

Measuring the impact of mental health services

Chris Nas, senior policy advisor

E-mail: cnas@trimbos.nl;

Twitter: @CNas66

European Psychiatric Association

Nice, March 3rd 2018





EPA 2018
26th
EUROPEAN
CONGRESS
OF PSYCHIATRY



Faculty Disclosure

<i>Company Name</i>	<i>Honoraria/ Expenses</i>	<i>Ownership/ Equity Position</i>	<i>Employee</i>
Trimbos Institute			X
EPA	X		
Chris Nas Advies & Project		X	

Take home messages

- It is possible to collect meaningful outcome data on mental health treatment and support
- It is possible to compare teams and service providers on outcome data
- It is possible to learn from these comparisons on outcomes

In the Netherlands, service provider “transparency” is built upon four cornerstones



Cost effectiveness

=

Efficiency

+

Performance

=

Safety

+

Client opinion

+

Outcomes



Together, these cornerstones are an integral system for performance assessment



Providers collect data on *client* level.

Before sending data to *national databases*, they are encrypted

Results are *public* and presented on level of service providers.

It is *mandatory by law* for service providers to collect data and present them publicly.



Patient safety indicators are important and decided upon by Health Inspectorate

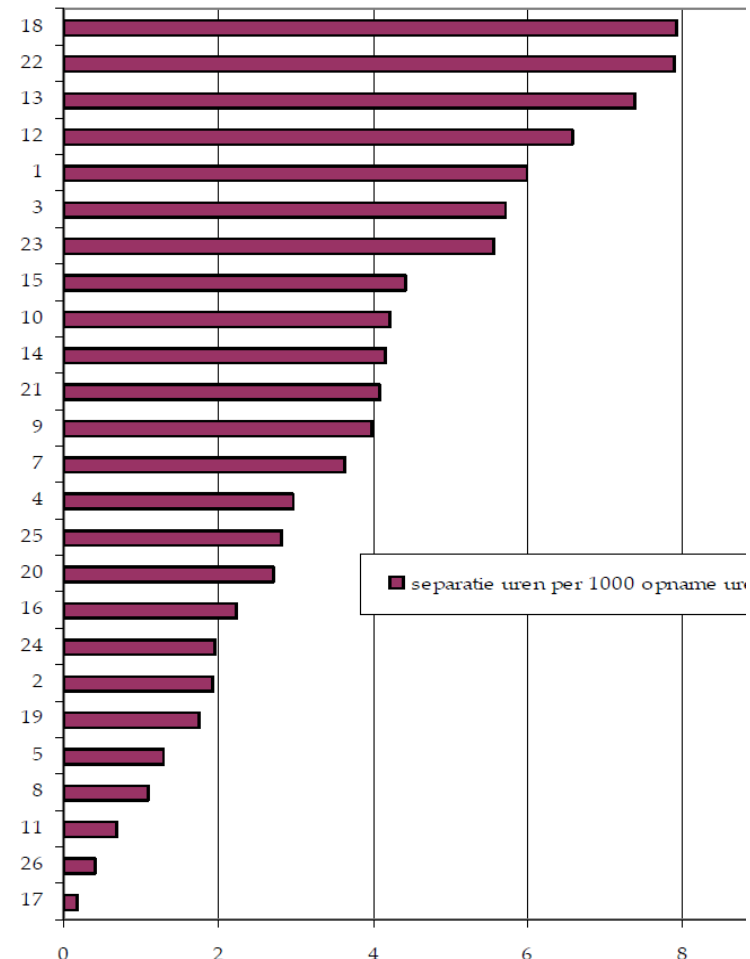
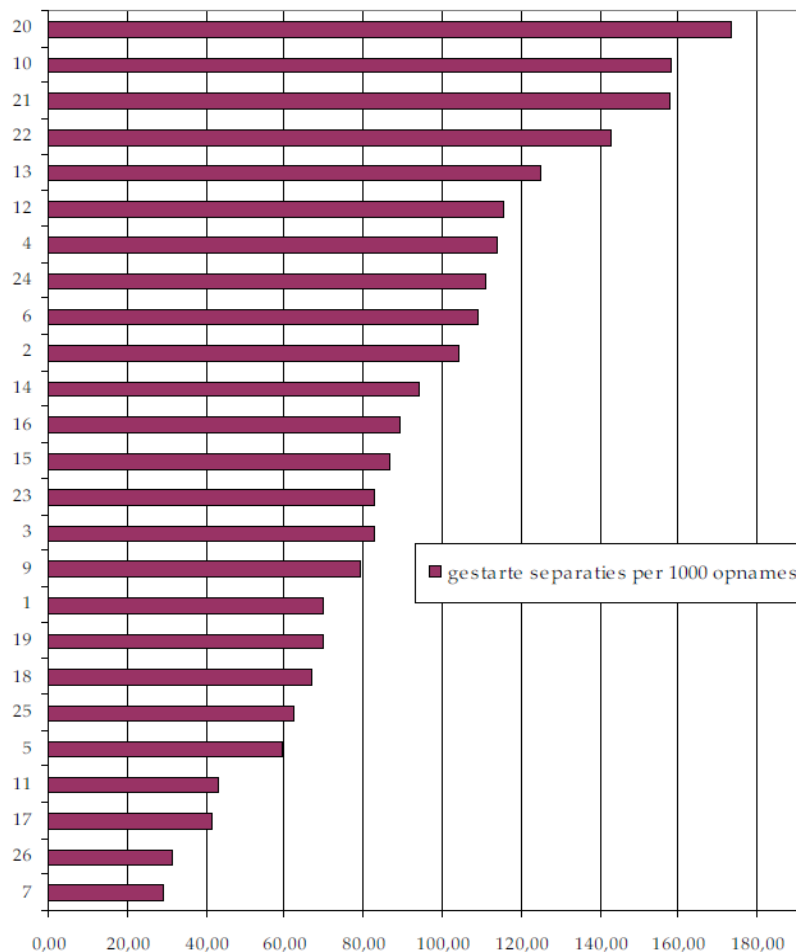
- Somatic screening (all patient admitted to clinical facilities)
- Medication safety
 - Availability up-to-date medication list during prescribing
 - Information on side effects of medication (CQ Index)
- Timely contact following discharge from a clinic
- Coercion (mandatory)
 - restraint
 - seclusion
 - forced medication
 - forced feeding



The benchmark on coercion shows a significant variation between hospitals.

