NEXT GENERATION
MIGRAINE THERAPIES
AMERICAN HEADACHE SOCIETY

Behavioral Approaches in Migraine

Scott W. Powers, PhD, ABPP, FAHS
Cincinnati Children's Hospital
Cincinnati, OH

AMERICAN HEADACHE SOCIETY®
www.AmericanHeadacheSociety.org

Disclosure: Scott W. Powers, PhD, ABPP, FAHS

Nothing to disclose

Learning Objectives

- Discuss effective communication strategies, including active listening and interviewing strategies.
- Review the Stages of Change model.
- Identify patients who will benefit from specialized behavioral interventions.

How can behavioral medicine improve my migraine practice and patient outcomes?

- Effective behavioral strategies for managing challenging issues
  - Effective medical communication
  - Maximizing adherence
  - Motivational interviewing

- Tips and tricks to make an effective referral to a behavioral medicine provider
  - What to expect
  - Who to refer
  - Where to refer
  - When to refer
  - How to refer

Empirically validated, consortium guideline-endorsed behavioral therapies for migraine management

Biofeedback

CBT

Relaxation training

- **Supported by study data**
- **Grade A evidence in US Headache Consortium Guidelines**
- **Have long-lasting benefits**
- **Effective at all life stages**
- **Can be standalone or combined with other therapies**

CBT, cognitive behavioral therapy.

Silberstein SD for the US Headache Consortium. *Neurology*. 2000;55:754–762.

Behavioral interventions include techniques for ALL HCPs

	HCPs can provide	Behavioral specialists provide	Useful for all patients	Necessary for some patients
Education (triggers, healthy lifestyle)	✓		✓	
Effective communication	✓		✓	
Adherence enhancement strategies	✓		✓	
Relaxation training		✓	✓	
Stress management		✓	✓	
CBT		✓		✓
Biofeedback		✓		✓

CBT, cognitive behavioral therapy; HCP, healthcare provider.

Why is effective communication essential for migraine management?

No external measure (eg, MRI, blood test) to assess pain that is more reliable or valid than the patient's report[1]

Any breakdown in patient–physician communication negatively impacts treatment quality[2–5]

1. Nicholson RA et al. *Headache*. 2006;46:754–765. 2. Buse DC, Lipton RB. *Curr Pain Headache Rep*. 2008;12:230–236. 3. Hahn SR. Communication in the care of the headache patient. In: Silberstain SD et al, eds. *Wolff's Headache and Other Head Pain*. New York: OUP; 2008:805–824. 4. Lewicki RJ et al. *Acad Mgmt Rev*. 1998;23:438–458. 5. Rousseau DM et al. *Acad Mgmt Rev*. 1998;23:393–404.

Clinician = Coach

Uses experience and expertise to teach the skills and tools to manage migraine

Patient = Player

Puts the principles and tools provided by the clinician “in play” on a daily basis

Nicholson R. *Curr Pain Head Rep*. 2010;14:47–54.

American Migraine Communication Studies (AMCSs)

- AMCS 1: Sociolinguistic analysis of interactions between HCPs and patients with migraine[1]
  - HCPs often used narrowly focused, closed-ended questions
  - As a result, HCPs were often unaware of how migraine affected patients' lives
- AMCS 2: Assessed the impact of an internet-based intervention[2]
  - Positive communication changes not associated with increased visit length were observed

	AMCS 1[1]	AMCS 2[2]
Assessed ictal impairment (%)	10	90
Assessed inter-ictal impairment (%)	0	45
Addressed need for migraine prophylaxis (%)	50	74
Patient–physician agreement on frequency (%)	45	56
Patient–physician agreement on impairment (%)	49	61
Length of visit (minutes)	11	9

1. Lipton RB et al. *J Gen Intern Med*. 2008;23:1145–1151. 2. Hahn SR et al. *Curr Med Res Opin*. 2008;24:1711–1718.

Pearls from the AMCSs

- Use open-ended questions
- Ask about disability: “How does migraine affect your life?”
  - Normalize the experience
  - Wait for the patient to stop talking before you respond
- Use the Ask-Tell-Ask strategy to clarify important concepts and confirm understanding
  - Number of migraine attacks vs migraine days
  - Number of headache days vs completely pain-free days

Active listening: Ask-Tell-Ask in migraine – example 1

Ask:

- How many headache attacks do you get each month?
- On average, how long do your headaches last?

"I get an attack pretty much every week, and usually two the last week of the month when I'm stressed at work. They last a couple of days."

Tell (rephrase):

- So you have five headache attacks per month that last 2 days each on average?

"That sounds right."

Ask:

- So you are having headaches on about 10 days per month on average?

"Yes."

Hahn SR et al. *Curr Med Res Opin*. 2008;24:1711–1718. Lipton RB et al. *J Gen Intern Med*. 2008;23:1145–1151.

Active listening: Ask-Tell-Ask in migraine – example 2

Ask:

- How many days with headache did you have last month?

"Probably about half the days in the month."

Tell (rephrase):

- So you had 15 days with headache last month?
- How many days were you entirely headache pain-free for the entire 24 hours last month?

"Yes, 15 days sounds right."

"I would say I only had a couple of days per week when I was pain-free for a full 24 hours."

Ask:

- So does that mean you had 22 days with headache last month?

"I hadn't thought about it that way, but I guess you're right."

Hahn SR et al. *Curr Med Res Opin*. 2008;24:1711–1718. Lipton RB et al. *J Gen Intern Med*. 2008;23:1145–1151.

Effective communication influences empathy and trust

Patients who perceive their physician as being empathetic:

- Have greater confidence in their ability to cope with treatments and symptoms
- Are more likely to be open and honest with preferences, concerns, and adherence issues

Patients who trust their doctors more:

- Are more likely to be prescribed needed migraine medication
- Have less disability

Zachariae R et al. *Br J Cancer*. 2003;88:658–665. Levinson W et al. *JAMA*. 2000;284:1021–1027. Parchman ML, Burge SK. *Fam Med*. 2004;36:22–27. Heisler M et al. *J Gen Intern Med*. 2002;17:243–252. Nicholson RA et al. *Headache*. 2006;46:754–765.

