

**“Integrating patients’ and clinical mental health expertise
within a single online decision support system: myGRiST”**



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Part sponsored by



Overview

- **Brief introduction to GRiST**
- **How the clinical expertise was elicited and implemented within GRiST**
- **Development of the patient version, myGRiST**
- **Sharing expertise between practitioners and patients**

Rationale for GRiST

- **Galatean Risk and Safety Tool (GRiST)**
 - grant awarded in 2002 by the UK Department of Health
 - help people without mental-health training to detect risks
- **Encapsulate risk expertise**
 - suicide, self-harm, harm to others, self-neglect, and vulnerability
- **Make it universally accessible**
 - without specialist training
 - across all practitioner disciplines
 - across all clinical services
 - into the community
- **For anyone to use**
 - specialist mental-health practitioners
 - front-line services outside mental health
 - service users
 - carers



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web-based decision support

emerging picture: shared expertise

individual expertise

expert mental-health practitioners

GRiST captures clinical expertise



How people in general do it

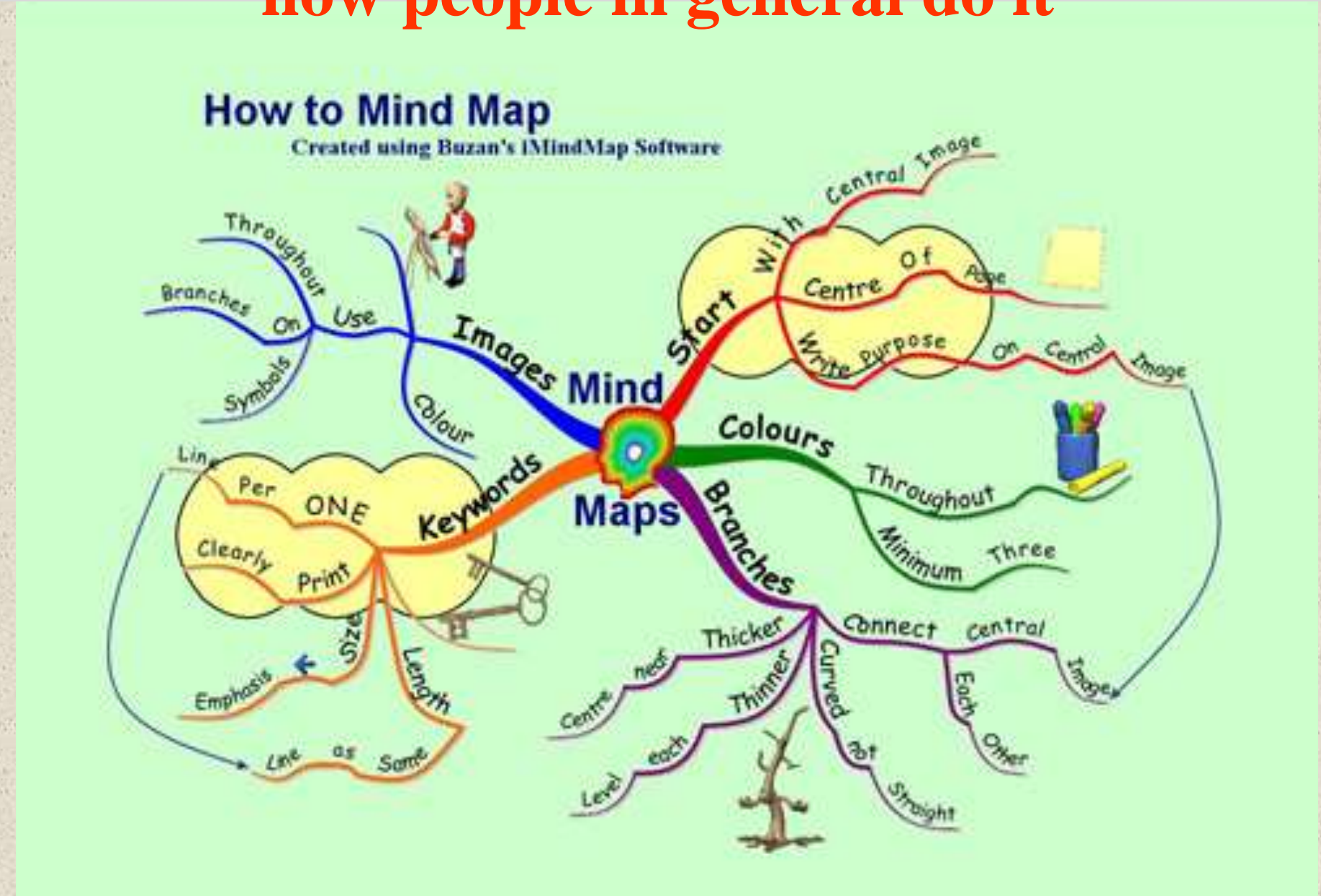
How to Mind Map

Created using Buzan's iMindMap Software

```
graph LR; MM((Mind Maps)) --- Images[Images]; MM --- Keywords[Keywords]; MM --- Colours[Colours]; MM --- Branches[Branches]; MM --- Start[Start]; Images --- Use[Use]; Images --- Colour[Colour]; Use --- Throughout[Throughout]; Use --- Symbols[Symbols]; Use --- Branches2[Branches]; Colour --- On[On]; Colour --- Central[Central]; Colour --- Image[Image]; Keywords --- ONE[ONE]; Keywords --- Clearly[Clearly]; Keywords --- Print[Print]; Keywords --- Size[Size]; Keywords --- Length[Length]; ONE --- Per[Per]; ONE --- Emphasis[Emphasis]; Clearly --- Line[Line]; Print --- as[as]; Print --- Same[Same]; Colours --- Throughout3[Throughout]; Colours --- Minimum[Minimum]; Colours --- Three[Three]; Branches --- Thicker[Thicker]; Branches --- Thinner[Thinner]; Branches --- Curved[Curved]; Branches --- not[n't]; Branches --- Straight[Straight]; Branches --- Connect[Connect]; Branches --- Central2[Central]; Branches --- Images2[Images]; Branches --- Each[Each]; Branches --- Other[Other]; Start --- With[With]; Start --- Central3[Central]; Start --- Image3[Image]; Start --- Write[Write]; Start --- Purpose[Purpose]; Start --- On2[On]; Start --- Central4[Central]; Start --- Image4[Image];
```

