

High Patient Satisfaction with an Employer-provided Migraine Disease Management Program

Leonhard Schaetz¹, Purnima Pathak², Timo Rimner³, Juanzhi Fang⁴, Deepak Chandrasekhar⁵, Lawrence Vandervoort⁵, Jelena Mueller¹, Andreas R. Gantenbein⁶

¹Novartis Pharma AG, Basel, Switzerland; ²Novartis Ireland Limited, Dublin, Ireland; ³Medgate, Basel, Switzerland; ⁴Novartis Pharmaceuticals Corporation, East Hanover, NJ, United States; ⁵Healint Pte Ltd., Singapore; ⁶RehaClinic, Bad Zurzach, Switzerland

BACKGROUND

- Migraine, a debilitating neurological disorder, affects people in their most productive years (30-50 years) and imposes an enormous personal and financial burden on the sufferers, their families, and society. In Europe, the estimated annual costs of migraine range from €18 to €111 billion, about 77%-93% of which were attributed to work productivity loss (one-third caused by absenteeism)^{1,3}
- In Switzerland, individuals lost an average of 10.2-31.9 workdays per year due to their migraine, which highlights the substantial impact of migraine on both patients and their employers^{4,5}
- With an aim to raise awareness of migraine in the workplace and provide free coaching to employees and their family members living with migraine, Novartis launched the Migraine Care program in collaboration with patient groups and leading experts in neurology, telemedicine and digital. The program was provided as a complimentary service to all Swiss-based Novartis associates and their family members to empower them in the management of the disease and improve their quality of life

