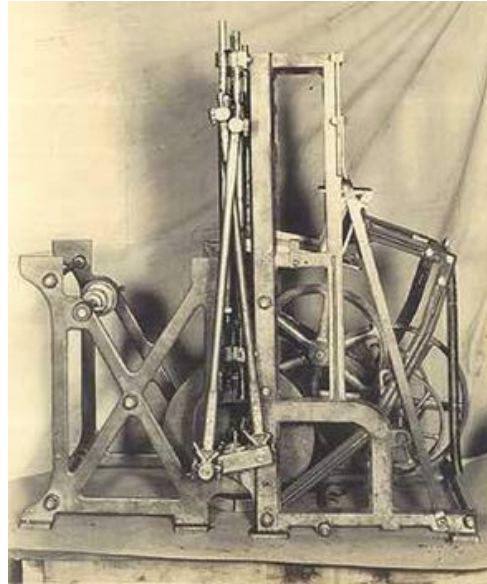




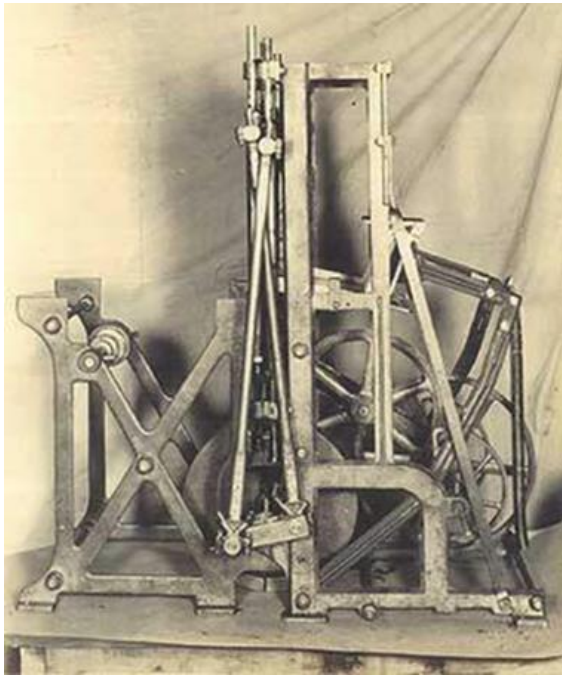
Otto Rohwedder



How long did it take for sliced bread to take off?



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One year

Five years

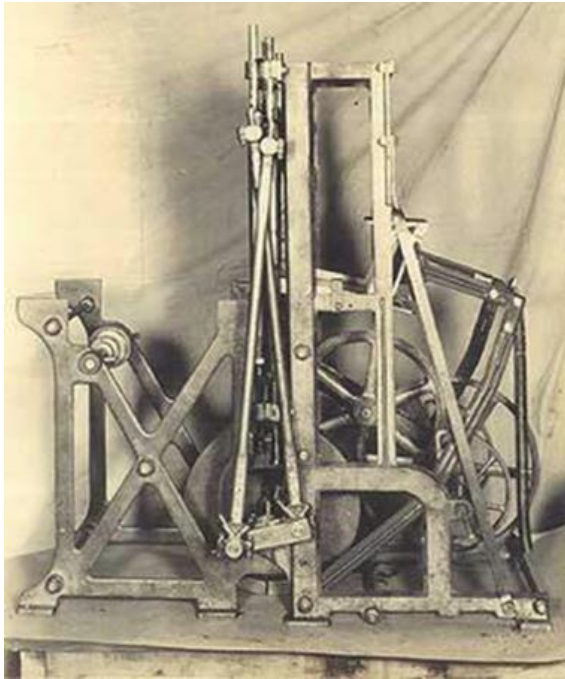
Fifteen years

Fifty years

How long did it take for sliced bread to take off?



