



CleanMed

Creating Healing Environments

Europe
2018

Disclosure

Potential conflict of interest	None/see below
Relationships with commercial companies	Company names:
<ul style="list-style-type: none">• Sponsorship / research money• Fee or other financial compensation• Shareholder• Other relationship, (please specify)	<ul style="list-style-type: none">• None• None• None• None

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Preventing medicalisation and takeback schemes

- Prof Dr C Kramers: Preventing medicalisation
- Dr. K Mitkidis: Takeback schemes for pharmaceuticals informing regulation by behavioural science

Moderator:



Medicines in the environment

How bad is it?

What is the cause?

How do you prevent is?

What is the opinion of the patient?



How bad is it?

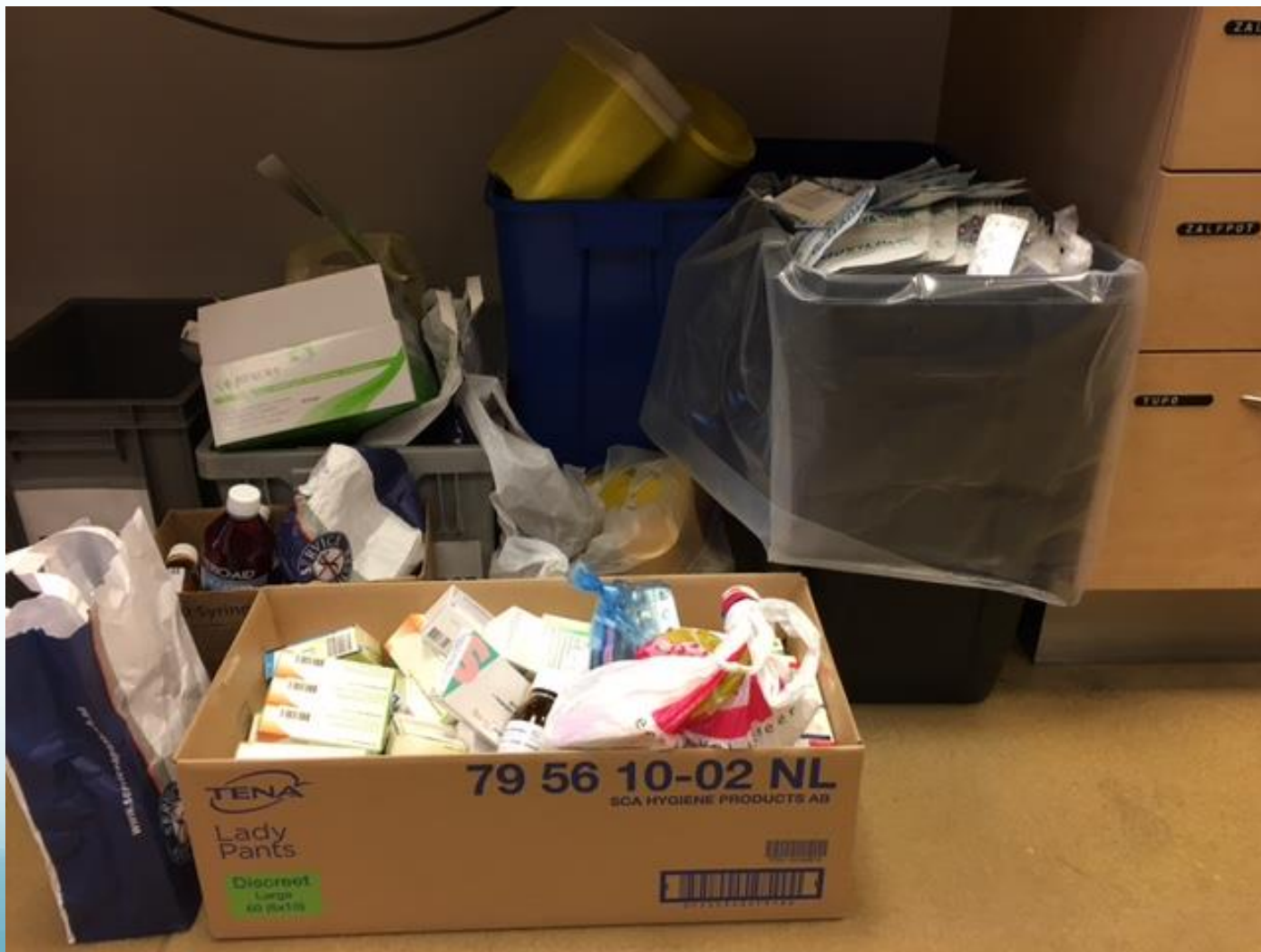
I wouldn't know

But when we find out it will be too late..

Antibiotics..



What is the cause?





Mr H

Diabetes, heart disease, COPD, neuropathy

Cardiologist (CWZ)

Pulmonologist (CWZ)

Internist (Radboud)

Neurologist (Radboud)



Mr H

Diabetes, heart disease, COPD, neuropathy

Gets his medication from:

GP

CWZ

Radboudumc



Mr H

Admitted in the CWZ

Abdominal pain, nausea, vomiting

