

Primary care for insomnia – past, present and future

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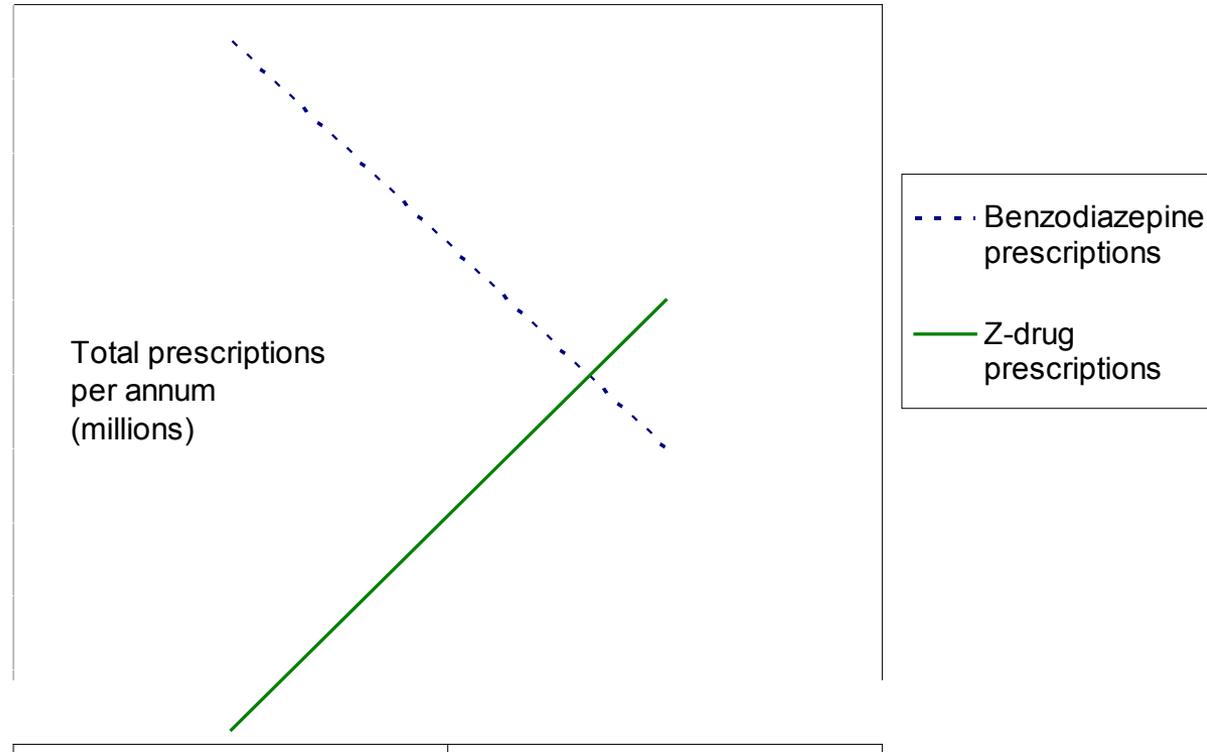
University of Lincoln

Community and Health Research Unit



Past

General practice and sleep



Cadogan C et al . Benzodiazepine and Z-drug prescribing in Ireland: analysis of national prescribing trends from 2005 to 2015. Br J Clin Pharm 2018; 84: 1354–1363.

What patients told us about hypnotics

- 95% had taken hypnotics for 4 weeks or more
- 45% advised to continue treatment for a month or more and a further 42% not advised on duration
- 87.9% first prescribed by GP
- 92.1% were on repeat prescriptions
- Side effects common (40%+)
- 18.6% wished to stop medication

Siriwardena AN et al. Magic bullets for insomnia? Patients' use and experience of newer (z drugs) versus older (benzodiazepine) hypnotics for sleep problems in primary care. *Br J Gen Pract* 2008; **58**: 417-22

GPs preferences for insomnia treatment

	Insomnia preference ranking (1 = highest; 9 = lowest)	Anxiety preference ranking (1 = highest; 9 = lowest)
Benzodiazepine	5	–
'Z' drug	2	–
Brief psychotherapy	–	3
Anxiety advice sheets	–	4
GP verbal advice	1	–
Sleep hygiene advice sheets	4	–
Sleep restriction	7	–
Sedative antihistamines	6	8
Phenothiazines	9	7
Sedative antidepressant	3	6
Non-sedative antidepressant	8	5
Referral to counsellor	–	1
Referral to CPN	–	2
Other referral	–	9

Siriwardena AN, Apekey T, Tilling M, et al. General practitioners' preferences for managing insomnia and opportunities for reducing hypnotic prescribing. *J Eval Clin Pract* 2010;16(4):731-7

GPs beliefs about sleep

- Compared to anxiety where GPs tended to use or refer for psychological treatments for insomnia, drugs were often a the preferred choice of treatment
- GPs did not like prescribing drugs but were not sure what else they could do or how to do this
- Z drugs preferred over benzodiazepine hypnotics
- GPs positive to initiatives to reduce inappropriate prescribing

Siriwardena AN, Apekey T et al. GPs' preferences for managing insomnia and opportunities for reducing hypnotic prescribing. *J Eval Clin Pract* 2010;16: 731–737

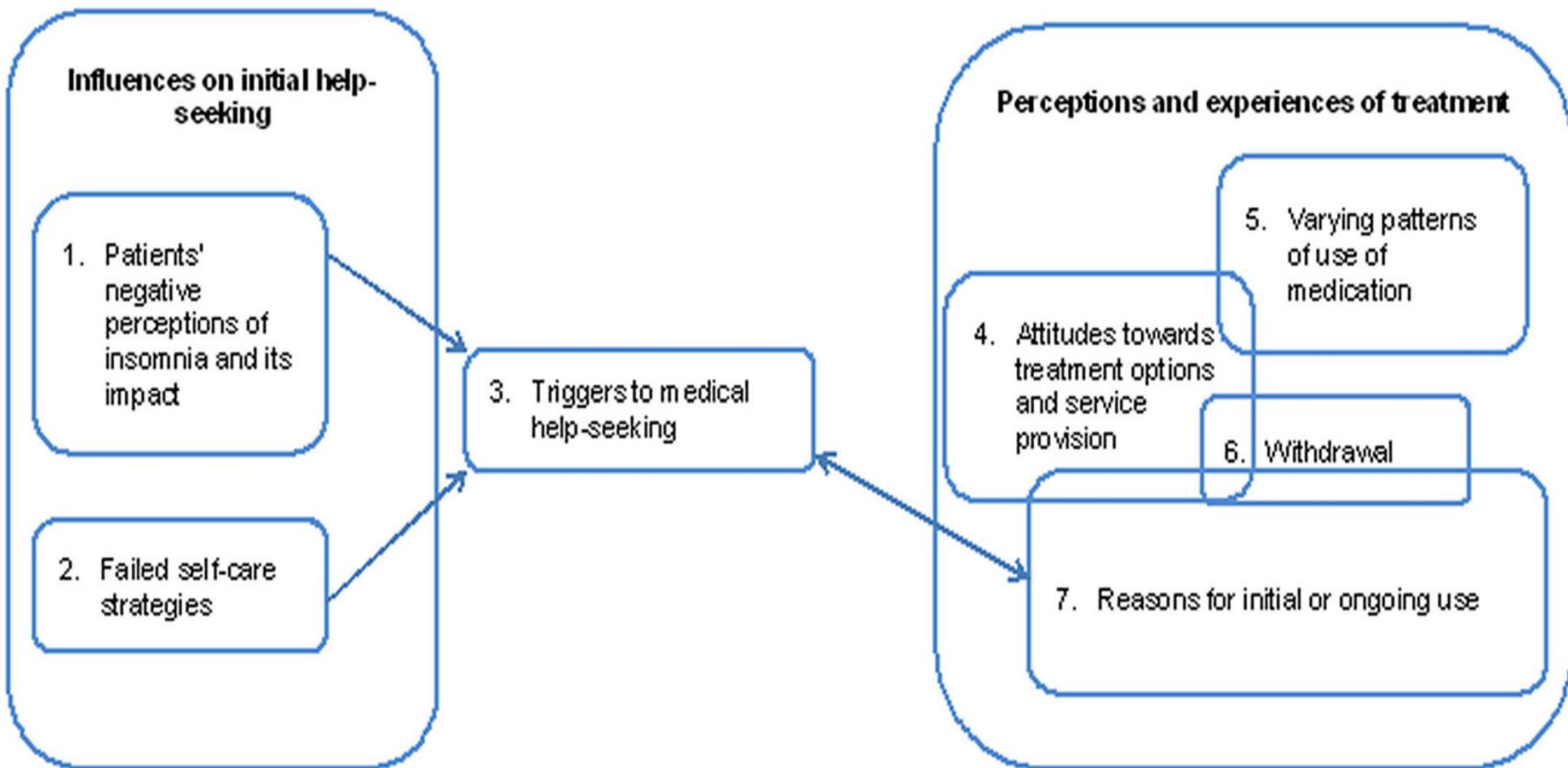
Siriwardena AN, Qureshi Z et al. Family doctors' attitudes and behaviour to benzodiazepine and Z drug prescribing *BJGP* 2006; 56: 964–967.

