.9	44.0
4	63.7	55.9	71.4		56.0	15.3	28.7
5	78.0	71.1	84.7		71.3	13.5	15.2
6	88.3	84.3	92.1		84.8	7.1	8.1
7	93.3	91.3	95.1		91.9	2.8	5.3
8	95.9	94.2	97.4		94.7	2.5	2.8
9	98.3	96.9	99.5		97.2	2.3	0.5
10	99.7	99.3	100.0		99.5	0.4	0.1
11	99.97	99.8	100.0		99.9	0.09	0.01
12+	99.99	99.8	100.0		99.99	0.01	0

Source: Hanson, Lloyd, Helmus, & Thornton (2012). Although these percentiles were developed using Canadian data, available research supports their generalizability to other countries, particularly the United States and Sweden.

Relative Risk Ratios

Static-99R Score	Frequency (*n*)	Relative Risk Ratio
-3	73	0.19
-2	105	0.26
-1	384	0.37
0	473	0.52
1	565	0.72
2	599	1.00
3	598	1.39
4	491	1.94
5	333	2.70
6	209	3.77
7	120	5.25
8+	87	7.32

Note: Risk ratios were calculated from hazard ratios based on Cox regression coefficients derived from entering the continuous (i.e., unclumped) Static-99R scores (β = 0.332; *SE* = .022), with sample as strata (k = 8, n = 4,037). Due to small sample size, risk ratios are not presented for Static-99R scores greater than 8. The analyses were based on routine (i.e., relatively unselected) correctional samples.

Static-2002R Score	Frequency (*n*)	Relative Risk Ratio
-2	30	0.20
-1	36	0.28
0	102	0.38
1	135	0.52
2	192	0.72
3	221	1.00
4	220	1.38
5	195	1.90
6	137	2.63
7	88	3.62
8	45	5.00
9+	51	6.90

Note: Risk ratios were calculated from hazard ratios based on Cox regression coefficients derived from entering the continuous (i.e., unclumped) Static-2002R scores (β = 0.322; *SE* = .038), with sample as strata (k = 3, n = 1,452). Due to small sample size, risk ratios are not presented for Static-2002R scores greater than 9. The analyses were based on routine (i.e., relatively unselected) correctional samples.

Source: Babchishin, Hanson, & Helmus (2012b); Hanson, Babchishin, Helmus, & Thornton (2013)

Static-99R Recidivism Estimates
ROUTINE/COMPLETE SAMPLES

		Logistic Regression Estimates						
		5-Year Sexual Recidivism Rates			10-Year Sexual Recidivism Rates			Projected 20-year Estimates (Average)
Score	Risk Level	Predicted Recidivism Rate	95% CI		Predicted Recidivism Rate	95% CI		
-3	I	**0.7**	[0.5	1.0	**1.2**	0.7	2.1	**1.5**
-2	I	**1.1**	0.8	1.4	**1.8**	1.1	2.9	**2.2**
-1	II	**1.6**	1.2	1.9	**2.5**	1.7	3.8	**3.1**
0	II	**2.2**	1.8	2.7	**3.6**	2.6	5.1	**4.5**
1	III	**3.2**	2.7	3.7	**5.1**	3.9	6.7	**6.3**
2	III	**4.6**	4.0	5.2	**7.2**	5.8	8.9	**8.9**
3	III	**6.5**	5.8	7.2	**10.1**	8.5	11.9	**12.5**
4	IVa	**9.2**	8.4	10.1	**13.9**	12.1	15.9	**17.2**
5	IVa	**12.8**	11.7	14.1	**18.8**	16.4	21.5	**23.4**
6	IVb	**17.6**	15.8	19.6	**25.0**	21.5	28.9	**31.2**
7	IVb	**23.7**	20.9	26.7	**32.5**	27.3	38.2	**40.2**
8	IVb	**31.0**	27.0	35.4	**40.9**	33.7	48.6	**50.3**
9	IVb	**39.5**	34.1	45.2	**50.0**	40.7	59.2	**60.9**
10	IVb	**48.7**	42.0	55.4	--	--	--	--
11	IVb	--	--	--	--	--	--	--

Source: Lee & Hanson (2021) for 5- and 10-year estimates; methods from Thornton et al. (2021) used to generate 20-year projections

Static-99R Recidivism Estimates
HIGH RISK/NEED GROUP

Score	Risk Level	Logistic Regression Estimates: 5-Year Sexual Recidivism Rates: Predicted Recidivism Rate	5-Year: 95% CI		Logistic Regression Estimates: 10-Year Sexual Recidivism Rates: Predicted Recidivism Rate	10-Year: 95% CI		Projected 20-year Estimates (Average)
-3	I	--	--	--	--	--	--	
-2	I	--	--	--	--	--	--	
-1	II	**5.6**	3.5	9.1	**10.6**	5.8	18.4	**12.0**
0	II	**7.2**	4.7	10.7	**13.0**	7.9	20.5	**14.9**
1	III	**9.0**	6.4	12.5	**15.8**	10.7	22.8	**18.2**
2	III	**11.3**	8.6	14.6	**19.1**	14.1	25.4	**22.3**
3	III	**14.0**	11.3	17.2	**22.9**	18.2	28.5	**26.8**
4	IVa	**17.3**	14.5	20.5	**27.3**	22.5	32.6	**32.2**
5	IVa	**21.2**	18.0	24.8	**32.1**	26.7	37.9	**38.1**
6	IVb	**25.7**	21.5	30.3	**37.3**	30.5	44.7	**44.5**
7	IVb	**30.7**	25.1	37.0	**42.8**	33.9	52.3	**51.1**
8	IVb	**36.3**	28.8	44.5	**48.5**	37.1	60.1	**58.0**
9	IVb	**42.2**	32.6	52.5	--	--	--	--
10	IVb	**48.4**	36.6	60.5	--	--	--	--
11	IVb	--	--	--	--	--	--	--

Source: Hanson, Thornton, Helmus, & Babchishin (2016) for 5- and 10-year estimates; methods from Thornton et al. (2021) used to generate 20-year projections

Static-2002R Recidivism Estimates
ROUTINE/COMPLETE SAMPLE

Score	Risk Level	Logistic Regression Estimates			Projected 20-year Estimates
		5-Year Predicted Recidivism Rate	95% CI		
-2	I	**1.0**	0.6	1.7	**1.9**
-1	I	**1.5**	0.9	2.3	**2.9**
0	II	**2.2**	1.5	3.2	**4.2**
1	II	**3.2**	2.3	4.4	**6.1**
2	III	**4.6**	3.6	6.0	**8.7**
3	III	**6.8**	5.5	8.2	**12.8**
4	III	**9.7**	8.3	11.3	**18.0**
5	IVa	**13.8**	12.2	15.6	**25.1**
6	IVa	**19.2**	16.9	21.6	**34.0**
7	IVb	**26.0**	22.6	29.8	**44.5**
8	IVb	**34.3**	29.1	40.0	**56.1**
9	IVb	**43.7**	36.5	51.2	**67.8**
10	IVb	**53.5**	44.4	62.4	**78.1**
11	IVb	-	-	-	-
12	IVb	-	-	-	-
13	IVb	-	-	-	-

Source: Hanson, Thornton, Helmus, & Babchishin (2016) for 5-year estimates; methods from Thornton et al. (2021) used to generate 20-year projections