Severe kidney disfunction



Mr H

Admitted in the CWZ

Abdominal pain, nausea, vomiting

Severe kidney disfunction

Letter 9-7 CWZ

Pantozol 2 x 80mg
ISMN 1 x 16 mg
Creon forte 3 x 1
Aspro cardio 1 x 100 mg
Simvastatine 1 x 20 mg
Zolpidem 1 x 10 mg
Spiriva puff 1 x 18 µg
Seretide 2 x 1 (geen dosis)
Flixonase 2 x 1
Neurontin 3 x 300 mg
New-ACE 2 x 20 mg
Furosemide 1 x 40 mg
Tildiem XR 1 x 200 mg
Selokeen ZOC 1 x 100 mg
Amlodipine 1 x 10 mg
Omnice 1 x 0,4 mg
Plavix 1 x 75 mg
Novomix 24-18 EH

According to me 2-7 Radboud

Pantozol 1 x 40 mg
ISMN ret 1 x 60 mg
Creon forte 1 x 1
Aspro cardio 1 x 100 mg
Simvastatine 1 x 20 mg
Zolpidem 1 x 10 mg

Seretide 2 x 1 à 2

Neurontin 3 x 300 mg
New-ACE 1 x 20 mg
Furosemide 1 x 80 mg
Tildiem 1 x 200 mg
Selokeen ZOC 1 x 100 mg

Omnice 1 x 0,4 mg
Plavix 1 x 75 mg
Novomix 24-18 EH

A few notes:

Uses 60 mg fosinopril instead of 20 mg

Has stopped amlodipine, because he had finished them

Uses all medication 50%, because he feels he uses too much medication..

Stopped gabapentine, does not work.

His cardiologist finds I should not change his medication..



Hyperpolypharmacy

Non adherence

Problems in medication verification

Evidence based medicine?

