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# Scalability Assessment of the North Dublin Psychology Suicide Assessment and Treatment Service (SATS)

January 2021



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# Executive Summary

In April 2019 the HSE National Office for Suicide Prevention (HSE NOSP) contracted the Centre for Effective Services (CES) to conduct a scalability assessment to test the feasibility of scaling-up the North Dublin Adult Mental Health approach to implementing the Collaborative Assessment and Management of Suicidality (CAMS) in their Suicide Assessment and Treatment Service (SATS). This report presents the findings of this scalability assessment.

## Adult Mental Health, North Dublin Psychology Department, Suicide Assessment and Treatment Service (SATS)

The North Dublin Suicide Assessment and Treatment Service (SATS) was established by the HSE Adult Mental Health Psychology service. The primary intervention delivered by the SATS is the Collaborative Assessment and Management of Suicidality (CAMS) model. CAMS is an evidence-based therapeutic framework designed to wrap around pre-existing mental health interventions of all types and can be delivered by all mental health staff. The CAMS intervention prioritises the suicidal service users' point of view in collaboratively identifying the drivers of their suicidal thoughts and feelings, and planning treatment accordingly. The CAMS model includes collaboratively addressing the tasks of risk assessment, risk management, and treatment planning. Central to the CAMS approach is the use of the Suicide Status Form (SSF), which is a multipurpose assessment, treatment planning, tracking and outcome tool that acts as a clinical 'roadmap.' It enables co-authoring of therapeutic goals, joint identification of problems to address and agreeing the length of time required.

The SATS is the service structure by which the CAMS model is delivered. Each Psychologist allocated to the Community Mental Health Teams (CMHTs) in the catchment area has clinical time dedicated to providing suicide specific mental health care to suicidal service users using the CAMS intervention. This service provision was developed using additional working hours available following implementation of the Haddington Road (Croke Park) Agreement. This provided the capacity for work with approximately 20 suicidal service users in the catchment area at any given time. With an average of 12 weeks required per CAMS intervention, this equates to approximately 70 suicidal people per year being assessed and treated specifically for suicidality by the CMHT Psychologists. The SATS provides a timely and responsive treatment pathway for suicidal service users within the CMHT structure. The CAMS model provides a clinical frame that accommodates the acute risk management phase of each suicidal service users struggle, and longer-term suicide specific care. Since July 2012, over 180 service users have availed of this intervention. Referrals are made verbally within standing CMHT structures, typically during the weekly CMHT meeting. An internal audit of this service activity has been carried out.

## Assessing the Scalability of the SATS/CAMS approach

Following a review of the literature on scalability, for the purposes of this report, the following definition of scale-up is offered: “Increasing the reach or impact of an intervention that benefits people in an intentional manner with a view to sustainability or meeting the need.”<sup>1</sup> Related to the definition of scale-up, is the concept of ‘scalability’, which here is taken to mean the ease or difficulty of achieving scale-up in practice.

A scalability assessment seeks to understand how easy (or otherwise) it would be to increase the reach or impact of an intervention that benefits people (the SATS/CAMS approach in this instance) in an intentional manner with a view to sustainability or meeting the need for the intervention. Consistent with other approaches, this scalability assessment addresses the following questions:

1. What do you want to scale? (Articulate the model)
2. Does it work? (Is it credible, observable, testable and adaptable? Is there a relative advantage?)
3. Does it fit? (Is it relevant, simple, easy to adopt, cost-effective, acceptable and aligned?)

The sources of evidence consulted to address the questions in the scalability assessment include:

- *Literature, documentation and research* on the SATS structure, the CAMS intervention, and relevant policy documents.
- Notes of the *Logic Modelling workshop* and the agreed Logic Model.
- An *online survey* with North Dublin Mental Health staff
- *Service/outcomes data* from the implementation of the CAMS intervention through the SATS: CES analysed intervention outcomes data completed by North Dublin SATS clients, including qualitative data entered by clients. This data was gathered from the Suicide Status Forms (SSF), the core assessment tool that had been completed by clients during their CAMS interventions.

Table 1 presents a summary of the findings of the scalability assessment.

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<sup>1</sup> An assessment of scalability was made by CES, informed by existing frameworks, guides, checklists and tools associated with the scalability or scaling up of interventions from the literature, including the scalability assessment guides produced by the New South Wales Government (Milat, 2014), NESTA (Gabriel (2014), the WHO and ExpandNet (2010), MSI (Cooley & Ved, 2012), and the Save the Children foundation. See Appendix 1 of the full Report for an overview of the scalability and assessing scalability, including how this definition was arrived at.

**Table 1 Summary Scalability Assessment**

Key Question	Scalability category	Primary sources of evidence	Conclusion
<b>What is it?</b>	Articulating the model	Logic model workshop Literature review Documentary Analysis	The elements of the SATS structure and CAMS intervention are clear and identifiable.
<b>Does it work?</b>	Credibility	Staff survey Literature Review Documentary analysis	The SATS structure, particularly the CAMS intervention is credible
	Testability and adaptability	Staff survey Literature Review Documentary analysis	The CAMS intervention is particularly testable and adaptable.
	Observability	Service data Literature Review Staff Survey	The CAMS intervention as delivered through the SATS structure is observable
	Relative advantage over existing practice	Staff survey Literature Review Documentary analysis	There are some relative advantages over existing practice
<b>Does it fit?</b>	Relevance to concern of potential adopters	Staff survey Literature Review Documentary analysis	The SATS structure and CAMS intervention are relevant.
	Simplicity and ease of adoption	Staff survey Literature Review Documentary analysis	The model requires clear articulation to facilitate adoption
	Cost-effectiveness	Staff survey Literature Review Documentary analysis	Likely to be cost effective. However, this was difficult to determine in the scope of this report.
	Acceptability	Staff survey Literature Review Documentary analysis	Acceptable for staff, however there is limited evidence from some key stakeholders, including service users.
	Aligned	Staff survey Literature Review Documentary analysis	Aligned, however shifting priorities may pose a challenge.

## Overall conclusion

The SATS structure, including the CAMS intervention, appear to be scalable interventions. The scalability assessment indicates that it is clear what the approach is, and there is evidence to support that it 'works', and it 'fits':

- **It works:** There is evidence to support its efficacy and effectiveness, it is perceived as effective, the results are observable to both implementers and beneficiaries, it has some notable relative advantages over other approaches, and it is testable and adaptable.
- **It fits:** There is evidence to suggest that it is seen as relevant and acceptable to stakeholders, including the target group, the approach is simple, the approach is likely to be cost-effective (although a full cost-effective analysis was not conducted as part of this scalability assessment), and it is aligned with national and local policy directives.

The CAMS intervention appears to be the most scalable aspect of the SATS structure and should form the primary focus of planning for the next stage of scale-up.

### Limitations of methodology

These findings should be understood bearing the following in mind:

- The response rate to the staff survey was low (although in line with response rates to surveys in general) and some key perspectives (e.g. psychiatry) were absent. However, the respondents did represent a good spread of disciplines and community mental health teams and locations across the North Dublin mental health services.
- The research literature and service data analysed for this scalability assessment was limited to what existed and was available at the time the scalability assessment was undertaken. This research base was not developed with a scalability assessment in mind, and while useful, it did not necessarily cover all aspects relevant to a scalability assessment.

### Next steps

If it is decided that the SATS structure and/or the CAMS intervention is to be scaled up, this report recommends the following steps should be considered<sup>2</sup>:

1. Determine the approach to scale-up
2. Establish the preconditions for scale
3. Plan for implementation and
4. Monitor and evaluate.

### Final thoughts

The conditions are never 'ideal' for successful scaling up. Every context or environment brings with it both opportunities and challenges. In order to achieve the desired goals of scaling up the SATS structure, or the CAMS intervention, the approach adopted should ensure that the need for and effectiveness of the approach are demonstrated relative to national and regional policy priorities; that it is adaptable to new ways of working; and that it is acceptable to both staff and target groups.

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<sup>2</sup> See for example Cooley, L. and Ved, R. and Fehlenberg, K. 2012. "Scaling Up – From Vision to Large-Scale Change: Tools and Techniques for Practitioners". Management Systems International (MSI).

# 1. Introduction

## 1.1 Background to the Scalability Assessment

In April 2019 the HSE National Office for Suicide Prevention (HSE NOSP) contracted the Centre for Effective Services (CES) to conduct a scalability assessment to test the feasibility of scaling-up the North Dublin Adult Mental Health approach to implementing the Collaborative Assessment and Management of Suicidality (CAMS) in their Suicide Assessment and Treatment Service (SATS).

The HSE NOSP supports, drives and co-ordinates the implementation, monitoring and evaluation of Connecting for Life (CfL), Ireland's National Strategy to Reduce Suicide 2015-2020 ([www.connectingforlifeireland.ie](http://www.connectingforlifeireland.ie)). CfL focuses on the primary and secondary prevention of suicidal behaviour and addresses a broad range of risk and protective factors. There are 69 actions under seven strategic goals; 22 government departments/agencies have made commitments as lead and/or supporting partners to deliver on these actions. In addition, 23 NGO partners are funded (by the HSE) to deliver on work aligned with CfL's strategic objective. A full list of the NGO partners can be found in the NOSP's 2017 Annual Report.

Action 7.4.4 of the CfL strategy requires the HSE NOSP to "evaluate innovative approaches to suicide prevention". The HSE NOSP understands innovation as being a new or different, successful and cost-effective way of delivering better suicide prevention, intervention and postvention initiatives. Innovative approaches aim to add value in the form of improved efficiency, effectiveness, quality, sustainability and/or affordability. Ultimately the aim is to scale-up innovations with demonstrated effectiveness to improve coverage and equitable access to the innovation.

The Adult Mental Health, North Dublin Psychology Suicide Assessment and Treatment Service (SATS) has been identified as one innovative approach to suicide prevention warranting further attention with regard to its potential for scaling-up. SATS incorporates an approach to the delivery of the Collaborative Assessment and Management of Suicidality (CAMS) intervention, which clinical audits and international trial data indicate has been successful.

### 1.11 Adult Mental Health, North Dublin Psychology Department, Suicide Assessment and Treatment Service (SATS)

The primary intervention delivered by the Suicide Assessment and Treatment Service (SATS) is the CAMS model. The CAMS is an evidence-based therapeutic framework designed to wrap around pre-existing mental health interventions of all types and can be delivered by all mental health staff. The CAMS intervention prioritises the suicidal service users' point of view in collaboratively identifying the drivers of their suicidal thoughts and feelings, and planning treatment accordingly. The CAMS model includes collaboratively addressing the tasks of risk assessment, risk management, and treatment planning.

The North Dublin Suicide Assessment and Treatment Service (SATS) was established by the Adult Mental Health Psychology service. The SATS is the service structure by which the CAMS model is delivered. Each Psychologist allocated to the CMHTs in the catchment area has clinical time dedicated to providing suicide specific mental health care to suicidal service users using the Collaborative Assessment and Management of Suicidality (CAMS) intervention. This service provision was developed using additional working hours available

following implementation of the Haddington Road (Croke Park) Agreement. This provided the capacity for work with approximately 20 suicidal service users in the catchment area at any given time. With an average of 12 weeks required per CAMS intervention, this equates to approximately 70 suicidal people per year being assessed and treated specifically for suicidality by the Community Mental Health Team's (CMHT) Psychologists. The SATS provides a timely and responsive treatment pathway for suicidal service users within the CMHT structure. The CAMS model provides a clinical frame that accommodates the acute risk management phase of each suicidal service users struggle, and longer-term suicide specific care. Since July 2012, over 180 service users have availed of this service development. Referrals are made verbally within standing CMHT structures, typically during the weekly CMHT meeting. An internal audit of this service activity has been carried out.

## 1.12 Assessing the Scalability of the SATS Structure and CAMS intervention

Prior to commencing the scalability assessment, the CES team met with the NOSP team to discuss and agreed:

- the project plan,
- the scope of the work,
- timelines, and
- the deliverables.

Potential risks to the project were discussed, including accessing and anonymising data, and strategies to ameliorate the risks agreed.

Following review of the literature on scalability, and for the purposes of this report, the following definition of scale-up is offered: "Increasing the reach or impact of an intervention that benefits people in an intentional manner with a view to sustainability or meeting the need."<sup>3</sup> Related to the definition of scale-up, is the concept of 'scalability', which here is taken to mean the ease of difficulty of achieving scale-up in practice.

A scalability assessment seeks to understand how easy (or otherwise) it would be to increase the reach or impact of an intervention that benefits people (the SATS/CAMS approach in this instance) in an intentional manner with a view to sustainability or meeting the need for the intervention. An assessment of scalability was made by CES, informed by existing frameworks, guides, checklists and tools associated with the scalability or scaling up of interventions from the literature, including the scalability assessment guides produced by the New South Wales Government (Milat, *et al* 2014), NESTA (Gabriel 2014), the WHO and ExpandNet (2010), MSI (Cooley & Ved, 2012), and the Save the Children foundation<sup>4</sup>.

These approaches to scalability align well with the frequently cited 'CORRECT' model (Glaser, Abelson, & Garrison, 1983), whereby an assessment of scalability is made against the seven characteristics of the CORRECT criteria: Credible, Observable, Relevant, Relative advantage, Easy, Compatible and Testable. The CORRECT criteria have been applied in a number of studies assessing scalability in health contexts (e.g. Bousquet, Farrell, & Crooks *et al.*, 2016; Uddin Mian, Malik, & Iqbal *et al.*, 2015). This model underpins or informs most other approaches to scalability available in the literature. Further discussion of scalability models can be found in Milat *et al* (2020).

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<sup>3</sup> See Appendix 1 for an overview of scalability and assessing scalability, including how this definition was arrived at.

<sup>4</sup> See <https://resourcecentre.savethechildren.net/library/scalability-assessment-and-planning-sap-toolkit>



Zamboni *et al* (2019), identified 10 models or scale-up frameworks, of which five were based on implementers' experiences, and five originated from the research community, mostly as literature reviews supported by qualitative interviews with stakeholders in a given health system or a Delphi process. Their analysis of these frameworks identified five critical factors that require consideration when planning scale-up: (1) attributes of the innovation; (2) attributes of the implementers (actors introducing an innovation or actively supporting their scale-up); (3) attributes of the adopting community; (4) socio-political context and (5) scale-up strategy. For the purposes of this scalability assessment the CORRECT framework was adopted, and expanded to incorporate additional categories from the 'Scaling Up Management Framework Scalability checklist', from the review by Zamboni (2019) under the factor 'attributed of the intervention' and from the NSW guide. This resulted in 10 categories of interest:

1. Articulating the model
2. Credibility of the model
3. Observability of results
4. Relative advantage over existing practice
5. Testability and adaptability
6. Relevance to concern of potential adopters
7. Simplicity and ease of adoption
8. Cost-effectiveness
9. Acceptability
10. Aligned (and harmonised with existing government health system or programme).

A range of methods to assessing scalability have been described, these methods tend to consider (in different ways and to different degrees), the following questions:

1. What do you want to scale? (Articulate the model)
2. Does it work? (Is it credible, observable, testable and adaptable? Is there a relative advantage?)
3. Does it fit? (Is it relevant, simple, easy to adopt, cost -effective, acceptable and aligned?)

CES approached the scalability assessment as illustrated in Figure 1.

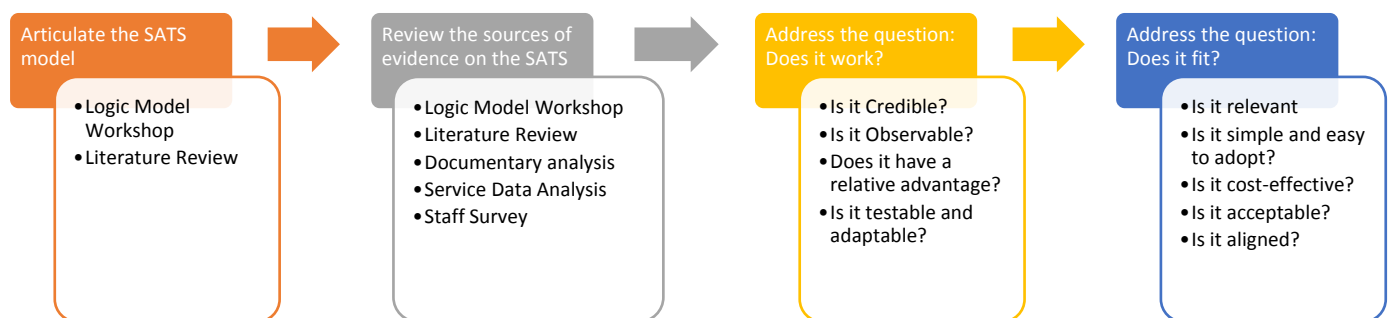


Figure 1: Approach to the Scalability Assessment

The CES team reviewed evidence and documentation to evaluate the scalability of the SATS under each category of interest and to offer suggestions for going forward. Initial findings were presented at the North Dublin Connecting for Life conference in January 2020. The sources of evidence consulted to address the questions in the scalability assessment include:

- *Literature, documentation and research* on the SATS structure, the CAMS intervention<sup>5</sup>, and relevant policy documents.
- Notes of the *Logic Modelling workshop* and the agreed Logic Model.
- An *online survey* with North Dublin Mental Health staff<sup>6</sup>: See Appendix 5 for an overview of the survey methodology and findings.
- *Service/outcomes data* from the implementation of the CAMS intervention through the SATS: CES analysed intervention outcomes data completed by North Dublin SATS clients, including qualitative data entered by clients. This data was gathered from the Suicide Status Forms (SSF) that had been completed by clients during their CAMS interventions. The SSF, is the core assessment tool within the CAMS model.

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<sup>5</sup> see Appendix 2

<sup>6</sup> The survey was circulated to 130 mental health staff across North Dublin. Twenty-seven responses were received, representing a response rate of approximately 21%. Although not a large response rate, it is typical for a survey of this sort. Of the 27 respondents to the survey, 30% were psychologists, 33% were nurses, 26% were occupational therapists, and 11% were social workers. No psychiatrists responded to the survey, and no respondents used the 'other' option.

## 2. Articulating the SATS Model

### 2.1 Developing a Logic Model for the SATS

This phase of the Scalability Assessment was focused on understanding and articulating the Adult Mental Health North Dublin Psychology Suicide Assessment and Treatment Service (SATS) model. It is important to note that this is not an attempt to develop a logic model for the CAMS intervention, although the CAMS intervention is a key aspect of the SATS approach. Rather it is an attempt to understand how and why the SATS operates and incorporates the CAMS intervention. This understanding and articulation was developed based on three activities:

1. Reviewing documentation provided by the Adult Mental Health North Dublin Psychology Mental Health Team
2. Reviewing academic literature on the CAMS approach
3. Collaboratively developing a logic model articulating the SATS/CAMS approach with those delivering it.

