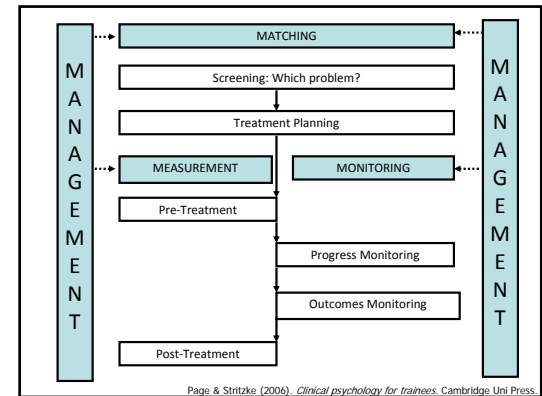
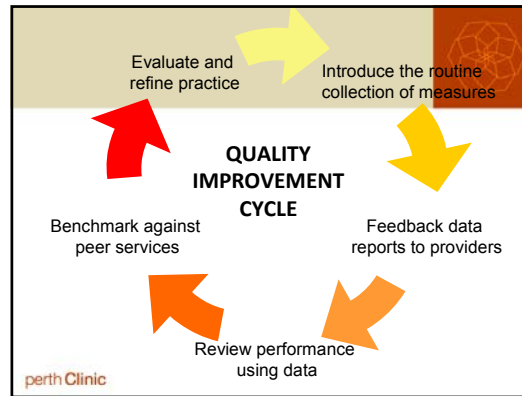


Improving patient outcomes by monitoring wellbeing and providing feedback during inpatient and day patient therapy.



Elizabeth A Newnham
Geoff R Hooke
Andrew C Page

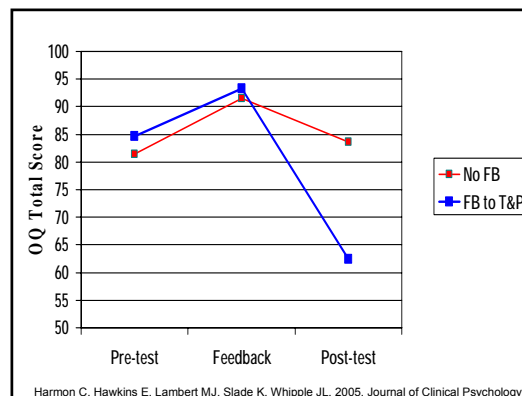



Monitoring progress

- No thermometer for mental health
- Engagement in decision making improves outcomes (e.g. Roter & Hall, 1993, Street, 2001)



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Inpatient mental health population

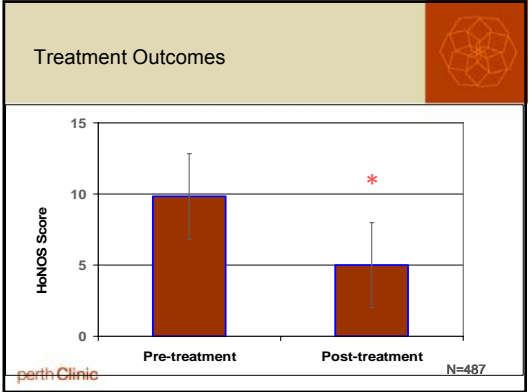
- Establish need
- Define outcome
- Develop a means of monitoring and improving outcomes for alarm cases

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Comparing Outcomes

	Outpatient Routine Care Outcomes*	Inpatient Outcomes at Perth Clinic
Recovered	14.1%	?
Improved	20.9%	?
No change	56.8%	?
Deteriorated	8.2%	?
Number of sessions	4.3 (sessions)	10 (days)

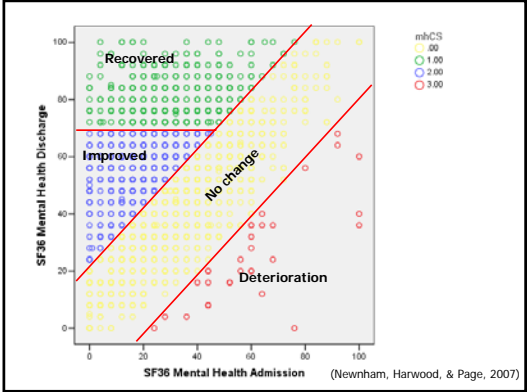
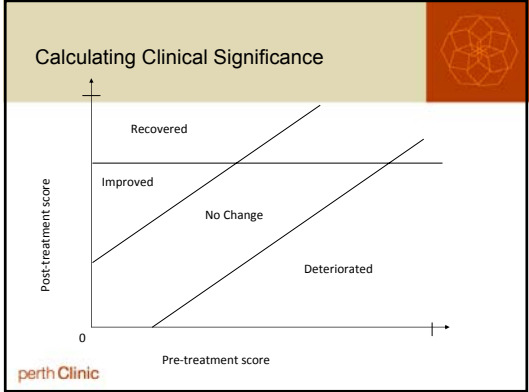
*Lambert, M. (2006) Personal communication



Clinical significance

1. Reliable Change
2. Meaningful symptom reduction

Jacobson & Truax, 1991



Comparing Outcomes

	Outpatient Routine Care Outcomes*	Inpatient outcomes at Perth Clinic
Recovered	14.1%	46.4%
Improved	20.9%	15.3%
No change	56.8%	37.8%
Deteriorated	8.2%	0.6%
Number of sessions	4.3 (sessions)	10 (days)

*Lambert, M. (2006) Personal communication

Despite demonstrated effectiveness, a sizeable minority show **no change** or **deteriorate** during psychological intervention (e.g. Newnham, Harwood & Page, 2007; Ogles, Lambert & Fields, 2004)

Need to move *beyond* pre- to post-treatment assessments and address progress *during* therapy.

