

## ***BETTER TOGETHER***

2018 ATSA Conference | Thursday October 18 | 10:30 AM – 12:00 PM

**T-03**

### **Estimating Real Lifetime Rates of Sexual Recidivism**

Symposium Chair: David Thornton, PhD  
FAsTR LLC

Most research into sexual recidivism, and the instruments that have come out of this research, estimate rates of officially detected sexual recidivism over limited periods of time. However, both policy researchers concerned with examining the effects of preventive detention, and forensic evaluators whose assessments have to speak to lifetime risk for real recidivism, have an interest in estimating real lifetime recidivism rates. This symposium begins by reviewing and critiquing the methods commonly used by evaluators to estimate to real lifetime sexual recidivism rates. The first presentation indicates that while attempts to extrapolate to real lifetime sexual recidivism rates are potentially valuable, the methods commonly used to attempt this are either known to be misleading, based on untested assumptions, or insufficiently constrained by existing data to be useful. The second presentation presents a new, more soundly based, and user-friendly, method for extrapolating from short-term official sexual recidivism rates to lifetime official sexual recidivism rates. The third presentation presents new data testing some of the assumptions underlying estimates of undetected sexual recidivism. The symposium concludes with a panel discussion of the implications of the new findings for practice.

### **Reaching Beyond the Known: Evaluators' Struggles with Extrapolation**

David Thornton, PhD  
FAsTR LLC

Modern actuarial risk assessment instruments come with tables that show the expected recidivism rate associated with each score on the instrument. These tables describe rates of officially known sexual reoffending over defined, and limited, follow-up periods. Although these tables are useful, certain questions motivate evaluators to extrapolate beyond the observed recidivism rates. Policy researchers interested in the value of preventive detention will want to estimate the actual number of offenses prevented, which could be substantially higher than the observed rates. Decisions concerning individuals are usefully informed by considering the totality of the risk the individual presents. As well, in some forensic contexts, the statutory criteria to which evaluations have to speak require an estimate of lifetime risk for real (not detected)

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reoffending. This last context applies particularly to SVP evaluations in the USA. Evaluators' struggle to extrapolate to lifetime risk of real recidivism is the focus of this presentation. The presentation seeks to describe and critique common methods used for extrapolation. Examples of the critiques are outlined below.

One form of extrapolation starts with the five or ten-year rates of official sexual recidivism found in actuarial tables and then uses simple rules to extrapolate to lifetime estimates of official recidivism. A common source for this approach is Doren's (2009) book chapter, in which he reviewed studies with follow-ups of at least 20 years duration and determined ratios between recidivism rates determined over those long-term follow ups and five or ten-year rates. His heuristic was that the long-term recidivism rate is twice the five-year rate. Unfortunately, this method assumes that these ratios are constant, regardless of risk level, something which turns out to be untrue (Wollert & Cramer, 2011). Furthermore, new statistical models (Hanson et al., 2017) of changes in recidivism risk over time indicate that these ratios are not an accurate metric for extrapolation.

Another form of extrapolation goes from officially known rates of sexual recidivism to an estimate that includes undetected sexual recidivism (so-called real recidivism). One common approach is simply to state that many offenses go undetected so that real recidivism must be much higher than detected recidivism. The Rape, Abuse & Incest National Network (RAINN)'s statistics ([www.rainn.org](http://www.rainn.org)) may be quoted here indicating that out of 1,000 rapes, only 7 will lead to a felony conviction. The finder of fact is led to infer that even a 2% known sexual recidivism rate is compatible with virtually 100% real re-offending. One of the problems with this kind of implicit extrapolation is that it assumes that recidivists will commit only one re-offense. This is unlikely. Hanson et al. (2003) demonstrated the need to estimate both the average detection rate per victim and the average number of victims per recidivist in order to calculate an estimated real recidivism rate from an official rate. Unfortunately, these underlying parameters are not known with precision and relatively small differences in the values of these parameters can lead to big differences in estimates of real recidivism. Furthermore, much of the offending that contributes to RAINN's statistics was committed by persons with no known record of sex offending. Detection may be much more probable for offenses committed by persons already known to the authorities.