This phase culminated in a logic model for the SATS/CAMS approach, co-developed by staff involved in its delivery and informed by service documentation and academic literature.

This stage should develop an initial description of the model to be scaled that focuses on features that are believed to be essential to its effectiveness (Cooley & Ved, 2012). This includes tacit elements of the model that may be invisible but have been central to the model's effectiveness. Listing the model's key elements facilitates simplification and helps to strike a balance between fidelity to the original model and the type of streamlining that is typical for scaling up to be successful. The importance of this stage is acknowledged in the literature on scalability. Nesta, for example state that "it is critical to establish a clear model of delivery and to scale this model with fidelity... This does not mean the model cannot be further iterated or improved in time." A logic model presents a picture of how an intervention is supposed to work. It explains why the intervention is an appropriate solution to the problem at hand. A logic model can be used for multiple purposes. It is particularly useful with regard to a scalability assessment as it can be used to:

- Describe an intervention to interested stakeholders, such as funders or potential funders.
- Make clear the underlying beliefs and assumptions of a programme.
- Identify and build consensus on what inputs, activities and outputs are essential to achieve the desired outcomes.

Logic models can take a range of forms. Generally, logic models include the following elements in a graphic representation of the intervention:

- Situation Analysis
- Inputs
- Outputs/Activities
- Outcomes.

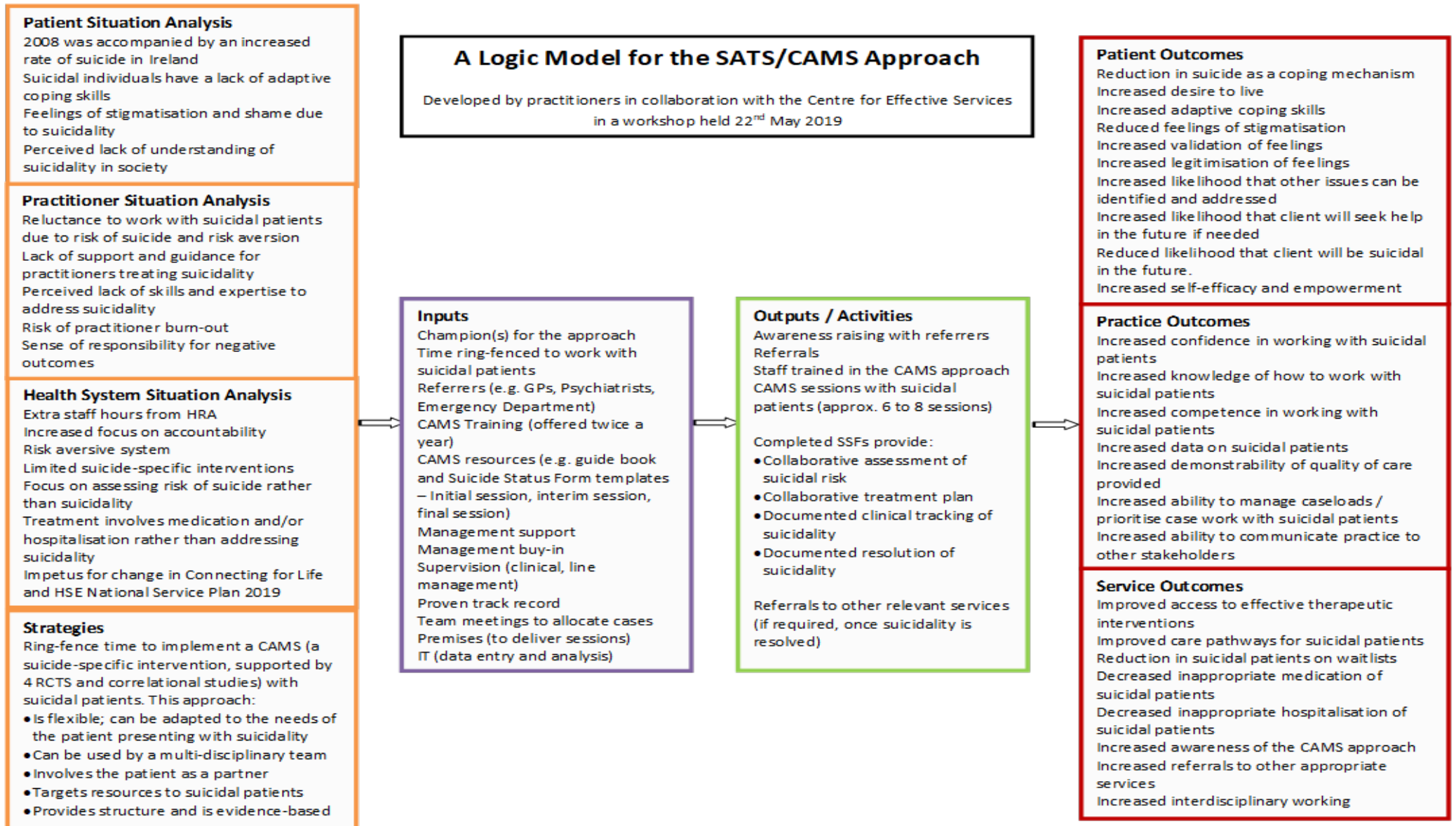
A logic model is useful for a scalability assessment as it illustrates and communicates a clear understanding of the key elements of the model. This assists in preparing for subsequent steps, including conducting the scalability assessment itself as well as helping to articulate which components are critical to the desired outcomes (and which are not), and

understanding how best to refine or simplify the model to enhance scalability and further adoption.

On the 22<sup>nd</sup> May 2019, the CES project team (LAK and DB) facilitated a workshop with 5 individuals who were currently or previously involved in the delivery of (or supported the delivery of) the SATS/CAMS approach in North Dublin. The purpose of the workshop was to collaboratively develop a logic model articulating the SATS/CAMS approach.

Participants in the workshop included one participant with a management/support role and four clinical psychologists. Three of the clinical psychologists were currently delivering the CAMS intervention in North Dublin (one as part of an older persons team, and two working with the general population), and one who had previously delivered CAMS in North Dublin to the general population, but now worked with older persons in a different part of the country.

The logic model documented here is based on discussions in the focus group and their review and comments of an initial draft logic model circulated to them by CES. Issues raised reflect the experiences and perceptions of those delivering (or supporting the delivery of) SATS/CAMS, rather than coming from the literature.



### 3. Does it work?

When addressing the question of whether the SATS approach ‘works’, CES considered the following factors:

- Is it perceived as *credible*?
- Are the results *observable*?
- Is there a *relative advantage* to the SATS approach over existing practice?
- Is the SATS approach *testable and adaptable*?

When the answer to each of these questions is ‘yes’, scale-up is thought to be easier; when the answer is no, scale-up is more challenging. Each of these factors is discussed in this report in turn and assigned a qualitative rating: “Scale-up is easier”; “Scale-up will have some challenges” and “Scale-up will be more difficult”.

#### 3.1 Credibility

An intervention is more credible when it is based on sound evidence, has been subject to independent external evaluation, there is evidence that the model works in diverse social contexts and when the model is supported by eminent individuals and institutions. For the purposes of this scalability assessment, these aspects were considered and the following issues were considered:

- Staff perceptions on the credibility of the model
- The evidence on efficacy (RCT studies) and effectiveness (non-randomised trials)

##### Staff perceptions of the credibility of the model

The majority of survey respondents (89%) indicated that they agreed or strongly agreed that the SATS structure is an effective way to ensure that suicidal service users are not placed on a wait list. The same majority of respondents also agreed or strongly agreed that the SATS structure is an effective way to ensure that suicidal service users receive effective treatment. In both instances the remaining 11% neither agreed nor disagreed.

Most of the survey respondents (N=17) agreed or strongly agreed that the CAMS approach is an effective way to work with suicidal service users. One-in ten neither agreed nor disagreed.

##### Evidence from Randomised Controlled Trials of CAMS – Efficacy Studies

Between 2011 and 2020 five Randomized Controlled Trials (RCT’s) of CAMS have been published supporting its effectiveness for treating suicidal risk. Sample sizes in these studies ranged from 32 (Comtois et al, 2011) to 148 (Jobes et al, 2017).

Participants in these RCTs represented community samples (Comtois et al, 2011), patients meeting two criteria for borderline personality disorder (Andreasson et al., 2016), in-and out-patients who scored 13 or above on Beck’s Scale for Suicide Ideation-Current (BSSI-C) (Ryberg et al, 2019) and soldiers who presented to a military behavioural health clinic (Jobes et al, 2017). Two of these studies compare CAMS to enhanced care as usual (ECAU) or treatment as usual (TAU), while one compared CAMS to Dialectical Behaviour Therapy (DBT) (Andreasson et al., 2016). DBT is a treatment developed for people with self-harm urges/ behaviours, suicidal thoughts, urges for suicide and/or suicide attempts. Individuals who have a long history of these difficulties may have been given a diagnosis of Borderline Personality Disorder (BPD) or Emotionally Unstable Personality Disorder (EUPD).

The findings suggest that CAMS is associated with significant improvements for service users in terms of their suicidality, and may be superior to enhanced care as usual in terms of reducing suicidal ideation (Jobes et al, 2017, Comtois et al, 2011, Pistorello et al., 2020), reducing overall symptom distress (Comtois et al, 2011, Ryberg, 2019), and increasing optimism/hope (Comtois et al, 2011) or decreasing hopelessness (Pistorello et al., 2020). Positive effects appear to be enduring (Andreasson et al 2016, Comtois et al, 2011, Jobes et al, 2017, Ryberg, 2019).

Data comparing CAMS to DBT showed no significant differences between DBT and CAMS for the treatment of self-harm and suicide attempts (Andreasson et al 2016). This is notable since DBT is recognised as a highly effective treatment for self-harm and suicide attempts, and CAMS patients received significantly less clinical contact (one session per week of CAMS for an average of 10 sessions vs. two sessions per week of DBT for 16 weeks), suggesting CAMS is less resource-intensive and offers similar benefits to DBT. CAMS may also be more effective more quickly than treatment as usual (Ryberg, 2019). However, findings from Pistorello et al. (2020) indicate that TAU may be more effective for certain service users (in their study, students with BPD features and history of multiple suicide attempts).

CAMS patient satisfaction ratings were significantly higher than control patient ratings and the patients receiving CAMS care demonstrated superior treatment retention in comparison to control patients (Comtois et al, 2011).

### Evidence from non-randomised controlled studies of CAMS – effectiveness studies

In addition to RCTs, CAMS has been investigated using a range of other study designs (see table). Findings from studies using a correlational design have indicated that CAMS is associated with:

- Significant reductions in SSF core assessment ratings before and after the CAMS intervention (Jobes et al., 1997, Arkov et al, 2008, Nielsen et al., 2011; Ellis et al., 2012)
- Significant reductions in overall symptom distress (Jobes et al 2005; Jobes et al 1997)
- Significant reductions suicidal ideation (Jobes et al., 2009, Ellis et al, 2012)
- Significant reductions in hopelessness and depression (Ellis et al, 2012)

Findings from studies using a comparison group (but not a full RCT) have indicated that CAMS is associated with:

- Significantly quicker reductions in suicidal ideation for those treated with CAMS compared to those who received treatment as usual (Jobes et al, 2005)
- More favourable changes in suicidal ideation and suicide-related cognitions when compared to a propensity score matched control group receiving treatment as usual (Ellis et al, 2015)
- Significantly greater improvements in suicidal ideation, depression, functional disability, and wellbeing at discharge compared to propensity score matched control patients receiving treatment as usual (Ellis et al, 2017).

Table 1 Overview of RCT studies of the CAMS intervention

Authors	Sample / Setting	Comparisons	Results
Comtois et al (2011)	32 outpatients, community mental health	TAU and baseline measures	Significantly greater reductions in <b>suicidal ideation</b> for CAMS compared to treatment as usual; significant improvements in hope/optimism, overall symptom distress, and patient satisfaction for CAMS patients
Andreasson et al (2016)	108 adults with borderline personality traits and disorder and a recent suicide attempt	DBT and baseline measures	No significant differences between DBT and CAMS patients for measures of self-harm and subsequent suicide attempts
Jobes et al (2017)	148 U.S. Army infantry soldiers, outpatient clinic	ECAU and baseline measures	Compared to enhanced care as usual, at 3 months participants in the CAMS condition had significantly lower suicidal ideation compared with participants in the E-CAU condition. Compared to baseline measures, both groups showed improvements in any suicide related Emergency Department admissions, behavioural health-related Emergency Department admissions, suicide related IPU days, behavioural-related IPU days, mental health, psychiatric distress, and resiliency.
Ryberg et al (2019)	Newly referred patients aged 18+ with ongoing suicidal ideation, requiring treatment in specialized care in psychiatric care centres in Norway	TAU and baseline measures	CAMS participants experienced <b>less suicidal ideation</b> as well as larger improvements from baseline compared to TAU participants at 6 months. After 12 months, patients in TAU had partly caught up, with the difference between the treatments groups no longer being significant (d = 0.89). General mental health distress was reduced in both CAMS and TAU over time, where CAMS participants experienced superior reductions from baseline to both 6 and 12months follow-up.
Pistorello et al. (2020)	Suicidal college students	TAU and baseline measures	Both groups showed improvements in all outcome variables over time. CAMS had a significantly higher impact on depression and suicidal ideation when measured weekly during care CAMS was more likely than TAU to decrease hopelessness among students with fewer BPD features, no suicide attempt history, and older age. TAU appeared to be more effective for students with BPD features and history of multiple suicide attempts.



Table 2 Overview of non-RCT studies of CAMS

<b>Authors / location</b>	<b>Sample / Setting</b>	<b>Design</b>	<b>Comparisons</b>	<b>Results</b>
Jobes, Jacoby, Cimbolie & Hsutead 1997 (USA)	106 College students, university counselling centre	Correlational	Pre-Post treatment	Significant reductions in overall distress and SSF core assessment ratings
Jobes, Wong, Conrad, Drozd, & Neal-Walden, 2005 (USA)	56 U.S. Air Force personnel, outpatient clinic	Nonrandomised case-control	TAU	Significantly quicker reductions in suicidal ideation for those with CAMS and significant reductions in Primary Care/Emergency Department visits
Arkov, Rosenbaum, Christiansen, Jønsson, & Münchow, 2008 (Denmark)	27 Danish outpatients, community mental health	Correlational	Pre-Post treatment	Significant reductions in SSF core assessment ratings
Jobes, Kahn-Greene, Greene, & Goeke-Morey, 2009 (USA)	55 College students, university counselling centre	Correlational	Pre-Post treatment	Significant reductions in SSF core assessment ratings
Nielsen, Alberdi, & Rosenbaum, 2011 (Denmark)	42 Danish outpatients, community mental health	Correlational	Pre-Post treatment	Significant reductions in SSF core assessment ratings
Ellis, Green, Allen, Jobes, & Nadorff, 2012 (USA)	20 Psychiatric inpatients	Open trial, case series	Pre-Post treatment	Significant reductions in depression, hopelessness and suicidal ideation and in SSF core assessment ratings
Ellis, Rufino, Allen, Fowler, & Jobes, 2015 (USA)	52 Psychiatric inpatients	Controlled comparison	TAU	Compared to baseline there were significant changes in the desired direction for suicidal ideation, hopelessness, suicide cognitions and depression
Ellis, Rufino, & Allen, 2017 (USA)	104 Psychiatric inpatients	Controlled comparison	TAU	All patients improved significantly across a wide range of measures, including depression, suicidal ideation, functional disability, and well-being. Patients treated by a CAMS-trained individual therapist improved significantly more from admission to discharge across all measures.

## Effect sizes in studies of CAMS

While the finding of significant differences in favour of CAMS compared to treatment as usual is important, it is important to also consider the effect sizes reported in these studies. Effect sizes usually give information about the magnitude and direction of the difference between two groups or the relationship between two variables – in this case the effect size would tell us how big is the difference between a group of service users who received the CAMS intervention and a group of service users who did not, and whether it was a positive difference or not<sup>7</sup>.

The NSW guide indicates that it is important to consider whether the effect size of the original intervention is known and whether this is likely to be of policy significance. This is seen as being key to determining the likely benefits of scaling up the intervention for the intended beneficiaries (in terms of the likely outcomes achieved) and for the funder (in terms of the potential for reduced costs or greater efficiency). The NSW guide notes that the effectiveness of interventions may attenuate as they are scaled up, and so relatively large effect sizes should be demonstrated in the efficacy stage, if an acceptable level of effect is to be expected to be maintained when interventions are scaled up. Presumed reductions in effect sizes are thought to occur for several reasons, including the difficulties in maintaining the dose and fidelity of the original intervention in real world settings, the selected nature of participants or communities or settings involved in research studies, and the adaptation of interventions to local contexts.

Effect sizes were not always reported in published studies of CAMS, effect sizes of studies where effect sizes were reported or easily calculated from the reported findings are discussed in Appendix 6. Effect sizes in RCTs and other studies of CAMS were typically impressive and either medium or large when service user outcomes were compared to baseline on a range of measures including suicidal ideation, subsequent suicide attempts, healthcare utilisation, distress, resilience, hopelessness, depression and other relevant measures. Treatment as usual or the comparison group typically also noted impressive effect sizes over time, but the effect size associated with CAMS was often higher.

## The service user movement

It has been suggested the CAMS can be considered to be aligned with a recovery-oriented philosophy of care (Galavan & Repper, 2017). The CAMS prioritises the suicidal person's point of view in exploring the drivers of the individual's suicidal struggle and the treatment plan is explicitly co-authored. The suicidal person's handwritten words describing their concerns is the guiding information upon which clinical decisions are based.

## Recommendation

There is good, but limited, evidence from the literature and the North Dublin mental health services to indicate that the CAMS intervention is effective in addressing the problem in the target population. Relative to other interventions in the field of clinical suicidology, the CAMS would appear to have the second largest number of trials supporting its efficacy (Dialectical Behaviour Therapy (DBT) having the largest number of trials). The number of interventions with replicated RCT evidence supporting efficacy is relatively small (DBT, CAMS, Cognitive Behavioural Therapy-Suicide Prevention (CBT-SP), Brief Cognitive Behaviour Therapy

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<sup>7</sup> This is important information that cannot be obtained by focusing only significance levels, for example on a particular p-value such as .05. The relationship between a p-value and the effect size is not straightforward, a small p-value can relate to a low, medium, or high effect size. An effect size can be expressed as a difference between means, a percentage, or a correlation.