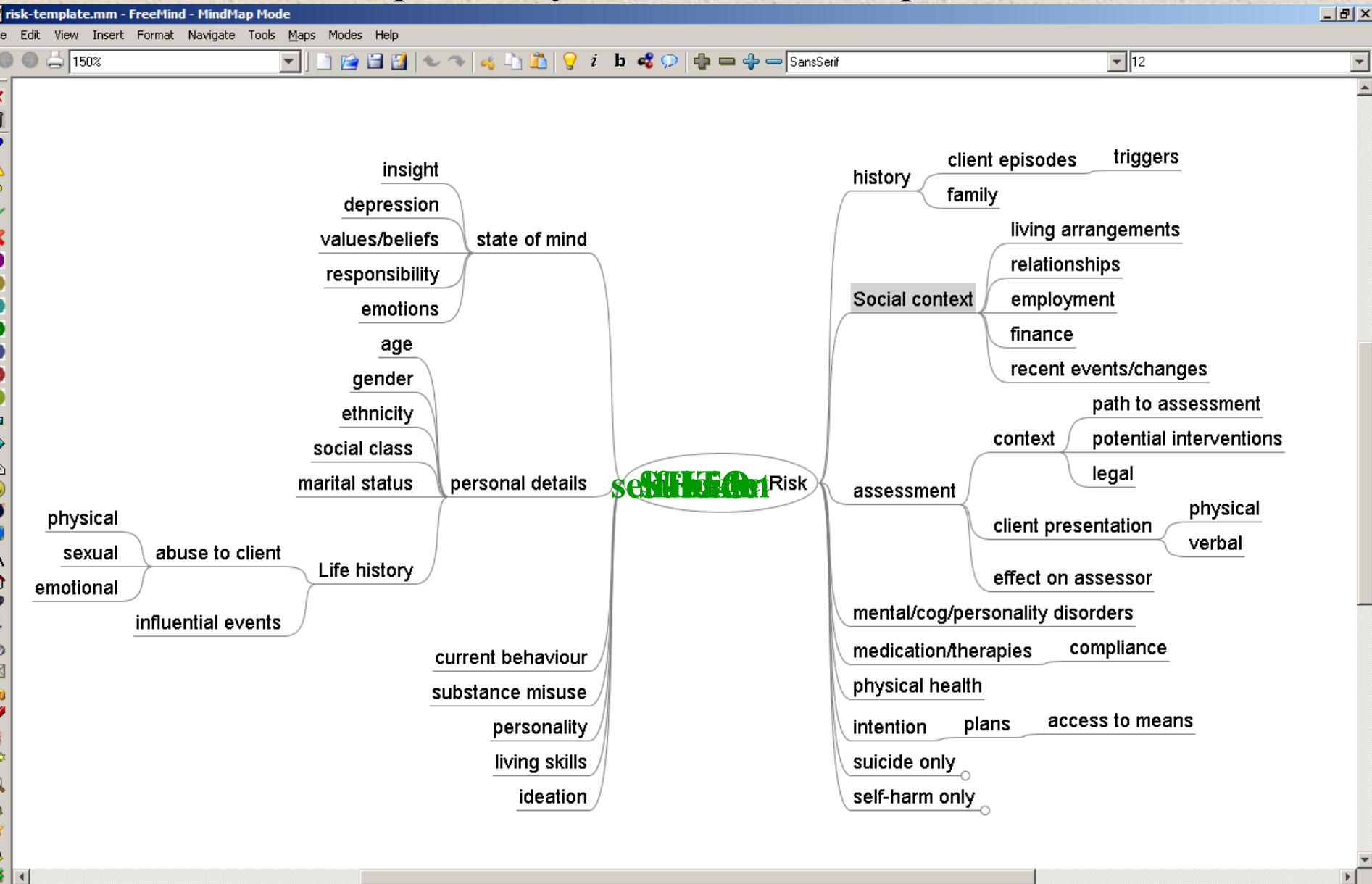
The mind map is titled "How to Mind Map" and was created using Buzan's iMindMap Software. The central node is "Mind Maps", which branches into five main categories: "Images", "Keywords", "Colours", "Branches", and "Start".

- Images** (blue branch):
 - Use
 - Throughout
 - Symbols
 - Branches
 - Colour
 - On
 - Central
 - Image
- Keywords** (orange branch):
 - ONE
 - Per
 - Emphasis
 - Clearly
 - Print
 - Line
 - as
 - Same
 - Size
 - Length
- Colours** (green branch):
 - Throughout
 - Minimum
 - Three
- Branches** (purple branch):
 - Thicker
 - Thinner
 - Curved
 - n't
 - Straight
 - Connect
 - Central
 - Images
 - Each
 - Other
- Start** (red branch):
 - With
 - Central
 - Image
 - Write
 - Purpose
 - On
 - Central
 - Image