Number of seclusions started per 1000 admissions in 2012

Total number of hours in seclusion per 1000 admission hours in 2012



In comparison to other countries, the Netherlands prefer seclusion above forced medication

Coercive measures used among 770 involuntary admitted patients in 10 European countries.

Country	Seclusion		Restraint		Forced medication		p ^a	Number of coercive measures applied	Number of coercive measures applied per patient
	N	%	N	%	N	%			
Germany	0	—	51	55	42	45	<.001	93	1.50
Bulgaria	4	4	17	15	90	81	<.001	111	1.13
Czech Republic	9	6	50	33	94	61	ns	153	1.66
Greece	0	—	131	69	59	31	<.001	190	1.64
Italy	19	19	24	24	59	58	<.001	102	1.36
Lithuania	0	—	9	27	24	73	ns	33	1.32
Poland	0	—	83	32	174	68	<.001	257	2.86
Spain	10	5	82	37	129	58	ns	221	2.51
United Kingdom	79	30	68	26	113	43	<.001	260	2.74
Sweden	1	2	7	17	34	81	.004	42	1.45
Total	122	8	522	36	818	56		1,462	1.90

^a For the difference (Pearson chi square) in the pattern of applied coercive measures compared with other countries investigated

Source: Raboch, J., L. Kališová, A. Nawka, E. Kitzlerová, G. Onchev, A. Karastergiou and F. Torres-Gonzales (2010), "Use of coercive measures during involuntary hospitalization: findings from ten European countries", *Psychiatric Services*, 61(10), 1012-1017.

Client opinions as measured by CQ Index

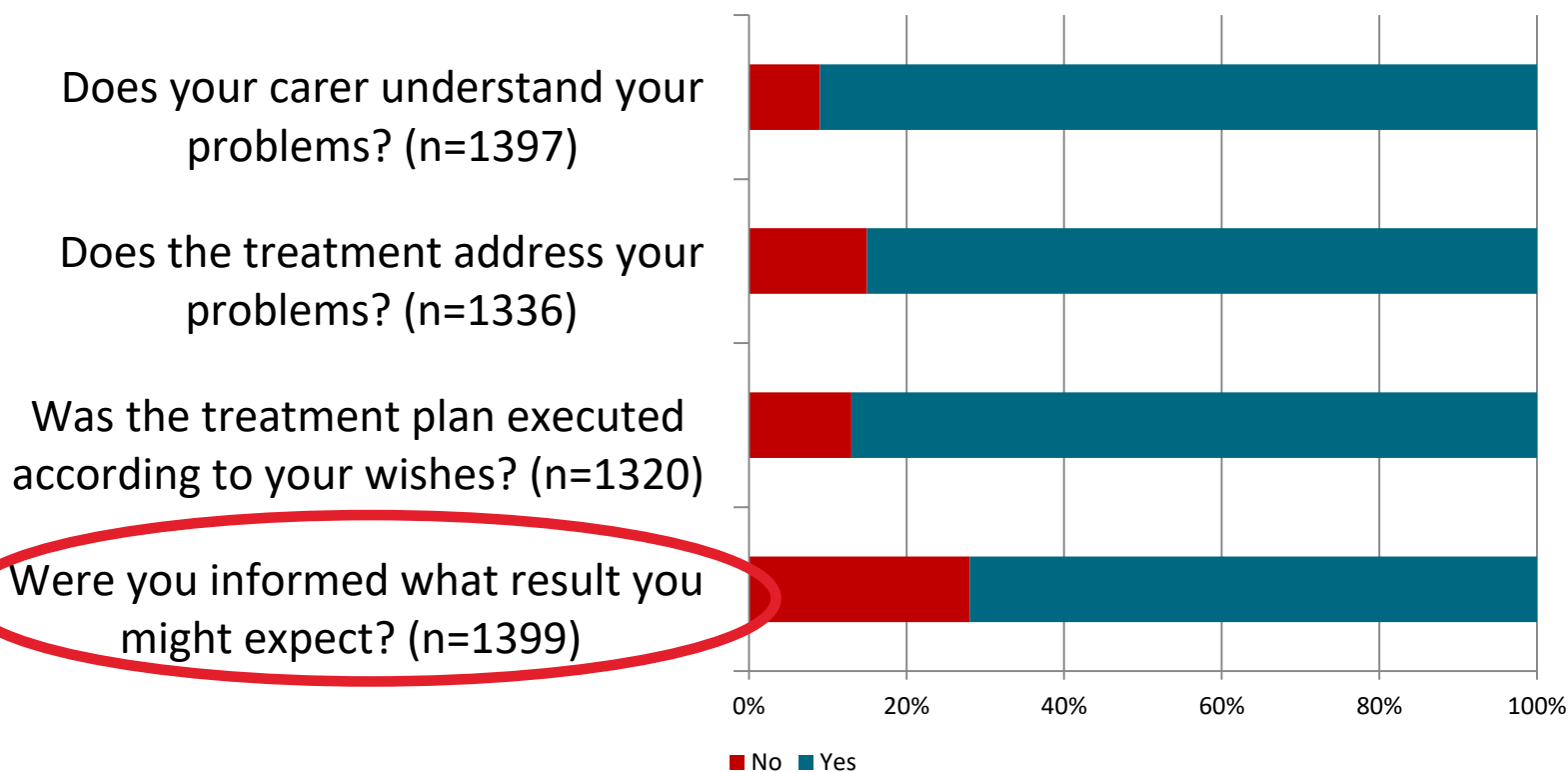
Standardised questionnaire with items:

- freedom of choice between professionals/treatments
- informed consent
- fulfilment of wishes in care delivered
- evaluation/adjustment of treatment/support
- coordination of care
- approach of clients by professionals
- housing and living conditions in a clinical setting or sheltered housing



