



Pacini Editore & AU-CNS

Regular Article

Heroin Addict Relat Clin Probl 2024; 26, 19
<https://doi.org/10.62401/2531-4122-2024-19>

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“Life feels better with the right medication”. Results from a service user organization-led survey of opioid maintenance treatment patients in Norway

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Summary

Background: Opioid maintenance treatment (OMT) is the first-line treatment for opioid use disorder (OUD), but little is known about patient-reported outcomes. This study aimed to explore 1) the participants' experience and satisfaction with their current OMT medication and 2) the association between medication satisfaction and self-rated health, relationship to treatment providers, and overall treatment satisfaction, including intention to discontinue OMT. **Methods:** This is a nationwide cross-sectional study using data from an anonymous online patient satisfaction survey conducted by the service user organisation proLAR Nett in Norway from February to September 2021. The study sample consisted of individuals identifying as patients currently enrolled in OMT. Participants were recruited via direct community outreach, social media (Facebook), and treatment and low-threshold service providers. **Results:** Among the study sample of n=831 OMT patients, most were male (463; 56%), above the age of 45 (431; 52%) and had been in treatment for 8+ years (567; 68%). Their current OMT medication was as follows: sublingual buprenorphine (315; 38%), methadone syrup (251; 30%), buprenorphine depot (96; 12%), methadone tablets (76; 9%), morphine tablets (30; 4%) and levomethadone syrup (17; 2%). 464 (56%) participants reported being satisfied with their current OMT medication. Compared to participants not satisfied with their OMT medication, a smaller proportion of satisfied participants reported OMT medication side effects. Participants satisfied with their medication also reported significantly better self-rated physical and mental health, higher overall treatment satisfaction, and better cooperation with their OMT providers. **Conclusions:** For OMT patients, being satisfied with one's OMT medication is associated with several positive treatment outcomes. Different patients seem to benefit from different medications, highlighting the importance of offering a wide range of OMT medications and including patients in decisions about their treatment.

Key Words: Medications for Opioid Use Disorder; patient involvement; treatment satisfaction; Opioid Agonist Treatment; methadone; buprenorphine

1. Introduction

Opioid maintenance treatment (OMT) for patients with opioid use disorder (OUD) is effective at improving physical and mental health [6, 13, 17, 30], as well as reducing mortality [31], criminal activity [4, 23], and illicit opioid use [18]. However, the multitude of OMT studies evaluating these “hard” outcomes contrasts the limited availability of research on “softer”

patient-reported outcomes like quality of life and treatment satisfaction [19, 22, 35].

It is also unclear how these “hard” and “soft” treatment outcomes relate to each other, especially considering that patients' treatment goals are not always the same as the providers' [29]. Reduced opioid use and retention in treatment are common clinical

benchmarks, whereas patients commonly describe satisfaction in treatment, tapering, and ultimately discontinuing OMT as their own goals [26, 27].

A complicating factor is that “soft” outcomes are complex and, therefore, more difficult to measure. Treatment satisfaction can be measured using unidimensional instruments, that is, reporting on one single overall satisfaction factor [35], or by means of multidimensional instruments where patients can express their preferences (e.g., by rating) or opinions on several aspects of the treatment they receive [8]. Trujols et al. have demonstrated that the choice of method can directly impact results: patients who were “highly satisfied” in a unidimensional survey raised significant problems with their treatment when mixed-methods studies were conducted [35].

In NorCOMT (Norwegian Cohort of Patients in Opioid Maintenance Treatment and Other Drug Treatment Study), 62% of 156 long-term OMT patients reported overall satisfaction with their treatment [20]. However, much less is known about the patients’ satisfaction with their current OMT medication. Existing research into patient medication satisfaction has primarily focused on studying individual OMT medications [15, 36] or comparing two different OMT medications [16, 24]. In 2014, the Norwegian service user organisation proLAR Nett conducted a multidimensional peer-to-peer survey to provide patient-centred data [3, 21]. ProLAR Nett is an advocacy group which aims to improve treatment conditions for patients in OMT. In the survey, approximately two-thirds of 1,032 participants reported overall treatment satisfaction as well as satisfaction with their current OMT medication, but only buprenorphine (with or without naloxone) and methadone were compared [21].

In 2021, proLAR Nett thus conducted a second multidimensional survey to measure OMT medication and overall treatment satisfaction among the Norwegian OMT patient population, covering a more comprehensive range of OMT medications. Using data from the 2021 survey, our aims in this study are to explore:

1. The participants’ experience and satisfaction with their current OMT medications;
2. The association between OMT medication satisfaction and self-rated health, relationship to treatment providers, and overall treatment satisfaction, including intention to discontinue OMT.

2. Methods

2.1. Design

This cross-sectional study uses data from the 2021 anonymous OMT patient satisfaction survey

led by the service user organisation proLAR Nett. Online data collection took place from 8 February to 5 September 2021.