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One year

Five years

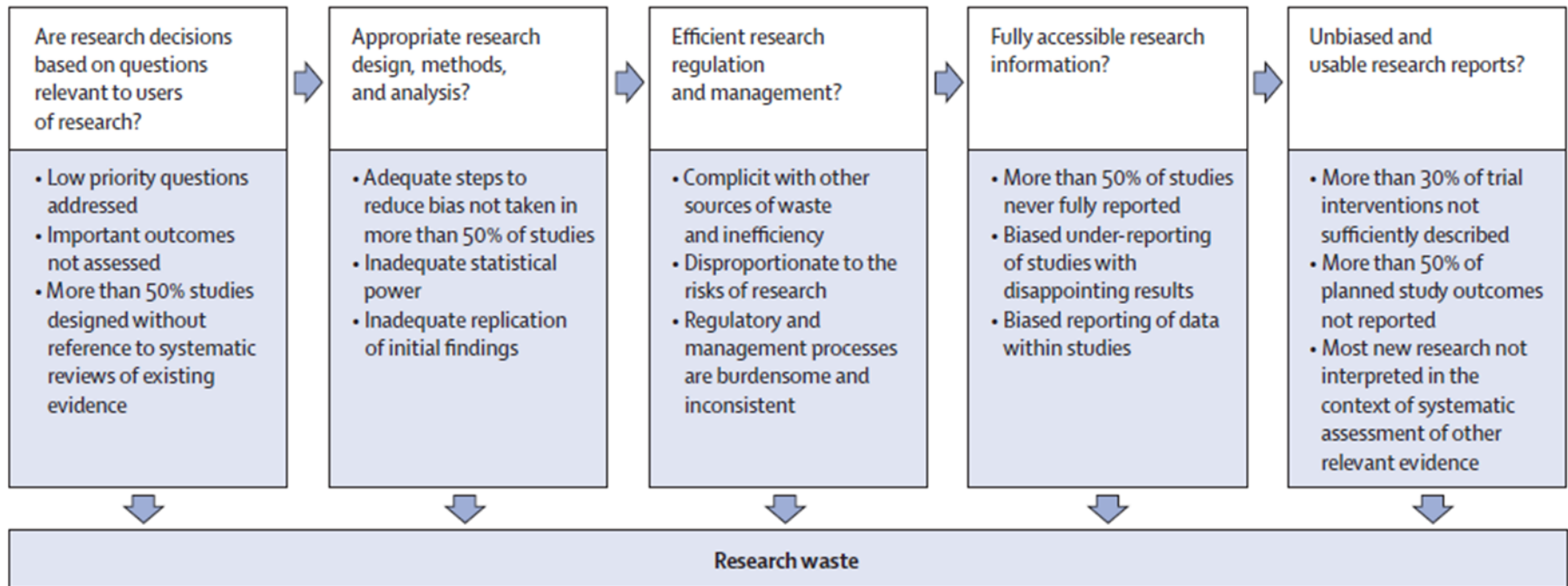
Fifteen years

Fifty years



Avoidable research waste

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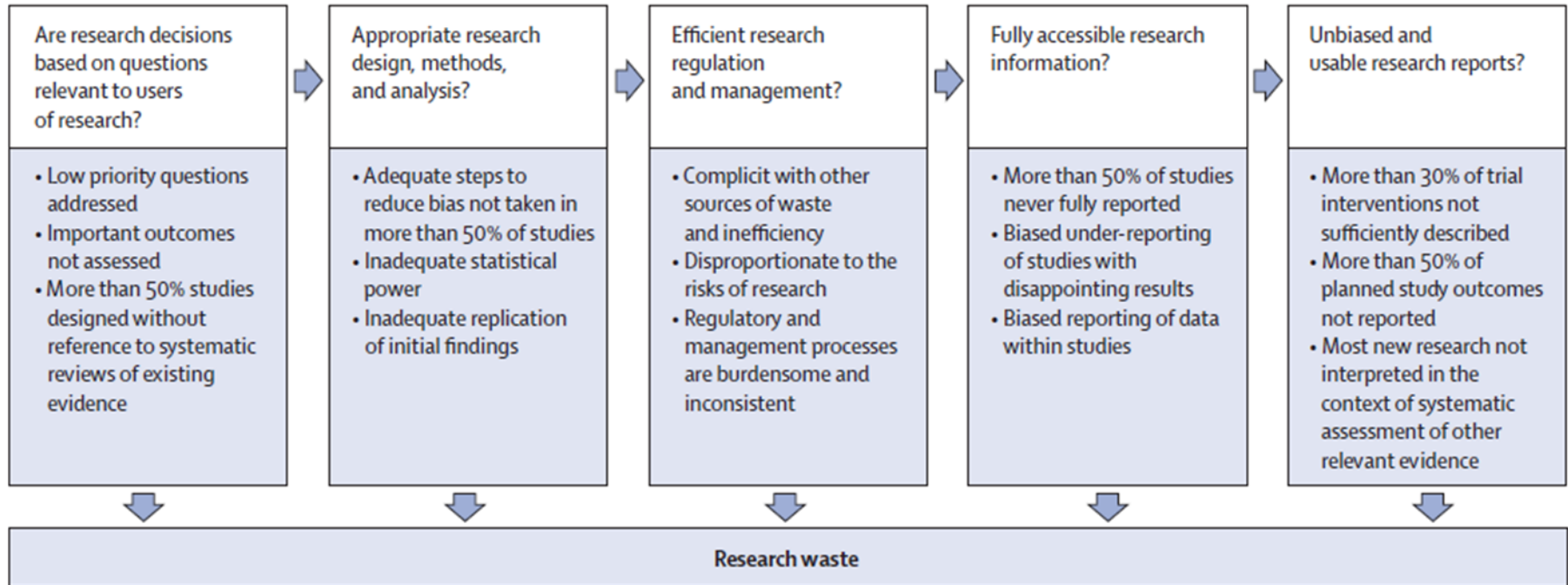
Chalmers I, Glasziou P; Lancet 2009; 374: 86–89

MacLeod et al. Lancet 2014; 383: S0140-6736(13)62329-6

How much health research is wasted?



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19%

37%

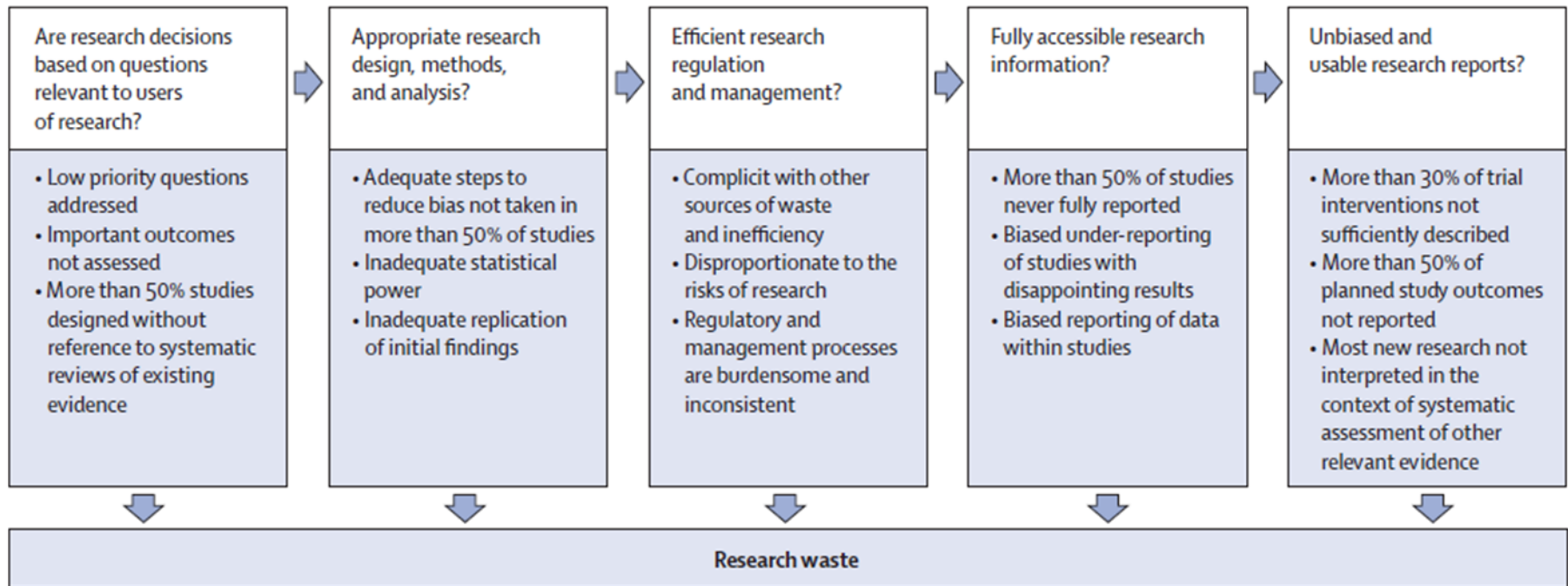
63%

85%

How much health research is wasted?