Ways to show empathy, increase trust

To motivate change, discuss advantages and disadvantages of treatment

	Actively managing migraine	Not actively managing migraine
Advantages	Actively managing migraine	
Disadvantages		NOT actively managing migraine

To motivate change, discuss advantages and disadvantages of treatment

	Actively managing migraine	Not actively managing migraine
Advantages		**NOT actively managing migraine**
Disadvantages	**Actively managing migraine**	

To motivate change, discuss advantages and disadvantages of treatment

	Actively managing migraine	Not actively managing migraine
Advantages	Actively managing migraine	NOT actively managing migraine
Disadvantages	Actively managing migraine	NOT actively managing migraine

Use motivational interviewing to encourage healthy behavioral habits

Collaborative

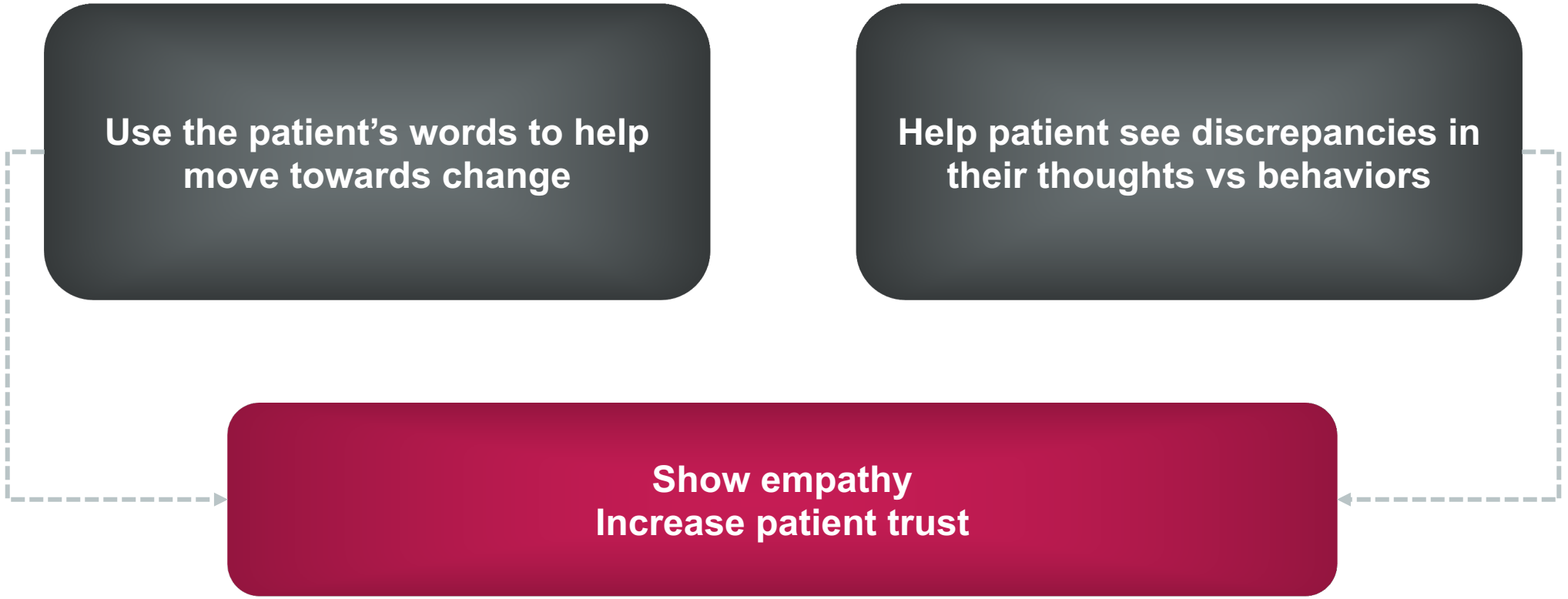
Guiding*

Involves:

- **Recognizing** a problem
- **Identifying** the patient's readiness for change
- **Tailoring** interventions to the patient's stage of readiness for change

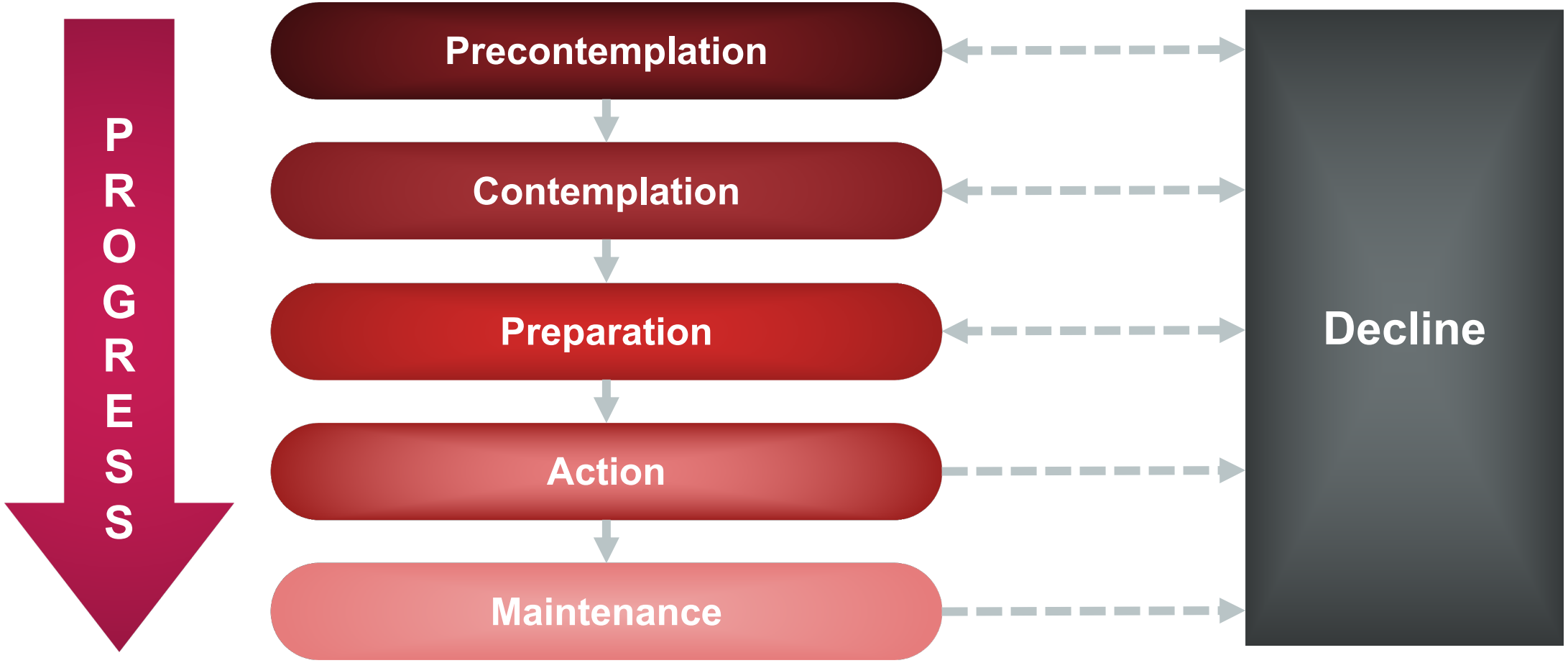
*To elicit/strengthen motivation for change.