Static-2002R Recidivism Estimates
HIGH RISK/NEED GROUP

Score	Risk Level	Logistic Regression Estimates			Projected 20-year Estimates
		5-Year Predicted Recidivism Rate	95% CI		
-2	I	-	-	-	-
-1	I	-	-	-	-
0	II	**7.4**	4.2	12.6	**13.9**
1	II	**9.0**	5.6	14.1	**16.8**
2	III	**11.0**	7.5	15.7	**20.3**
3	III	**13.3**	9.8	17.7	**24.3**
4	III	**16.0**	12.6	20.0	**28.8**
5	IVa	**19.1**	15.8	23.0	**33.9**
6	IVa	**22.7**	18.9	27.0	**39.4**
7	IVb	**26.8**	21.9	32.3	**45.7**
8	IVb	**31.2**	24.6	38.7	**51.9**
9	IVb	**36.1**	27.3	45.9	**58.6**
10	IVb	**41.2**	30.0	53.4	**64.9**
11	IVb	-	-	-	-
12	IVb	-	-	-	-
13	IVb	-	-	-	-

Source: Hanson, Thornton, Helmus, & Babchishin (2016) for 5-year estimates; methods from Thornton et al. (2021) used to generate 20-year projections

Samples Used To Construct Percentile Ranks for Static-99R and Static-2002R

Ideally the percentiles calculated in the Evaluator Workbook would consider all Canadian adults convicted of a sexual offense as the reference category. An unbiased sample of all Canadian sexual offenders was not available; however, we were able to identify four relatively unbiased samples of sexual offenders released between 1990 and 2005 from the three major divisions of the Canadian criminal justice system: a) community, b) provincial prison (sentences of less than two years that are administered by the provinces), and c) federal prison (sentences of two years or more that are administered federally by the Correctional Service of Canada). We then used standard survey sampling statistics (Kalton, 1983) to estimate a representative normative (Canadian) sample from these multiple independent samples (see Hanson et al., 2012). Our data also found acceptable generalizability of these percentiles with California and Sweden, suggesting they are suitable to apply internationally.

The samples used to create the percentiles are listed below (along with a descriptive table), and full sample descriptions can be found in Appendix B.

Bigras (2007)
Boer (2003)
Haag (2005)
Hanson, Helmus & Harris (2015)

Characteristics of Samples Used for Percentiles

Sample	*N*	Age	Victim Type	Static-99	Static-99R	Static-2002	Static-2002R
		M (*SD*)	% Adults/ % Children	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)
Hanson et al. (2015)	595	42 (14)	36/54	2.6 (1.9)	2.1 (2.3)	3.8 (2.2)	3.2 (2.4)
Boer (2003)	296	41 (12)	40/55	3.2 (2.3)	2.8 (2.8)	4.5 (2.5)	3.9 (2.7)
Haag (2005)	663	41 (12)	46/52	2.8 (2.0)	2.5 (2.6)	4.6 (2.4)	4.1 (2.6)
Bigras (2007)	457	43 (12)	38/46	2.7 (2.0)	2.1 (2.4)	4.1 (2.3)	3.5 (2.5)
Total	2,011	42 (13)	40/52	2.8 (2.0)	2.3 (2.5)	4.2 (2.3)	3.7 (2.5)

Note. Age refers to age at release.

Samples Used to Construct Risk Ratios for Static-99R and Static-2002R

A risk ratio is a global term to describe a ratio to compare recidivism among two groups (e.g., scores of 7 compared to the median score of 2 on Static-99R or a score of 7 compared to the median score of 3 on Static-2002R). There are different ways to calculate risk ratios such as rate ratios, odds ratios, or hazard ratios. In these datasets, hazard ratios were used to define risk ratios (see Babchishin et al., 2012b; Hanson et al., 2013).

The 8 samples (*n* = 4,037) used in the current study were selected from a larger group of studies used for the re-norming of Static-99 (Helmus, 2009). Of the 29 datasets available, 23 had the necessary information for calculating Static-99R risk ratios for sexual recidivism; however, only eight approximated routine samples that had not been preselected on risk-relevant characteristics or the need for treatment. These 8 samples were selected as most representative of the complete population of men charged or convicted of sexual offences in their respective jurisdictions. Of these, 3 samples also had Static-2002R scores (Bigras [2007], Boer [2003], and Hanson et al. [2007]).

See Appendix B for a description of these samples.

Bartosh, Garby, Lewis, & Gray (2003)
Bigras (2007)
Boer (2003)
Craissati, Bierer, & South (2011) Epperson (2003)
Hanson et al. (2015)
Långström (2004). The study examined sex offenders released from prison in Sweden
Rettenberger et al. (2013)

Descriptive Information for Static-99R samples Used for Risk Ratios

Study	*Cox Regression N*	*Logistic Regression* $N_{5\text{-}year}$	Static-99R *M* (*SD*)	Country	Recidivism Criteria	Type of Sample	Mostly Treated	Release Period	Year Release (*Mdn)*
Bartosh et al. (2003)	186	90	3.3 (2.9)	U.S.	Charges	Routine correctional	-	1996	1996
Bigras (2007)	480	206	2.1 (2.4)	Canada	Charges	Routine CSC	Mixed	1995-2004	1999
Boer (2003)	299	299	2.8 (2.8)	Canada	Conviction	Routine CSC	-	1976-1994	1990
Craissati et al. (2011)	209	200	2.2 (2.3)	U.K.	Conviction	Routine community supervision	Mixed	1992-2005	1998
Epperson (2003)	177	150	2.5 (2.6)	U.S.	Charges	Routine correctional	-	1989-1998	1995
Hanson et al. (2015)	702	-	2.4 (2.4)	Canada	Charges	Routine community supervision	-	2001-2005	2002
Långström (2004)	1,278	1,278	2.0 (2.4)	Sweden	Conviction	Routine European prison	No	1993-1997	1995
Rettenberger et al. (2013)	706	151	2.3 (2.3)	Austria	Conviction	Routine European prison	-	2000-2005	2003
Total	4,037	2,374	2.3 (2.5)	-	-	-	-	1976-2005	1997

Note. CSC = Correctional Service Canada (administers all sentences of at least two years). Average Static-99R computed using sample size from Cox regression. Sample includes all cases available for cox regression with sample as strata; three cases were deleted because the total follow-up time was less than the time to first observed recidivism event. Thirty-one cases from Hanson et al. (2007) were excluded from all 5-year analyses because there were no sexual recidivists in that group.

Descriptive Information for Static-2002R samples used for Risk Ratios

Study	*Cox Regression N*	*Logistic Regression* $N_{5\text{-}year}$	Static-2002R *M* (*SD*)	Country	Recidivism Criteria	Type of Sample	Mostly Treated	Release Period	Year Release (*Mdn*)
Bigras (2007)	454	196	3.5 (2.5)	Canada	Charges	Routine CSC	Mixed	1995-2004	1999
Boer (2003)	296	296	3.9 (2.7)	Canada	Conviction	Routine CSC	-	1976-1994	1990
Hanson et. al. (2015)	702	-	3.5 (2.5)	Canada	Charges	Routine Community supervision	-	2001-2005	2002
Total	1,452	492	3.6 (2.5)	-	-	-	-	1976-2005	1997

Note. CSC = Correctional Service Canada (administers all sentences of at least two years). Average Static-2002R computed using sample size from Cox regression. Sample includes all cases available for cox regression with sample as strata; three cases were deleted because the total follow-up time was less than the time to first observed recidivism event. Thirty-one cases from Hanson et al. (2007) were excluded from all 5-year analyses because there were no sexual recidivists in that group.