2.2. Setting

As of late 2021, a total of 8,198 patients were enrolled in OMT nationwide [2]. OMT in Norway is publicly funded, free of charge for the patients and available in all regions of the country. Treatment is based in specialised addiction clinics, but individual patient follow-up is coordinated by a multidisciplinary team composed of the patient, the municipality with the social services and the patient’s GP, the OMT staff and other services, depending on the patient’s needs and the local circumstances. After the patient has been stabilised on the OMT medication, other clinical needs may be addressed through the addition of medical treatment and/or psychotherapy for other substance use, somatic health, or mental health problems.

The first-line medications used in OMT in Norway are buprenorphine (as sublingual tablets or weekly/monthly depot injections) and methadone syrup. However, individual patients may be switched to second-line OMT medications such as methadone tablets, morphine tablets (12-hour formulation, as slow-release oral morphine was not available in Norway when the study was conducted) or levomethadone if the ordinary OMT medications do not have sufficient effect and/or involve too many side-effects [10].

2.3. Participants

To be eligible for inclusion, participants had to identify (self-report) as being enrolled in OMT in Norway at the time of data collection.

2.3.1. Recruitment

Recruitment of the participants occurred via a 3-tiered strategy.

1. Social media: On 8 February 2021, the survey was launched on the proLAR Nett Facebook page (with a link to the Nett-skjema [37] online questionnaire) and subsequently reposted. ProLAR Nett and GWS (first author) encouraged all OMT patients to participate in the survey, particularly those from regions, gender, and age groups likely to be underrepresented. All Facebook posts were public and could be shared by third persons/parties.
2. Mail: From February to May 2021, proLAR Nett sent e-mails (with a copy of the participant information sheet attached) to various services – asking the organisations to advertise the online survey to as many

OMT patients as possible. These services included all OMT units in the country, pharmacies, low-threshold services, and other service user organisations.

3. Outreach: The proLAR Nett team (comprised of employees and volunteers) conducted street-based outreach to OMT patients in several cities. The team distributed participant information sheets to patients, inviting them to participate in the online survey, and had tablets available so that patients could complete the online survey directly on-site. The proLAR Nett team also conducted outreach to OMT patients via the organisation's mobile hepatitis C van, which visited multiple cities during the study period.

2.4. Study procedures

All potential participants received the participant information sheet either as a digital or hard copy version and were instructed on the proLAR Nett webpage to complete the survey only once. A link to the Nettskjema [37] online survey was included on the participant information sheet, Facebook posts, and the proLAR Nett webpage. Most participants completed the online survey themselves using a tablet, a mobile phone, or a personal computer. In contrast, some participants were interviewed by the proLAR Nett team, who completed the online survey on behalf of the participant. Upon completion, each participant's survey responses were directly uploaded onto the Services for Sensitive Data (TSD) at the University of Oslo [38], a secure data storage platform.

2.5. Questionnaire

The online survey was administered in the Norwegian language on Nettskjema, a web-based survey tool developed by the University of Oslo to collect strictly confidential data [37]. The questionnaire was based on the first proLAR Nett survey from 2014 [3], modified in consultation with GWS and researchers from Bergen Addiction Research (Bergen University Hospital). The final questionnaire comprised 24 items (with sub-questions and skip patterns) and took approximately ten minutes to complete. An English translation of the questionnaire is provided as Appendix.

2.5.1. Variables

The items from the proLAR Nett survey included in this study comprised demographics, i.e., gender, age group, total years in OMT, and housing situation (all categorical variables).

The questionnaire contained items about the respondents' physical and mental health (5-point Likert scale). The respondents were asked: "Are you currently using any illegal drugs?" If yes, the respondents were asked to indicate which substance(s) they used (multiple choice item) and whether they thought of their illicit drug use as problematic (yes/no).

In addition to their current OMT medication, respondents were asked: "Are you satisfied with the OMT medication you use (yes/no)?" and if they experienced any side effects. In the case of side effects, respondents were asked to indicate which side effects (multiple choice item). The participants were then asked to indicate on a drop-down menu which OMT medication they would have preferred if given a free choice (single choice). Participants were also asked if they were prescribed other medications with addictive potential (i.e., in addition to their OMT).

Regarding safety measures, participants were asked how often they picked up their OMT medication, whether they provided urine drug screens, and if they felt obliged to do so.

Respondents were asked to rate (on a 5-point Likert scale) their relationships with their general practitioner (GP), OMT counsellor (nurse or social worker), and OMT doctor. Further, they were asked if they trusted their OMT counsellor and if they trusted their OMT doctor to want the best for them.

Participants were asked to rate (5-point Likert scale) four statements about OMT, of which two were positive ("I can influence my OMT-treatment to a large degree"; "The people in charge of my OMT are preoccupied with what is best for me and my rehabilitation") and two negative ("To a large degree, OMT staff decide too much over my life"; "I feel powerless in my encounter with the OMT system").