Motivational interviewing: strategies for change



Rollnick S, Miller WR, Butler CC. Motivational interviewing in health care: Helping patients change behavior. New York, NY, US: Guilford Press; 2008.

Motivational interviewing: stages of change



Prochaska JO et al. *Am Psychol*. 1992;47:1102–1114. Prochaska JO et al. *Health Psychol*. 1994;13;39–46.

Readiness to change: precontemplation

Description	Principles to address
Not motivated to change	Challenge disabling beliefs
Doesn't see the need or disagrees about the need	Set treatment expectations

1. Prochaska JO, Velicer WF. *Am J Health Prom*. 1997;12:38–148. 2. Prochaska JO et al. *Health Psychol*. 1994;13:39–46. 3. Zimmerman GL et al. *Am Fam Physician*. 2000;61:1409–1416. 4. Prochaska JO et al. *Am Psychol.* 1992;47:1102–1104.

Readiness to change: contemplation

Description	Principles to address
Patient has some motivation to change, however...	Explore consequences of changing or not changing
Lacks the skills needed to change and/or	Teach skills Educate/answer questions
Remains unsure it is worth the time and effort	

1. Prochaska JO, Velicer WF. *Am J Health Prom*. 1997;12:38–148. 2. Prochaska JO et al. *Health Psychol*. 1994;13:39–46. 3. Zimmerman GL et al. *Am Fam Physician*. 2000;61:1409–1416. 4. Prochaska JO et al. *Am Psychol.* 1992;47:1102–1104.

Readiness to change: preparation

Description	Principles to address
Motivated to change, but motivation may be impeded by...	Identify and address skills deficits
Lack of skills and/or barriers to successful change	Assess and address barriers

1. Prochaska JO, Velicer WF. *Am J Health Prom*. 1997;12:38–148. 2. Prochaska JO et al. *Health Psychol*. 1994;13:39–46. 3. Zimmerman GL et al. *Am Fam Physician*. 2000;61:1409–1416. 4. Prochaska JO et al. *Am Psychol.* 1992;47:1102–1104.

Readiness to change: action

Description	Principles to address
Patient is actively making changes, but...	Reinforce adaptive changes
Barriers could diminish motivation	Facilitate self-maintenance

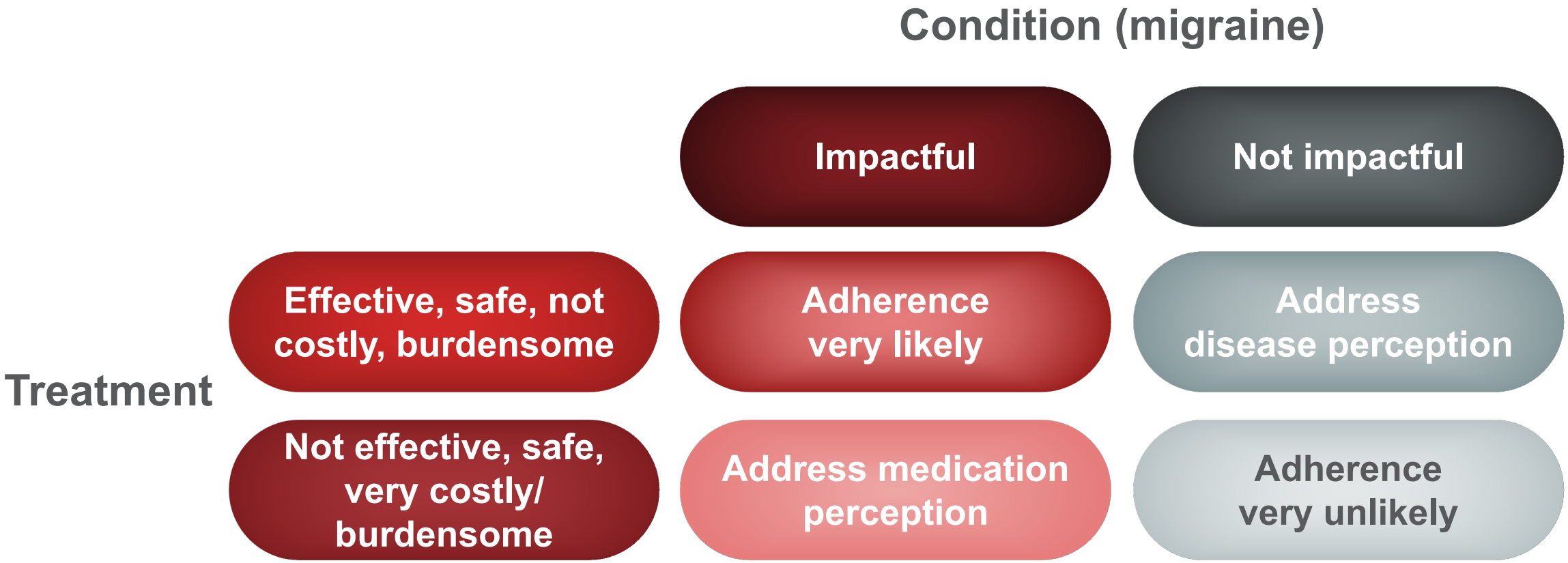
1. Prochaska JO, Velicer WF. *Am J Health Prom*. 1997;12:38–148. 2. Prochaska JO et al. *Health Psychol*. 1994;13:39–46. 3. Zimmerman GL et al. *Am Fam Physician*. 2000;61:1409–1416. 4. Prochaska JO et al. *Am Psychol.* 1992;47:1102–1104.

