



How does the cost of medicines to patients influence the use of guidelines-based medicines for asthma in Australia

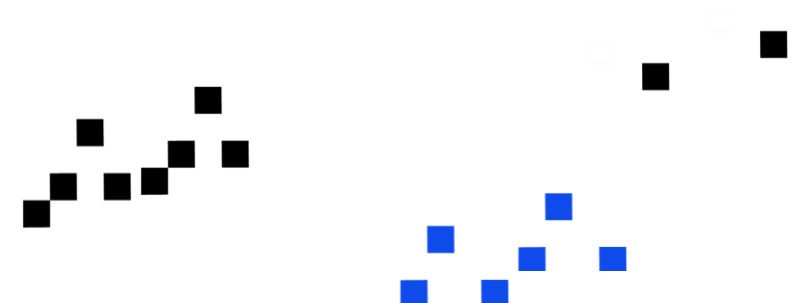
Tracey-Lea Laba. PhD, BPharm

Tracey.laba@chere.uts.edu.au



Conflicts of interest

- My married name is Laba
- LABA = long-acting beta agonists
 - I am not advocating for or against LABAs, nor getting any kickbacks...



NHMRC partnership project

Title: Evaluation of a financial incentive to improve the use of preventive medicines by people with asthma

*Research organisations

- University of NSW, Division of general practice and community medicine: Nick Zwar
- Woolcock Institute (Breathing and Sleep research): Helen Reddel, Guy Marks
- The George Institute for Global Health, Health Economics and Process evaluation program: Steve Jan, Tracey Laba
- University of South Australia, Quality use of medicines and Pharmacy research centre: Elizabeth Roughead

*National Prescribing Service (NPS) MedicineWise:

Aine Heaney, Kirsty Lembke

*Asthma Australia:

Anthony Flynn, Michelle Goldman

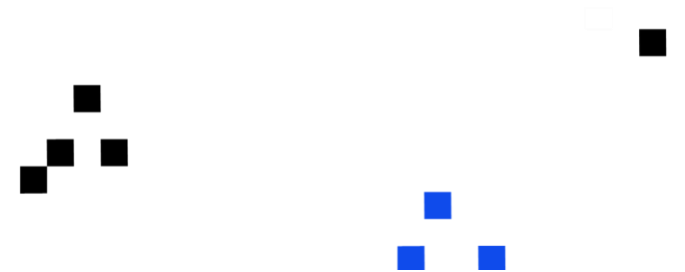
*Other stakeholders

- Consumer Health Forum, Federal Department of Health, Health Practitioners, Pharmacy Guild of Australia, Pharmaceutical Society of Australia



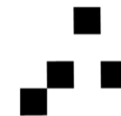
The problem

- Preventable disease burden
- Effective medications not being used optimally
- Affordability to communities



Preventable burden

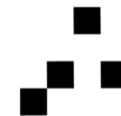
- Asthma in Australia
 - 1 in 9 people affected = ~2.5 million
 - 39,500 hospitalisations; more likely in children <15 years
 - 34% report interference with daily living
 - 21.8% of people aged 15-25 needed time of work, study, school because of asthma
 - Asthma action plans: 20% (15years and over); 41% (under 15)
 - 0.9% all direct spend on health (~\$655million)
 - 419 deaths in 2014 (rate is steady overall but declining in 5-34 years)



Asthma medicines



- Relievers – salbutamol, terbutaline (“the blue inhaler”)
- Preventers – inhaled corticosteroid (ICS) containing
 - SINGLE AGENT: e.g. fluticasone, budesonide (ICS)
 - COMBINATION with long-acting reliever: Fluticasone and salmeterol (ICS-LABA)
- Others....



- *“the absence of a relationship between asthma deaths and prevalence adds evidence that most asthma deaths at all ages are **PREVENTABLE** by treatment with low-dose corticosteroids and other management strategies, along with avoidance of risk factors.”*

Global Burden of Disease, Lancet 2017

Asthma guidelines – at the time of study

Figure. Stepped approach to adjusting asthma medication in adults

 AUSTRALIAN
ASTHMA
HANDBOOK



- ! Before considering stepping up, check symptoms are due to asthma, inhaler technique is correct, and adherence is adequate
- ↗ Consider stepping up if good control is not achieved.
- ↘ When asthma is stable and well controlled for 2–3 months, consider stepping down (e.g. reducing inhaled corticosteroid dose, or stopping long-acting beta₂ agonist if inhaled corticosteroid dose is already low).