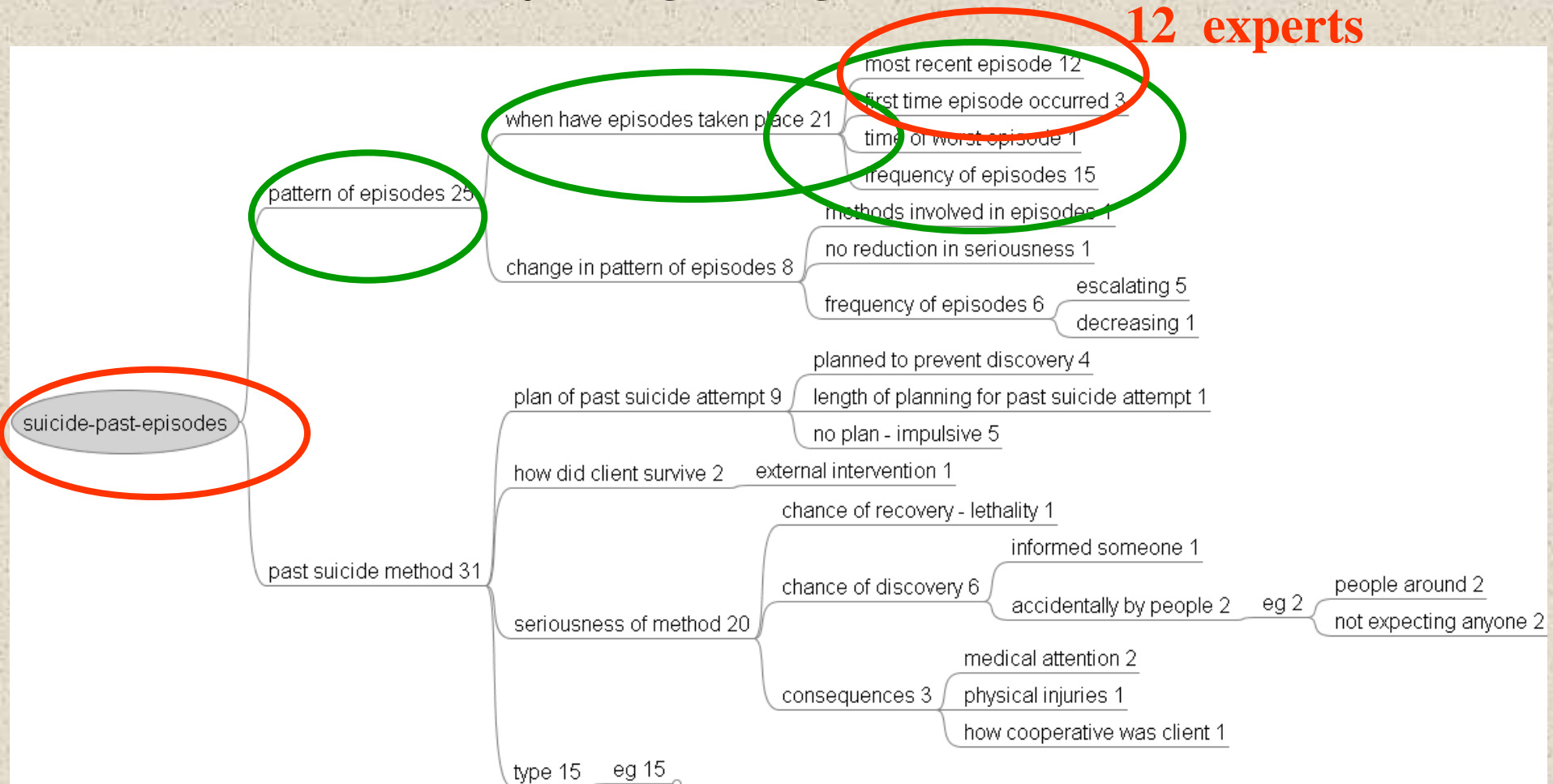
Mind map template: 46 interviews

multidisciplinary mental-health practitioners



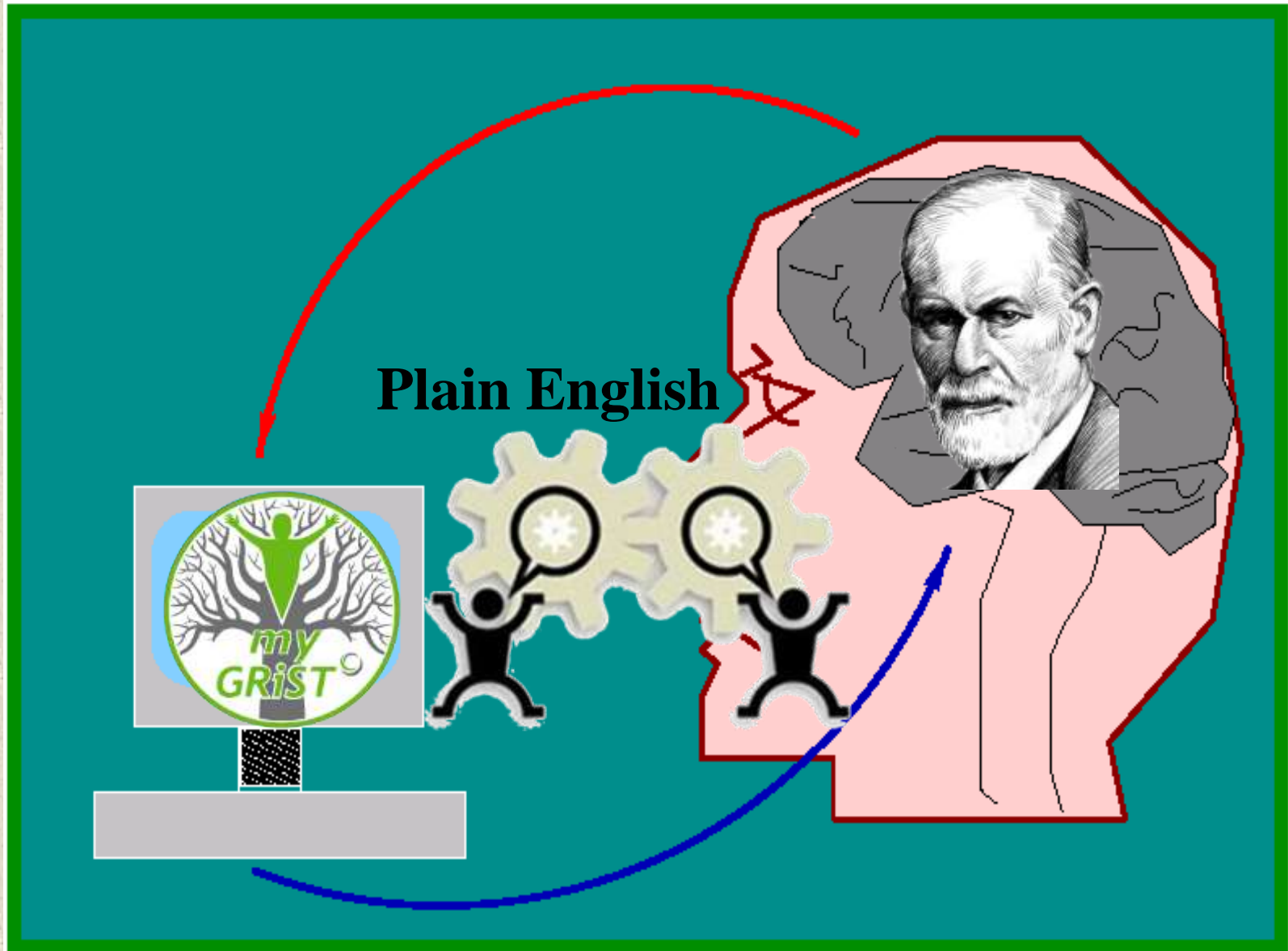
Mind map with total numbers of experts results of integrating interview data