The questionnaire also enquired whether respondents wanted to discontinue their OMT medication and whether they considered OMT a long-term treatment for themselves.

Finally, participants were asked to rate their total satisfaction with OMT treatment on a 10-point Likert scale.

2.6. Ethics

Participation was anonymous, entirely voluntary, and did not involve any reimbursements. The online survey contained no items with forced reply format or identifiable personal data, and participants' Internet Protocol (IP) address was not logged. All data were stored using the Services for Sensitive Data (TSD) at the University of Oslo [38]. The Norwegian Centre for Research Data (SIKT) deemed the project did not require a research ethics committee review (reference: 593266; decision letter dated 02.05.2022) [28].

Table 1. Background variables, N=831

| | n (%) |
|---|----------|
| Gender | |
| Men | 463 (56) |
| Women | 365 (44) |
| Other | 1 (0) |
| Missing | 2 (0) |
| Age Group (Years) | |
| < 25 | 5 (1) |
| 25-35 | 111 (13) |
| 36-45 | 281 (34) |
| 46-55 | 294 (35) |
| >55 | 137 (17) |
| Missing | 3 (0) |
| How Is Your Housing Situation? | |
| Own House/Apartment | 223 (27) |
| Rented House/Apartment | 283 (34) |
| Municipal Housing | 217 (26) |
| Other | 104 (13) |
| Missing | 4 (1) |
| Total Years In OMT | |
| 0-2 | 82 (10) |
| 3-7 | 176 (21) |
| 8-11 | 185 (22) |
| ≥12 | 382 (46) |
| Missing | 6 (1) |
| Current OMT Medication | |
| Methadone Syrup | 251 (30) |
| Methadone Tablets | 76 (9) |
| Morphine Tablets (12-Hour Formulation) | 30 (4) |
| Levomethadone Syrup | 17 (2) |
| Buprenorphine Sublingual | 315 (38) |
| Buprenorphine With Naloxone | 39 (5) |
| Buprenorphine Depot | 96 (12) |
| Buprenorphine: Other Formulations | 7 (1) |
| Missing | 0 (0) |
| How Often Do You Receive/Pick Up Your OMT Medication? * | |
| Less Than Weekly | 120 (16) |
| Once/Week | 288 (39) |
| 2-3 Times/Week | 149 (20) |
| 4-5 Times/Week | 46 (6) |
| Daily | 119 (16) |
| Missing | 13 (2) |
| Do You Provide Urine Drug Screens? | |
| Yes | 552 (66) |
| No | 272 (33) |
| Missing | 7 (1) |
| If You Could Choose Freely, Which OMT Medication Would You Chose? | |
| Methadone Syrup | 44 (5) |
| Methadone Tablets | 106 (13) |
| Morphine Tablets (12-Hour Formulation) | 312 (38) |
| Levomethadone Syrup | 33 (4) |
| Buprenorphine Sublingual | 169 (20) |
| Buprenorphine With Naloxone | 7 (1) |
| Buprenorphine Depot | 62 (8) |
| Buprenorphine: Other Formulations | 5 (1) |
| Other Opioid Medications | 29 (4) |
| Non-Opioid Medication | 23 (3) |
| Missing | 41 (5) |

*depot buprenorphine excluded from this analysis

2.7. Analyses

All survey data were imported into IBM SPSS Statistics (version 29; Armonk, NY), and statistical analyses were carried out following data cleaning. Missing data on all variables are reported in the respective tables and handled by complete case analysis. Continuous variables were compared using independent sample t-tests, and categorical variables were compared using χ^2 tests, using a 95% confidence interval (CI). The level of significance was set at $p = 0.05$.

3. Results

3.1. Participant characteristics

We excluded 30 survey participants from the study sample as they did not indicate current use of an OMT medication and were therefore ineligible. No information was available about how long these former OMT patients had been out of treatment.

A total of $n=831$ participants who identified as current OMT patients were included in the study sample, of whom most were men (463; 56%), older than 45 years (431; 52%), and had been in OMT for eight years or more (567; 68%). **Table 1** describes the participants' background variables.

3.2. OMT medication

Participants reported using one of the following eight medications as their current OMT medication, in declining order: sublingual buprenorphine (315; 38%), methadone syrup (251; 30%), buprenorphine depot (96; 12%), methadone tablets (76; 9%), buprenorphine with naloxone (39; 5%), morphine tablets (30; 4%), and levomethadone syrup (17; 2%) (see **Table 1**).

One hundred and twenty (16%) respondents received their OMT medication less than weekly, 288 (39%) once a week, 149 (20%) two to three times a week, 46 (6%) four to five times a week, while 119 (16%) of the participants received their OMT medication daily. Two-thirds (552; 66%) of participants reported that they provided urine drug screens, among whom 356 (65%) indicated that they felt obliged to do so.