(BCBT) and non-demand caring follow up) (Brown & Hyman, 2014). More studies on the CAMS intervention are welcomed, in particular studies which do not include the developer of the approach as an author. More data should be collected on the overall SATS approach to enable monitoring and evaluation. There are indications that better awareness and communication around the overall SATS approach are warranted.

### 3.2 Observability

The observability of results is concerned with the visibility of the impact of the intervention, and the association of the impact with the intervention with the accessibility of the evidence of impact (Cooley et al, 2012).

The observability of the SATS is enhanced by the data made available via the CAMS. All survey participants agreed (58%) or strongly agreed (42%) that the CAMS approach is associated with positive outcomes for suicidal service users. The use of the Suicide Status Form (SSF) ensures that the impact of the intervention is visible and tangible as service user outcomes can be tracked across multiple sessions, allowing for comparisons to be made over time. The SSF functions as a multipurpose assessment, treatment planning, tracking and outcome tool that acts as a clinical ‘roadmap.’ It enables co-authoring of therapeutic goals, joint identification of problems to address and agreeing the length of time required (see Appendix 7 for more details). The ‘collaborative’ nature of the SSF ensures that the service user voice is prioritised in the SSF. The SSF comes in three forms, one form is used for the initial session, one form is used for subsequent sessions (the tracking form), and one is used for the final (resolution) session. These are described in further detail below. The use of this form ensures that progress and impact are visible to both the therapist and the service user, and if processed with due consideration, results can be demonstrated to wider audiences in an anonymised manner.

#### Findings from service data

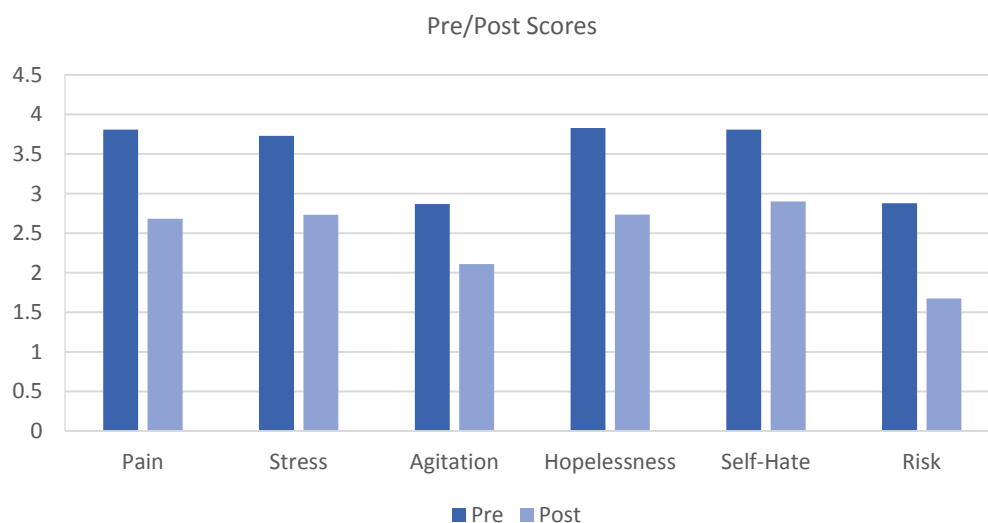
These findings are based on the data available for 182 service users who received CAMS treatment between 2012 and 2019. Data from two time points (a first CAMS session, and the last recorded session they attended) were available for between 136 and 138 of service users for the 5 core rating scales of the SSF (pain, stress agitation, hopelessness, self-hate), indicating notable missing data. Information on gender was available for 113 service users (54 female and 79 male) (this information was redacted in more recent records).

<b>Year of Treatment</b>	<b>N</b>	<b>% of total</b>
2012	11	6.0
2013	22	12.1
2014	32	17.6
2015	30	16.5
2016	40	22.0
2017	8	4.4
2018	32	17.6
2019	5	2.7
Unknown	2	1.1
<b>Total</b>	<b>182</b>	<b>100.0</b>

Both Paired-samples T-tests and Wilcoxon Signed Ranks Test were carried out, and both suggest significant differences for all elements between the pre- and post-test findings. Findings from the Wilcoxon Signed Ranks Test are reported here as this is the more appropriate nonparametric test given the data available.

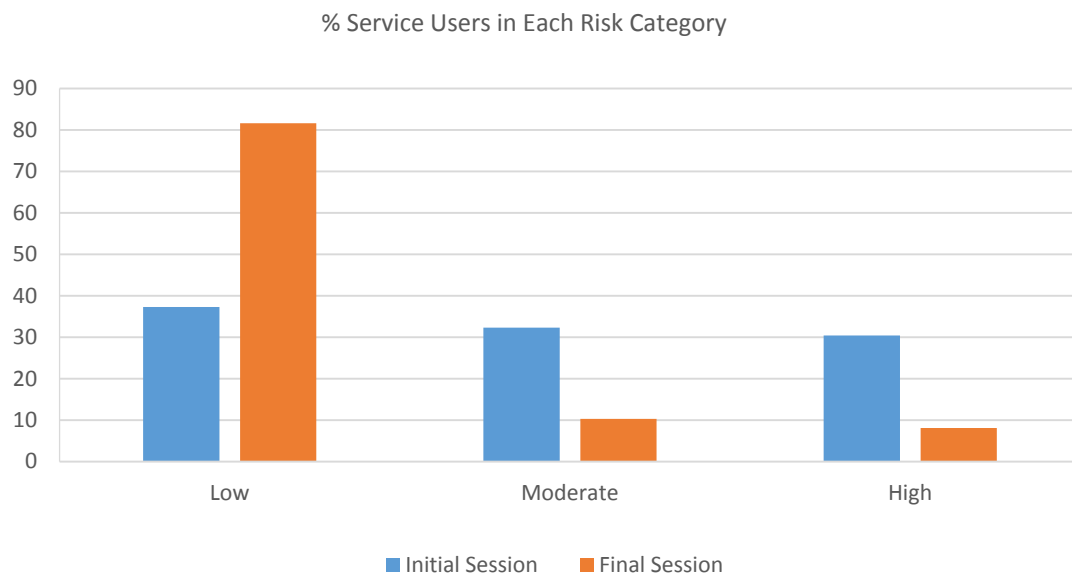
SSF Domain		M	N	SD	Z	Sig	Cohen's D
<b>Pain</b>	Pain score at initial session	3.80	138	1.17	-7.18	.000**	0.926
	Pain score at final session	2.68	138	1.26			
<b>Stress</b>	Stress score at initial session	3.72	138	1.24	-6.33	.000**	0.787
	Stress score at final session	2.73	138	1.29			
<b>Agitation</b>	Agitation score at initial session	2.86	137	1.29	-5.41	.000**	0.587
	Agitation score at final session	2.10	137	1.20			
<b>Hopelessness</b>	Hopelessness score at initial session	3.82	137	1.18	-6.56	.000**	0.878
	Hopelessness score at final session	2.73	137	1.31			
<b>Self-Hate</b>	Self-Hate score at initial session	3.80	136	1.29	-5.74	.000**	0.688
	Self-Hate score at final session	2.90	136	1.35			
<b>Risk</b>	Risk score at initial session	2.87	138	1.22	-7.81	.000**	1.083
	Risk score at final session	1.67	138	0.98			

The graph below illustrates the differences between first and last session average scores on the core rating scales of the SSF. Only participants for whom there were both pre- and post-intervention data are included in this graph.



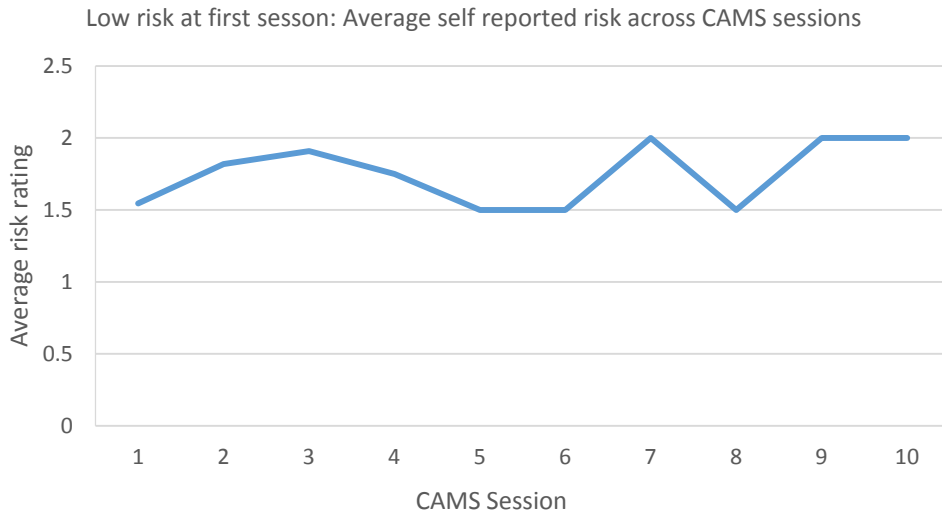
Self-rated risk scores from service users were split into three groups; ratings of 4-5 (high risk), rating of 3 (moderate risk), and ratings of 1-2 (low risk), at the beginning of and end of the CAMS intervention. At initial assessment 48 (30%) clients fell within the high-risk group, compared to 51 (32%) clients in the moderate risk group and 59 (37%) clients in the low-risk group. Final session analysis identified only 11 clients (8%) were still rated within the high-risk category, while 81% (n=111) were in the low category, and 10% (n=14) were in the moderate category.

Category	N (Initial session)	% (Initial Session)	N (Final session)	% (Final Session)
Low	59	37.3	111	81.6
Moderate	51	32.3	14	10.3
High	48	30.4	11	8.1
<b>Total</b>	<b>158</b>	<b>100</b>	<b>136</b>	<b>100</b>

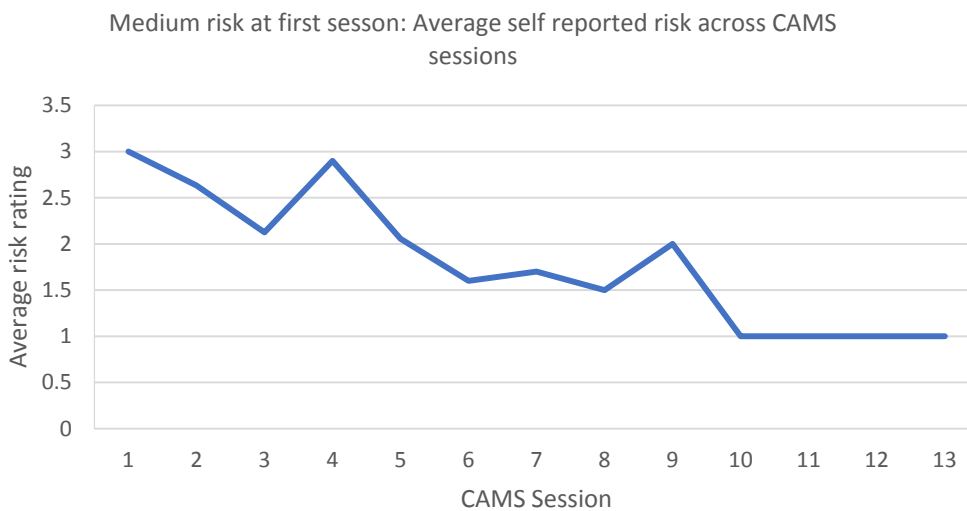


Full data on all CAMS sessions was provided for a smaller cohort of service users (N=44). Of these service users 11 rated their self-reported risk in the low category (a rating of either 1 or 2), they attended on average 5.5 CAMS sessions (with a range of 3 to 10 sessions), and tended to stay in the low category across CAMS sessions<sup>8</sup>.

<sup>8</sup> Note the average self-rated risk for each session is calculated based on the number of participants who attended that number of sessions, and this number decreases over CAMS sessions. Eleven service users had a first, second and third CAMS session, 8 had a fourth, 6 had a fifth, 5 had a sixth, 4 had a seventh, 2 had an eighth and 1 service user had a ninth and tenth CAMS session.



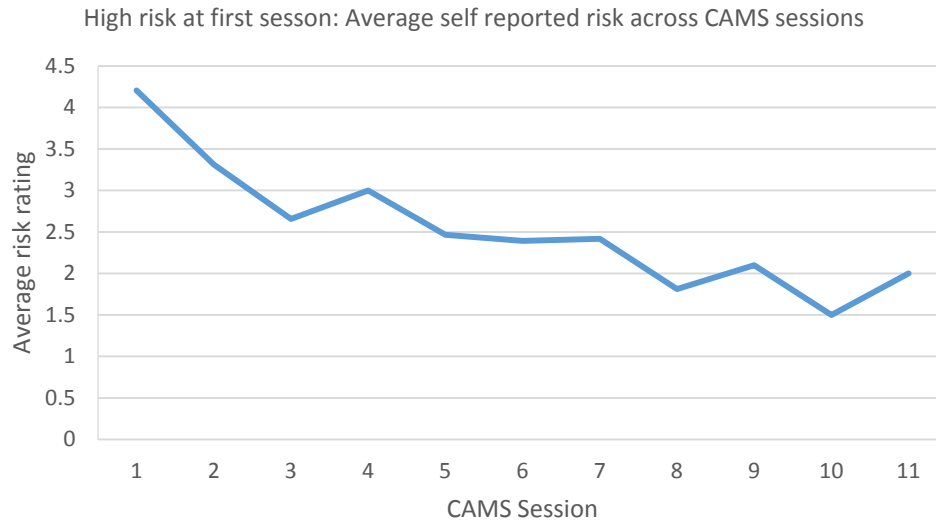
Fifteen of these service users rated their self-reported risk in the medium category (a rating of 3), they attended on average 5.2 CAMS sessions (with a range of 2 to 13 sessions), with a trend towards a reduction in self-rated risk across CAMS sessions<sup>9</sup>.



Eighteen of these service users rated their self-reported risk in the high category (a rating of either 4 or 5), they attended on average 7.2 CAMS sessions (with a range of 2 to 11 sessions, excluding an outlier who attended 17 sessions), with a trend towards a reduction in self-rated risk over the course of the CAMS sessions they completed, with the exception of one service user who consistently indicated a self-reported risk rating of 4 across 17 sessions<sup>10</sup>. Their data has been excluded from the figure below, but it is important to highlight that the CAMS intervention may not be equally effective for every client.

<sup>9</sup> Fifteen service users had a first and a second CAMS session, 12 had a third, 10 had a fourth, 9 had a fifth, 5 had a sixth and a seventh, 2 had an eighth, 1 had a ninth, tenth, eleventh and twelfth CAMS session.

<sup>10</sup> Note the average self-rated risk for each session is calculated based on the number of participants who attended that number of sessions, and this number decreases over CAMS sessions. Seventeen service users had a first and a second CAMS session, 16 had a third, 14 had a fourth and a fifth, 12 had a sixth, 8 had a seventh, 5 had an eighth and 2 service users had a ninth and tenth CAMS session.



## Recommendation

The available data demonstrates clearly the effectiveness of the CAMS intervention. Less data is available for the overall SATS approach; consideration should be given to what data should be routinely collected in order to ensure that the time ring-fenced through the SATS approach is being used as intended. This could include for example, the number of sessions following resolution of suicidality during the CAMS intervention, ongoing referral choices post CAMS, number of clients discharged from services post CAMS, number of clients who return into a CAMS intervention and inpatient stays before, during or after the CAMS intervention.

## 3.3 Relative Advantage

In order to be considered for scale-up, an intervention should have some relative advantage over current practice. This scalability assessment explored the potential relative advantage of the SATS structure and the CAMS intervention over other approaches to addressing suicidality.

### Staff perceptions

Survey participants generally felt that the CAMS intervention had a relative advantage over other approaches<sup>11</sup>.

### Lower training requirement, broader applicability and potentially faster results

The CAMS relies on pre-existing skill sets and interventions, shaped in a suicide specific way, as opposed to learning a whole new range of complex theories and interventions from the ground up. The academic literature suggests that the CAMS intervention may show results more quickly than DBT (Ryberg, 2019), while longer term outcomes appear similar.

DBT offers an effective, intensive, resource-heavy intervention that is only accessible by a small number of suicidal service users. DBT is particularly suitable for chronically suicidal and complex presentations and has a substantive evidence base for addressing suicidality and self-harm, particularly with those people categorised as borderline personality disorder.

<sup>11</sup> When asked, the vast majority of survey respondents (89%) either agreed or strongly agreed that the CAMS approach has advantages over other interventions for suicidal service users. The remaining participants neither agreed nor disagreed. Sixty-eight percent of respondents also agreed or strongly agreed that the CAMS approach has a positive impact on professionals' relationships with service users (the remaining respondents neither agreed nor disagreed).

Given the intensive nature of DBT it is not possible or necessary to deliver DBT to all suicidal people in the mental health service. CAMS is useful for a larger proportion of suicidal service users. As a standard service approach to addressing suicidality in mental health care, the CAMS model represents a more user-friendly model that is applicable to most suicidal service users.

### Facilitates clear communication

A key function of the CAMS model is to communicate and frame treatment around suicide specific issues. The CAMS approach facilitates clinicians to make treatment decisions in a way that prioritises those aspects of the individual's difficulties that are most relevant to their suicidality. The SSF allows these elements to be recorded and transferred with a service user when they travel between service locations. The CAMS intervention is a highly person centred and collaborative approach which includes and records the service users own words and ideas about what is driving their suicidality and what they need to help them. The CAMS model facilitates the decision to discharge from inpatient care to the community team with a thorough collaboratively developed, suicide specific treatment and risk management plan in place.

### Incorporates risk assessment

The CAMS intervention provides a frame to document a thorough risk assessment in a short period of time that directly informs treatment. The nature of this risk assessment is consistent with the NICE guidelines which advocates risk assessment be part of a collaborative person-centred assessment that considers risk in the context of needs<sup>12</sup>. It is also consistent with the HSE's best practice guidance for suicide prevention services<sup>13</sup>, specifically under theme two, "effective care and support", the aim of which is that "The suicide prevention service is planned and delivered to meet the initial and ongoing needs of the person using the service" (pg. 58). The SSF component of the CAMS intervention provides data for indicator 2.1: "Where relevant, the person using the service has an individual plan that describes the level of care and support they need. This is coordinated by an identified key worker or team" (pg. 59).