Static-99R Summary List of Samples for Recidivism Tables

See Appendix B for description of Samples

Routine/Complete Samples
(with 5-year data, 12 samples, *n* = 7,244, with 483 recidivists; with 10-year data, 6 samples, *n* = 1,599, with 186 recidivists)

Bartosh et al. (2003)
Bigras (2007)
Boer (2003)
Craissati et al. (2011)
Epperson (2003)
Hanson et al. (2015)
Långström (2004)
Lee et al. (2016)
Lee et al. (2018)
Lehmann et al. (2013)
Mercado et al. (2011)
Rettenberger et al. (2013)

Preselected High-Risk/Need
(with 5-year data, 5 samples, *n* = 860, with 164 recidivists; with 10-year data, 2 samples, *n* = 350, with 98 recidivists)

Bengtson (2008)
Bonta & Yessine (2005)
Haag (2005)
Nicholaichuk (2001)
Wilson et al. (2007a,b)

Static-2002R Summary List of Samples for Recidivism Tables

Routine/Complete
(with 5-year data, 4 samples, n = 1,964, with 217 recidivists)
Bigras (2007)
Boer (2003)
Hanson et al. (2015)
Lehmann et al. (2013)

Preselected High-risk/Need
(with 5-year data, 2 samples, *n* = 497, with 97 recidivists)
Bengston (2008)
Haag (2005)

Report Writing Templates for Static-99R and Static-2002R

The remaining sections of this Workbook provide various templates that could be used for reporting the results of Static-99R and Static-2002R. These templates are provided as examples only. Evaluators are free to use them, or to revise the wording as they see fit. They are not exhaustive (e.g., some examples use Static-99R data, others use Static-2002R). Further information concerning the research upon which this template is based can be found at www.saarna.org.

These templates were originally created by Hanson and Phenix (2013) and revised over time as new research became available. There is no consensus about how best to communicate normative data or results of a risk assessment scale. How it is communicated depends on the context, the audience, and the specific referral question. Evaluators should try to develop a consistent template for reports within a particular context, and avoid changing their reporting practices to emphasize a particular position. A helpful review on risk communication research can be found in Hilton, Scurich, and Helmus (2015), although there has been some interesting subsequent research developing with implications for reporting Static-99R scores.

Some basic principles from research to date:

- Interpretation of risk results is influenced by how you present them (Hilton et al., 2015; Varela et al., 2014).
- Each risk communication metric (e.g., percentiles, risk ratios, recidivism estimates, risk levels) has its own strengths and weaknesses (e.g., Hanson, Babchishin et al., 2013; Hanson, Lloyd et al., 2012; Hanson et al., 2016, 2017).
- Generally, presenting all risk communication metrics together may result in the best ability to differentiate risk between individuals (Helmus et al., 2018). Risk ratios or risk levels tend to result in the highest perceptions of risk, and recidivism estimates the lowest. Evaluators should not pick and choose which normative data to report to influence interpretation in a desired direction. Reporting all metrics is often the least biased and most helpful approach, although in some settings it may make sense to consistently only report one or two metrics that best align with the decision at hand.
- Using graphs to aid risk communication appears to have some benefits (Hilton & Helmus, 2021)

In the following examples, two versions are presented: a simple, direct version and a more detailed version. The simple versions are intended for familiar audiences, i.e., readers expected to have some familiarity with the risk tool and its use in their setting. The more detailed versions are intended for audiences who may be being introduced to Static-99R/Static-2002R for the first time. In highly adversarial settings, greater detail may be desired to address real or anticipated criticisms.

Template 1a

Nominal Risk Levels, Familiar Audience (e.g., routine corrections)

Mr. XXXX was scored on Static-99R. Static-99R is intended to position individuals charged or convicted of a sexual offence in terms of their relative degree of risk for sexual recidivism based on commonly available demographic and criminal history information that has been found to correlate with sexual recidivism in adult men with a sex offence history.

Static-99R has moderate accuracy in ranking individuals according to their relative risk for sexual recidivism, and is widely accepted by the scientific community and by applied evaluators. For further information, see www.saarna.org.

Mr. XXXX's Static-99R score was calculated based on official criminal history records provided by the RCMP dated [insert date], and files provided by the Ontario Ministry of Community Safety and Correctional Services dated [insert date]. As well, Mr. XXXX was interviewed on [insert date], in order to verify the accuracy of the information contained in the police and correctional files.

Mr. XXXX received a total score of XXX which places him in Risk Level [I, II, III, IVa, IVb], ["Very low risk," "Below average risk," "Average risk," "Above average risk," or "Well above average risk"] for being charged or convicted of another sexual offence.

Template 1b

Nominal Risk Categories, Familiar Audience, Slightly Longer Description

Mr. XXXX was scored on Static-99R[1,2]. Static-99R is intended to position individuals charged or convicted of a sexual offence in terms of their relative degree of risk for sexual recidivism based on commonly available demographic and criminal history information that has been found to correlate with sexual recidivism in adult men with a sex offence history. Static-99R contains 10 items, which are added together to create a total score. The original Static-99 was developed using data from 4 samples (*n* = 1,208) across Canada and the United Kingdom. Static-99R was developed using data on sexual recidivism from 8,106

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[1] Hanson, R. K., & Thornton, D. (2000). Improving risk assessments for sex offenders: A comparison of three actuarial scales. *Law and Human Behavior, 24(*1), 119-136. doi:10.1023/A:1005482921333

[2] Helmus, L., Thornton, D., Hanson, R. K., & Babchishin, K. M. (2012). Improving the predictive accuracy of Static-99 and Static-2002 with older sex offenders: Revised age weights. *Sexual Abuse: A Journal of Research and Treatment, 24*(1), 64-101. doi:10.1177/1079063211409951

individuals across 23 samples, from Canada, the United States, the United Kingdom, Austria, Denmark, Germany, Sweden, and New Zealand – specifically, 5,714 men were randomly assigned to the development sample and 2,392 were assigned to the validation sample.

Static-99R has moderate accuracy in ranking individuals according to their relative risk for sexual recidivism[3]. On average, there is a 70% chance that a randomly selected recidivist would have a higher score than a randomly selected non-recidivist. The ability of Static-99R to assess relative risk has been fairly consistent across a wide variety of samples, countries, and unique settings. Static-99R is widely accepted by the scientific community, by courts, and by applied evaluators. For further information, see www.saarna.org.

Mr. XXXX's Static-99R score was calculated based on official criminal history records provided by the RCMP dated [insert date], and files provided by the Ontario Ministry of Community Safety and Correctional Services dated [insert date]. As well, Mr. XXXX was interviewed on [insert date], in order to verify the accuracy of the information contained in the police and correctional files.

Static-99R Score Summary

	Risk Factor	Yes = 1, No = 0	Scores
1	Age at Release? (Score range is -3 to 1)		
2	Ever lived with (no two year relationship)?		
3	Index non-sexual violence, any conviction?		
4	Prior non-sexual violence, any convictions?		
5	Prior sex offenses? (Score range is 0-3)		
6	Prior sentencing dates (excluding index)?		
7	Convictions for non-contact sex offenses?		
8	Any unrelated victims?		
9	Any stranger victims?		
10	Any male victims?		
		TOTAL SCORE =	
		RISK LEVEL=	

Mr. XXXX received a total score of XXX which places him in Risk Level [I, II, III, IVa, IVb], ["Very low risk," "Below average risk," "Average risk," "Above average risk," or "Well above average risk"] for being charged or convicted of another sexual offence.