Asthma guidelines - 2019

Figure. Stepped approach to adjusting asthma medication in adults



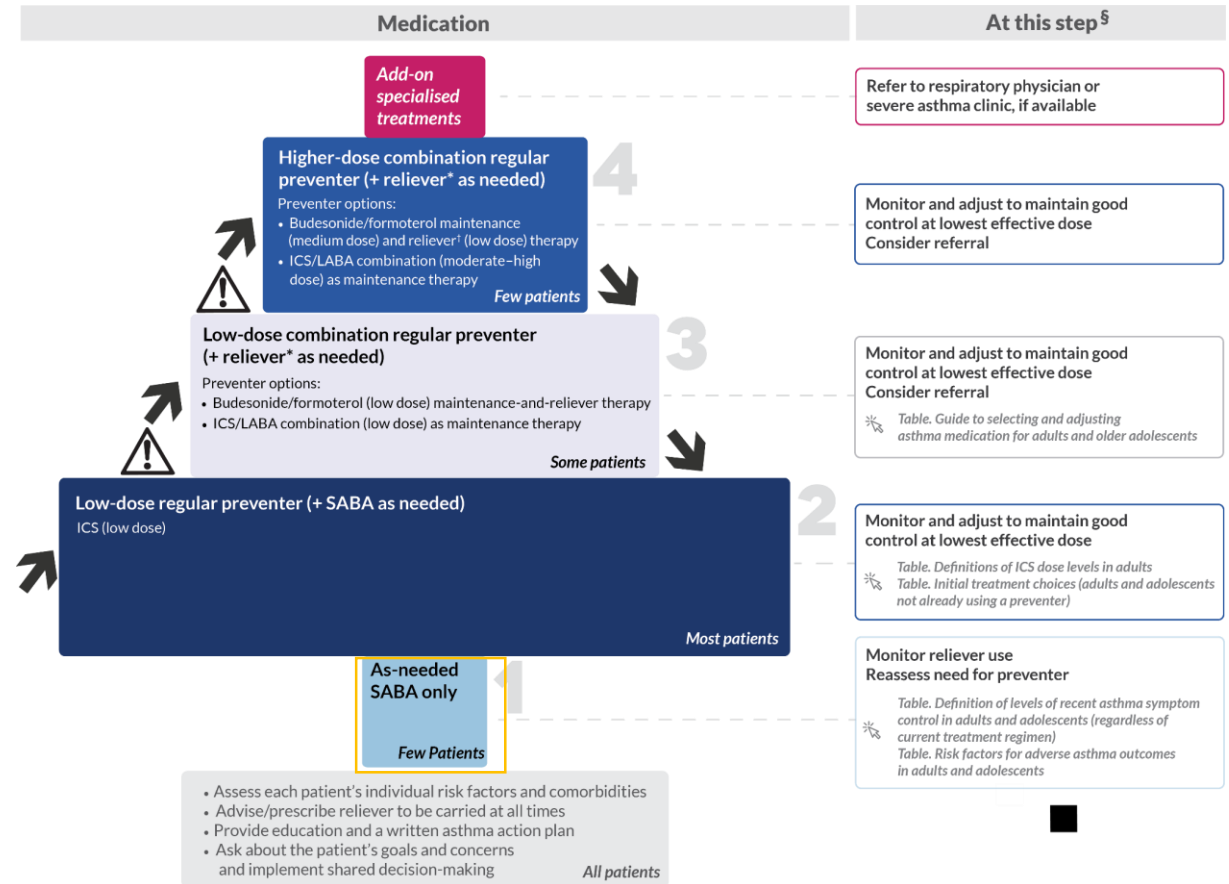
AUSTRALIAN ASTHMA HANDBOOK

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astmahandbook.org.au



Evidence for ICS-alone versus ICS- LABA

No exacerbation benefit for initial treatment
(*Ni Chroinin, Cochrane 2009*)

Modest reduction in exacerbations (17-21%;
Stempel NEJMed 2016, Peters NEJMed 2016)

No difference in symptom control (ACQ)
(*Stempel NEJMed 2016, Peters NEJMed 2016*)

Significant but tiny difference in reliever use
(<0.2 puffs/day) (*Stempel 2016*)

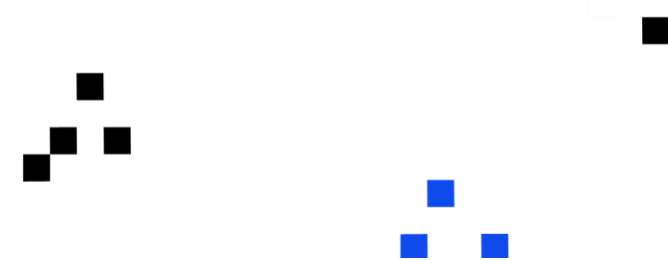
“Real-life” study: difference of 0.5 reliever
inhalers/year (*Stempel 2005*)



Asthma prescribing: Australia versus NZ

	NZ	Australia
% asthma patients taking ICS	69%	61%
% ICS patients taking ICS/LABA	44%	82%
% patients with poorly-controlled asthma	42%	45%
% asthma patients with urgent healthcare	28%	29%

- Time from launch of ICS-LABA to prescribing overtaking ICS-only
 - Australia: 3 years
 - NZ: 13 years



Do Australian prescribing regulations favour ICS-LABA?