### Transferrable

The CAMS intervention and associated documentation can be used by all mental health professionals and across clinical environments. It is consistent with recommended standards of care for managing transitions between in-patient and out-patient environments as outlined by the Suicide Action Alliance<sup>14</sup>. In the context of very high risk cases, the CAMS provides a focus for hospital-based interventions to be driver and suicide specific, regardless of diagnostic category, with a view towards discharge as risk decreases over time.

### Prioritise the service users voice

The SATS and CAMS are considered consistent with service user feedback on core priorities within services as per the National Action Alliance for Suicide Prevention Task

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<sup>12</sup> See <https://www.nice.org.uk/guidance/qs189>

<sup>13</sup> HSE, NOSP and NGO partners (2019) *Best Practice Guidance for Suicide Prevention Services Working together for high-quality services*. Dublin 20.

<sup>14</sup> The National Action Alliance for Suicide Prevention (Action Alliance) is the United States' public-private partnership for suicide prevention. See their guidance on care transitions here: [https://theactionalliance.org/sites/default/files/handout\\_-\\_best\\_practices\\_in\\_care\\_transitions\\_final.pdf](https://theactionalliance.org/sites/default/files/handout_-_best_practices_in_care_transitions_final.pdf)



Force in the US<sup>15</sup>. In particular the following core values as outlined by the report 'The Way Forward' are highly consistent with the CAMS approach:

- Foster hope and help people find meaning and purpose in life
- Preserve dignity and counter stigma, shame, and discrimination
- Promote choice and collaboration in care
- Provide timely access to care and support.

### CAMS and other approaches

Applied Suicide Intervention Skills Training (ASIST) and STORM offer 'once off' models of intervention and there is little expectation of follow-up. These approaches manage immediate risk and redirect people to further interventions that are not necessarily suicide-specific. The evidence base regarding these interventions is highly limited, with little to no data on effectiveness, and no RCT data. The CAMS intervention has advantages over these approaches as it is a more comprehensive intervention that is better suited to address the needs of suicidal people. The CAMS intervention can track risk over time and has a stronger evidence base pertaining to its effectiveness in addressing suicidality.

### Recommendation

The CAMS element of the SATS approach is a suitable intervention catering to a wide variety of suicidal service users across our mental health services.

## 3.4 Testable and Adaptable

The easier an intervention can be trialled on a small scale by potential adopters without a large commitment of resources and the easier it is to adapt it to new contexts while retaining its effectiveness, the more scalable the intervention is.

### Evidence from the logic model workshop

The logic model workshop indicates that the SATS model is relatively simple, with few core components. The most important of these components relate to the CAMS element of the SATS approach, and the supporting of staff to implement SATS.

When it comes to scaling up the SATS approach or replicating the SATS in another service environment, changes and/or adaptations may be required to the overall SATS approach as it may not be possible or required (depending on service user needs) for other services to ring fence the same amount of time to implement the CAMS intervention. The SATS approach was developed using additional working hours available following implementation of the Haddington Road (Croke Park) Agreement. This provided the capacity for work with approximately 20 suicidal service users in the catchment area at any given time (with approximately 10 psychologists/mental health staff). With an average of 12 weeks required per service user, this equates to approximately 70 people per year being assessed and treated specifically for suicidality by the Community Mental Health Team's (CMHT) Psychologists. It may be challenging for other areas to 'ring fence' hours to dedicate to delivering SATS/CAMS given the current pressure on resources. The SATS approach appears to be able to accommodate adaptations. The CAMS can also be incorporated into current practice on a needs basis. In other words, as suicidality arises the CAMS can be used by individual practitioners in response to this need. This would remove the need for

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<sup>15</sup> See the National Action Alliance for Suicide Prevention report: "The Way Forward: Pathways to hope, recovery, and wellness with insights from lived experience" here: <https://theactionalliance.org/sites/default/files/the-way-forward-final-2014-07-01.pdf>

ring fenced CAMS 'slots' however also brings the waiting lists of practitioners into play as a potential barrier. An advantage of the CAMS intervention is that it circumvents wait list pressures by ring fencing time.

The SATS structure, and in particular the CAMS intervention, has the potential to be tested by users on a limited scale, and does not require an overhaul of regular working structures or functions, particularly in the first instance. The CAMS intervention is a flexible therapeutic framework to guide practice, rather than a new type of therapy; this means it can be adopted by a wide range of different practitioners working from different disciplinary and philosophical backgrounds.

### **Adaptability of the CAMS intervention**

The CAMS intervention has been used with a range of different types of service users in a variety of service environments (see Jobes 2017 for review). In Ireland, it is currently being implemented by the Simon Community in their work with homeless service users experiencing suicidality indicating that the approach is adaptable to different contexts and relevant beyond its initial context.

### **Recommendation**

The core components of the SATS approach and the CAMS intervention should be clearly documented for those seeking to adopt the approach. Adaptations made by services should be clearly identified and monitored to ensure the intended outcomes are not negatively impacted. Consideration should be given to how intervention fidelity will be monitored and maintained, while allowing for appropriate adaptations.

## 4. Does it fit?

When addressing the question of whether the SATS approach fits, this scalability assessment considered the following factors:

- Is the SATS approach *relevant* to the work of potential implementers and funders?
- Is the SATS approach *simple and easy to adopt*?
- Is the SATS approach *cost-effective*?
- Is the SATS approach *acceptable* to service users and other stakeholders?
- Is the SATS approach *aligned* with national and local policy directives?

When the answer to each of these questions is ‘yes’, scale-up is thought to be easier; when the answer is no scale-up is more challenging. Each of these factors is discussed in this report in turn and assigned a qualitative rating: “Scale-up is easier”; “Scale-up will have some challenges” and “Scale-up will be more difficult”.

### 4.1 Relevant

In order to understand the relevance of the SATS structure, this scalability assessment considered whether staff currently involved in the delivery of the SATS approach felt it addressed an objectively and subjectively significant persistent problem. It also considered whether it addressed an issue which is currently high on the policy agenda.

#### Staff perceptions

Survey participants generally agreed (47 % strongly agreed, 32% agreed, 16% neither agreed nor disagreed) that the CAMS approach meets an important need in the area in which they work. The majority of participants also agreed that the CAMS intervention meets an important national need (47% strongly agreed, 47% agreed, 5 % neither agreed nor disagreed). However, participants were less confident about the support for the SATS structure from leadership in their Community Mental Health Team. However, the majority did agree that it receives leadership support (11 % strongly agreed, 44 % agreed, 33% neither agreed nor disagreed, 11% disagreed). This again is tacitly supported by the fact that staff from all disciplines have attended workshops and trainings in the CAMS model, and staff from all disciplines have begun to integrate the model into their practice.

#### An objectively significant, persistent problem

According to the World Health Organisation (WHO) suicide is a leading cause of death and a global disease burden, accounting for nearly one million annual deaths across the world (WHO, 2012)<sup>16</sup>. In 2016 suicide was the 18th leading cause of death across all ages, and the 2nd leading cause of death among young people (12 to 24 years old)<sup>17</sup>. In Ireland, national suicide statistics are provided by the Central Statistics Office (CSO). These annual figures are usually published with a delay of approximately two years or longer.

#### An issue which is currently high on the policy agenda

[Connecting for Life](#) (CfL) is the national strategy to reduce suicide over the period 2015–2022. It sets out the Irish Government’s vision for suicide prevention, the expected outcomes over these five years and the actions that will be taken to prevent suicide and self-harm in

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<sup>17</sup> World Health Organization Suicide Data. Available online: [https://www.who.int/mental\\_health/prevention/suicide/suicideprevent/en/](https://www.who.int/mental_health/prevention/suicide/suicideprevent/en/) (accessed on 24 February 2020).

Ireland. The vision of CfL, is an Ireland where fewer lives are lost through suicide, and where communities and individuals are empowered to improve their mental health and wellbeing.

CfL seeks to achieve two primary outcomes, which align with the SATS structure:

1. Reduced suicide rate in the whole population and amongst specified priority groups.
2. Reduced rate of presentations of self-harm in the whole population and amongst specified priority groups.

The principles and themes guiding CfL are as follows:

- Collaborative - Achieve together to deliver our goals
- Accountable - Clear governance structures and openness in implementing the strategy
- Responsive - Providing high-quality service responses that work with and support people to achieve goals that are meaningful and important to them
- Evidence-informed and outcome-focused - Action targeted to identified need and based on international best-practice recommendations
- Adaptive to change - responsive to new and emerging circumstances.

The SATS structure aligns well with these themes and principles. The CAMS element of the SATS structure represents a collaborative approach that is responsive to an individual's particular circumstances and needs. It is an evidence-informed approach that can be adopted by a range of practitioners with different theoretical and philosophical orientations.

Sláintecare is the current ten-year programme aiming to transform health and social care services in Ireland. The vision of Sláintecare is to achieve a universal single-tier health and social care system where everyone has equal access to services based on need, and not ability to pay. The overarching aims are to:

- improve patient and service user experience
- improve clinician experience
- lower costs
- achieve better outcomes.

The 'collaborative' nature of the CAMS approach puts the service user at the centre of their treatment planning, in line with the Sláintecare vision.

At the time of writing this report, the Covid-19 pandemic is ongoing. This presents both challenges and opportunities for the scale up of the SATS approach. Healthcare Sector staff are dealing with increased workloads, some are redeployed from their regular posts and work practices are changing to incorporate social distancing. This will have implications for the resources and capacity available to engage in the scaling up process. However, the response to the pandemic is also creating a context in which large scale change is happening at pace and people are willing to adopt new practices provided they are useful, easy to adopt and needed. The pandemic may also increase the need for interventions addressing suicidality as the general population is placed under increased stress and uncertainty.

## Recommendation

The CAMS approach and SATS structure address issues that staff feel are important, and issues that may become increasingly important during and after the Covid-19 pandemic. While the level of leadership support currently experienced is good, it is not optimal. To facilitate scale-up, leadership support is an important enabler and should be secured at an

early stage of any planned scale-up activity. Demonstrating the relevance of the SATS structure and CAMS intervention to the current context and into the future will help to achieve leadership buy-in and support.

## 4.2 Simple and easy to adopt

This scalability assessment considered the extent to which the SATS structure was simple and adoptable in other contexts. Drawing from the experiences of those implementing the approach currently, the logic model workshop and the literature on CAMS we considered the number of components involved, the processes required to support implementation, and whether there was a need to simplify the intervention in order to scale it.

### Staff perceptions

The majority of survey respondents agreed that the CAMS intervention is simple and relatively easy to implement (32% strongly agreed, 47 % agreed, 21% neither agreed nor disagreed).

In terms of the SATS structure, the majority of survey respondents felt it did not increase their workloads; however, this perception was not unanimous. While no participants strongly agreed that the SATS structure increases the workload of psychologists and those working with suicidal service users on my Community Mental Health Team, 22% did agree while 22 % neither agreed nor disagreed and 56 % disagreed.

### Implementing the CAMS intervention

The CAMS model requires clinicians learning new skills and a new approach to suicidality. The learning curve in applying the CAMS involves adopting a particular philosophy of care (collaborative and psychotherapeutically informed), consolidation of previously learned skills in a suicide specific context, and mastering multiple modes of intervening with, assessing and managing risk in a coherent relationship based model (Jobes et al, 2018).

Working with suicidal people typically involves weekly meetings, over a relatively short period of time. Currently, many clinicians dedicate time to working with suicidal people, for example, managing recurring suicidal crises, with little or no focus on resolving drivers and suicidality in the longer term. It is also unusual for many clinicians to meet with suicidal people on a weekly or regular basis dedicated to resolving those issues driving their suicidality. The changes in practice required are considered achievable and it is time well spent with rates of resolution of suicidality in the CAMS treated group being at 80% within 12 sessions (Jobes, et al 2018).

### Implementing the SATS structure within existing systems

The logic model workshop suggests that the SATS structure is implementable within existing systems, infrastructure and human resources as it contains few components, and those components it does contain are easily added to existing systems. The approach represents only a small departure from current practices and behaviors of both the potential implementers and of the target population.

At the time of writing this report, a plan for scale-up had yet to be determined. Therefore, it is unclear at this stage how many decision makers would be involved in agreeing to adoption of the model. The number of decision makers involved may be numerous, and this would pose a challenge for scale-up.

The original SATS approach involves ring-fencing a small amount of clinical time for practitioners to develop the intervention. Respondents to the staff survey were not sure how

easy to replicate the SATS structure would be (see section on acceptability). This may be additionally challenging in during the Covid-19 pandemic.

### Recommendation

The CAMS element of the SATS structure has demonstrated effectiveness in diverse settings. The SATS structure itself is simple with few components that are compatible with existing practices in the healthcare sector. In particular, as an approach to working with service users experiencing suicidality, the CAMS approach is simple and compatible with a wide range of work practices, philosophies and theoretical perspectives. The SATS approach would need some adaptation to suit contextual factors, but the model appears to be able to accommodate that. Given the current context, the readiness of organisations to adopt the structure should be addressed at an early stage of scaling up.

## 4.3 Cost-effective

A scalable intervention is ideally more cost-effective than existing and/or competing interventions. A thorough investigation of cost-effectiveness would also preferably include the extent to which the total cost at scale is feasible within the financial and non-financial resources of possible adopters and funders (taking account of the available human resources and infrastructure available to implement it). This was not possible as potential adopters have not yet been identified. This report did not seek to conduct a full cost-benefit analysis, this limits the ability to address this question authoritatively.

### Cost effectiveness as a relative advantage

In North Dublin, the SATS model was developed and implemented within existing organisational, technical, human and financial resources. The training requirement is not as intensive compared to other approaches, and the CAMS element can potentially encompass a wider range of service users than the 'go-to' DBT approach. Some research findings indicate that service users who have received the CAMS intervention show lower healthcare utilisation than service users who received other treatment options (Jobes, et al., 2005). See the section on relative advantage for more information on the potential cost-effectiveness of the SATS structure and CAMS intervention.

### Recommendation

The SATS approach, and the CAMS element, are likely to be cost-effective. However, this is difficult to determine in the context of the scope of this report.

## 4.4 Acceptable

This scalability assessment considered the likelihood that the SATS structure, including the CAMS element, would be acceptable to stakeholders, including target groups when scaled up.

### Staff perceptions

Most respondents to the staff survey agreed that the SATS structure has a positive impact on suicidal service users (33% strongly agreed, 56% agreed, 11% neither agreed nor disagreed) and on Community Mental Health team members who work with suicidal service users (11% strongly agreed, 67% agreed, 22% neither agreed nor disagreed). These findings indicate that the SATS structure is thought to have a positive impact on both suicidal service users and on Community Mental Health team members who work with suicidal service users. This suggests that the approach is likely to be acceptable to staff who would implement the approach, as well as service users who would engage with it. Added to that,

the findings from the staff survey indicate that the majority of respondents feel that the CAMS approach would be a good fit for all Community Mental Health Teams in the country as well as being a good fit for their own Community Mental Health Team (see section on alignment), pointing to good perceived acceptability among frontline staff and service users.

### Evidence from research

Peer-reviewed research indicates that service users have positive perceptions of the CAMS intervention, compared to other treatment modalities (Comtois, et al, 2011). Research conducted within North Dublin also suggests that the CAMS approach and SATS structure are acceptable to staff and service users. For example, one research report (Finnegan, 2014) examined the experiences of 40 mental health professionals who had attended a one-day training workshop on the CAMS approach and completed a feedback questionnaire. At approximately 3 months post-training, 21 participants completed a follow-up questionnaire, providing additional information on changes in attitudes and behaviour and implementation of the CAMS approach. A mixed-methods analysis indicated that participants found both theoretical and practical aspects of the training highly useful. At follow-up, less than half of respondents had successfully implemented CAMS with a client. However, nearly all respondents reported changes in their working practice with suicidal clients. The large majority of respondents indicated their intention to use CAMS in the future, while noting some barriers to implementing the intervention, including conflicts with regular ways of working.

### Lack of important perspectives

Feedback to the staff survey was limited, particularly given that there were no respondents from psychiatry. While there is existing evidence that staff and service users who have been involved in the delivery of the SATS approach and / or the CAMS intervention find the approach acceptable, other important perspectives are lacking. The generalisability of the findings on acceptability are therefore limited

### Recommendation:

The scalability assessment suggests that the SATS approach is likely to be acceptable to service users and practitioners implementing the CAMS approach. However, less is known about acceptability among other stakeholders. Early scale-up efforts should focus on identifying key stakeholders and achieving buy-in from stakeholders at every level.

## 4.5 Aligned

This scalability considered whether the SATS approach is consistent with national or local policy directives and its alignment with the broader strategic context (see section on relevance), and whether the SATS structure and CAMS intervention would likely be compatible with other interventions being implemented in the settings where the SATS structure could be scaled to.

### Staff perceptions

Staff were positive about the alignment of the SATS structure and the CAMS approach with the settings in which they worked. Most agreed that the CAMS approach fits well in their Community Mental Health Team (26% strongly agreed, 37% agreed, 32% neither agreed nor disagreed, 5% disagreed). Most felt that the CAMS approach would be a good fit for all Community Mental Health Teams in the country (37% strongly agreed, 42% agreed, 21% neither agreed nor disagreed).

Staff were very positive about the alignment of the CAMS approach with the Irish mental health system, with most agreeing that the CAMS approach fits well in the Irish mental health system (47% strongly agreed, 42% agreed, 11% neither agreed nor disagreed). However, there was more uncertainty regarding how easy the SATS structure would be to replicate (55.6% be easy for other Community Mental Health teams to replicate versus 44.44%).

### Alignment in new settings

Because it is a 'therapeutic framework' rather than a type of psychotherapy; a clinician offering CAMS would continue to deliver whatever therapy or intervention they normally deliver but they would use the CAMS framework. This has been designed to address suicidality and elements of the individuals problems most related to suicidality.

CAMS relies on the pre-existing skill sets and interventions of the mental health clinician. For mental health clinicians the level of new training required is much less than for example Dialectical Behaviour Therapy (DBT), Cognitive Behaviour Therapy for Suicide Prevention (CBT-SP) or Mentalisation Based Therapy (MBT).

Essentially, once the manual is read and understood clinicians rely on their underlying skills base in a newly learned treatment frame. Clinicians from different disciplines can potentially utilise this single frame across different health settings providing a stable clinical frame that is evidenced-based, suicide specific and contains a risk assessment, risk management and treatment plan that travels with the service user between clinical environments.