Do Z-drugs work?

‘We found significant reductions in polysomnographic and subjective sleep latency in both drug and placebo groups. The difference between drug and placebo was 22 minutes for polysomnographic sleep latency and seven minutes for subjective sleep latency...both of which are conventionally considered to be small effects’

Huedo-Medina T, Kirsch I, Middlemass J, Klonizakis M, Siriwardena AN. Effectiveness of non-benzodiazepine hypnotics in treatment of adult insomnia: meta-analysis of data submitted to the Food and Drug Administration. *British Medical Journal* 2012; 345: e8343

Patients' perceptions of hypnotics

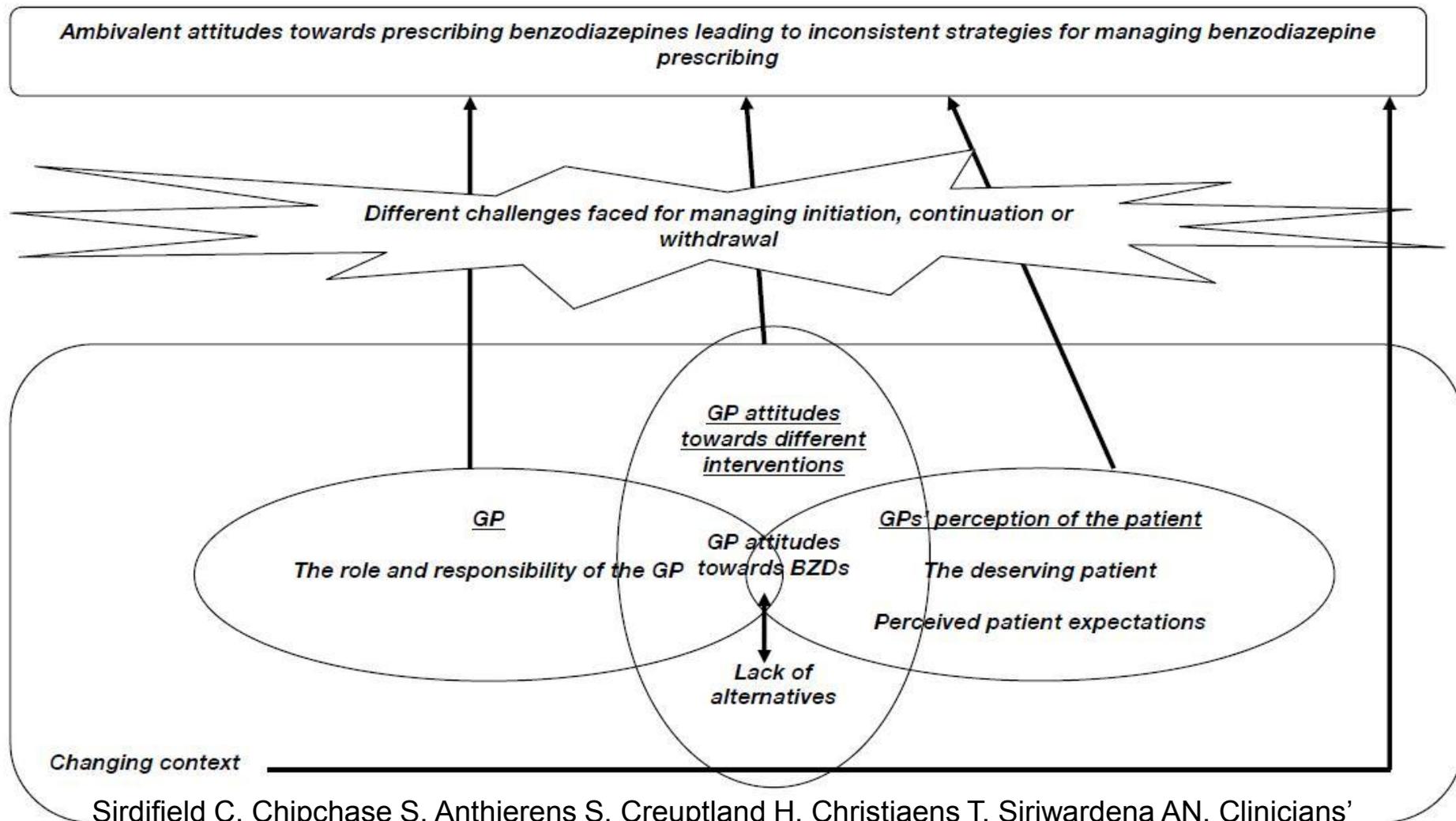


Sirdifield C, Chipchase SY, Owen S, Siriwardena AN. A systematic review and meta-synthesis of patients' experiences and perceptions of seeking and using benzodiazepines and Z-drugs: towards safer prescribing. *The Patient*. 2016 10(1):1-15

- “I said to my doctor recently, ‘when I die...I don’t want breast cancer on my death certificate, I don’t want emphysema, I want insomnia because I am sure that’s at the root of all my problems”
- “I was having marriage problems because of this thing of not sleeping”
- “...try this tape, calming tapes and all this crap, that I have already tried anyway, also herbal stuff. Tried all the herbal stuff, you know in chemists”

- “Consultation was often triggered by significant life events or pressure from family and friends (social networks).”
- “I’d eat a bucket of nails if you told me it would help me sleep.” This was greeted with a resounding chorus of “me too.”
- “...he said one spoonful and 2 hours later I took another and another. The next night I drank two thirds of the bottle”