- Both listed on Pharmaceutical Benefits Scheme (PBS)
- PBS facts:
 - Australia's universal medicine plan for all community dispensed medicines and high cost medicines dispensed in outpatients departments
 - Federally funded
 - Fixed co-payment per medicine dispensed (general up to \$38.30; concession \$6.30)
 - Family maximum out-of-pocket limit (roughly 62 scripts per year)
 - Prescribing restrictions: to match use in practice with cost-effectiveness evidence

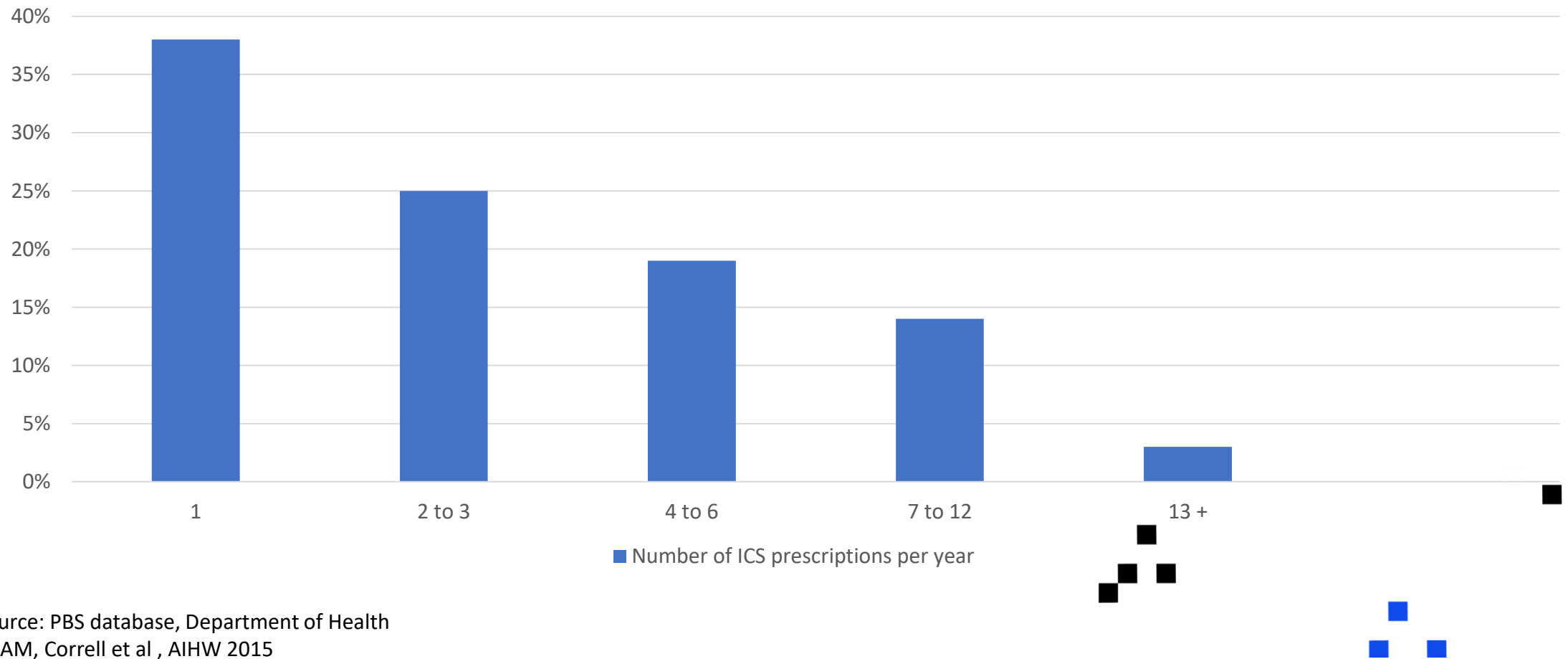
I confirm the above details are correct and that in signing this form I understand I may be audited.

Signed: Date:

Post application to Ministry of Health, Private Bag 3015, Wanganui – Fax: 0800 100 131