12 experts



- identifies relevant service-user data
- “tree” relates data to risk concepts and top-level risks
- information profile for service user

The common psychology gives a common language



suicide

* Has the person ever made a suicide attempt? If yes, the questions about them should be answered with reference to the attempts in general rather than any specific one, unless otherwise stated. 📁 ➕ 🔒

☐ yes ☒ no ☐ DK

* Are you concerned about the person's current intention to complete suicide? 📁 ➕

☐ yes ☐ no

* Are you concerned about anything that could trigger suicide attempts? 📁 ➕

☐ yes ☐ no

* Is the person having suicidal thoughts or fantasies? 📁 ➕

☐ yes ☐ no ☐ DK

In your judgement, to what extent is the person at risk of suicide?

☒ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ ?

min

low

medium

high

max

DK

WOULD YOU LIKE TO MAKE AN OVERALL COMMENT/ACTION PLAN FOR THIS RISK? 📁 📄

[suicide](#) [self-harm](#) [harm to others or damage to property](#) [risk to dependents](#) [self neglect](#) [vulnerability of service user](#) [general issues relating to all risks](#)

self-harm

* Are you concerned about anything that could trigger self-harm? 📁 ➕

[return to top](#)

save data ⓘ

suspend ⓘ

submit form ⓘ

Search Panel

(type in box below)

Path to Result

Web-based tool for clinicians

Online web tool using PHP

[suicide](#) [self-harm](#) [harm to others or damage to property](#) [self neglect](#) [risk to dependents](#) [vulnerability of service user](#) [generic nodes](#)

suicide: 6

* Has the person ever made a suicide attempt? If yes, the questions about them should be answered with reference to the attempts in general rather than any specific one, unless otherwise stated.

☒ yes ☐ no ☐ DK

- When was the last suicide attempt? 122007
(Please enter a date in the format ddmmyyyy, mmyyyy or just yyyy) 06092009 ☐ DK

- Has there been more than one suicide attempt? yes
☒ yes ☐ no ☐ DK

- When was the first suicide attempt? 2006
(Please enter a date in the format ddmmyyyy, mmyyyy or just yyyy) 2006 ☐ DK

- Approximately how many suicide attempts have there been? 5
(Please enter a number in figures) 6 ☐ DK

- How have the suicide attempts been changing in frequency over the last two years? DECREASING
☐ decreasing ☐ same ☒ increasing ☐ DK

- To what extent were the suicide attempts well planned? 10
☐ 0 ☒ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ ?
min low medium high max DK

- Was a suicide note written for any previous or current suicide attempts? NO
☐ yes ☐ no ☐ DK

save data ⓘ

suspend ⓘ

submit form ⓘ

Search Panel
(type in box below)

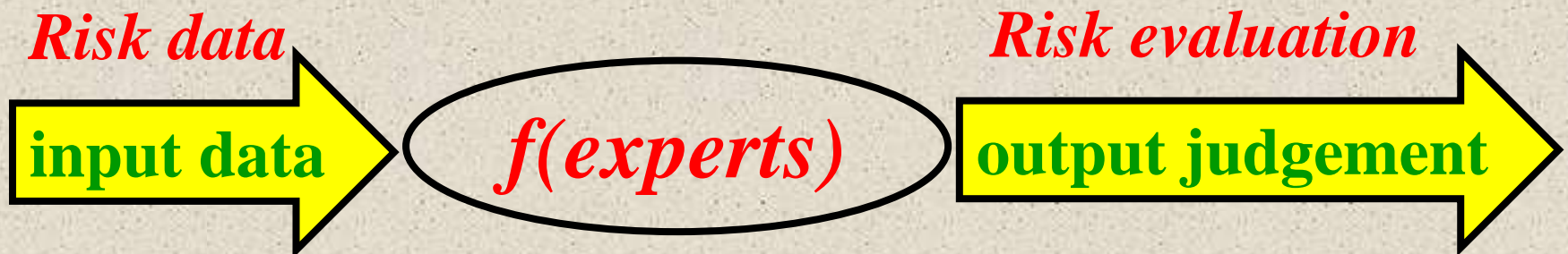
self

Path to Result

[self-harm](#)
↓
[past and current episodes of self-harm](#)
↓
[pattern of self-harm episodes](#)
↓
[self-harm episodes escalating in frequency](#)

Practitioner expertise embedded in the GRiST database

- 3,000 practitioners
- 50,000 service users
- 500,000 completed assessments
 - increasing by over 500 a day
- different types of service user and care context
- wisdom of the crowd
 - predict risks for the service user
 - from the association of data and clinical judgements