Readiness to change: maintenance

Description	Principles to address
Change is part of his/her ongoing routine	Reinforce gains Normalize regression and errors Help get back on track
Continued success will reinforce motivation	

1. Prochaska JO, Velicer WF. *Am J Health Prom*. 1997;12:38–148. 2. Prochaska JO et al. *Health Psychol*. 1994;13:39–46. 3. Zimmerman GL et al. *Am Fam Physician*. 2000;61:1409–1416. 4. Prochaska JO et al. *Am Psychol.* 1992;47:1102–1104.

Factors driving medication adherence in migraine



1. Katić BJ et al. *Headache*. 2010;50:117–129. 2. Dunbar-Jacob J, Mortimer-Stephens MK. *J Clin Epidemiol*. 2001;54:S57–60. 3. Rains JC et al. *Headache*. 2006;46:1395–1403.

Assessing and addressing adherence

Ask the patient:

Most people encounter some issues with taking medication. What issues have you had?

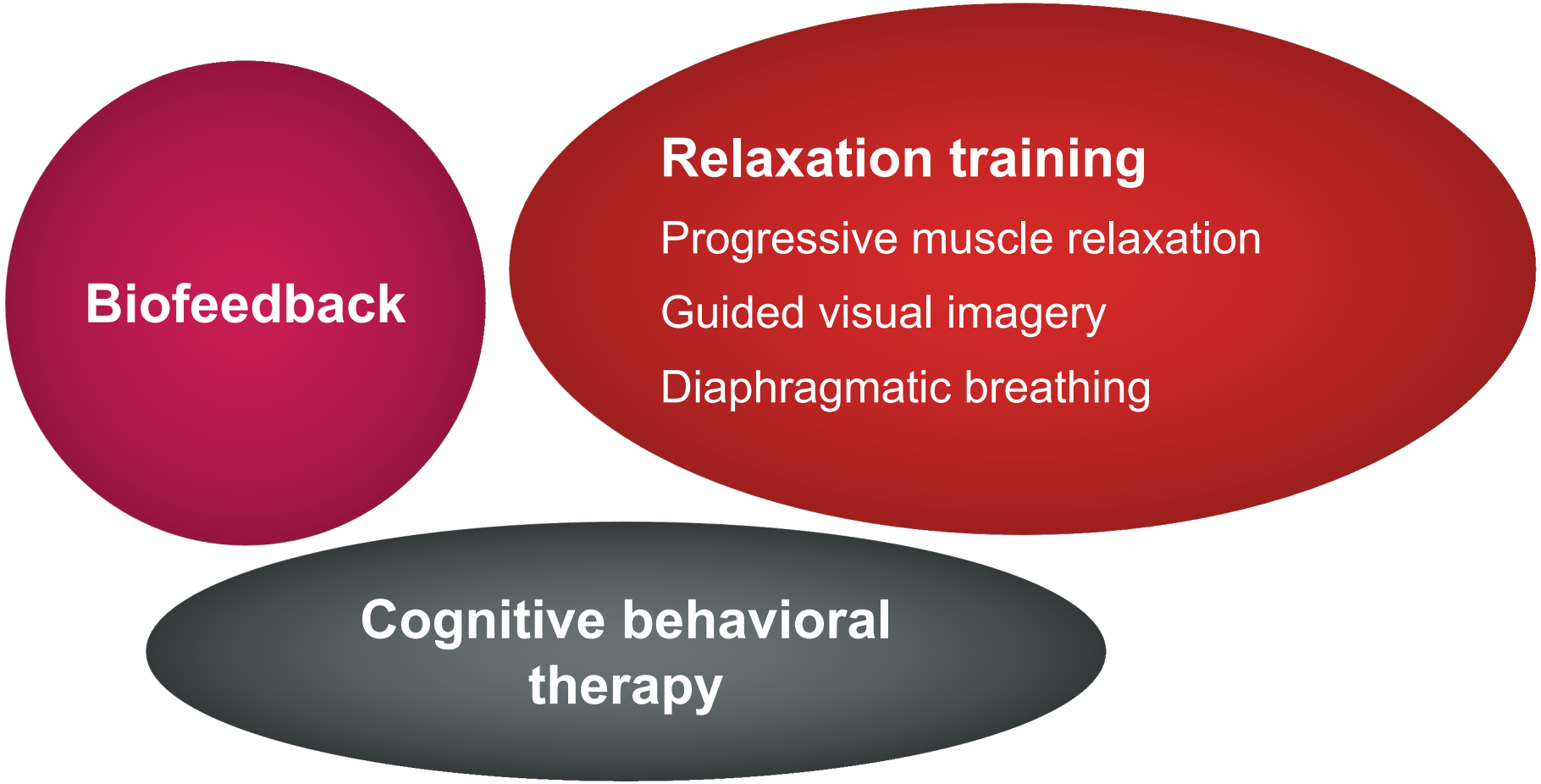
Normalize adherence challenges

1. Hahn SR et al. *Ophthalmology*. 2010;117:1339–1347. 2. Hahn SR. *Ophthalmology* 2009;116(11 Suppl):S37–42.

Identify and address the barrier(s)

