Short-Term Assessment of Risk and Treatability (START)

Rationale, Application, and Empirical Overview

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People entering public institutions, be it prisons, tertiary or forensic psychiatric hospitals, homeless shelters, or community mental health clinics often present with complex, intermingled physical health, mental health and associated risks and needs. The Centre for Mental Health in the UK estimates that 90% of prisoners have a mental health or substance misuse problem and that many have more than one (Durcan, Allan, & Hamilton, 2018). Furthermore, individuals with mental illness are at greater risk of self-harm, suicide, substance abuse, and victimization compared to the general population (Haw, Hawton, Houston, & Townsend, 2001; Nordentoft, Mortensen, & Pedersen, 2011; Swendsen et al., 2010; Hiday, Swartz, Swanson, Borum, & Wagner, 1999), and these adverse outcomes are related to one another (Vaughn et al., 2010; Poorolajal, Haghtalab, Farhadi, & Darvishi, 2016). Violent behaviours directed at oneself and others, as well as victimization, often co-occur and represent precipitating and/or predisposing factors for one another (Strub, Douglas, & Nicholls, 2016). Thus, a comprehensive approach is needed to assess and effectively prevent diverse adverse outcomes in populations of individuals with mental illness and criminal justice involvement.

The *Short-Term Assessment of Risk and Treatability* (START) (Webster, Martin, Brink, Nicholls, & Middleton, 2004; Webster, Martin, Brink, Nicholls, & Desmarais, 2009) is an empirically and theoretically informed structured professional judgment (SPJ) guide for the dynamic assessment of risks and treatability in adults (also see START: Adolescent Version; Viljoen, Nicholls, Cruise, Desmarais, & Webster, 2014) with mental illness and/or criminal justice needs. The START has become the most widely adopted and researched inpatient risk assessment and treatment planning tool (O'Shea & Dickens, 2014) and has been recognized as a means of supporting best practices (e.g., BC Patient Safety & Quality Council, 2011; Haute Autorité de Santé, 2011; Health Standards Organization, 2011; Risk Management Authority, 2019).[1]

The START is intended to assist mental health professionals in providing comprehensive care plans to address the needs of individuals with complex needs while meeting the legal and ethical responsibilities of evaluating and preventing risk to patients, staff, and the community (i.e., violence, self-harm, suicide, unauthorized leave, substance abuse, self-neglect, and victimization). The measure allows for the differential coding of 20 dynamic items as both Strengths and Vulnerabilities over a relatively short period of time (3 months) compared to other risk assessment measures, making the START a tool of choice for integrating risk assessment with treatment planning (Crocker et al., 2011; Dickens, 2015; Doyle & Logan, 2012; Doyle, Lewis, & Brisbane, 2008; Khiroya, Weaver, & Maden, 2009; Kroppan et al., 2011; Levin, Nilsen, Bendtsen, & Bülow, 2018; Nicholls, Brink, Desmarais, Webster, & Martin, 2006; Quinn, Miles, & Kinane, 2013). The START was developed by an interdisciplinary clinical team—led by nurses, occupational therapists, psychiatrists, psychologists, recreational therapists, social workers, and vocational/rehabilitation workers (Webster, Nicholls, Martin, Desmarais, & Brink, 2006). Results of several studies indicate it is a user-friendly tool with good practical utility and face validity for qualified mental health professionals of all disciplines (Doyle

et al., 2008; Khiroya et al., 2009) and that it increases multidisciplinary participation in treatment planning (Crocker et al., 2011; Kroppan, Nonstad, Iversen, & Søndenaa, 2017).

Description of Measure

The START is an assessment and treatment planning guide that supports clinicians in simultaneously evaluating an individual's Strengths and Vulnerabilities. It comprises 20 dynamic items (i.e., changeable) that were identified through a consideration of theory and research across diverse populations (corrections, tertiary psychiatry, forensic mental health) and contexts (inpatient/community). This assessment is intended to inform a short-term estimation (generally forecasting 3 months into the future) of an individual's risk on seven domains and guide comprehensive interdisciplinary treatment planning. In light of the intermingled risks that many individuals with mental health needs and criminal justice involvement present with, the START does not solely assess the risk of a single outcome of concern (e.g., interpersonal violence). Rather, the START guides a short-term estimate of risk for a variety of interrelated concerns commonly encountered in day-to-day clinical practice with individuals who have mental health and criminal justice-related needs: suicide, self-harm, self-neglect, unauthorized absence (AWOL), substance abuse, and victimization. The intent of the START is to guide comprehensive care planning.

Purpose

The START was developed in direct response to four primary gaps in the risk assessment and forensic mental health fields.

Overlapping Risks

First, given the extent to which individuals with mental illness and criminal justice involvement present with diverse and intermingled risks (e.g., self-harm and general offending; violence, substance abuse and victimization, etc.), a comprehensive assessment and treatment planning guide is needed. The START structures clinical assessments of risk to self and others and aids treatment providers in practical day-to-day decision-making around a variety of matters (e.g., security levels and privileges within institutions, day passes, visit leaves) (see Webster et al., 2006).

Dynamic Variables

Second, although the risk estimates and case formulation are firmly grounded in a consideration of static and historical information ("Key Items," "Critical Items," and the "Hx" column in Risk Estimates; see Figure 15.1), the START is comprised of 20 dynamic variables. As such, the START is consistent with leading practice in risk assessment which calls for consideration of dynamic variables (Douglas & Skeem, 2005; Wilson, Desmarais, Nicholls, Hart, & Brink, 2013), recovery-oriented treatment (de Vries Robbé, de Vogel, & Douglas, 2013), and alignment with the ultimate goals of care providers (i.e., supporting change, providing patients with hope) (Viljoen, Viljoen, Nicholls, & de Vries Robbé, 2017). A consideration of dynamic variables is consistent with a growing body of literature demonstrating that dynamic variables may hold promise in risk assessments (Douglas & Skeem, 2005), particularly in the short term (Wilson et al., 2013) and as a measure of resiliency to future violent offending (de Vries Robbé, de Vogel, Douglas, & Nijman, 2015; Desmarais, Nicholls, Wilson, & Brink, 2012). Specifically, dynamic variables may contribute a unique predictive validity for offending when combined with static factors (de Vries Robbé, de Vogel, & de Spa, 2011; Olver, Wong, Nicholaichuk, & Gordon, 2007).

BC MENTAL HEALTH & SUBSTANCE USE SERVICES
Provincial Health Services Authority
RESEARCH INSTITUTE

St. Joseph's Healthcare Hamilton

START Summary Sheet ©

Name	Mr. L		
MRN	20200707		
		Sex: M	D.O.B: 10.10.1990

Diagnoses: ☒ DSM-5   ☐ ICD-10   **1.** Schizophrenia (Paranoid)   **2.** Substance Use (Cannabis)

3.   **4.**   **5.**

STATUS:	☒ HOSPITAL Specify: Forensic Psychiatric	☐ COMMUNITY Specify:	☐ CORRECTIONS Specify:

PURPOSE:	☐ REFERRAL	☐ ADMISSION	☐ REVIEW Specify:	☒ OTHER Specify: Recent Behav. Change

START Time Frame: 3 Months (or behavioural change)
days/weeks/months

Key Item	Strengths 2	1	0	START Items	Vuln 0	1	2	Critical Item
○	☐	☒	☐	1. Social Skills	☐	☒	☐	○
○	☐	☒	☐	2. Relationships (TA: Y ☐ /N ☒)*	☐	☒	☐	○
○	☐	☒	☐	3. Occupational	☐	☐	☒	○
○	☐	☐	☒	4. Recreational	☐	☐	☒	○
○	☐	☒	☐	5. Self-Care	☐	☒	☐	○
○	☐	☒	☐	6. Mental State	☐	☐	☒	◉
○	☐	☒	☐	7. Emotional State	☐	☒	☐	○
○	☐	☐	☒	8. Substance Use	☐	☐	☒	○
○	☐	☒	☐	9. Impulse Control	☐	☒	☐	○
○	☐	☒	☐	10. External Triggers	☐	☒	☐	○
◉	☐	☒	☐	11. Social Support (PPS: Y ☐ /N ☒)‡	☐	☐	☒	○
○	☐	☒	☐	12. Material Resources	☒	☐	☐	○
○	☐	☐	☒	13. Attitudes	☐	☒	☐	○
○	☐	☐	☒	14. Med Adherence (N/A ☐)†	☐	☐	☒	◉
○	☐	☐	☒	15. Rule Adherence	☐	☐	☒	○
○	☐	☐	☒	16. Conduct	☐	☒	☐	○
○	☐	☐	☒	17. Insight	☐	☐	☒	◉
○	☐	☒	☐	18. Plans	☐	☐	☒	○
○	☐	☒	☐	19. Coping	☒	☐	☐	○
○	☐	☐	☒	20. Treatability	☐	☐	☒	◉
○	☐	☒	☐	21. Case Specific Item: Intelligence	☐	☐	☒	○
○	☐	☐	☐	22. Case Specific Item:	☐	☐	☐	○

SIGNATURE RISK SIGNS

1st episode QUERY: wearing same T-shirt for several days; expressing belief his genius is being thwarted; believing he can insert video game into tooth cavity.

SPECIFIC RISK ESTIMATES

Hx◦	Risks	T.H.R.E.A.T	Low	Mod	High
☒	Violence	No ☒ Yes ☐	☐	☐	☒
☐	Self-Harm	No ☒ Yes ☐	☒	☐	☐
☐	Suicide	No ☒ Yes ☐	☒	☐	☐
☐	Unauthorized Leave		☐	☐	☒
☒	Substance Abuse		☐	☐	☒
☒	Self-Neglect		☐	☒	☐
☐	Being Victimized		☒	☐	☐
☒	Case Specific Risk: Hospital Internet Breach		☐	☐	☒

CURRENT MANAGEMENT MEASURES

Current Privilege Level: 3 ▼

Recommended Privilege Level: 2 ▼

Med secure unit; limit access to funds; IM medications; weekly urine screens; privileges on hold.

Health Concerns/Medical Tests: Dental pain; patient is presently refusing care

Risk Formulation: What factors predict/explain/which person/will carry out/what act/when?

If non-compliant with medications, patient may become increasingly paranoid and/or delusional, with increased agitation. Potential for violence towards caregivers and/or those he believes are involved in his delusion-based conspiracy network. Absent the secure setting, Mr. L is unlikely to be compliant with conditions or his orders (meds, SU).