When asked: "If you could have chosen freely, which medication would you have chosen?" – the largest proportion of respondents (312; 38%) indicated morphine tablets as their choice (see **Table 1**).

Table 2. Current OMT medication satisfaction and side effects, N=831

| Current OMT Medication | Total n (%) | Satisfied n (%) | Experienced Side Effects n (%) | Number Of Side Effects mean ± SD |
|-------------------------------|-------------|-----------------|--------------------------------|----------------------------------|
| Methadone Syrup | 251 (100) | 93 (38) | 207 (83) | 5.3±3.8 |
| Methadone Tablets | 76 (100) | 56 (74) | 45 (60) | 3.1±3.4 |
| Morphine Tablets ¹ | 30 (100) | 24 (80) | 16 (57) | 3.2±3.7 |
| Levomethadone | 17 (100) | 9 (56) | 13 (81) | 5.4±4.8 |
| Bup ² Sublingual | 315 (100) | 195 (63) | 219 (70) | 3.7±3.5 |
| Bup With Naloxone | 39 (100) | 23 (61) | 30 (77) | 5.1±4.0 |
| Bup Depot | 96 (100) | 59 (63) | 61 (64) | 2.9±3.1 |
| Missing | 7 | | | |
| Total | 831 (100) | 464 (56) | 595 (72) | 4.1±3.7 |

¹ 12-hour formulation; ² BUP: buprenorphine

3.3. Satisfaction and side effects by current OMT medication

Table 2 shows the participants' ratings of their OMT medication satisfaction as well as their side effects. The highest satisfaction with OMT medication was reported by patients receiving morphine tablets (80%), followed by methadone tablets (74%), various buprenorphine formulations (61-63%), levomethadone syrup (56%), and, lastly, methadone syrup (38%).

Most participants reported experiencing side effects from their OMT medication, ranging in proportion from 57% (morphine tablets) to 83% (methadone

syrup). Among individuals with side effects, the average number of side effects experienced ranged from three (mean = 2.9; SD = 3.1) with depot buprenorphine to five (mean = 5.4; SD = 4.8) with levomethadone.

3.4. Substance use

A third of participants (243; 33%) reported use of non-prescribed substances at the time of the survey. Among those, 98 (40%) described their drug use as "problematic". Across all substances, the use of cannabis (180; 22%) was most frequently reported, followed by benzodiazepines (129; 16%), ampheta-

Table 3a. Satisfaction with OMT medication: Background variables, medication, safety measures and health

| | Total n (%) | OMT medication | | p |
|--------------------|-------------|-----------------|---------------------|----|
| | | Satisfied n (%) | Not satisfied n (%) | |
| Total (missing=10) | 831 | 464 (56) | 357 (43) | |
| Gender | | | | |
| Men | 457 (56) | 255 (55) | 202 (57) | Ns |
| Women | 361 (44) | 208 (45) | 153 (43) | |
| Other | 1 (0) | | 1 (0) | |
| Missing | 12 | | | |
| Age | | | | |
| ≤ 45 Years | 395 (48) | 229 (50) | 166 (47) | Ns |
| ≥46 Years | 422 (52) | 231 (50) | 191 (54) | |
| Missing | 14 | | | |
| Total Years In OMT | | | | |
| ≤ 7 | 253 (31) | 153 (33) | 100 (28) | Ns |
| ≥ 8 | 559 (69) | 305 (66) | 254 (72) | |
| Missing | 19 | | | |

*depot buprenorphine excluded from this analysis, **the 5-point Likert scale is compressed to a 3-point scale

Table 3a. Satisfaction with OMT medication: Background variables, medication, safety measures and health