[3] Babchishin, K. M., Hanson, R. K., & Helmus, L. (2012a). Even highly correlated measures can add incrementally to predicting recidivism among sex offenders. *Assessment, 19*, 442-461. doi:10.1177/1073191112458312

Static-99R does not measure all relevant risk factors and Mr. XXXX's recidivism risk may be higher or lower than that indicated by Static-99R based on factors not included in this risk tool.

[Optional language to explain the risk levels:]

Static-99R risk levels were developed based on the Justice Center's standardized risk/need level classification system.[4]

[Level I]. Individuals placed in Level I are considered *Very Low Risk* using the standardized risk level framework. If they have criminogenic needs, those would likely be few and/or transitory in nature. These individuals often have clearly identifiable prosocial resources and strengths within the psychological, interpersonal, and lifestyle domains. Their risk of new sexually criminal behaviour is no different from the rate of spontaneous, first-time sexual offending amongst individuals with a non-sexual, criminal history (i.e., about 0.4% per year)[5]. The prognosis, given the already low expected rate of reoffending, is good. Most individuals placed in Level I are expected to desist from criminal behaviour, even without a correctional response.

[Level II]. Individuals placed in Level II are considered *Below Average Risk* using the standardized risk level framework. Most individuals have few identifiable criminogenic needs and have clearly identifiable prosocial resources and strengths. When moderate levels of criminogenic needs are observed, these needs are expected to be transitory, rather than ingrained, problems. The risk of new criminal behaviour for individuals in Level II is lower than the average individual convicted of sexually motivated offences, but greater than individuals in Level I. It is expected that most individuals will transition down to a Level I, *Very Low Risk*, if appropriate correctional strategies are provided or should they remain offence-free in the community for 5 years.[6]

[Level III]. Individuals placed in Level III are considered *Average Risk* using the standardized risk level framework. They often have multiple criminogenic needs—varying in severity—in psychological, interpersonal, and lifestyle domains. These needs are likely to be barriers to effective use of any available prosocial resources and strengths. The rate of reoffending for individuals in Level

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[4] Hanson, R. K., Bourgon, G., McGrath, R., Kroner, D., D'Amora, D. A., Thomas, S. S., & Tavarez, L. P. (2017). *A five-level risk and needs system: Maximizing assessment results in corrections through the development of a common language.* New York: The Council of State Governments Justice Center.

[5] Kahn, R. E., Ambroziak, G., Hanson, R. K., & Thornton, D. (2017). Release from the sex offender label. Archives of Sexual Behavior, 46(4), 861–864. https://doi.org/10.1007/s10508-017-0972-y

[6] Hanson, R. K., Harris, A. J. R., Letourneau, E., Helmus, L. M., & Thornton, D. (2018). Reductions in risk based on time offense-free in the community: Once a sexual offender, not always a sexual offender. Psychology, Public Policy, and Law, 24(1), 48–63. https://doi.org/10.1037/law0000135

III is generally equivalent to the average rate of sexual reoffending in the overall population of individuals convicted of sexually motivated offences. It is expected that about half the individuals at Level III will transition down to a Level II, *Below Average Risk*, within a year or two after a sufficient dosage of treatment or positive life changes. All will eventually transition to Level II or Level I should they remain offence-free in the community for 10 to 15 years.[7]

[Level IVa]. Individuals placed in Level IVa are considered *Above Average Risk* using the standardized risk level framework. They often have many criminogenic needs, most of which are chronic and severe. Access to prosocial resources and strengths is likely limited due to significant barriers. The rate of sexual reoffending for individuals in Level IVa is roughly equivalent to twice the average rate of reoffending for the overall population of individuals convicted of sexually motivated offences. The prognosis includes a significant reduction of reoffending with many individuals in Level IVa transitioning down to a Level III, *Average Risk*, within a year or two after a sufficient dosage of treatment or positive life changes. Most will transition to Level III after a sufficient dose of treatment, positive life changes, or should they remain offence-free in the community for 10 to 15 years.[8]

[Level IVb]. Individuals placed in Level IVb are considered *Well Above Average Risk* using the standardized risk level framework. They often have many criminogenic needs, most of which are chronic and severe. Access to prosocial resources and strengths is likely limited due to significant barriers. The rate of sexual reoffending for individuals in Level IVb is about three to four times the average rate of reoffending for the overall population of individuals convicted of sexually motivated offences. Most will transition to Level III after a sufficient dose of treatment, positive life changes, or should they remain offence-free in the community for 10 to 15 years.[9]

[7] Ibid.
[8] Ibid.
[9] Ibid.

Template 2

Recidivism rates estimates are provided for three different time periods: 5-years, 10-years, and 20-years. Evaluators can report all three or select the time period(s) that are most relevant for their context.

Absolute recidivism rates – Routine sample as default reference group

In routine samples of men charged or convicted of a sexual offence, the average 5-year sexual recidivism rate is between 5% and 15%. This means that out of 100 individuals of mixed risk levels, between 5 and 15 would be charged or convicted of a new sexual offence after 5 years in the community.

Mr. XX's Static-99R score was XX. In routine samples with the same score, the 5-year sexual recidivism rate is between XX% and XX%. This means that out of 100 individuals with the same risk score between XX and XX would be charged or convicted of a new sexual offence after 5 years in the community. Conversely, between XX and XX would not be charged or convicted of a new sexual offence during that time period.

After 10 years, the expected recidivism rate is between XX% and XX%. So out of 100 individuals with the same risk score between XX and XX would be charged or convicted of a new sexual offence, and XX and XX would not be charged or convicted.

After 20 years, the expected recidivism rate is approximately XX%. So out of 100 individuals with the same risk score, approximately XX would be charged or convicted of a new sexual offence, and XX would not be charged or convicted.

The above values are based on the table entitled "Static-99R Routine Sample: Estimated 5-year and 10-year sexual recidivism rates and projected 20-year sexual recidivism rates" in Helmus et al. (2021) Static-99R & Static-2002R Evaluators' Workbook. Available from www.saarna.org.

Static-99R does not measure all relevant risk factors and Mr. XXXX's recidivism risk may be higher or lower than that indicated by Static-99R based on factors not included in this risk tool.

Template 3a

Absolute recidivism rates – Routine sample as considered reference group

In routine samples of men charged or convicted of a sexual offence, the average 5-year sexual recidivism rate is between 5% and 15%. This means that out of 100 individuals of mixed risk levels, between 5 and 15 would be charged or convicted of a new sexual offence after 5 years in the community.

In order to use Static-99R to estimate recidivism rates, it is necessary to select the reference group that the individual most closely resembles. Recidivism rate norms are provided for routine samples and samples that have been preselected to be high risk and high needs. The routine samples are the appropriate reference group for most situations, but it is possible that the high risk and high needs samples may be appropriate in some circumstances. This determination is based on the density of external risk factors not measured by Static-99R.

The STABLE-2007[10] was used to assess risk factors external to Static-99R. Mr. XX's STABLE-2007 was 6, which is similar to the average value in routine correctional samples (7)[11]. Consequently, there was not a strong justification to use norms other than the routine correctional samples as the reference group for Mr. XX.

Mr. XX's Static-99R score was XX. In routine samples with the same score, the 5-year sexual recidivism rate is XX. The margin of error for this estimate is between XX% and XX%, 19 times out of 20. A recidivism rate of between XX% and XX% means that out of 100 individuals with the same risk score between XX and XX would be charged or convicted of a new sexual offence after 5 years in the community. Conversely, between XX and XX would not be charged or convicted of a new sexual offence during that time period.

After 10 years, the expected recidivism rate is between XX% and XX%. So out of 100 individuals with the same risk score between XX and XX would be charged or convicted of a new sexual offence, and XX and XX would not be charged or convicted.