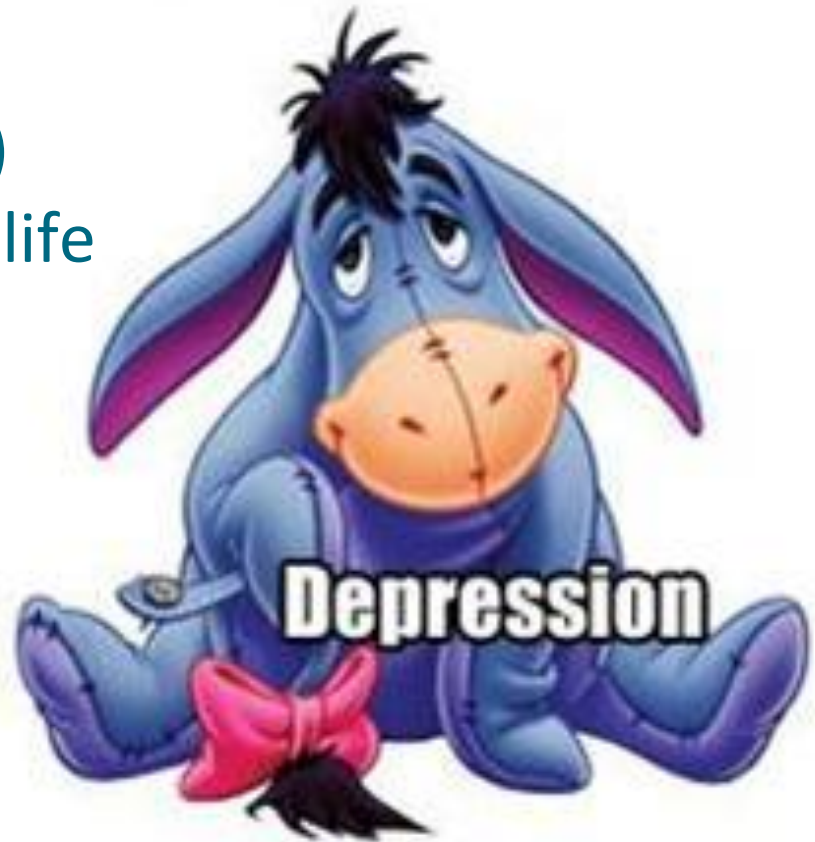
Over 85% of people using outpatient mental health care find their treatment appropriate and according to wish

Percentage of answers to questions about shared decision making and execution of treatment plan in out-patient care for common mental disorders in 2009.



Outcome measures can be different for client groups

- Symptom reduction
(common mental disorders)
- daily functioning/quality of life
(severe mental ill health)
- parental stress
(children/adolescents)
- craving (addiction)
- risk (forensic care)



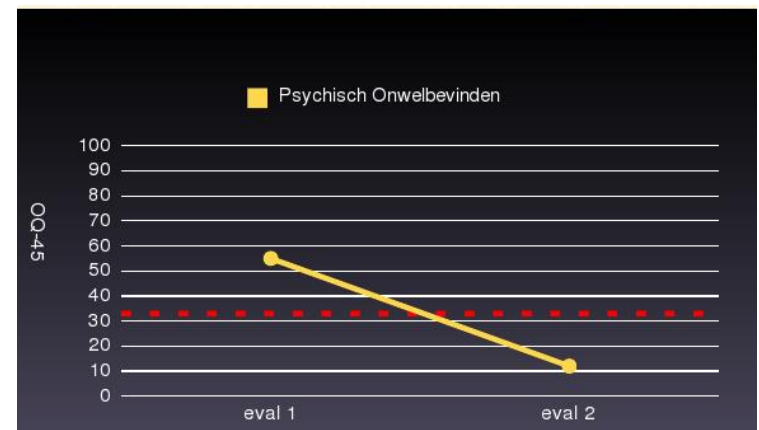
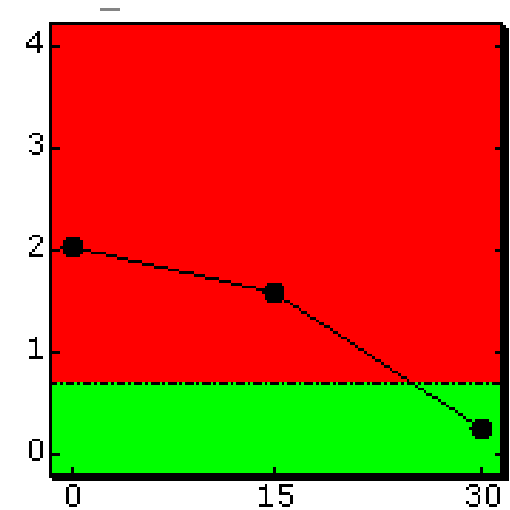
Outcome measurements are first and foremost to aid clients and professionals in mental health services

Clients fill in questionnaires

- at the beginning,
- during and
- end of treatment or support.

Measuring:

- reduction of symptoms
- functioning in daily life
- quality of life



Factsheet	Factsheet	Factsheet
A t/m G	H t/m M	N t/m Y
3DMLS-SNL 20150515	HADS 20150515	NOSIK 20150515
3DMSPL-ACC 20150515	HADS-A 20160422	OBVL 20150101
ASI-gebr 20150515	HCR20 20150701	OQ45 20160201
BPRS 20150515	HKT30 20150515	OQ45-sd 20160422
BSI 20160422	HKT-R 20161017	PANSS 20150515
CANSAS 20150515	HoNOS-12 20160422	PI-DICTEE 20150515
CBCL1-5-5 20150101	HoNOS65 20170101	RAFGGZ (vw) 20150515
CBCL-6-18 20150515	HoNOSCA 20150515	RAND36 20150101
CORE-P 20150515	IFBE 20160616	SCL90 20170101
CQiv-amb 20150924	Kidscr27P 20150515	SDQ-P 20150515
CQI-GGZ-VZ 20170701	Kidscr27S 20150515	SDQ-S11-17 20150515
C-TRF 20150515	KKL 201510515	SDQ-T 20150515
DASS21 20160707	L-QOL 20160422	SF36 20150101
DASS42 20160422	LSCMI 20160307	SPsy-prob 20150515
DROS 20151203	MANSA-7 20150515	SQ48 20160422
EDE-Q 20170101	MANSA-12ph 20150515	SSCQ 20150515
EDIZ 20170101	MANSA-12vn 20160422	START 20150701
EMT 20150515	MANSA-16 20150401	SVR20 20150515
EQ5D 20150515	MATE1 20151112	TRF 20150515
EUASI-gebr 20150515	MATE7 20150515	VerkorteDROS 20150515
FARE 20170310	MATE10 20150515	YSR 20150515
GDS15 20150515	MiddelenMatrix 20170101	