### Alignment with existing government health system or program, and wider strategic context

As noted previously, the aims, objectives and methods associated with the SATS structure and the CAMS intervention align well with:

- Connecting for Life (CfL), Ireland's 2015- 2022 national government strategy to reduce deaths by suicide
- National Institute of Health and Care Excellence (NICE) guidelines and quality standards<sup>18</sup>
- Sláintecare, Ireland's ten-year programme aiming to transform health and social care services in Ireland

The SATS structure and the CAMS intervention also align well with the HSE's Best Practice Guidance for Suicide Prevention Services. This guidance works from the premise that suicide prevention services are provided through evidence-based best practice and the principle of 'first do no harm' to the people accessing them. It is underpinned by five guiding principles, none of which conflict with the SATS structure or CAMS intervention and principles four and five are actively promoted by the SATS:

1. A clear suicide prevention objective is carried out in the organisation, as set out in Connecting for Life, Ireland's National Strategy to Reduce Suicide 2015-2022
2. Health and well-being of the whole population and the promotion of an ambition for recovery is at the core of work in suicide prevention
3. Services are planned and provided using evidence-informed practice and in consultation with services users

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<sup>18</sup> See <https://www.nice.org.uk/guidance/qs189>



4. Access to services is timely, and individuals using the service are treated with dignity, equality and respect
5. A collaborative approach to the delivery of service is adopted with people using the service, their families, and support networks, as well partnership working with relevant service providers.

### Recommendation

The SATS structure and the CAMS intervention are well aligned with national policies and broader strategic goals. However, scale up is likely to be frustrated by competing priorities, both nationally and locally. For example, the current Covid-19 pandemic may divert attention from a range of priorities, including the implementation of a suicide specific intervention.

In a context of shifting priorities, attempts to scale-up the SATS structure and the CAMS intervention should involve demonstration of the continued relevant and need for the approach, and how it can help to address emergent needs.

## 5. Overall conclusion

The SATS structure, including the CAMS intervention appear to be scalable interventions. The scalability assessment indicates that it is clear what the approach is, and there is evidence to support that it 'works', and it 'fits':

- **It works:** There is evidence to support its efficacy and effectiveness, it is perceived as effective, the results are observable to both implementers and beneficiaries, it has some notable relative advantages over other approaches, and it is testable and adaptable.
- **It fits:** There is evidence to suggest that it is seen as relevant and acceptable to stakeholders, including the target group, the approach is simple, the approach is likely to be cost-effective (although a full cost-effective analysis was not conducted as part of this scalability assessment), it is aligned with national and local policy directives.

The CAMS element of the intervention appears to be the most scalable aspect of the SATS structure and should form the primary focus of planning for the next stage of scale-up.

### 5.1 Limitations of methodology

These findings should be understood bearing the following in mind:

- The response rate to the staff survey was low (although in line with response rates to surveys in general) and some key perspectives (e.g. psychiatry) were absent. However, the respondents did represent a good spread of disciplines and community mental health teams and locations across the North Dublin mental health services.
- The research literature and service data analysed for this scalability assessment was limited to what existed and was available at the time the scalability assessment was undertaken. This research base was not developed with a scalability assessment in mind, and while useful it did not necessarily cover all aspects relevant to a scalability assessment.

### 5.2 Next steps

If it is decided that the SATS structure and/or the CAMS intervention is to be scaled up, this report recommends the following steps should be considered (See Cooley et al., 2012, WHO and ExpandNet, 2009):

1. Determine the approach to scale-up
2. Establish the preconditions for scale
3. Plan for implementation
4. Monitor and evaluate

#### Determine the approach to scale-up

This involved articulating the planned approach or strategy for how the intervention will be scaled up, that is how can the intervention best reach more people? The literature describes a number of ways an intervention can be scaled:

- **Spontaneous diffusion:** this occurs when an intervention is adopted by other settings in an unplanned and uncoordinated way. Successful scale-up usually requires purposeful attention. This is not recommended for the SATS structure or the CAMS approach as it is not a reliable method to scaling up.

- **Horizontal scaling up:** this occurs when innovations are replicated in different geographical sites or are extended to serve larger or new categories of populations. Horizontal scaling up can take the form of *expansion*, where the organisational size, operational scope or geographic spread are increased, or *replication* where other organisations adopt the intervention. Replication in other mental health service areas appears to be a viable option for the SATS structure or CAMS approach.
- **Vertical scaling up:** This occurs when formal government decisions are made to adopt the innovation on a national or subnational level and it is institutionalized through national planning mechanisms, policy changes or legal action. Systems and structures are adapted and resources redistributed to build the institutional mechanisms that can ensure sustainability. Vertical support could facilitate the scale up of the SATS structure or the CAMS approach.
- **Collaboration:** This occurs when the work of implementing and scaling-up the intervention is shared through formal partnerships, strategic alliances and coalitions. These include various innovative structures and governance arrangements reflecting the need to leverage the strengths of different types of organisations. Whether this approach is relevant for scaling up the SATS structure or the CAMS approach depends on the overall vision for scale-up – it may not be relevant if the intention is to scale up to other community mental health teams; however if the intention is to work with other organisations such as NGOs, this approach may be worth considering.
- **Functional scaling up:** this occurs when additional interventions are added to an existing package to expand the service offering or target group. This is not recommended for scaling up the SATS structure at this time, as the target group and approach are clear. Functional scale up could be considered once a sufficient degree of coverage and support has been achieved to indicate that it is likely to continue expanding and the SATS structure could benefit from new interventions.
- **Field building:** focuses on the “ecosystem”, and stakeholders such policy makers, community groups, NGOs, advocacy groups, service delivery groups, think tanks, funders, investors and beneficiaries. Field building involves creating a shared identity, standards of practice, knowledge base, and leadership to support improved policy advocacy and funding. This approach is not recommended for the SATS structure at this stage, although how the SATS structure contributes to the field of suicidality should be kept in mind.

Once the approach to scale-up has been agreed, a plan should be developed that summarises the need for the intervention, the vision behind it, and the evidence underpinning it. The plan should include a clear description of proposed actions, timetables, roles, responsibilities, and resources for scaling up.

### Establish the preconditions for scale-up

Demonstrate the effectiveness and relative advantage of the intervention to relevant decision makers, funders, and opinion leaders to show it is both necessary, desirable and feasible using appropriate channels. Engage with the leadership and staff of potential implementing organisations to understand their needs and to achieve buy-in.

### Plan for implementation

Identify and make any necessary changes to the intervention to ensure it works in the new context or contexts in which it is to be scaled. Ensure responsibilities are clearly allocated and efficient mechanisms are established to coordinate the scaling up effort.

Gradual, phased expansion of the innovation facilitates successful scaling up. The advantage of a gradual scaling up process is that there is more time to complete the tasks required to achieve lasting institutional capacities at all levels and to ensure that the innovation is sustainable. The risk of scaling up too quickly is that the essential characteristics of interventions can be lost as they are expanded to new areas, resulting in a loss of efficacy and effectiveness.

A phased approach would allow for documenting the learning of embedding the SATS structure, or implementing the CAMS intervention, in second pilot site building from the learning in North Dublin. It could also allow for identifying a service area where a similar structure, but more tailored to that area, could be developed to implement the CAMS intervention whereby the SATS is used as an exemplar rather than as a protocol to be adopted.

### **Monitor and evaluate**

Ensure that adequate procedures for documenting the progress, lessons learned, and impact of the scaling up effort are in place. Identify the mechanisms that will most effectively ensure that this information is fed back to key stakeholders and the broader public where relevant and used to make necessary amendments over time.

## **5.3 Final thoughts**

The conditions are never 'ideal' for successful scaling up. Every context or environment brings with it both opportunities and challenges. In order to achieve the desired goals of scaling up the SATS structure, or the CAMS intervention, the approach adopted should ensure that the need for and effectiveness of the approach are demonstrated relative to national and regional policy priorities, that it is adaptable to new ways of working, and that it is acceptable to both staff and target groups.

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# Appendix 1 - Overview of scalability and assessing scalability

## Terms and concepts relating to assessing scalability

### Scaling-Up

Scaling-up has been defined a number of ways in the literature. Essentially, to scale-up means to 'do more' or 'to reach more people'. Definitions of scaling up vary in their specific focus, but tend to share some common elements. Consider the following:

- Nesta (2014)<sup>19</sup> state "When we talk about scaling social innovation we're primarily thinking about how to increase the number of people who benefit from a social innovation" and indicate that an innovation can be said to have scaled "when their impact grows to match the level of need".
- MSI adopts the following definition: "Scaling up is the process of expanding, adapting and sustaining successful policies, programs or projects in geographic space over time to reach a greater number of people."
- ExpandNet and the WHO define scaling-up as: "deliberate efforts to increase the impact of successfully tested health innovations so as to benefit more people and to foster policy and programme development on a lasting basis."

These definitions share four common components, each sees scale up as:

- i. Increasing the reach or impact
- ii. of an innovation or intervention that benefits people
- iii. in an intentional manner
- iv. with a view to sustainability or meeting the need for the innovation or intervention

Each of these four components is discussed here in further detail.

**Increasing the reach or impact.** Definitions of scale up talk about making sure the either more people benefit from an intervention, or that people benefit more from an intervention; that is that the intervention reaches more people or the intervention has an increased impact.

In order to reach more people, a number of approaches to scaling-up have been identified in the literature. For example MSI international list three types – expansion, replication and collaboration; WHO and ExpandNet list four types - vertical scaling up (institutionalization through policy, political, legal, budgetary or other health systems change), horizontal scaling up (expansion/replication), diversification, and spontaneous scaling up; Nesta list 4 types – Influence and advise, build a delivery network, form strategic partnerships, grow an organization to deliver.

The approach to scaling-up depends on a number of factors including the type of intervention or innovation to be scaled up, the availability of resources, the context and the interactions between these factors.

Also likely requires transferring control for delivery from initial implementers or innovators to local actors or institutions

**An innovation or intervention that benefits people:** Innovations or interventions to be scaled up are known to have positive results. That is, they are backed by evidence of programme effectiveness and feasibility. This evidence may be obtained through pilot, demonstration or experimental projects, or through initial introduction in a limited number of local sites (WHO, 2010).

When considering the evidence for effectiveness, the NSW Ministry of Health guide to scalability draws particular attention to 'effect size'. The NSW guide indicates that it is important to consider

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<sup>19</sup> Gabriel, M. (2014). Making it Big: strategies for scaling social innovations. Nesta.



whether the effect size of the original intervention is known and whether this is likely to be of policy significance. This is seen as being key to determining the likely benefits of scaling up the intervention for the intended beneficiaries (in terms of the likely outcomes achieved) and for the funder (in terms of the potential for reduced costs or greater efficiency). The NSW guide notes that the effectiveness of interventions may attenuate as they are scaled up, and so relatively large effect sizes should be demonstrated in the efficacy stage, if an acceptable level of effect is to be expected to be maintained when interventions are scaled up. Presumed reductions in effect sizes are thought to occur for several reasons, including the difficulties in maintaining the dose and fidelity of the original intervention in real world settings, the selected nature of participants or communities or settings involved in research studies, and the adaptation of interventions to local contexts

**An intentional manner:** Scaling up is seen as a deliberate process, implemented in a planned and strategic manner, rather than a spontaneous outcome.

**Sustainability or meeting the need:** Once scaled up, the innovation should be sustainable and continue to meet the need it was designed to address for as long as the need is present.

### Scalability

If scaling up refers to doing more and reaching more people, scalability refers to how easy (or not) this is likely to be in practice. As with scale up, a number of definitions with varying emphases can be found in the literature. For example:

- The NSW guide to increasing the scale of population health interventions uses the following definition of scalability: “the ability of a health intervention shown to be efficacious on a small scale and/or under controlled conditions to be expanded under real world conditions to reach a greater proportion of the eligible population while retaining effectiveness” (from Milat AJ, King L, Bauman AE, Redman S. The concept of scalability: increasing the scale and potential adoption of health promotion interventions into policy and practice. *Health Promot Int* 2013; 28(3): 285–298.)
- WHO and ExpandNet see scalability as “the ease or difficulty of scaling up the innovation, based on the attributes (or determinants) of success which have previously been identified in research on the diffusion of innovation and through practical experience”.

These definitions imply the need for evidence to make judgements on the efficacy of an intervention and the importance of retaining effectiveness as the intervention is scaled. Milat et al (2013), see scalability as encompassing three themes: (1) expansion of coverage, the potential reach of an intervention varying in relation to the problem being addressed, characteristics of the intervention, the target group, and the context; (2) transferring control for delivery from initial implementers or innovators to local actors or institutions; and (3) retaining the effectiveness demonstrated in proof of principle studies.

### Assessing scalability

A number of processes and frameworks have been proposed for assessing the scalability of an intervention. Milat et al (2020) note that assessing scalability has been identified as a fundamental step in any scaling up process because it helps to avoid wasting resources and efforts in scaling up unsuitable interventions. They describe that assessing scalability generally requires making judgements on a range of complex issues, including feasibility, acceptability, costs, sustainability and adaptability to context. They note that a growing number of frameworks and guides offer step-by-step processes for scaling up evidence-based interventions and identifying factors, including scalability, that should be considered throughout the scaling up process but critique the fact that these guides do not offer practical tools that policy-makers can use to conduct structured scalability assessments. They note that there scalability tools do exist, such as in Cooley et al.’s Scaling Up Management Framework, the scalability checklist is brief, does not provide a mechanism for evidence gathering or a process for the comprehensive and systematic assessment of scalability, and was developed primarily for use in low- to middle-income country contexts and thus may have less utility in high-income countries.

Zamboni et al (2019), identified 10 models or scale-up frameworks, of which five were based on implementers' experiences, and five originated from the research community, mostly as literature reviews supported by qualitative interviews with stakeholders in a given health system or a Delphi process. Their analysis of these frameworks identified five critical factors that require consideration when planning scale-up: (1) attributes of the innovation; (2) attributes of the implementers (actors introducing an innovation or actively supporting their scale-up); (3) attributes of the adopting community; (4) socio-political context and (5) scale-up strategy.

Milat et al (2020) identified 15 papers/reports that described scale-up frameworks, tools and checklists, in their review of tools and frameworks. Ten frameworks and checklists provided steps for scale-up, five specifically mentioning the assessment of scalability although guidance on assessing scalability was only provided by one author through two iterations of the MSI scalability checklist. This one-page checklist (called the 'Scaling Up Management Framework Scalability checklist') described seven categories for scalability and, within those categories, provided a series of questions to facilitate a decision of scalability across a three-point scale; users were not prompted to provide additional supporting text or evidence.

For the purposes of this scalability assessment the CORRECT framework was adopted, and expanded to incorporate additional categories from the 'Scaling Up Management Framework Scalability checklist', from the review by Zamboni (2009) under the factor 'attributed of the intervention' and from the NSW guide. This resulted in 11 categories of interest:

1. Articulating the model
2. Credibility of the model
3. Observability of results
4. Relevance to concern of potential adopters
5. Relative advantage over existing practice
6. Simplicity or ease of adoption
7. Model testable and adaptable
8. Affordability or cost-effectiveness
9. Acceptability
10. Aligned and harmonised with existing government health system or programme
11. Other considerations: Monitoring and evaluation

### **Overview of approaches to assessing scalability**

The following resources were considered useful for the present scalability assessment:

- MSI – Management Framework and Toolkit
- WHO / ExpndNet
- Nesta
- NSW
- Save the Children
- Hartmann and Linn's (2008) Scaling Up Aid

Most of these approaches are underpinned by the 'CORRECT' model (Glaser, Abelson, & Garrison, 1983):

- Credibility – Stemming from the soundness of evidence for an innovation's value or from its espousal from highly respected persons or institutions
- Observability – the opportunity for potential users to see a demonstration of the innovation or its results in operational practice
- Relevance – to coping with a persistent or bothersome problem of concern to many or to influential people
- Relative advantage – cost-benefit or other advantages over existing practice; the conviction that improvement will more than off-set additional effort which may be required to adopt or adapt the change

- Ease in understanding and installation – as contrasted with difficulty with putting into operation or transplanting from another setting
- Compatibility – with potential users values, norms, procedures, and facilities.
- Trialability, divisibility, reversibility – which permits a pilot try-out one step at a time and does not call for an irreversible commitment.

### **Save the Children Foundation – Scalability and Planning Toolkit**

The Save the Children Foundation have developed a Scalability and Planning (SAP) Toolkit. The SAP Toolkit includes resources to guide Scaling and Assessment Planning with corrective actions to strengthen or enable scaling up. The Toolkit is designed for a facilitator in a 1.5-day workshop. Certain components of the toolkit can be completed as a desk review, provided the relevant and appropriate documentation is available.

The SAP Toolkit includes seven components:

1. Pre-discussion ‘Go / No Go’ Checklist for Programme Managers / Technical Advisors (poses questions on what is to be scaled, the evidence behind the intervention, the argument for scaling up, and the entity or entities to scale the intervention)
2. An overview of scalability (offers content for a workshop input on scalability)
3. Workshop Agenda and guidance on workshop length, facilitators and participants
4. Worksheet to identify the most appropriate types and pathways to scale up the initiative
5. A ‘Deal Breaker’ worksheet to confirm if the minimum context is assured.
6. Worksheets to map internal and external factors and score the Enabling Environment
7. Workshop Reporting Template

The SAP Toolkit’s worksheets can be amended to can add criteria specific to the initiative of interest and/or modify questions for certain initiatives should specific scalability lessons be identified in a particular area. The workshops are designed to be facilitated by an internal (preferably) programme officer who does not need to be a subject matter expert. The SAP toolkit is designed to be used with multiple stakeholders to discuss the issues from different perspectives. The workshop format allows for people to gain ownership of the initiative, as well as an opportunity to explore the key issues of scaling up and scalability in depth.

### **NSW guide**

The NSW scalability guide describes a 4-step process for scaling up interventions, from completing a scalability assessment to assess the suitability of the intervention or interventions for scaling up. Through to describing some of the main tasks that should be addressed during scaling up. The guide does not specify who should undertake these steps, or prescribe a methodology for how these steps should be undertaken. The guide does note that the acceptability of an intervention to stakeholders may be determined through conducting a preliminary or informal consultation process with key stakeholders likely to be involved in scaling up the intervention. It assumes a project team, made up of those embarking on or those already involved in scaling up interventions. It is designed to be used by health practitioners, policy makers, and others with responsibility for scaling up evidence-based population health interventions. It has been written primarily for use within the public sector in high resource environments but could also be used by non-government organisations tasked with such processes. The guide is also identified as being useful to researchers in helping to present intervention research findings, in a manner amenable to health practitioners and policy makers to assess the scalability of an intervention.

The NSW Scalability Assessment (Step 1 of the 4 Step process) involves the addressing the following four areas:

#### ***Assess effectiveness***

- Is the intervention effective and how strong is the evidence?
- What is the effect size of the original intervention?
- Is the effect size of the intervention likely to be of policy significance?

