

**Requirements**

- Required a method of dealing with the WHO 5 to process data 3-5 times per week for each patient
- Criteria:
  - Quick turn around of questions to data and graph
  - Accessible for patients
  - Not onerous for staff – administering, data entry

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**Criteria**

- Simple to use for all ages – inc. 65+
- Able to cope with large patient numbers
- Ideally point of care
- High level of patient acceptance + staff
- Secure
- Private

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**Solution – Touchscreens at Point of Care**

- 12 x LG 15” Touchscreens
- Wyse S90 thin client running XP Windows Embedded,
- Small cabinet mounted at point of care



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**Reasons For Touchscreens & Thin Client**

- Ability to lock down – kiosk mode
- Low heat generation
- Low power consumption
- Long life - no moving parts
- Fully configurable to deploy our own applications
- Easy to manage (I.T.), little can go wrong



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**Software Solution**

- Program developed using ASP.NET – environment allows rapid development and easy deployment (program updates do not require any intervention on touch screen terminal PC's)
- Special coding for touch screens is not required – uses standard web interface with touches detected as mouse clicks

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## Software Uses Web Browser



- Web based interface means program is platform-independent so it can run via any PC with a web browser
- Displayed using web browser kiosk mode to prevent patients leaving the program
- Hidden button links to login page that allows therapists to view graphs and access other staff-only functions

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## Integrated Solution



- Data entry immediately written to database and integrated with management and patient information systems
- Graphs created in real-time from database so they are always up-to-date
- Data stored in an SQL Server database – provides fast and secure access to large volumes of questionnaire data

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## What Does This Solution Offer



- It meets the criteria ...plus
- Time & date accuracy
- No intervening data entry person - reduces errors
- Immediate turn around of data including on screen graphing

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## How Does It work – CBT 10 Day Closed Group



- Each day, patient completes WHO 5, via touchscreen
- Therapist can view during session when patient completed WHO 5 and what score; can then view graph as necessary - at point of care or print
- Each daily handover uses graphs to inform practice (staff often surprised by score)



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The screenshot shows a web browser window displaying a patient list for a group session. The session is for group 200843, dated Tue 11/11/08, from 15:30-17:00. The patient list includes ANNE, BRENDA, KAREN, KELLIE, LAUREN, MATHEW, SARAH, and SHELL. A table below the list shows data for each patient, including columns for 'Score' and 'Graph'.

PATIENT	NAME	DOB	Initial	Score	Graph
BRENDA	P200	11/11/08	15.00	[Graph Icon]	
KAREN	SP	15.00	[Graph Icon]		
KELLIE	SP	15.00	[Graph Icon]		
LAUREN	SP	15.00	[Graph Icon]		
MATHEW	SP	15.00	[Graph Icon]		
SARAH	P200	15.00	[Graph Icon]		
SARAH	SP	15.00	[Graph Icon]		
SHELL	SP	15.00	[Graph Icon]		


## Closed Group



- The impact of an intervention can be seen in the next days scores
- Every Friday, each patient's progress graph is printed & discussed
- Opens progress discussions with patients
- At group completion, graphs sent to referring Psychiatrist with graph of other outcome measures

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### Monitoring Progress



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### How Does It Work - Inpatients


- Early days of baseline data collection
- Staff observing graphs and feeding some back at end of treatment
- Addition of 4 symptom measures to the WHO 5 including a question on suicide
- Suicide data is immediately displayed on the nursing staff ward screens, shown next to observation category – colour coded

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### Group Feedback Methods

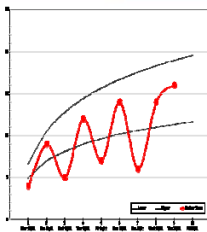
- Draw elements of graph on whiteboard
- Explain graph on whiteboard
- Handout graphs
- Talk in group to patients not doing well; try and look at issues; explanations of patterns; wild variations & mood control; high graphs may expect a drop



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### Feedback Methods

- Patterns connected to active practice and discharge from hospital
- Handover helps therapists target patients not on track and focus interventions – or active practice / exposure
- Used in note writing each day



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### Issues Faced

- Staff hesitant to give negative feedback
- Worry about fallout for patient
- Group issues involved in negative feedback, as done in group
- Patients already know how they are, as they answered the questions
- It is news to staff