Practitioners' perceptions of hypnotics

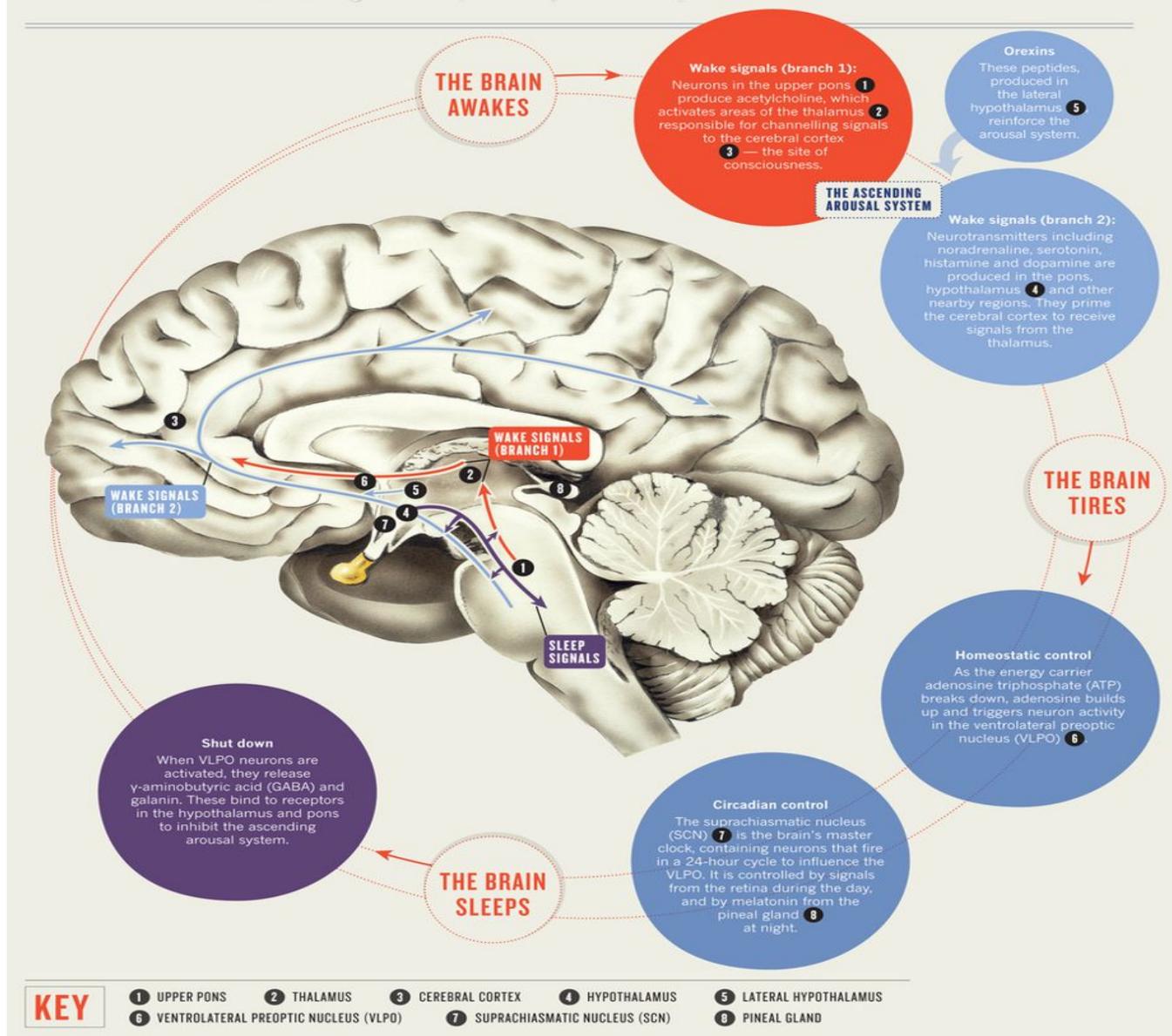


Sirdifield C, Chipchase S, Anthierens S, Creuptland H, Christiaens T, Siriwardena AN. Clinicians' experiences and perceptions of benzodiazepine prescribing in Western primary care settings: a meta-synthesis. *BMC Family Practice* 2013; 14: 191.

- “...a focus on GPs has been unreasonable, given that the psychiatric profession was deemed to be responsible for initiating and legitimizing the use of the drugs”
- “A number of physicians appeared to have different rules and strategies for prescribing these medications in older versus younger adults, and were more tolerant of long-term use in the elderly”

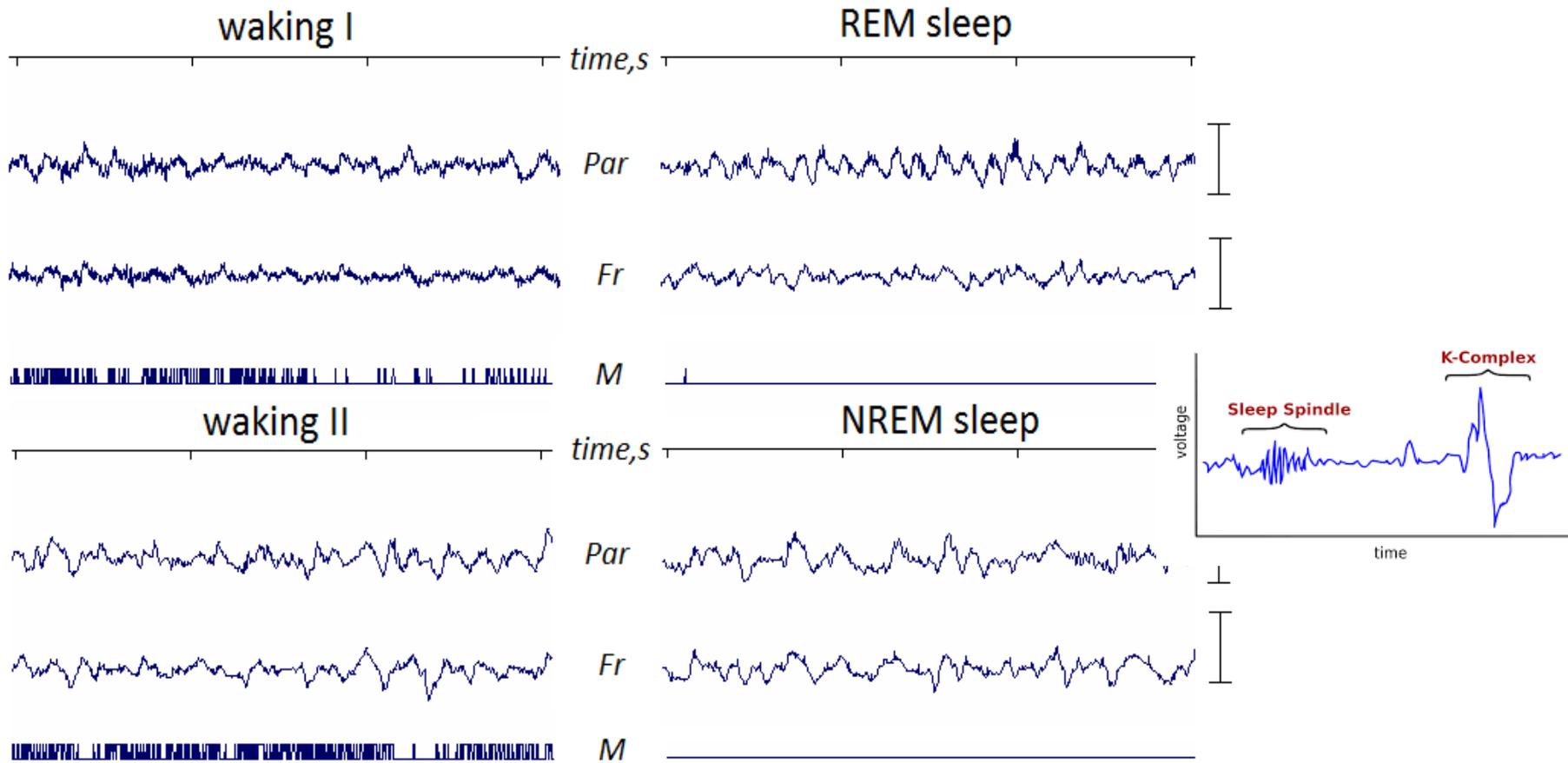
- “I have to do a lot of “psycho” Whether I want it or not but I haven’t got the training for it. What do I do? I prescribe...”
- “She’s been on it for years, I’ll just give her what she asks for and I won’t have to sit here and explain things for twenty minutes about why I want to get her off...So maybe it’s just the path of least resistance”

