Clinically Useful Outcome Measures

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SHOCK CLAIM BY DRUG EXPERTS

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BEER-SWILLING is more likely to result in violence and sexual harassment than the [ta]king of the drug [ecst]asy, a Leeds con[feren]ce was told.

The dementia timebomb facing binge drinkers

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…so not as easy as asking people how much they drink or what drugs they take?

- Is it how much (quantity) or how often (frequency) that matters?

- Is it the range of substances used or just the presenting main substance that should be the outcome?

- Does substance use itself matter? what about the related harms?

- When is a good time to measure outcomes?

- How should outcomes data be presented? who should get the outcome measures?

- Are physical health measures and mortality to be ignored?

……problems of the substance itself as an outcome measure……

- people in treatment typically use and misuse a variety of substances and move in and out of problem use

- it is difficult to compare the harmfulness of different classes of drugs and even different drugs within a class

- some harms are clearly attributable to particular substances some much less so

- prescribed medications may be misused or be part of the substance use profile of an individual

- some drugs are associated with more harmful routes of administration than others

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……solutions to using the substance itself as an outcome measure……

- adopt a profiling method to provide detail ✘
  too time consuming, costly, and difficult to interpret

- disregard substance use from the outcomes profile ✘
  not intuitive or politically acceptable

- standardise outcome of initial problem drug ✔
  for alcohol %days abstinent and drinks per drinking day

- use a categorical method of describing substance use ✔
  ICD-10 codes work well and are not substance specific

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UK Alcohol Treatment Trial
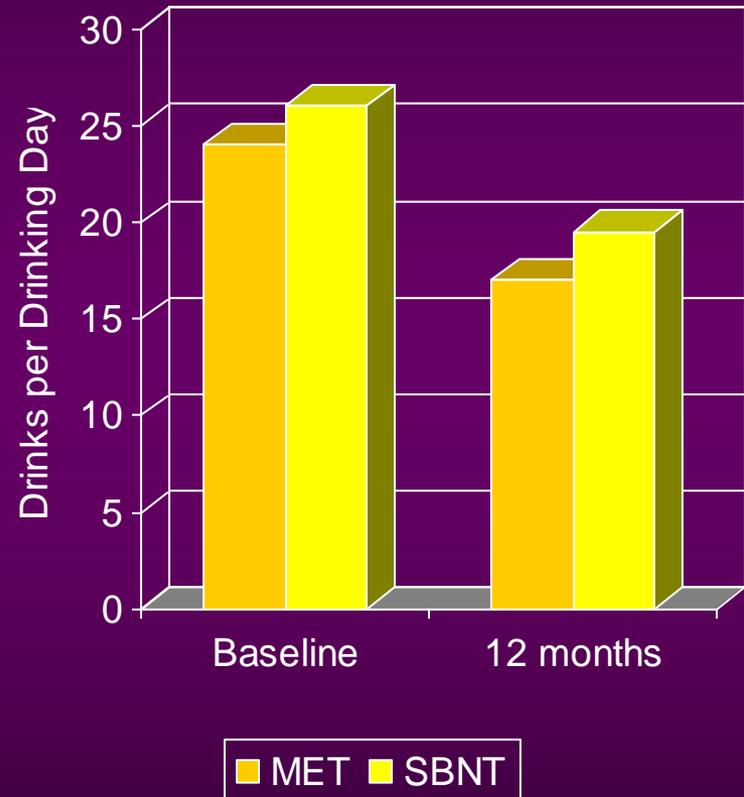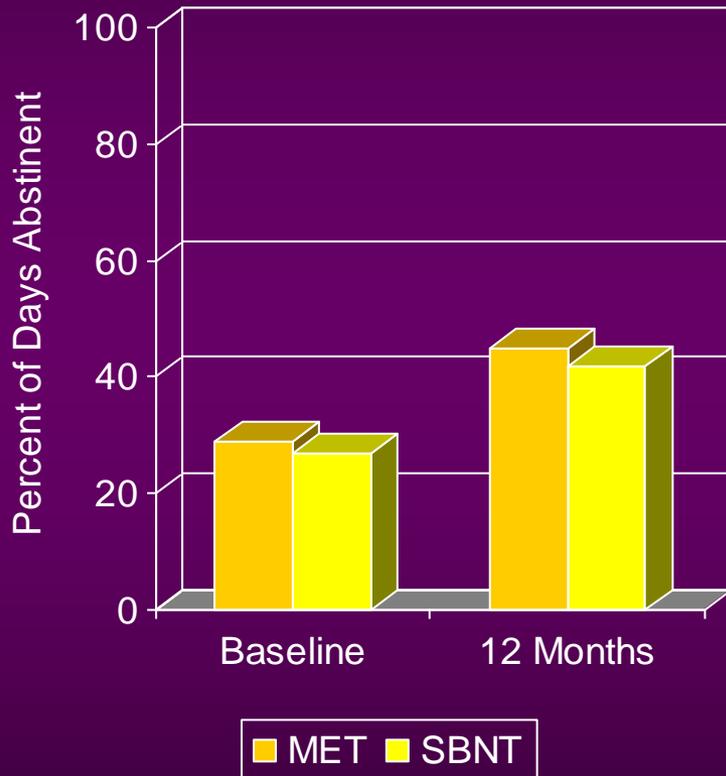
Source: UKATT Research Team, BMJ (2005)