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## Positives

- It opens discussion with the patient about progress and what is required
- It becomes an ongoing discussion, highs or lows are tracked and discussed
- Particularly for anxiety, effects of exposure are highlighted
- Enhances motivation for those on track

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## Additional Advantages

- Patients have feedback both on previous score but also compared to expected trajectory
- From feedback, patients are particularly interested in comparison to their previous scores
- Staff are comparing their assessment vs patients "self report" view and learning
- Excellent in handover discussions and written reporting

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### DAILY INDEX

Welcome to the DAILY INDEX questionnaire!

The following is a touchscreen. To select an option touch the screen.

[Next >>] takes you forward to the next screen.

[<< Back] takes you back to the previous screen.

[Cancel] cancels all your selections and takes you back to this screen.

Start >>

### DAILY INDEX

Initials

Press the buttons on the keypad to enter your initials.

Use the initials of **all your given names** followed your **surname**.

E.g. Enter **JHWS** for John Henry Wesley-Smith.

LAM			
A	B	C	D
E	F	G	H
I	J	K	L
M	N	O	P
Q	R	S	T
U	V	W	X
Y	Z	Delete	

<< Back      Cancel      Next >>

### DAILY INDEX

Date of Birth

Press the buttons on the keypad to enter your **date of birth**.

Use the format **dd/mm/yy**.

E.g. Enter **20/4/67** for 20th April 1967.

30/9/53		
1	2	3
4	5	6
7	8	9
0	/	Delete

<< Back      Cancel      Next >>

### DAILY INDEX

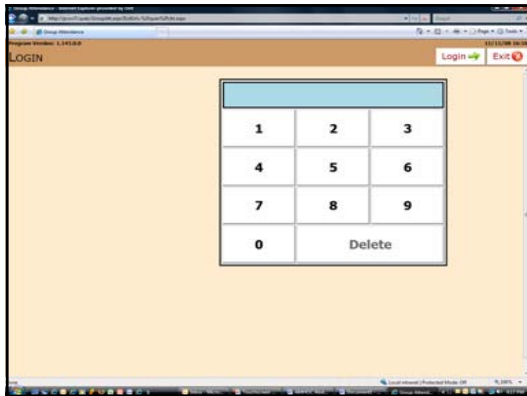
Question 5 of 9

Please indicate, by touching the screen, the statement which is closest to how you have been feeling over the last day.

Over the last day **I have felt cheerful and in good spirits...**

At no time	Some of the time	Less than half of the time	<b>More than half of the time</b>	Most of the time	All of the time
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<< Back      Cancel      Next >>



TUE 11/11/08 (today) Change Date Exit

Time	15:00 - 15:15	15:15 - 15:30	15:30 - 15:45	15:45 - 16:00	16:00 - 16:15	16:15 - 16:30	16:30 - 16:45	16:45 - 17:00
200842	15:00 - 15:15	15:15 - 15:30	15:30 - 15:45	15:45 - 16:00	16:00 - 16:15	16:15 - 16:30	16:30 - 16:45	16:45 - 17:00
200843	15:00 - 15:15	15:15 - 15:30	15:30 - 15:45	15:45 - 16:00	16:00 - 16:15	16:15 - 16:30	16:30 - 16:45	16:45 - 17:00
CREATIVE								
EV200805								
GREEN1								
HEALTHYL								
PURPLE1								
PURPLE3								
PURPLEA1								
RED1								
SILVER								
STRESSMG								
T200803								
TYMONTYCE								

200843 Melinda Tue 11/11/08 15:30-17:00 Sessions Exit

Name	15:30 - 16:00	16:00 - 16:30	16:30 - 17:00	Present
ANNE				<input checked="" type="checkbox"/>
BRENDA				<input checked="" type="checkbox"/>
KAREN				<input checked="" type="checkbox"/>
KELLIE				<input checked="" type="checkbox"/>
LAUREN				<input checked="" type="checkbox"/>
MATHEW				<input checked="" type="checkbox"/>
SARAH				<input checked="" type="checkbox"/>
SARAH				<input checked="" type="checkbox"/>
SHELL				<input checked="" type="checkbox"/>