Present



Peplow M. Structure: The anatomy of sleep. Nature 2003; 497, S2–S3

NREM - REM



Insomnia disorder

DSM IV	DSM-V
Primary insomnia	Insomnia disorder
A. Predominant complaint difficulty initiating or maintaining sleep, or nonrestorative sleep, for at least 1 month	A. predominant complaint of dissatisfaction with sleep quantity or quality, associated with one (or more) of the following symptoms: Difficulty initiating sleep. Difficulty maintaining sleep characterized by frequent awakenings or problems returning to sleep after awakenings. Early-morning awakening with inability to return to sleep.
B. Clinically significant distress or impaired function	D. Sleep difficulty present for at least 3 months. B. Clinically significant distress or impaired function

Insomnia in primary care

- Affects 30-50% (67% persist at 1 year)
- Around 50% of sufferers seek help
- Up to 50% attending receive a prescription
- Up to 50% on hypnotics would prefer not to be

Morphy H et al . Epidemiology of insomnia: a longitudinal study in a UK population. *Sleep*. 2007;30(3):274-80.

Benefits of better sleep management

- Improved patient sleep, function/QoL, work absence/presenteeism, comorbid conditions, satisfaction/empowerment
- Prevention of physical/psychological ill health
- Clinician skills and satisfaction
- Reduced legal implications of non-licensed/non-guidance long-term use

Espie CA, Emsley R, Kyle SD, Gordon C, Drake CL, Siriwardena AN et al. quality of life and psychological wellbeing: RCT. *JAMA Psychiatry* 2019;76 (1): 21-30.

Freeman D et al. The effects of improving sleep on mental health (OASIS): RCT with mediation analysis *The Lancet Psychiatry* 2017; 4 (10): 749–758

What patients say they need

- Listening, empathy, taking the problem seriously
- Health beliefs: concerns about sleep tablets vs. need for help
- Previous self-help: what they have tried already: OTC, complementary
- Careful assessment
- Psychological therapy: CBTi

Dyas JV et al. Patients' and clinicians' experiences of consultations in primary care for sleep problems and insomnia: a focus group study. *BJGP* 2010; **60**: 329 -333.

What treatment patients prefer

Treatments preferentially viewed if:

- Confer long-term sleep benefits ($p < 0.05$)
- Ongoing vs predefined duration of treatment ($p < 0.05$)
- Require some, as opposed to no, additional time commitment ($p < 0.05$)
- Lower monthly out-of-pocket treatment costs ($p < 0.001$).

Treatment onset of action no influence on preference.

Cheung JMY, Bartlett DJ, Armour CL, et al. Patient preferences for managing insomnia: a discrete choice experiment. *Patient* 2018;11(5):503-14.

What practitioners want to provide

- Need to focus on the problem [of insomnia] not just underlying causes
- Do not assume that patients only want a prescription
- Do not expect patients, already on sleeping tablets, to be resistant to stopping...patients often open to alternatives.
- “More options should be available for treatment and that health professionals should have better training in treating insomnia.”

Dyas JV et al. Patients' and clinicians' experiences of consultations in primary care for sleep problems and insomnia: a focus group study. *BJGP* 2010; 60: 329 -333.

CBTi

- CBTi effective for primary or comorbid insomnia
- Sleep improvements sustained over time
- Better in the short and long term compared to drugs
- Improves QOL and psychological outcomes

Trauer JM, Qian MY, Doyle JS, Rajaratnam SM, Cunnington D. Cognitive Behavioral Therapy for Chronic Insomnia: A systematic review and meta-analysis. *Ann Intern Med.* 2015;163(3):191-204.

Mitchell MD, Gehrman P, Perlis M, Umscheid CA. Comparative effectiveness of cognitive behavioral therapy for insomnia: a systematic review. *BMC Fam Pract.* 2012;13:40.

CBTi in primary care

- 12 RCTs in primary care/community settings
- CBTi effective
- Varying components, dose, constraints, feasibility

Post-treatment effects of CBT-I interventions.

	K^b	N	Hedge's g	95% CI	P-value
Measures of Sleep Quality					
<i>Insomnia Severity Index</i> ^a	6	700	0.40	0.24, 0.55	<0.001
<i>Pittsburgh Sleep Quality Index</i> ^a	4	687	0.37	0.22, 0.52	<0.001
Sleep Diary Measures					
<i>Sleep Onset Latency</i> ^a	9	935	0.38	0.25, 0.51	<0.001
<i>Wake time After Sleep Onset</i> ^a	8	693	0.46	0.32, 0.60	<0.001
<i>Total Sleep Time</i>	9	1130	0.10	-0.02, 0.22	0.09
<i>Sleep efficiency</i>	8	1021	0.38	0.25, 0.51	<0.001

Cheung JMY, Jarrin DC, Ballot O, et al. A systematic review of cognitive behavioral therapy for insomnia implemented in primary care and community settings. *Sleep Med Rev* 2019;44:23-36.

Resources for Effective Sleep Treatment

- To provide evidence on effective, safe and patient centred assessment and non-pharmacological treatment of insomnia
- To introduce sleep assessment and psychosocial management techniques and hypnotic withdrawal programmes
- To explain how to incorporate these techniques into routine consultations



Dyas JV et al. Patients' and clinicians' experiences of consultations in primary care for sleep problems and insomnia: a focus group study. *BJGP* 2010; **60**: 329 -333.

Quality Improvement Collaborative

...multiorganizational, multiprofessional initiatives in which improvement and clinical experts, using structured activities, engage clinicians to effect improvement in a specific area of practice'



Assessing sleep

Two simple questions:

- Are you having difficulty getting to sleep and/ or staying asleep?
- Do you have this most nights? Is this persistent and affecting you during the day?
- This can be supported by using simple validated tools such as the 9-item Insomnia Severity Index or even simpler, the 2-item sleep condition indicator

Insomnia severity index

	0	1	2	3	4
1. Difficulty FALLING ASLEEP					
2. Difficulty STAYING ASLEEP					
3. Problems WAKING UP TOO EARLY					
4. How SATISFIED/DISSATISFIED are you with your current sleep pattern?					
5. How NOTICEABLE to others do you think your sleep problem is in terms of impairing your quality of life?					
6. How WORRIED/DISTRESSED are you about your current sleep problem?					
7. To what extent do you consider your sleep problem to INTERFERE with your daily functioning?					

0–7 = No clinically significant insomnia

8–14 = Subthreshold insomnia

15–21 = Clinical insomnia (moderate severity)

22–28 = Clinical insomnia (severe)

Sleep condition indicator – 2-item

Two-item version of the Sleep Condition Indicator (SCI-02)

Item score	4	3	2	1	0
Thinking about the past month, to what extent has poor sleep ...					
1. ... troubled you in general					
	Not at all	A little	Somewhat	Much	Very much
Thinking about a typical night in the last month ...					
2. ... how many nights a week do you have a problem with your sleep?					
	0–1	2	3	4	5–7

Scoring instructions: Add the item scores to obtain the SCI total (minimum 0, maximum 8). A higher score means better sleep.