Psychiatrist: Dr. D. F.	CMC: Ms. S. J.	Social Worker: Ms. S. L.
Primary Nurse: Ms. K. R.	Nurse(s): Ms. J. R.; Mr. R. O.	Other (pls specify position): Pharmacist: Dr. A. A.
Date Completed: 11.10.2020	Time to Complete: 40min	

*TA - Therapeutic Alliance   ‡PPS - Positive Peer Support   †N/A - Not Applicable   ◦Hx - Historical   FPSC Version 1.0 Electronic

Figure 15.1 START Summary Sheet for the Case of Mr. L

Integrating Strengths and Risks

Third, the START was the first SPJ measure to equitably consider individual's Strengths and Vulnerabilities; it guides a balanced assessment of a person's capacities, talents, and resources while also acknowledging a person's challenges and deficits. This even-handed assessment facilitates risk amelioration through implementation of effective management strategies and engagement of clients in programs of targeted treatment and intervention ("push" and "pull"). The equalized consideration of strengths and risks and attentiveness to recovery-oriented practice has led the measure to be described as "highly compatible with notions of person-centeredness and recovery-oriented practice" (Dickens, 2015, p. 461).

The risk assessment field has demonstrated a movement towards the side-by-side inclusion of risks and strengths, evidenced by the recent creation of tools with equally balanced strength and risk items (e.g., the START) and tools assessing either risks or strengths that are meant to operate in tandem (e.g., the HCR-20 and the SAPROF; de Vogel, de Ruiter, Bouman, & de Vries Robbé, 2012), and has been well documented in the literature (Barnao, 2013; Ward, Mann, & Gannon, 2007; Rogers, 2000; Seligman, 2002). These objectives are consistent with recommendations regarding the consideration of strengths by the Mental Health Commission of Canada (2015). Finally, although further research is needed, there is some evidence combining consideration of strength and risk variables in assessments can increase predictive validity for violence recidivism over assessing solely for risk variables (de Vries Robbé et al., 2011; Kashiwagi, Kikuchi, Koyama, Saito, & Hirabayashi, 2018). Even when the presence of strengths does not increase predictive validity, they continue to act as protective factors for violence (Wilson, Desmarais, Nicholls, & Brink, 2010) and may still be valuable information for clinical treatment planning. Furthermore, clinicians have expressed the benefits of integrating protective factors (strengths) into clinical assessments as a well-rounded snapshot of client treatment progress and the inclusion of strengths can facilitate a therapeutic alliance, treatment motivation, and skills acquisition (de Vries Robbé, de Vogel, & Stam, 2012; Dumas & Ward, 2016; Ray & Simpson, 2019).

Treatment Relevant

Finally, given all of these considerations, the START is uniquely positioned to facilitate treatment planning in diverse populations (Kroppan et al., 2011). The measure provides a comprehensive 360-degree view of the patient, is attentive to the range of adverse outcomes of concern when caring for mentally ill and justice-involved individuals, and supports attention to progress and deterioration in both strengths and risks. Legislation (e.g., Section 16, *Criminal Code of Canada*, 1985) clearly intends mental health, forensic, and correctional care providers to prepare people to return the community in an expeditious and safe fashion. Theory (Andrews, 2011; Andrews & Bonta, 2010) and research evidence (Dvoskin, Skeem, Novaco, & Douglas, 2011) strongly advocate for a shift in practice from punitive approaches to supporting recovery (e.g., through education, occupational opportunities, and social support).

Further, several countries have passed legislation endorsing the recovery model as a guiding principle of mental health services and education (Rufener, Depp, Gawronska, & Saks, 2015). The START also lends itself well to monitoring patient progress (e.g., changes in behaviours, attitudes, and emotional state) over time. Clinicians, along with patients, family, and other stakeholders (Review Boards) can monitor risk and track patient progress with the START. The measure can also be used to inform critical decision-making, including: (1) placement (e.g., inpatient vs. community, max/med/min security unit), (2) privilege levels (e.g., level of supervision for hospital programming, community access), (3) referrals for assessments, and (4) treatment and care planning (e.g., recommendations for programming and treatment). Implementation research suggests

that completing the START is a useful undertaking (e.g., Khiroya et al., 2009) and assists treatment teams with documentation and organizing information (Doyle et al., 2008). For instance, Levin et al. (2018) concluded that the assessment increased consensus in defining risks and communicating treatment needs. Similarly, results of several studies (Crocker et al., 2011; Doyle et al., 2008; Kroppan et al., 2011) indicate that assessments and care plans are more systematic and structured when the START is employed. The use of the START has been found to have increased the knowledge of the patients' risk and protective factors for violence and to lead to a broader, more nuanced understanding of the patient (Crocker et al., 2011; Kroppan et al., 2011).

Populations and Settings

The START is intended for assessing risks and treatment planning with adults with mental health, substance use, and criminal justice-related needs. However, following publication and dissemination, there was considerable interest and perceived value in using the measure with youth. Thus, several of the original START authors (Webster, Desmarais, and Nicholls) collaborated with experts in developmental psychology, trauma, and forensic mental health (Professors/Drs. Jodi Viljoen and Keith Cruise) to develop the START: Adolescent Version (START:AV; Viljoen et al., 2014).[2] Generally, we would consider individuals appropriate for a START assessment if they are 18 to 25 years of age or older. In some circumstances, a young person (e.g., 16 or 17 years of age) may be living independently and thus the care team may determine it would be more appropriate to complete an adult START than to use the START:AV. Similarly, given the adolescent version is attentive to the extent to which young people are embedded within the family network and financially dependent on others, it may be more appropriate to evaluate a young person (25 years or younger) who remains in the family home with the START:AV.

The START can be used in both inpatient and community settings for mental health, forensic, and correctional clients (Gray et al., 2011; O'Shea & Dickens, 2014) and has been used with diverse populations (e.g., individuals who are homeless). The measure supports transparency, consistency, and accuracy in communication among colleagues and between units, agencies, and other primary stakeholders (e.g., with the individual and their family). The START is considered particularly helpful for handovers; for instance, when a patient leaves an inpatient setting and returns to the community or when care providers are on vacation.

User Qualifications

The START is designed to integrate the expertise of mental health specialists of various disciplines, preferably working together as a team (Webster et al., 2009). In this fashion, it is assumed that professionals using the measure will possess the typical qualifications for the various mental health disciplines, as well as START-specific training (Webster et al., 2004, p. 169, 2009, p. 79). The START can be used by a diverse range of experienced clinical staff members; this includes but is not limited to social workers, nurses, psychiatrists, and psychologists. The rationale is that most mental health settings integrate multidisciplinary teams and acknowledges that it is typically nurses, occupational therapists, and rehabilitation staff who spend the most time with patients and are thus well positioned to comment on the person's behaviour. Professionals of various backgrounds are able to provide unique contributions to assessing specific items. For example, social workers are often most knowledgeable about a patient's social support and material resources; nurses, occupational therapists, and rehabilitation therapists can provide unique observations about the person's day-to-day conduct; psychiatrists may have more insight into the individual's emotional state and medication adherence. In addition, it is recommended that the individual who is the focus of the START assessment should be involved in the assessment process, as

appropriate (Nyman, Hofvander, Nilsson, & Wijk, 2019). Research demonstrates the potential benefits of collaborative decision-making and treatment planning. For instance, Livingston et al. (2016) concluded that even when forensic psychiatric patients disagree with the disposition determination, provided they felt respected through the process, they are more likely to be cooperative.

Timeframe

A virtue of the START, particularly for treatment decision-making purposes and monitoring patient progress, is that while it is attentive to the past, it is a short-term dynamic risk assessment. As such, ratings for the 20 Strengths and Vulnerabilities are to be based upon the patient's behaviour and presentation in the prior 3 months, or since the last START assessment. However, the START also allows for the inclusion of static and historical information in every aspect of the measure. The coding of Key Items and Critical Items can include anything the team knows about the patient (past or present). Similarly, the future-oriented Specific Risk Estimates have a foundation on past evidence that the person has engaged in that behaviour (e.g., self-harm, suicidal ideation, violence, substance abuse) or that the outcome has been a concern previously (e.g., victimization, self-neglect). It is suggested that assessors forecast up to 3 months into the future for the Specific Risk Estimates.

START assessments provide a snapshot of patient risk over the future 3 months, unless otherwise clinically indicated. For instance, if a patient was admitted to hospital with acute psychotic symptoms and placed in seclusion/on a locked unit but had a history of responding well to medications, the team would logically want to re-evaluate the person once the symptoms had cleared and consider moving them to a less restrictive environment. Conversely, if a patient was noted to be pacing and uttering threats under his breath during an outpatient appointment, staff would logically want to re-evaluate and reassess, specifically to determine if a return to hospital was required. This 3-month timeframe reflects two primary considerations: (1) the dynamic nature of the items, and (2) the purpose of the START—to be intentional about using risks/needs to inform placement, programming, and privileges. Since, for example, a person's risk of violence can diminish rapidly once severe symptoms of mental illness are treated and can increase just as quickly if he or she stops taking prescribed medications or is exposed to destabilizers, the shorter period of time for which a START rating is considered valid aims to convey that risk is a changing phenomenon that is heavily influenced by variable internal and external factors.

Description of Content and Items

The START is comprised of 20 dynamic items that were identified through a consideration of theory, empirical research, and clinical expertise across related areas of research and practice (e.g., violence, unauthorized leave, suicide, and self-harm risk assessment literature; inpatient and community treatment literature; tertiary, forensic, and correctional research). Each item is evaluated simultaneously for vulnerabilities and strengths. Items are scored 0/No (minimal/low), 1/Possible (partial/moderate), or 2/Yes (clear/definite/high) as demonstrated by the individual in the recent past (generally, the last 3 months). In addition, assessors can include static and historical information as Key Items and Critical Items (see Figure 15.1).

Key and Critical Items

In addition to evaluating the individual's current presentation, each of the 20 items can be coded as "Key Items" or "Critical Items" (see far left and far right columns of the items, Figure 15.1). This allows one or more assessors (preferably a clinical team) to communicate that the item has

been especially important historically and/or is of considerable relevance to treatment planning and/or future outcomes.

