

Reducing hyperpolypharmacy in Inpatient Acute & Aged Medicine

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We declare that we have no conflicts of interest to disclose.



Polypharmacy- in Australia

- **One Definition:** “Prescription of ≥ 4 -5 drugs”
- **Size of Burden:**
 - Older Community
 - Average drug use: 4.4
 - 30% exposed to high risk drugs
 - Older Hospital
 - >5 drugs 60%
 - 50% exposed to high risk drugs
 - Nursing Home
 - Average of 6 drugs
 - 60% exposed to high risk drugs



Polypharmacy- What do we know?

- Cognitive Decline
- Falls
- Adverse Drug Reactions
- Hospitalisation and Readmissions
- Disability and Mortality

Welsh et al. 2018 Drugs and Ageing

Polypharmacy- High Risk Drugs

- Polypharmacy (5 + drugs and Falls)
- Sedatives – Hypnotics
- Antipsychotics
- Antidepressants
- Anticoagulants
- Cardiovascular drugs
- PPI? Statin?
- **Anticholinergic (drug) burden**



*Welsh et al. 2018 Drugs and Ageing
Cao et al 2007 Clin Pharm and Therapeutics
Gray et al 2018 JAGS, 2016 BMJ*

Anticholinergic burden- New kid on the block?

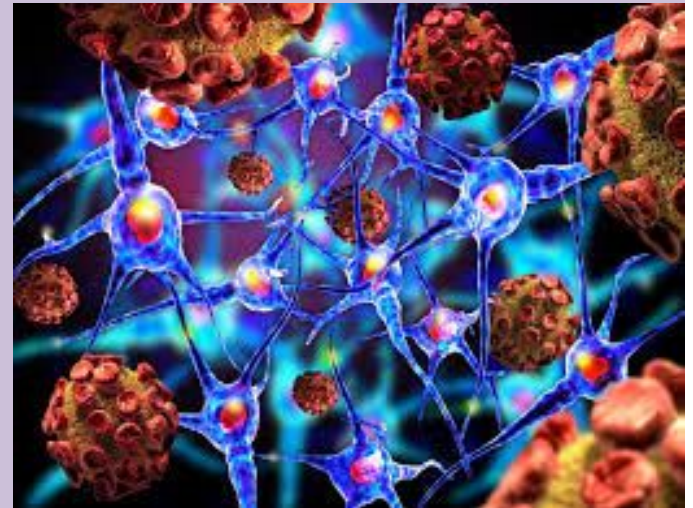
- Falls and Hospitalisation
- Cognitive impairment
- Poor Memory and Executive function
- Increased risk of “Dementia” long term



Ancelin et al 2006 BMJ
Carriere et al 2009 Arch Int Med
Myint et al 2016 Age Ageing
Coupland et al 2019 JAMA
Richardson et al 2018, BMJ

Anticholinergic burden- New kid on the block

- Anticholinergic burden increases risk of :
 - Dementia diagnosis (?10% PAR)
 - Mortality
 - Adverse cardiovascular outcomes
 - Falls



*Ancelin et al 2006 BMJ
Carriere et al 2009 Arch Int Med
Myint et al 2016 Age Ageing
Coupland et al 2019 JAMA
Richardson et al 2018, BMJ*

Hyperpolypharmacy

- **Definition :**

- Prescription of ≥ 10 drugs
- Prevalence in internal medicine inpatients : 20%-30%
- Increased risk of adverse drug reactions, falls, delirium and functional decline
- Almost 20% elderly dispensed potentially inappropriate medication/s



Deprescribing

- **Definition:**

“..process of withdrawal of inappropriate medication, supervised by a healthcare professional with the goal of managing polypharmacy and improving outcomes” *Reeve, E. et al. 2015 BrJCP*

- **Steps:**

- 1. **C-onsider** indications for all medications
- 2. **E-valueate** risks of medication induced harm
- 3. **A-ssess** each medication for potential to deprescribe
- 4. **S-ort** and prioritise medications to deprescribe
- 5. **E-valuation** and Monitor post Implementation



Scott et al. 2015 IMJ

Deprescribing

- **Aim:**

Better health outcomes and value based care
Healthcare cost savings (>A\$1.2b/year)