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ICD-10 Categorical Outcome Measures

F1x.20 Currently abstinent

F1x.21 Currently abstinent. but in a protected environment

F1x.22 Currently on a clinically supervised maintenance or replacement regime (controlled dependence)

F1x.23 Currently abstinent, but receiving treatment with aversive or blocking drugs

F1x.24 Currently using the substance (active dependence)

F1x.25 Contunuous use.

F1x.26 Episodic use (dipsomania)

Substance specific codes are F10 to F19

What would make a good general purpose outcomes package?

- Easy to collect the data. Max 10mins of service user time.
- A selection of measures that are relatively independent of each other and adequately reflect aspects of life.
- Measures must be of universal applicability.
- Ratings should be made by the service user or someone independent of the treatment team.
- Self completion measures must be written in plain english.
- Rating scales must have adequate psychometric properties and preferably published population norms.

any general package can be enhanced better to meet the needs of a particular agency, or specialist function, or political expedience

…...from these principles RESULT was developed as an outcomes package……

Dependence domain: Leeds Dependence Questionnaire

Raistrick, D, Bradshaw, J., Tober, G., Weiner, J., Allison, J. & Healey, C., (1994). Development of the Leeds Dependence Questionnaire. Addiction, 89, 563–572.

Psychological domain: Clinical Outcomes Routine Evaluation

Evans, C., Connell, J., Barkham, M., Margison, F., McGrath, G., Mellor-Clark, J., et al. (2002). Towards a standardised brief outcome measure: Psychometric properties and utility of the CORE-OM. British Journal of Psychiatry, 180, 51–60.

Social domain: Social Satisfaction Questionnaire

Raistrick, D., Tober, G., Heather, N. and Clark, J. (2007) Validation of the Social Satisfaction Questionnaire in the context of routine outcome evaluation for alcohol and drug problems treatment, *Psychiatric Bulletin*, 333-336

Substance use domain: ICD-10 categorical codes

World Health Organization (1993). International Statistical Classification of Disease and Health-related Problems – ICD-10. Geneva: World Health Organization

QALY – quality adjusted life years: EQ5D

EuroQol Group (1990) A new facility for the measurement of health-related quality of life. *Health Policy*, 16, 199-208