- Are the benefits of the intervention likely to outweigh the costs?
- Can the same dosage, fidelity and effect of the original intervention be maintained in the real world within acceptable costs?
- How adaptable is the intervention?
- Is it likely that the key elements of the original intervention necessary to maintain effectiveness can be retained when it is scaled up?
- Is the intervention likely to have differential effectiveness across target groups and/or socio-economic status?
- Is the intervention likely to have unintended consequences or adverse outcomes?

#### *Assess potential reach and adoption*

- What is the likely reach of the intervention per eligible population when scaled up?
- What is the likely adoption rate by intermediary settings and organisations?
- Is the likely reach and adoption of the intervention extensive enough to have a population impact?
- Is the intervention likely to have differential rates of reach and adoption?

#### *Assess alignment with the strategic context*

- Is the intervention consistent with national, state or regional policy directions?
- Will the intervention address an identified need of funding agencies?
- Is the context within which the original intervention was implemented comparable to that of the new environment or setting in which the intervention will be scaled up?
- How well will the intervention align with the broader strategic context within which it will be scaled up?
- Is the intervention compatible with similar interventions in the same setting?
- Is the intervention superior to current practice?

#### *Assess acceptability and feasibility*

- What organisational, technical, human and financial resources were required to deliver the original effective intervention?
- How ready is the current system to accommodate these requirements at scale?
- Is the intervention likely to be acceptable to target groups and other stakeholders when scaled up?
- Are the potential costs of the intervention at scale likely to fit within the budget that may be available?

### **The MSI Scaling Up Toolkit**

The MSI Scaling Up Toolkit described scaling up over a three-step process; developing a scaling up plan, establishing the pre-conditions for scaling up, and managing the scaling up process. The Scalability Assessment sits under the first step, developing a scaling up plan. The toolkit is intended for use by Field managers working in development implementing agencies (government or non); Staff and managers at funding agencies (governments, international donors, and private foundations) interested in scaling up their programs or integrating scaling up into the design of new programs; Academics in professional fields like public health, public policy, social welfare, international affairs, and international development; Monitoring and evaluation practitioners interested in integrating scaling up into the design and implementation of their monitoring and evaluation work or in managing the quality of the scaling up process.

The toolkit contains 3 tools to help to articulate the model to be scaled, a tool to describe the originating organisation, information on standards of evidence, two brief tools to help to chart the pathway to scale, role of key actors, and likelihood of success. Step 1 concludes with the Scalability Assessment Tool, on which users rate 28 questions across 7 domains. Rating is done on a 3-point scale, a positive response, a neutral response and a negative response (anchored with 'smiley faces', and 'sad faces', with 'smiley faces' indicating easier to scale and 'sad faces' indicating more difficult to

scale. The primary purpose of the assessment is not to give a yes or no regarding scaling up but to provide a “very rough” indication of the scalability of a model and a basis for anticipating the most likely challenges that will be faced. The 7 domains are as follows:

1. Credible, based on sound evidence or espoused by respected persons or institutions;
2. Observable to ensure that potential users can see the results in practice;
3. Relevant for addressing persistent or sharply felt problems;
4. Have a relative advantage over existing practices;
5. Easy to transfer and adopt;
6. Compatible with the existing users’ established values, norms, and facilities; and
7. Able to be tested or tried without committing the potential user to complete adoption when results have not yet been seen

Using the scalability tool requires:

- An understanding of the model itself and the context in which it has been effective
- An understanding of any evidence of efficacy, efficiency, or both
- A basic understanding of the potential adopting institutions and infrastructures in place, and their capacities and capabilities
- An understanding of relevant policy, budget, and resource issues in that sector

The toolkit does not specify *who* should complete the Scalability Assessment Tool, however it does highlight that the salience of a response will vary depending on who has given the response and in what context, for example in the case of an intended expansion (versus other types of scale up), the response to whether the model addresses an issue of high policy priority, the priority would be that of concern to senior decision makers in the piloting organization, most likely the Executive Director or a board of directors. In the case of replication, the priority would be that of key decision makers in the adopting organizations; and in the case of collaboration, it would be key decision makers in each of the collaborating organizations.

The toolkit and management framework encourage consideration of the following questions:

- Do relevant stakeholders, potential partners, and intended beneficiaries perceive a need for this kind of model?
- Has the model been documented, including the process component, and has its cost-effectiveness been objectively assessed?
- Does the evidence indicate that the model is more cost-effective than other approaches?
- Are there obvious economies or diseconomies of scale?
- How easily can institutional characteristics that were key to the outcomes achieved be replicated or enlarged?
- Is there anything special or unique about the social or political context, or general circumstances of the pilot project (e.g., cultural, ethnic, or religious values/characteristics; distribution of power; homogeneity; economic conditions) that would need to be present for the model to be replicated successfully?
- Does the adopting organization have the appropriate organizational and implementation capacity, or the means to develop that capacity?
- Does needed funding exist to replicate the model on a large scale?
- Are the central mission, organizational culture, and values of the proposed adopting organization sufficiently compatible with those necessary to adopt and implement the model successfully?

In developing the methodology for the present scalability assessment, a response to each of the key domains addressed in the above tools was sought. Using a mixed methods approach (workshops, data analysis, documentary analysis, literature reviews, surveys and phone interviews), each element was addressed and reviewed for what information it could provide on each of the elements. While sources of data may be able to offer an insight into several of the elements, the relevance/quality/weight of the insight varies according to the element in question, for example the service data analysis offers the most relevant insight into the credibility and effectiveness of the

SATS/CAMS intervention, while the surveys offer the most valuable insight into the perceived alignment with the strategic context.

Nesta's report In and Out of Sync identified that scalable social innovations tend to be ones that:

- Are relevant beyond their initial context.
- Are relatively simple.
- Are clearly better than the alternatives.
- Don't rely solely on the talents of specific individuals.

Nesta Pg. 18: "In order to frame a social innovation and define a model to scale up, you need to understand what's fundamental to achieving social impact and making the model work in practice."

- How will you frame your social innovation for scaling?
- What's fundamental to making the delivery model work?
- What evidence do you have that the innovation works? What's key to achieving social impact?
- Who'll pay for your social innovation? Who'll deliver it? Who'll use it? Who'll benefit from it?
- How does your innovation fit with what exists already? Does it support or challenge existing systems and structures?
- Do you have a viable business model, with a clear overview of cost structures and revenues?
- Are your systems and processes capable of operating at higher volume, or capable of expanding?

## Appendix 2 – Overview of the literature consulted, and the existing documentation reviewed

The CES team reviewed documents including existing research and other relevant material provided by Eoin Galavan of the North Dublin Mental Health Team with the aim of understanding the CAMS approach and how it is implemented under the SATS model.

This body of documentation included two service audits undertaken by assistant psychologists, a rationale for the statistical procedures used in the most recent service audit, three studies of different aspects of the SATS/CAMS delivery undertaken by Psychology doctoral students as part of their course work, an information leaflet on SATS, three articles providing commentary on the delivery of the SATS/CAMS approach authored by Dr Eoin Galavan and a proposal for training in the Collaborative Assessment and Management of Suicide (CAMS) for mental health staff.

Document Title	Type of document
North Dublin Adult Mental Health Suicide Assessment and Treatment Service (SATS) Yearly Report (2017)	Service Audit
CAMS Statistical Analysis – Rationale for statistical approach adopted	Details of analysis
Service responses to patient suicidality at referral and initial assessment: a retrospective audit of patient files in a community adult mental health setting	Service Audit
Training in the Collaborative Assessment and Management of Suicidality (CAMS) in a Community Mental Health Service: A mixed methodology analysis of feedback on training and implementation at follow-up.	Doctoral study on training in CAMS
A Review Suicidal Drivers in North Dublin Suicide and Assessment Service	Doctoral study on suicidal drivers
Assessment and Treatment of Suicidality: What Psychologists Need to Know	Journal article
The collaborative assessment and management of suicide (CAMS): a recovery-oriented approach to working with suicidal people	Journal article
Clients Perspectives of the Process of Change Following Successful Clinical Engagement with the Collaborative Assessment and Management of Suicidality (CAMS): A Grounded Theory	Doctoral study on service user perspectives
SATS Information Leaflet	Information Leaflet
Developing a Suicide Assessment and Treatment Service Based on the Collaborative Assessment and Management of Suicidality (CAMS)	Journal article
Proposal for training in the Collaborative Assessment and Management of Suicide (CAMS) for mental health staff	Proposal

The available documentation was rich and offered varied perspectives on the CAMS approach, representing the views of service users, clinicians and offering analyses of service data. The documentation was used to identify the core elements of the SATS/CAMS intervention, but the documentation was also drawn upon to inform later stages of the scalability assessment to answer the questions: Does it work? and Does it Fit?.

### Academic Literature on the CAMS approach

Academic literature on the CAMS approach was reviewed, including randomized controlled trials and correlational studies (described in the main body of the report), as well as papers on the development of the approach, theoretical underpinnings and other commentaries. In addition to the studies of CAMS drawn upon to understand the efficacy of the approach (described in the main body of the report), the following papers were reviewed to build an understanding of the key elements of the CAMS approach:

- Jobes, D. A., Nelson, K. N., Peterson, E. M., Pentiu, D., Downing, V., Francini, K., & Kiernan, A. (2004). Describing suicidality: An investigation of qualitative SSF responses. *Suicide and Life-Threatening Behavior*, 34, 99-112.

- Jobes, D. A. (2009). The CAMS approach to suicide risk: Philosophy and clinical procedures. *Suicidologi*, 14, 3-7.
- Conrad, A. K., Jacoby, A. M., Jobes, D. A., Lineberry, T. Jobes, D., Shea, C., Fritsche, K., Schmid, P., Ellenbecker, S., Grenell, J., & Arnold-Ewing, T. (2009). A psychometric investigation of the suicide status form with suicidal inpatients. *Suicide and Life-Threatening Behavior*, 39, 307-320.
- Ellis, T. E., Allen, J. G., Woodson, H., Frueh, B. C., & Jobes, D. A. (2010). Implementing an evidence-based approach to working with suicidal inpatients. *Bulletin of the Menninger Clinic*, 73, 339-354.
- Jobes, D. A. (2017). Clinical assessment and treatment of suicidal risk: A critique of contemporary care and CAMS as a possible remedy. *Practice Innovations*, 2(4), 207.
- Jobes, D. A., Gregorian, M. J., & Colborn, V. A. (2018). A stepped care approach to clinical suicide prevention. *Psychological services*, 15(3), 243.
- Dimeff, L. A., Jobes, D. A., Chalker, S. A., Piehl, B. M., Duvivier, L. L., Lok, B. C., ... & Koerner, K. (2018). A novel engagement of suicidality in the emergency department: Virtual Collaborative Assessment and Management of Suicidality. *General hospital psychiatry*.
- Huh, D., Jobes, D. A., Comtois, K. A., Kerbrat, A. H., Chalker, S. A., Gutierrez, P. M., & Jennings, K. W. (2018). The collaborative assessment and management of suicidality (CAMS) versus enhanced care as usual (E-CAU) with suicidal soldiers: Moderator analyses from a randomized controlled trial. *Military Psychology*, 30(6), 495-506.

The academic literature covered a range of issues relating to the development and implementation of CAMS approach, and the validity and reliability of the SSF tool that is central to CAMS. At this stage of the scalability assessment the literature was used to identify the core elements of the SATS/CAMS intervention, but the literature was also drawn upon to inform later stages of the scalability assessment.



## Appendix 3 – Report in the logic modelling workshop

### Introduction

On the 22<sup>nd</sup> May 2019, the CES project team (LAK and DB) facilitated a workshop with 5 individuals who were currently or previously involved in the delivery of (or supported the delivery of) the SATS/CAMS approach in North Dublin. The purpose of the workshop was to collaboratively develop a logic model articulating the SATS/CAMS approach.

Participants in the workshop included one participant with a management/support role and four clinical psychologists. Three of the clinical psychologists were currently delivering the CAMS intervention in North Dublin (one as part of an older persons team, and two working with the general population), and one who had previously delivered CAMS in North Dublin to the general population, but now worked with older persons in a different part of the country.

The logic model workshop was initially designed to last three hours, but given work commitments of some participants timings were revised, resulting in a duration of 2 hours 15 minutes.

The logic model workshop proceeded according the following broad outline:

1. Welcome, introductions and purpose (CES)
2. History of SATS/CAMS (Dr. Eoin Galavan)
3. Overview of scalability and the role of the logic model (CES)
4. Background to logic modelling (CES)
5. Developing the logic model for SATS/CAMS (Group Discussion)
  - a. Situation Analysis
  - b. Identifying Outcomes for clients, practitioners and the service/system
  - c. Identifying Inputs
  - d. Identifying Outputs
6. Overall Discussion

Each participant was offered a 'post-it' pad where they could note their ideas about each element of the logic model, in addition to these being addressed in a group discussion of each.

Following the workshop LAK and DB reviewed the notes and suggestions for each element of the logic model and synthesized them into the proposed logic model depicted in Figure 1. This logic model was circulated to the participants in the workshop for validation. A small number of edits were suggested in the feedback. The logic model was amended to incorporate the feedback, and the revised logic model is depicted in Figure 2.

This logic model addresses a fundamental aspect of the scalability.

A range of issues relating to the implementation of the SATS/CAMS approach were also discussed throughout the workshop, including reflections on:

- The advantages of CAMS over other approaches
- Challenges implementing CAMS
- Unintended consequences
- Reach
- Consistency of approach

Questions to consider:

- Does the logic model include all of the most important inputs, outputs, activities and outcomes?
- Are the outcomes clear and realistic?
- Do they represent meaningful changes?
- Are the connections between components logical?

## Findings:

A Logic model presents a picture of how an intervention is supposed to work. It explains why the intervention is an appropriate solution to the problem at hand. A logic model can be used for multiple purposes. It is particularly useful with regard to a scalability assessment as it can be used to:

- Describe an intervention to interested stakeholders, such as funders or potential funders.
- Make clear the underlying beliefs and assumptions of a program.
- Identify and build consensus on what inputs, activities and outputs are essential to achieve the desired outcomes.

Logic models can take a range of forms. Generally, logic models include the following elements in a graphic representation of the intervention:

- Situation Analysis
- Inputs
- Outputs/Activities
- Outcomes

At CES, we also include the evidence underpinning the intervention, and information on monitoring and evaluation. These elements of the SATS/CAMS intervention are covered in the 'Establishing the Evidence' sections of the report.

## Situation Analysis

A situation analysis communicates the relevance of the project to the problem or issue at hand. It offers a description of the problem, including details such as its causes, its symptoms, who is affected by the problem, and what motivates the need for change. It considers the climate (political and economic) in which change will take place, including alignment with national and local policies, priorities and values.

### SATS/CAMS Situation Analysis

**Patient:** Service users dealing with mental health problems are at increased risk of suicide. They may feel that suicidality is shameful, stigmatized, and that thoughts of suicide are abnormal and not legitimate. Yet they do not see another way to cope with their current situation. In Ireland, rates of suicide have been generally rising since the recession in 2008; with a decreasing trend over recent years. Suicidality is a frequent presenting difficulty amongst the mental health service user group.

**Practitioner:** Practitioners work in a risk averse context and working with suicidal patients can be stressful due to the risk of a negative outcome and the sense of personal responsibility that goes with it. Practitioners can feel that they do not have the skills, role or expertise to work with suicidal patients. There are a limited number of evidence-based approaches that directly address suicidality.

At the moment, anecdotally, if someone presents with suicidality to their GP or mental health services, they will be offered assessment and medication, and to a vastly lesser extent counselling/therapy. There are very few interventions used by practitioners, including those providing therapy, (apart from CAMS) that will actually directly assess AND intervene with the suicidality that the person is experiencing.

**Health System:** The North Dublin SATS/CAMS approach was first implemented by Psychologists in 2013, (following piloting of the CAMS model by three Psychologists in 2011-2012), the same year that the Haddington Road Agreement came into effect. The Public Service Stability Agreement – 2013-2016 (Haddington Road Agreement) set out a range of measures on productivity, cost extraction and reform. These measures included an increase in working hours of 2 Hours 15 minutes (employees at Grade VII and equivalent or below who had been working less than 35 hours per week, increased their hours by 2 hours 15 minutes per week, those with a working week greater than 35 hours but less than 39 hours increased to a 39-hour week). Concomitant with these increases was a greater focus on accountability and scrutiny over how these additional hours were being used. The North Dublin Psychology Department used this as an opportunity to allocate these 'extra hours' to use the CAMS

intervention with service users presenting as suicidal. This achieved a dual purpose, it enabled the service to clearly show how the additional working hours were being used, and it allowed time to be specifically ear marked to prevent (or reduce the incidence of) suicidal patients being wait-listed. Prior to this, the wait listing of suicidal persons caused considerable stress and was contrary to meeting service users needs.

The health service culture is perceived as being largely risk averse, and there can be a tendency to medicate or to hospitalise suicidal patients as a response to suicidality, which is often not optimal. There are limited suicide-specific interventions available in general and within the local services. The primary approach used in Ireland, Dialectical Behaviour Therapy (DBT), is resource-intensive and has a high-threshold for entry. As such it is most suitable for a small cohort of suicidal service users. In general across services, interactions with service users are largely exclusively assessment or risk focused. At the same time, HSE policies and plans are encouraging a focus on client engagement, reduction of suicide rates and identification of effective interventions, including the National Service Plan 2019 and Connecting for Life, Ireland's 2015- 2020 national government strategy to reduce deaths by suicide.

CAMS is the model being used, and can be used widely by all MH professionals. SATS is the service structure, currently delivered by the Psychology department. It is hoped this will further widen out to become a MDT service structure over time.

### **Inputs**

Inputs include the resources invested in an intervention or brought to bear on an intervention, including human resources, financial inputs, facilities, skills and expertise. Assessing the scalability of an intervention is facilitated when essential inputs are adequately described.