- **Evidence:**

No mortality benefit in RCTs (? Trend towards)
Reduced falls

- **Resources:**

- ADeN (Australian Deprescribing Network)
- Canadian Deprescribing Network
- EdeN (English deprescribing network)
- SIMPATHY (Europe)
- WHO The Global Patient Safety Challenge : Medications without harm (5 moments of medication safety)



Deprescribing - Challenges

- Lack of time and information
- Lack of clinician awareness
- Fear of causing discomfort or harm
- How to evaluate benefits
- Maintaining adherence
- Knowledge and willingness of physicians



Reducing Hyperpolypharmacy in inpatients

MAJOR FOCUS

Patient Safety

(Reducing risks for adverse drug effects)

MINOR FOCUS

Quality

Improvement

(Accurate and essential prescribing)

Aims ----- Team

1

Primary : Reduce prevalence of hyperpolypharmacy to 15% within 12 months

2

Secondary : Deprescription rate of 50% for at least 1 drug within 12 months

**Medical (Junior/Senior)
Nursing
Pharmacy
Ward Clerical**

**EMR and Decision Support
Team**

Research & Ethics

Executive Sponsors

Intervention

Regular educational sessions and posters

Patient information sheet

**Colour coded
ALERT card**

Revised Patients' Attitudes to Deprescription (rPATD) questionnaire*

Post discharge phone call to patient

Alert Card

Take Care

This patient takes ≥ 10 medications

1. Please verify indications for medications
2. Please cease/reduce dosages as appropriate

Flip this page over only when you are finished deprescribing

High Priority Medication Classes

Psychotropics	PPIs	Statins
Opioid Analgesics	Antihypertensives	Anticoagulants

Thank You

For completing a review of this patient's medications

Signature _____
Page _____
Designation _____

Study Population



1052 consecutive patients

(January-July)