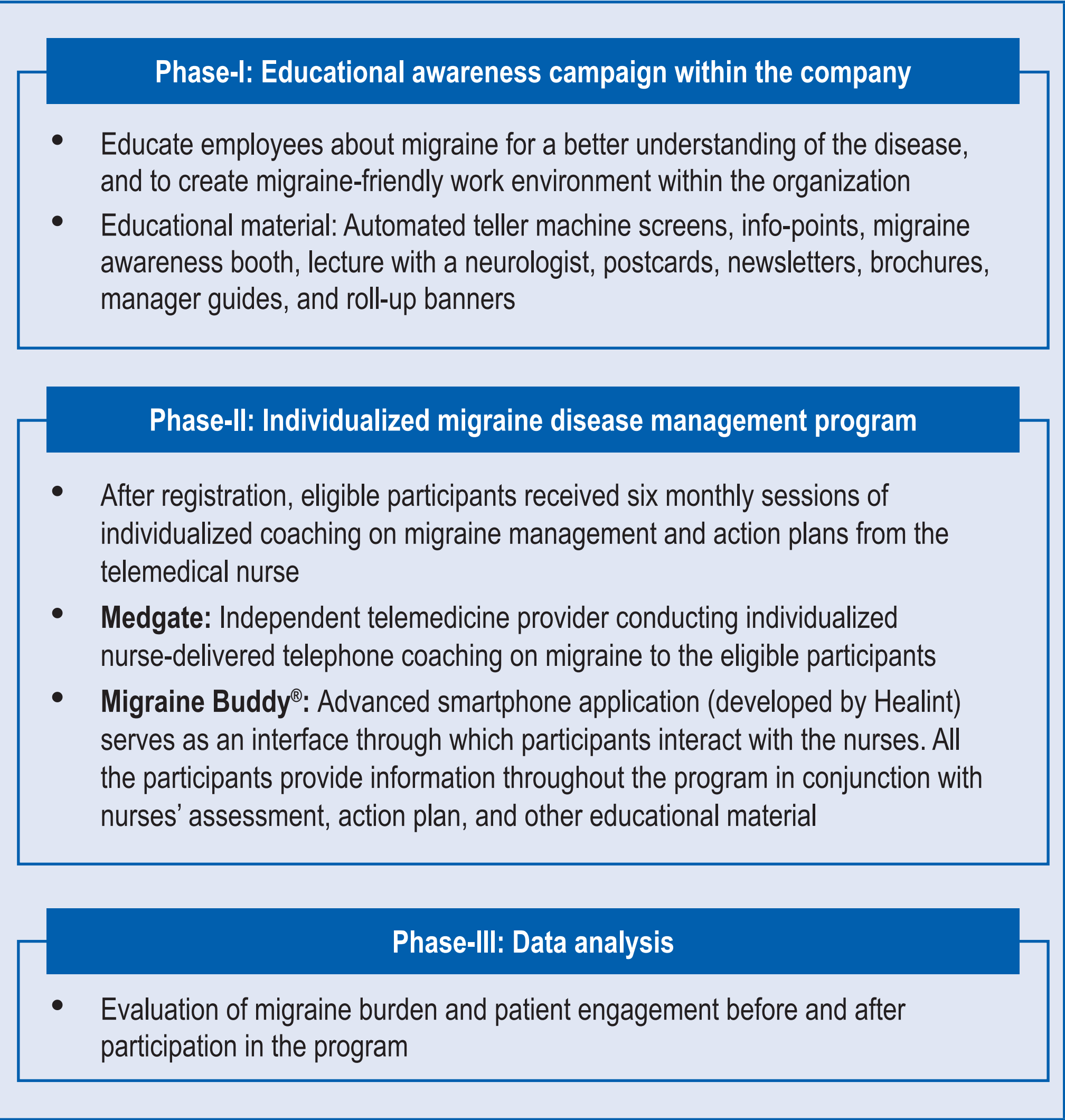
OBJECTIVE

- To assess participants' satisfaction with the Migraine Care program offered by a healthcare company as a complimentary service within its wellness program for its Swiss-based employees and their family members. The aim of the program was to foster patient empowerment to multidisciplinary approaches in the management of their migraine

METHODS

- The Migraine Care support program consisted of three integrated phases: (I) an educational awareness campaign for all employees, (ii) an individualized disease management program for those living with migraine, and (iii) data analysis phase which assessed the program's impact among the participants (Figure 1)

Figure 1. Phases of the Migraine Care support program



- Employees (aged ≥18 years) of Novartis Pharma AG, Switzerland and their family members who provided consent through the e-diary application, were eligible to participate
- The educational awareness campaign was designated to educate all employees (independent of their migraine status) about migraine. Following the educational awareness campaign, interested participants could self-enroll into the migraine care program
- After enrollment, participants received a screening call from the telemedical nurse and consultation with a medical doctor to determine if they had migraine or a high probability of having migraine (as determined by a score ≥2 on the ID-Migraine questionnaire). Eligible participants then received six monthly sessions of individualized telecoaching on migraine management and action plans from the telemedical nurse via a specially developed module on the Migraine Buddy smartphone application. The module was also used to track progress in the program and to interact with their nurses
- During enrollment into the Migraine Care program, interested participants could provide consent to allow analysis of their data collected during the program within the Migraine Buddy app. The impact of program on migraine burden and patient engagement was evaluated through a series of questionnaires and assessments, including Migraine Disability Assessment (MIDAS) and Patient Activation Measure (PAM)^{6,7}
 - MIDAS: A brief, self-administered questionnaire (seven questions) that quantifies headache-related disability over a 3-month recall period. Higher scores represent more severe disability. MIDAS scores are categorized into 4 severity grades: Grade I = score 0 to 5 (minimal or infrequent disability), Grade II = score 6 to 10 (mild or infrequent disability), Grade III = score 11 to 20 (moderate disability), and Grade IV = 21 and over (severe disability)⁶
 - PAM: This questionnaire measures the activation of patients in managing their own health. It assesses the patient's personal involvement, knowledge of, and actions to alleviate their condition, and maintenance of changes made using a 5-point scale (disagree strongly, disagree, agree, agree strongly, and not applicable). An abbreviated version of the PAM with 10 questions (PAM 10), which is the most widely used version of the PAM, was used for this study. Patients are categorized into one of four activation levels along an empirically derived continuum (Level 1: disengaged and overwhelmed; Level 2: becoming aware and still struggling; Level 3: taking action and gaining control; Level 4: maintaining behavior and pushing further). Participants with higher levels of activation are associated with better self-management and improved health outcomes⁷
- The results presented here focus on responses to an exit questionnaire that was administered at the end of the program (at Month 6) to collect feedback from the study participants to measure satisfaction level of the services offered

- The exit questionnaire included following assessments:
 - Patient Global Impression of Change (PGIC): The PGIC scale measures the change in the patient's overall status through a 7-point rating scale from "very much improved" to "very much worse"⁸
 - Satisfaction score/net promoter score (NPS) was assessed using a 10-point Likert scale (0=not likely to recommend; 10=extremely likely to recommend; respondents were grouped into promoters: those who scored 9-10, passives: those who scored 7-8, and detractors: those who scored 0-6, respectively). The NPS was calculated as the difference between the percentage of promoters and detractors giving a final score between -100 (if all participants were detractors) and 100 (if all participants were promoters)
 - A 5-point Likert scale response ("greatly exceeded expectations" to "much less than expected") on whether the program met expectations
 - A 5-point Likert scale responses ("very much so" to "none") for a question related to progress towards migraine goals: "Did you make progress toward the goals you had around managing your migraine?"
 - A 5-point Likert scale response ("very much so" to "none") for "Do you feel the program has helped you better manage your migraine?"