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19%

37%

63%

85%





Implementation research: from bookcase to bedside

Robbie Foy

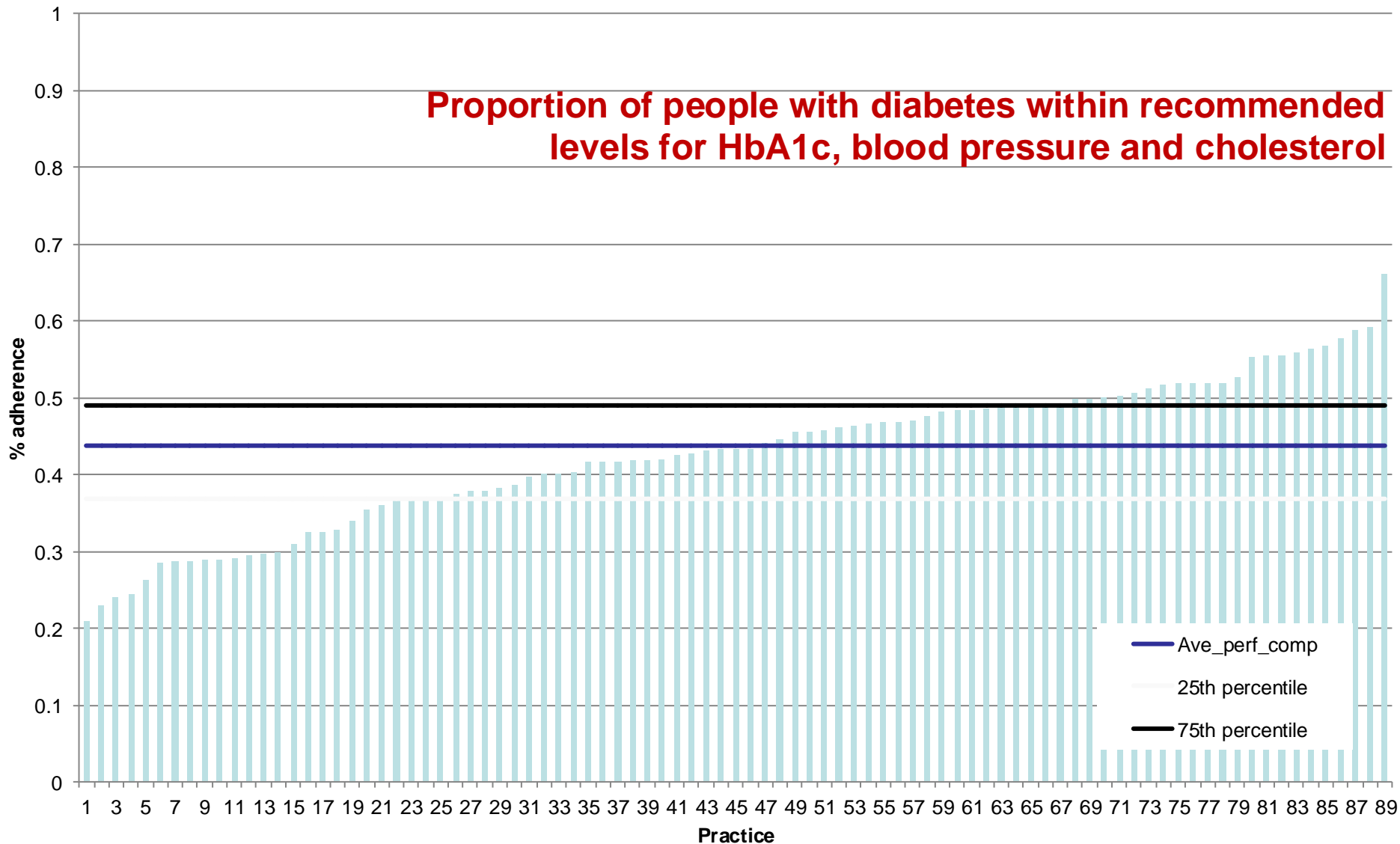


... the study of methods to promote the systematic uptake of research findings and other evidence-based practices into routine practice and, hence, to improve the quality and safety of health care

Why do we need implementation research?