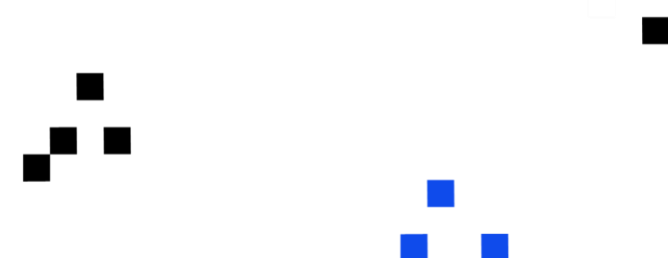
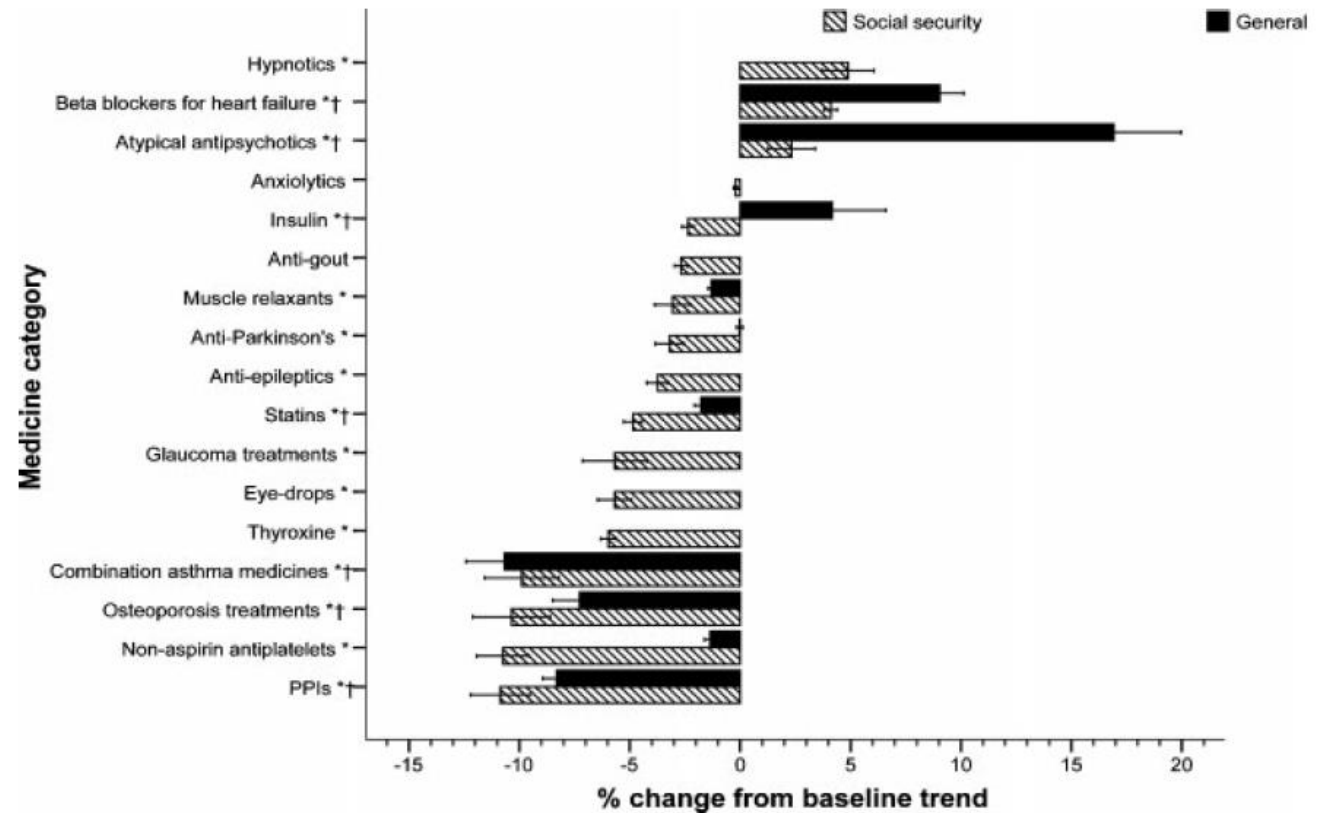
Sub-optimal use in patients

Proportion of Australians dispensed ICS-containing medicines



Is cost impacting patient use?

- Hynd, 2008
 - 2005, 21% co-payment rise
 - Sustained reduction in asthma med dispensing
- Ampon, 2008
 - Dispensing ICS more likely for concession card holders than general beneficiaries



Affordability

- Health System
 - 50% of the \$655 million spend on asthma in 2008-9 was on prescription medicines
 - Cost to government up to 10-times more for ICS-LABA than ICS
- Patients (see Reddel 2018, Australian prescriber)

	Cheapest 2018 cost per month (general patient)	Cheapest 2018 cost per month (concession)
Step 4	≥\$39.50	≥\$6.40
Step 3	\$19.75	\$3.20
Step 2	\$5.93	\$0.96

Research questions



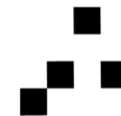
How are the cost to patients for asthma medicines impacting use in Australia?

People with asthma
GP prescribing



Would a financial incentive improve the use of preventive medicines by people with asthma?

Financial incentive = patient directed = lower co-payment for ICS-alone



Methods

- Qualitative semi-structured interviews
 - General practitioners (n=15)
 - Adults with asthma (n=24)
 - Parents of children with asthma (n=20)
- Quantitative web-based survey with randomised stratified sampling
 - Adults with asthma (n=792)
 - Parents of children >4 years with asthma (n=609)
 - Included:
 - indicator for cost-related underuse
 - Discrete Choice Experiment



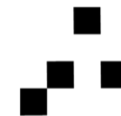
Qualitative results – general practitioners

- Prescribing priorities?
- Is cost an issue for patients?
- Conversations about costs?
- What if co-payments were lower for some preventer medicines?



Priorities for prescribing decisions

- Priority One: Quality of medical care and effective medicine appropriate for patient
 - *The main discussion is about its effectiveness, just ensuring that they're not having to use relievers too often, or they're not getting symptomatic too often: a sign that it's either ineffective or they're not using it well. (GP7/male)*
- All said they prescribed “according to guidelines”
 - 2 prescribed ICS-only for initial treatment...
- Cost to government
 - supportive of savings to government BUT **not** prepared to prioritise this at the expense of patient care.



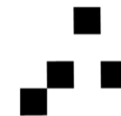
Is cost an issue to your patients with asthma?