Snapshot: ICD-10: Freq any misuse: Self rating %

Domains (or components) of Addiction

psychological well being

substance use

dependence

social well being
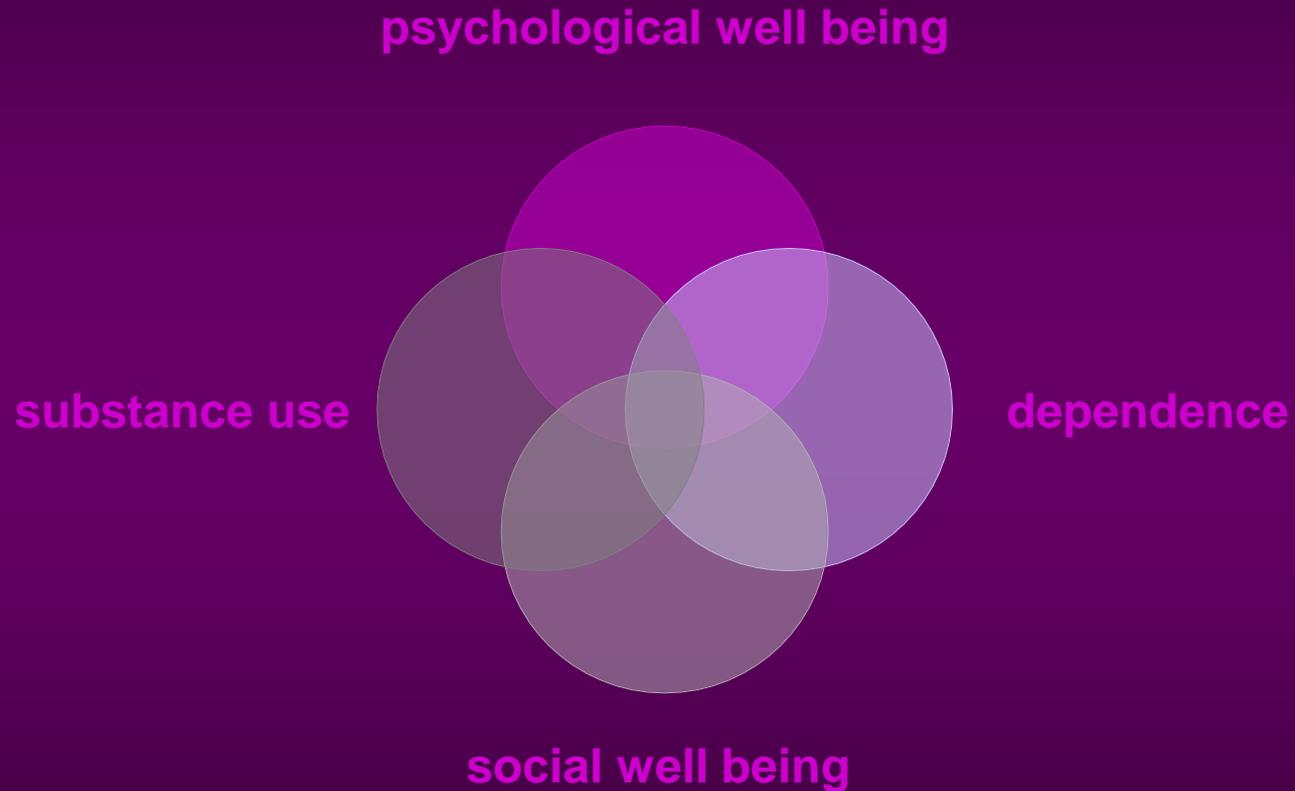
Factor Analysis

	component				component				component		
	1	2	3		1	2	3		1	2	3
LDQ1	.382	.733	.305	CORE1	.805	.371	.186	SSQ1	.194	.356	.689
LDQ2	.375	.769	.296	CORE2	.645	.196	.302	SSQ2	.194	.261	.747
LDQ3	.360	.752	.302	CORE3	.723	.283	.254	SSQ3	.143	.261	.614
LDQ4	.316	.782	.281	CORE4	.751	.285	.254	SSQ4	.242	.235	.789
LDQ5	.324	.690	.248	CORE5	.804	.327	.181	SSQ5	.193	.227	.768
LDQ6	.352	.756	.261	CORE6	.722	.312	.236	SSQ6	.205	.145	.754
LDQ7	.335	.786	.280	CORE7	.745	.331	.218	SSQ7	.163	.170	.763
LDQ8	.295	.722	.199	CORE8	.826	.339	.158	SSQ8	.168	.241	.761
LDQ9	.310	.792	.247	CORE9	.814	.331	.183				
LDQ10	.381	.780	.257	CORE10	.789	.321	.158				
	26.1% of variance				25.4% of variance				19.8% of variance		

principal components analysis with varimax rotation

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Leeds Dependence Questionaire

Q2   Is drinking or taking drugs more important than anything else you might do during the day?

Q7   Do you feel you have to carry on drinking or taking drugs once you have started?
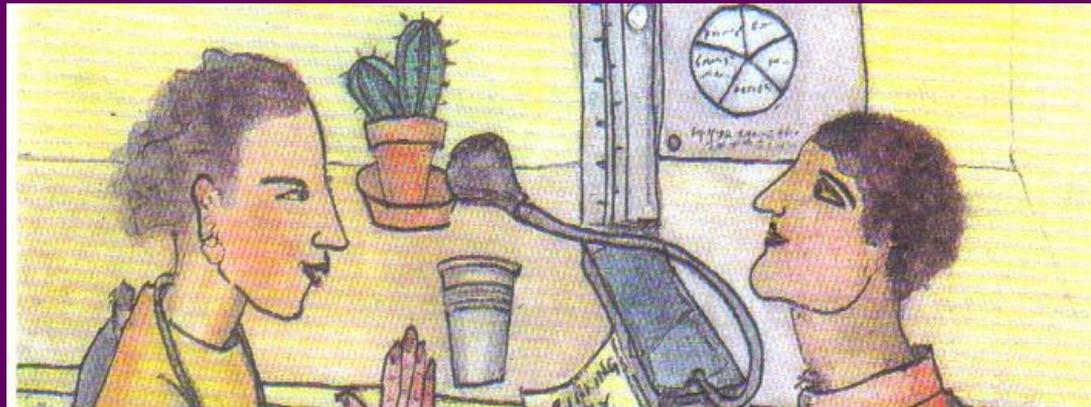
Clinical Outcomes in Routine Evaluation