- Preliminary analysis

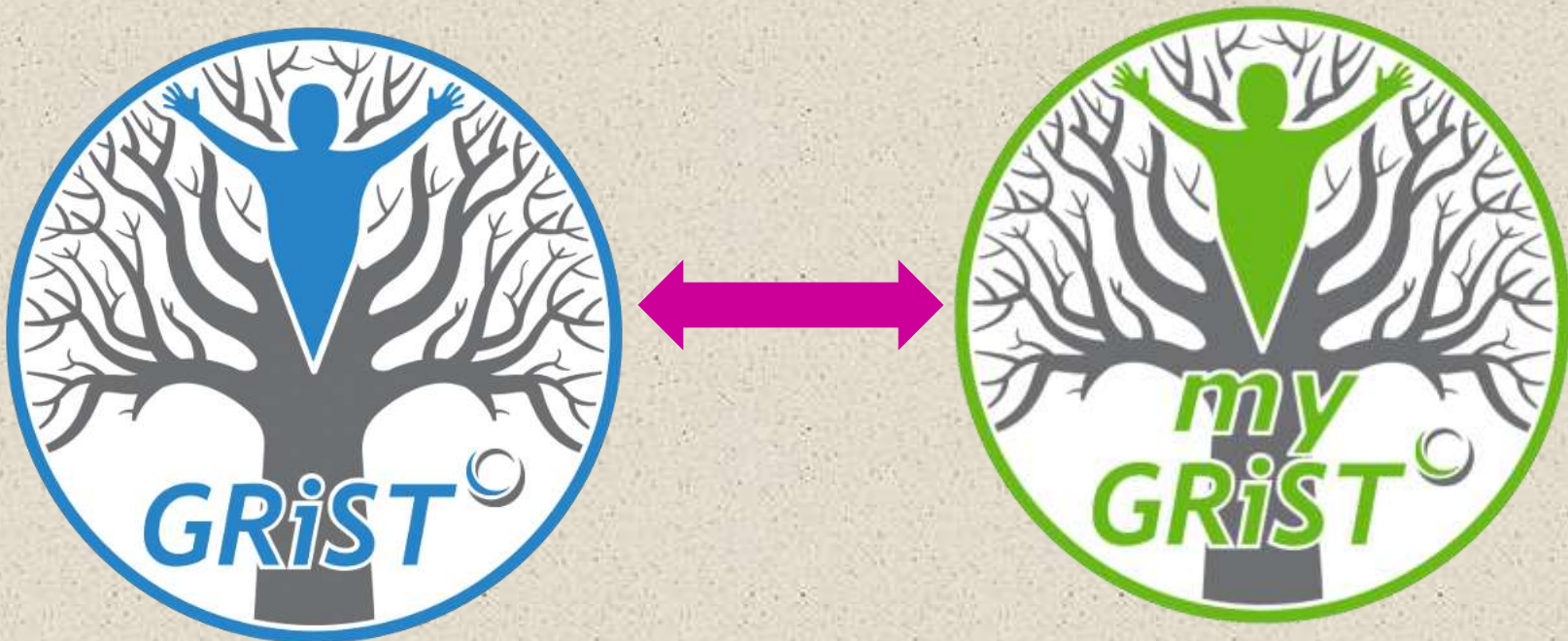
- # clinician

0	1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	---	----

[illegible]

Multiple interfaces

- **Driven by the underlying XML**
 - different populations
 - different services
 - all using the same common knowledge base



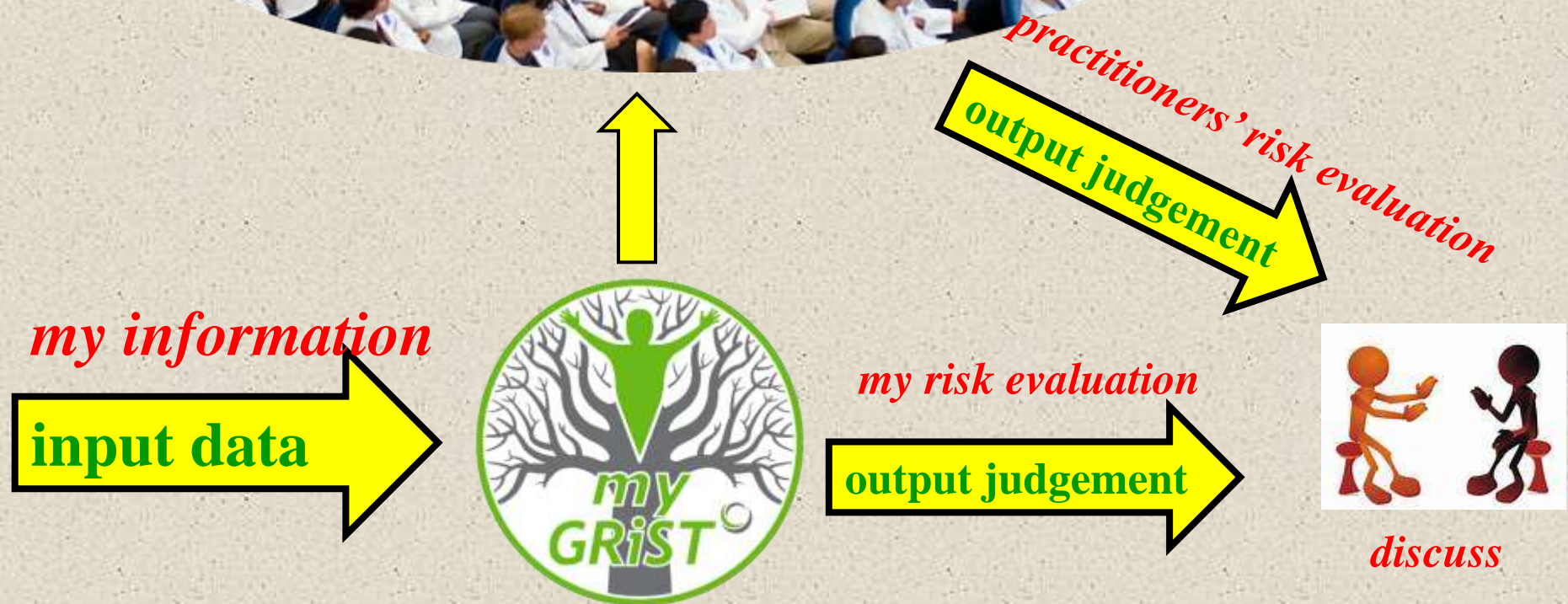
Vision for myGRiST: a tool to help service users

- **Self-monitor and self-manage risk**
- **Understand factors in their lives that influence risk**
- **Make decisions about how and when to intervene to reduce risk**
- **Own their own history and risk profile**
- **Communicate with clinicians and others about risk**
- **Share in risk management decisions**

myGRiST was developed by...