- All but three GPs said that patients rarely reported cost as an issue
- Three GPs reported that some patients expressed difficulty affording medicines, not just for asthma
 - They responded by reviewing the patient's entire treatment regimen, particularly focussing on 'the most expensive'; but did not necessarily know exact costs
- Little awareness of patient co-payments
 - *I guess most GPs don't know that kind of information well enough, really. It's not something that's ever been discussed by drug reps. Even if you ask them that, it's really a very vague answer. It's really through GPs who are interested where we talk to chemists or find out from patients, bits and pieces, and we piece the information all together. (GP13/male/IRSAD-8)*



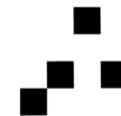
Discussions with your asthma patients about medicine costs?

- None of the GPs routinely initiated discussions about medicine costs
- One-third said that they considered cost to patients when prescribing, but only if a patient raised this as a concern.
 - *I would give them a higher dose and use it less frequently if [cost] was the issue, but it's not really an issue...it's more theoretical than real. (GP6/male)*
- Two GPs felt it was not appropriate to initiate discussions of medicine costs with patients, as these were matters of personal finance:
 - *I don't really feel it's my place. I'm there to provide the best possible care; patients need to know what this is irrespective of any other factor. (GP4/male)*
 - *If I think they need a particular medication, then that's the one that I'll give them. (GP1/male)* ■



What if co-payments for ICS were lower?

- One GP who treated many patients with cost concerns would consider cheaper options if the effectiveness of the product was assured, and the reduction in cost was substantial:
 - *If there is a big gap [in co-payment] and GPs are made aware of it, I guess it will probably promote more GPs venturing to try it out and then probably realising that it actually works equally as well for a lot of the patients.*
(GP13/male)
- Otherwise, switching patients may not be worthwhile from a time perspective:
 - *We're time poor. A number of my colleagues would, I think, just stick to what they know rather than try to explain the logic of switching to a patient.*
(GP10/male)



Qualitative results - patients

- Perceptions around the cost of medicines varied

“I’m a bit slack ‘cause the [ICS/LABA]’s pretty expensive and if I, if I sort of can’t afford it, I’ll go without it for a couple of months and ... I notice it really, really badly”

“First is our son’s health. So I would pay, you know, all my wage into keeping my son healthy”

- The cost of not taking medicines also considered by some

“The cost if I don’t take it is higher, because when you take time off work, that costs you money, or costs me money... because if you’re always sick and stuff like that and can’t catch up with your work ...”

- Many unaware of medicine costs until purchase

“They never tell you at the [consultation], “Oh, this is going to cost you so much ... until you go to your pharmacist ... they tell you the cost”



Quantitative results – is cost impacting asthma medicine use?

- Web-based survey with rigorous methodology to obtain a population sample

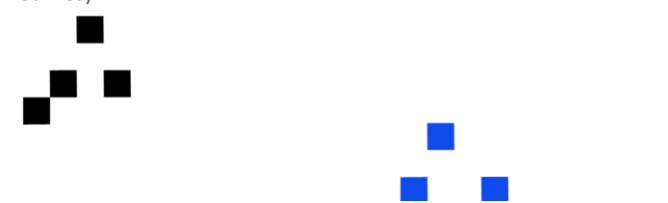
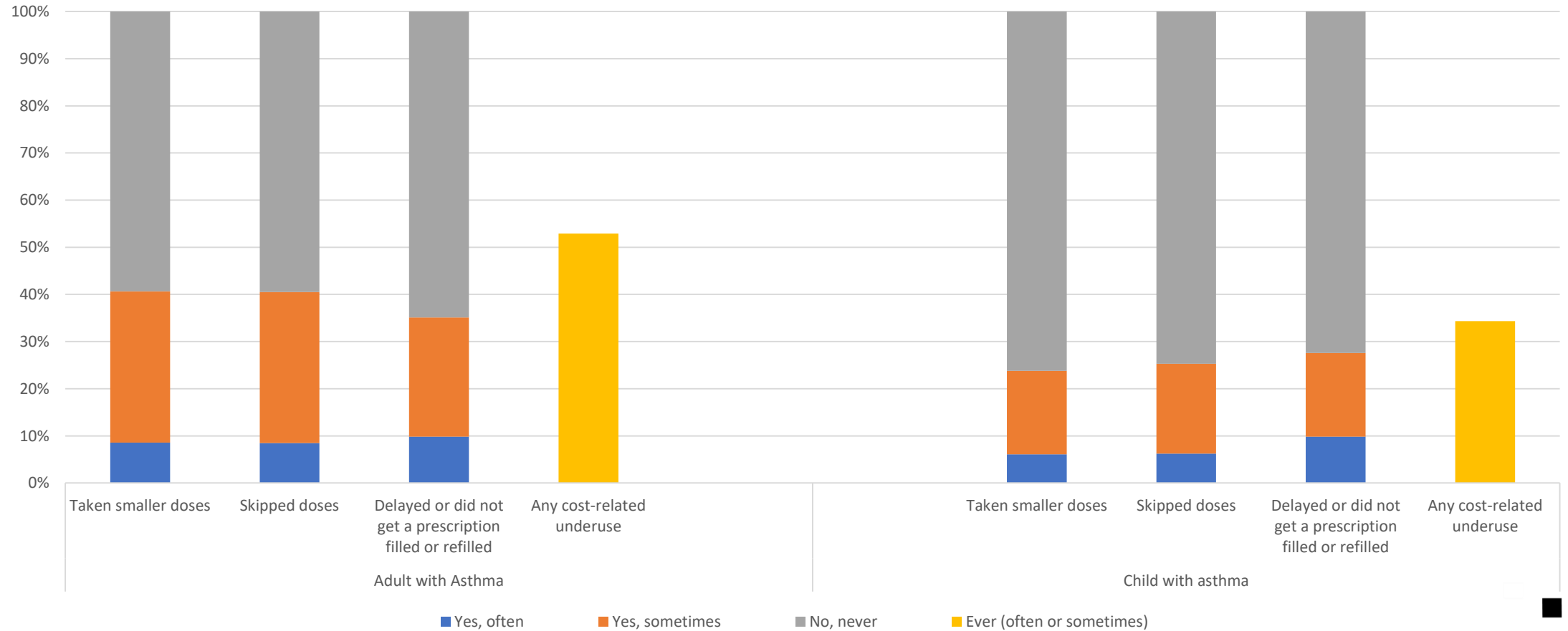
	Adults (n=792)	Children with asthma (n=609)
Age (mean, SD)	47.0 (17.0)	5-10 years: 50.7% 11-17 years: 49.3%
Male	375 (47.3%)	364 (59.8%)
Concession beneficiary	478 (60.4%)	322 (52.9%)
GINA “poorly controlled symptoms”	252 (31.8%)	216 (35.5%)
Any urgent health service use for asthma, previous 12 months	353 (44.6%)	390 (64.0%)
No ICS-medicines, previous 12 months	326 (41.2%)	322 (52.9)