Q6   I made plans to end my life

Clinical Outcomes in Routine Evaluation
Q7   I have had difficulty getting to sleep or staying asleep
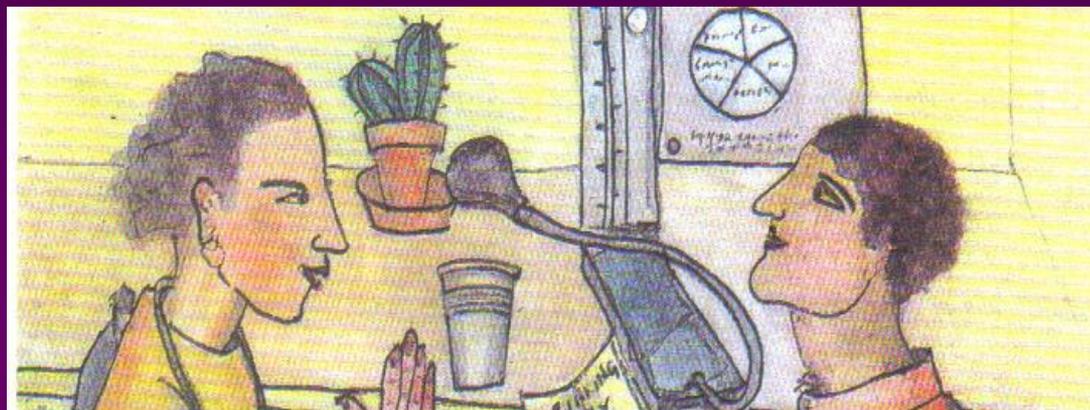
Social Satisfaction Questionaire
Q1   How satisfied are you with your accommodation?

Q6   How satisfied are you with your closest relationship in life *(eg. spouse, partner, lover, parent, best friend)* ?

T- test Baseline and 3mth Means

	n=	mean	95% CI	Sig. p<
LDQ				
baseline	758	17.1	16.4 – 17.7	.000
3mth	75	6.5	4.6 – 8.3	
CORE				
baseline	779	21.3	20.7 – 21.9	.000
3mth	75	14.0	11.9 – 16.2	
SSQ				
baseline	731	13.7	13.3 – 14.1	.000
3mth	74	15.0	13.6 – 16.4	