A Critical Item reflects a "red flag" (e.g., substance use relapse; return to an antisocial peer group; noncompliance with treatment/medication). If this is present, the team is concerned that the patient has already relapsed or could deteriorate, and/or that his or her risk level(s) may increase (e.g., for suicide, offending, self-neglect, respectively). This allows assessors to communicate how the patient is doing presently, without losing sight of the fact that the person may have demonstrated substantial Strengths and/or Vulnerabilities on an item previously. For instance, Mental State may be coded as a Critical Item for an individual who exhibited paranoid delusions that were directly related to his index offense and subsequent Not Criminally Responsible on account of Mental Disorder (NCR-MD) finding and forensic hospital admission 6 months ago, even if the person has been asymptomatic over the last 3 months and has a "0" Vulnerability score on that item presently.

Conversely, Key Items reflect "therapeutic levers," which are opportunities to engage the patient or an acknowledgement of past or present skills or supports. Flagging an item as a Key Item indicates that it is an area in which the individual has demonstrated strength in the past or where the treatment team may want to focus support for the individual on their road to recovery, regardless of how the person presents on the item currently. To be clear, an individual may receive a low or high score on an item and still have that item coded as a "Key Item." For example, if an individual received significant recreational or occupational benefit from writing, the treatment team may want to consider incorporating journaling or other forms of creative expression into recovery planning. Similarly, a person may presently be reluctant to have contact with supportive friends and family due to feelings of shame (avoiding contact with prosocial supports demonstrates some Vulnerabilities) but treatment providers may want to support reunification with a prosocial support network; thus, it would be useful to code Social Support as a Key Item.

The START authors recommend that teams be reasonably parsimonious in their use of Key and Critical items (Webster et al., 2009). Key and Critical items can provide guidance or the "action items" for the next care planning meeting and it can be difficult or overwhelming when the patient has many Vulnerabilities and few Strengths. Identifying Key Items or Critical Items can help to identify the current priorities of the treatment plan, which should reflect the shared goals of the patient and treatment team, whenever possible (Nicholls, Desmarais, Martin, Brink, & Webster, 2019).

Case-Specific Items

In addition to the 20 standard START items, a minority of individuals will have Strengths and/or Vulnerabilities in other areas that assessors may wish to document. The content of these items can vary widely depending on the individual being assessed, but some areas that are commonly encountered are cognitive abilities, culture, and/or trauma.[3]

Case-Specific Risk Estimates

Case specificity is also a feature of the START Specific Risk Estimates. In addition to the seven outcomes listed in the Specific Risk Estimates, users may wish to include additional patient safety concerns or antisocial behaviours. Common examples include reckless driving, driving under the influence, or engaging in unprotected sex despite having a diagnosis of HIV. The authors also encourage assessors to use this space to provide additional information about the type of outcome of concern. For instance, hostage taking, stalking, intimate partner violence, child abuse, or gang involvement would be addressed under the Violence Specific Risk Estimate. The START is first and foremost intended to be a communication tool, a means of identifying and documenting risk

to prevent adverse outcomes. While being attentive to the value of a "one-pager," the team is mindful that documentation and clarity that will efficiently convey critical information is of the utmost importance; the START should form the foundation of an integrated treatment plan .[4]

There Is No Silver Bullet; However . . .

The primary intention of a risk assessment is to prevent harm; the priority is to keep the patient, staff, and the community safe and to promote recovery. However, human behaviour is complex and risk is often highly dynamic. For example, a patient and their care provider may both leave a productive treatment session feeling quite positive but upon returning home the patient could receive a distressing phone call, relapse to substance use, and subsequently hurt themselves or someone else. No matter how good the measure or the clinician, there is no silver bullet, and unfortunately, adverse events will occur. However, seasoned clinicians are also likely aware that using measures such as the START, and other forensic measures, such as those covered in this book, also serve to protect the best interests of the assessor. START supports evidence-based practice, transparency, and accountability, which can be essential to prevent liability. A senior colleague at the BC Forensic Psychiatric Hospital, Mr. Peter Parnell, Director of Access, Transitions, and Risk, often shares with direct care staff and people engaged in START Workshops how he was called in to testify at an inquiry into a forensic community patient's suicide. He describes how he was able to use the START to demonstrate precisely how and why he had made his determination and was relieved to promptly be thanked for his time and complete his testimony in just ~10 minutes.

Overview of the START Summary Sheet and Recommendations for the Organization of the Assessment

There are six distinct sections of the START Summary Sheet: (1) Identifying information, (2) 20 Items, including two separate columns to code Key Items and Critical Items, (3) Signature Risk Signs, (4) Specific Risk Estimates, (5) Health Concerns, and (6) Current Management Measures and Risk Formulation (see Figure 15.1).

As with any assessment, the clinician will always want to begin by ensuring that the correct Identifying Information is linked to the patient being assessed, and to be clear about the purpose of the evaluation. The patient's past and current presentation and associated needs on the Items should then be considered. That information, gleaned from file reviews, interviews with the patient and collaterals, administrative records, etc., should help to determine if there are any signature risk signs and if the person has any physical health concerns. Finally, a comprehensive consideration of the individual's mental health, substance use, and criminal justice involvement will inform the "Hx" column. All of this information is then used to inform the Risk Estimates.

When using the START Summary form, assessors should work from top to bottom and left to right, much like reading a book. Thus, START assessments can be used to justify necessary limitations put on a patient's civil liberties (e.g., it is useful to help explain to the patient or a family member why the patient is living in a locked unit; or why the treatment team has recommended a Custody disposition or a Conditional Discharge). It can be helpful when providing expert testimony before a tribunal[5] and as a rationale to other stakeholders as to why other care planning and referrals have been made (e.g., referrals for assessments, treatment).

Identifying Information

Similar to other health care documentation, the START Summary Sheet allows for information such as name, sex, identification number, and date of birth to ensure a correct match between the evaluation and the individual being assessed. DSM or ICD diagnoses should also be included for easy reference for the treatment team and other stakeholders (e.g., tribunals, units/agencies receiving a patient upon transfer/discharge). In addition, assessors are able to indicate the setting by choosing between options of "hospital," "community," or "corrections," and can write in the reason for the assessment (e.g., upcoming court date/annual review/change in patient presentation) and the person's current legal status (e.g., involuntary, NCRMD, remand, etc.).

START Items: Scoring Strengths and Vulnerabilities

The assessment can proceed with any item, meaning it is not important to complete the items in the order they are presented on the form (i.e., 1–20). Further, there are no concrete guidelines about completing the coding for all of the Vulnerabilities versus all of the Strengths first, for instance. That being said, given the importance of being attentive to the item anchors and operational definitions, it may be the case that assessors find it helpful to complete the assessment of both Strengths *and* Vulnerabilities for each item to be more efficient than coding all Strengths for the 20 items and then returning to each item to evaluate Vulnerabilities. As we will expand on in the following sections, there may also be value in considering all 20 items before determining which items should be coded as Key or Critical.

As mentioned earlier, a unique facet of the START is its equal focus on both the individual's Vulnerabilities and Strengths. The measure is comprised of 20 items that are each rated twice—the patient's Vulnerabilities (or risk factors—challenges, deficits) regarding the item on one "side," and the patient's Strengths (or protective factors—capacities, skills) related for the item on the other. Borrowing from pre-existing measures, such as the HCR-20 (Webster, Douglas, Eaves, & Hart, 1997; Webster, Eaves, Douglas, & Wintrup, 1995), the START employs a 3-level scale. A maximum rating can be given to each of the 20 items if there is strong evidence that the factor is present and relevant to the individual's risks or needs. A moderate score is given when the factor is possibly evident or evident to some (but not the full) extent, or when there is partial evidence that the factor has relevance for the client. The person being assessed would receive a low score if there is no support for the presence of the item or if there is clear evidence the item is irrelevant to the person's risks and needs. The value of a scale that considers an individual's Strengths as well as his or her Vulnerabilities has been established (Barnao, 2013; Ward et al., 2007; Rogers, 2000; Seligman, 2002; de Vries Robbé et al., 2012; see the "Overview of Research" section later in this chapter). When using risk assessment tools that focus solely on risk/vulnerabilities, evaluators can be led to conceptualize that a score of 0 is the "full stop" point, as it is the highest possible positive score. Allowing the scale to reach in the opposite, protective direction aims to help assessors consider what positive aspects of the individual's life may be interwoven into intervention and treatment planning to uniquely contribute to risk reduction efforts (Borum, Bartel, & Forth, 2003).

The inclusion of a separate Strengths scale should not influence coding of the Vulnerability scale, and vice versa. Separating Strengths and Vulnerabilities into two discrete scales was done to encourage evaluators to conceptualize an individual's ability to have both Strengths and Vulnerabilities in one domain, and to plan for the buffering of Vulnerabilities and the promotion of Strengths, simultaneously. For example, a person may be highly motivated to stop using drugs/alcohol, recognize that he has a significant substance use problem, and willingly attend various treatment programs, but still frequently relapse, at least initially. Similarly, a patient may easily form strong relationships with her female peers and have a prosocial and supportive family, but

may be taken advantage of in abusive romantic relationships with men. In each of these case examples the patient exhibits both Strengths and Vulnerabilities, and the assessment provides the treatment team with insights into how to proceed to support the person's Strengths and address their needs.

Consideration of these two case examples can demonstrate the clinical utility of considering Strengths and Vulnerabilities separately when it comes to treatment planning. In the first case, if the assessment had only considered the patient's deficits, it would reflect ongoing Vulnerabilities because the person continues to relapse. If substance use was associated with a risk estimate (e.g., the person committed thefts to support their habit or had a history of aggression when high/ drunk) it should also be coded a Critical Item. Often the first response for people with substance use disorders is to recommend motivational interviewing. In this scenario, the care team likely would not want to engage the patient in motivational interviewing but rather might want to work with the patient to identify any stressors or circumstances that precede a relapse. In fact, to pursue motivational interviewing might be a waste of limited resources and could detract from the therapeutic alliance by making the patient feel that he was not being heard and that the treatment was not addressing his present needs. In the second scenario, to code the patient's social support as having Vulnerabilities would clearly be accurate, and it might again be coded a Critical Item. However, simply acknowledging that the patient has an antisocial romantic partner and to neglect that she has a substantial prosocial network would offer substantially fewer insights into how the team might want to proceed. Working with the patient to develop healthy boundaries and healthy romantic relationships would be a critical therapeutic goal. If the patient was in an inpatient environment, the staff may want to consider close monitoring or even limiting access to grounds during periods when male patients are also outside. Similarly, the wisdom of placing the patient on a mixed-sex unit would be an important topic for discussion and might be delayed until the patient demonstrated some insight.