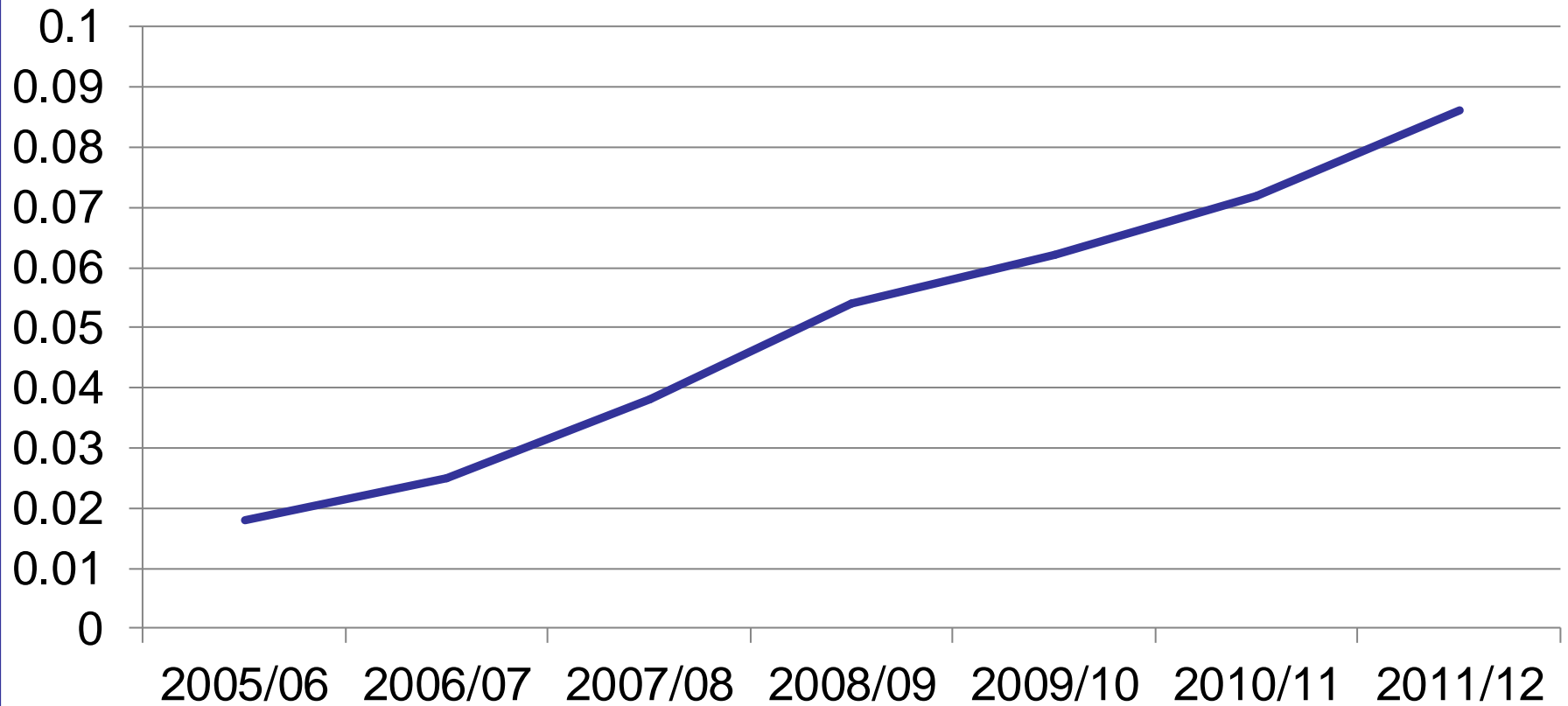
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Prescribing of opioids for chronic, non-cancer pain in general practice



Rate of prescription per patient count per year



What proportion of blood transfusions given are probably unnecessary?



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WHY USE TWO? WHEN ONE WILL DO

Transfusing one unit of blood at a time reduces the risk of an adverse event – **Transfuse one then reassess**

5%

10%

20%

40%



BLOOD IS A GIFT
USE IT WISELY

To find out more go to http://staffnet/TransfusionMedicine/blood_is_a_gift.asp



What proportion of blood transfusions given are probably unnecessary?



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**BLOOD IS A GIFT
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To find out more go to http://staffnet/TransfusionMedicine/blood_is_a_gift.asp



Why don't people do
what we tell them?



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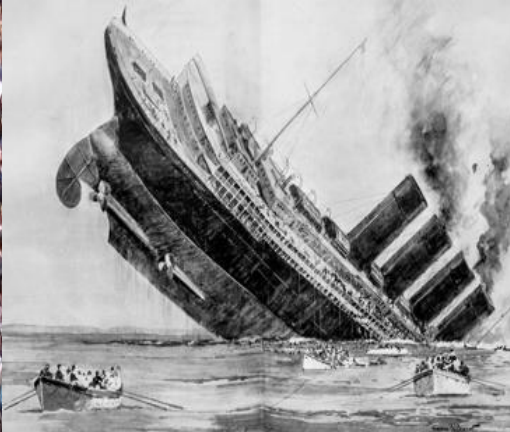


Why don't people do
what we tell them?



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A guideline **implementation package** for general practice which...

- Fits in with ways of working and resources available
- Has been rigorously tested in 'real world' conditions
- Improves population healthcare and outcomes
- Produces an acceptable return on time, money and effort
- Can be adapted to a range of 'high impact' clinical priorities...



Foy R, Willis T, Alderson S, Bregantini D, Carder P, Clamp S, Collinson M, Farrin A, Glidewell L, Hartley S, Heyhoe J, Holland M, Hulme C, Heudtlass P, Hunter C, Ingleson E, Lawton R, Louch G, Johnson S, McEachan R, Meads D, Petty D, Rathfelder M, Richardson J, Rushforth B, Schmitt L, Vargas-Palacios A, Stokes T, Ward V, West R, Watt I

Acknowledgement



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The views expressed are those of the authors and not necessarily those of the NHS, the NIHR or the Department of Health



We identified 'high impact' recommendations



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Diabetes control



Blood pressure control



Anticoagulation in atrial fibrillation

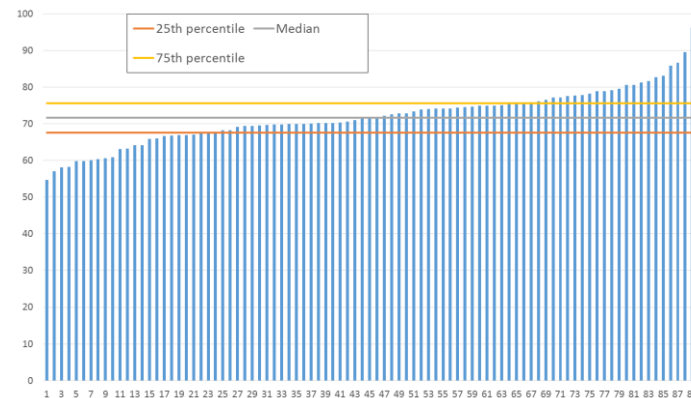
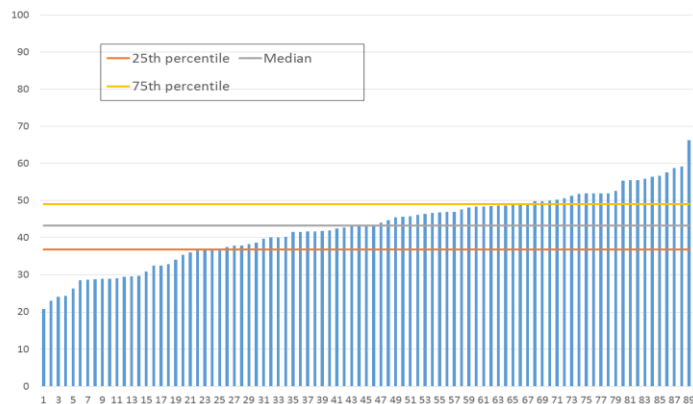