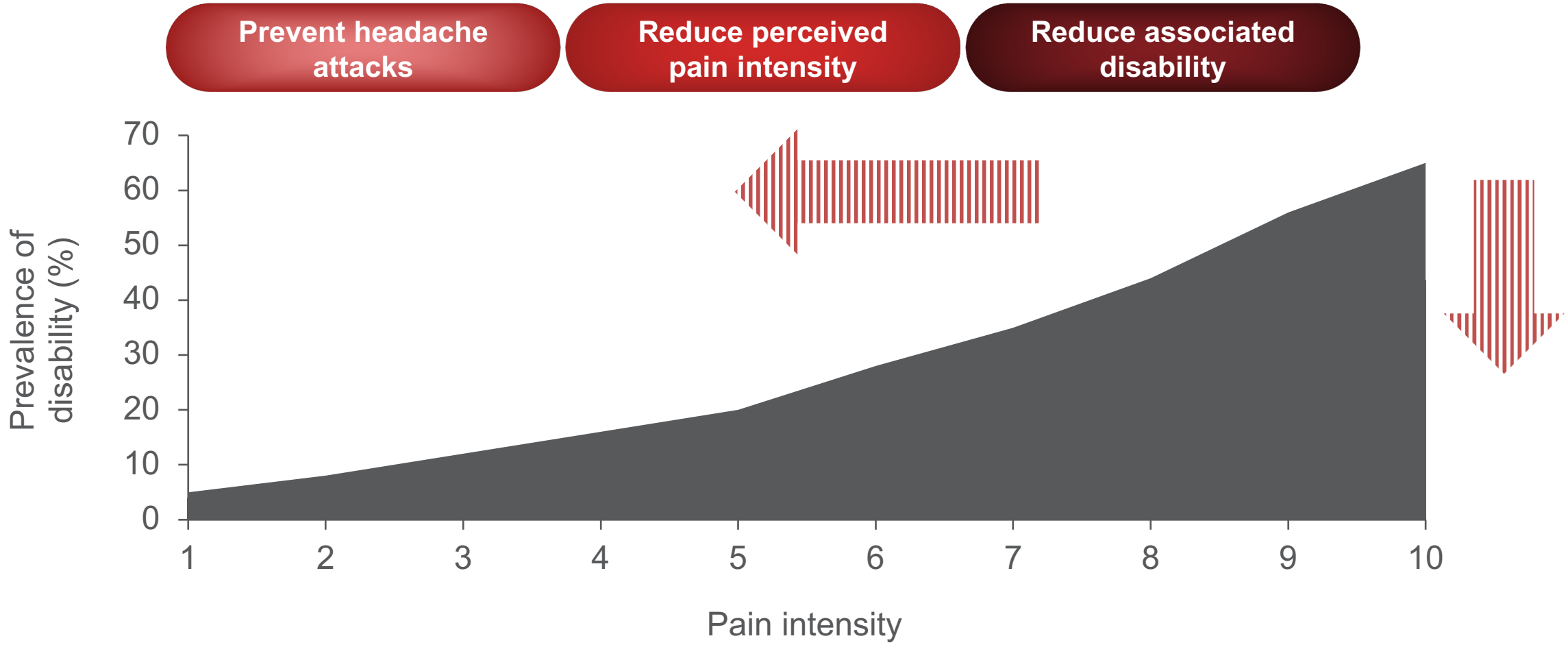
Barrier	Address by...
Ambivalence	Asking patients about how migraine impacts their life
Difficulty remembering to take medication	Keeping the regimen consistent; using visual reminders (eg, pill boxes and calendars); keeping next to a daily item like a toothbrush; involving a family member; having a reminder on a smartphone or watch
Fear of side effects	Discussing the data on side effects; discussing alternative treatment options
Unsure of medication efficacy	Discussing the data honestly; discussing personal clinical experience honestly; discussing alternative treatment options

Scientifically proven behavioral techniques for migraine management



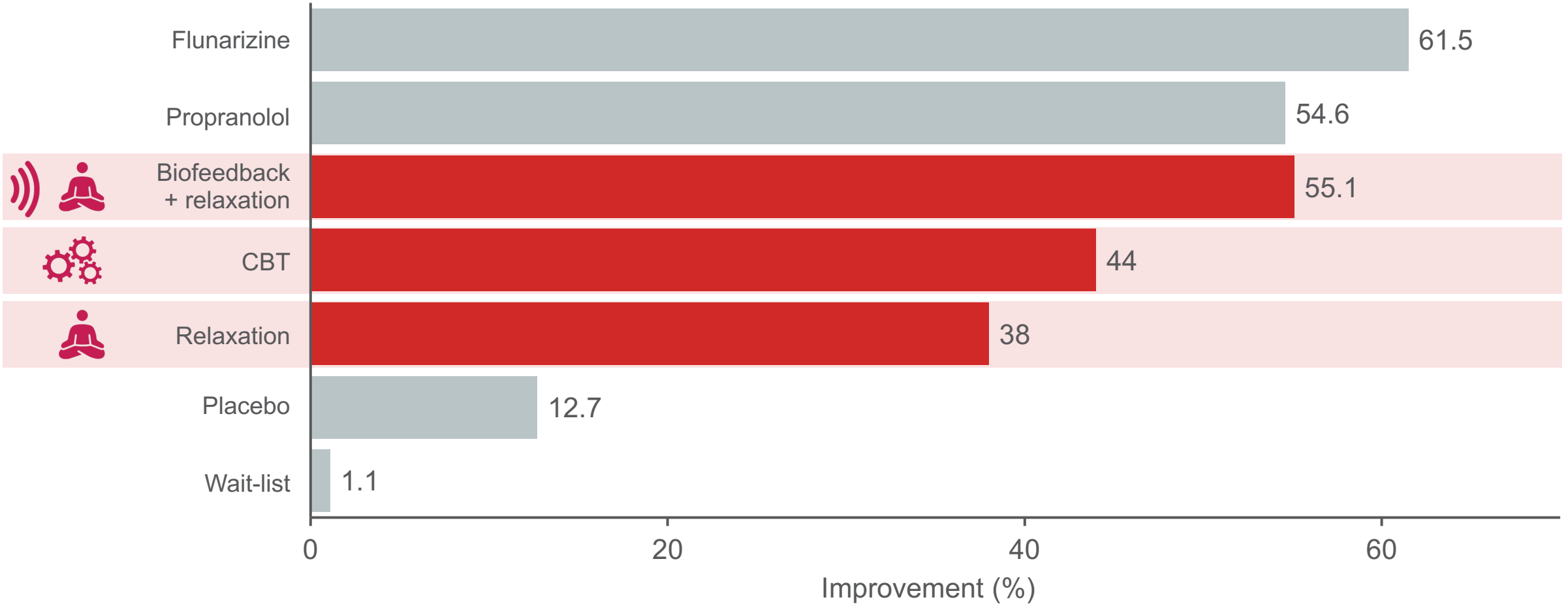
Silberstein SD for the US Headache Consortium. *Neurology*. 2000;55:754–762.

Behavioral treatments may...