This presentation concludes that there are potential benefits to extrapolations beyond the observed sexual recidivism rates, but that there is much room for improvement in methods currently used for this purpose.

### **Learning Goals:**

By the end of the presentation participants should be able to:

- Describe two reasons for wanting to extrapolate beyond known sexual recidivism rates.
- Describe two critical problems with the ratio method of extrapolating to longer times at risk.
- Describe two critical problems current methods for extrapolating from official recidivism rates to real recidivism rates.

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### **Using Survival Analysis to Estimate Lifetime and Residual Risk**

R. Karl Hanson, PhD  
Carleton University

Our previous research found a predictable reduction in relative risk based on time sexual offence free in the community (Hanson et al., 2014, Hanson et al., 2017). This presentation shows how this steady reduction can be used to extrapolate from observed sexual recidivism rates for specific follow-up periods (5 years, 10 years) to the expected recidivism rates for longer time periods. For example, given an observed sexual recidivism rate of 42.8% (10 years, Static-99R scores of 7, High Risk/High Needs reference group), what is the expected rate if the follow-up period was extended to 15 years? 20 years? This presentation also shows how these time free effects can be used to estimated expected recidivism rates for individuals who have spent years sexual offence-free in the community. Although we have previously demonstrated how time free can be used to adjust assignment to standardized risk levels, it is not obvious how evaluators can use the equations in Hanson et al. (2017) to revise numeric estimates of residual risk.

The estimation approach is based on life table survival analysis (e.g., Singer & Willett, 2003, Chapter 10). With a consistent decline in hazard rates (known from previous research), the only variable required to estimate recidivism rates for any period is the hazard rate for any unit period. This value can be estimated from any observed recidivism rate for any length of time. An additional assumption is that the residual risk is essentially zero for individuals with a sexual offense history who have spent 20 years sexual offense free in the community, i.e., lifetime risk is the same as the risk up to 20 years. With these assumptions, survival analysis provides a mechanical method to translate the time free effects documented in Hanson et al. (2017) into estimated recidivism rates for diverse follow-up periods. These methods can also be used to estimate sexual recidivism rates for individuals with a history of sexual offending but for whom their index offence is not a sexual offence (e.g., an individual released in 2010 from a sexual offence conviction and convicted in 2018 of Driving Under the Influence).

This presentation describes the analytic framework for such estimates, the strengths and weaknesses of this approach, and provides user-friendly extrapolation tables based on risk at time of release from the index sexual offence (defined by Static-99R scores). As well, I will demonstrate how these estimates can be conveniently calculated using EXCEL.

#### **Learning Goals:**

After attending this presentation, audience members will

- Be able to extrapolate 20-year sexual recidivism rate estimates based on observed sexual recidivism rates associated with Static-99R scores at 5 years or at 10 years.

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- Be able to estimate residual risk for individuals with a sexual offence history who have been offence free in the community, based on initial risk defined by Static-99R scores.
- Be able to estimate the combined effect of reductions in risk based on time sexual offence free and increased risk based on new nonsexual offending.

### **The Undetected**

Sharon Kelley, PsyD  
Sand Ridge Evaluation Unit

Risk assessments for individuals with a history of sex offenses have advanced in recent years with the most commonly used measure, the Static-99R, demonstrating moderate ability to discriminate between recidivists and non-recidivists (Kelley, Barahal, Thornton, & Ambroziak, 2017; Phenix et al., 2016). However, the recidivism estimates for risk assessment measures under-estimate risk because not all sexual offenses are detected. Although we can have reasonable confidence that an officially recorded conviction is a valid indicator of recidivism, we are less confident that the absence of an officially recorded conviction is a valid indicator of desistance. Both official convictions (Falshaw, Bates, Patel, Corbett, & Friendship, 2003) and charges (Marshall & Barbaree, 1998) underestimate the rate of sexual recidivism. For example, Marshall and Barbaree (1988) found that sexual recidivism known to child protection agencies was about twice as common as sexual recidivism known to police. Falshaw et al. (2003) found that the rate of sexual reoffending known to outpatient treatment providers and probation officers was 1.2 times greater than officially documented offenses in criminal databases. Further complicating this issue is the fact that few sexual assault victims report their assaults to police and few of the victims' reports results in a charge or conviction (Hanson, Morton, & Harris, 2003). Recent FBI statistics suggest that approximately 35% of teen and adult victims will report a sexual assault to police and, of these reports, only about 39% leads to an arrest (Truman & Langton, 2015; Truman & Morgan, 2016). However, the majority of these statistics likely concern first time offenses where the individual may be able to evade detection for a longer period of time than individuals with past convictions for sexual offenses and who are well known to police.