Signature Risk Signs

A particularly unique contribution of the START is the inclusion of what the manual refers to as Signature Risk Signs (Webster et al., 2009). The idea is similar to the serial sexual homicide literature, in that a detective coming across a crime scene might recognize a pattern of behaviour (e.g., a body displayed in a certain, precise manner; a "trophy" removed; or something identifiable left at the crime scene). Our colleague Dr. Emlene Murphy (then medical director of the BC Forensic Psychiatric Hospital) drew the team's attention to the notion that among a minority, yet perhaps substantial number of persons with mental illness, the emergence of psychotic, depressive, or other symptoms or behaviours may signal a relapse. The indicators may be subtle and initially appear to be unrelated to the individual's mental health or risk to self or others, or initially even could be perceived to indicate therapeutic progress or recovery. However, an anamnestic clinical approach and growing familiarity with the person during repeated relapses may shed light on seemingly irrelevant symptoms that represent a "signature risk sign" which is invariant for that specific person and may serve as an extremely reliable predictor of impending relapse and elevated risk for violence to self or others (Melton, Petrila, Poythress, Slobogin, Otto, & Mossman, 2018, p. 298).

The START Summary Sheet includes a space for "Signature Risk Signs" to ensure that they are communicated to all other persons involved in the patient's care.[6] For example, an individual's fixation on Armageddon may be a Signature Risk Sign for violence risk when in the past this fixation has preceded murder committed within the context of a delusional belief of saving the victims from Armageddon. Signature Risk Signs can be as simple as wearing a certain article of clothing or a person licking his fingers and smoothing out his eyebrows, when doing so has been found to consistently precede aggression. To unaware treatment providers, the behaviours may

initially seem irrelevant or benign, or may even be characterized as a prosocial leisure pursuit (e.g., making paper flowers or paper airplanes) but they can be very helpful to indicate that supervision, management and monitoring should be revisited (e.g., serum levels should be checked, urine drug screens completed, one-on-one observation, delaying a day leave).

Examples of Signature Risk Signs:

- Becomes preoccupied with an identified individual
- Becomes paranoid about an entire population of individuals (e.g., blonde-blue eyed women)
- Wears excessive jewelry and "gangster clothing"
- Becomes preoccupied with health/fitness
- Makes a crucifix out of chicken bones and wearing it as a necklace
- Reports smelling "unicorn exhaust"
- Grows a beard
- Becomes fixated on numbers and number sequences
- Develops an unusual accent
- Reports fatigue due to alien blood transfusion
- Taking showers with clothing on and wetting hair repeatedly

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T.H.R.E.A.T.

Although the START is designed to aid professionals in synthesizing vast amounts of historical and current clinical information about the individual to inform their assessment and care plan, it is important to always be aware of imminent and serious risks that must be addressed immediately. In these cases, when there often is no time for the systematic collection of information, the START communicates T.H.R.E.A.T.: a *T*hreat of *H*arm that is *R*eal, *E*nactable, *A*cute, and *T*argeted. That is, a significant risk of harm to self or to others that is credible (e.g., the assessee has known motivation to harm), effectible (e.g., the individual has adequate means to harm, such as a weapon), immediate (e.g., staff and/or co-patients may be in imminent danger), and specific (e.g., targeted to a particular person and/or group) (Webster et al., 2004, 2009). In this section of the START Summary Sheet, the T.H.R.E.A.T. box is indicated in relation to the individual's risk for violence, self-harm, and/or suicide. If it is deemed that a threat of this nature exists, it is expected that the ordinary START assessment process will be suspended in order for the threat to be addressed and managed.

Specific Risk Estimates

The START includes seven Specific Risk Estimates that point to both risks to self and others. These risks are to be scored as if the client were living independently in the community with no supervision. Thus, the main question asked by these estimates is "What is the risk, over the specified timeframe, if the client was given the opportunity?" A rating of "low" refers to the absence of risk, or to minimal risk. Therefore, no unique management strategies are required, and the patient can continue to be monitored as per usual (Webster et al., 2004, 2009). "Moderate" ratings refer to a greater-than-average risk, and as such require a risk management plan, with identification of strategies that target reduction of risks and enhancement of strengths. A timetable for monitoring and evaluating the effectiveness of these strategies should also be developed.

A "high" rating refers to risks that are a serious and imminent threat. Risk management strategies should be implemented immediately and should be focused on pressing needs. The plan should also consider short- and long-term[7] risk reduction and strength enhancement.

The START also allows for inclusion of historical lifetime risk of each Specific Risk Estimate. This is to ensure that a thorough client history has been completed. However, historical risk is simply one piece of information; it does not necessarily reflect the individual's current risk level. A person can have a history of engaging in violence, substance use, suicide, etc., but presently be "low" risk; on the other hand, a person can also have a "high" current level of risk while having no history of that particular behaviour.

Timeframe Considerations

On average START assessors are forecasting 3 months into the future. However, the START is intended to support clinical practice and the long-term success of the patient. Moreover, the authors acknowledge that each patient's profile and care trajectory will vary.

CASE EXAMPLE

Sarah is a bright, young, first-year university student admitted to hospital. She has a pro-social and engaged family. In the immediate future the team is focused on alleviating her depressed mood through a combination of medications and psychosocial rehabilitation (engaging her in activities she has enjoyed in the past such as yoga, cooking, and movie nights).

Nonetheless, the team is mindful that Sarah has responded well to medications in the past and her length of stay is expected to be short. Sarah's longer-term goals involve supporting her in remaining close with her family and doing whatever possible to prevent her from falling behind in her studies. This includes arranging family visits, referring Sarah to work with the hospital teacher and cooking with the rehab staff, as well as supporting her in her desire to initiate a book club for her fellow female patients. The plan might also include discussions with the patient, and family as appropriate, about the potential need to re-evaluate Sarah's courseload as a mechanism to reduce unnecessary anxiety and depression as a strategy to prevent a relapse.

Risk Management and Treatment Planning

After an individual's risks have been identified, it is important for assessors to develop a plan to manage those risks. The START provides space for brief risk management planning—it is recommended that a detailed plan should also be documented elsewhere (contact START@phsa.ca for an Integrated Treatment Planning form). The START Summary Sheet includes prompts for treatment planning (e.g., privilege levels) and additional documents are available that integrate the START assessment with routine treatment planning (see Figure 15.2; also see START:AV; Viljoen et al., 2014).

Although the START focuses on a 3-month window, we recognize that in clinical practice the clinician and the patient may be contemplating multiple timeframes and acute, short-term, and longer-term needs and treatment plans. The START is intended to support quality patient-centred care; thus the 3-month timeframe is a guideline. For instance, at the BC Forensic Psychiatric Hospital, the START policy requires that the measure is completed as soon as an NCR

Substance Use				
Key Item	Strengths	Items	Vulnerabilities	Critical Item
☐	2 ☐ 1 ☐ 0 ☒	**8. Substance Use**	☐ 0 ☐ 1 ☒ 2	☐

Supporting Evidence for Strengths	**Supporting Evidence for Vulnerabilities**
There is currently no evidence of any Strengths. Mr. L does not abstain, nor does he express any insight into the risks associated with using in hospital (e.g., violating rules, the conditions of his order results in limits to his privileges; mixing non-prescription drugs with his meds). He does not demonstrate any efforts to quit using THC.	Mr. L is testing positive for THC in a controlled environment. He denies use despite + testing and he will not disclose how he is accessing. He advocates for use of cannabis in place of his antipsychotic medications. Team believes patient may use cannabis as a means of coping with SX.

Supporting Evidence for Key Items	**Supporting Evidence for Critical Items**
There is no evidence that Substance Use is a Key Item.	There is insufficient evidence that this is a Critical Item. There is not a long history of severe and/or persistent drug use. Mr. L's THC use did not appear to play a significant role in the index offence and his use has not been associated with any recent risks to himself or others.

Priorities for Substance Use

GOALS: Team, particularly primary nurse, will increase collaboration and engagement with patient and family to inform understanding of what it is that motivates Mr. L to use THC. Reduce access/use of THC. Increase motivation to stop using THC and his insight into the importance of not using non-prescribed drugs given it is a condition of his Review Board order and thus, could interfere with his application for additional privileges, community outings.

Case Management Plan

MONITORING:
1. Mr. L. will undergo irregularly scheduled urine drug screens ~2x/weekly (per the Matrix program standard).
2. His behaviour will be monitored for evidence of use of THC, particularly upon return from grounds.
3. The team will work with Mr. L to identify/understand triggers, if his use is linked to any particular stressors (e.g., some staff have postulated that his mother's visits cause anxiety), and if so, how best to support him.

SUPERVISON:
1. Mr. L's grounds privileges will be immediately suspended for 1 week. Each time he tests positive for THC he will lose grounds privileges for 1 week, for the next 2 months.
2. The team will ask the forensic security officers to monitor video surveillance tapes of the hospital grounds to determine how Mr. L is obtaining THC and discuss with grounds staff and patients, as appropriate.
3. Staff will ask facilities management staff to trim the trees near Mr. L's favourite spot on the grounds and change the type and location of chairs to decrease unobserved spaces.

ASSESSMENT and TREATMENT:
1. Mr. L's mental state, his lack of insight, and minimal response to antipsychotic medications are critical items on his START assessment and all remain considerable Vulnerabilities. The psychiatrist and pharmacist will consider increasing Mr. L's medications and/or examining alternatives (clozapine).

(Continued)

2. Refer Mr. L to concurrent disorders counsellor to assess using motivational interviewing and MI treatment. To determine what function marijuana currently has for him and identify treatment goals to address same.

3. Mr. L is difficult to engage in programming. In the absence of intrinsic motivation, the team will implement extrinsic motivation. Each time Mr. L attends NA or SMART recovery program, he will receive 1 hour of time playing the computer game of his choice (given the risk associated with his computer use in the past, this will be on a non-networked television).

Other Actions/Notes:

1. **Follow up with concurrent disorders counsellor (CDC):** Counsellor recently interviewed Mr. L. and recommended individual Motivational interview sessions to prepare him for entry into the hospital's substance use program (Matrix).