### **SATS/CAMS Inputs**

The following inputs were noted as being essential for the SATS/ CAMS approach as it operates in North Dublin:

- Champion(s) for the approach
- Time ring-fenced to work with suicidal patients
- Referrers (e.g. GPs, Psychiatrists, Emergency Department)
- CAMS Training (offered twice a year). This training is attended by the wider MDT mental health staff across North Dublin. SATS clinicians typically attend 1-2 training events in total, with most finding 1 training day sufficient, and are further supported by telephone consultation with experienced CAMS practitioners, supervision and line management. The twice yearly (approx.) training serves the broader goal of encouraging the wider North Dublin Adult Mental Health service to adopt CAMS and/or a SATS like structure for general use across the MH service. It also allows new staff to learn about the model, and encourages referral activity in teams, while maintaining awareness of the model and its utility. It is hoped that all staff will develop the confidence and competence to use the CAMS model over time.
- CAMS resources (e.g. CAMS manual and Suicide Status Form templates – Initial session, interim session, final session)
- Management support-Managers from all disciplines have encouraged attendance at CAMS training events and supported through line management the use of the model. This allows the broader context of MH staff outside SATS clinicians to begin developing awareness of and use of the model.
- Management buy-in. Managers from all disciplines have attended training events allowing them a firm grasp of the CAMS model and how it operates, which further encourages referral activity and team support of the SATS service structure.
- Supervision (not essential, but clinical, line management)
- Proven track record
- Team meetings to allocate cases. Referrals are made verbally at weekly MDT meetings. This is to avoid suicidal people being waitlisted (an initial goal of the introduction of the SATS). This requires awareness and cooperation on the CMHT to allow the SATS function. When

SATS clinicians are at capacity for their caseloads, other team members can utilise the CAMS model, and some teams have become to systematise this approach with several team members outside of the SATS clinicians utilising the CAMS model.

- Premises (to deliver sessions). A comfortable, quiet side by side seating arrangement in bookable clinical rooms is beneficial in supporting this work
- IT (data entry and analysis)

Clinical supervision was not necessarily seen as essential to delivering the approach. Not everyone had suicide specific supervision, but its value in ensuring high quality work was highlighted. It was noted that all the Psychologists using the CAMS had this via Eoin Galavan or access to Eoin Galavan.

It was also noted that administrative support, suicide-specific supervision, and technological solutions for data capture would facilitate the process but were usually not available (and therefore have not been essential to the implementation of the SATS/CAMS approach to date). In general, management buy-in and appreciation of the demands on staff were identified as being crucial. Practitioners themselves also have to buy-in to the approach in order to be willing to deliver it. Additionally, the good track record of the CAMS approach over time, coupled with its evidence base for effectiveness, has resulted in increased referrals, and the confidence of referrers when making referrals. Training is currently offered twice a year, and clinicians trained in the approach tend to attend the training once, followed by consultation with experienced SATS practitioners and supervision. Occasionally SATS practitioners will attend a second training however they tend to use the model on a daily basis and rely on consultation as a means of maintaining the skill set. Ongoing availability of refresher training and consultation were identified as very useful. It was also noted that online training is available for purchase. This would be beyond the scope of most individual practitioners but could be purchased by the service. With the support of Assistant Psychologists, the SATS/CAMS approach is regularly audited; this provides good information of the effectiveness of the approach. However, the availability of support to complete these audits is not guaranteed, and as recent changes in the status of AP posts means this resource is unlikely to be available again in the future. As such this represents a current deficit in maintaining the service structure.

### **Outputs/Activities**

Outputs and activities are the things that are produced by combining the inputs (products, goods, materials, resources and services) and the people reached (service users, staff).

### **SATS/CAMS Outputs**

The following outputs were identified for the SATS/CAMS approach in North Dublin:

- Awareness raising with referrers
- Referrals over time increase with awareness and familiarity with the model. Sometimes referral behaviour is slow to change, given the subject area, this is understandable.
- Staff trained in the CAMS approach
- CAMS sessions with suicidal patients (approx. 6 to 8 sessions)
- Completed SSFs provide:
  - Collaborative assessment of suicidal risk
  - Collaborative treatment plan
  - Documented clinical tracking of suicidality
  - Documented resolution of suicidality
- Referrals to other relevant services (if required, once suicidality is resolved)

It was suggested that the skills offered in the CAMS training also supported the practitioners' general practice and were transferrable to working with suicidal service users outside of the CAMS model. Referrals to the service depend on awareness of referrers, and on their confidence referring to the service. Overtime, the approach has built up a good track record in North Dublin and this has been associated with increased referrals to the service over time. An issue with Psychiatry was noted in

terms of a need for reassurance that CAMS assessment and intervention followed on from an initial suicide assessment.

## **Outcomes**

Outcomes answer the question “What happened as a result of the program?” and are useful to communicate the impacts of investment in an intervention. Outcomes can be short-term, intermediate-term, or long-term (sometimes also referred to as impact).

### **Service User Outcomes:**

- Reductions in self-rated risk of suicide, pain, stress, agitation, hopelessness and self-hate
- Reduction in suicidality as a coping mechanism
- Increased problem-solving skills as an alternative to suicidal behaviour (which usually exists to solve a problem)
- Increased desire to live
- Increased adaptive coping skills
- Reduced feelings of stigmatisation
- Increased validation of feelings
- Increased legitimisation of feelings
- Increased likelihood that other issues can be identified and addressed
- Increased likelihood that client will seek help in the future if needed
- Reduced likelihood that client will be suicidal in the future.
- Increased self-efficacy and empowerment
- Reduced Stress

### **Practice/Staff Outcomes**

- Increased confidence in working with suicidal service users
- Increased knowledge of how to work with suicidal service users
- Increased competence in working with suicidal service users
- Increased data on suicidal service users
- Increased demonstrability of quality of care provided
- Increased ability to manage caseloads / prioritise case work with suicidal service users
- Increased ability to communicate practice to other stakeholders
- Increased willingness to work with suicidal patients
- Increased visibility or ‘sense of visibility’ of working with suicidal people can lead to an increased sense of responsibility and stress. This is coupled with a deeper sense of responsibility when a suicide specific pathway is established.

### **Service Outcomes**

- Improved access to effective therapeutic interventions, by accurately identifying suicidal service users’ needs Improved care pathways for suicidal service users, and in particular more reliable access to psychological care for suicidal service users
- Reduction in suicidal service users on waitlists
- Perceived decreased reliance on medication as a response to suicidal
- Perceived decreased hospitalisation of suicidal service users
- Increased awareness of the CAMS approach
- Increased referrals to other appropriate services
- Increased interdisciplinary working

It was noted that some potentially unwanted outcomes could result from the SATS/CAMS approach. For example, once practitioners are identified as being willing and able to work with suicidal service users, they may be referred a disproportionate number of such cases. If practitioners cannot manage their caseloads (or do not get adequate support to do this) they risk burn out. Theoretically the allocation of two hours to this work should assist in case load management, and the recommended

case load for SATS practitioners is 1-2 cases ongoing at any given time. With cases typically resolving within two months, and with approximately 10 SATS practitioners active at any given time, this results in a total SATS service capacity of 40-80 CAMS slots available via SATS/year.

Also, once suicidality is resolved the service user may be referred to or returned to the pre-existing psychology wait list to further address longer standing psychological or other mental health needs. While the SATS structure removes suicidal service users from waitlists, it puts further demand on those wait lists after the SATS intervention as it creates a new referral pathway to psychological care. As people are met via SATS their needs for psychological care which might otherwise have not been identified, are picked up. In principal this is of course to be welcomed as we identify more individual's needs for psychological care, however there are also very limited resources within each CMHT to deliver this care and as such a finite resource is facilitated in one way (responsive access to care for suicidal people) and strained further in another way (increased identification of need for psychological care).

A difficulty measuring outcomes was noted: Are they *clinically* significant? For example how to measure 'increased self-efficacy and empowerment'?

## Appendix 4 – Quantitative data analysis

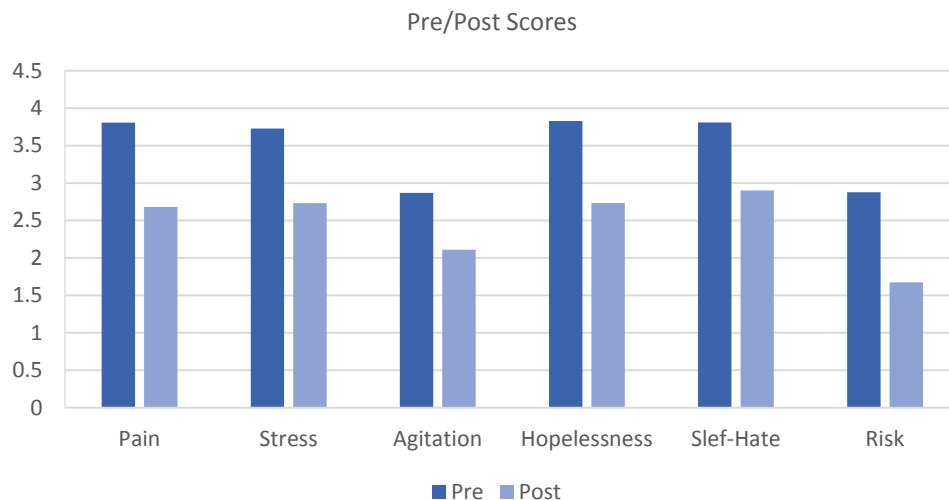
These findings are based on the data available for 182 service users who received CAMS treatment between 2012 and 2019. Both pre- and post-intervention data were available for between 136 and 138 of service users for each of the 5 elements of the SSF, indicating notable missing data. Information on Gender was available for 113 of the participants.

Year of Treatment	N	% of total
2012	11	6.0
2013	22	12.1
2014	32	17.6
2015	30	16.5
2016	40	22.0
2017	8	4.4
2018	32	17.6
2019	5	2.7
Unknown	2	1.1
<b>Total</b>	<b>182</b>	<b>100.0</b>

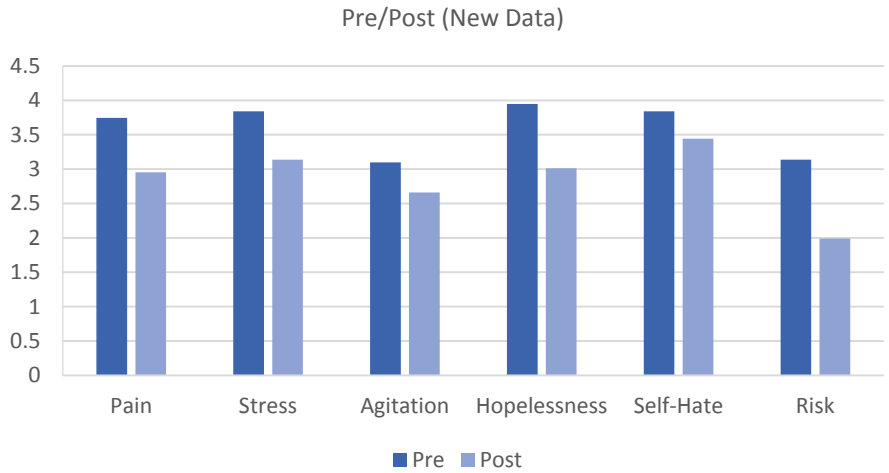
Gender	N
Female	54
Male	79
Missing	49
<b>Total</b>	<b>182</b>

The graph below illustrates the differences between pre and post scores on the elements of the SSF. Only participants for whom there were both pre and post data are included in this table.



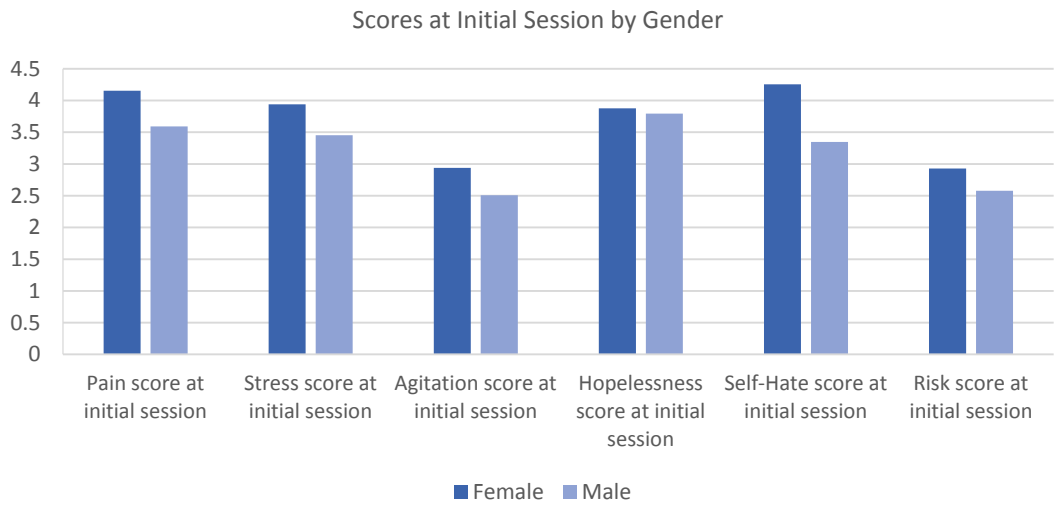
Self-rated risk from service users were split into three groups, ratings of 4-5 (high risk), rating of 3 (moderate risk), and ratings of 1-2 (low risk), at the beginning of and end of the CAMS intervention. At initial assessment 48(30.4%) clients fell within the high-risk group, compared to 51 (32.3%) clients in the moderate risk group and 59 (37.3%) clients in the low-risk group. Outcome session analysis identified only 11 clients (8.1%) were still rated within the high-risk category, while 81% (111) were in the low category, and 10.3% (14) were in the moderate category.

When the 'New Data' only were analysed, similar trends were noted. Paired-Samples T-Tests and Wilcoxon Signed Ranks analyses suggest that there was a significant effect on all SSF scales (with differences in the desired direction). These analyses also suggested strong effect sizes. The Wilcoxon Signed Ranks test is the more correct test to use in this instance because the outcome measures are 1-item Likert scales, but people might typically expect to see t-tests reported.

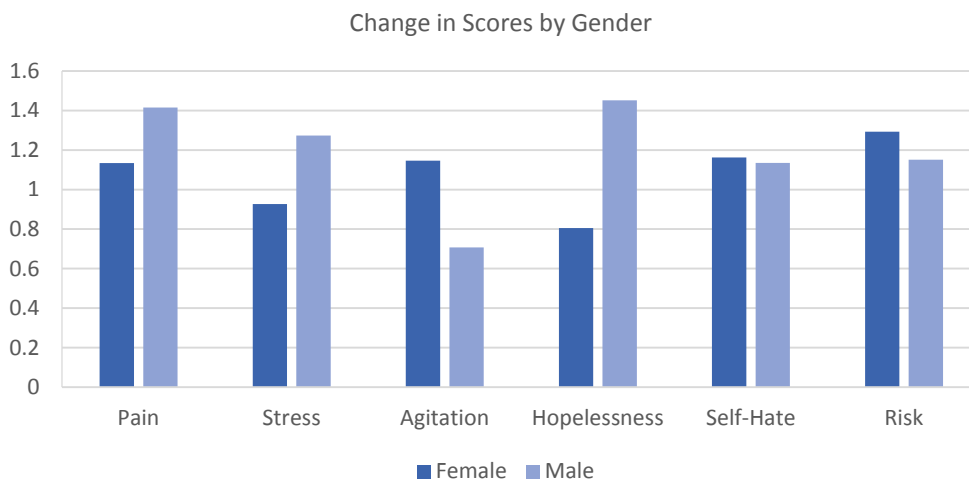
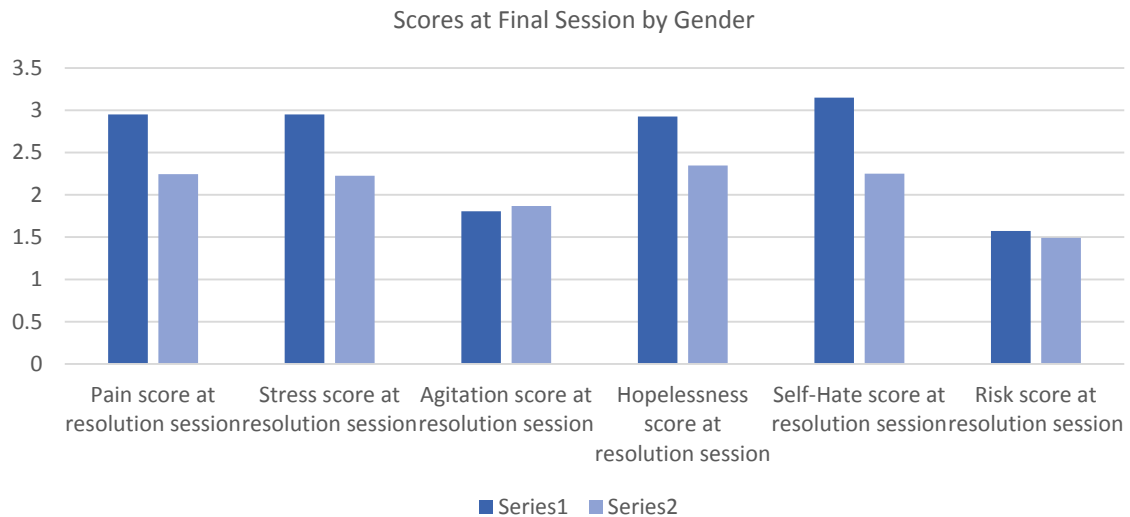


Gender differences were analysed in cases where data was available (N=113). At both pre and post test, females mean scores on all markers of suicide were higher than mean scores for males.

Independent Samples T-Tests suggest that differences were significant for Pain, Stress and Self-Hate at pre-test, and significant for Pain, Stress, Hopelessness and Self-Hate at post-test. However, Independent Samples T-Tests suggest that there were no statistically significant differences between males and females in terms of their changes in scores on suicidal markers or risk, there was a trend indicating that CAMS had a greater effect on reducing agitation among women compared to men, and on reducing hopelessness among men compared to women.







Gender differences (for 'old data'/archived data only): Independent samples t-tests were used to explore gender differences, and suggest that there were significant differences between females and males in terms of their levels of Pain, Stress and Self Hate at the initial CAMS session (with females scoring higher on each of these SSF scales), and significant differences between males and females in terms of their Pain, Stress, Hopelessness and Self-Hate at the final session (with females scoring higher on each scale). Independent samples t-tests suggest that there are no significant differences between males and females in terms of the magnitude of reduction on each of the scales of the SSF (suggesting the CAMS approach is effective for both men and women).

Parametric and Nonparametric correlations suggest that the number of CAMS sessions has an effect on the reduction in some of the SSF scales, with more sessions being associated in greater reductions in: Pain, Stress and Risk (parametric), and Pain, Stress, Hopelessness and Risk (nonparametric). Parametric and Nonparametric correlations suggest that the number of days between the first and last CAMS sessions has an effect on pain and stress (parametric), and all subscales according to nonparametric analyses.

## Appendix 5 – Overview of the survey methodology and findings.

The survey was circulated to 130 mental health staff across North Dublin. Twenty-seven responses were received, representing a response rate of approximately 21%. Although not a large response rate, it is typical for a survey of this sort.