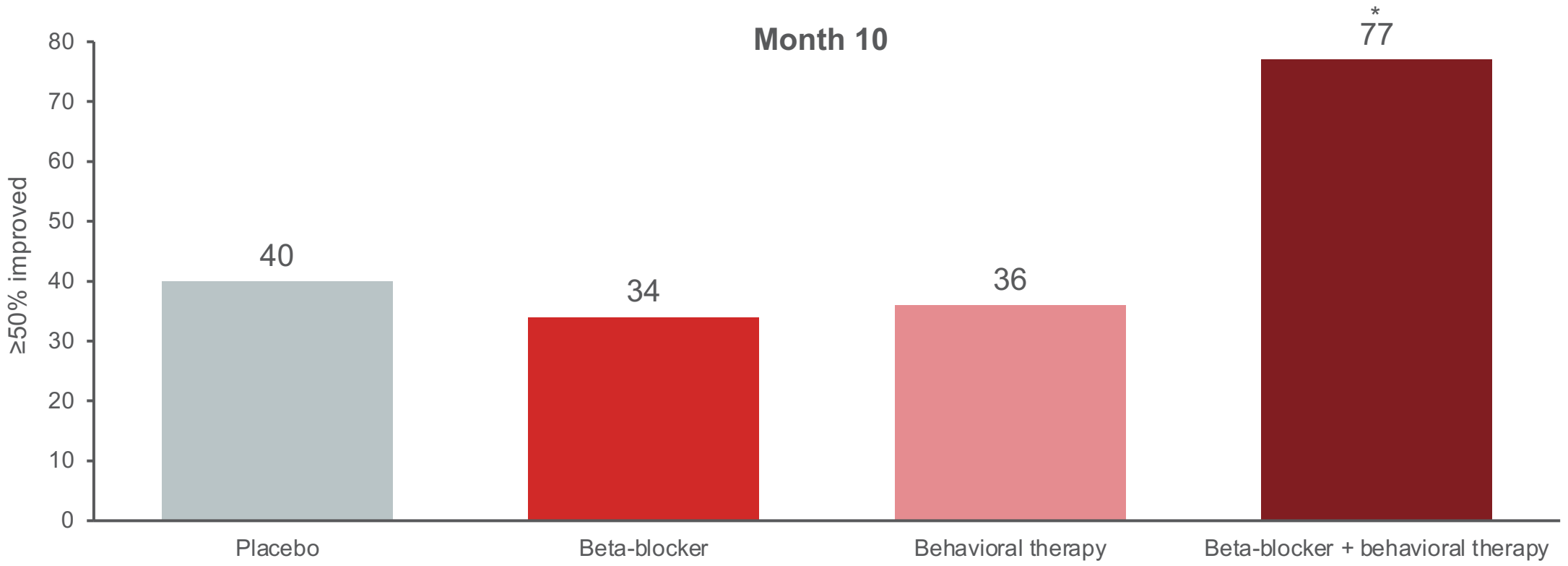
Stewart WF et al. *Neurology*. 1994;44(Suppl 4):S24–39. Buse DC, Andrasik FA. *Neurol Clin*. 2009;27:445–465.

Meta-analysis shows similar benefits from traditional pharmacotherapies and behavioral therapies for migraine prevention in adults



1. Duke University, Center for Clinical Health Policy Research. Behavioral and Physical Treatments for Migraine Headache. Technical Review 2.2. Feb 1999. (Prepared for the Agency for Health Care Policy and Research under Contract No. 290-94-2025. Available from the National Technical Information Service [Accession No. PB99-127946]). 2. Rains JC, et al. *Headache*. 2005;45(Suppl. 2):92–109.

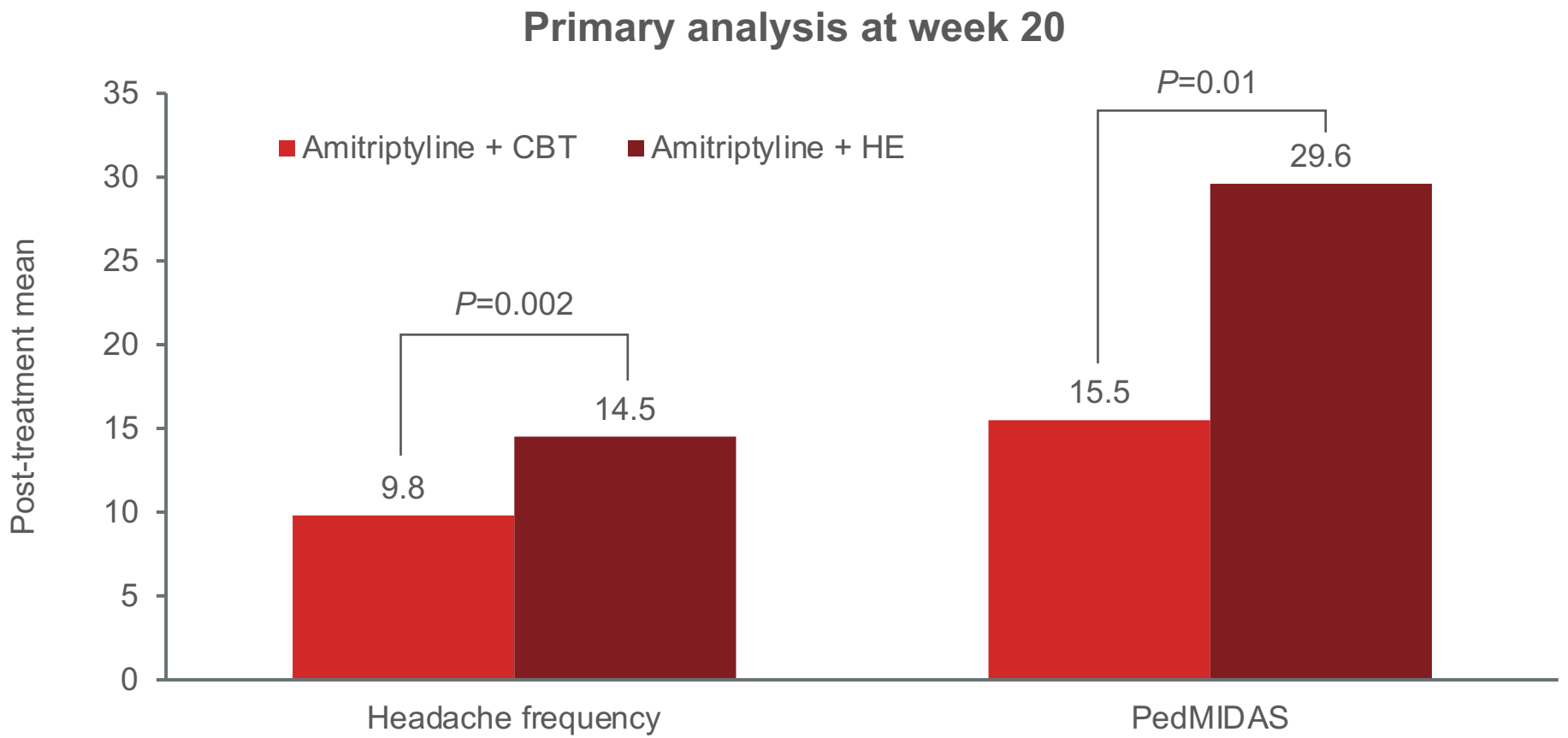
Combination therapy (beta-blocker plus behavioral) is effective in adults with migraine



Patients could receive acute therapy as needed.
*P<0.001 vs other treatment groups.