| | OMT medication | | | p |
|--|----------------|--------------------|------------------------|--------|
| | Total n (%) | Satisfied n (%) | Not satisfied n (%) | |
| Have You Experienced Any Side Effects Of The OMT Medication? | | | | |
| Yes | 587 (72) | 252 (55) | 335 (95) | <0.001 |
| No | 228 (28) | 209 (45) | 19 (5) | |
| Missing | 16 | | | |
| Are You Currently Using Any Illegal Drugs? | | | | |
| Yes | 263 (32) | 116 (25) | 147 (41) | <0.001 |
| No | 553 (67) | 346 (75) | 207 (58) | |
| Missing | 15 | | | |
| How Often Do You Pick Up Your OMT Medication?* | | | | |
| Once A Week Or Less | 405 (55) | 266 (66) | 139 (44) | <0.001 |
| Multiple Times A Week | 310 (42) | 135 (34) | 175 (56) | |
| Missing | 20 | | | |
| Are You Prescribed Other Medications With Addictive Potential? | | | | |
| Yes | 308 (38) | 156 (34) | 152 (43) | Ns |
| No | 506 (62) | 305 (66) | 201 (57) | |
| Missing | 17 | | | |
| Do You Provide Urine Drug Screens? | | | | |
| Yes | 546 (67) | 319 (69) | 227 (64) | Ns |
| No | 268 (33) | 142 (31) | 126 (35) | |
| Missing | 17 | | | |
| Do You Feel Obligated To Provide Urine Drug Screens? | | | | |
| Yes | 356 (65) | 181 (57) | 175 (77) | <0.001 |
| No | 184 (34) | 133 (42) | 51 (22) | |
| I Do Not Provide Urine Samples | 268 | | | |
| Missing | 23 | | | |
| How Is Your Physical Health? ** | | | | |
| Positive (Good Or Very Good) | 293 (36) | 211 (46) | 82 (23) | <0.001 |
| Neutral | 211 (26) | 128 (28) | 83 (24) | |
| Negative (Bad Or Very Bad) | 312 (38) | 124 (27) | 188 (53) | |
| Missing | 15 | | | |
| How Is Your Mental Health? ** | | | | |
| Positive (Good Or Very Good) | 280 (35) | 195 (43) | 85 (24) | <0.001 |
| Neutral | 197 (25) | 130 (29) | 67 (19) | |
| Negative (Bad Or Very Bad) | 328 (41) | 128 (28) | 200 (57) | |
| Missing | 26 | | | |
| Do You Want To Come Off The OMT Medication? | | | | |
| Yes | 349 (43) | 155 (34) | 194 (55) | <0.001 |
| No | 248 (30) | 182 (39) | 66 (19) | |
| Do Not Know | 216 (26) | 122 (26) | 94 (26) | |
| Missing | 18 | | | |
| Do You Consider OMT As A Long-Term Treatment For Yourself? | | | | |
| Yes | 586 (72) | 371 (80) | 215 (60) | <0.001 |
| No | 228 (28) | 91 (20) | 137 (39) | |
| Missing | 17 | | | |

*depot buprenorphine excluded from this analysis, **the 5-point Likert scale is compressed to a 3-point scale

Table 3b. Satisfaction with OMT medication: Relationship to OMT staff, attitudes to OMT, and patient involvement

| | OMT medication | | | p |
|--|----------------|-----------|---------------|--------|
| | Total | Satisfied | Not satisfied | |
| | n (%) | n (%) | n (%) | |
| Total (missing=10) | 831 | 464 (56) | 357 (43) | |
| How Is Your Relationship To Your GP?* | | | | |
| Positive (Good Or Very Good) | 482 (59) | 301 (65) | 181 (51) | <0.001 |
| Neutral | 201 (25) | 106 (23) | 95 (27) | |
| Negative (Bad Or Very Bad) | 133 (16) | 55 (12) | 78 (22) | |
| Missing | 15 | | | |
| How Is Your Relationship To Your OMT Counsellor?* | | | | |
| Positive (Good Or Very Good) | 362 (48) | 271 (63) | 91 (28) | <0.001 |
| Neutral | 195 (26) | 96 (22) | 99 (31) | |
| Negative (Bad Or Very Bad) | 196 (26) | 66 (15) | 130 (41) | |
| Not Applicable/Missing | 78 | | | |
| Do You Trust Your OMT Counsellor? | | | | |
| Yes | 317 (39) | 246 (53) | 71 (20) | <0.001 |
| No | 353 (43) | 131 (28) | 222 (62) | |
| Do Not Know | 135 (16) | 77 (17) | 58 (16) | |
| Missing | 26 | | | |
| How Is Your Relationship To Your OMT Doctor?* | | | | |
| Positive (Good Or Very Good) | 165 (26) | 134 (38) | 31 (11) | <0.001 |
| Neutral | 227 (36) | 139 (40) | 88 (32) | |
| Negative (Bad Or Very Bad) | 236 (38) | 79 (22) | 157 (57) | |
| Not Applicable/Missing | 203 | | | |
| Do You Trust That Your OMT Doctor Wants The Best For You? | | | | |
| Yes | 198 (24) | 159 (34) | 39 (11) | <0.001 |
| No | 352 (43) | 133 (29) | 219 (61) | |
| Do Not Know | 256 (31) | 160 (35) | 96 (27) | |
| Missing | 25 | | | |
| "I Can Influence My OMT-Treatment To A Large Degree"* | | | | |
| Agree/Strongly Agree | 322 (40) | 261 (57) | 61 (17) | <0.001 |
| Neither Agree Nor Disagree | 122 (15) | 79 (17) | 43 (12) | |
| Disagree/Strongly Disagree | 372 (46) | 120 (26) | 252 (71) | |
| Missing | 15 | | | |
| "The People In Charge Of My OMT Are Preoccupied With What Is Best For Me And My Rehabilitation"* | | | | |
| Agree/Strongly Agree | 264 (33) | 223 (49) | 41 (12) | <0.001 |
| Neither Agree Nor Disagree | 162 (20) | 107 (23) | 55 (16) | |
| Disagree/Strongly Disagree | 387 (48) | 129 (28) | 258 (73) | |
| Missing | 18 | | | |
| "To A Large Degree OMT Staff Decide Too Much Over My Life"* | | | | |
| Agree/Strongly Agree | 552 (68) | 254 (55) | 298 (84) | <0.001 |
| Neither Agree Nor Disagree | 125 (15) | 85 (19) | 40 (11) | |
| Disagree/Strongly Disagree | 136 (17) | 121 (26) | 15 (4) | |
| Missing | 18 | | | |
| "I Feel Powerless In My Encounter With The OMT System"* | | | | |
| Agree/Strongly Agree | 556 (68) | 241 (52) | 315 (89) | <0.001 |
| Neither Agree Nor Disagree | 110 (14) | 84 (18) | 26 (7) | |
| Disagree/Strongly Disagree | 149 (18) | 135 (29) | 14 (4) | |
| Missing | 16 | | | |