... with many different instruments to use for different groups



Quality of Life questionnaire (QoL+)

Could you please tell how satisfied you are with

- | | | | | | | | | |
|----|----------------------------------|---|---|---|---|---|---|---|
| 1) | your housing situation? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2) | your relations with people? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3) | your physical health? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4) | your mental health? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5) | your financial situation? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6) | your work? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7) | your life in general? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8) | the support you receive? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

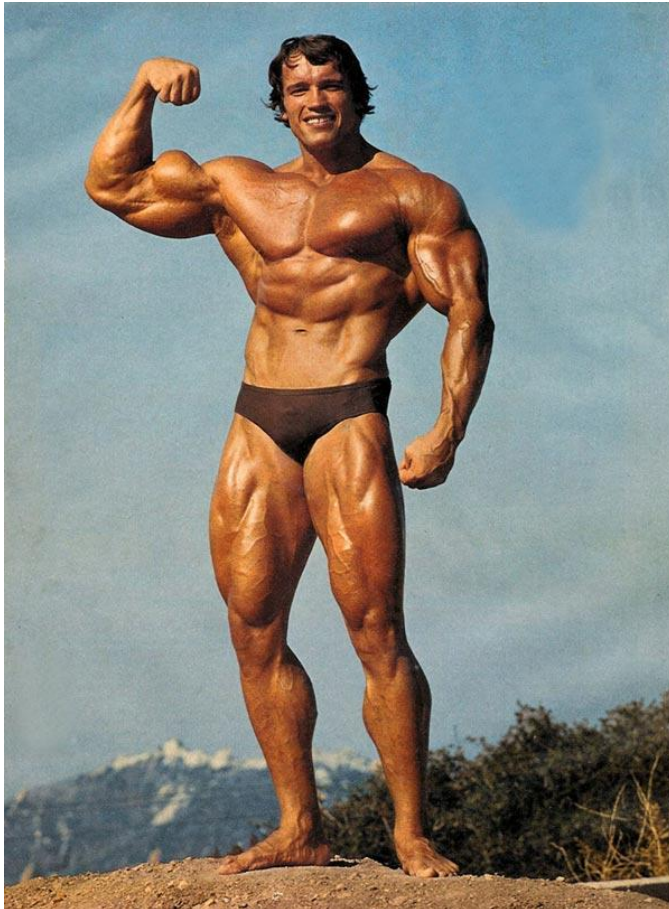
Collecting and analysing outcome data to learn from each other is possible and meaningful

Clinical recovery (according to RCI)	A	B	C	D
% Recovered	31%	39%	23%	28%
% Reliable improved	11%	13%	19%	21%
% No change	55%	43%	50%	43%
% Reliable aggravated	4%	6%	9%	8%

Results of a pilot in 2011 of 4 mental health service providers in long term mental health care on the basis of HONOS questionnaires. Not corrected or standardised for case mix. RCI = Reliable Change Index (RCI).

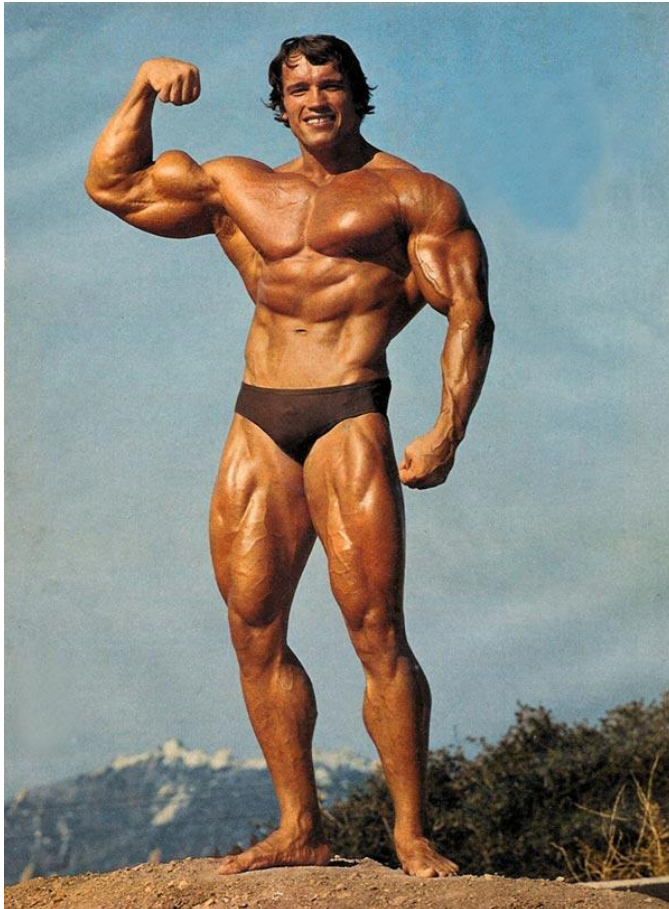
In research, accumulated outcome data could be very useful. New methodology needed !