Wasted money

Environmental impact

Top 100 van geneesmiddelen o.b.v. het aantal DDD's in 2015

Raming voor de totale Zwv-populatie

		2011	2012	2013	2014	2015
Rang 2015	ATC-code					
1	A02BC01 Omeprazol (<i>Losec mups</i> ®)	355.085.300	337.196.200	373.600.500	399.708.200	421.653.300
2	C10AA01 Simvastatine (<i>Zocor</i> ®)	292.372.500	316.105.400	333.482.200	344.539.100	351.676.600
3	A11CC05 Colecalciferol (<i>Divisun</i> ®)	82.105.000	127.169.200	187.319.700	243.885.700	307.267.800
4	D02AX Overige emollientia en protectiva	228.326.600	250.111.900	289.511.300	287.940.600	303.950.600
5	B01AC06 Acetylsalicylzuur (<i>Aspirine-protect</i> ®)	199.721.400	211.830.100	223.270.300	230.412.400	228.545.500
6	C10AA05 Atorvastatine (<i>Lipitor</i> ®)	146.934.800	155.973.100	165.391.400	182.512.700	201.758.700
7	C08CA01 Amlodipine (<i>Norvasc</i> ®)	158.890.200	172.098.800	182.158.700	190.769.100	200.527.700
8	B03BB01 Foliuimzuur	194.721.700	191.212.800	189.847.000	191.221.100	186.755.500
9	A02BC02 Pantoprazol (<i>Pantozol</i> ®)	123.795.100	127.157.500	146.245.800	164.827.700	183.999.000
10	C07AB02 Metoprolol (<i>Selokeen zoc</i> ®)	178.025.200	180.611.300	179.304.000	176.565.200	174.471.800
11	S01XA20 Kunststranen en andere indifferente preparaten (<i>Vidisc</i> ®)	155.072.800	157.081.200	148.411.200	151.313.000	157.077.100
12	A10BA02 Metformine	140.176.800	145.291.100	149.421.400	149.319.100	151.207.300
13	C09AA02 Enalapril/enalapriilaat (<i>Renitec</i> ®)	148.705.600	148.614.500	147.755.200	144.889.400	140.723.300
14	C03AA03 Hydrochloorthiazide	123.908.000	127.447.100	126.196.100	125.888.900	123.746.000
15	B01AC08 Carbasalaatcalcium (<i>Ascal cardio-neuro</i> ®)	152.761.600	148.147.800	134.891.900	122.941.100	111.147.800
16	A12AX Calcium met vitamine d en/of andere middelen	58.747.400	76.983.800	89.041.700	99.946.900	108.886.700
17	G03AA07 Ethinylestradiol met levonorgestrel (<i>Microgynon</i> ®)	102.528.800	107.305.000	107.512.000	107.540.100	106.476.200
18	H03AA01 Levothyroxine (<i>Thyrax</i> ®)	90.891.900	97.052.600	100.382.900	102.946.000	104.978.200
19	C09AA04 Perindopril (<i>Coversyl arg</i> ®)	87.851.600	94.755.400	98.724.500	103.199.200	104.247.300
20	C09AA03 Lisinopril (<i>Zestril</i> ®)	85.166.300	89.992.800	93.750.500	97.067.300	101.612.700
21	C09CA01 Losartan (<i>Losanox</i> ®)	91.947.700	94.646.700	97.283.000	98.526.600	99.444.700
22	Y Niet ingevuld	50.768.000	62.936.900	78.872.500	83.736.500	93.761.400
23	C10AA07 Rosuvastatine (<i>Crestor</i> ®)	70.367.900	78.817.400	82.535.200	86.853.100	91.342.300
24	C09CA03 Valsartan (<i>Diovan</i> ®)	69.978.700	76.696.800	78.851.400	82.470.600	85.859.300
25	C03CA01 Furosemide (<i>Lasix</i> ®)	90.412.400	88.947.000	88.324.900	87.034.000	85.346.000
26	A02BC05 Esomeprazol (<i>Nexium</i> ®)	85.805.800	81.120.600	83.488.900	83.453.900	83.143.900
27	B03BA03 Hydroxocobalamine (<i>Hydrocobamine</i> ®)	61.864.100	68.082.300	70.293.900	74.913.200	79.424.000
28	A10BB09 Gliclazide (<i>Diamicron</i> ®)	47.398.900	46.523.200	48.492.200	62.037.000	75.815.200
29	C08CA05 Nifedipine (<i>Adalat oros</i> ®)	66.022.700	65.915.700	65.797.600	65.371.800	64.835.300
30	R03BB04 Tiotropium (<i>Spiriva</i> ®)	61.065.100	64.317.900	64.306.200	63.036.700	62.858.100
31	R01AD08 Fluticason (<i>Flixonase</i> ®)	53.383.200	54.520.600	54.142.600	56.788.800	59.428.100



How to prevent?