M~F

Age ~ 75 years

LOS ~ 5 days

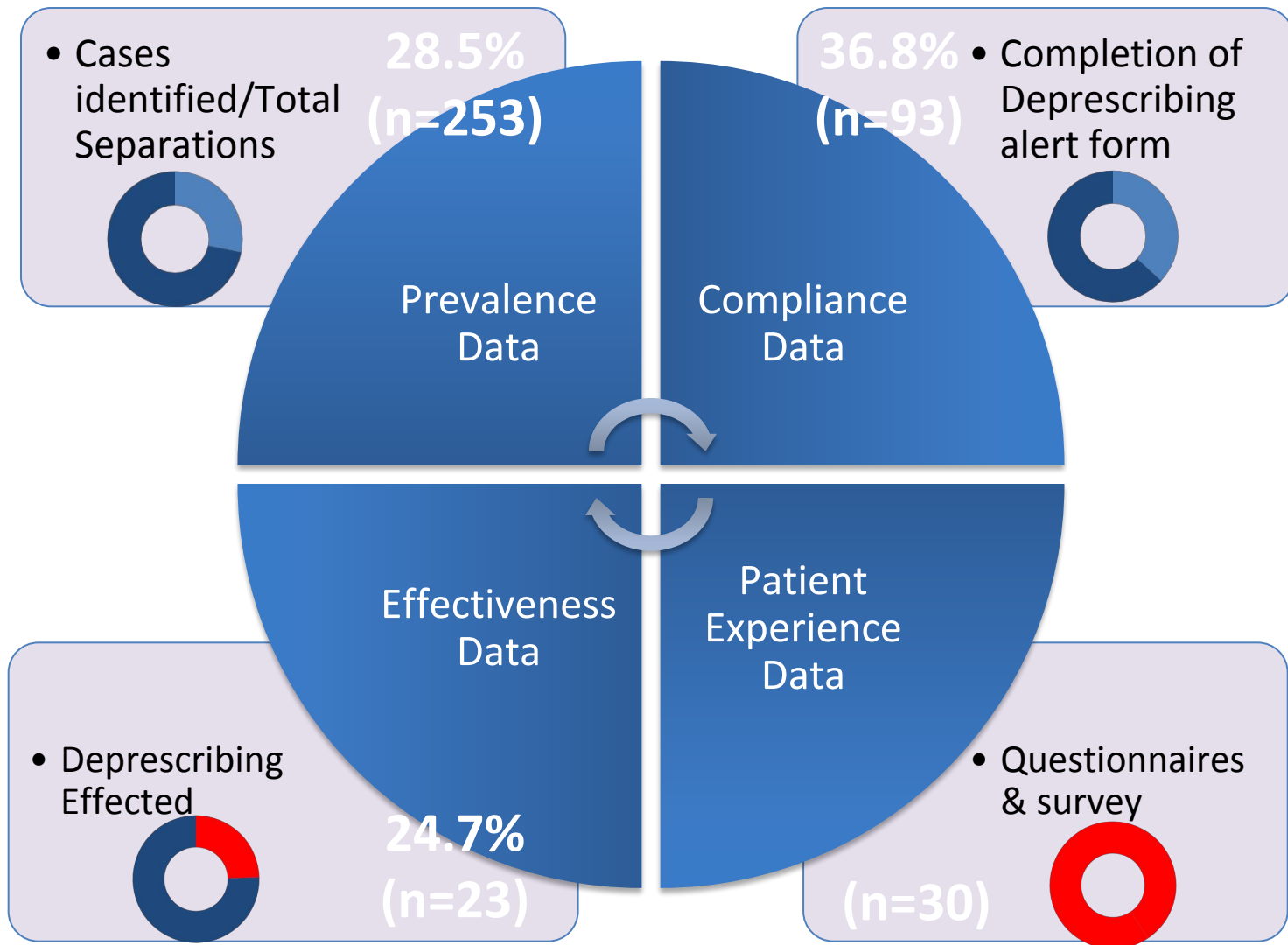
164 files excluded

(incomplete prescribing
information)