Holroyd KA, et al. *BMJ.* 2010;341:c4871.

Combination therapy (amitriptyline plus behavioral) is effective in pediatric CM



135 children aged 10–17 years with CM were randomly assigned to amitriptyline plus CBT or amitriptyline plus HE.

HE, headache education; PedMIDAS, Pediatric Migraine Disability Assessment.

Powers SW, et al. *JAMA*. 2013;310:2622–2630.

Behavioral therapies with strong evidence in other psychological disease states are being tested in migraine

Acceptance and commitment therapy[1,2]

- Reduces headache-related disability
- Reduces emotional distress in people with migraine
- Several studies with positive results in chronic pain

Mindfulness-based therapies

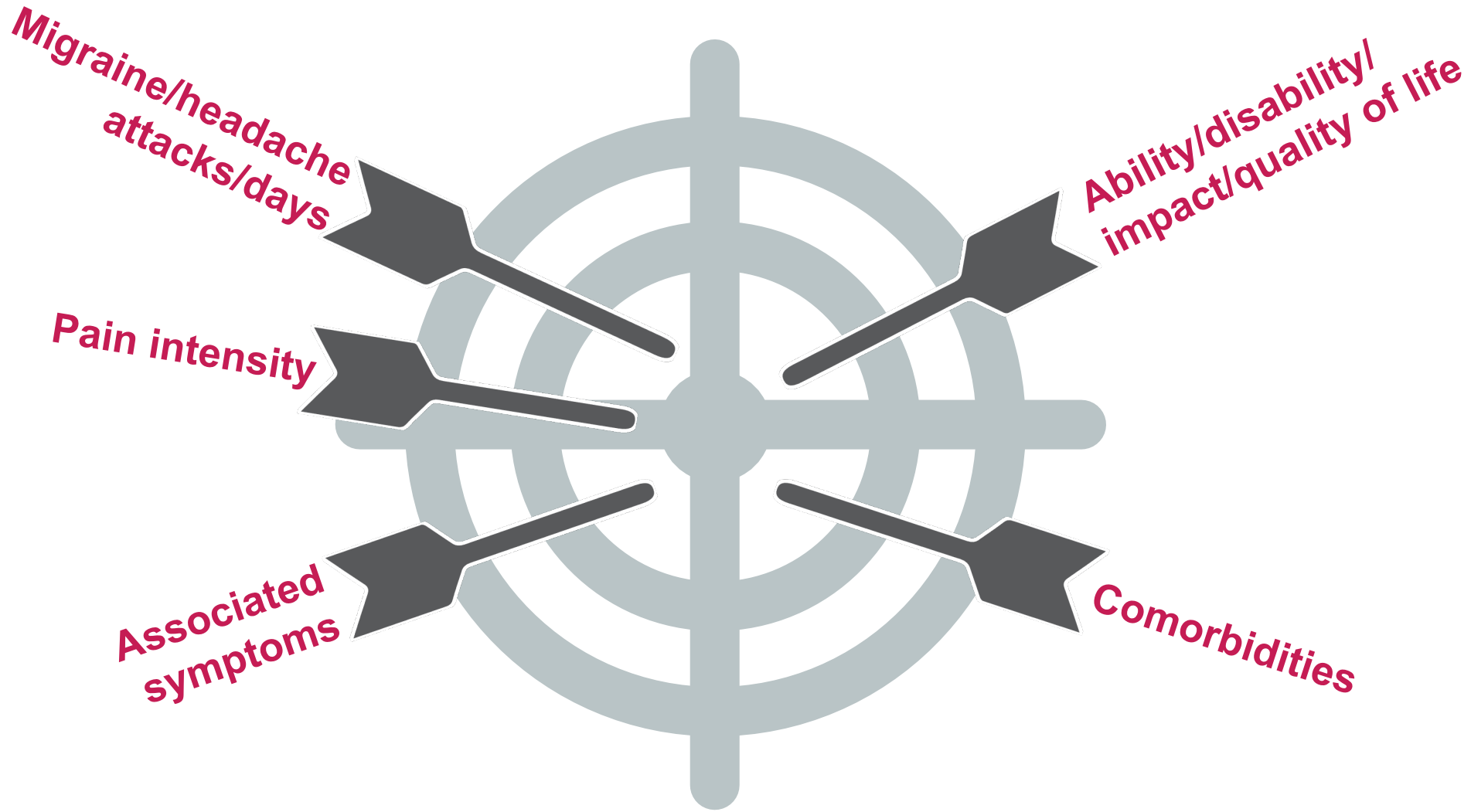
- Include mindfulness-based stress reduction (MBSR) and mindfulness-based cognitive therapy (MBCT)
- Two pilot studies and one headache clinic study[3–5]
- Self-efficacy, disability, and acceptance of pain

MBCT for migraine (vs waitlist/treatment as usual):[5]

- Reduced overall headache-related disability
- Reduced attack-level migraine-related disability (indicating improved resilience and functional ability during an attack)
- Did not reduce headache frequency or pain intensity

1. Dindo L, et al. *Behav Res Ther*. 2012;50:537–543. 2. Mo'tamedi H, et al. *Headache*. 2012;52:1106–1119. 3. Day MA, et al. *Clin J Pain*. 2014;30:152–161. 4. Wells RE, et al. *Headache*. 2014;54:1484–1495. 5. Seng EK, et al. *Headache*. 2019;Sep 26. doi: 10.1111/head.13657 [Epub ahead of print].