RESULTS

- Overall, 339 participants registered in the program (Jun 2018 - Oct 2019). Of these, 141 consented to the analysis of their data; 79 participants completed the 6-month program and were included in this analysis
- The mean (standard deviation [SD]) age of 79 participants was 41.5 (8.8) years, 69.6% were females, and 64.1% had a confirmed migraine diagnosis at the time of screening. About 80% of the participants were affected by migraine for more than 10 years
- At baseline, 56.8% of these 79 participants were not being treated by a healthcare provider while 17.2% were treated by a specialist, despite 56.1% of the overall patients (N=73) having moderate to severe disability based on MIDAS data. Detailed baseline characteristics for 6 months completers are presented in Table 1

Table 1. Baseline characteristics of included participants in the program

	6 months completers (N=79)
Age, mean (SD) years	41.5 (8.8)
Gender, n (%)	
Female	55 (69.6%)
Participant status, n (%)	
Employee	78 (98.7%)
Family	1 (1.3%)
How long affected by migraine,* n (%)	
<1 year	0 (0.0%)
1-5 years	8 (10.3%)
6-10 years	8 (10.3%)
11-15 years	5 (6.4%)
16-20 years	25 (32.1%)
21+ years	32 (41.0%)
When diagnosed,* n (%)	
No diagnosis	28 (35.9%)
In the last 3 months	1 (1.3%)
3-6 months	1 (1.3%)
6-12 months	0 (0.0%)
1-2 years	7 (9.0%)
2-5 years	8 (10.3%)
5-10 years	4 (5.1%)
10+ years	29 (37.2%)
Treated by HCP**, n (%)	
No	46 (56.8%)
Yes, by physician	21 (25.9%)
Past or current treatment by a specialist	14 (17.2)
MIDAS grades n (%)#	
Grade I (MIDAS score 0–5): Little or no disability	19 (26.0%)
Grade II (MIDAS score 6–10): Mild disability	13 (17.8%)
Grade III (MIDAS score 11–20): Moderate disability	25 (34.2%)
Grade IV (MIDAS score 21+): Severe disability	16 (21.9%)

*Two participants who completed Month 0 did not complete Month -1 assessments (screening)

**Participants provided more than one response

#N=73 for MIDAS grades (program participants who completed both baseline and 180 day MIDAS assessment)

Abbreviations: HCP: healthcare provider; OTC: Over-the-counter; SD: Standard deviation

MIDAS and PAM

- At Month 6 (N=73), total mean (SD) MIDAS scores significantly reduced by 8.1 (5.5) points, p<0.0001 from baseline. Similarly, presenteeism and absenteeism scores reduced by 4.4 (1.7) and 3.8 (3.7), respectively. In addition, the percentage of employees with MIDAS Grade I increased (26.0% vs. 60.3%), whereas those with MIDAS Grades II (17.8% vs. 12.3%), III (34.2% vs. 21.9%) and IV (21.9% vs. 5.5%) decreased from baseline at 6 months
- At Month 6 (n=78), the mean (SD) PAM score significantly improved by 5.8 (1.9) points, p=0.0027 from baseline. In addition, more than 90% of participants were activated (PAM levels 3 and 4), while none had poor activation (PAM level 1)

PGIC

- Approximately 90% of the participants who completed the study and participated in the exit survey reported feeling improved (under "minimally", "much" and "very much" categories) compared to baseline on the PGIC scale (Figure 2)

Patient satisfaction (NPS)

- Overall, 68.8% of the participants were categorized as promoters (very satisfied), 23.8% somewhat satisfied, and 6.3% as detractors (not at all satisfied). The NPS was estimated to be 62.5