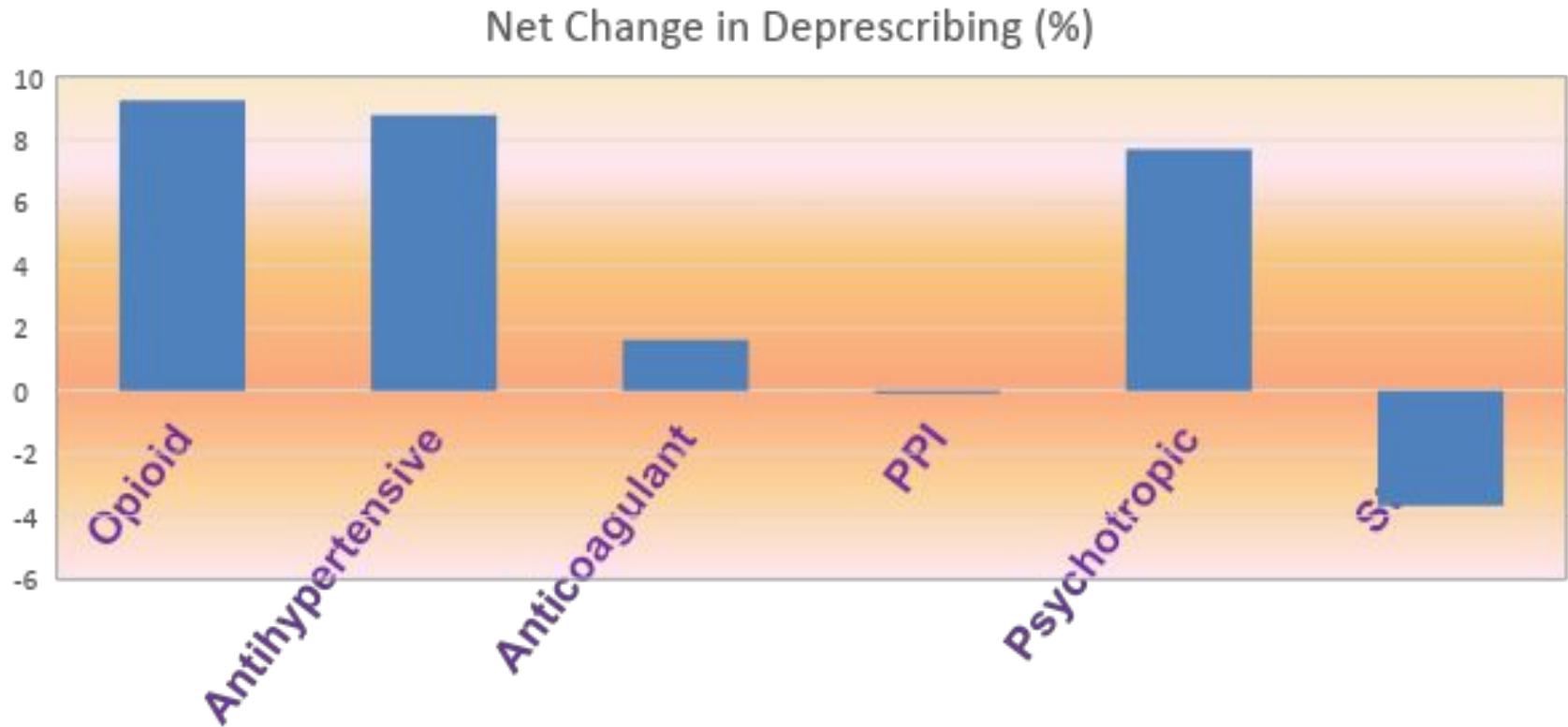
888 complete medical
records



Deprescribing Measurements



Deprescribed High Risk Medications



Deprescribing- Practical Aspects



"It's important to note we really are trying hard."

Deprescribing- Patient's Attitudes

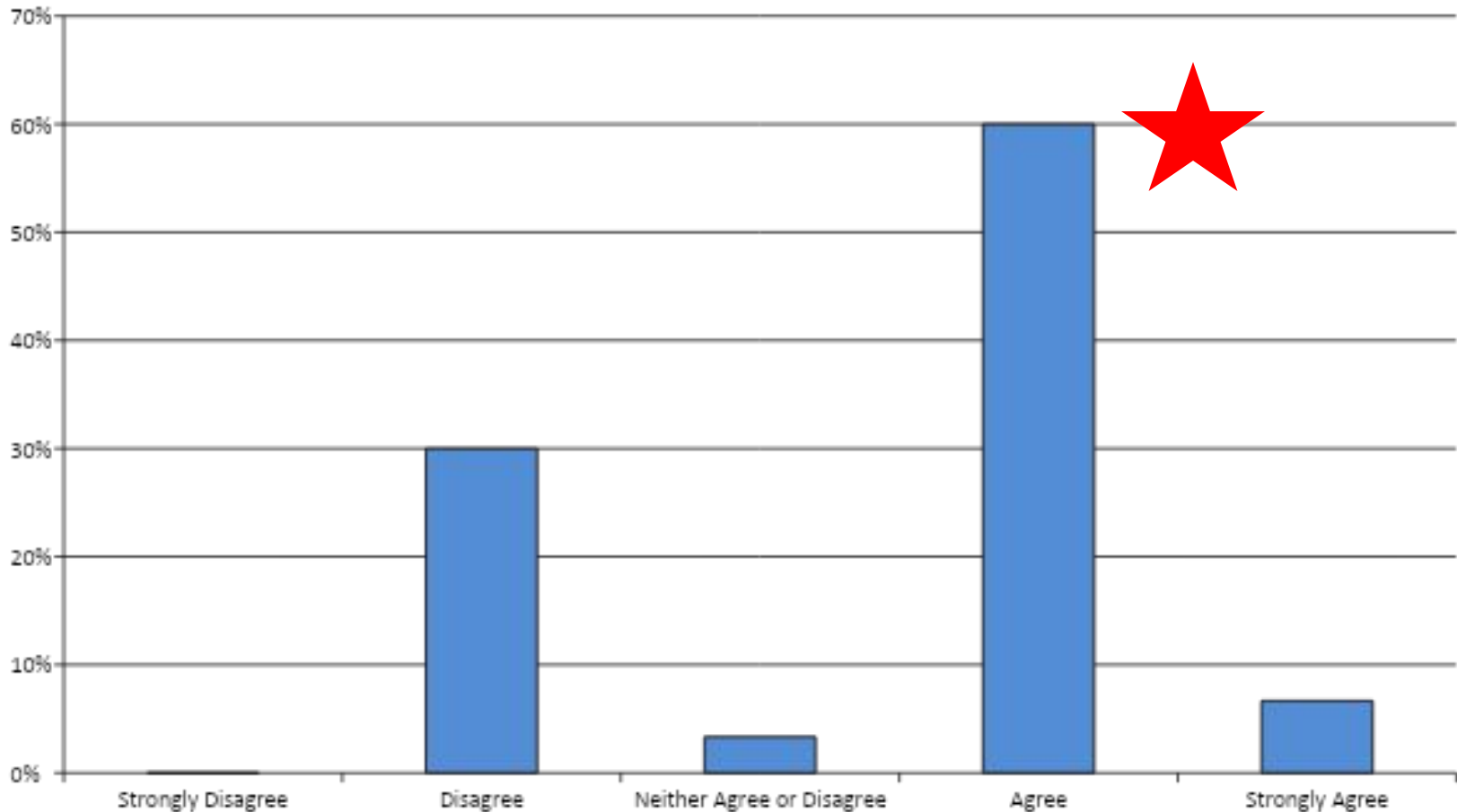
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"Is there a pill I can take to feel better about all the pills I take?"