RCT test person

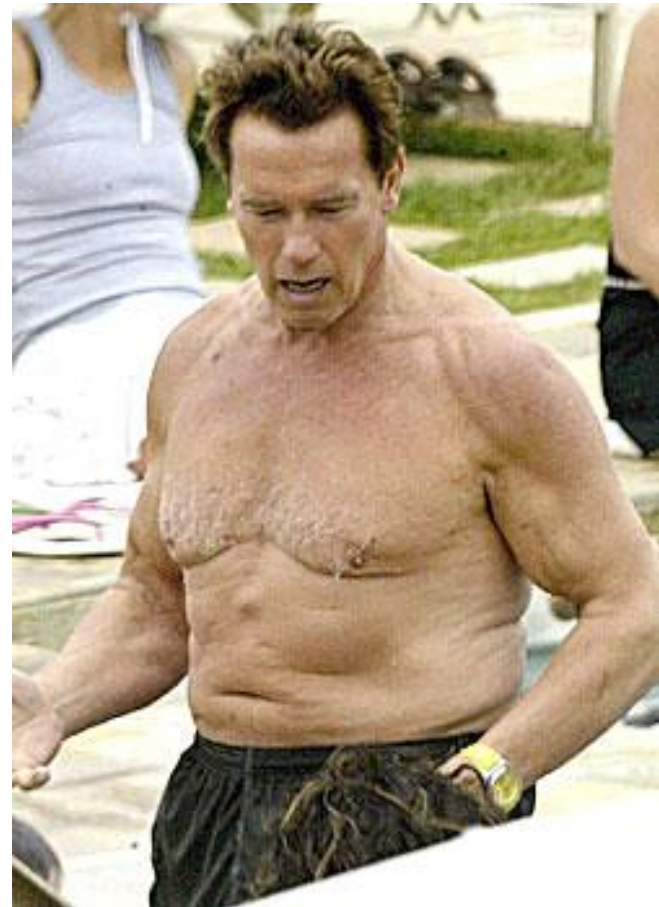


In research, accumulated outcome data could be very useful. New methodology needed !

RCT test person



Real person



In this randomised controlled trial in addiction care, CBT is more cost effective than MDFT ...

Main outcome measure in adolescents according to treatment condition ($n = 109$)

	MDFT Mean (sd)	CBT Mean (sd)
Cannabis use past 90 days (days)		
Baseline	63.1 (22.8)	62.3 (23.6)
Month 3	42.0 (23.7)	45.4 (23.0)
Month 6	40.6 (21.8)	42.9 (20.6)
Month 12	43.0 (33.3)	47.4 (33.3)
Cannabis use past 90 days ('joints')		
Baseline	168.0 (129.6)	155.1 (128.7)
Month 3	108.2 (89.0)	106.8 (82.3)
Month 6	108.8 (134.5)	92.9 (64.6)
Month 12	91.2 (94.2)	96.0 (100.8)
Property/violent crimes past 90 days		
Baseline	6.3 (13.4)	6.6 (18.2)
Month 3	4.2 (3.8)	4.9 (7.6)
Month 6	3.9 (3.8)	3.4 (3.4)
Month 12	1.7 (3.1)	2.1 (4.2)
	MDFT (%)	CBT (%)
Treatment response		
Month 3	51.6%	43.6%
Month 6	58.9%	54.8%
Month 12	41.8%	44.4%
Treatment recovery		
Month 3	9.1%	7.4%
Month 6	5.5%	3.7%
Month 12	14.5%	5.6%

RCT compares MDFT and CBT on outcomes for youths between 13 and 18 years old

There is no significant difference between MDFT and CBT for response or recovery.

However, MDFT costs more time and money than CBT (3-4 times)

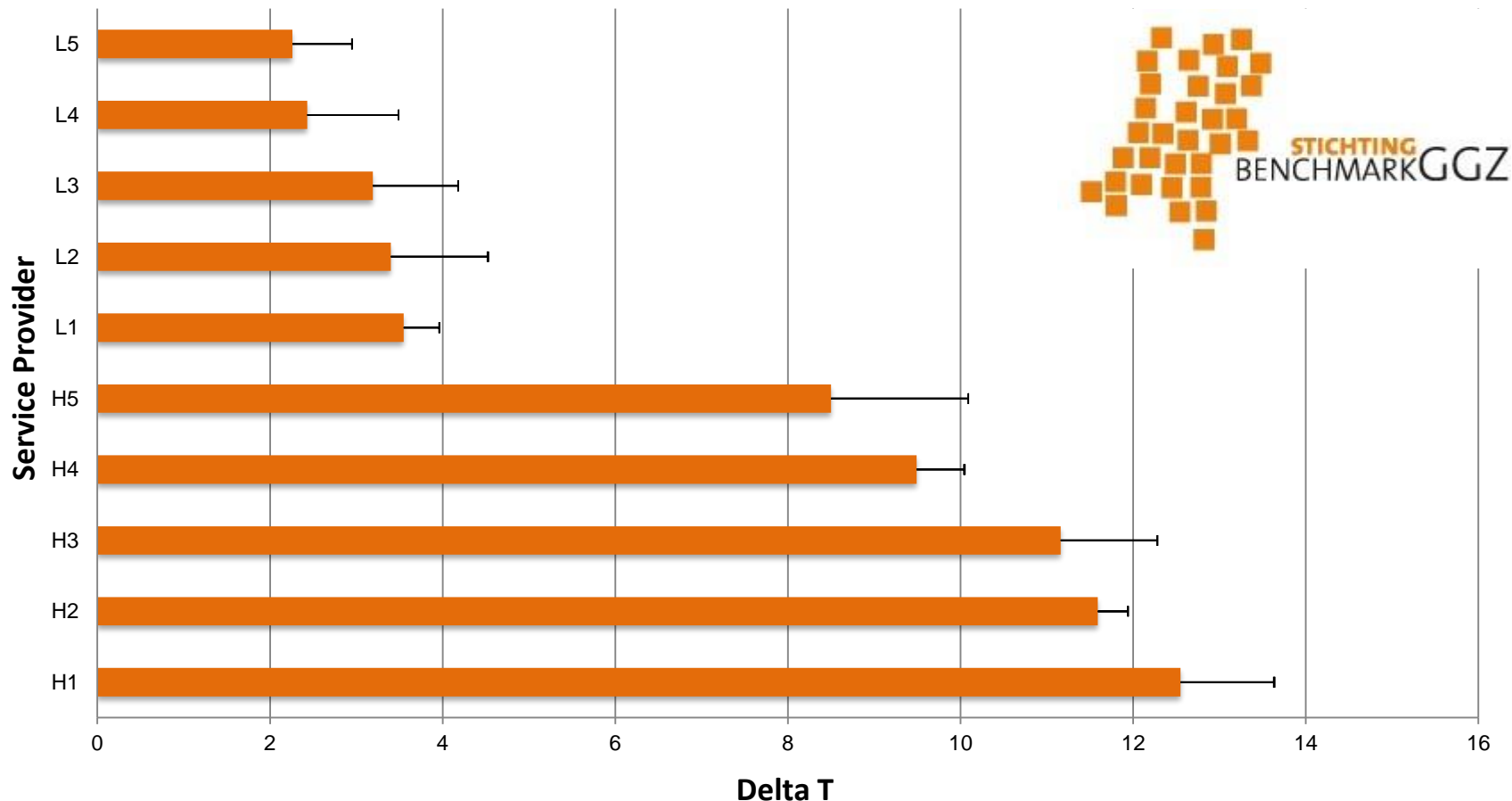
... however, post hoc analysis showed a different reality when moderators are taken into account.