Zoeken



Formularium Disclaimer Contact

A Algemeen

- A01 nociceptieve pijn
- A01 postoperatieve pijn
- A01 Acute pijn bij kinderen (inclusief postoperatieve pijn)
- A10 bloeding onder coumarine
- A10 bloeding onder heparine/LMWH
- A12.1 Anafylaxie
- A44 maagbescherming bij NSAID-gebruik
- A44 vitamine D deficiëntie

corticosteroidstress schema bij operatie, procedure of ingreep bij volwassenen

corticosteroidstress schema op SEH en/of tijdens ziekenhuisopname

infuusbeleid

Palliatieve sedatie

Bijnierinsufficiëntie bij kinderen: perioperatief corticosteroidenschema

B Bloed en bloedvormende organen

D Spijverteringsorganen

F Oog

H Oor

corticosteroidstress schema bij operatie, procedure of ingreep bij volwassenen

Inleiding

Corticosteroidstress schema Bij operatie, procedure of ingreep bij volwassenen Een Addisonse crisis is een levensbedreigende situatie door acuut hypocortisolisme, gekenmerkt door hypotensie, shock, bewustzijnsdaling, braken, diarree en koorts. Dit treedt op indien de bijrijner niet voldoende cortisol produceert in een situatie van stress (operatie, ziekte met koorts, ongewoon grote fysieke inspanning, partus, psychische stress), en wordt voorkomen door een glucocorticoid stressschema te geven. Een glucocorticoid stressschema moet bij patiënten met chronische suppletie van glucocorticoiden...*(lees verder)*

Behandelwijzer

1. Grote operatie zoals een laparotomie of een thoracotomie
2. Kleine operatie zoals een liesbreukcorrectie
3. Coloscopie
4. Overige ingrepen: in overleg met voorschrijvend behandelaar

Medicatie

Prednisolon (Di-adreson-F-prednisolon (DAF®))

Dosis en toediening

Prednisolon (Di-adreson-F-prednisolon (DAF®))

Dag OK: orale onderhoudsdosis glucocorticoid om 07.00 uur laten innemen.
Dag OK: 3 dd 25 mg prednisolon i.v. (bij inleiding OK 1e gift, volgende giften elke 8 uur.)
Dag 1: 2 dd 25 mg prednisolon i.v.
Dag 2: 2 dd 12.5 mg prednisolon i.v. of 2 dd 12.5 mg prednisolon oraal.
Dag 3: hervatten onderhoudsdosis, verdrievoudigd, afbouw in 1 week naar onderhoudsdosis.

Co-Medicaties

- niet selectief NSAID
- diclofenac
- ibuprofen
- meloxicam
- naproxen

Patiëntkenmerk/Comorbiditeit

diabetes mellitus
lactatie
myasthenie
ulcus pepticum
zwangerschap

Advies Co-Medicatie

niet selectief NSAID

Indien leeftijd >60 jaar geef protonpompremmer (omeprazol 20 mg) als gastroprotectie.

Gain of healthy life time expectancy

Profile

Date of Birth: Day: 18, Month: 9, Year: 1938

Gender: male female

Ethnic group: White or not stated

Height (m): 1.84 (6' 0.5" (72.5")) Weight (kg): 70.1 (11st 0.5 (154.5 lb)) BMI: 20.7

Townsend quintile (3 if unknown): 2

Do you smoke? No

Total Cholesterol: 5.5 mmol/L

HDL Cholesterol: 1.2

NonHDL Cholesterol: 4.3

Systolic Blood Pressure: 160 mm Hg

Have you received blood pressure treatment?

Do you suffer from diabetes?

Does a close relative under 60 suffer from CVD?

Do you have a chronic kidney disease?


Have you suffered atrial fibrillation?

Do you have rheumatoid arthritis?