This presentation explores the assumption that individuals continue to engage in undetected sexual reoffending despite previous sanctions. Although previous studies have reported the average total number of undetected victims obtained through polygraph testing, the current study is the first to examine the change in the number of undetected victims across time within a sample of individuals who repeatedly recidivated. This presentation will include data from a high-risk sample of individuals (N = 100-200 cases) who have been convicted of multiple sex offenses and who were civilly committed to the Sand Ridge Secure Treatment Center as "Sexually Violent Persons" or SVPs. These individuals have completed a truthful sexual history polygraph exam through the course of

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their treatment, which document both detected (offenses leading to an arrest, charge or conviction) and undetected offenses (those that did not lead to an arrest or charge). Criminal charges, sentencing dates, custody time, release dates, and current diagnoses have also been obtained from their criminal and treatment records. The current presentation will address the following questions: (1) What is the overall number of undetected victims prior to first arrest for a sexual offense? (2) What is the overall number of undetected victims following first arrest? (3) Does the number of undetected victims decrease following each sanction (i.e., arrest for sexual offense)? (4) What is the average rate of undetected victims during each release period? (5) Does the number of undetected victims vary by diagnosis (e.g., Pedophilic Disorder, Antisocial Personality Disorder, etc)? Preliminary results suggest the average number of undetected sexual offenses remain similar before and immediately following first sanction but appears to decrease thereafter.

**Dr. David Thornton** is a forensic psychologist in private practice. He also holds a part time position as a Professor in the Department of Clinical Psychology at the University of Bergen in Norway. He is a licensed psychologist in Wisconsin and Minnesota, as well as being a registered psychologist in the United Kingdom. He has been involved in the development of risk assessment instruments and published papers relevant to understanding risk and protective factors for sexual and violent recidivism.

**Dr. Hanson** is one of the leading researchers in the field of sexual offender risk assessment and treatment. He has published more than 150 articles, including several highly influential reviews, and is lead author of the most widely used risk assessment tools for sexual offenders, including Static-99R, Static-2002R, STABLE-2007 and ACUTE-2007. He is a Fellow of the Canadian Psychological Association and the 2002 recipient of Significant Achievement Award from the Association for the Treatment of Sexual Offenders. Originally trained as a clinical psychologist, he was a researcher and manager with Public Safety Canada between 1991 and 2017, and is currently adjunct faculty in the Psychology Department of Carleton University (Ottawa) and the Yeates School of Graduate Studies of Ryerson University (Toronto).

**Dr. Sharon Kelley** is a SVP evaluator with the Sand Ridge Evaluation Unit in Wisconsin. She is currently the chapter president of the Wisconsin Association for the Treatment of Sexual Abusers (WI-ATSA). She is a licensed psychologist in Wisconsin, Minnesota, California, and Massachusetts. She is an approved trainer for the SAPROF, an instrument designed to assess protective factors, as well as the VRS-SO, an instrument designed to evaluate the effect of risk reduction due to treatment change. She is a co-developer of the SAPROF-SO, which is an actuarially based measure of protective factors specifically designed for individuals who have been charged with sex offenses.

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### **Financial Interests:**

The presenter for the second presentation (Hanson) has a potential financial interest in a commercially available product involved in his presentation. He describes this as follows: *R. Karl Hanson is an author and certified trainer of the Static-99R. The copyright for Static-99R is held by the Government of Canada.* Presenters for the first and third presentations do not have relevant financial interests.