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[10] Hanson, R. K., Harris, A. J. R., Scott, T., & Helmus, L. (2007). *Assessing the risk of sexual offenders on community supervision: The Dynamic Supervision Project* (Corrections User Report No 2007-05). Ottawa, ON: Public Safety Canada. Available at www.publicsafety.gc.ca

[11] Distribution norms for the STABLE-2007 were based on the meta-analysis by R. K. Hanson & D. Thornton (2012, October). *Preselection effects can explain variability in sexual recidivism base rates in Static-99R and Static-2002R validation studies.* Presentation at the 31st Annual Research and Treatment Conference of the Association for the Treatment of Sexual Abusers, Denver, CO.

After 20 years, the expected recidivism rate is approximately XX%. So out of 100 individuals with the same risk score, approximately XX would be charged or convicted of a new sexual offence, and XX would not be charged or convicted.

The above values are based on the table entitled “Static-99R Routine Sample: Estimated 5-year and 10-year sexual recidivism rates and projected 20-year sexual recidivism rates” in Helmus et al. (2021) Static-99R & Static-2002R Evaluators’ Workbook. Available from www.saarna.org.

Template 3b

Absolute recidivism rates – High Risk/High Need (HRHN) as considered reference group

In routine samples of men charged or convicted of a sexual offence, the average 5-year sexual recidivism rate is between 5% and 15%[12,13]. This means that out of 100 individuals of mixed risk levels, between 5 and 15 would be charged or convicted of a new sexual offence after 5 years in the community.

In order to use Static-99R to estimate recidivism rates, it is necessary to select the reference group that the individual most closely resembles. Recidivism rate norms are provided for routine samples and samples that have been preselected to be high risk and high needs. The routine samples are the appropriate reference group for most situations, but it is possible that the high risk and high needs samples may be appropriate in some circumstances. This determination is based on the density of external risk factors not measured by Static-99R.

The VRS-SO[14] was used to assess risk factors external to Static-99R. Mr. XX's VRS-SO Pretreatment Dynamic Risk score was 30, which is similar to the average value in pre-selected groups of higher risk individuals (27.2)[15]. Consequently, the norms for High Risk/High Need samples were used as the reference group for Mr. XX.

Mr. XX's Static-99R score was XX. In High Risk/High Need samples with the same score, the 5-year sexual recidivism rate is XX. The margin of error for this estimate is between XX% and XX%, 19 times out of 20. A recidivism rate of between XX% and XX% means that out of 100 individuals with the same risk score between XX and XX would be charged or convicted of a new sexual offence after 5 years in the community. Conversely, between XX and XX would not be charged or convicted of a new sexual offence during that time period.

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[12] Helmus, L., Hanson, R. K., Thornton, D., Babchishin, K .M., & Harris, A. J. R. (2012). Absolute recidivism rates predicted by Static-99R and Static-2002R sex offender risk assessment tools vary across samples: A meta-analysis. *Criminal Justice and Behavior, 39*(9), 1148-1171.

[13] Harris, A.J.R., & Hanson, R. K. (2004). *Sex offender recidivism: A simple question* (Corrections Research User Report No. 2004-03). Public Safety and Emergency Preparedness Canada. Available from www.publicsafety.gc.ca

[14] Olver, M. E., Wong, S. C., Nicholaichuk, T., & Gordon, A. (2007). The validity and reliability of the Violence Risk Scale-Sexual Offender version: assessing sex offender risk and evaluating therapeutic change. *Psychological Assessment*, *19*(3), 318-329.

[15] Distribution norms for the VRS-SO were based on the meta-analysis by R. K. Hanson & D. Thornton (2012, October). *Preselection effects can explain variability in sexual recidivism base rates in Static-99R and Static-2002R validation studies.* Presentation at the 31st Annual Research and Treatment Conference of the Association for the Treatment of Sexual Abusers, Denver, CO.

After 10 years, the expected recidivism rate is between XX% and XX%. So out of 100 individuals with the same risk score between XX and XX would be charged or convicted of a new sexual offence, and XX and XX would not be charged or convicted.

After 20 years, the expected recidivism rate is approximately XX%. So out of 100 individuals with the same risk score, approximately XX would be charged or convicted of a new sexual offence, and XX would not be charged or convicted.

The above values are based on the table entitled “Static-99R High Risk/Need Group: Estimated 5-year and 10-year sexual recidivism rates and projected 20-year sexual recidivism rates” in Helmus et al. (2021) Static-99R & Static-2002R Evaluators’ Workbook. Available from www.saarna.org.

Template 4a

Percentile Ranks – midpoint average as default, for familiar audience

Mr. XX scored 6 on Static-2002R. Mr. XX's score is higher than 88% of individuals with a sexual offence charge or conviction in routine correctional samples.

or

Mr. XX scored -1 on Static-2002R. Mr. XX's score places him in the bottom 4% of individuals with a sexual offence charge or conviction in routine correctional samples. In other words, out of 100 individuals, 3 would have a lower score and 94 would have a higher score.

Template 4b

Percentile Ranks – extended version

Percentile ranks describe the individual's risk in comparison to other men who have been charged or convicted of a sexual offence. Because some people have the same scores, there are different ways of reporting percentile ranks (% higher, % lower, mid-point average). Absolute recidivism rates cannot be inferred from percentile rankings. For Static-99R, percentile ranks are based on routine/complete correctional samples from Canada, which have shown to be reasonably stable in international comparisons with Sweden and California[16].

Mr. XX's Static-99R score was 0. In routine correctional samples, this score represents the 19th percentile, defined as a mid-point average (14% have a lower score, 76% have a higher score, and 10% have the same score). In other words, out of 100 men with a charge or conviction for a sexual offence, 14 would have a lower score, 10 would have the same score, and 76 would have a higher score. With the 95% confidence interval, the score could span the 13th to 24th percentile.

[16] Hanson, R. K., Lloyd, C. D., Helmus, L., & Thornton, D. (2012). Developing non-arbitrary metrics for risk communication: Percentile ranks for the Static-99/R and Static-2002/R sexual offender risk scales. *International Journal of Forensic Mental Health, 11*(1), 9-23. doi:10.1080/14999013.2012.667511

Template 5a

Risk Ratios – for familiar audience

In routine samples of individuals with a sexual offence charge or conviction , the average 5-year sexual recidivism rate is between 5% and 15%. This means that out of 100 individuals of mixed risk levels, between 5 and 15 would be charged or convicted of a new sexual offence after 5 years in the community. Conversely, between 85 and 95 would not be charged or convicted of a new sexual offence during that time period.

Mr. XX had a Static-2002R score of 1. On average, individuals with this score have a sexual recidivism rate that is half the rate of individuals in the middle of the risk distribution.

or

Mr. XX had a Static-2002R score of 3. On average, individuals with this score have a sexual recidivism rate that is the same as the rate of individuals in the middle of the risk distribution.

or

Mr. XX had a Static-2002R score of 7. On average, individuals with this score have a sexual recidivism rate that is the 3.6 times the rate of individuals in the middle of the risk distribution.

Template 5b

Risk Ratios – extended version

In routine correctional samples of individuals with a sexual offence charge or conviction, the average 5-year sexual recidivism rate is between 5% and 15%[17,18]. This means that out of 100 individuals of mixed risk levels, between 5 and 15 would be charged or convicted of a new sexual offence after 5 years in the community. Conversely, between 85 and 95 would not be charged or convicted of a new sexual offence during that time period.