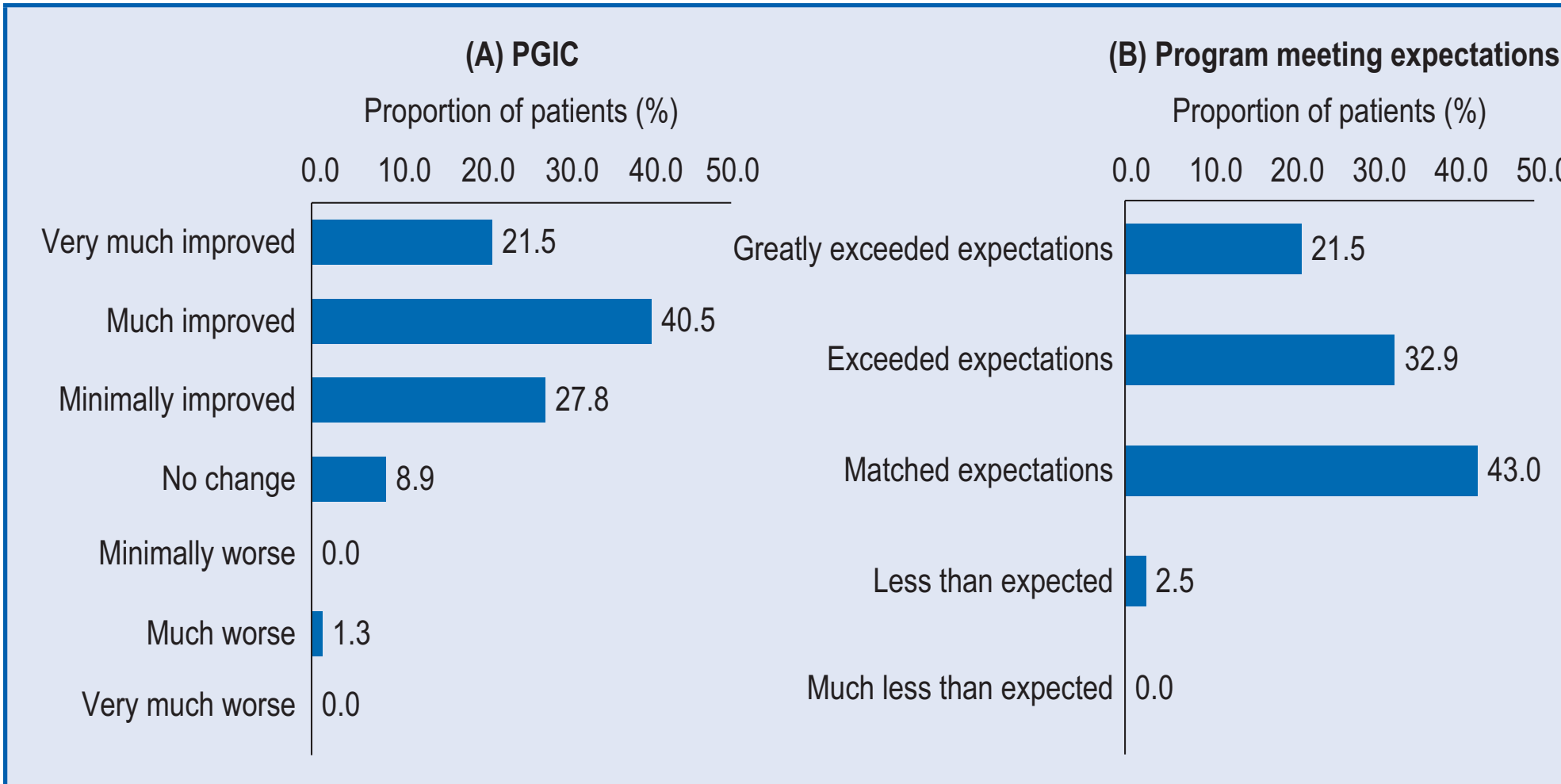
CONCLUSIONS

- The results demonstrate that at baseline, an overwhelming majority of participants were not medically followed or supported managing their migraine, though they should be followed by HCPs according to the Swiss Headache Society guidelines⁹
- An employer-sponsored migraine disease management program resulted in great clinical improvements in employees' migraine and very high levels of satisfaction with the program informing other companies that such programs could be great enhancements of their wellness programs

Program meeting expectations

- While 43.0% participants reported that the program met their expectations, 32.9% and 21.5% reported that the program "exceeded" and "greatly exceeded" their expectations, respectively (Figure 2)

Figure 2. Impact of program on PGIC and patient expectations (N=79)