Cost-related underuse of asthma medicines, previous 12 months

- “skipping or reducing doses, delaying or not obtaining prescriptions because of cost” (Pierre-Jacques 2008 Med Care; Madden JAMA 2008, Medicare Beneficiary Survey, USA)

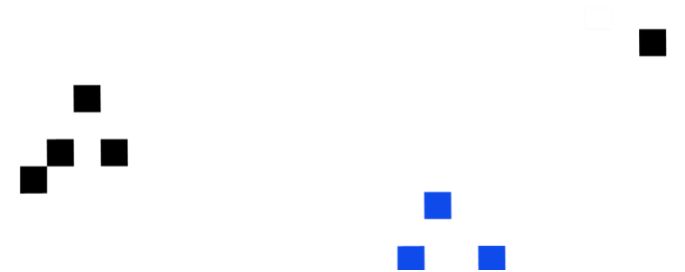


Cost-related underuse

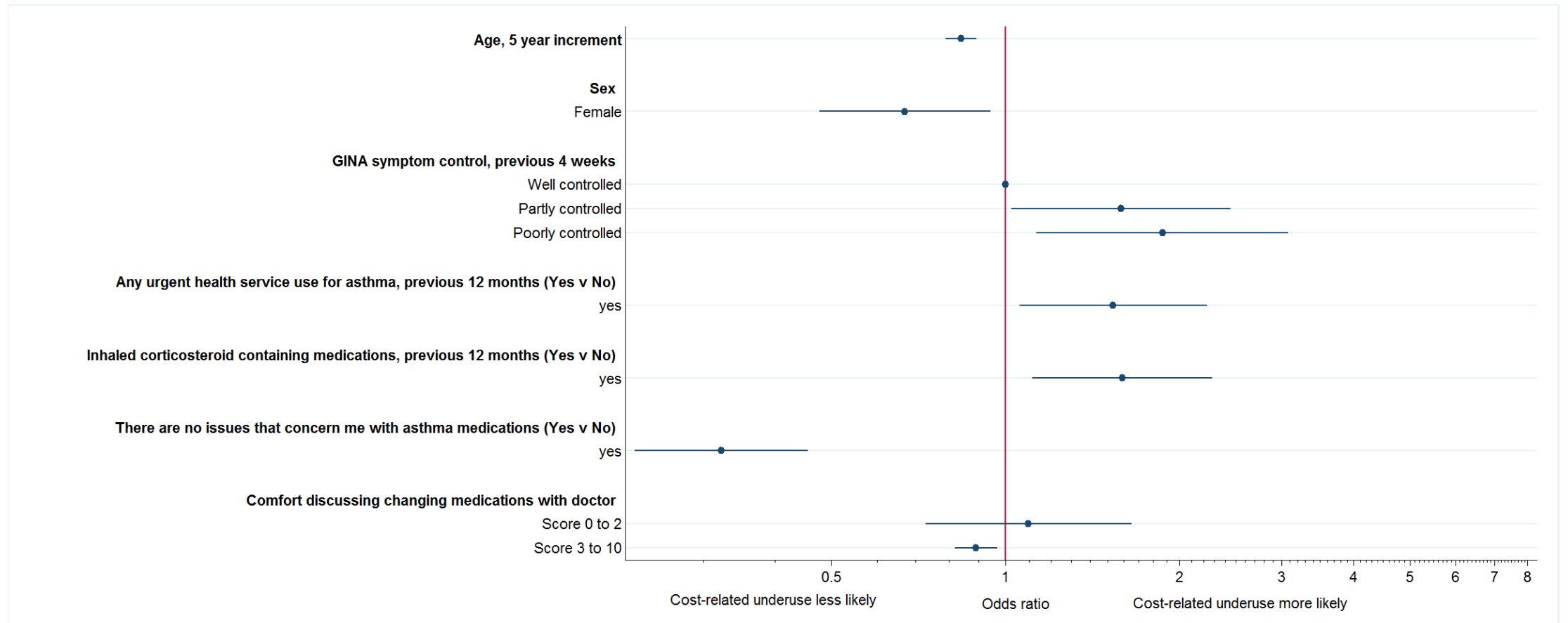


Comparison to the literature

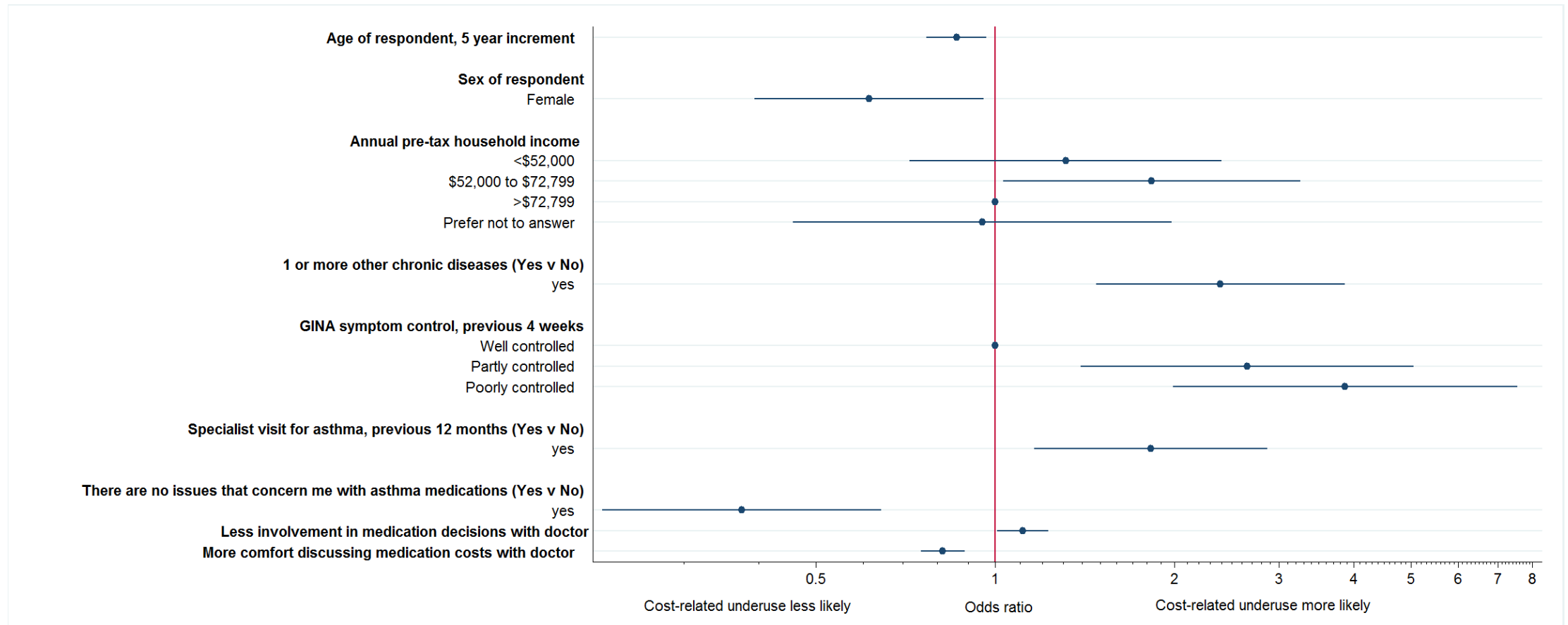
- US >49 years: 20% underuse; ours 39.2%
- US >64 years: 31%; ours 32%



Associated factors - adults



Associated factors - children



Quantitative results – Would a financial incentive improve guidelines use of preventers?

Discrete Choice Experiment (DCE)

Hypothetically:

- How important is out-of-pocket costs on preventer choice (ICS-alone versus ICS-LABA)
- If ICS-alone co-payment was lowered, would we see an increased uptake to ICS-alone choice?
- What would that mean to government expenditure?