Risk ratios describe differences between recidivism rates. For Static-99R, risk ratios compare the expected recidivism rate for individuals with a particular score,

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[17] Helmus, L., Hanson, R. K., Thornton, D., Babchishin, K .M., & Harris, A. J. R. (2012). Absolute recidivism rates predicted by Static-99R and Static-2002R sex offender risk assessment tools vary across samples: A meta-analysis. *Criminal Justice and Behavior, 39*(9), 1148-1171. doi:10.1177/0093854812443648

[18] Harris, A.J.R., & Hanson, R. K. (2004). *Sex offender recidivism: A simple question* (Corrections Research User Report No. 2004-03). Public Safety and Emergency Preparedness Canada. Available from www.publicsafety.gc.ca

to the expected recidivism rate of individuals in the middle of the risk distribution. The middle of the risk distribution is defined as the rate for individuals having the median score (2). Risk ratios for Static-99R are reasonably stable across follow-up times and jurisdictions[19].

Mr. XX had a Static-99R score of 1. On average, individuals with this score have a sexual recidivism rate that is 3/4 the rate of individuals in the middle of the risk distribution.

[19] Hanson, R. K., Babchishin, K. M., Helmus, L., & Thornton, D. (2013). Quantifying the relative risk of sex offenders: Risk ratios for Static-99R. *Sexual Abuse: A Journal of Research and Treatment, 25* (5), 482 - 515. doi:10.1177/1079063212469060

Template 6a

Complete results (categories and quantitative indicators) – Routine as default reference, for familiar audiences

Mr. XXXX was scored on Static-99R. Static-99R is intended to position individuals charged or convicted of a sexual offence in terms of their relative degree of risk for sexual recidivism based on commonly available demographic and criminal history information that has been found to correlate with sexual recidivism in adult men with a sexual offence history.

Static-99R has moderate accuracy in ranking individuals according to their relative risk for sexual recidivism, and is widely accepted by the scientific community and by applied evaluators. For further information, see www.saarna.org.

Mr. XXXX's Static-99R score was calculated based on official criminal history records provided by the RCMP dated [insert date], and files provided by the Ontario Ministry of Community Safety and Correctional Services dated [insert date]. As well, Mr. XXXX was interviewed on [insert date], in order to verify the accuracy of the information contained in the police and correctional files.

Mr. XXXX received a total score of 6 which places him in Risk Level IVb (Well above average risk) for being charged or convicted of another sexual offence. Mr. XX's score is higher than 94% of routine samples of individuals charged or convicted of a sexual offence.

In routine samples of individuals charged or convicted of a sexual offence, the average 5-year sexual recidivism rate is between 5% and 15%. This means that out of 100 individuals of mixed risk levels, between 5 and 15 would be charged or convicted of a new sexual offence after 5 years in the community. Conversely, between 85 and 95 would not be charged or convicted of a new sexual offence during that time period. On average, individuals with a Static-99R score of 6 have a sexual recidivism rate that is the 3.8 times the rate of individuals in the middle of the risk distribution.

Within routine correctional samples of individuals with a Static-99R score of 6, the 5-year sexual recidivism rate is between 16% and 20%. This means that out of 100 individuals with the same risk score between 16 and 20 individuals would be charged or convicted of a new sexual offence after 5 years in the community. Conversely, between 80 and 84 individuals would not be charged or convicted of a new sexual offence during that time period.

After 10 years, the expected recidivism rate is between XX% and XX%. So out of 100 individuals with the same risk score between XX and XX would be charged

or convicted of a new sexual offence, and XX and XX would not be charged or convicted.

After 20 years, the expected recidivism rate is approximately XX%. So out of 100 individuals with the same risk score, approximately XX would be charged or convicted of a new sexual offence, and XX would not be charged or convicted.

Static-99R does not measure all relevant risk factors and Mr. XXXX's recidivism risk may be higher or lower than that indicated by Static-99R based on factors not included in this risk tool.

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Appendix A. Descriptions of the Standardized Risk Levels for Sexual Offending

Level	Risk Profile	Criminogenic Needs	Correctional Treatment Dose	Treatment Effect	Prognosis Following Intervention
I	***Very Low Risk***—similar to people with non-sexual criminal histories, < 2% after 5 years	***None or few*—**if any, mild and/or transitory; clear resources and strengths. Generally prosocial	***None***—if needed, refer to community services	***None***—Risk so low that it will not be reduced further	***Excellent***—individuals will stay in Level I
II	***Below Average Risk***—higher than very low (I) risk profile but lower than average (III)	***A few***—some mild, transitory, or possibly acute; clear resources and strengths. Vulnerable prosocial	***Minimal***—if any, very short term, refer to community services if needed	***Minor*—**Risk so low that intervention can only have a minor impact	***Very good***—most individuals move from Level II to I
III	***Average Risk***—the middle of the risk distribution	***Multiple***—some severe, several domains; Some resources/strengths	***Significant***—treatment programs, and change-focused supervision activities	***Significant*—**Intervention impact can meaningfully reduce reoffending	***Good*—**many individuals will move from Level III to II
IV a	***Above Average Risk***—approximately 2x the average risk (III)	***Multiple, persistent***—some chronic and severe, problems cover all domains; few resources/strengths if any	***Intensive***—High intensity treatment programs	***Beneficial***—Significant reduction in risk, although residual risk still above the lowest levels	***Improvement***—some individuals will move to IVa, III, and as low as II after several years
IV b	***Well Above Average Risk*—**3 to 4x the average risk (III)				
V*	***Virtually Certain to Reoffend*—**Entrenched criminal profile: virtually certain to sexually reoffend, >85% after 5 years	***Multiple, entrenched***—chronic, severe, and entrenched, likely across most or all domains; no resources/strengths	***Extensive***—High intensity treatment programs provided over several years.	***Potential*—**Intervention can have an impact but initial risk so high that emphasis is on treatment readiness and behavioural management	***Poor*—** Risk likely to continue to be above average despite reductions; expected to move to III and II with age-related desistence

* Individuals at this level are not presently identified using Static-99R/2002R

Appendix B: Description of Samples Used in Normative Data

Bartosh, Garby, Lewis, & Gray (2003). The study sample consists of sex offenders released from the Arizona Department of Corrections and subject to registration and notification. Static-99 was scored from file information and recidivism was coded from FBI records. Interrater reliability was reported (r = .90), although the number of cases coded by multiple raters is unknown.

Bengtson (2008). The study sample consists of sex offenders who received a pre-trial forensic psychiatric evaluation in Denmark. Such evaluations were typically conducted for offenders suspected of mental disorder or severe intellectual disability, offenders deemed high risk by the courts, those accused of serious offenses, and those for whom an indefinite sentence was being considered. Static-99 was coded from file information and criminal records. Recidivism information was obtained from the Danish Central Crime Register, and interrater reliability was assessed by having two raters code 20 cases (*ICC* = .94).

Bigras (2007). The original sample contained 94% of all sexual offenders receiving a federal sentence (two or more years) in Quebec, Canada between 1995 and 2000 (6% refused participation in the research or were unable to provide consent). Static-99 and Static-2002 scores were coded from file data and offender interviews (n = 457). Interrater reliability was unavailable for this sample. Recidivism data was collected using CPIC records.

Boer (2003). The study sample consists of all male federal offenders serving a sentence for a sexual offense in British Columbia, Canada whose Warrant Expiry Date (WED; the end of their sentence) was between January 1990 and May 1994. Many offenders are granted conditional release prior to their WED; thus, some offenders in this sample were released as early as 1976. Recidivism information was collected using CPIC records. Category B sexual offenses (see Phenix, Fernandez, et al., 2016) were excluded from the definition of sexual recidivism. Interrater reliability was unavailable for this sample.