Deprescribing- Patient's Attitudes

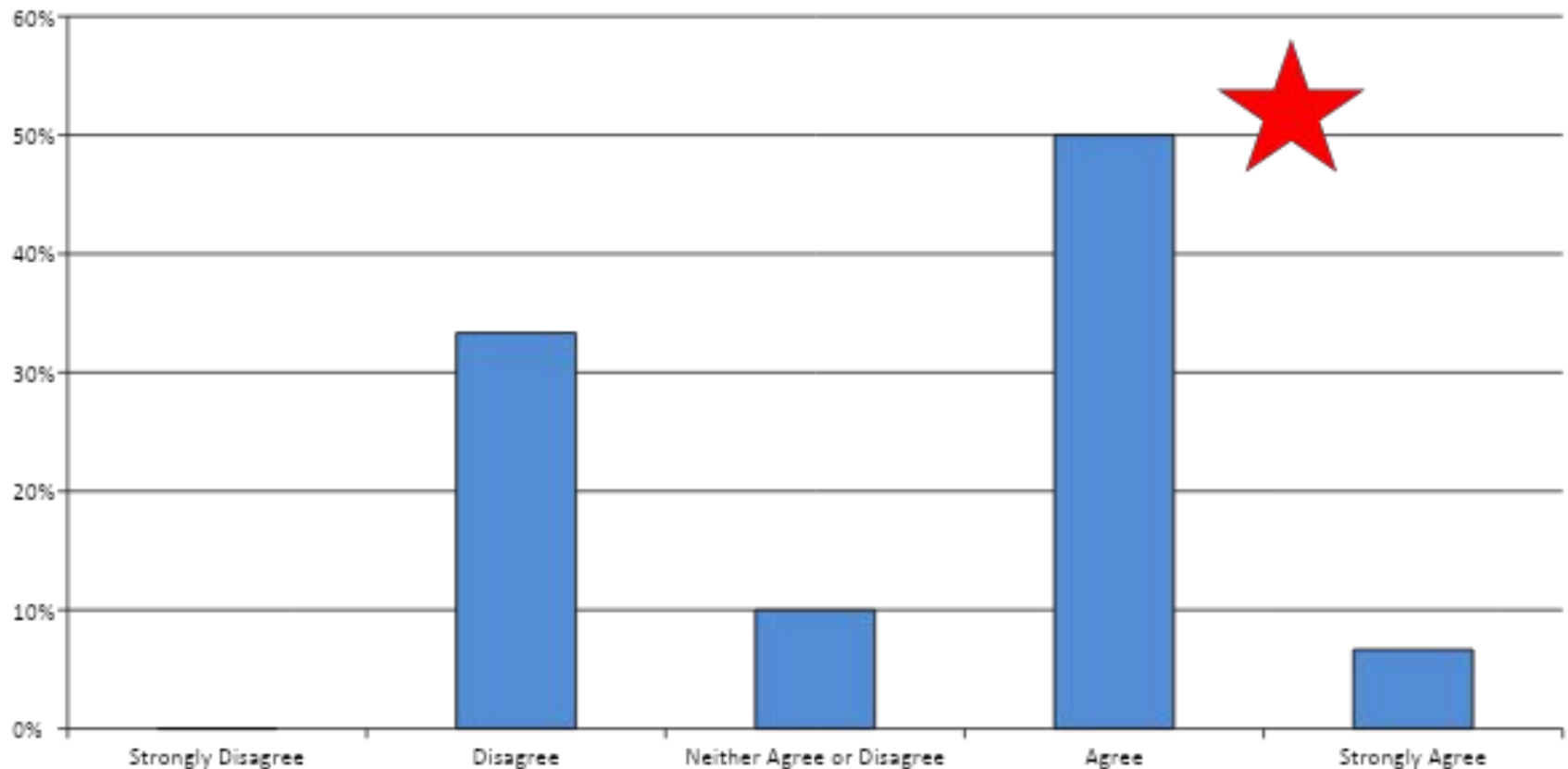
1. Sometimes I think I take too many medications (n=30)