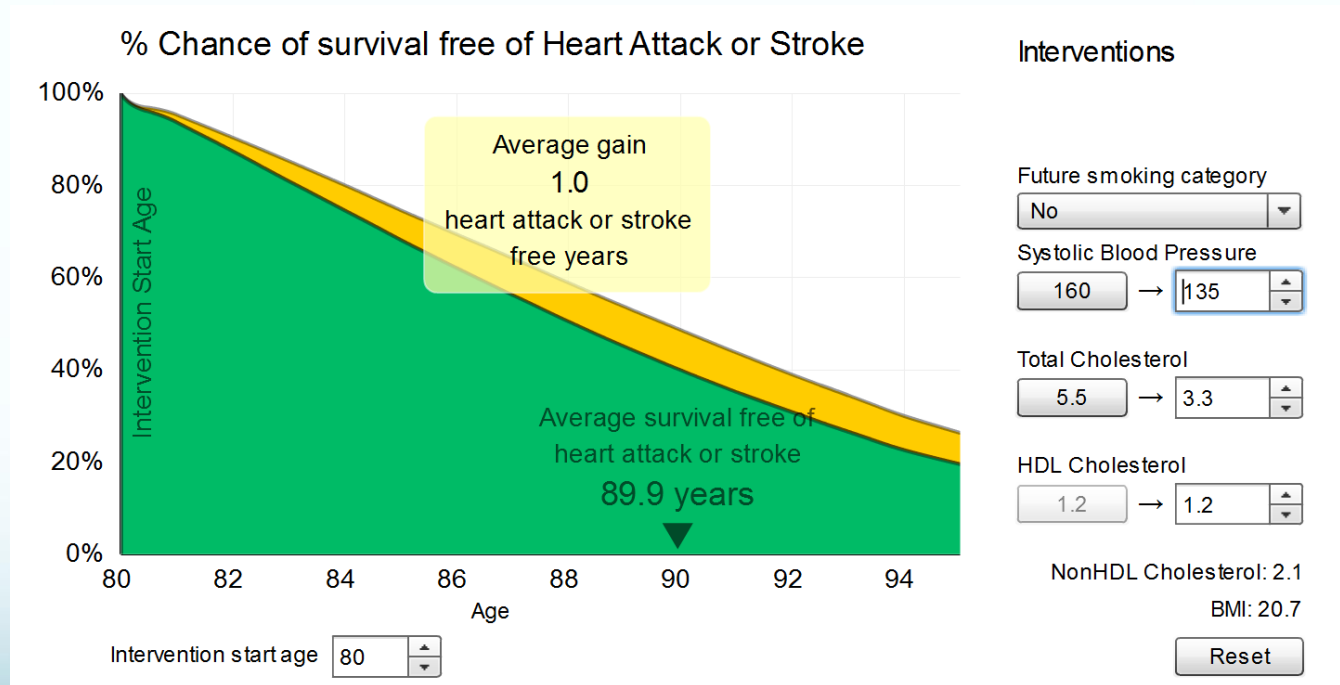
I have never suffered from Cardiovascular Disease

I have read the [terms and conditions](#)

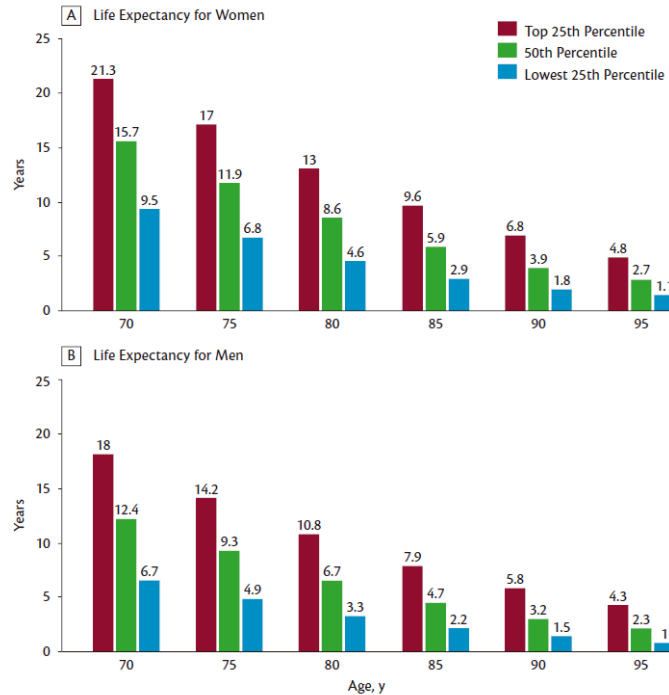
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Gain of healthy life time expectancy



Time to benefit



Figuur 1 Schatting van resterende levensverwachting per bereikte leeftijd, geslacht en comorbiditeit, waarbij de donkerste balk de meest fitte patiënten aangeeft en de lichtste balk de patiënten met de meeste comorbiditeit. A: vrouwen, B: mannen⁴⁵

Placebo effect?