Frequency of Scores at Assessment and 3mth
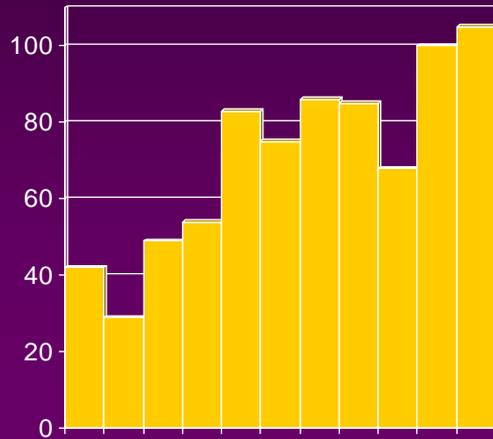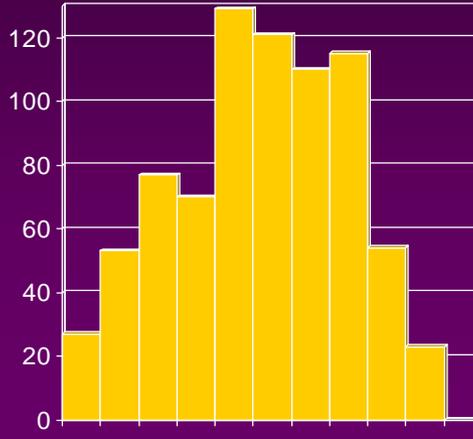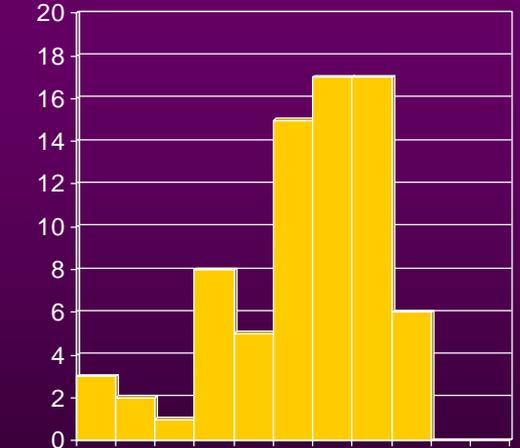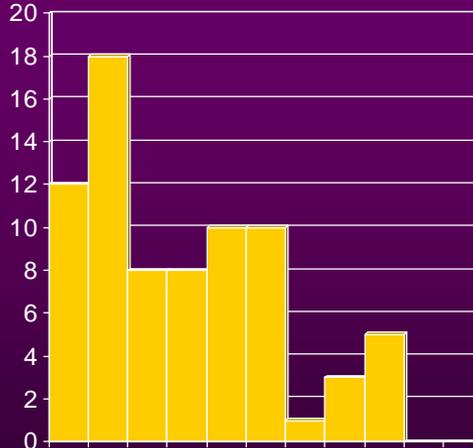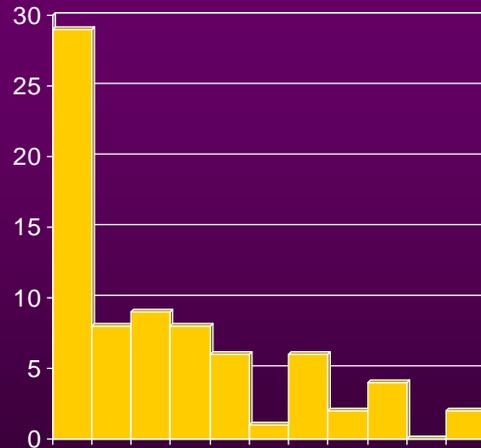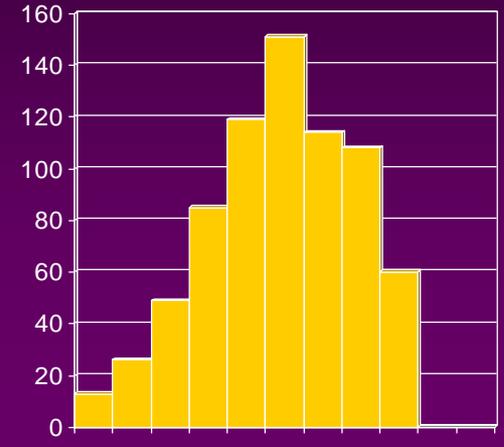
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Change from Assessment to 3mth & 12mth
heroin user n=60 alcohol users n=41

	assess		3mth		12mth		statistical sig.					
	H	A	H	A	H	A	a>3		3>12		a>12	
days used	5.7	4.6	3.4	2.5	2.2	2.4	✓	✓	✓	✗	✓	✓
grams	0.7	174	0.3	121	0.2	88	✓	✗	✗	✗	✓	✓
abs. 1wk	13%	17%	43%	37%	55%	42%	-	-	-	-	-	-
LDQ	19.7	17.6	11.8	11.6	10.6	10.4	✓	✓	✗	✗	✓	✓
GHQ	7.9	6.9	5.4	4.1	4.9	3.0	✓	✓	✗	✗	✓	✓
SSQ	8.9	8.2	8.1	7.0	7.6	6.4	✗	✗	✗	✗	✓	✓

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Source: Tober G. (2000) *PhD Thesis*