- **Iterative working with 88 service users**
 - and increasing as pilots continue
- **Phase 1: assessing the clinical tool for adaptation**
 - understanding service user experiences of risk assessment
 - Prototype 1 (33 service users)
- **Phase 2: Data-collection questions, risk language, and risk evaluations**
 - converted from clinician to patient perspective
 - Prototype 2 (28 service users)
- **Phase 3: myGRiST packaged for adoption by patients**
 - Prototype 3 (27 service users)

Patient wisdom and the wisdom of GRiST practitioners



myGRiST distinct tool

- **Different wording**
 - less technical and “clinical”
 - information not data
 - practitioner not clinician
 - activities not behaviour
 - more positive
 - “Do you have anything planned for the future?”
 - instead of “Does the person lack plans for the future?”
- **Different data-gathering interface**
 - more dynamic
 - explore risks and risk factors in any order
 - more controlled entrance to risk exploration
 - less overwhelming
 - clear navigation
 - different colour scheme
- **Risk exploration for interactive understanding**
 - animated
 - real-time
 - as the assessment takes place

Step 1: Am I safe?

**Rapid
screening**

**Step 2: Where
would practitioners
say I am at risk?**

**Mental-health
practitioner
feedback**

**Step 3: How do my
past and present
help understand
my risks?**

**Complete the
full picture of
my life**

**Step 4: How does my
assessment compare with
the practitioners?**

**My risk
assessment**

**Step 5: How do I
manage my life
better?**

**My self-
management
plan**

**My
personalised
risk & safety
report**

**Step 6: Who will I
share my issues
with?**



Step 1: Am I safe?



Am I safe? When you have finished, these first questions will allow the myGRIST expert panel to assess your safety




0% Questions Answered

Save

Suspend

Finish Screening

Patient: Test Patient

Have you ever tried to end your own life? If yes, the questions should be answered about your attempts in general rather than any specific one, unless otherwise stated.   

☐ yes ☐ no ☐ don't know

Do you have any intention to end your life?  



☐ yes ☐ no

Is there anything specific that is making you feel like ending it all?  

☐ yes ☐ no

Do you keep thinking about or imagining ending your life?  




☐ yes ☐ no ☐ don't know

Are you concerned about how you are feeling at the moment?  

☐ yes ☐ no

Are you concerned about your sense of self worth?    

☐ yes ☐ no

Are you concerned about anything in your social context (relationships, your home, finances, employment, or any changes for the worse)?   

**Rapid
screening**

Step 2: Where would practitioners say I am at risk?

Risk Overview



Summary and exploration of risks

Where does the GRiST panel of practitioners say I am at risk?

Risk of ending my life: 0.09

**Mental-health
practitioner
feedback**

What things in my life are making me unsafe?

A report showing how your answers have led to the experts' views is available from the "Show Report" button at the bottom of this window. It highlights the main issues for you to address and shows how they contribute to your risk, safety, and wellbeing.

Exploring my risks

You can explore your risk profile in more detail by selecting the "Risk Exploration" button where you can see how any changes you make will impact on risk.

Gathering information to help me manage my risks

When you close this window, you will be taken to the full set of myGRiST questions. These will gather information that will help you understand the reasons for your risk issues and how to manage them.