2. **Matrix program:** Mr. L should be added to the waitlist pending approval of CDC.

3. Long term, the team will continue to build Mr. L's motivation through various pursuits:

   — **Recreational:** latest Marvel movie is to be released in a few months, and Mr. L has repeatedly expressed an interest in seeing it in theatre. The team can encourage him to refrain from substance use and work to increase his privilege level with the goal of planning a Staff Supervised Community Outing.

   — **Occupational:** With supervision to ensure he is not accessing the internet, Mr. L should be given opportunity to obtain continuing education credits and long term to take part in a work placement relevant to his interests in programming.

   — **Relationships and Social Support:** Mr. L and his family will be encouraged to take part in family counselling sessions, when appropriate.

Figure 15.2 Portion of a START Risk Assessment, Risk Management, and Treatment Planning Form

determination is made and an assessment patient becomes a treatment patient, but within the first 3 months at a maximum. Further, consistent with recovery-oriented practice, we also encourage staff to be planning for community release immediately from the time of admission. Thus, while the START assessment and treatment plan is "focused" on the short term, the intention is to encourage teams to use the assessment and care plan as a foundation for longer-term success. This can serve to provide patients with an understanding of the anticipated care pathway and support the individual and their support network in maintaining hope and developing insight, goals, and concrete plans for achieving their goals (see the "Timeframe Considerations" textbox).

Overview of Research

Systematic Review and Meta-Analysis

A systematic review and meta-analysis of the START, comprised of 23 and 9 studies, respectively, was conducted by O'Shea and Dickens (2014). The authors examined the psychometric properties of the measure and the validity of each of the seven distinct risk domains (i.e., violence, self-harm, suicide, unauthorized leave, substance abuse, self-neglect, and victimization). Evidenced by the systematic review, the START is well received by users; mental health professionals find it both clinically useful and efficient to complete (O'Shea & Dickens, 2014). The internal consistency of the START Vulnerabilities scale ranged from .80 to .95 across the seven studies and the Strengths scale ranged from .76 to .95 (considered good or acceptable to excellent; O'Shea & Dickens, 2014). The authors reported significant positive correlations between the START Vulnerability scale scores and the total and subscale scores of the HCR-20 (.46 to .83; Douglas et al., 2013), the Suicide Risk Assessment and Management Manual (.58; Bouch & Marshall, 2003), and the PCL:SV (.21; Hart et al., 1995) (O'Shea & Dickens, 2014). O'Shea and Dickens (2014) also

reported the total Strengths scale scores and total scores of the Structured Assessment of Protective Factors (SAPROF; de Vogel et al., 2012) showed a significant positive correlation (.81) and, as would be expected, the Vulnerabilities scale scores had a significant negative correlation with the SAPROF (−.78; Abidin et al., 2013). The START Strengths and Vulnerabilities scales fell within the good to excellent interrater reliability range in the seven studies examined (ICC: .78–.86; Spearman's r: .69–.83; Kappa: .07–.13; O'Shea & Dickens, 2014).

As is often the case with SPJ measures, although the items on the START are not intended to be summed to determine an individual's risk, many researchers have examined the association between the START Vulnerability total score/Strength total score and various outcomes of relevance. In their review, O'Shea and Dickens (2014) concluded that the Vulnerability scale total score was significantly associated with multiple outcomes of relevance, including verbal aggression, physical aggression, unauthorized leave, and substance use in the majority of studies examined. However, one study found the Vulnerabilities scale significantly predicted aggression to objects but not aggression against individuals (Morris, 2013), and in no study did the scale predict suicidality, self-harm, or victimization. The Strengths scale total score predicted the absence of all forms of measured aggression (verbal and/or physical aggression against objects and individuals) in most research, and in one study it significantly predicted unauthorized leaves and substance abuse (Braithwaite, Charette, Crocker, & Reyes, 2010), and in another study it was significantly associated with self-neglect (Gray et al., 2011). Larger AUC values were observed in most examined studies for the Vulnerabilities scale compared to the Strengths scale (O'Shea & Dickens, 2014).

O'Shea and Dickens (2014) reported on two studies that had examined the incremental validity of the START Strengths and Vulnerabilities scale total scores over the HCR-20 Historical scale in regards to predicting physical aggression against others: in one, the Vulnerabilities scale demonstrated significant incremental validity, as did the C and R Scales of the HCR-20 (Wilson et al., 2013). In the other, the Strengths scale predicted physical aggression against others more strongly than the HCR-20 Historical scale and the PCL:SV, while the Vulnerabilities scale demonstrated incremental validity over the same measures for the prediction of amalgamated aggression and verbal aggression (Desmarais, Nicholls, et al., 2012). Within a third study, the START scales did not demonstrate incremental validity over each other, evidencing comparable predictivity (Wilson et al., 2010).

Finally, the authors concluded that the meta-analysis was consistent with the systematic review: both subscales were predictive for some risk domains (O'Shea & Dickens, 2014). Specifically, the Specific Risk Estimates predicted each of their respective risk outcomes at a rate that exceeds chance (weighted mean AUC values = .60 to .76), while the Strengths and Vulnerabilities scales consistently predicted measures of aggression (.70 to .78) but did not have significant associations with some risk estimates, including self-harm, victimization, and self-neglect (.53 to .61). The O'Shea and Dickens (2014) systematic review and meta-analysis provided an overview of the utility of the START in both clinical and research settings, most strongly for the prediction of diverse measures of aggression. In the sections that follow, we provide a detailed examination of literature on the START, including research published subsequent to O'Shea and Dickens (2014).

Internal Consistency

A total of nine distinct studies that have examined the internal consistency of the START were identified. Consistency for the total Strength and Vulnerabilities scales, measured using Cronbach's alpha values, has ranged from .86 to .95 (Nicholls et al., 2006; Timmins, Evans, & Tully, 2018). More specifically, in a study conducted by Nicholls and colleagues (2006) within a forensic inpatient sample in Canada, the internal consistency for independent ratings was .86 across psychiatrists, case managers, and social workers. The Vulnerabilities scale displayed an alpha value ranging between .76 and

.95 while the Strengths scale ranged from .80 to .95 in forensic inpatient, civil secure inpatient, and community settings with sample sizes ranging from 50 to over 1000 patients (Abidin et al., 2013; Desmarais, Van Dorn, et al., 2012; Lowder, Desmarais, Rade, Coffey, & Van Dorn, 2017; Lowder, Desmarais, Rade, Johnson, & Van Dorn, 2019; Nicholls et al., 2011; Nonstad et al., 2010; Timmins et al., 2018; Viljoen, Nicholls, Greaves, Ruite, & Brink, 2011). Internal consistency for the Specific Risk Estimates has only been examined in one study conducted in the United Kingdom which engaged a variety of mental health professionals (psychiatrists, psychologists, occupational therapists, and registered mental health nurses) as raters and was reported to be .74 (Timmins et al., 2018).

Interrater Reliability

In the first study to examine the interrater reliability (IRR) of the START, an intraclass correlation coefficient (ICC_2) of .87 was found across groups of psychiatrists ($n = 42$), case managers ($n = 37$), and social workers ($n = 32$) who completed 111 total START assessments independently (Nicholls et al., 2006). Studies that came after have reported ICCs ranging from .64 to .90 for the Vulnerabilities scale and .49 to .85 for the Strengths scale and have examined the reliability of researcher and case manager START ratings across up to 29 independent raters (Troquete et al., 2015; Viljoen et al., 2011; Wilson et al., 2010, 2013).

The Specific Risk Estimates have been evaluated less frequently. One Canadian study reported an ICC_1 of .81 combined across all risk estimates, rated by graduate-level research assistants (Wilson et al., 2010). The START Strengths and Vulnerabilities scales and Specific Risk Estimates have been found to have Kappas ranging from .64 to 1.00 (Gunenc, O'Shea, & Dickens, 2018; Marriott, O'Shea, Picchioni, & Dickens, 2017; O'Shea, Picchioni, & Dickens, 2016). Specifically, a study by Marriott and colleagues (2017) in which two researchers independently rated 20 inpatients in a secure psychiatric unit found the lowest IRR for a Specific Risk Estimate was for self-neglect ($\kappa = .64$) and the highest to be for aggression (including physical and verbal aggression; $\kappa = 1.00$). Similarly, investigators in another study conducted in a psychiatric inpatient setting reported the lowest IRR value of the START Specific Risk estimates, when rated by patients' multidisciplinary teams, to be for the unauthorized leave Specific Risk Estimates ($\kappa = .86$) and the highest to be the substance use Specific Risk Estimates (Kappa = .89) (O'Shea & Dickens, 2015). Finally, using Spearman's correlation coefficients, Abidin and colleagues (2013) found an r of .85 and .69 for the START Vulnerabilities and Strengths scales, respectively, when 21 inpatients were rated at two separate times by two researchers.

Predictive Validity

The START is unique from other measures in that it is intended to guide assessments and treatment across multiple risks: violence, self-harm, suicide, unauthorized leave, substance use, self-neglect, and victimization. Overall, studies evaluating predictive validity of the START Vulnerabilities scale, Strengths scale, and Specific Risk Estimates have most often examined violence to self and others, and the other Specific Risk Estimates, including unauthorized leave and substance abuse, have been examined in a smaller body of literature.

The START Vulnerabilities scale has been found to be consistently predictive of aggression and violence to others; AUCs for inpatient aggression range from .58 to .95 over 16 studies (Dickens & O'Shea, 2015; Finch, Gilligan, Halpin, & Valentine, 2017). However, the START was not intended to predict minor forms of aggression (such as off-handed, antagonistic remarks) and rather is intended to evaluate an individual's risk of violence on principles of severity, imminence, and likelihood (Webster et al., 2009). When aggression is disaggregated into physical aggression, verbal aggression, and aggression against objects, AUC values ranging from .58 to .94 (Dickens &

O'Shea, 2015; Finch et al., 2017), .60 to .93 (Dickens & O'Shea, 2015; Finch et al., 2017), and .84 to .90 (Cartwright, Desmarais, Hazel, Griffith, & Azizian, 2018; Desmarais, Nicholls, et al., 2012) have been found for each type of aggression respectively, with the vast majority being significantly predictive. It is noteworthy that these studies spanned diverse civil, forensic, and combined inpatient settings in the United Kingdom, Canada, the United States, and Australia and employed a mix of assessors, including mental health professionals and research assistants; further studies in the community/outpatient context are required. The Vulnerabilities scale has been found to predict physical aggression and verbal aggression at 1-, 3-, and 6-month follow-up periods in the same settings (AUCs of .69 to .95; Cartwright et al., 2018; Chu, Thomas, Ogloff, & Daffern, 2011; Finch et al., 2017). It was also significantly predictive of number of arrests at 9, 12, and 18 months (Walden chi-square values of 4.17 to 17.27) and number of jail days at 6, 9, 12, and 18 months (Walden chi-square values of 4.17 to 68.75) in a sample of clients involved in a mental health jail diversion program in the United States (Lowder et al., 2017).