Bonta & Yessine (2005). The original sample consisted of three subgroups of Canadian offenders: 1) offenders flagged as potential Dangerous Offenders (subject to indeterminate sentence) by the National Flagging System, 2) offenders designated as Dangerous Offenders, and 3) offenders who committed a violent reoffense after being detained until their Warrant Expiry Date. Only offenders in the first group (flagged offenders), however, had Static-99 scores available. For these offenders, Static-99 was coded from file information and recidivism was coded from CPIC records and Offender Management System (OMS) records from the Correctional Service of Canada (CSC). Sexual recidivism excluded prostitution offenses, indecent phone calls, and possession of child pornography. Given the low frequency of these offenses, it is expected that this restricted definition would have minimal impact on the results.

The offender's "current" offense (i.e., the offense that precipitated the flag) was sometimes non-sexual, but there was a prior sexual offense on record. Their most recent sex offense was used as the index sex offense for Static-99 scoring purposes (as per the coding rules), but these cases are somewhat unique because the offenders spent time in the community after their index sex offense but before the recidivism follow-up period began. To retain a sample of offenders who were serving a sentence for a sexual offense or who had a recent sex offense on file, offenders with more than two years between their index sex offense and the current offense for which they were flagged were deleted (*n* = 22).

Craissati, Bierer, & South (2011). The study sample consists of all contact sex offenders on probation in two boroughs in South East London during the study period. Static-99 was coded from file information and recidivism data was collected from four sources: the Police National Computer, the Violent and Sex Offenders Register, the Multiple Criminal Remote Access, and the EApps database.

Epperson (2003). The study sample consists of sex offenders in North Dakota who were either incarcerated or on probation. Recidivism information was collected from North Dakota state records.

Haag (2005). OMS records were used to identify all federal sex offenders with a WED in 1995. Offenders were released as early as 1987 (*n* = 663). Interrater reliability for Static-99 and Static-2002 scores was high (*r* = .92 and .84, respectively; *n* = 66 cases) when assessed by the lead researcher (Haag) and another psychologist. The full sample (N = 663) was used for developing percentiles.

Follow-up information was collected for 7 years after the WED. Because recidivism information was not recorded for the time period after release but before the WED, offenders who were released more than 30 days in advance of their WED were deleted from the recidivism analyses, effectively reducing the sample to offenders who were detained until Warrant Expiry. Under Canadian legislation, offenders are to be automatically released after serving two thirds of their sentence. In some cases, however, CSC will make an application to have the offender detained until Warrant Expiry if the parole board is satisfied that if released, the offender poses a significant risk of committing a serious offense before their sentence expires. Recidivism information was collected from CPIC records.

Hanson, Helmus, & Harris (2015). This prospective study followed sex offenders on community supervision between 2001-2005 in all Canadian provinces and territories, and two U.S. states. For the current study, only Canadian offenders. Static-99 scores were coded prospectively by the probation

officers. Static-2002 scores were coded by graduate students based on information from Static-99 scores and Canadian Police Information Centre (CPIC) records maintained by the Royal Canadian Mounted Police (RCMP).

Of the 595 individuals with the necessary data for the current analyses, 38 were supervised following a federal sentence (*n* = 38, 6.4%), 254 following a provincial sentence (42.7%), and 303 received a solely non-custodial sentence (e.g., probation, conditional sentence order, or in rare cases, a peace bond; 50.9%). Twenty-four offenders (4.0%) had a non-sexual violent index offense.

Recidivism information was collected from CPIC records, supervising officers, provincial records, and informal police contacts (additionally, one recidivist was identified in a newspaper article).

Interrater reliability for Static-99 was examined through file review of 88 cases coded by probation officers participating in the DSP project (*ICC* = .91). An exceptionally high interrater reliability for Static-2002 coding (*ICC* = .98, *n* = 25 cases) was observed. Coding was based upon probation officers' obtained Static-99 scores and conviction information rather than interpretation of victim information or offense circumstances. Consequently, reliability for Static-2002 scores in this study should not be considered representative or typical.

Långström (2004). The study sample consists of sex offenders released from prison in Sweden. Static-99 was coded from file information and recidivism was coded from the National Council for Crime Prevention.

Lee, Restrepo, Satariano, & Hanson (2016). This study included adult male sexual offenders released from the California Department of Corrections and Rehabilitation (CDCR; i.e., parolees) as well as those on probation (i.e., probationers) between 2009 and 2010. Recidivism was defined as any subsequent arrest for a sexual offense (contact or non-contact) after release on community supervision. Recidivism information was provided by the California Department of Justice as of October 2015.

Lee, Hanson, Fullmer, Neeley, & Ramos (2018). This study is an update on a previous study (Hanson et al., 2014) with additional information (e.g., death and deportation information). The samples included adult male sexual offenders released from the California Department of Corrections and Rehabilitation (CDCR; i.e., parolees) between 2006 and 2007. Recidivism was defined as any subsequent arrest for a sexual offense (contact or non-contact) after release on community supervision. The California Department of Justice provided recidivism information.

Lehmann, Hanson, Babchishin, Gallasch-Nemitz, Biedermann, & Dahle (2013). This sample included sexual offenders reported to the Berlin state police during the years 1994-2001 for a violent or abusive sexual offence. Static-99R

items were extracted from police and criminal history record databases. Recidivism information was obtained from the National Conviction Registry of Germany.

Mercado, Jeglic, & Markus (2011). The sample was from a larger study examining sex offender management, treatment, and civil commitment (Mercado et al., 2011). All individuals in this study were adult males who were convicted of a sexual offense. The sample was selected from individuals who had been detained at either the Adult Diagnostic Treatment Center (ADTC) or any New Jersey State Prisons. Sexual recidivism was defined as any subsequent conviction for a sexual offense (contact or non-contact) after release. Recidivism data were accessed from the New Jersey State Police criminal records database. These records include criminal records from the state of New Jersey as well as other states who share their records with the New Jersey State Police.

Nicholaichuk (2001). The study sample consists of sex offenders treated at the Clearwater sex offender treatment program, located in a federal maximum-security forensic mental health facility in Saskatchewan. Recidivism information was coded from CPIC records.

Rettenberger et al. (2013). The study examined sex offenders released from prison in Austria. Interrater reliability was assessed by having four raters code 27 cases (*ICC* = .90). Recidivism information was collected from the Federal Department of the Interior.

Wilson and colleagues (2007a & b). The study sample consists of Canadian offenders combined from two previous studies: Wilson, Cortoni, and Vermani (2007a), and Wilson, Picheca, and Prinzo (2007b). Both studies consist of high-risk sex offenders who were detained in prison until their Warrant Expiry Date (the end of their sentence). In both studies, half of the offenders participated in Circles of Support and Accountability, while another (matched) group of sex offenders did not. Although the two studies had separate samples, they were combined into one dataset because both samples were selected in the same way and the basic descriptive information was the same for both studies.

STATIC Supplementary Recidivism Tables

The tables below supplement the following article: Lee, S. C., & Hanson, R. K. (2021). Updated 5-year and new 10-year sexual recidivism rate norms for Static-99R with routine/complete samples. *Law and Human Behavior, 45*(1), 24-38. https://doi.org/10.1037/lhb0000436

For more information on why we privilege logistic regression recidivism estimates, see Hanson et al. (2010). For more explanation of logistic regression, see Helmus & Hanson (2011).