Baseline patient characteristics	Change in cannabis use (joints) ^b			
	N	MDFT ^c mean (joints)	N	CBT ^c mean (joints)
Age				
13–16	29	–127.8	27	–29.9
17–18	26	–19.9	27	–88.2
Violent and/or property crimes				
No	22	–4.9	29	–51.7
Yes	30	–125.3	24	–71.2

“The RCT showed that MDFT and CBT were equally effective in reducing cannabis use. The post hoc analysis strongly suggests that age, disruptive behaviour and internalizing disorders are important treatment effect moderators. This gives directions for future patient treatment matching”

Accumulation of outcome data is an opportunity for payers and providers to discuss performance

Variation between highest and lowest Delta-T in adults with common mental disorders between November 2012 and April 2013



Accumulation of outcome data is an opportunity for payers and providers to discuss performance

Variation in treatment effect (Delta – T) between service providers for completed care pathways in the treatment of adults with common mental disorders

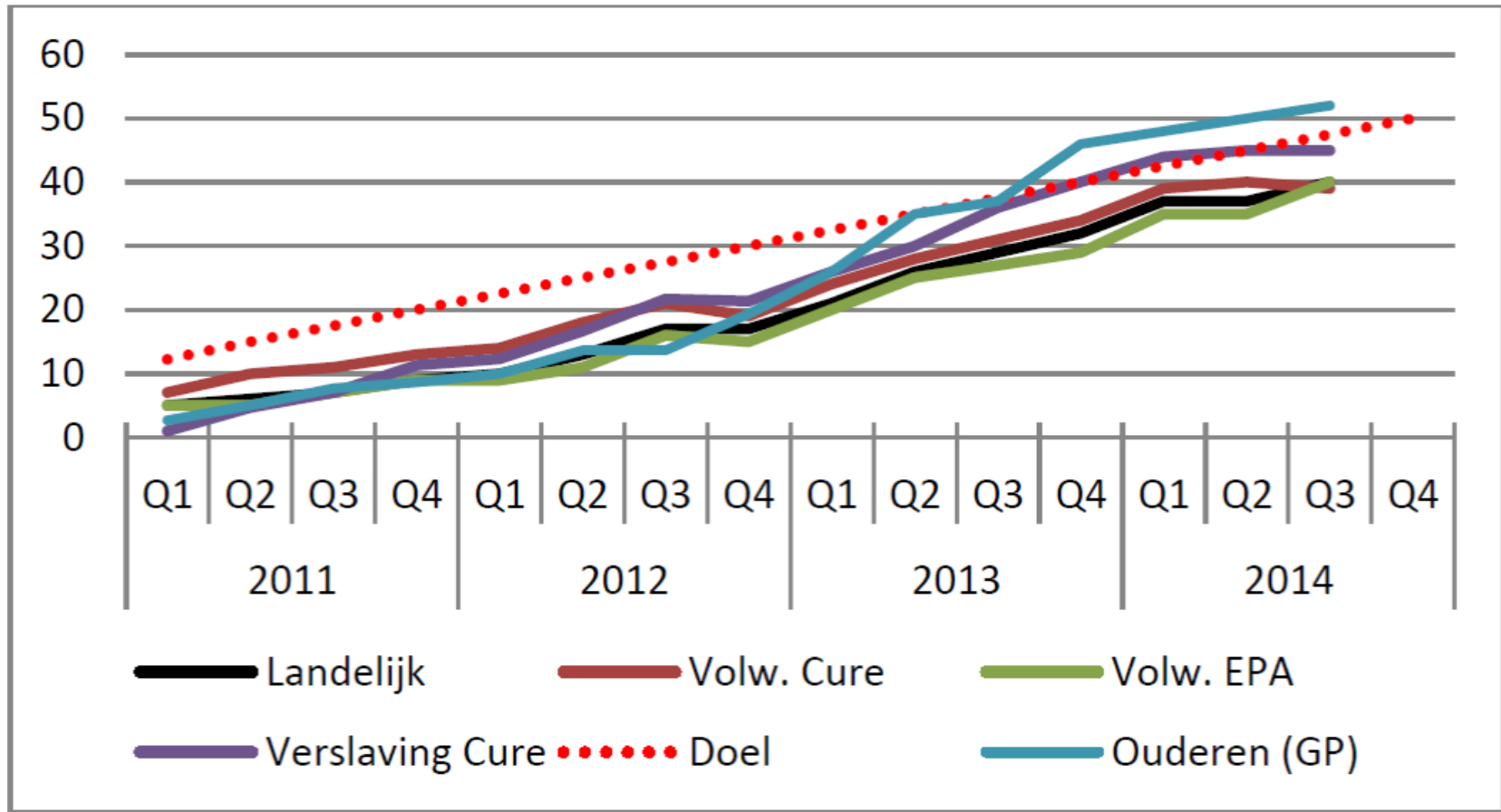


	Number	ΔT	(95%)	T-start	T-end
National average	42600	8.69	(8.59 - 8.78)	49.23	40.54
Mental health service provider A	6280	11.57	(11.30 - 11.84)	51.20	39.64
Mental health service provider B	767	10.62	(9.94 - 11.31)	51.60	40.97
Mental health service provider C	558	10.26	(9.37 - 11.16)	52.03	41.76
Mental health service provider D	3489	9.85	(9.55 - 10.15)	47.90	38.05
Mental health service provider E	439	9.80	(8.80 - 10.80)	52.12	42.32
Mental health service provider F	580	9.61	(8.74 - 10.48)	52.60	42.99
Mental health service provider G	741	6.56	(5.92 - 7.19)	48.01	41.46
Mental health service provider H	978	6.47	(5.85 - 7.09)	50.88	44.41
Mental health service provider I	594	6.42	(5.70 - 7.14)	49.93	43.52
Mental health service provider K	1196	6.41	(5.88 - 6.95)	49.33	42.92
Mental health service provider P	89	3.93	(1.72 - 6.14)	48.92	44.99