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Inpatient mental health population

1. Establish need
2. Define outcome
3. Develop a means of monitoring and improving outcomes for alarm cases

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WHO-5 Wellbeing Index

Over the last day	At no time	Some of the time	< half of the time	> half of the time	Most of the time	All of the time
I have felt cheerful and in good spirits	0	1	2	3	4	5
I have felt calm and relaxed	0	1	2	3	4	5
I have felt active and vigorous	0	1	2	3	4	5
I woke up feeling fresh and rested	0	1	2	3	4	5
My daily life has been filled with things that interest me	0	1	2	3	4	5

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Monitoring Patient Outcomes

With funding from Medibank Private we sought to implement a system of patient monitoring Patients completed a "wellbeing thermometer" each two days

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WHO-5 Wellbeing Index

- Reliable ($\alpha=.89$)
- Clinical significance cut-off = 11
- Group means: functional sample= 12.95 (SD=5.11)
patient population = 8.45 (SD=5.31)

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Sensitivity and False-alarm Rate

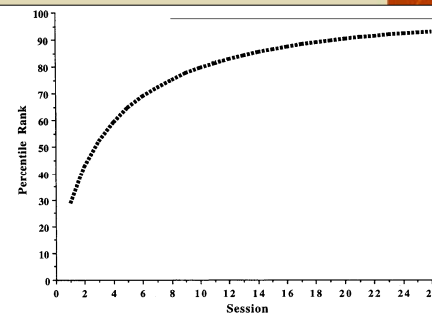
Cut-off Point	Sensitivity	1-Specificity
7	0.329	0.055
8	0.388	0.063
9	0.434	0.075
10	0.493	0.106
11	0.552	0.138
12	0.611	0.177
13	0.678	0.268
14	0.711	0.366

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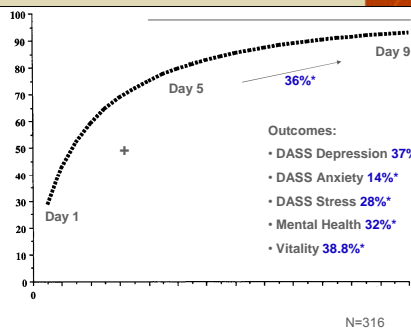
WHO-5 Wellbeing Index

- Divergent validity with DASS-21
 - Depression ($r=-.65, p<.01$)
 - Anxiety ($r=-.40, p<.01$)
 - Stress ($r=-.52, p<.01$)
- Convergent validity with SF-36
 - Mental Health ($r=.71, p<.01$)
 - Vitality ($r=.71, p<.01$)

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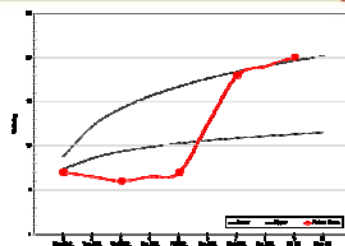


- Outcomes:
- DASS Depression 37%*
 - DASS Anxiety 14%*
 - DASS Stress 28%*
 - Mental Health 32%*
 - Vitality 38.8%*

N=316

perth Clinic Linear combination of Day 1 and Day 5 scores

Illustration of "Not on Track" Patient Responding to a Friday Feedback Session



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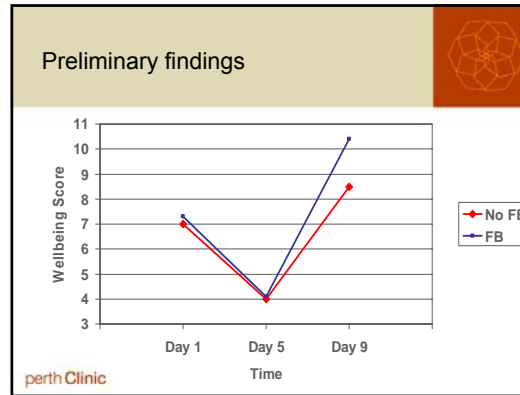
Clinical Purpose

- Opens dialog between patient and staff members about progress
- International data suggest that clinical outcomes are improved (without additional training of staff or intervention from management)

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Evaluation

	Therapists	Patients
How helpful was the Wellbeing Thermometer?	6.0	4.7
Useful encouraging dialog between therapist and patient?	6.0	5.4
Useful understanding progress?	5.5	5.4
How informative was the information?	4.8	4.7
How useful comparing with past progress?		5.3
How useful comparing with expected progress?		4.7
Useful in goal setting?	5.0	
Preference for touchscreen over paper and pencil	100%	100%



- ### Where to now?
- Aim is to:
- Evaluate the effectiveness of the feedback system
 - Extend to all inpatients and daypatients
 - Track patients' wellbeing post-discharge

- ### Conclusions
- Pre- to post-assessment of outcome is not sufficient.
 - To improve outcomes, progress must be monitored *during* therapy.
 - Feedback of progress to clinicians and patients improves:
 - Dialogue about progress and treatment goals
 - Outcomes?