*the 5-point Likert scale is compressed to a 3-point scale

Table 3b. Satisfaction with OMT medication: Relationship to OMT staff, attitudes to OMT, and patient involvement

| | OMT medication | | | p |
|--|---------------------|---------------|---------------|--------|
| | Total | Satisfied | Not satisfied | |
| | mean \pm SD | mean \pm SD | mean \pm SD | |
| “On A Scale From 1-10: Totally, How Satisfied Are You With The OMT Treatment You Receive?” Mean \pm SD Missing (Including Those Scoring 0) | 5.0 \pm 2,9 85 | 6.1 \pm 2.7 | 3.3 \pm 2.3 | <0.001 |

*the 5-point Likert scale is compressed to a 3-point scale

mines (75; 9%), and heroin (34; 5%). These results are not shown in the tables.

3.5. Patients' satisfaction with the OMT medication

In total, 464 (56%) participants reported being satisfied with their current OMT medication. OMT medication satisfaction was not associated with participants' gender, age, or length of OMT treatment (see **Table 3a**). Among participants satisfied with their OMT medication, a significantly smaller proportion had side effects (55% versus 95%), reported use of illegal drugs (25% versus 41%) or intention to come off their OMT medication (34% versus 55%), compared to those not satisfied (all $p < 0,001$).

Respondents satisfied with their OMT medication had significantly longer pick-up intervals, as a greater proportion could pick up their medication once a week or less (66% versus 44% among those not satisfied with their OMT medication). Participants satisfied with their OMT medication significantly more often rated their physical (46% versus 23%) and mental health (43% versus 24%) as positive (good or very good) compared to those not satisfied.

3.6. Participants' relationship to OMT staff and attitudes to OMT

Significantly larger proportions ($p < 0,001$) of participants satisfied with their OMT medication reported positive relationships with their GP (65% versus 51%), OMT counsellor (63% versus 28%) and OMT doctor (38% versus 11%), indicated that they trusted their OMT counsellor (53% versus 20%) and trusted that their OMT doctor wanted the best for them (34% versus 11%), compared to those not satisfied with their OMT medication (**Table 3b**).

On all four 5-point Likert scale statements inquiring about attitudes to OMT, there were significant differences ($p < 0,001$) between the participants satisfied with their OMT medication and those who were not: Participants satisfied with their OMT medication

agreed more with the positive statements about OMT and less with negative statements.

When asked: “On a scale from 1-10: Totally, how satisfied are you with the OMT treatment you receive?”, participants satisfied with their OMT medication reported significantly higher ($p < 0,001$) satisfaction (mean = 6.1; SD = 2.7) than participants who were not satisfied with their OMT medication (mean = 3.3; SD = 2.3), respectively.

4. Discussion

In this nationwide survey, 56% of participants were satisfied with their OMT medication. Notably, these participants also fared better on other treatment indicators: they reported lower side effect burden, less use of illegal drugs, and better physical and mental health. Further, they reported a better relationship with their treatment providers, higher overall satisfaction with OMT treatment, and more influence over their treatment compared to those dissatisfied with their OMT medication.

The higher ratings of their physical and mental health among participants satisfied with their OMT medication may be associated with the fewer OMT medication side effects reported. Reporting on the proLAR Nett survey from 2014, Muller et al. [21] identified side effects among 84% of the total sample (roughly consistent with 72% in our study) and found an association between high side effect burden and worse self-rated health.

In our study, compared to those not satisfied with their OMT medication, satisfied patients had longer take-home dosing intervals and provided fewer urine drug screens. They also reported less illicit drug use, which may explain the longer take-home intervals and hence partly account for better relationships with their OMT staff, as previously reported in a US study [7].

Conversely, participants not satisfied with their OMT medication more frequently reported that they wanted to come off their OMT medication. Tapering or stopping OMT medication is associated with

increased mortality [31], underlining the importance for clinicians to discuss OMT medication satisfaction with their patients.