Close

Risk Exploration

Show Report

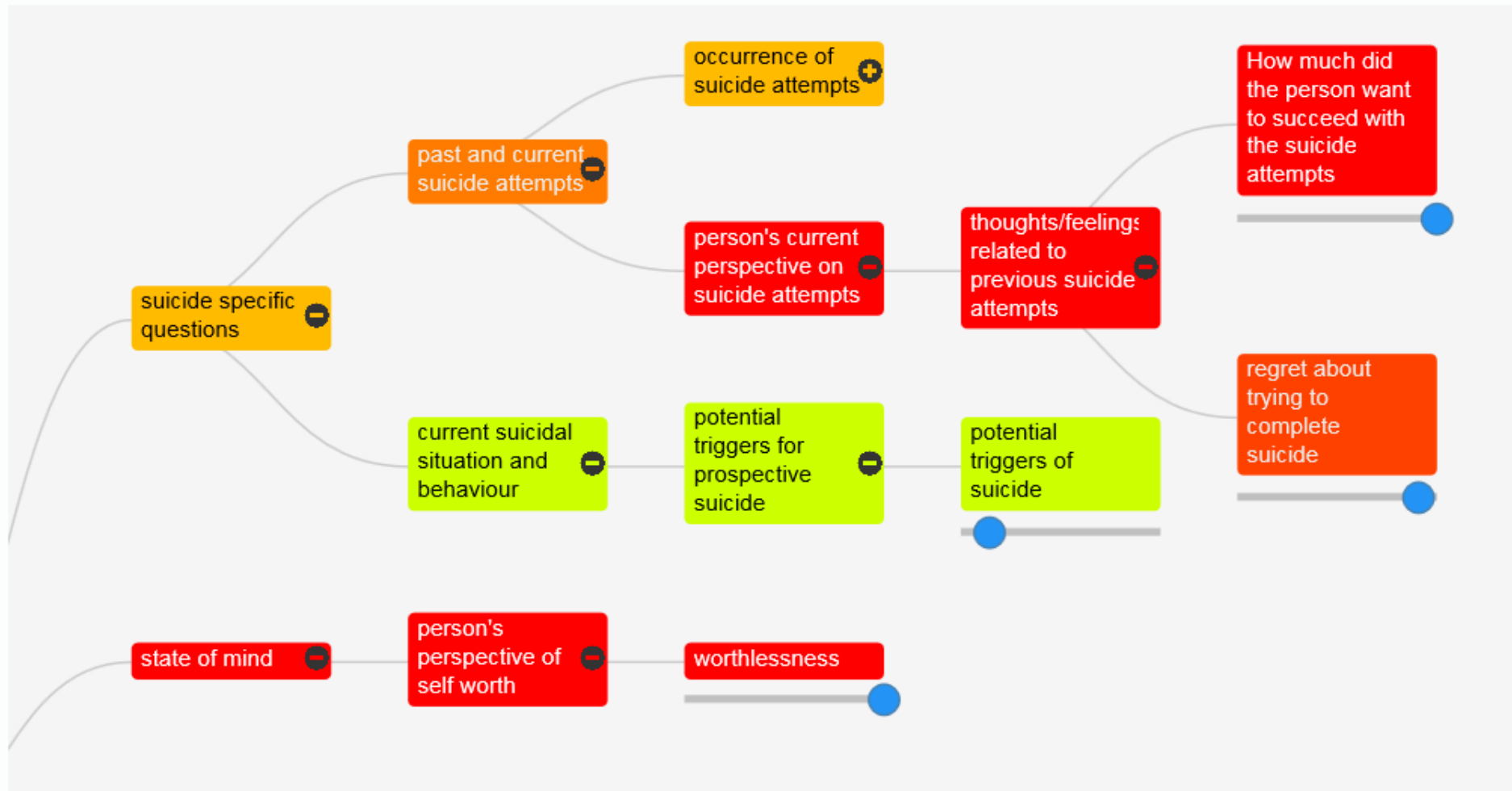
Review an interim screening report

ending your own life

Past and current attempts to end your life:	Yes
Most recent attempt to end your life:	4 days prior (25 Sep 2014)
Pattern of attempts to end your life:	Yes
Change in frequency of attempts to end your life:	no change
How dangerous were your attempts to end your life:	8 - High risk
How much did you want to end your life:	2 - Low risk
Regret trying to end your life:	10 - No risk
Current intention to end your life:	Yes
Dangerous self-harming:	8 - High risk
Triggers for ending your life:	Yes
Potential triggers for ending your life:	6 - Medium risk
Match between current triggers and dangerous ones in the past:	1 - Very low risk
Thoughts about ending your life:	Concerned
Ability to control thoughts about ending your life:	4 - Medium risk
Very risky thoughts about ending your life:	9 - Very high risk
Strength, intensity, intrusiveness, and persistence of thoughts about ending your life:	4 - Medium risk

Other risks and general screening data are also part of the report

See how your risks change with different answers



Reset Tree

Reset Sliders

Zoom: In

Zoom: Out

Zoom: Reset

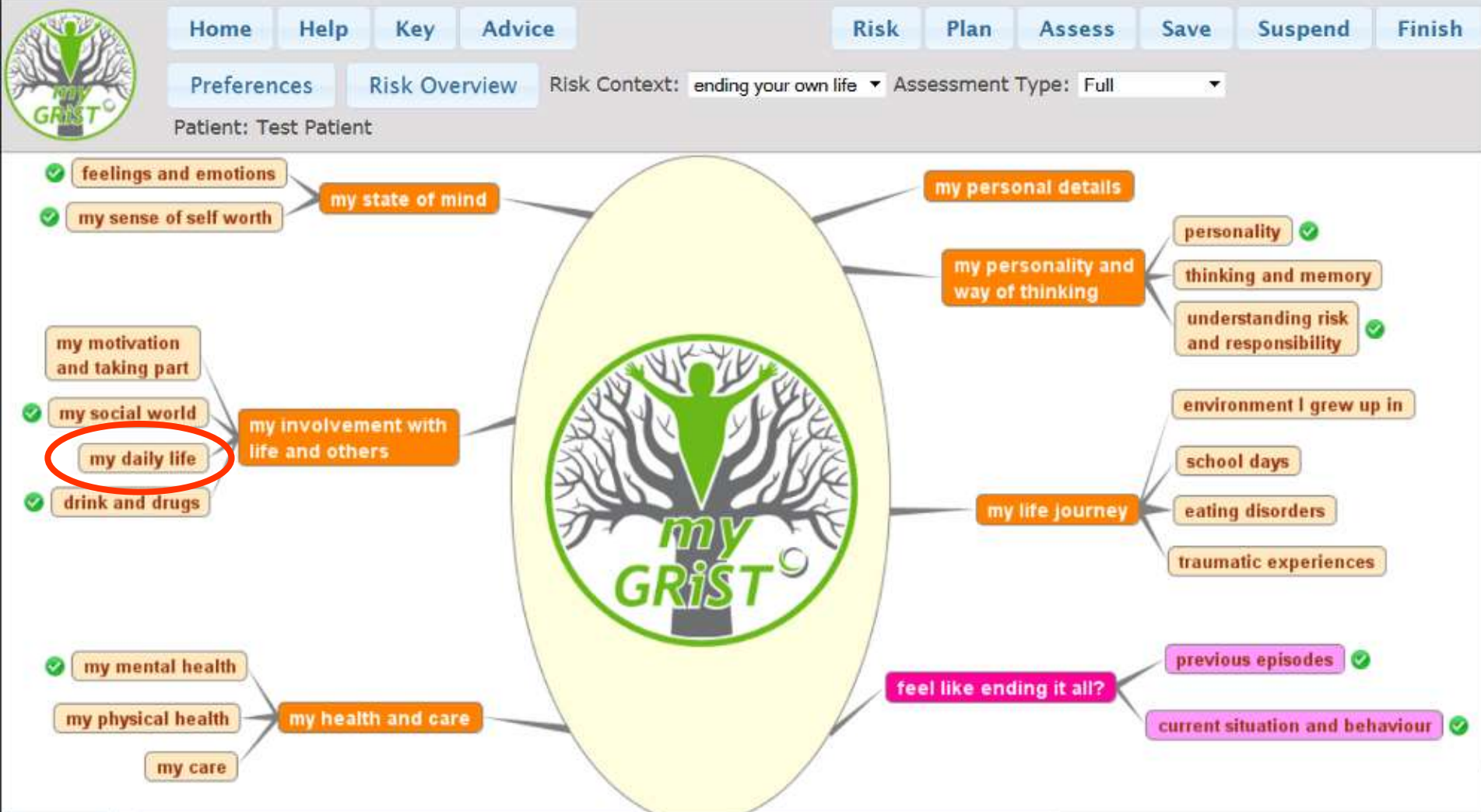
Help

Close

Step 3: How do my past and present help understand my risks?