Researchers have also found the Vulnerabilities scale to be predictive of unauthorized leave (AUC of .64 to .66; Braithwaite et al., 2010; O'Shea & Dickens, 2015), self-harm, and suicide (.70; Marriott et al., 2017) while the association with substance use (.63 to .67; Braithwaite et al., 2010; O'Shea & Dickens, 2015), self-neglect (.52 to .75; Braithwaite et al., 2010; Marriott et al., 2017), and victimization (.55 to .61; Braithwaite et al., 2010; Marriott et al., 2017) has been more variable. In a small sample of intellectually disabled offenders in the United Kingdom ($N = 28$), the Vulnerabilities scale (coded by a multidisciplinary mental health team) was associated with aggression (.66 to .71), property theft/damage (.69 to .73), noncompliance (.61 to .63), stalking/intimidation (.66 to .68), and self-harm (.62 to .69) at 30- and 90-day follow-up periods (Inett, Wright, Roberts, & Sheeran, 2014). Only at the 90-day follow-up mark was the measure predictive for suicide (.67). The Vulnerabilities scale was predictive of female verbal (.75) and general aggression (.74) and self-harm/suicide in a combined forensic and civil sample in the United Kingdom (.68; O'Shea & Dickens, 2015). A study in an outpatient forensic setting in the Netherlands asked clients to self-report their START scores and their case managers to simultaneously score the START for their clients; the average of the critical Vulnerabilities, as rated by patients, was not significantly predictive of future violent or criminal behaviour (.62), as well as the sum of the Vulnerabilities scale, as rated by the patients' case managers (.63; van den Brink et al., 2015).

The predictive validity of the START Strengths total scores has also been assessed in a variety of studies. Given the outcomes studied are typically negative in nature, it is standard practice to assess the predictive validity of the Strengths scale for individuals abstaining from these outcomes, or conversely to use participants' inverted Strengths score to predict negative outcomes. Predictive validity investigations of the START Strengths total scores for general aggression has produced AUCs ranging from .61 to .78 over 18 studies (Abidin et al., 2013; Van den Brink et al., 2015). All but one of these 18 studies found the START Strengths total score was significantly associated with at least one of the outcomes of concern. These studies included secure forensic and civil inpatient and forensic outpatient settings in many European and North American countries and examined the START Strengths scale predictive validity in a combined total of over 2500 individuals. Research methods ranged from file-based retrospective coding conducted by trained research assistants to teams of mental health clinicians completing the START as part of their routine clinical practice, demonstrating the strength of the START within research and clinical contexts. While typically significantly predictive, the AUCs for the Strengths scale have generally been lower than the AUCs for the Vulnerabilities scale, with AUCs ranging from .63 to .80 for physical aggression and .64 to .75 for verbal aggression across civil and forensic inpatient settings (Desmarais, Nicholls, et al., 2012; Dickens & O'Shea, 2015). The Strengths scale score has also been found to be significantly predictive of property damage (.77; Desmarais, Nicholls, et al., 2012). Specifically, when different lengths of follow-up periods were assessed, Strengths scores are

predictive of physical aggression and verbal aggression at 1-, 2-, and 3-month follow-up periods (AUCs from .63 to .75; Cartwright et al., 2018; Dickens & O'Shea, 2015) and predictive of arrests and jail days at 3, 6, 9, 12, and 18 months when U.S.-based forensic outpatient participants self-rated their own START Strengths and their case mangers rated their START Strengths (AUCs from .83 to .96; Lowder et al., 2017).

A wide range of other risk outcomes have also been found to be associated with the START Strengths scale. At 30- and 90-day follow-up periods, the Strengths scale was inversely significantly predictive of property damage (.30), noncompliance (.40), and stalking behaviours (.32) in a UK forensic low-security inpatient sample of 27 mentally disordered offenders assessed by their clinical teams (Inett et al., 2014). Research by Dickens and O'Shea (2015) examining 231 civil psychiatric patients in the United Kingdom assessed as part of regular clinical care found that self-neglect was predicted at 1- and 2-month follow-up periods (AUCs of .69); however, in two other studies of civil inpatient participants in Canada and the United Kingdom, victimization was not significantly predicted (Braithwaite et al., 2010; Gray et al., 2011). Braithwaite et al. (2010) reported the Strengths scale predicted unauthorized leave (AUC of .66) and substance abuse (AUC of .63) but did not predict self-harm or suicidal ideation.

Lastly, the predictive validity of the START Specific Risk Estimates (i.e., violence, self-harm, suicide, UAL, substance abuse, self-neglect, victimization), particularly the Specific Risk Estimate for violence, have been examined. Investigation of these aspects of the measure is particularly crucial, because the START is an SPJ measure and it is the Specific Risk Estimates in which the risk assessor consolidates all information into an assessment of risk (low, medium, or high) to inform management and care plans. The START violence Specific Risk Estimate has been found to be predictive of diverse forms of aggression across a variety of studies: any aggression (.62 to .80; Desmarais, Nicholls, et al., 2012; Van den Brink et al., 2015), verbal aggression (.62 to .78; Desmarais, Nicholls, et al., 2012; Marriott et al., 2017), physical aggression towards others (.68 to .85; Desmarais, Nicholls, et al., 2012; Marriott et al., 2017), and physical aggression towards objects (.84; Desmarais, Nicholls, et al., 2012) in civil and forensic secure inpatient settings in Canada, the United Kingdom, and the Netherlands, using file review, clinical team ratings, and self-report methods. The violence Specific Risk Estimate was predictive for verbal and physical aggression at one- (.65, .71), two (.62, .68), and three- (.62, .88) month follow-up periods in a civil sample (Dickens & O'Shea, 2015) and for any aggression (.83) and physical aggression (.85) in females within a combined civil and forensic sample (O'Shea & Dickens, 2015).

Additionally, the Specific Risk Estimates for self-harm and suicide (combined in many studies) were predictive for self-harming behaviours and suicide at one (.65 to .77), two (.67 to .78), and three (.69 to .81) months (Dickens & O'Shea, 2015; O'Shea et al., 2015; Marriot et al., 2017). Unauthorized leave was predicted by the Specific Risk Estimate for unauthorized leave (.66; O'Shea & Dickens, 2015) and substance use was predicted by the Specific Risk Estimate for substance use (.72 to .78; Braithwaite et al., 2010; O'Shea & Dickens, 2015). The START Specific Risk Estimate for victimization was predictive of victimization at 3 months in one study conducted within a secure civil inpatient hospital (.65; Dickens & O'Shea, 2015) but was not predictive in another secure civil inpatient unit (Marriot et al., 2017). A file-based research conducted in a secure forensic hospital in Canada did not find predictive validity for the violence, self-harm, suicide, unauthorized leave, self-neglect, and victimization Specific Risk Estimates; however, the authors reported large confidence intervals on AUCs and odds ratios (Braithwaite et al., 2010).

One study (Troquete et al., 2015) conducted with forensic outpatient participants as part of a larger randomized controlled trial (RCT) in the Netherlands included an intervention group of 310 clients and 29 case managers who assessed their patients using the START. Clients assigned to the control group did not have their case managers use the results of a START assessment to inform subsequent treatment planning. This research tested the predictive validity of models that

combined the START Strengths scale, Vulnerabilities scale, violence SRE, and the Historical scale of the HCR-20 Version 2 (Webster et al., 1997). All models listed were significantly predictive. When the model included the Historical HCR-20 scale and the sum of the Vulnerabilities scale, the AUC was .62. The AUC remained at .62 when the sum of the Strengths scale was added to the model and increased to .65 when the violence SRE was added (Troquete et al., 2015). When another model consisting of the Historical HCR-20 scale and the mean number of critical Vulnerabilities was tested, the AUC was .61. The AUC remained consistent when the mean number of key Strengths was added to the model and increased significantly to .67 when the violence SRE was added (Troquete et al., 2015). However, it is important to note that this RCT involved an intention to treat and the authors reported there was sub-optimal implementation of the intervention (i.e., 35% of the intervention group did not receive the intervention) which may have influenced the results. Future RCTs with stronger fidelity are required to clarify these issues.

Incremental Validity

A particularly unique aspect of the START is that assessors are prompted to consider both the Strengths and the Vulnerabilities of the examinee; thus, both scales should add to each other and have unique independent effects when both are considered. Several studies have examined the START scales and Specific Risk Estimates and have found evidence of incremental validity for a variety of outcomes in forensic and civil inpatient settings. The START Strengths scale showed significant incremental validity over the Vulnerabilities scale for general aggression, verbal aggression, and physical aggression with changes in chi-square values ranging from 4.25 to 6.36 (O'Shea et al., 2015) and over the Historical scale of the HCR-20 for physical aggression (chi-square change of 4.67; Desmarais, Nicholls, et al., 2012) within forensic samples, using both research assistant file-based and clinical team assessments. These results are likely due to the higher responsivity of dynamic risk factors (e.g., the items of the START Strengths and Vulnerabilities scales) versus static risk factors to changes in individual risk of violence (Wilson et al., 2013). Similarly, the START Vulnerabilities scale showed significant incremental validity over VRAG-R, length of institutional stay, and HCR-20 Historical scale scores for inpatient aggression and specifically verbal aggression (4.05 to 10.11; Desmarais, Nicholls, et al., 2012; Wilson et al., 2013). However, the Strengths and Vulnerabilities scales have not demonstrated incremental validity over each other for all outcomes (Desmarais, Nicholls, et al., 2012; Wilson et al., 2010). Further examination of the interrelationship between the Strengths and the Vulnerabilities scales and the potential impact on incremental validity (e.g., multicollinearity) would be informative.