Observed and estimated 5-year sexual recidivism rates for Static-99R: Routine Samples

		Fixed follow-up		Logistic Regression Estimates		
Score	Risk Level	Recidivists/total	Observed recidivism rate (%)	Predicted recidivism rate (%)	95% CI	
-3	I	0/119	0.0	0.7	0.5	1.0
-2	I	1/130	0.0	1.1	0.8	1.4
-1	II	13/612	2.1	1.6	1.2	1.9
0	II	18/848	2.1	2.2	1.8	2.7
1	III	36/987	3.7	3.2	2.7	3.7
2	III	35/1,155	3.0	4.6	4.0	5.2
3	III	68/1,152	5.9	6.5	5.8	7.2
4	IVa	74/965	7.7	9.2	8.4	10.1
5	IVa	69/578	11.9	12.8	11.7	14.1
6	IVb	61/332	18.4	17.6	15.8	19.6
7	IVb	47/201	23.4	23.7	20.9	26.7
8	IVb	36/112	32.1	31.0	27.0	35.4
9	IVb	17/38	44.7	39.5	34.1	45.2
10	IVb	6/12	50.0	48.7	42.0	55.4
11	IVb	2/3	66.7	-	-	
12	IVb	-	-	-	-	
Total		483/7,244	6.7			

Observed and estimated 10-year sexual recidivism rates for Static-99R: Routine Samples

		Fixed follow-up		Logistic regression estimates		
Score	Risk Level	Recidivists/total	Observed recidivism rate (%)	Predicted recidivism rate (%)	95% CI	
-3	I	0/16	0.0	1.2	0.7	2.1
-2	I	0/23	0.0	1.8	1.1	2.9
-1	II	5/111	4.5	2.5	1.7	3.8
0	II	5/154	3.2	3.6	2.6	5.1
1	III	13/194	6.7	5.1	3.9	6.7
2	III	10/233	4.3	7.2	5.8	8.9
3	III	26/249	10.4	10.1	8.5	11.9
4	IVa	36/261	13.8	13.9	12.1	15.9
5	IVa	18/147	12.2	18.8	16.4	21.5
6	IVb	25/96	26.0	25.0	21.5	28.9
7	IVb	21/59	35.6	32.5	27.3	38.2
8	IVb	15/37	40.5	40.9	33.7	48.6
9	IVb	8/14	57.1	50.0	40.7	59.2
10	IVb	3/4	75.0	-	-	
11	IVb	1/1	100.0	-	-	
12	IVb	-	-	-	-	
Total		186/1,599	11.6			

Below tables supplement the following article: Hanson, R. K., Thornton, D., Helmus, L. M., & Babchishin, K. M. (2016). What sexual recidivism rates are associated with Static-99R and Static-2002R scores? *Sexual Abuse: A Journal of Research and Treatment, 28,* 218-252. doi:10.1177/1079063215574710

Observed and estimated 5-year sexual recidivism rates for Static-99R: High Risk/Need Samples

		Fixed Follow-up		Logistic Regression Estimates		
Score	Risk Level	Recidivists/total	Observed recidivism rate (%)	Predicted recidivism rate (%)	95% CI	
-3	I	0/1	0.0	-	-	-
-2	I	0/5	0.0	-	-	-
-1	II	1/21	4.8	5.6	3.5	9.1
0	II	1/28	3.6	7.2	4.7	10.7
1	III	5/64	7.8	9.0	6.4	12.5
2	III	11/63	17.5	11.3	8.6	14.6
3	III	10/103	9.7	14.0	11.3	17.2
4	IVa	30/152	19.7	17.3	14.5	20.5
5	IVa	28/143	19.6	21.2	18.0	24.8
6	IVb	30/122	24.6	25.7	21.5	30.3
7	IVb	23/86	26.7	30.7	25.1	37.0
8	IVb	14/45	31.1	36.3	28.8	44.5
9	IVb	6/18	33.3	42.2	32.6	52.5
10	IVb	5/8	62.5	48.4	36.6	60.5
11	IVb	0/1	0.0	-	-	-
Total		164/860	19.1			

Observed and estimated 10-year sexual recidivism rates for Static-99R: High Risk/need Samples

		Fixed Follow-up		Logistic Regression Estimates		
Score	Risk Level	Recidivists/total	Observed Recidivism Rate (%)	Predicted recidivism rate (%)	95% CI	
-3	I	-	-	-	-	-
-2	I	0/1	0.0	-	-	-
-1	II	1/13	7.7	10.6	5.8	18.4
0	II	1/15	6.7	13.0	7.9	20.5
1	III	4/33	12.1	15.8	10.7	22.8
2	III	8/22	36.4	19.1	14.1	25.4
3	III	4/38	10.5	22.9	18.2	28.5
4	IVa	23/75	30.7	27.3	22.5	32.6
5	IVa	21/63	33.3	32.1	26.7	37.9
6	IVb	16/39	41.0	37.3	30.5	44.7
7	IVb	11/25	44.0	42.8	33.9	52.3
8	IVb	6/18	33.3	48.5	37.1	60.1
9	IVb	0/2	0.0	-	-	-
10	IVb	3/6	50.0	-	-	-
11	IVb	-	-	-	-	-
Total		98/350	28.0			

Observed and estimated 5-year sexual recidivism rates for Static-2002R: Routine Samples

		Fixed Follow-up		Logistic Regression Estimates		
Score	Risk Level	Recidivists/total	Observed recidivism rate (%)	Predicted recidivism rate (%)	95% CI	
-2	I	0/24	0.0	1.0	0.6	1.7
-1	I	0/35	0.0	1.5	0.9	2.3
0	II	4/83	4.8	2.2	1.5	3.2
1	II	5/137	3.6	3.2	2.3	4.4
2	III	7/245	2.9	4.6	3.6	6.0
3	III	18/306	5.9	6.8	5.5	8.2
4	III	34/399	8.5	9.7	8.3	11.3
5	IVa	46/323	14.2	13.8	12.2	15.6
6	IVa	34/190	17.9	19.2	16.9	21.6
7	IVb	30/103	29.1	26.0	22.6	29.8
8	IVb	19/60	31.7	34.3	29.1	40.0
9	IVb	12/42	28.6	43.7	36.5	51.2
10	IVb	5/11	45.5	53.5	44.4	62.4
11	IVb	3/6	50.0	-	-	-
12	IVb	-	-	-	-	-
Total		217/1,964	11.0			

Observed and estimated 5-year sexual recidivism rates for Static-2002R: High Risk/need Samples

		Fixed Follow-up		Logistic Regression Estimates		
Score	Risk Level	Recidivists/total	Observed Recidivism Rate (%)	Predicted Recidivism Rate (%)	95% CI	
-2	I	-	-	-	-	-
-1	I	0/1	0.0			
0	II	1/17	5.9	7.4	4.2	12.6
1	II	1/19	5.3	9.0	5.6	14.1
2	III	7/39	17.9	11.0	7.5	15.7
3	III	3/52	5.8	13.3	9.8	17.7
4	III	18/92	19.6	16.0	12.6	20.0
5	IVa	14/71	19.7	19.1	15.8	23.0
6	IVa	15/75	20.0	22.7	18.9	27.0
7	IVb	9/50	18.0	26.8	21.9	32.3
8	IVb	14/46	30.4	31.2	24.6	38.7
9	IVb	6/17	35.3	36.1	27.3	45.9
10	IVb	6/10	60.0	41.2	30.0	53.4
11	IVb	3/7	42.9	-	-	-
12	IVb	0/1	0.0	-	-	-
Total		97/497	19.5	-	-	-