TWO WEEK SLEEP DIARY



INSTRUCTIONS:

1. Write the date, day of the week, and type of day: Work, School, Day Off, or Vacation.
2. Put the letter "C" in the box when you have coffee, cola or tea. Put "M" when you take any medicine. Put "A" when you drink alcohol. Put "E" when you exercise.
3. Put a line (|) to show when you go to bed. Shade in the box that shows when you think you fell asleep.
4. Shade in all the boxes that show when you are asleep at night or when you take a nap during the day.
5. Leave boxes unshaded to show when you wake up at night and when you are awake during the day.

SAMPLE ENTRY BELOW: On a Monday when I worked, I jogged on my lunch break at 1 PM, had a glass of wine with dinner at 6 PM, fell asleep watching TV from 7 to 8 PM, went to bed at 10:30 PM, fell asleep around Midnight, woke up and couldn't get back to sleep at about 4 AM, went back to sleep from 5 to 7 AM, and had coffee and medicine at 7:00 in the morning.

Today's Date	Day of the week	Type of Day Work, School, Off, Vacation	Noon	1PM	2	3	4	5	6PM	7	8	9	10	11PM	Midnight	1AM	2	3	4	5	6AM	7	8	9	10	11AM
sample	Mon.	Work		m					A													M	C			
	Mon	OFF							E	M																
	Tues	OFF										M														
	Wed	OFF							E			M														
	Thurs	OFF									M															
	Fri	OFF							E			M														
	Sat	OFF										M														
	Sun	OFF										M														
	Mon	OFF										M														
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	Wed	OFF										M														
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	Fri	OFF										M														
	Sat	OFF	C								M		A													
	Sun	OFF										M														

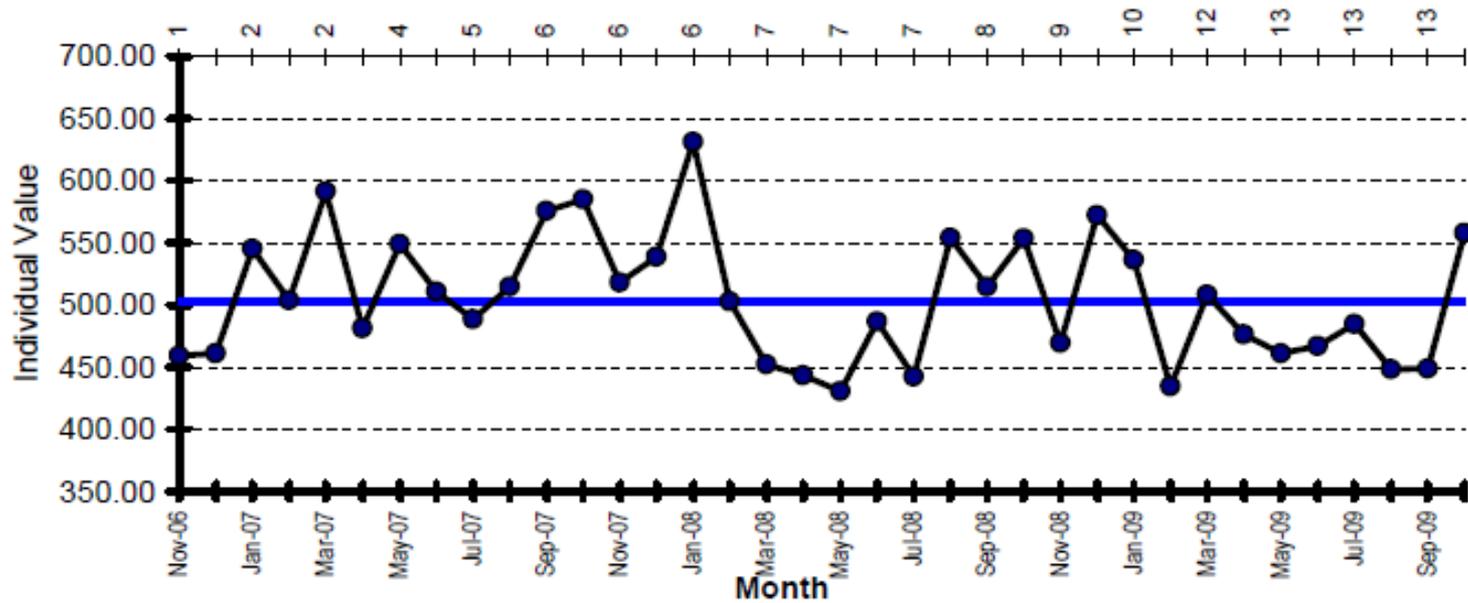
week 1

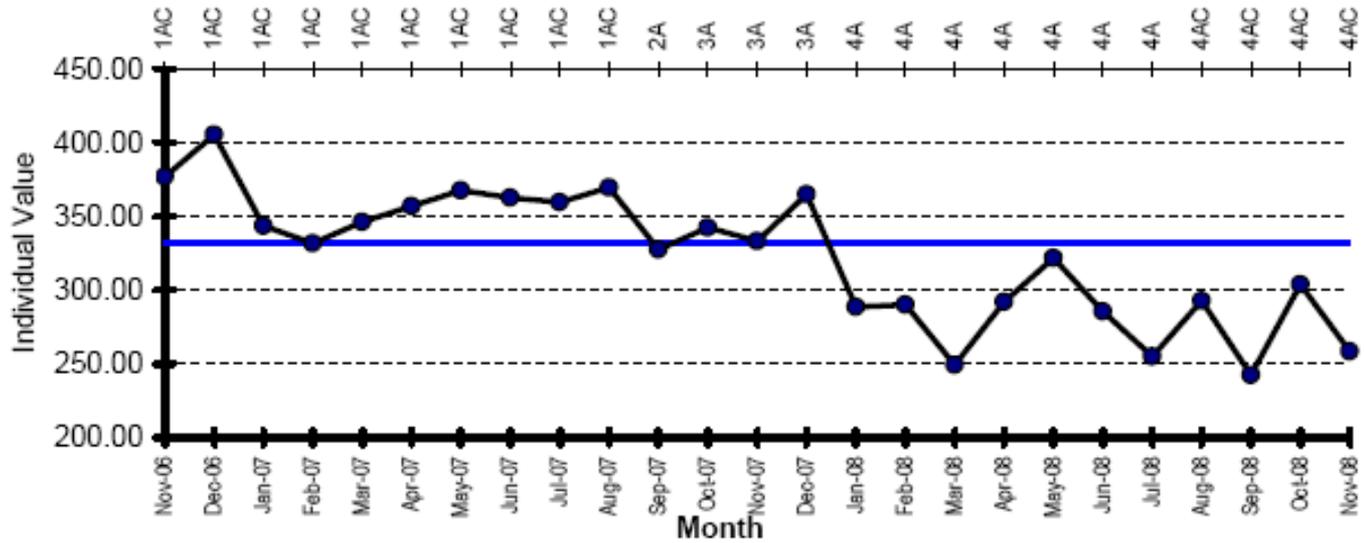
week 2

CBT-I

- Cognitive
 - Sleep education: expectations, to-do list, thought-blocking
- Behavioural
 - Sleep hygiene: environment, scheduling etc.
 - Stimulus control: caffeine, alcohol, nicotine, TV, reading etc.
 - Muscle relaxation
 - Sleep restriction

What happened?