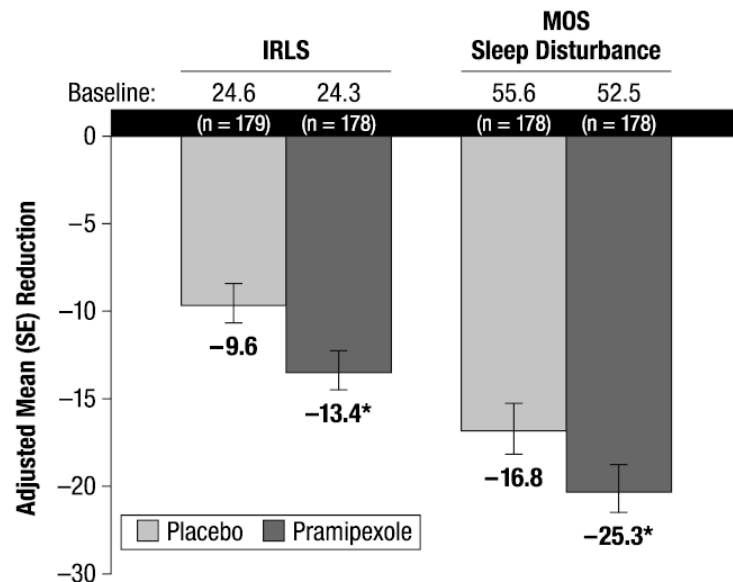
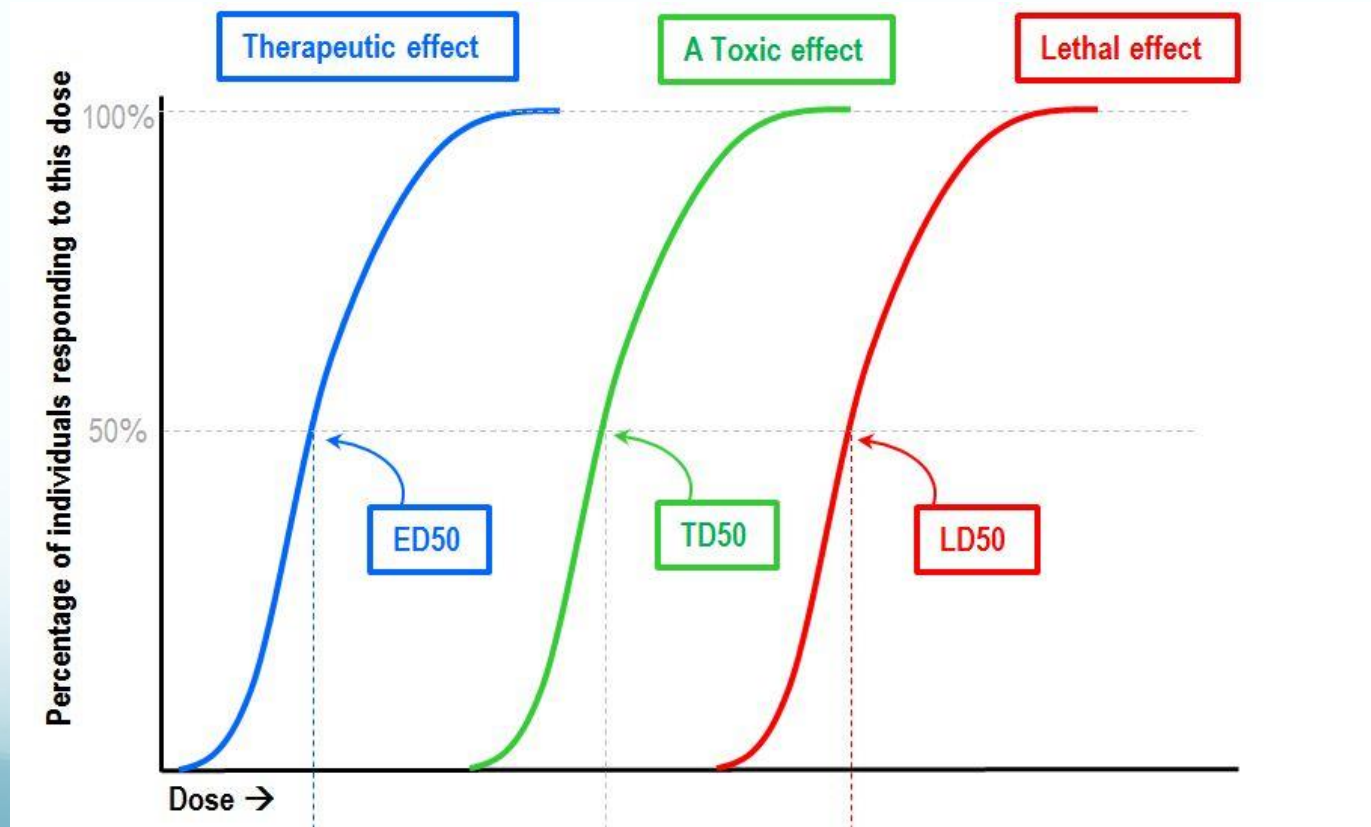