The “in-house reporting” is under way, enabling learning within mental health service providers

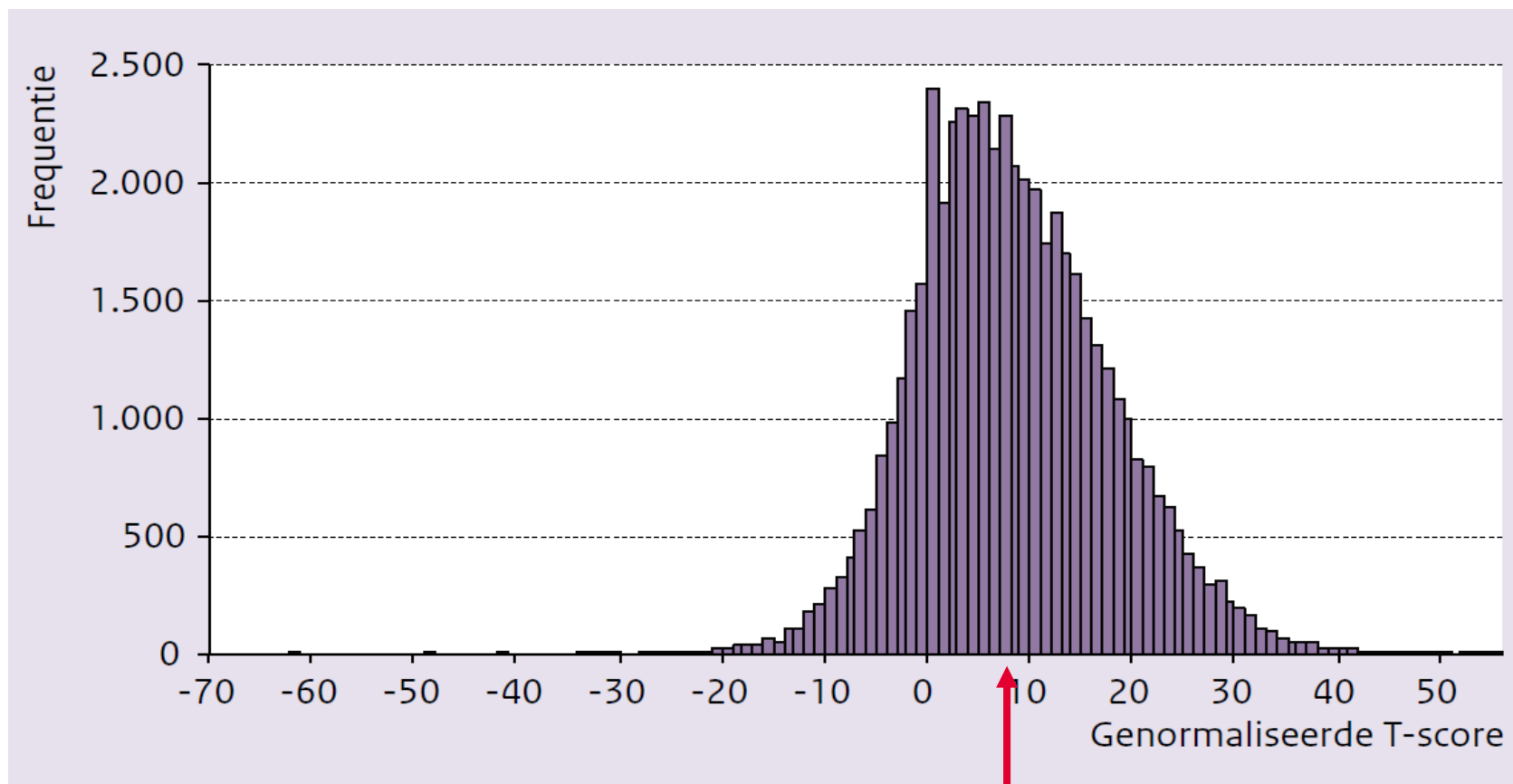
Details cliëntenpopulatie		Behandeluitk. (ΔT)	Cijfer CTO	KostprijsTotaal	DuurTotaal (minuten)	ΔT	CTO	€	Duur
n= 573		9,35	8,5	€ 1.196	682	Rangorde			
n= 33		13,80		€ 992	613	1		2	3
n= 42		12,55		€ 1.515	900	2		12	12
n= 56		10,91		€ 1.168	709	3		7	9
n= 37		10,06	9,2	€ 1.069	646	4	1	3	6
n= 20		10,03		€ 892	549	5		1	1
n= 46		9,95		€ 1.110	612	6		4	2
n= 99		9,53		€ 1.157	635	7		5	4
n= 54		8,93	8,8	€ 1.198	662	8	2	8	7
n= 34		8,92		€ 1.166	639	9		6	5
n= 94		7,38	8,2	€ 1.306	731	10	3	11	11
n= 43		5,51		€ 1.259	697	11		9	8
n= 15		4,98		€ 1.294	722	12		10	10

Completed sets outcomes collected by Mental Health Benchmark Institute is above 40% in 2014