Further, respondents satisfied with their OMT medication also reported higher overall satisfaction with OMT in our study [1], as reflected in a better relationship with their treatment providers, more influence over their treatment, and more trust towards OMT staff [34]. Trust is considered essential in the relationship between patients and providers [12, 25] and can facilitate communication and more user involvement in treatment. In our study, participants satisfied with their OMT medication held significantly more positive attitudes about OMT than the participants who were not satisfied.

In a subgroup analysis of medication satisfaction by type of OMT medication, patients receiving a 12-hour formulation of morphine (80% satisfied) ranked highest in our study, followed by patients receiving methadone tablets (74%), sublingual and depot buprenorphine (63%), and methadone syrup (38%). These results differ from proLAR Netts' 2014 survey, where 66% of patients were satisfied with their OMT medication, with no difference between methadone and buprenorphine without naloxone [21]. The 2014 survey only included methadone, buprenorphine, and buprenorphine with naloxone. The wider range of OMT medications may explain some of the differences found in the present survey, conducted seven years later. The availability of more medication options increases the need for improved communication between patients and clinicians regarding medication alternatives and patient involvement in treatment decision-making [40].

In our study, if provided a free choice of OMT medication, over a third (38%) of respondents would have chosen morphine tablets, whereas syrup-based methadone formulations were the least popular. However, we do not have any information about the reasons for the participants' choice. Moreover, the optimal OMT medication for a specific patient may change over time depending on the duration of OMT and physiological changes due to ageing [5].

Two-thirds (68%) of our patient sample had been in OMT for over 8 years. It is thus interesting to note that 15% of participants reported current use of second-line OMT medications such as levomethadone syrup, morphine tablets, and methadone tablets. In a German follow-up study of 180 long-term OMT patients with unsatisfactory treatment courses who were subsequently switched to slow-release oral morphine (SROM), improved physical and mental health and decreased heroin use were reported after 12 months [14]. OMT practices, including the range of OMT medications offered, vary greatly both within and across countries [11].

4.1. *What does the current study add to the literature?*

Our study shows that a survey initiated, designed, and conducted by an OMT advocacy group can provide important and nuanced information on how patients in OMT perceive the treatment they receive. Compared to single-item measurements of overall treatment satisfaction [2], multidimensional surveys like proLAR Netts' offer detailed information useful for individual treatment planning at the patient level as well as for the improvement of OMT services [35].

4.2. *Implications for practice*

Our findings emphasise the need for OMT professionals to routinely ask their patients about their experience and satisfaction with their OMT medication, screen for side effects, and pay attention to any side effects the patients report. The results also indicate the need for improved communication between patients in OMT and their treatment providers – particularly OMT doctors – so that patients can be well informed about the treatment options. Further, the study demonstrates the advantage of offering a wide range of OMT medications, as different patients seem to benefit from different medications, probably also at different periods in their course of treatment. According to one of the medication-assisted treatment (MAT) standards set by the Scottish Government: "All people are supported to make an informed choice on what medication to use for MAT and the appropriate dose" [33].

4.3. *Representativeness of sample*

Our study sample comprises 10% (831/8,198) of the 2021 Norwegian OMT population [2]. Nonetheless, our sample is not representative of the Norwegian OMT treatment population due to gender differences, the use of illegal drugs and the frequency of picking up OMT medication. The percentage of women in this survey (44%) was higher than in the national annual status report of OMT patients for the year 2021 (30%), which covered more than 80% of Norwegian OMT patients [2]. The study sample is a predominantly well-functioning group of long-term OMT patients, as only a third of the respondents reported any substance use, and 55% of the participants picked up their OMT medication weekly or less. The proportion of patients using the different first-line OMT medications in this study was approximately the same as in the most recent annual Norwegian status report [2].

4.4. Strengths and limitations

Our study reports on a nationwide survey initiated, developed, and conducted by a patient advocacy group, giving a unique insight into how more than ten per cent of the OMT population in Norway experience their treatment. Due to the multidimensional survey design, participants report their experience with and views on many aspects of OMT service provision, including a wide range of OMT medications.

As such, the study also has limitations. Firstly, the questionnaire was developed by a service user organisation and is therefore not validated. Secondly, participants were self-selected into the survey. The overrepresentation of females (see above) may have affected our study results. It is also possible that patients less satisfied with OMT disproportionately participated in the survey. Thirdly, our study is based on self-report data only, and its cross-sectional design does not allow any claims about causality. Fourthly, some results are based on limited numbers, e.g., the 30 respondents (4% of the sample) receiving morphine tablets. Lastly, data collection occurred during the COVID-19 pandemic, when OMT service provision was altered (i.e., fewer patient visits to OMT clinics and urine drug screens, longer take-home intervals, more home delivery of OMT medications), and in-person recruitment into the survey was complicated due to social distancing guidelines.