Deprescribing- Patient's Attitudes

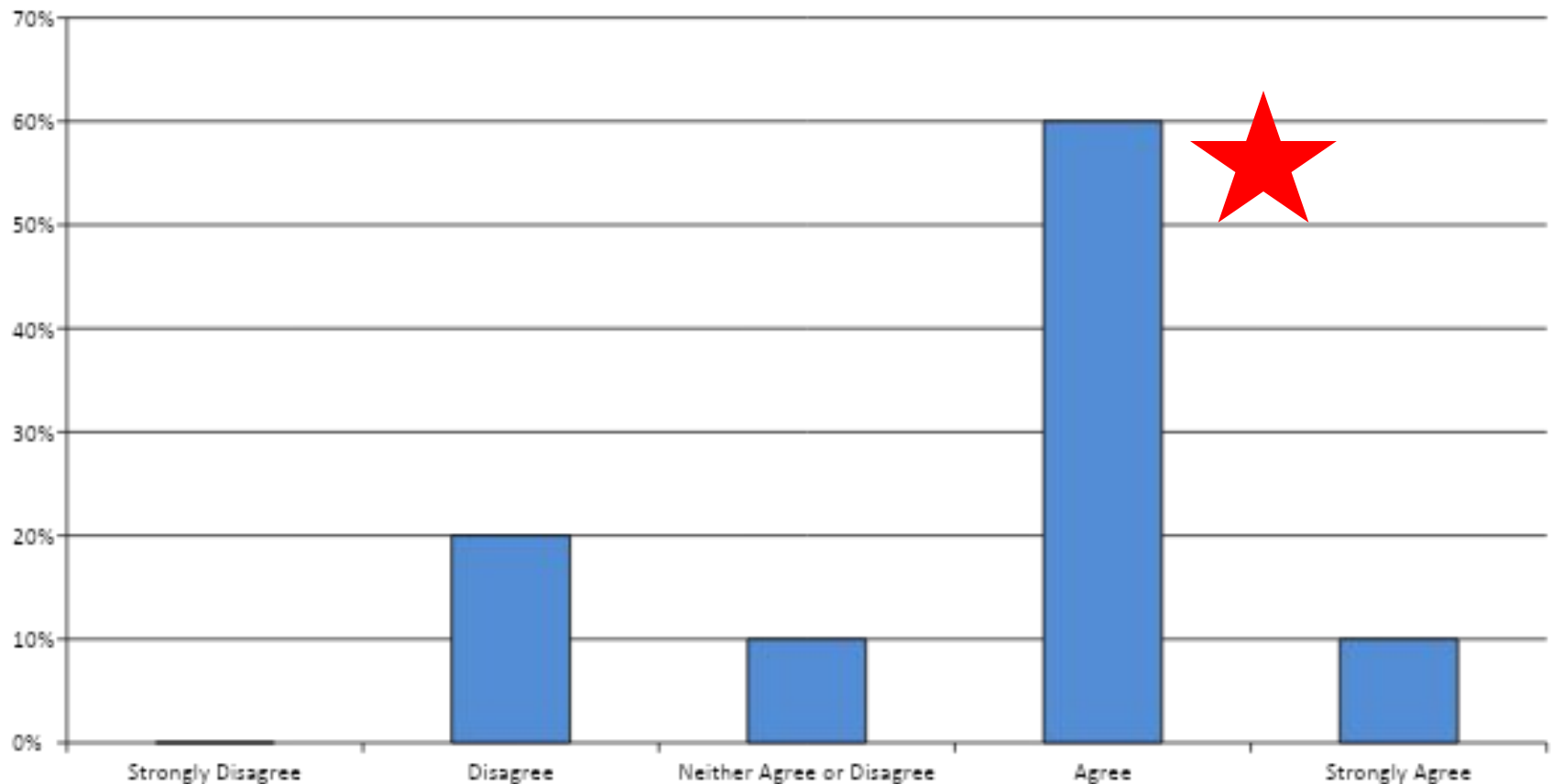
2. I think I am taking one or more medications I don't need to take

(n=30)