Of the 27 respondents to the survey, 29.63% were psychologists, 33.33% were nurses, 25.93% were occupational therapists, and 11.11% were social workers. No psychiatrists responded to the survey, and no respondents used the 'other' option.

Responses were received from all areas the survey was circulated to barring the Ashlin Care Centre Sheehan. Responses were received from Kilbarrack East, Kilbarrack West, Coolock/Darndale, Killester, Swords, Balbriggan, Rehabilitation Services, Mental Health Services for Older Persons, Mental Health Services for Intellectual Disability, Ashlin Centre Joyce, management and 'other'.

81% reported that there was a psychologist on their CMH team.

75% indicated that someone on their CMHT is using the CAMS approach (while 11% did not know whether anyone is or not).

63% of respondents indicated that they were aware of the SATS. 44% of respondents indicated that their community mental health team allocates dedicated time to use the CAMS approach, while 15% did not know.

86% of respondents reported having attended a workshop delivered locally introducing the CAMS, or other specific training in the CAMS model. 67% of respondents reported having delivered CAMS with service users.

Reasons for not having delivered the CAMS approach included:

- I have not received the training or been told to use this approach
- Time restraints
- I have never heard of it. I do not work on a CMHT.
- Time! I have many duties and I don't think I have the time to take on the CAMS . if i was to be freed up from other duties then yes i would
- There were experienced members on my team available to deliver CAMS when required by a service user
- I have not been trained
- I have yet to get a referral that would be appropriate for CAMS
- My role is not clinical
- As manager I am not clinically involved at that level with patients. Staff under my remit have delivered the CAMS approach

Respondents were involved in the delivery of CAMS in a range of capacities, with almost 60% delivering it or having delivered it in the past with service users, 11% support people who deliver or have delivered CAMS/SATS in a management capacity, and 33% had referred service users to CAMS.

52% of respondents had been involved in the delivery of CAMS for between 1 and 3 years, 30% had not been involved in the delivery of CAMS, 11% had been involved for less than 1 year, and 7% for five years or more.

19 Respondents answered more in-depth questions on the CAMS approach.

	<b>STRONGLY AGREE</b>	<b>AGREE</b>	<b>NEITHER AGREE NOR DISAGREE</b>	<b>DISAGREE</b>	<b>STRONGLY DISAGREE</b>	<b>TOTAL</b>	<b>WEIGHTED AVERAGE</b>
The CAMS approach is associated with positive outcomes for suicidal service users	42.11% 8	57.89% 11	0.00% 0	0.00% 0	0.00% 0	19	1.58
The CAMS approach has advantages over other interventions for suicidal service users	42.11% 8	47.37% 9	10.53% 2	0.00% 0	0.00% 0	19	1.68
The CAMS approach is an effective way to work with suicidal service users	52.63% 10	36.84% 7	10.53% 2	0.00% 0	0.00% 0	19	1.58
The CAMS approach has a positive impact on professionals relationships with service users	26.32% 5	42.11% 8	31.58% 6	0.00% 0	0.00% 0	19	2.05
The CAMS approach meets an important need in the area where I work	47.37% 9	31.58% 6	15.79% 3	5.26% 1	0.00% 0	19	1.79
The CAMS approach meets an important national need	47.37% 9	47.37% 9	5.26% 1	0.00% 0	0.00% 0	19	1.58
The CAMS approach is simple and relatively easy to implement	31.58% 6	47.37% 9	21.05% 4	0.00% 0	0.00% 0	19	1.89
The CAMS approach fits well in my Community Mental Health Team	26.32% 5	36.84% 7	31.58% 6	5.26% 1	0.00% 0	19	2.16
The CAMS approach would be a good fit for all Community Mental Health Teams in the country	36.84% 7	42.11% 8	21.05% 4	0.00% 0	0.00% 0	19	1.84
The CAMS approach fits well in the Irish mental health system	47.37% 9	42.11% 8	10.53% 2	0.00% 0	0.00% 0	19	1.63

9 Respondents answered more in-depth questions on the SATS structure.

	<b>STRONGLY AGREE</b>	<b>AGREE</b>	<b>NEITHER AGREE NOR DISAGREE</b>	<b>DISAGREE</b>	<b>STRONGLY DISAGREE</b>	<b>TOTAL</b>	<b>WEIGHTED AVERAGE</b>
The SATS structure increases the workload of psychologists and those working with suicidal service users on my Community Mental Health Team	0.00% 0	22.22% 2	22.22% 2	55.56% 5	0.00% 0	9	3.33
The SATS structure has a positive impact on suicidal service users	33.33% 3	55.56% 5	11.11% 1	0.00% 0	0.00% 0	9	1.78
The SATS structure has a positive impact on Community Mental Health Team members who work with suicidal service users	11.11% 1	66.67% 6	22.22% 2	0.00% 0	0.00% 0	9	2.11
The SATS structure is resource intensive	0.00% 0	11.11% 1	55.56% 5	33.33% 3	0.00% 0	9	3.22
The SATS structure receives support from leadership in my community mental health team	11.11% 1	44.44% 4	33.33% 3	11.11% 1	0.00% 0	9	2.44
The SATS structure would be easy for other Community Mental Health Teams to replicate	0.00% 0	55.56% 5	44.44% 4	0.00% 0	0.00% 0	9	2.44
The SATS structure is an effective way to ensure that suicidal service users are not placed on a wait list	33.33% 3	55.56% 5	0.00% 0	11.11% 1	0.00% 0	9	1.89
The SATS structure is an effective way to ensure that suicidal service users receive effective treatment	22.22% 2	66.67% 6	11.11% 1	0.00% 0	0.00% 0	9	1.89

## Appendix 6 – Effect sizes in published studies of CAMS

### What is effectiveness?

The primary pre-requisite for scaling up a mental health intervention is that it is effective; that is, the intervention achieves the intended outcomes.

The 'gold standard' evidence of effectiveness is typically considered to come from randomised controlled research trials (RCTs). In a randomised controlled trial individuals are randomly assigned to receive the intervention under study or not (they may receive usual care, enhanced usual care, or an intervention without the key elements of the intervention under study); the individuals should be comparable in every way barring their receiving (or not) of the intervention. Differences in outcomes are then attributed to whether the individuals received the intervention or not. Increasingly, it is acknowledged that evidence of effectiveness for interventions can be derived from a broader range of research designs and methodologies (NSW).

Studies evaluating interventions can be placed on a continuum, with a progression from 'efficacy trials' to 'effectiveness trials'; with efficacy being defined as the performance of an intervention under ideal and controlled circumstances, and effectiveness relating to its performance under 'real-world' conditions.

Evidence of the efficacy and effectiveness of the CAMS approach comes in the form of a number of peer reviewed clinical treatment studies conducted in the US and Europe across a range of settings including at least eight correlational trials and three randomized controlled trials (with further randomised controlled trials underway).

### What is an effect size and what is an acceptable effect size?

The Task Force on Statistical Inference of the American Psychological Association and the fifth edition of the American Psychological Association (2001) *Publication Manual* both stress the importance of including an estimate of effect size in reported research findings in order that readers can fully understand the importance and implications of reported findings (Durlack, 2009).

Effect sizes usually give information about the magnitude and direction of the difference between two groups or the relationship between two variables – in this case the effect size would tell us how big is the difference between a group of service users who received the CAMS intervention and a group of service users who did not, and whether it was a positive difference or not. This is important information that cannot be obtained by focusing only on significance levels, for example on a particular *p*-value such as .05 (Thompson, 2006; Volker, 2006). The relationship between a *p*-value and the effect size is not straightforward, a small *p*-value can relate to a low, medium, or high effect size. An effect size can be expressed as a difference between means, a percentage, or a correlation (Vacha-Hasse & Thompson, 2004).

The NSW guide indicates that it is important to consider whether the effect size of the original intervention is known and whether this is likely to be of policy significance. This is seen as being key to determining the likely benefits of scaling up the intervention for the intended beneficiaries (in terms of the likely outcomes achieved) and for the funder (in terms of the potential for reduced costs or greater efficiency). The NSW guide notes that the effectiveness of interventions may attenuate as they are scaled up, and so relatively large effect sizes should be demonstrated in the efficacy stage, if an acceptable level of effect is to be expected to be maintained when interventions are scaled up. Presumed reductions in effect sizes are thought to occur for several reasons, including the difficulties in maintaining the dose and fidelity of the original intervention in real world settings, the selected nature of participants or communities or settings involved in research studies, and the adaptation of interventions to local contexts.

Effect sizes were not always reported in published studies of CAMs, effect sizes of studies where effect sizes were reported or easily calculated from the reported findings are discussed here.

## Effect sizes in RCTs of CAMS

Not all studies clearly reported effect sizes. Findings from those that did are included here. Reported effect sizes are generally strong or medium.

In Jobes et al's (2017) RCT with U.S. Army infantry soldiers, large effect sizes were observed on a range of outcome measures:

- At 3 months 37% of participants in the CAMS condition had any SI compared with 61% of participants in the E-CAU condition (Cohen's  $d=0.93$ ,  $p=0.028$ )
- Compared to baseline at one, three, six and 12 months there were statistically significant improvements ( $p < 0.05$ ) with strong effect sizes (Cohen's  $d$  over 0.8) for measures of:
  - any suicide related Emergency Department admissions
  - any behavioural health-related Emergency Department admissions
  - Suicide related IPU days
  - Behavioural-related IPU days
  - Mental Health
  - Psychiatric distress
  - Resiliency

Compared to baseline there was a medium effect on past-year suicide attempts ( $d = 0.63$ ,  $p = 0.066$ ).

It should be noted that enhanced care as usual also showed significant differences with strong effects on all these variables (excluding resiliency at 1 month, which did not have a statistically significant difference to baseline).

Ryberg et al (2019) noted large effect sizes on differences between baseline and six-month follow-up, and between baseline and 12-month follow-up on differences on pre and post measures of suicidal ideation and general mental health distress (suicidal ideation baseline to six months  $p<0.001$ ,  $d = 4.14$ ; Baseline to 12 months –  $p<0.001$ ,  $d = 4.26$ ; general mental health distress Baseline to 6 months –  $p<0.001$ ,  $d = 1.32$ ; Baseline to 12 months  $p<0.001$ ,  $d = 1.46$ ). Differences between baseline and follow-up were also large and significant for TAU, but were significantly larger for suicidal ideation and general mental health distress for CAMS participants at 6 months, and for general mental health distress for CAMS participants at 12 month follow-up.

## Effect sizes from non-randomised controlled studies of CAMS

Large and medium effect sizes have been found on a range of outcome measures in studies adopting correlational designs and studies using a comparison group:

Ellis et al, (2015) found that, compared to baseline, CAMs had large effects for measures of:

- Suicidal Ideation ( $d = 1.72$ )
- Hopelessness ( $d = 1.80$ )
- Suicide Cognitions ( $d = 1.90$ )
- Depression ( $d = 2.44$ )

Treatment as usual also had large effects for these outcomes, with the exception of suicidal ideation, and the effect sizes for CAMs were larger on all fronts.

ANOVA findings suggested that with regard to:

- suicidal ideation CAMS patients showed greater improvement at a faster rate (eta squared 0.12, medium verging on strong).
- Suicide cognitions, CAMS patients showed significantly more improvement with regard to suicidal cognitions compared to TAU (eta squared = 0.08 – medium effect size)

A large main effect for time on hopelessness was noted, but this was not significantly different to treatment as usual (0.58). A large main effect for time on the Patient Health Questionnaire-9 was also noted, but again this was not significantly different to treatment as usual (0.71).

Jobes et al (2005) did not report Cohen's d so it was calculated for the purposes of this report. The study found medium effect sizes for the following outcome measures

- Resolution of suicidality: (d = 0.69898) CAMS patients resolved their suicidality in significantly fewer sessions than TAU
- Medical appointments per year: (d = 0.704112) CAMS patients attended other medical appointments at a significantly lower rate than TAU patients
- ER visits – CAMS patients had fewer ER visits (d = 0.626391)
- ER Time (minutes) – CAMS patients spent less time in the ER (d = 0.536697)
- Med Apps. 0.446478
- Time in medical appointments (d = 0.618634)

Nielsen, Alberdi and Rosenbaum observed decreases in five suicidal markers with medium to large effect sizes (0.47 and 0.99): Psychological pain, Stress, Agitation, Hopelessness, Self-hate.

Ellis, et al (2012) found significant decreases in depression, hopelessness, suicidal ideation, suicidal cognition, and each of the suicide drivers from the SSF from the first to the last assessment time point, each with large effect sizes.

Scores on the WAI-S indicated that the therapeutic alliance was rated as strong from the start, increasing over time. The effect size of 0.44 indicates a small-to-moderate magnitude improvement in working alliance over the course of treatment.

Ellis et al 2017 reported large effect sizes for discharge on all measures, including suicidal ideation, suicidal cognition, hopelessness, acceptance and action and Patient Health depression subscale, suicide severity, wellbeing, and disability. Effect sizes reported in the CAMS condition were uniformly large (Cohen's d > 0.80; Cohen, 1988), ranging from 1.03 on the measure of suicidal ideation to 1.77 on the measure of suicidal severity. Effect sizes reported in the treatment as usual condition ranged from small (0.20 on the measure of hopelessness) to large (1.36 on the measure of suicidal severity).

## Appendix 7 – Overview of the suicide status form and how it is used in practice

The Suicide Status Form (SSF) serves as a multipurpose assessment, treatment planning, tracking and outcome tool that functions as a clinical ‘roadmap.’ It facilitates co-authoring of therapeutic goals, problems to address and length of time required.

### *CAMS First Session*

The first sessions of CAMS establish the suicide-specific and driver-oriented treatment within a collaborative dynamic. Each session begins with SSF-based assessment and ends with SSF-based treatment planning.

Assessment: During the first session, the patient and clinician complete the first version of the SSF together. It consists of both quantitative scales and qualitative prompts for the patient to write about their suicidal experience in their own words.

In Section A patients are asked to rate themselves on six key constructs: psychological pain, stress, agitation, hopelessness, self-hate, and overall behavioural risk of suicide. The patient is prompted to write in their own words qualitative responses for the first five constructs- for example “What I find most painful is: \_\_\_\_.” The initial five constructs are also ranked from most to least important. Taken together, the six initial rating variables make up the “SSF Core Assessment” which is revisited throughout the duration of CAMS-guided care. There are additional questions asking the patient to rate how much their suicidal thoughts are related to feelings about themselves versus others, and the listing (and ranking) of their respective reasons for living versus reasons for dying. Finally, the patient writes a response to the prompt: “The one thing that would help me no longer feel suicidal would be: \_\_\_\_.”

Section B gathers specific suicide risk factor and warning sign information related to their plan and access to means, their suicidal history, substance abuse, sleep troubles etc.

Treatment planning: CAMS treatment planning in the first session (Section C of SSF) focuses on the goal of keeping the patient out of the hospital if possible. There is an initial focus on self-harm potential which prompts the completion of the CAMS Stabilisation Plan (CSP) that helps ensure the patient’s ability to cope with current and future suicidal crises. The CSP is similar to safety planning and crisis response planning and is not a variation of ‘no-suicide’ or ‘no-harm’ contracting which lacks empirical support.

The CAMS treatment planning process identifies the two most pressing problem-drivers, from the patient’s perspective. The clinician proposes goals for effective treatment and possible interventions to effectively treat each driver-problem.

### *CAMS Interim Tracking Sessions*

Assessment: Every interim session begins with the completion of the SSF Core Assessment and ends with collaborative planning in which the CSP is improved as needed and to sharpen the focus of the patient’s suicidal problem-drivers. The patient’s self-identified reasons for suicidality may change in subtle or dramatic ways as new insights and information are revealed over the course of care. As their suicidal drivers evolve over time, their treatment evolves accordingly.

Treatment Planning: The emphasis of treatment during all interim sessions is focused on the two problem drivers; interventions can be whatever the clinician deems are appropriate to treat each driver (e.g. CBT, psychodynamic insight work, couples therapy etc.) The CAMS model does not dictate the use of a particular treatment but still offers several optional tools that may be used to help treat common suicidal drivers (e.g. self-hate, hopelessness, or perceived burdensomeness).



### *CAMS Outcome/Disposition Session*

CAMS optimally comes to a close when the criteria for resolution are met - three consecutive sessions of low suicidal risk and the successful management of suicide-related thoughts/feelings and behaviours. For all clinical outcomes within CAMS, an SSF Outcome/Disposition form is used which documents the full array of clinical outcomes- such as resolution, unilateral termination, dropout, hospitalisation, and so forth.

Because it is a 'therapeutic framework' rather than a type of psychotherapy; the clinician offering CAMS continues to deliver whatever therapy or intervention they would normally deliver, however in the context of a frame designed to address suicidality and elements of the individuals problems most related to suicidality. CAMS relies on the pre-existing skill sets and interventions of the mental health clinician. For mental health clinicians the level of new training required is much less than for example Dialectical Behaviour Therapy (DBT), Cognitive Behaviour Therapy for Suicide Prevention (CBT-SP) or Mentalisation Based Therapy (MBT). Once the manual is read and understood clinicians rely on their underlying skills base in a newly learned treatment frame. Clinicians from different disciplines can potentially utilise this single frame across different health settings providing a stable clinical frame that is evidenced based, suicide specific and contains a risk assessment, risk management and treatment plan that travels with the service user between clinical environments.

A key function of the CAMS model is to communicate and frame treatment around suicide specific issues. The CAMS approach facilitates clinicians to make treatment decisions in a way that prioritises those aspects of the individual's difficulties that are most relevant to suicidality. The SSF allows these elements to be recorded and transferred with a service user when they travel between service locations. For example, a patient who has been admitted to psychiatric hospital following a suicidal crisis or attempt; in the inpatient unit the CAMS is started, with the SSF being utilised to conduct a thorough risk assessment and risk management plan, as well as discovering key drivers of this individuals' suicidality. Some elements of intervention can be started on the unit, e.g. mindfulness or emotional regulation skills for managing intensely distressing emotional experiences. This information can then be sent and/or brought by the service user to the next CMHT meeting following their discharge from the acute unit. The CMHT have direct information pertaining to the drivers of this individuals' suicidality and a treatment plan which they can utilise to plan their intervention. This is a highly person centred and collaborative approach which includes and records the service users' own words and ideas about what is driving their suicidality and what they need to help them. It is also consistent with a recovery-oriented service approach to mental health care (see Galavan, 2017 for review). The CAMS model facilitates the decision to discharge to the community team with a thorough collaboratively developed, assessment and suicide specific treatment plan in place.