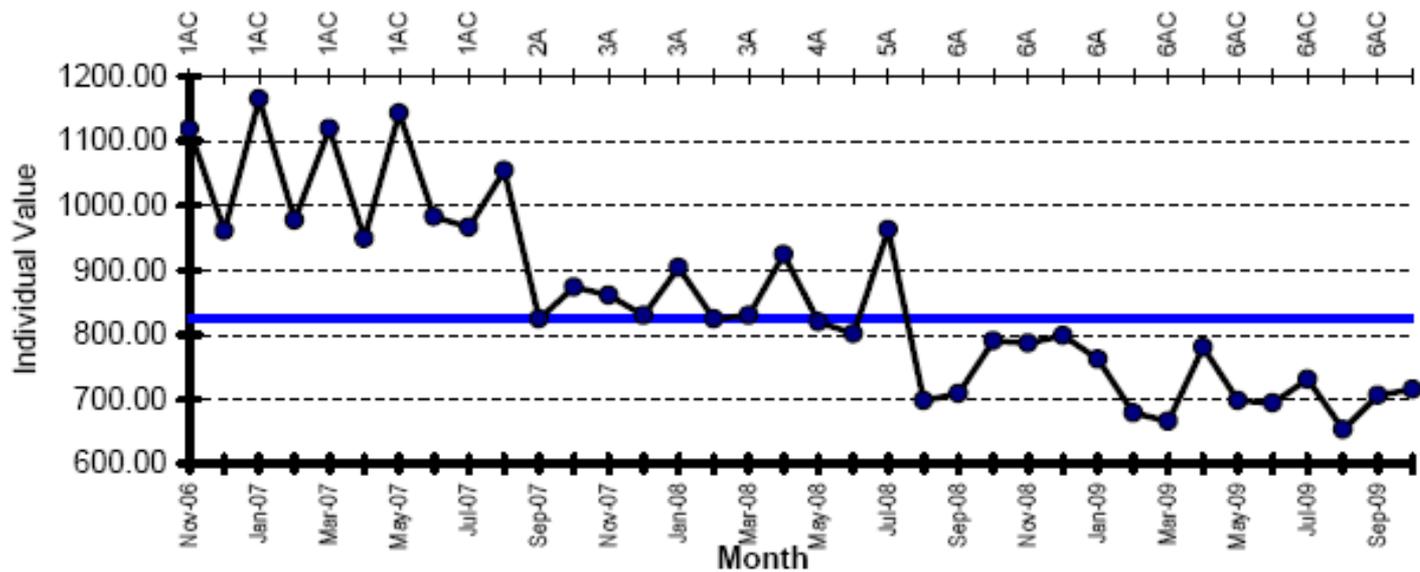


N 25
Average 322.6644
Median 331.69
N Runs 4
Min Runs 8
Max Runs 17

Special Cause(s) Detected

Tests:

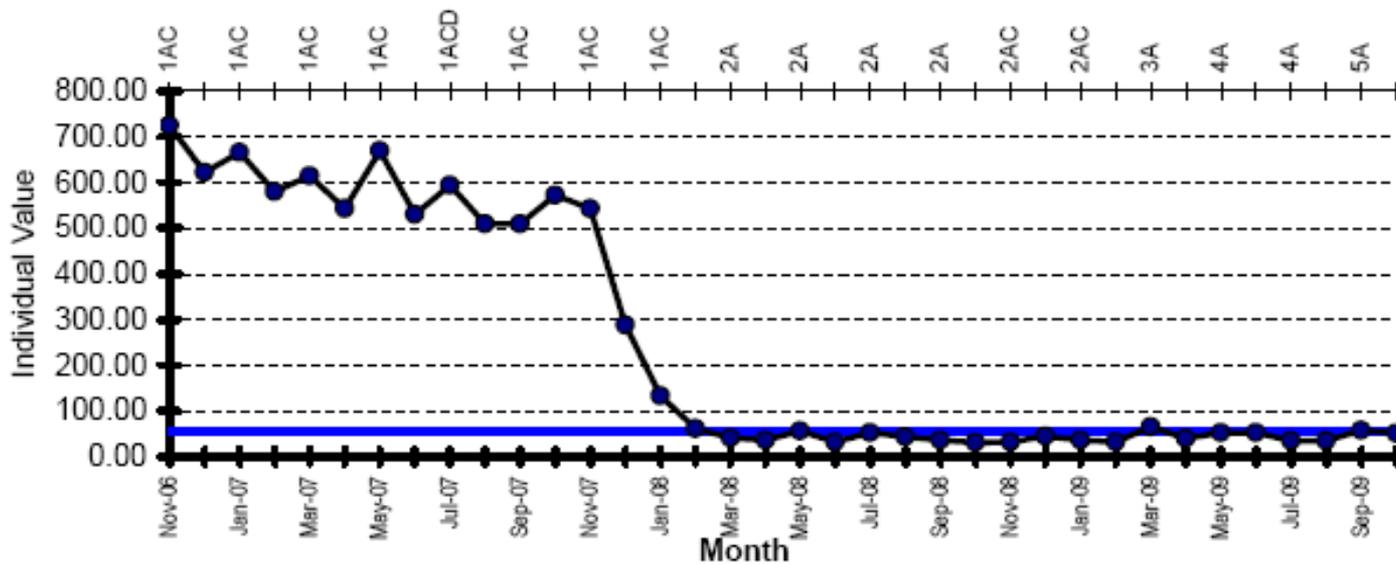
- A. Fails Runs Test
- B. Trend of 7
- C. 8 One Side of Median
- D. 14 Alternating
- E. 7 Same Value
- X. Excluded or Missing Data



N 36
 Average 854.529444
 Median 824.515
 N Runs 6
 Min Runs 13
 Max Runs 24

Special Cause(s) Detected

Tests:
 A. Fails Runs Test
 B. Trend of 7
 C. 8 One Side of Median
 D. 14 Alternating
 E. 7 Same Value
 X. Excluded or Missing Data