Risky prescribing

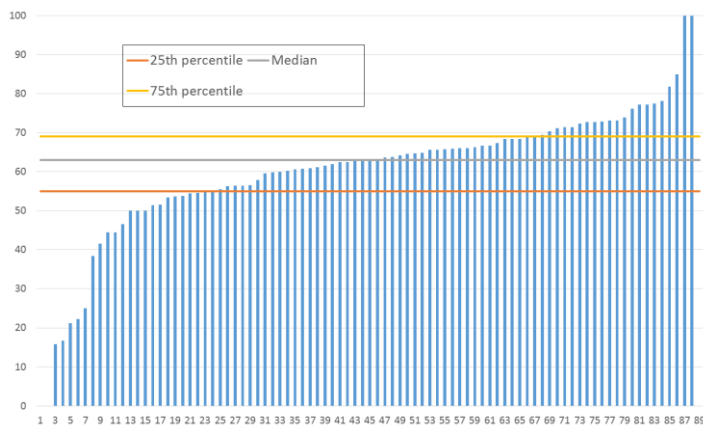
We analysed adherence to 'high impact' indicators



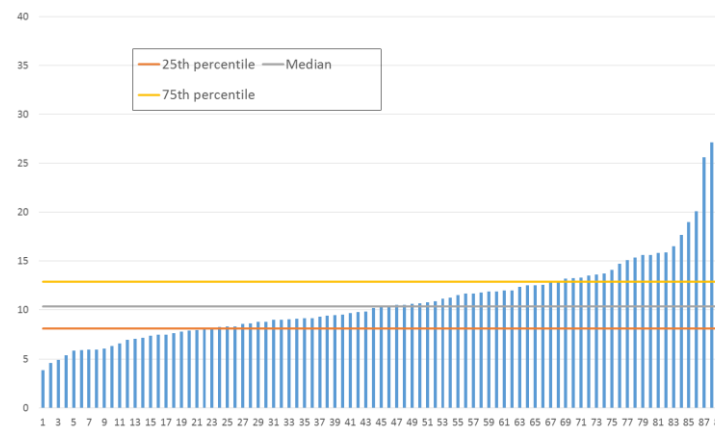
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Diabetes control



Blood pressure control



Anticoagulation in atrial fibrillation

Risky prescribing

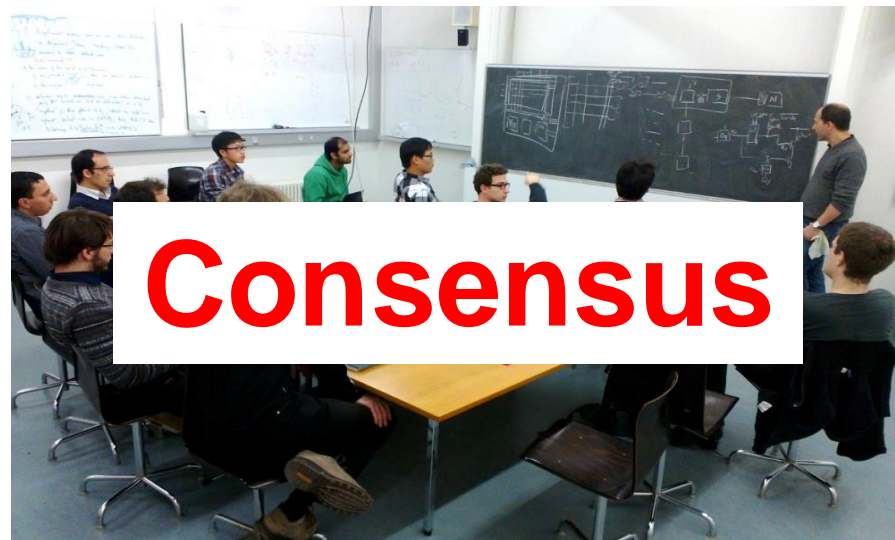
We developed an adaptable implementation package



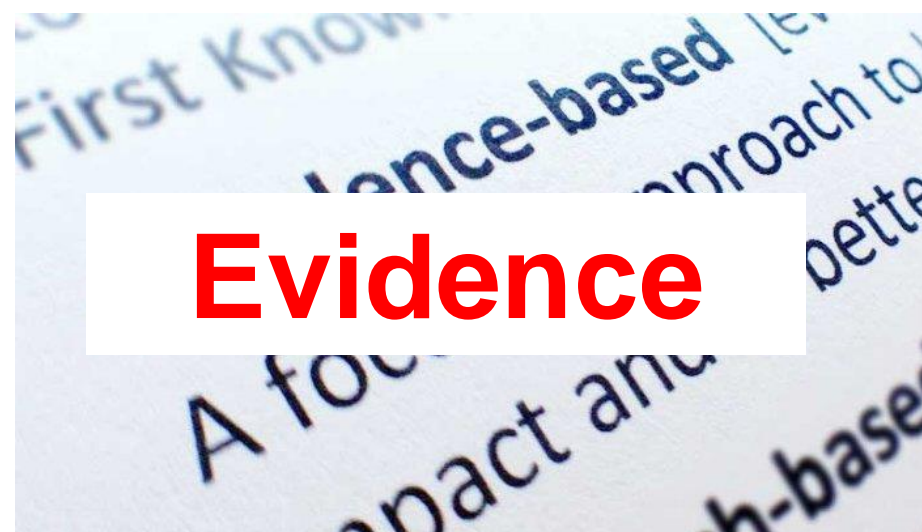
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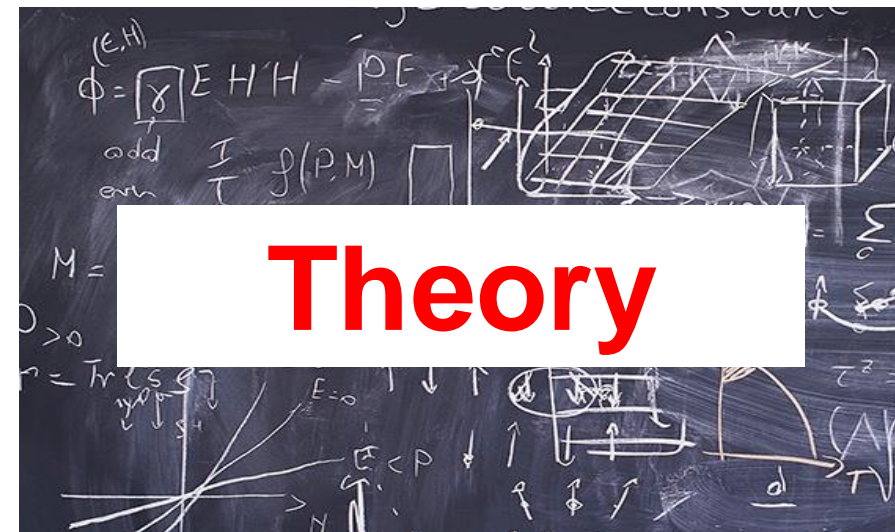
Interviews



