

Decision aids empower patients, improve decisional outcomes and increase uptake of hearing healthcare: *HearChoice* study

Melanie Ferguson¹, Ellen Bothe¹, Kerry Sherman², Barbra Timmer^{3, 4}, Piers Dawes³, Jorge Mejia⁵, Bec Bennett⁵, Bronwyn Myers^{1,6}

¹Curtin University, Perth, Australia, ²Macquarie University, Sydney, Australia, ³University of Queensland, Brisbane, Australia, ⁴Sonova AG, Stäfa, Switzerland, ⁵National Acoustic Laboratories, Sydney, Australia, ⁶South African Medical Research Council, South Africa

Background

Challenges in hearing health care

9 years of no action

Poor knowledge
Misinformation
Unrealistic Expectations

2:3 with hearing loss do nothing

Limited range of hearing options offered

40% of people leave clinics empty handed

Can these challenges be addressed through guided support in decision-making?

HearChoice is a modular, unbiased, trusted decision-support app that offers informed choice and control in hearing healthcare.

Aims

1. Understand patient needs in help-seeking and decision-making
2. Co-develop the *HearChoice* app
3. Evaluate the effectiveness of *HearChoice*
4. Co-design an implementation plan

Methods: work packages

- WP1: Understand barriers and enablers to help-seeking and decision-making
Participants: Adults with hearing difficulties (AHD), hearing care professionals (HCP)
Mixed-methods:
 - Semi-structured interviews (n=16 AHD), focus groups (n=9 HCPs)
 - Survey (n=300 AHD; n=43 HCPs)
- WP2: Co-develop *HearChoice* using an iterative participatory approach with key stakeholders (e.g., AHD, HCPs)
- WP3: Evaluate effectiveness and feasibility of *HearChoice* (ongoing)
 - Online randomised controlled trial (RCT; n=841 eligible AHD)
 - Process evaluation via interviews (n= 22) and surveys (n=841)
- WP4: Co-design implementation for scale-up and sustainability (ongoing)
 - Real-world clinic testing
 - Commercialisation (clinics, hearing aid manufacturers, big business)

WP2: *HearChoice* co-developed and UX-tested with key stakeholders

Learn

Services

Choose

Non-device options

Technology options

Plan your path to better hearing

4.5

Highly usable, useful and impactful

(Ferguson et al., 2025)

WP3: Randomised controlled trial

N: 841
T0: 841
T1: 657
T2: 451

T0: Screening & baseline measures

Randomise

Intervention

Active control

T1: 1 week Outcome measures

Email prompt: 1m

T2: 3 months Outcome measures

Intervention for controls (no follow-up)

Intention-to-treat analysis (n=841)

No main effect of group or group or time-by-group interaction

Main effect of time (T0-T1): improvement

Variable	F	p	Effect size η_p^2
Decisional conflict (DCS)	223.4	<0.001	0.27 Large
Empowerment (EmpAQ-5)	117.8	<0.001	0.16 Large
Readiness to take action (Ida line)	36.3	<0.001	0.05 Small
Confidence to take action (Ida line)	20.3	<0.001	0.03 Small

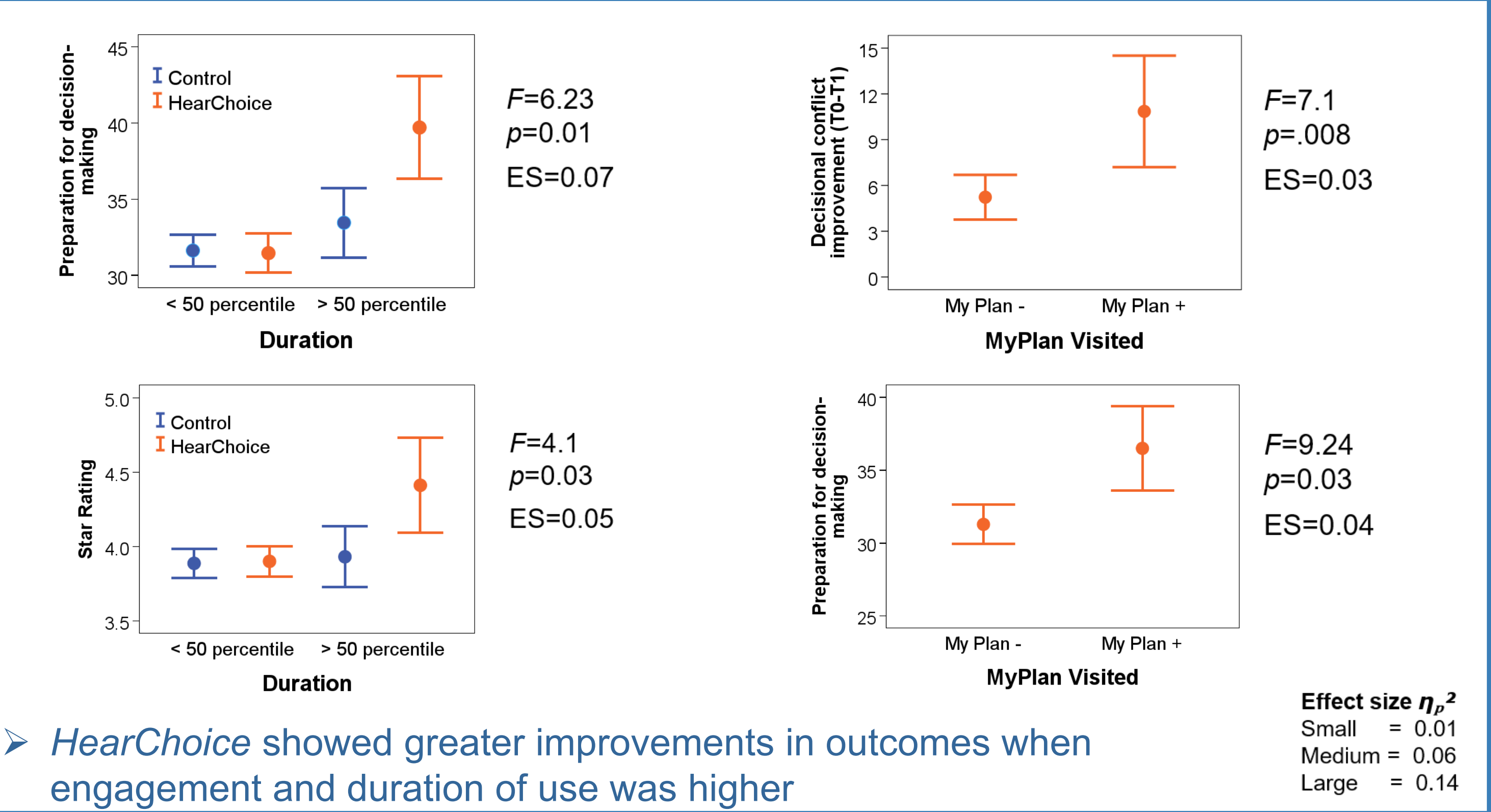
Decision aids showed significant improvements in:

decisional conflict and empowerment (large effect sizes)

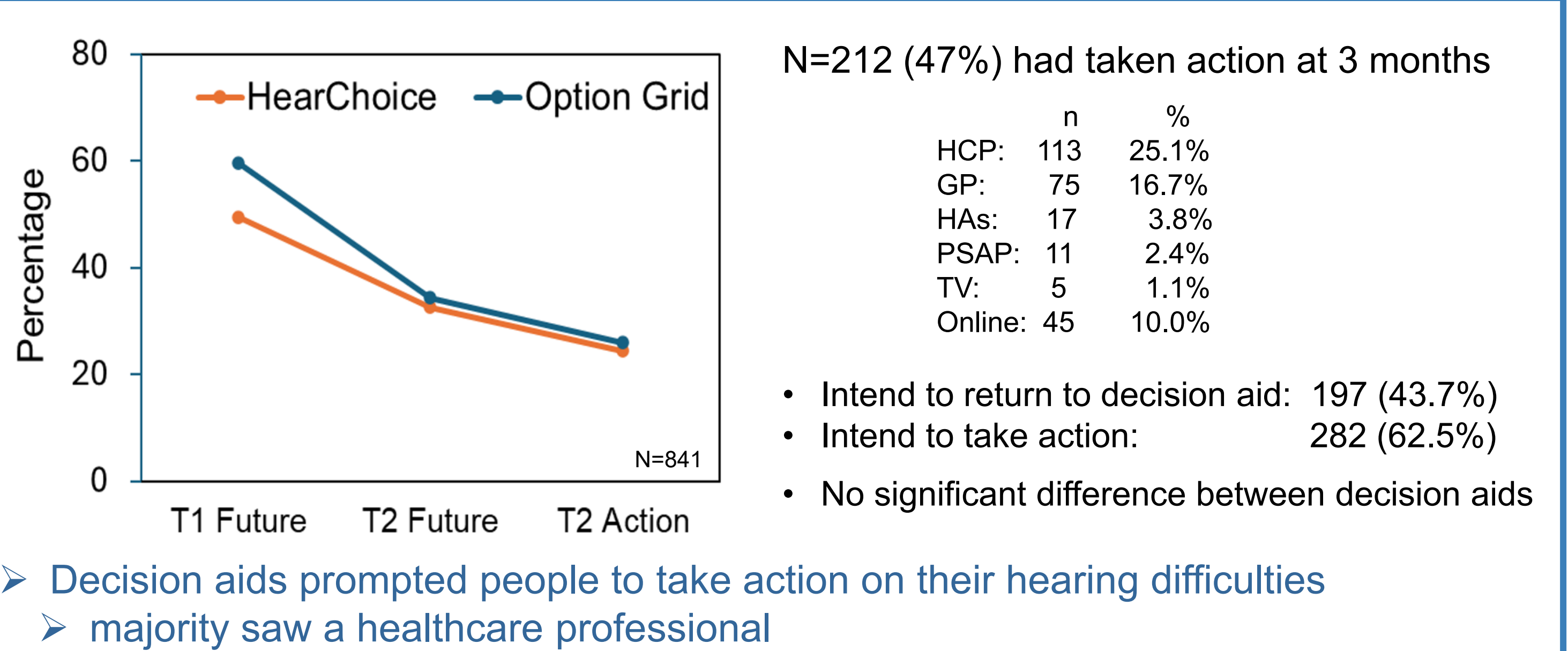
readiness and confidence to take action (small-moderate effect sizes)

No difference between *HearChoice* and control

More engagement: more benefit



WP3: Decision aids prompt help-seeking



Summary and Conclusions

- There are many barriers to help-seeking and decision-making in hearing healthcare
 - Large unmet need
- Co-development with users' voice at its core
 - High support for *HearChoice*
- *HearChoice* was rated as highly usable, useful and impactful
 - Prompts behaviour change (e.g. uptake of hearing healthcare)
- Across time, decision aids improve:
 - decisional conflict, empowerment (large effect size)
 - readiness and confidence to take action (small effect size)
- Greater engagement in *HearChoice*
 - better decisional outcomes
- Action taken for hearing difficulties at 3 months was high (47%)
- Decision aids are useful tools to empower and increase uptake of hearing healthcare