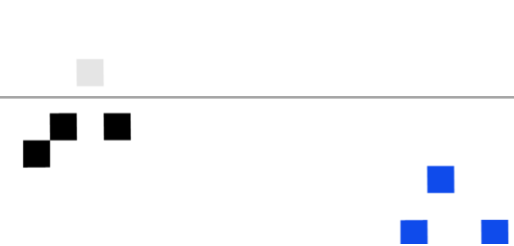


Discrete choice experiment

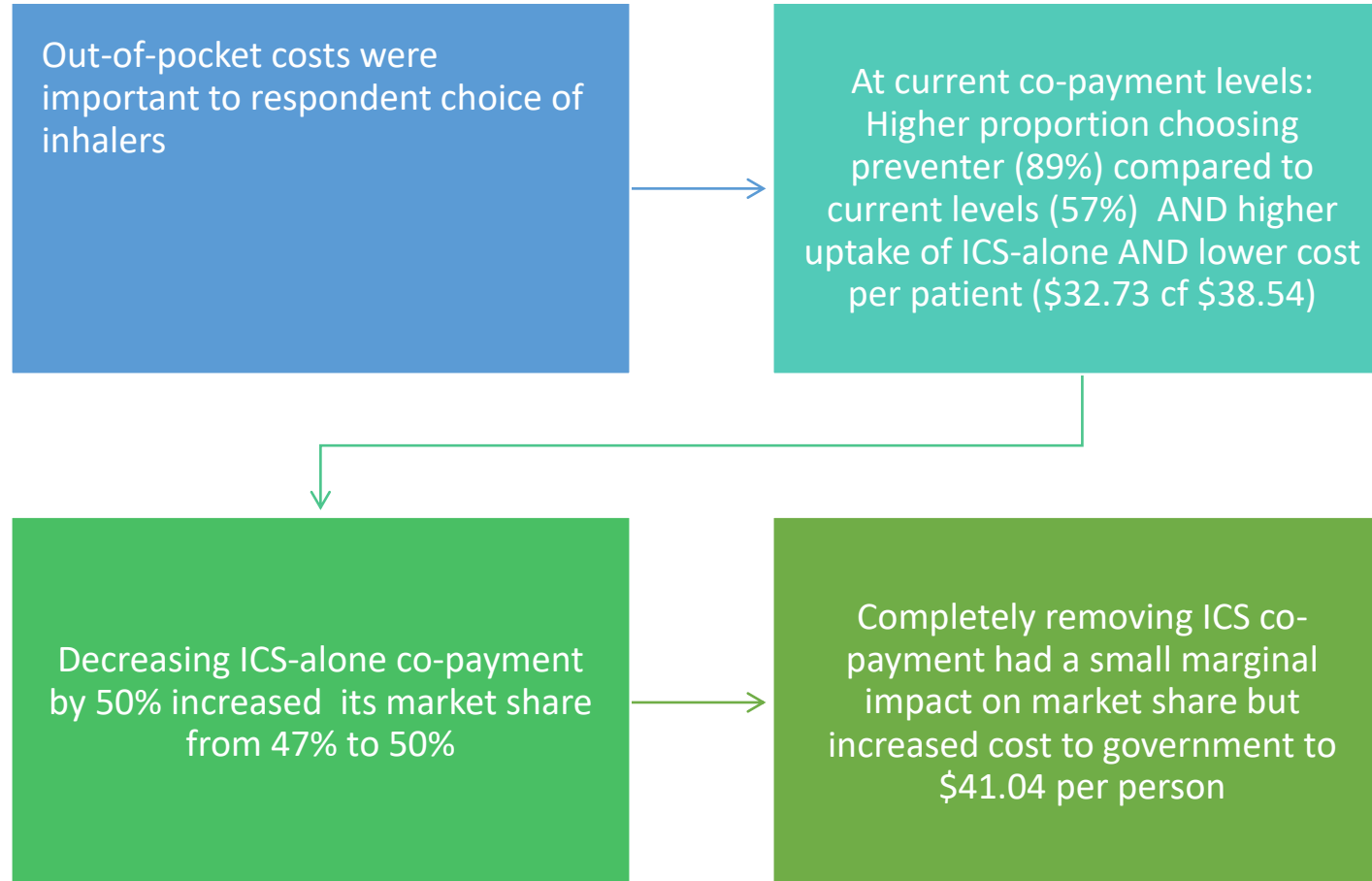
Scenario:

- ICS-alone versus ICS-LABA
- Recommended by GP
- Roughly equivalent safety and effectiveness
- Could choose no preventer

Factors that varied:

- Symptom frequency at appointment
 - Chance of revisiting the doctor
 - Strength of inhaler
 - Cost to government
 - Out-of-pocket cost
- 

Findings in a nutshell...



Bringing it together...



Despite PBS subsidies, cost-related underuse of asthma medicines is common in Australia

Younger males

Involvement of patients (and parents) in decisions and comfort in discussing costs may minimize cost-related underuse



Few clinicians appear to be discussing cost with patients, and most are unaware of the potential issues



Current levels of preventer use do not reflect patient preferences

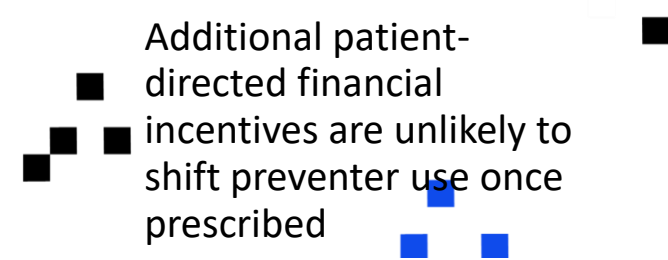


Strategies

Raise the dialogue about the impact of costs on asthma medicine use between prescribers and patients and pharmacists and...

Consider options with lower out-of-pocket costs

Additional patient-directed financial incentives are unlikely to shift preventer use once prescribed



Thank-you