Consensus



Evidence



Theory

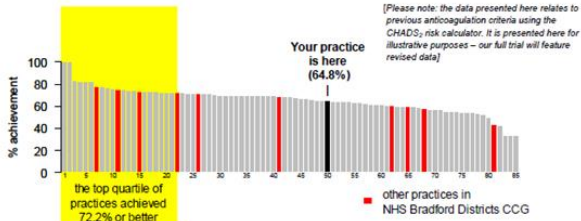
How well is your practice doing?

Parklands Medical Centre

Achievement in participating practices across West Yorkshire

The graph below demonstrates:

- Your practice (black bar) and % treated according to NICE guidance (64.8%)
- Achievement throughout West Yorkshire overall (range 0% – 100%)
- The top quartile of practices within West Yorkshire (shaded area – achieving 72.2% or above)
- Other practices within your CCG (red bars, n=4)



Your practice achievement on individual indicators

| Indicators (for patients with atrial fibrillation) | Proportion of patients (%) | Number of patients | Number of patients to be reviewed | Proportion of patients to be reviewed (%) |
|---|----------------------------|--------------------|-----------------------------------|---|
| AF register + CHADS ₂ score of 1 receiving anticoagulation / anti-platelet | 82.4 | 14/17 | 3 | 17.6 |
| AF register + CHADS ₂ score of 1 receiving anticoagulation / anti-platelet OR contraindication for anticoagulation / anti-platelet | 100 | 17/17 | 0 | 0 |
| AF register + CHADS ₂ score of 2 or above receiving anticoagulation | 64.8 | 59/91 | 32 | 35.2 |
| AF register + CHADS ₂ score of 2 or above receiving anticoagulation OR contraindication for anticoagulation | 94.5 | 86/91 | 5 | 5.5 |

We have analysed anticoagulation treatment in 4,773 patients with AF from a random sample of 88 general practices across West Yorkshire. Anticoagulation treatment was less likely to be prescribed to females and patients aged 80 years and older. However, much variation cannot be explained away by patient factors and is likely to be related to differences in clinician behaviour.

We estimate that there were approximately 7,170 untreated, potentially eligible patients across practices in West Yorkshire. Treating these patients with anticoagulation could prevent around 180 strokes per year.

For every 40 at risk patients your practice treats with anticoagulation, you may be preventing one stroke per year. Could you prevent another?

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Persuasive messaging

Peer comparison

Problem solving



Goal setting

Action planning

Patients to be reviewed

| Name | Count | % | Last Run | Flags |
|---|-------|--------|-------------------|-------|
| 13N3. AF and CHADS VASc = 1 without Warfarin Rx (read code or Rx) | 11 | 55.0 % | 17 Jun 2015 14:14 | |
| 13N4. AF and CHADS VASc = 1 without Warfarin Rx (read code or Rx OR Contraindication) | 9 | 45.0 % | 16 Jun 2015 12:11 | |
| 13N5. AF and CHADS VASc >=2 without Warfarin Rx (read code or Rx) | 44 | 25.9 % | 17 Jun 2015 14:24 | (u) |
| 13N6. AF and CHADS VASc >=2 without Warfarin Rx (read code or Rx OR Contraindication) | 36 | 21.1 % | 16 Jun 2015 12:11 | (u) |

Reinforcement

We did a rigorous 'real world' trial







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| | | |
|---|--------------|--------------|
| Adapted implementation package | 40 practices | 40 practices |
| Diabetes control  | Intervention | Control |
| Risky prescribing  | Control | Intervention |

| | | |
|---|--------------|--------------|
| Adapted implementation package | 32 practices | 32 practices |
| Blood pressure control  | Intervention | Control |
| Anticoagulation in atrial fibrillation  | Control | Intervention |

We did an economic evaluation



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We did a process evaluation



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Field Marshall Helmuth Karl Bernhard Graf von Moltke



What worked?