Given that the START is an SPJ measure, the expectation is that the Specific Risk Estimates should outperform the predictive accuracy of the total scores. The rationale is that the particular interrelation of items might lend themselves to suggesting different results than would simply be indicated by summing up items. For instance, a man with no history of mental health problems or criminal behaviours and a strong prosocial upbringing may have considerable Strengths and minimal Vulnerabilities. However, if that same young man becomes psychotic and is convinced that his partner is cheating on him, he may become determined to kill an innocent neighbour. Thus, he may be considered high risk by the treating clinician and thus coded High on the Violence Risk Estimate. Therefore, it is critical that the incremental validity of the START Specific Risk Estimates be studied.

The Specific Risk Estimate for violence had incremental validity over the Vulnerabilities and Strengths scales for general aggression perpetrated by men and women (increases in model fit were 4.71 and 9.83 respectively) and for physical aggression for men (increase of model fit to 10.08) in one study of START ratings completed in routine clinical practice in a combined forensic and civil inpatient secure unit (O'Shea et al., 2015). The suicide Specific Risk Estimate showed incremental validity over lifetime history of suicide attempts for the prediction of self-injurious

behaviour within a sample of maximum-security forensic psychiatric inpatients who were rated on the START within 2 weeks of admission (Lam, 2014). Furthermore, incremental validity was demonstrated within a sample of civil psychiatric inpatients who were interviewed by research assistants for START coding purposes (4.68; Gatner, Douglas, & Nicholls, 2016) as well as over the Vulnerability scale for women's suicidal behaviour in a combined civil and forensic secure setting (8.86; O'Shea & Dickens, 2015). The self-harm Specific Risk Estimate demonstrated incremental validity over the Vulnerability scale when the outcome of interest was self-harming behaviour in a sample of women (chi-square increase of 6.01; O'Shea & Dickens, 2015) and a sample of both genders (11.75 to 12.53; Gatner et al., 2016). The violence Specific Risk Estimate predicted general aggression (chi-square increase of 4.71) and physical aggression (10.08) in men over the Strengths scale and general aggression in women (9.83) over the Vulnerabilities scale (O'Shea & Dickens, 2015). Furthermore, Desmarais, Nicholls, and colleagues (2012) concluded that general, physical, and verbal aggression, as well as aggression against objects, was predicted more strongly by the violence Specific Risk Estimate than by the Strengths and Vulnerabilities scales combined with the HCR-20 Historical scale (7.61, 12.52, 6.04, 8.11, respectively).

International Uptake, User-Friendliness, and Perceived Clinical Relevance

The START has been adopted widely into practice and implemented in diverse contexts (e.g., community probation, homeless shelters). The measure has been translated into eight languages: Danish, Dutch, Finnish, French, German, Italian, Norwegian, and Swedish, and a Japanese manual is in preparation. The START:AV has been translated into Dutch and Norwegian, and Finnish and Italian translations are in progress. Users advocate for the START's general clinical utility, particularly focusing on the value of its dynamic nature (Desmarais, Nicholls, et al., 2012), the integration of strengths, and the capacity to increase multidisciplinary collaboration (Crocker et al., 2011; Kroppan et al., 2017; Levin et al., 2018).

Case Example

Background

Mr. L is a 30-year-old Caucasian male with a primary diagnosis of schizophrenia and a comorbid substance use disorder (cannabis). He was found Not Criminally Responsible on account of Mental Disorder (NCRMD) after killing his father and gravely injuring his mother 5 years ago. He is currently being treated in a high-secure forensic hospital.

Collateral reports indicate that Mr. L had an unremarkable childhood. He grew up in Vancouver, Canada, and is the youngest of three siblings raised by his biological parents. He is described as a quiet child who often went unnoticed. Mr. L was not very athletic, and children called him "geeky." His older sisters provided significant social support, helping Mr. L choose "cool" clothing and attempting to assist him to fit in at school, for instance. In high school he attended classes, rarely contributed to class discussions, had a few friends with whom he enjoyed playing video games, and earned acceptable, but unremarkable grades (B's and C's). He did not fail any grades or get into trouble in school. Mr. L's family reports a strong and supportive family dynamic. Mr. L had a loving relationship with his sisters and mother. His relationship with his father was more distant; however, their interest in computers brought them together.

As an adolescent, Mr. L spent much of his free time in his room playing video games and reading comic books. He had a small group of friends with whom he would engage in activities related to his interests. For example, they would plan weeks in advance to attend the latest superhero movie premiere. After graduating from high school, Mr. L registered for a computer

programming course at a community college and continued working 10 hours a week at his long-standing part-time job at a comic book and memorabilia store.

Mr. L's parents became concerned when he started missing his classes and then stopped attending them altogether. He called in sick at his job for several shifts and a few weeks later quit his job. His parents also noticed a steep decline in his hygiene. They noted that he would rarely join the family for meals and was subsisting mostly on junk food. Mr. L had not seen his friends within the weeks leading up to the index offence; however, he did continue to interact with them through online multiplayer video games.

One day his father came home unexpectedly in the middle of the day and smelled cannabis coming from the basement. When asked about the odour, Mr. L loudly and vehemently denied drug use, and when asked to explain his isolation and lack of any social, educational, or occupational pursuits, Mr. L said he was spending his time developing a video game and did not want to risk someone stealing his groundbreaking ideas. To his father's knowledge, Mr. L had no history of using substances.

Over the next couple of months Mr. L become increasingly irritable and hostile towards his father in particular. He also exhibited increasing paranoia; he was frequently overheard muttering to himself that family members and people walking down the street in front of his home were part of a large-scale conspiracy to suppress his genius or steal his creations. Mr. L continued to use cannabis on a regular basis.

Mr. L's parents visited their family doctor to ask for advice. They were advised that because Mr. L was an adult and was not seeking help himself, there was very little anyone could do unless he was an overt danger to himself or others. When questioned further about Mr. L's behaviour, his parents noted that despite escalating irritability and hostility toward others, he had no history of physical aggression and had made no overt threats to harm anyone. Similarly, despite his deteriorating self-care and weight gain, his mother and father both agreed he exhibited only very minimal risk to his own well-being. Specifically, they acknowledged he had no history of suicide or self-harm, nor had he expressed any ideation or plans to their knowledge.

Over the several weeks leading up to the attack on his parents, Mr. L's family noted a further increase in his symptoms including greater frequency of cannabis use and a heightened level of paranoia. His hostility continued to escalate into minor violent acts such as muttering threats towards his family under his breath (e.g., "vengeance will be mine," "you will pay for your betrayal") and shaking his fists in his mother's face when she refused to give him money. On one occasion, Mr. L and his mother were having a confrontation in the kitchen when Mr. L pushed her; she lost her balance and fell backwards hitting her head on the kitchen table. Mr. L's father came into the room moments later (having heard the yelling and the fall) and convinced his son to help him take his mother to the emergency room. Although his mother was not hurt badly, based on Mr. L's agitated behaviour and his parents' reports of recent behaviour, emergency room staff called the police and requested the emergency room psychiatrist assess Mr. L. As a result, Mr. L was held in hospital for a 24-hour psychiatric assessment. Mr. L was released early the next morning as his mental state was stable and the emergency room psychiatrist did not deem him a further risk. A few hours after arriving home, he brutally beat his parents with a baseball bat while they were asleep in their bed. His father died as a result of his injuries and, although his mother survived, she received life-changing injuries (e.g., severe and persistent headaches, difficulty sleeping). Mr. L was arrested and subsequently underwent a series of psychological assessments. He was eventually found NCRMD by the provincial Supreme Court and was admitted to a high security forensic psychiatric hospital.

Course in Hospital

Upon admission to hospital, Mr. L initially presented as extremely paranoid and hostile. He believed he was hospitalized as part of a conspiracy to suppress his brilliance and steal the video

game he had created. He went through phases of refusing to eat and even attempted to convince other patients that the food was being poisoned. For similar reasons, he also initially refused all medication. When injections were presented as the alternative if he continued to refuse, he grudgingly agreed to take oral medication. However, in the ensuing weeks his behaviour failed to improve and his delusions remained firmly intact. Staff soon discovered he only appeared to be cooperating with medication and treatment. In fact, he was using multiple creative means to avoid ingesting the medications. A few weeks after injection medications were implemented, his behaviour and mental state improved. He has not behaved aggressively since admission to hospital. Since the injectable medications were initiated, he is also less hostile and paranoid. After several months on a maximum-secure unit without any incidents of aggression, Mr. L was moved to a medium-security unit so that he could receive access to more programming, where he remains.

Recent Developments (the Last 3 Months)

Mr. L has remained withdrawn, has received no visits from friends that the treatment team is aware of, and isolates from other patients. When he is encouraged by staff, or internally motivated to engage in conversation, he is articulate and able to express his needs and desires clearly. His two older sisters have expressed an interest in being kept abreast of his progress, but they are not ready to have contact with Mr. L at this time. Mr. L's mother has been through extensive physical and psychological rehabilitation. In the last couple of months she has started visiting with her son for short periods with supervision. Although initially distant in these meetings, Mr. L has recently become more animated and warm and looks forward to his mother's visits. Mr. L's mother has expressed a desire to rebuild her relationship with her son and a willingness to eventually consider supervising him when he is allowed to leave the hospital. Staff are happy to see Mr. L bonding with his mother but remain cognizant that she was a target of violence in the index offence.

Mr. L attends programming when he feels like it and when the activity interests him. For example, his treatment team has encouraged him to attend a substance abuse group and a mental health awareness program, intended to enhance his insight into his illness and the offences, yet he rarely attends either. His excuses range from feeling tired to not having the right T-shirt to wear. Overall, Mr. L spends the majority of his time idle and rarely engages in unit programming and recreation. The only exception is that he had been attending a computer literacy program regularly that he seemed to enjoy. Mr. L interacted well with other patients in the program and had recently been displaying mentorship skills in his interactions. In addition, Mr. L had a more expressive relationship with his instructor than he has developed with other treatment providers. However, his participation in the program ended when staff discovered that he had successfully disabled security measures on the computer he used during the class, allowing him access to the internet. He downloaded contact information for approximately 50 highly placed authorities, to whom he wrote letters asking for their help to get him released from the hospital. He also created a GoFundMe page to collect money for his "legal fees" and created a blog where he documented what he believed to be his mistreatment by the hospital staff and a conspiratorial group working to suppress his genius. After this activity was uncovered, it took IT security personnel a month to discover how he disabled the security protocols on the computer without detection.