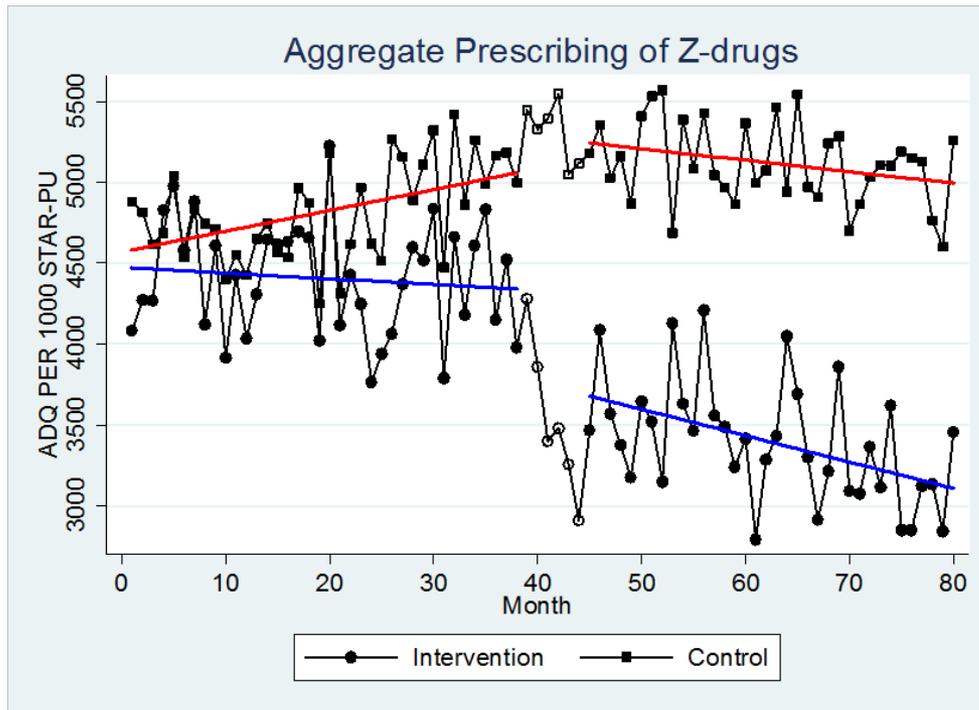


N 36
 Average 250.891111
 Median 56.48
 N Runs 6
 Min Runs 13
 Max Runs 24

Special Cause(s) Detected

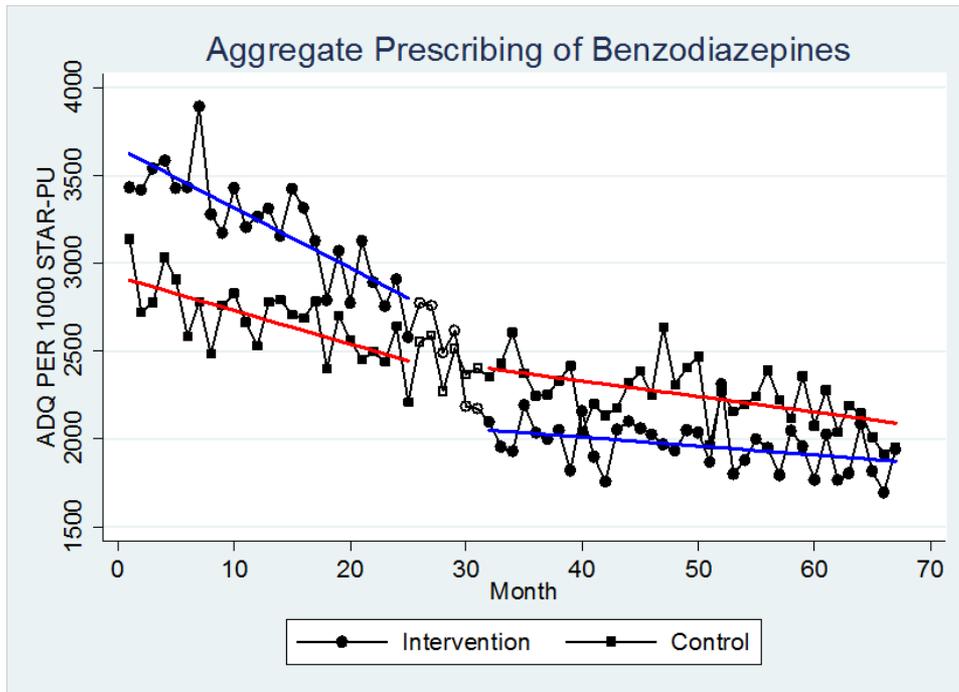
Tests:
 A. Fails Runs Test
 B. Trend of 7
 C. 8 One Side of Median
 D. 14 Alternating
 E. 7 Same Value
 X. Excluded or Missing Data

Results for Intervention vs Control practices Z-drugs (aggregated)



- Prescribing reductions in intervention practices were sustained over the post-QIC period
 - 12 months; $S = -3.37$, $p < 0.01$
 - 24 months; $S = -3.63$, $p < 0.01$
 - 36 months; $S = -3.57$, $p < 0.01$

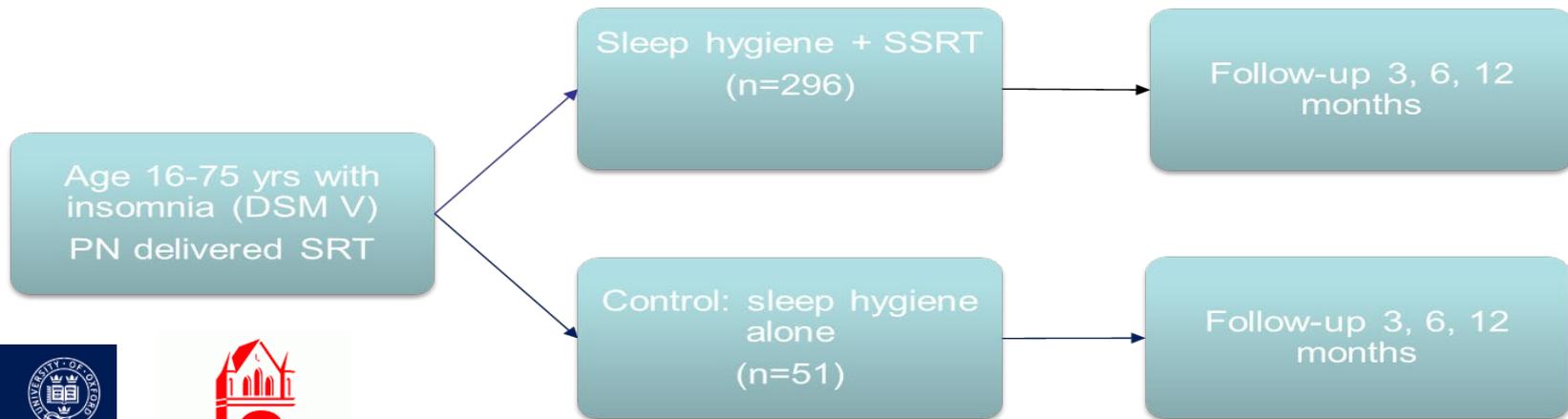
Results for Intervention vs Control practices benzodiazepines (aggregated)



- Significant reduction in prescribing over the shorter post-QIC term:
 - 12 months; $S = -2.83$, $p < 0.01$
- But not sustained over the longer post-QIC term:
 - 24 months; $S = -1.09$, $p = 0.14$
 - 36 months; $S = -0.01$, $p = 0.50$

HABIT trial

- Health professional Administered Brief Insomnia Therapy (HABIT) trial NIHR HTA £1.8M, 3.5 years
- Pragmatic, multicentre (Oxford, Lincolnshire, Manchester) individual, randomised, parallel group, clinical trial design within primary care 24 general practices, 588 patients



dCBT-I

- dCBT-I effective for most sleep outcomes
- Effects comparable to face-to-face CBT-I
- Sustained at FU 4-48 weeks
- Larger effect with longer treatment duration, greater personal support

Zachariae R, Lyby MS, Ritterband LM, O'Toole MS. Efficacy of internet-delivered cognitive-behavioral therapy for insomnia - A systematic review and meta-analysis of randomized controlled trials. *Sleep Med Rev.* 2015;30:1-10

Future

Sleep education for practitioners

The screenshot shows a web browser window titled "The REST Project - Welcome" with the URL "http://www.restproject.org.uk/". The page features a blue header with the title "Assessment and Management of Insomnia e-learning package" and the REST Project logo. A navigation sidebar on the left contains icons for Home, Information, Documents, Charts, Beds, Targets, Speech, Clipboard, and Phone. The main content area is titled "Welcome to the REST e-learning package" and includes a brief introduction. Below this is a grid of eight interactive buttons: "Background", "Review of Current Practice", "Sleep Assessment", "Sleep Management Tools & Techniques", "Hypnotic Withdrawal Programme", "Sleep Consultation", "Final Assessment", and "Contact Details". Each button has an icon and a "Click to enter this section" prompt. The page also contains sections for "What is Insomnia?", "Objectives", and "Description". At the bottom, there is a "Begin" button and a footer with copyright information and links for "Admin login", "Site map", and "Terms and Conditions".