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Diabetes control



Blood pressure control



Anticoagulation in atrial fibrillation



Risky prescribing

Risky prescribing



Control

6.0%

Intervention

4.9%

Odds ratio 0.81 (97.5% CI 0.67 to 0.99)

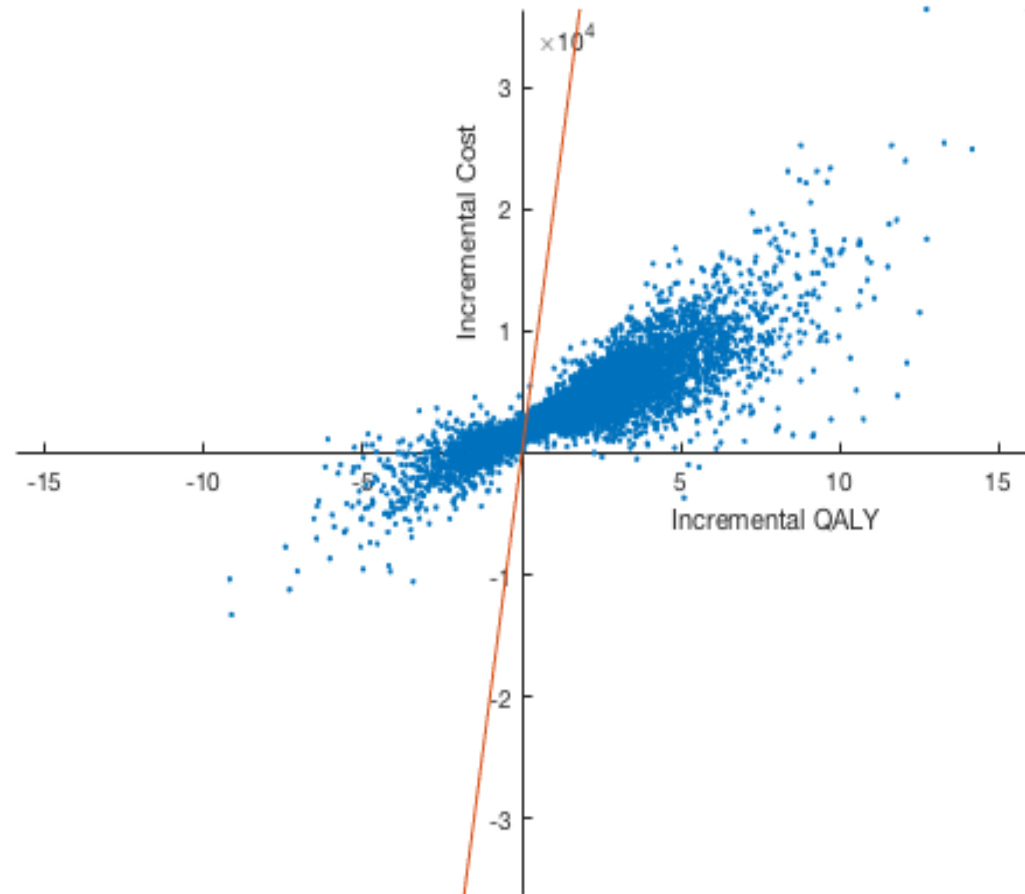
Once confounders adjusted for, the odds of a patient achieving outcome in intervention practices was 18.5% lower compared with a patient with same characteristics in control practices

More expensive and more effective than usual practice

Incremental cost effectiveness ratio of £2,337



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Risky
prescribing

Let's pause...



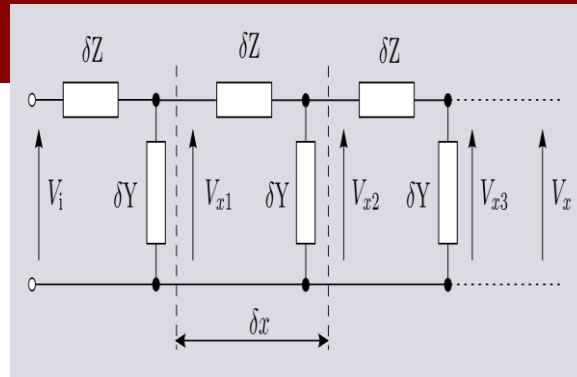
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CollegHumor.com