Fig. 2. International Restless Legs Syndrome Study Group Rating Scale (IRLS) and Medical Outcomes Study (MOS) sleep disturbance score reductions at Week 12 (intent-to-treat population). * $p \leq 0.0001$, ANCOVA with factors treatment and center and baseline score as the covariate.

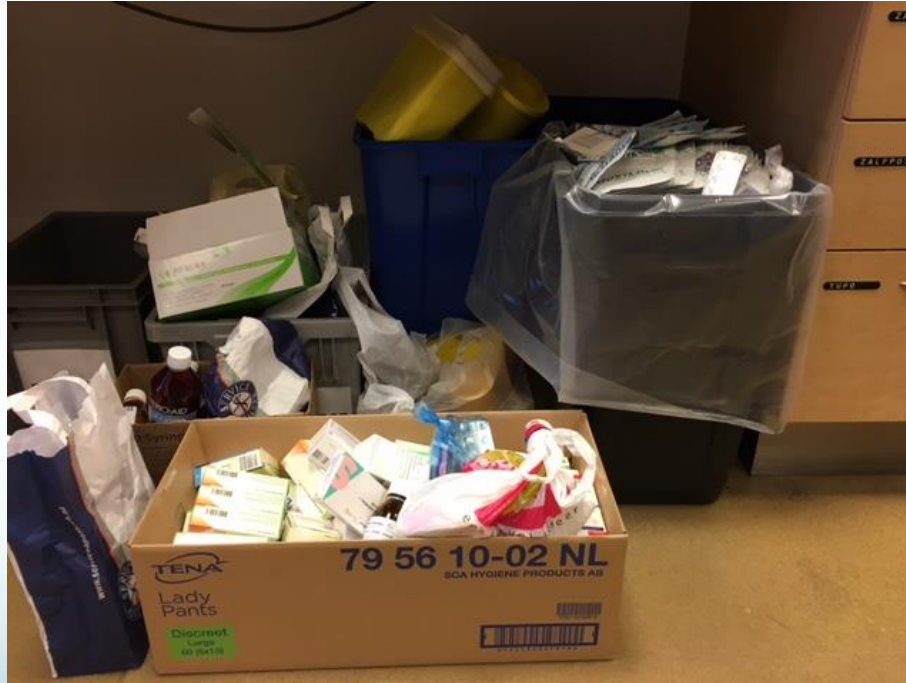
Lower dose?





Opinion patient

A waste!!





Take home

Hyperpolypharmacy

Many problems (also environmental)

Many ways to reduce

Take environment into account if you think of quality measures..



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