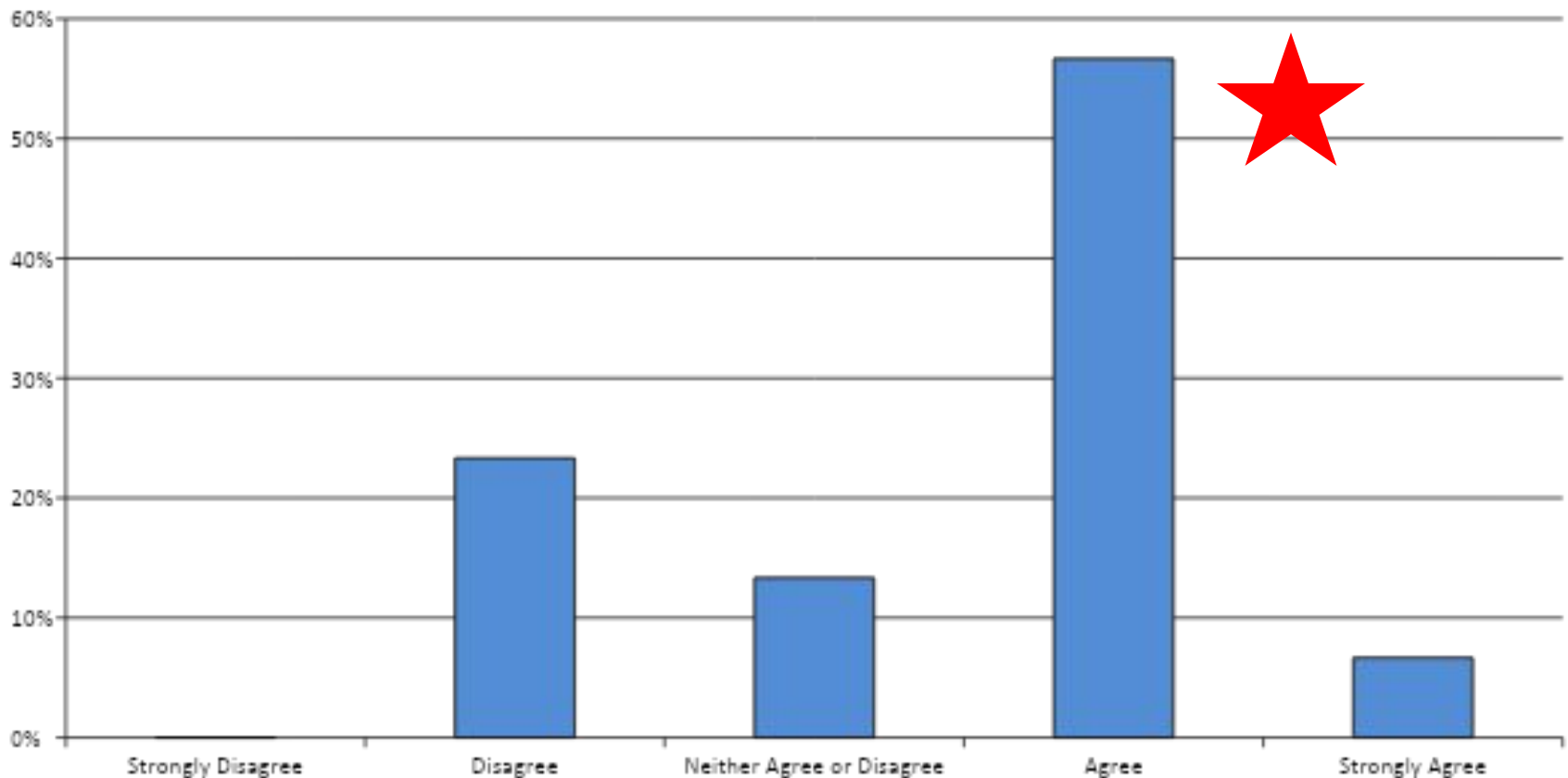
Deprescribing- Patient's Attitudes

3. I would like to try stopping one or more of my medications (n=30)



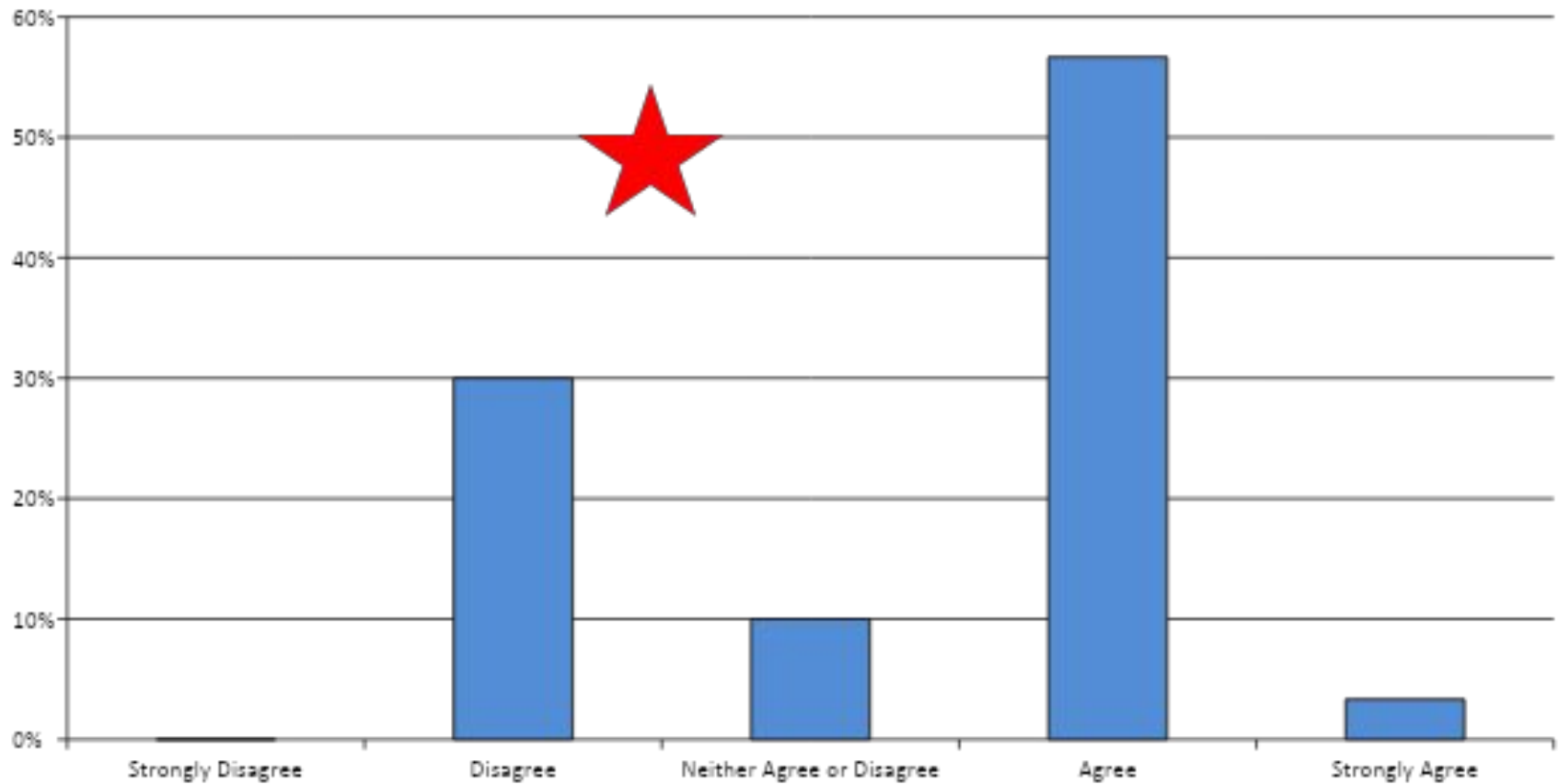
Deprescribing- Patient's Attitudes

4. I feel like my doctors have involved me enough in deciding what medicines I should take (n=30)



Deprescribing- Patient's Attitudes

5. Overall, I am satisfied with the medications that I take (n=30)



Challenges, Sustainability and Scalability



Challenges

- Sustained staff engagement/support
- Patient Resistance



Sustainability

- Simplistic Model
- Feedback via Organisation Dashboard



Scalability

- EMR modifications and support
- Acute and community health services

Conclusions

- Prevalence of hyperpolypharmacy in internal medicine inpatients is almost 30%
- Deprescribing high risk medications is challenging but can be successful
- Patients' attitudes to deprescribing suggest willingness to reduce medication burden
- Sustainability, individualisation and patient experience are key to successful deprescribing
- Long term measures of success (including readmissions and quality of life) are important considerations

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