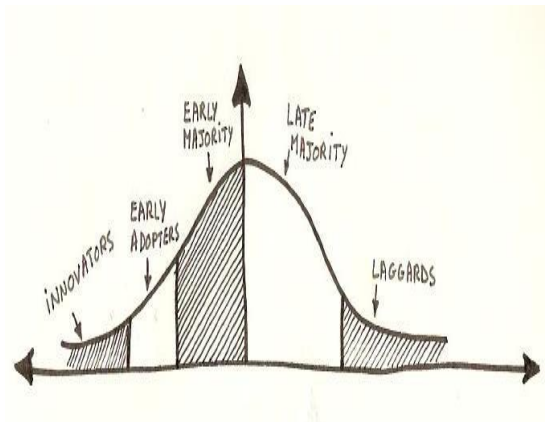
Latency



Voltage drop



Prompts



Targeted behaviour



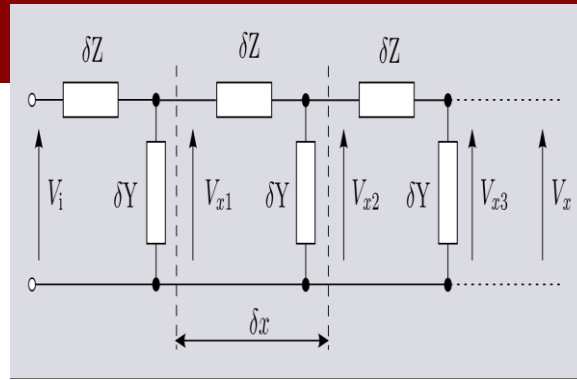
Wrong target



Stampede



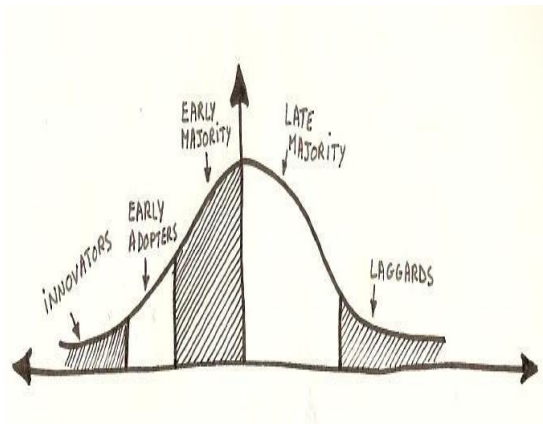
Latency



Voltage drop



Prompts



Targeted behaviour





Wrong target





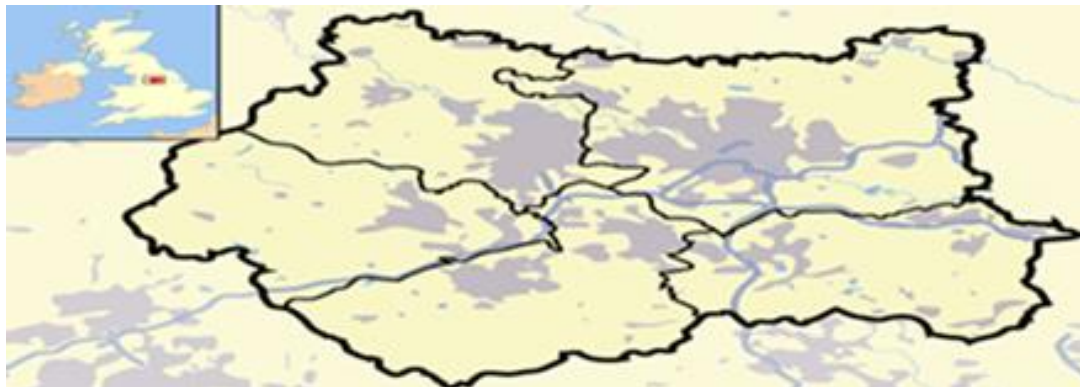
Stampede



What have we learned?

| | | |
|---|--------------|--------------|
| Adapted implementation package | 40 practices | 40 practices |
| Diabetes control  | Intervention | Control |
| Risky prescribing  | Control | Intervention |

| | | |
|--|--------------|--------------|
| Adapted implementation package | 32 practices | 32 practices |
| Blood pressure control  | Intervention | Control |
| Anticoagulation in atrial fibrillation  | Control | Intervention |

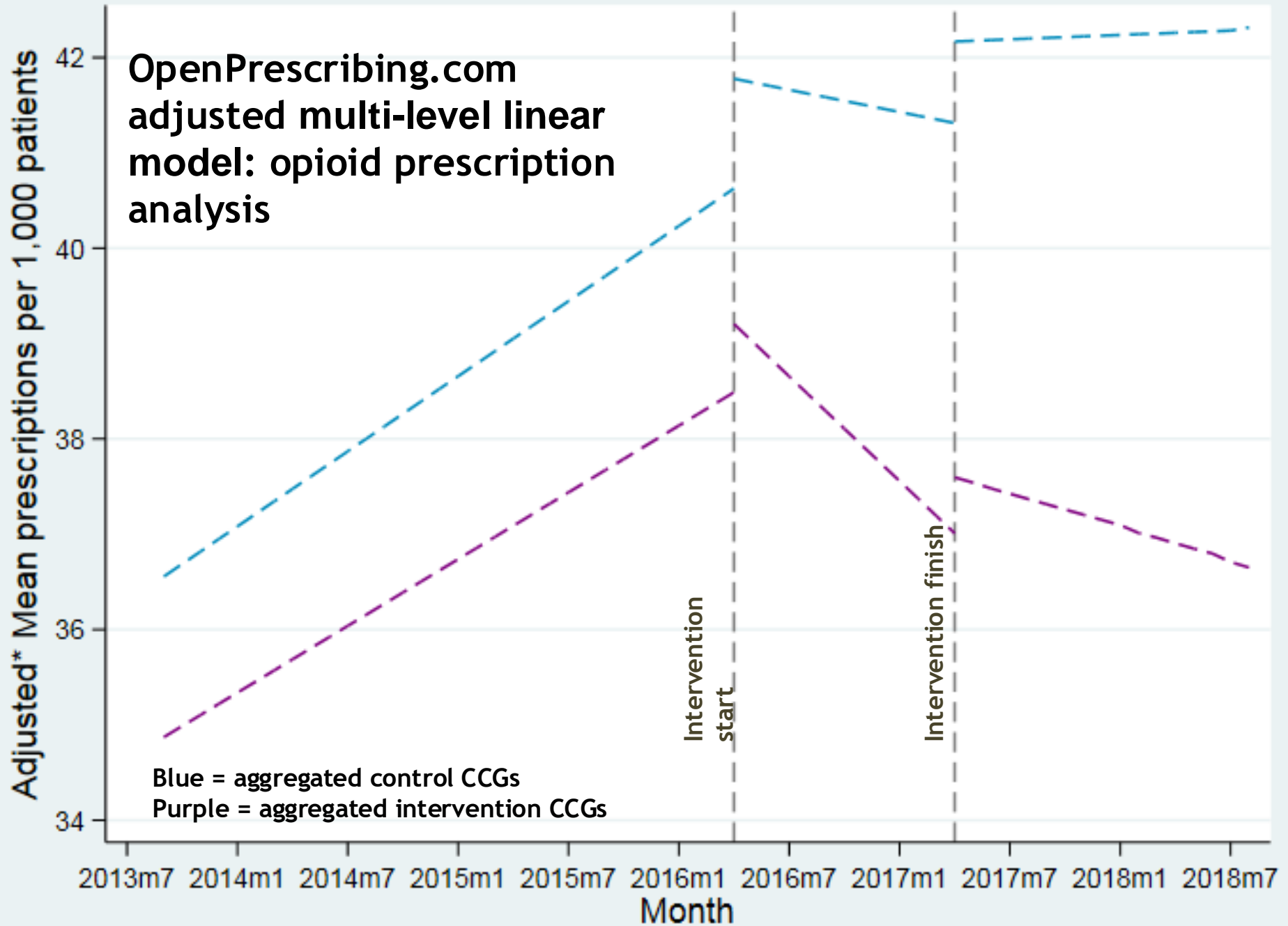


Iteration

Rigour

Scale

Pragmatism





Grimshaw JM, Eccles MP, Lavis JN, Hill SJ, Squires J. **Knowledge translation of research findings.**

Implementation Science 2012; 7: 50

Grol R. **Beliefs and evidence in changing clinical practice.** *BMJ* 1997; 315:418-421

Auerbach AD, Landefeld CS, Shojania KG. **The tension between needing to improve care and knowing how to do it.** *NEJM* 2007;357:608-13



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THE SCIENCES

Crack Research: Good news about knuckle cracking

One man's long, noisy, asymmetrical adventure gets him a high five