Life Events pre and post treatment

Total Negative Events
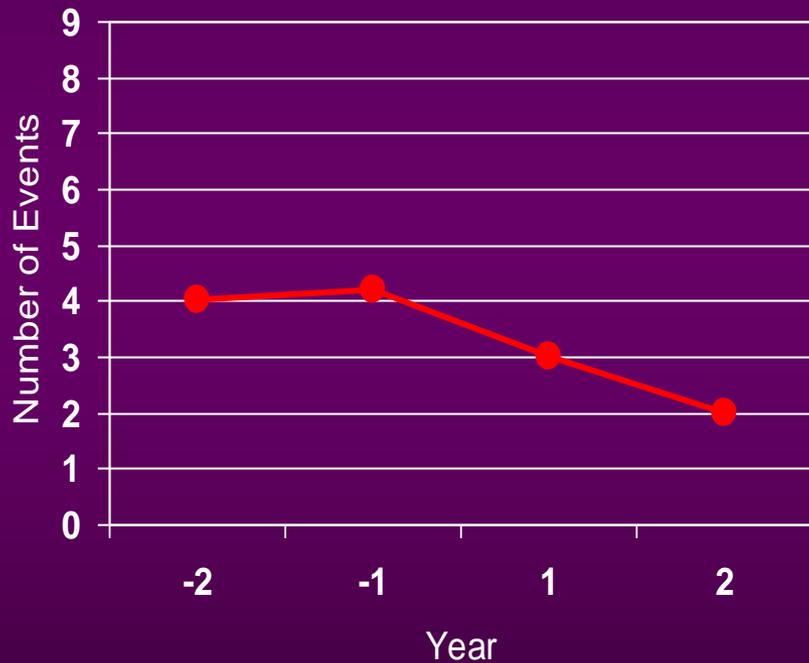
Total Positive Events
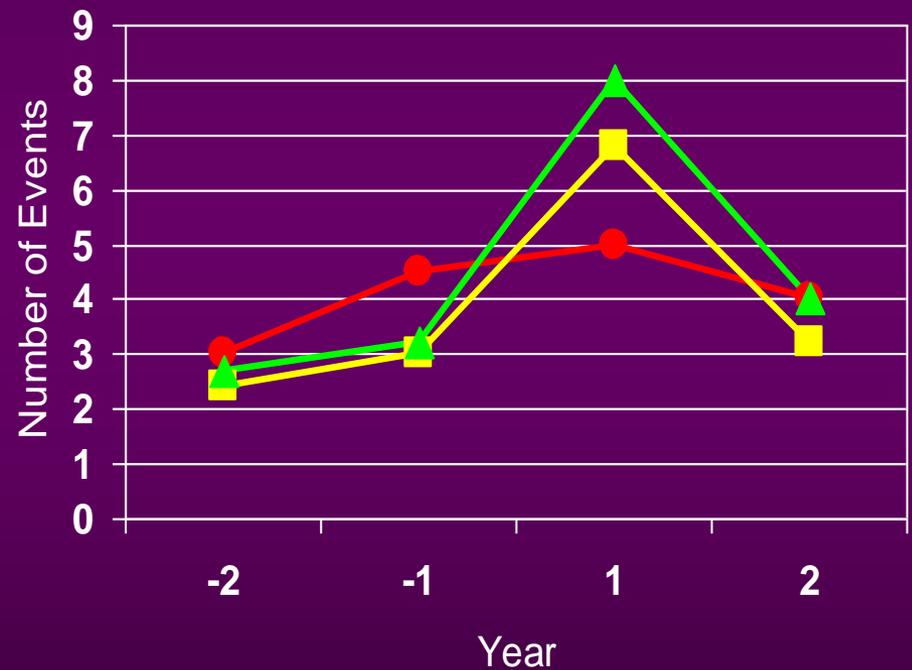
Source: Tucker & King (1999) *Changing Addictive Behaviour*

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Clinically Significant Change

Jacobson et al. (1999) proposed that in order to take account of baseline scores and measuring error clinically significant change should a) be statistically reliable b) end scores be in a normal population range.

	early changers: assessment to 3mth		late changers: 3mth to 12mth	
	Heroin n=59	Alcohol n=39	Heroin n=60	Alcohol n=40
statistically reliable change	52.5%	48.7%	35.0%	27.5%
clinically significant change	33.9%	28.2%	26.7%	20.0%

no statistically significant change differences between heroin and alcohol

Source: Tober G. (2000) *PhD Thesis*

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- Use of TOP imposed including exception reporting
- Sections are not single constructs so items stand alone
- Item selection is unbalanced
  a) 3/7 stimulant drugs
  b) 2 injecting
  c) 4 criminal justice
  d) 2 housing
- Items are of limited motivational value
- Scales of 0-20 are unusual
- Scales duplicate each other
- 3mth completion frequency is unnecessary
- Narrow completion time window

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Concluding Remarks

- RESULT is a package of existing scales that have demonstrable clinical usefulness and published psychometric properties

- Evidence supports collecting outcomes data on an intention to treat basis at 3mth, 12mth and then annually

- Self report is useful and probably adequate as a means of estimating treatment outcomes, but …

a) more research is needed to demonstrate the link between these outcomes and actual health or social gains

b) more research is needed to determine the key variables to profile different substance misuse populations

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