Targets of behavioral interventions for migraine management are multifactorial



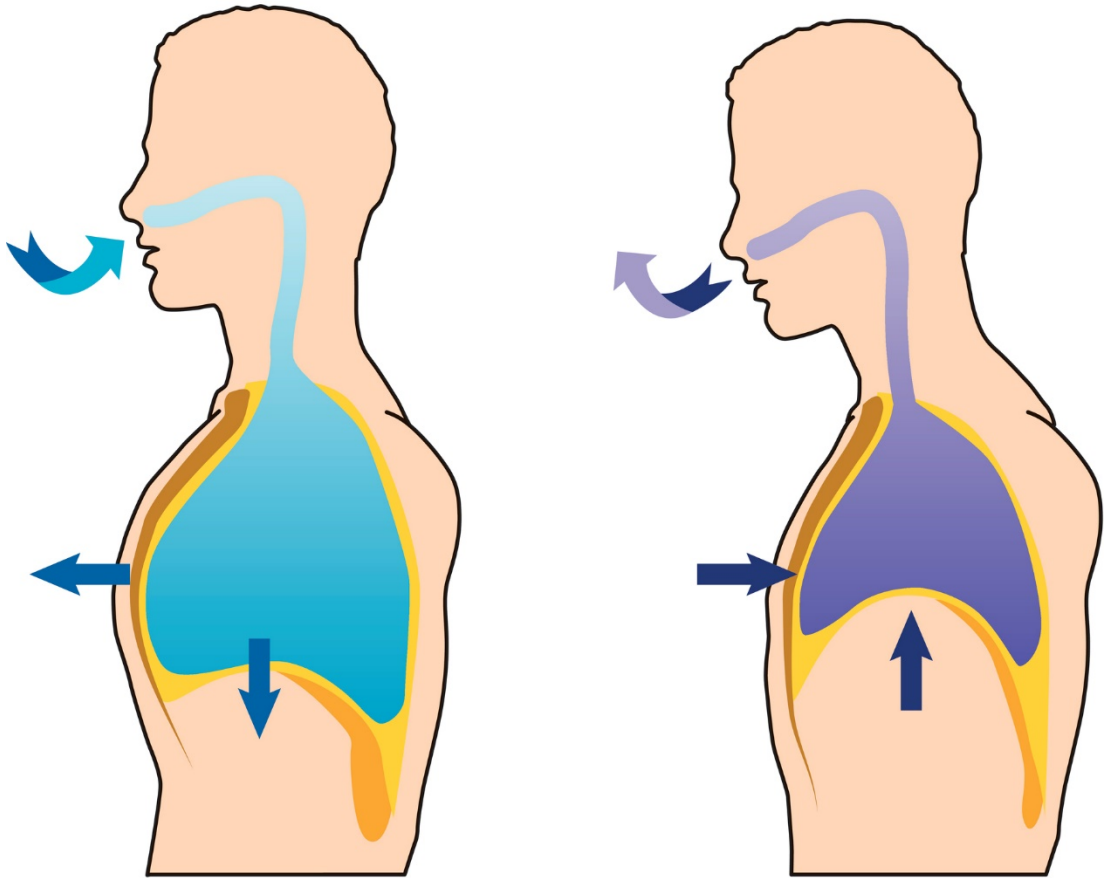
Progressive muscle relaxation (demonstration)

Bicep tense–release cycle

Jacobson E. *Progressive Relaxation.* 2nd ed. Oxford, England: University of Chicago Press; 1938.

Diaphragmatic breathing (exercise)

The movements of the chest during breathing



Breath

Exhalation

Guided visual imagery (exercise)

Identifying patients who will benefit from specialized behavioral interventions

US Headache Consortium Guidelines for use of behavioral interventions

1. Patient preference
2. Poor tolerance or side effects with pharmacologic treatments
3. Medical contraindications for specific pharmacologic treatments
4. Insufficient or non-response to pharmacologic treatment
5. Pregnancy, planned pregnancy, or nursing
6. History of long-term, frequent, or excessive use of analgesic or acute medications that can aggravate headache problems (or lead to decreased responsiveness to other pharmacotherapies)
7. Significant stress or deficient stress-coping skills

Campbell JK et al. 2000. Available at: http://www.aan.com.

Identifying patients who will benefit from specialized behavioral interventions

- Consortium guideline recommendations
- Additional factors:
  - Headache-related disability
  - Impact
  - Quality of life
  - **Psychiatric comorbidities**

How to overcome barriers to behavioral interventions and make a successful referral

Scepticism regarding effectiveness/benefit
- Provide education on the benefits
- Set criterion for when treatment options can be reconsidered

Perception of treatment burden (eg, time constraints)
- Identify short-term adjustments in priorities/ activities to allow for treatment time and home practice

Lack of adequate referral options
- Identify local area providers
- Train staff in clinic to do biofeedback or basic stress/lifestyle management
- Explore technology-based behavioral treatments

Potential lack of confidence by providers in their ability to communicate rationale
- Stay up to date on the evidence base
- Provide handouts to patients/caregivers

Cost/lack of reimbursement
- Provide research articles for patient to submit to insurance
- Call insurance company on patient's behalf
- Use the most appropriate billing codes

"Stigma" associated with psychology
- Use neutral terminology:
  - Biofeedback
  - Biobehavioral training
  - Behavioral medicine
  - Stress management
  - Relaxation training
- Write a "prescription" as for medical therapy

Matsuzawa Y et al. *Headache*. 2019;59:19–31. Minen MT et al. *Pain Med*. 2018;19:2274–2282. Ernst MM et al. *Headache*. 2015;55:1382–1396.

Reassure patients...

You are not "abandoning" them—you will work in collaboration with a behavioral health provider

You believe they have a biological condition

You are not judging—this is a common response to chronic pain

Treatment may help management of headache and improve quality of life

The Health and Behavior Assessment and Intervention CPT® codes

96150

- Initial assessment of the patient to determine the biological, psychological, and social factors affecting the patient's physical health and any treatment problems

96151

- Reassessment of the patient to evaluate their condition and need for further treatment
- May be performed by a clinician other than the one who conducted the initial assessment

96152

- Intervention service provided to an individual to modify psychological, behavioral, cognitive, and social factors affecting their physical health and well-being

96153

- Intervention service provided to a group

96154

- Intervention service provided to a family with the patient present

96155

- Intervention service provided to a family without the patient present

Useful websites

Sponsor	Site address
American Psychological Association	http://locator.apa.org
Association for Behavioral and Cognitive Therapies	www.abct.org
Society of Behavioral Medicine	http://www.sbm.org
Association for Applied Psychophysiology and Biofeedback	http://www.aapb.org/
Biofeedback Certification International Alliance	http://www.bcia.org