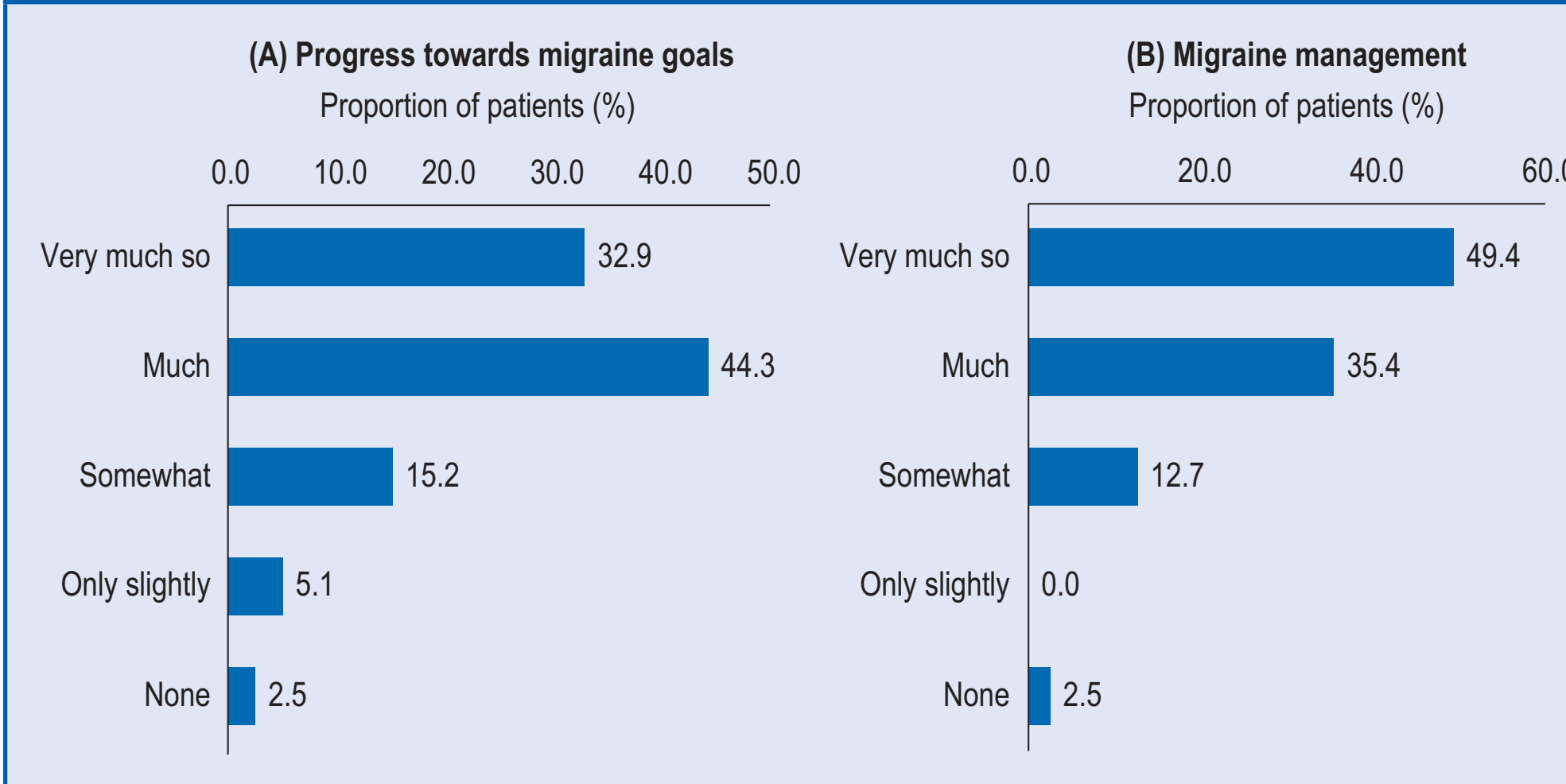


Abbreviations: PGIC: Patient Global Impression of Change

Progress towards migraine goals and management of migraine

- When prompted for self-reported progress towards migraine goals and how the program helped them to better manage their migraine, 77.2% and 84.8% responded in favor ("much" and "very much so") of the program, respectively (Figure 3)

Figure 3. Impact of program on progress towards migraine goals and migraine management (N=79)



Abbreviations: PGIC: Patient Global Impression of Change

LIMITATIONS

- The major limitations of this study include non-generalizability of results, as this study was limited to Novartis employees and their family members, and absence of a control group to allow for an adequate comparison
- In addition, dropout rates from the program may also affect the study results. The dropout rate is typical of questionnaire-based studies with no financial incentive; however, it induces a bias in favor of those most invested in the program or those with a greater awareness of migraine

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