collect more information

Complete the full picture of my life



See how the knowledge is structured and answer questions on any part of it

my GRIP

Home Screen Quick Help Key to Icons Support & Advice My Risk Assessment Save Answers Suspend Assessment Finish Assessment

63% Questions Answered

How I am and things I am doing at the moment

- structure in my life
 - structure in my life
 - being active
- sleep
- my diet
 - eating
 - weight
 - my weight
 - weight change
 - fluid intake
- not being myself
- risky activities
- carelessness

Are you concerned about how you are and things you are doing at the moment (eg risk-taking, sleep patterns, daily activities, losing your temper with people)? ☒ yes ☐ no

How structured are your days (i.e. do you have a timetable or regular things you have to do, be responsible for, or to turn up for)?

☒ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☒ 10 ☐ don't know

How active are you?

☐ passive-inert ☐ underactive ☐ normal ☐ overactive ☒ hyperactive ☐ don't know

To what extent do you have trouble sleeping?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☒ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ don't know

Are you concerned about your diet?

☐ yes ☐ no

To what extent would you say that you haven't been yourself, or that you have been behaving out of character?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☒ 10 ☐ don't know

To what extent are you engaging in risky activities at the moment (e.g. driving too fast, gambling, having unprotected sex)?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☒ 10 ☐ don't know

Step 4: How does my assessment compare with the practitioners?

My risk
assessment



Home

Help

Key

Advice

Save

Suspend

Finish

Preferences

Risk

Plan

Assess

Patient: Test Patient

My Risk Assessment

On a scale of 0-10 how likely is it that you will try to end your own life?



☐ 0

☐ 1

☒ 2

☐ 3

☐ 4

☐ 5

☐ 6

☐ 7

☐ 8

☐ 9

☐ 10

☐ don't know

0 = no risk, 10 = maximum risk

Consider the likelihood in the context of your circumstances if nothing changes.

This would be done for all risks, not just suicide.

Step 5: How do I manage my life better?

My self-
management
plan

Support and Advice

In the fully-functional tool to be released in January, 2015, it will be possible for you to put in actions that can be triggered by specified carers, friends, family and mental-health practitioners as appropriate, depending on the type of action. These may be text messages, emails, or even posts to friends on social media.

The table shows the issue that has been flagged and the risk contribution of that issue, which goes from zero (minimum) to one (maximum). The issue will be triggered by a threshold based on the expertise of the GRiST practitioners.

Actions	
Issue: feeling sad (risk contribution = 1) Action: Open webpage in a new tab URL: http://www.egrist.org/content/help-and-support-your-mygrist-assessment-sad-or-low-mood-0	Run
Issue: anxiety (risk contribution = 0.7) Action: Open webpage in a new tab URL: http://www.egrist.org/content/help-and-support-your-mygrist-assessment-anxiety	Run
Issue: mood swings (risk contribution = 1) Action: Open webpage in a new tab URL: http://www.egrist.org/content/help-and-support-your-mygrist-assessment-mood-swings	Run
Issue: negative feelings about myself (risk contribution = 0.6) Action: Open webpage in a new tab URL: http://www.egrist.org/content/help-and-support-your-mygrist-assessment-negative-feelings-about-onself	Run
Issue: feeling angry (risk contribution = 0.8) Action: Open webpage in a new tab	Run

Close

Step 6: Who will I share my issues with?

My personalised risk & safety report

<https://www.secure.egrist.org/panel/mhexperts/mh-dss-portal/java-tool-experimental/java>

suicide

<i>Past and current suicide attempts:</i>	Yes
Most recent suicide attempt:	2.4 years prior (9 Apr 2012)
<i>Pattern of suicide attempts:</i>	Concerned
First time suicide attempt occurred:	37.4 years prior (19 Apr 1977)
How many suicide attempts:	Five
Changing frequency of suicide attempts:	no change
Suicide note written for one or more previous attempts:	No
Chance of discovery after suicide attempts:	8 - High risk
Potential lethality of suicide method:	6 - Medium risk
How much did the person want to succeed with the suicide attempts:	9 - Very high risk
Regret about trying to complete suicide:	4 - Medium risk
<i>Current intention to complete suicide:</i>	Concerned
<i>Plans and methods for completing suicide:</i>	Yes
Realism of suicide plan:	9 - Very high risk
Physical steps taken to implement suicide plan:	6 - Medium risk
Potential lethality of prospective suicide method:	0 - No risk
Informed someone about intention to complete suicide:	Yes
End-of-life preparations for intended suicide act:	7 - High risk
Self-harm behaviour indicative of suicide:	2 - Low risk
Spiritual/religious values/beliefs affecting suicide risk:	Increase
<i>Potential triggers for prospective suicide:</i>	Concerned
Potential triggers of suicide:	8 - High risk
Potential triggers match those that previously caused suicide attempts:	7 - High risk

[return to t](#)

Gobal reach



Direct public access to myGRISt, linked to the clinical version, irrespective of location

Patient-centric web of care



www.egrist.org



clinical perspective

Risk

clinical/service user

Safety

service user

Well-being



Site Content

- Site News
- GRiST Timeline
- Groups
- Clinical Documents
- Research Documents

Administration

- Administer
- Create content
 - Add Timeline Item
- GRiSTsocneT

Welcome to GRiST

[View](#)[Edit](#)

GRiST is a sophisticated clinical decision support system for mental-health risk screening, assessment, and management.

Select the *Try GRiST* button on the top menu bar to see how GRiST works and explore other links to find out more about the project. If you want a comprehensive evaluation where you can save your patients between assessments, request a new account on the login page and register with the *GRiST Demo* group.

Don't forget to let us know who you are and why you are interested in GRiST because this helps us set up the account for you.

If you already have a username and login, you will be taken to the members' home page where your particular versions of GRiST can be accessed.



Search this site:

Search

Welcome to the portal for all things GRiST

www.egrist.org