Mr. L appears to have above average intelligence, although this is based on observation as Mr. L has not cooperated with testing. Despite this evidence that his delusional thoughts persist, he does not display signs of disorganized thinking.

Mr. L maintains his basic hygiene at socially appropriate levels; however, he has idiosyncratic behaviours surrounding his self-care. For example, he will only wear one T-shirt for weeks at a time and will wear a hospital-issued PJ top (only because staff refuse to allow him to go top-less) while the T-shirt is at laundry. Then for no apparent reason that he is willing or able to

articulate he will destroy the much-worn T-shirt and switch to a different outfit. Sometimes his clothing choices are socially appropriate and sometimes they are unusual (e.g., wearing two different shoes). Staff is unsure if this behaviour stems from psychosis or is his own form of rebellion.

Mr. L appears to be suffering from dental pain, yet he refuses to see a dentist. He told staff that he is developing video game technology that can be miniaturized to fit into a cavity and he will endure his tooth pain until he is released from hospital and can test this technology on himself.

In recent months, Mr. L has consistently presented as calm, contained, and deliberate. When there is a source of frustration (e.g., another patient acting childishly), he gets up and walks away. Yet, he remains emotionally withdrawn. He rarely engages in conversations or expresses any thoughts or emotions without prompting. However, on occasion, if staff can engage him in a conversation related to his delusional beliefs, the underlying anger he feels at staff, the hospital, society at large, and the members of the conspiracy to keep him detained, is very apparent.

Mr. L has tested positive for cannabis three times in the last month, yet he denies any use. Staff have not discovered how he is getting the drug. The only time they believe he can obtain cannabis is when he is given access to grounds. However, during these times he always sits in the same chair and is never observed socializing with other patients. Alternative explanations such as patients or staff supplying it on the unit remain unexplored.

Mr. L has been displaying worrisome behaviours with regard to money. A couple of weeks ago, his treatment team gave him access to a small amount of his money. Although his expressed intent was to spend the money on snacks, staff recently discovered that he was in fact hoarding it in his room. There is a general consensus among staff that he may be planning to attempt an unauthorized leave as he has been watching the door and paying special attention to staff schedules.

Mr. L continues to demonstrate a lack of insight into his illness and his index offences. He continues to receive his medications by injection and presents evidence at every treatment team meeting to support his request to discontinue his injection medication and start a trial of medicinal cannabis to treat his "supposed schizophrenia," noting that he has done his research and he does not "fit the bill for that diagnosis." He states he did not assault his parents and that someone from the conspiracy network committed the crime and planted evidence implicating him in order to get him hospitalized and out of their way. Mr. L has detailed plans to get out of the hospital. They involve getting access to the money he raised through GoFundMe (an investigation indicated that few funds were raised, and these were returned to the donators) and engaging a detective and legal team to get him released from hospital at which time he will continue his groundbreaking work.

Integrating the START Risk Assessment, Risk Management, and Treatment Planning

As a result of the recent changes in Mr. L's behaviour, the treatment team met to complete an updated START assessment (see Figure 15.1) and discuss whether that indicated a need for any changes in his risk management and treatment plan (see a portion of the treatment plan in Figure 15.2). Because team members were concerned about the possibility that Mr. L was planning to escape from the hospital, they limited his access to his funds and increased monitoring of his behaviour on the unit, particularly when he was near exits. Mr. L has proven to be adept at eluding staff while engaging in restricted activities (e.g., computer hacking). The treatment team plans to focus on working with Mr. L to develop a recovery plan. Mr. L is intelligent, young, and healthy. He has demonstrated an ability to develop relationships with a small group of friends and his family. Staff would like to support increased visitation with his mother and continue to speak with his sisters in hopes that they may eventually want to rebuild a relationship with Mr. L. There is some indication that during the time Mr. L had access to the internet, he reached out to his

old friends. Through conversations with Mr. L and the family, staff are attempting to determine if encouraging this contact could be appropriate. Mr. L has a clear aptitude with technology that his treatment team would like to explore this with him—both from an educational as well as an occupational perspective. Technology might also be an important tool for increasing Mr. L's therapeutic alliance with treatment team members. It is possible that mentorship and/or leadership abilities could be nurtured if staff can develop a plan that would allow Mr. L to safely teach other patients computer skills. The treatment team has also put in a referral for Mr. L to the book club. The group is currently reading a graphic novel that might serve as a good introduction to the group and its activities.

Specific Risk Estimates

Readers are reminded that the START Specific Risk Estimates should be coded as if the person is living in the community, without any restrictions/professional support, similar to the general population. The assessment should justify the management measures and treatment plan. Thus, a patient should not be coded as low risk for violence or substance abuse because they are on a locked unit and/or detained in a secure hospital; rather, a person who is believed to be at risk to themselves or others would require hospitalization. It is recommended that anytime a patient is considered Moderate of High risk for any of the outcomes of concerns a risk management strategy is documented and enacted (see Specific Risk Estimates, Figure 12.1 START Summary Sheet).

VIOLENCE

Mr. L's risk for future violence is presently high. The team believes that should he be in the community unsupervised, there is every reason to be concerned he would stop taking medications, cannabis use would persist or escalate, his delusions and paranoia might intensify, and violence could result, as evidenced by his history and his current mental state and behavior. Specifically, he has a history of *verbal aggression* ("vengeance will be mine", "you will pay"), *physical aggression* (pushing mother, resulting in minor-mod injuries), and *severe violence* (index offence—beat parents w/baseball bat while sleeping; father died and mother sustained grievous, life-altering injuries). Moreover, while he has been on injectable medications in hospital and has remained free of any incidents of violence for 5 years, he continues to express anger, distrust, and paranoia toward staff and society, generally ("the members of the conspiracy"). In addition, although his hostility and aggression are being well managed in hospital, this is believed to be, in large part, due to the moderately successful use of antipsychotic medication. His treatment team remains concerned that Mr. L continues to lack insight into his mental illness. He does not acknowledge the usefulness of antipsychotic medications in supporting recovery, nor the role his mental illness played in his index offence. Moreover, Mr. L does not accept responsibility for the index offence, which involved severe violence against family members, and continues to verbalize his distrust of others. Of note, he communicates psychotic beliefs consistent with those that preceded the index offence. The treatment team is implementing the use of incentives to help motivate Mr. L to attend and participate in an insight-oriented CBT group. In addition, Mr. L's mother, and to a lesser extent his sisters, are being integrated into the treatment planning.

UNAUTHORIZED LEAVE

Mr. L's behaviour (e.g., monitoring secure doors and staffing schedules; hiding money in his room and misleading staff about his intended use of funds), lack of insight into his mental health needs (e.g., denies he has a mental illness; believes he is being hospitalized unjustly), and

remaining psychotic symptoms (e.g., continues to verbalize that there is a conspiracy to have him detained in hospital, to steal his proprietary creation(s)) suggest he remains at high risk for UAL.

SUBSTANCE ABUSE

Mr. L continues to use THC in the hospital and thus is considered high risk for substance use should he be discharged. The treatment team has decided to temporarily suspend his privileges and investigate why and how Mr. L has been accessing marijuana. This portion of the START risk assessment, risk management, and treatment plan is shown in Figure 15.2.

SELF-NEGLECT

Mr. L has a history of neglecting his self-care and presently remains at moderate risk. His mental state has not stabilized, and thus it would be expected that he would slip into old patterns of poor sleep, an unhealthy diet, and sedentary lifestyle if released to the community. Of note, he is in need of dental care but is presently adamant he will not see the dentist.

CASE SPECIFIC

Mr. L was found to be abusing his computer and internet access (emailing strangers, setting up a GoFundMe page). There is no evidence to suggest that he may not pursue similar endeavours in the future given he continues to believe his hospitalization is unjustified, remains untrusting of care providers, and is eager to depart hospital.

Case Comment

In the year that followed the START assessment, Mr. L's treatment team continued to update and refine his START, risk management, and treatment plans. Mr. L responded well to being an active participant in his recovery plan. He enjoyed being a mentor to other patients, and this role accentuated some strengths that the treatment team had not seen in Mr. L, (e.g., empathy toward others) as well as provided a prosocial outlet for skills that had previous been directed towards antisocial activities (e.g., organization and planning). Mr. L's institutional cannabis use ended when a staff member was fired for selling cannabis to several patients. His treatment team remained concerned about his continued interest in using cannabis. Mr. L's behaviour and insight continued to improve sufficiently so that his treatment team granted increased privileges and access to programs. They are planning to provide staff escorted access to the community in the near future, with an eye towards a possible trial of living in the community in the years to come.

Notes

1. The START has been recognized as a Leading Practice by the Health Standards Organization (formerly Accreditation Canada, 2011). The British Columbia START team (BC Mental Health and Substance Use Services (BCMHSUS) won a Quality Award in the "Living With Illness" category from the BC Patient Safety and Quality Council (2011). The START is one of two recommended measures to support clinical judgement by the Quebec Ministry of Health (2011). The measure has been recognized as a validated risk assessment tool by Scotland's Risk Management Authority and is included in their Risk Assessment Tool Evaluation Directory (2012–present).
2. There is a START:AV Knowledge Guide (the evidence base for the measure) and a START:AV User Guide that is intended for clinicians implementing the measure into practice.
3. The START adult and adolescent teams both considered the importance of being attentive to Adverse Childhood Experiences and other forms of victimization, violence, and trauma. Careful consideration was given to including ACEs/Trauma as an item; however, the challenge of coding that variable as a

"Strength" could not be resolved. Thus, we encourage assessors to be mindful that prior victimization including child abuse should be recorded in the "Hx" column of the Risk Estimate and consideration should be given to including relevant concerns as a "Case Specific Item."
4. The START Summary Sheet (Figure 15.1) is recommended to be supplemented with coding notes (see Figure 15.2 for a sample) and an integrated treatment plan (contact start@phsa.ca for more information).
5. See the "There Is No Silver Bullet" textbox.
6. Patients and family members may provide particularly valuable insights into signature risk signs. Alternatively, if the team is not certain that patients and family are aware of these indicators it may be important information to share to help prevent relapse and adverse outcomes.
7. See the Risk Management section and the "Timeframe Considerations" textbox.

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