The REST Project - Welcome

http://www.restproject.org.uk/

The REST Project - Welcome

Assessment and Management of Insomnia e-learning package

THE REST PROJECT

You are here: E-learning home

Welcome to the REST e-learning package

Welcome to the REST e-learning project. This project has been created to help people understand the effects of insomnia and to address these to help cure their problems. Click on a section to navigate through, starting with Background.

- Background**
Click to enter this section
- Review of Current Practice**
Click to enter this section
- Sleep Assessment**
Click to enter this section
- Sleep Management Tools & Techniques**
Click to enter this section
- Hypnotic Withdrawal Programme**
Click to enter this section
- Sleep Consultation**
Click to enter this section
- Final Assessment**
Click to enter this section
- Contact Details**
Click to enter this section

What is Insomnia?

Insomnia is common and affects up to a third of adults in the United Kingdom in any one year.

Insomnia or insomnia disorder is dissatisfaction with the quantity or quality of sleep expressed by the patient (or by a caregiver or family in the case of children or elderly).

Insomnia may be primary (so called psychophysiological) or comorbidly associated with medical, psychiatric or other disorders.

The definition of insomnia is currently being updated in the Diagnostic and Statistical Manual of Mental Disorders (DSM) version 5 (click here to view).

Objectives

The objectives of this e-learning package are:

- To improve general practice and primary care management of insomnia
- To provide evidence on effective, safe and patient centred assessment and non-pharmacological treatment of insomnia
- To introduce sleep assessment and psychosocial management techniques and hypnotic withdrawal programmes
- To explain how to incorporate these techniques into routine general practice consultations

Description

The Resources for Effective Sleep Treatment (REST) project was funded by the Health Foundation under their engaging with quality in primary care scheme to improve management of insomnia. The evidence and learning from this quality improvement project has been developed into this e-learning package for clinical working in primary care.

Begin →

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dCBT-I delivery

Sleepio

6 published trials
with almost 7000
participants

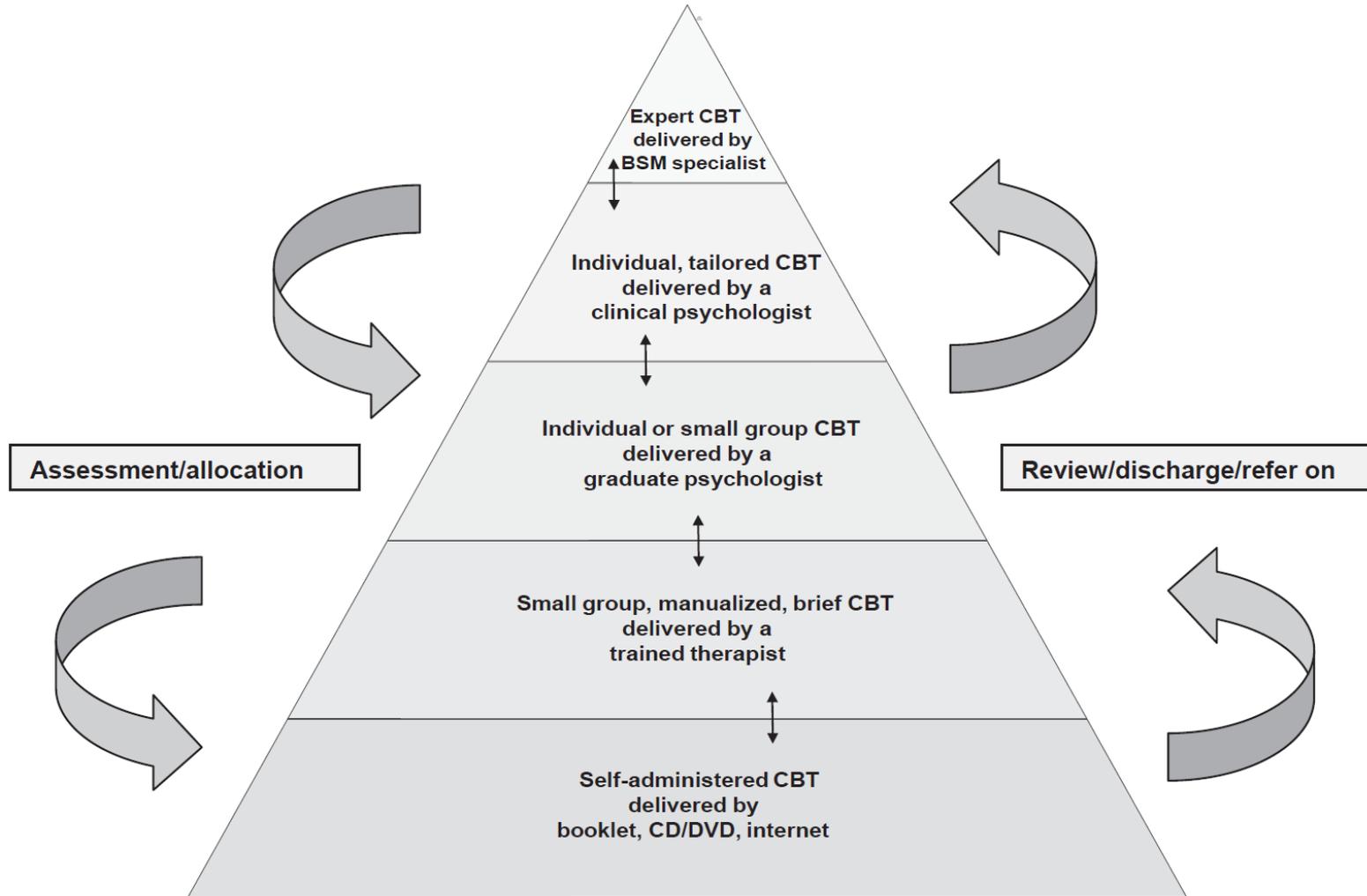
SOMRYST

Previously SHUTi - 6
published trials with
over 3000 participants



Middlemass J, Davy Z, Cavanagh K, Linehan C, Morgan K, Lawson S, Siriwardena AN. Integrating online communities and social networks with computerised treatment for insomnia: a qualitative study of service user and primary health care professional perspectives. *British Journal of General Practice* 2012 62: e840-850.

Moving towards stepped care



Espie C. Stepped care: a health technology solution for delivering Cognitive Behavioral Therapy as a first line insomnia treatment. *Sleep* 2009

Future primary care for insomnia

- Taking the problem seriously
- Better assessment
- Greater access to psychological interventions
- Reduced dependence on drugs

Thank you to our collaborators

- Patients, GPs, nurses, pharmacists, others
- **University of Lincoln** : Simon Durrant, Graham Law, Ffion Curtis
- **Oxford University** Sleep and Circadian Institute: Colin Espie, Simon Kyle, Daniel Freeman, Russell Foster
- **Harvard University** Program in Placebo Studies: Irving Kirsch
- **Loughborough University**: Kevin Morgan
- **University of Ghent**: Thierry Christiaens et al.
- **Funding**: NIHR, EPSRC, The Health Foundation

Further reading

REST project website and e-learning programme
www.restproject.org.uk

Matthew Walker. *Why we Sleep: The New Science of Sleep and Dreams*. Penguin 2018.

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**Further information: REST website and
e-learning programme**

www.restproject.org.uk