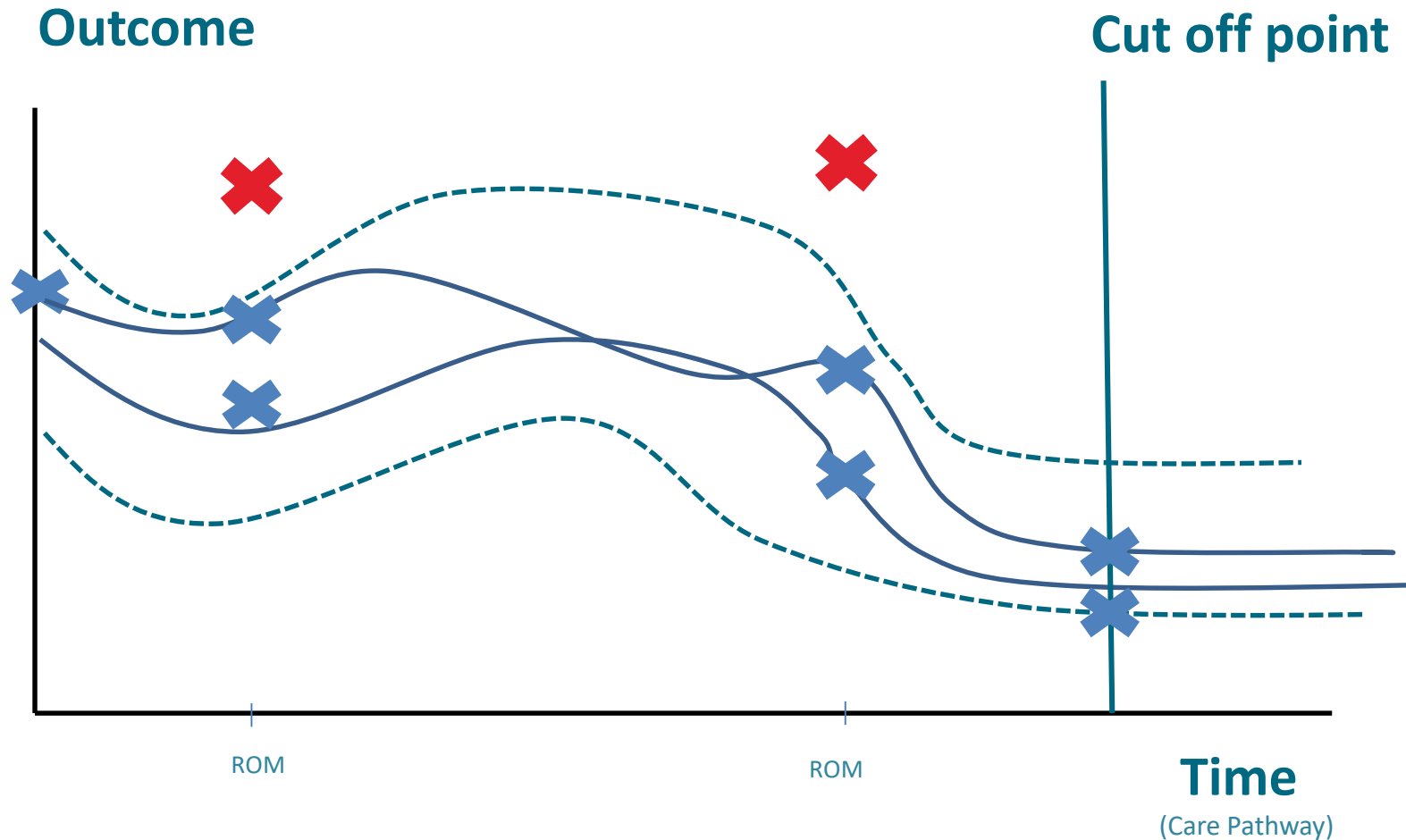


For CMD, 78% of patients had positive outcomes with an average improvement of 7.8 (8.0 is very good).

Frequency distribution of treatment effect in closed DRG's for common mental disorders between 1 January 2012 and 30 June 2013, expressed in difference between start and end of treatment (normalised T-score) .



What would be the ideal situation to be able to determine if treatment / support is appropriate?



Although milestones have been reached in the past eight years, there is criticism too

From a professional point of view, the system disowns health professionals:

- Data collection process does not relate to clinical practice;
- Too much a systems perspective, not a clinical perspective;

From a scientific point of view, the data collection does not serve clinical decision making and continuous improvement:

- Post hoc correction of case mix is scientifically not sound.
- Too much bias (client/professional/instrument/selection) for using (P)ROM to make irreversible decisions.

To make the pendulum swing back, a Breakthrough Project for ROM started in 2014

- Aim is to increase use of ROM as an instrument for quality improvement in mental health
- Two national learning networks led by Trimbos colleagues:
 - Consisting of 15 – 20 teams
 - Experiment with implementation of PROMs
 - Following “breakthrough method”
 - Teams are supported intensively by experts to learn, analyze and improve the use of ROM



How to reconcile two legitimate perspectives on quality of care ?

- From the viewpoint of health workers, the limited resources (time) should be directed to collect meaningful data that enables them and their clients improve the ***noticeable quality*** of care on the spot. That is in the best interest of the client and professional.
- From the viewpoint of society, financial restrictions make it necessary to allocate resources to cost effective interventions. To do so, performance assessment in terms of ***measurable quality*** is needed. This is in the best interests of people paying taxes, insurance and out-of-pocket fees.

In 1863, Florence Nightingale already introduced outcome measurements for hospitals



“It is proposed that *one and the same form* should be used for each statistical element. Seven elements are required to enable us to tabulate the results of hospital experience:

1. Remaining in hospital on the first day of the year.
2. Admitted during the year.
3. ***Recovered or relieved*** during the year.
4. ***Discharged*** incurable, ***unrelieved***, for irregularities, or at their own request.
5. ***Died during the year.***
6. Remaining in hospital on the last day of the year.
7. Mean duration of cases in days and fractions of a day.”

Take home messages

- It is possible to collect outcome data on mental health treatment and support
- It is possible to compare teams and service providers on outcome data
- It is possible to learn from these comparison on outcomes
- **After 155 years, it is time to catch up.**

Measuring the impact of mental health services

Chris Nas, senior policy advisor

E-mail: cnas@trimbos.nl;

Twitter: @CNas66

European Psychiatric Association

Nice, March 3rd 2018