4.5. Implications for policy

Prior to write-up of this study, proLAR Nett published a grey literature report based on data from the online survey in November 2021 [39], as this provided the opportunity for inclusion as a part of the evidence base for the revised National Treatment Guideline for OMT in Norway [10]. Launched in May 2022, the guideline makes multiple references to the proLAR Nett report, emphasising the importance of user participation both in their own OMT and the guideline development [9, 32]. The 2021 ProLAR Nett survey was conducted in the final year of the old guidelines. It would be worthwhile to repeat the survey at regular intervals to explore if the revised guidelines positively affect the patient experience of OMT.

4.6. Questions for future research

There is a need for more surveys performed by service user organisations from various countries focusing on how patients experience different aspects of the OMT treatment they receive. More research is needed to explore why patients are satisfied with different OMT medications and what they hope to achieve by changing their OMT medication. Further, we need research linking “soft outcome” results from

service user surveys to traditional “hard outcomes” of OMT as retention in treatment and physical and mental health.

5. Conclusions

The study demonstrates that OMT patients who are satisfied with their OMT medication report lower side-effect burden, better general physical and mental health as well as better relationship with their OMT providers, and overall higher satisfaction with and more influence on their own OMT treatment, compared to patients not satisfied with their OMT medication. Finding the optimal OMT medication should be considered an ongoing process between the patient and the OMT doctor, as this may change over time depending on the duration of OMT and physiological changes due to ageing.

References

- ALCARAZ S., VILADRICH C., TRUJOLS J., SIÑOL N., PÉREZ DE LOS COBOS J. (2018): Heroin-Dependent Patient Satisfaction with Methadone as a Medication Influences Satisfaction with Basic Interventions Delivered by Staff to Implement Methadone Maintenance Treatment. *Patient Prefer Adherence*. 12: 1203-1211. <https://doi.org/10.2147/ppa.S164181>
- BECH A. B., BUKTEN A., LOBMAIER P., SKEIE I., LILLEVOLD P. H., CLAUSEN T. (2022): The Annual OMT Status Survey for 2021. Norwegian Centre for Addiction Research,
- BRUN L., VESTERGAARD T., HOLUM G., BJØRNESTAD R. (2016): 1032 Users to Users. A National Survey of Opioid Maintenance Treatment (Only Summary in English). proLAR,
- BUKTEN A., SKURTVEIT S., GOSSOP M., WAAL H., STANGELAND P., HAVNES I., CLAUSEN T. (2012): Engagement with Opioid Maintenance Treatment and Reductions in Crime: A Longitudinal National Cohort Study. *Addiction*. 107(2): 393-399. <https://doi.org/10.1111/j.1360-0443.2011.03637.x>
- DUFORT A., SAMAN Z. (2021): Problematic Opioid Use among Older Adults: Epidemiology, Adverse Outcomes and Treatment Considerations. *Drugs Aging*. 38(12): 1043-1053. <https://doi.org/10.1007/s40266-021-00893-z>
- FINGLETON N., MATHESON C., JAFFRAY M. (2015): Changes in Mental Health During Opiate Replacement Therapy: A Systematic Review. *Drugs: Educ Prev Policy*. 22(1): 1-18.
- FRANK D., MATEU-GELABERT P., PERLMAN D. C., WALTERS S. M., CURRAN L., GUARINO H. (2021): “It’s Like ‘Liquid Handcuffs’”: The Effects of Take-Home Dosing Policies on Methadone Maintenance Treatment (Mmt) Patients’ Lives. *Harm Reduct J*. 18(1): 88. <https://doi.org/10.1186/s12954-021-00535-y>
- GUILLOU LANDREAT M., DANY A., CHALLET BOUJU G., LAFORGUE E. J., CHOLET J., LÉBOUCHER J., HARDOUIN J. B., VICTORRI VIGNEAU C., GRALL BRONNEC M. (2022): How Do People Who Use Drugs Receiving Opioid Medication Therapy Perceive Their Treatment? A Multicentre Study. *Harm Reduct J*. 19(1): 31. <https://doi.org/10.1186/s12954-022-00608-6>

9. HALL N. Y., LE L., MAJMUJAR I., MIHALOPOULOS C. (2021): Barriers to Accessing Opioid Substitution Treatment for Opioid Use Disorder: A Systematic Review from the Client Perspective. *Drug Alcohol Depend.* 221: 108651. <https://doi.org/10.1016/j.drugalcdep.2021.108651>
10. HELSEDIREKTORATET (2022): National Treatment Guideline: Opioid Maintenance Treatment (OMT) for Opioid Dependency (Legemiddelassiert Rehabilitering Ved Opioidavhengighet). Norwegian Directorate of Health, Oslo. <https://www.helsedirektoratet.no/retningslinjer/behandling-ved-opioidavhengighet>
11. JIN H., MARSHALL B. D. L., DEGENHARDT L., STRANG J., HICKMAN M., FIELLIN D. A., ALI R., BRUNEAU J., LARNEY S. (2020): Global Opioid Agonist Treatment: A Review of Clinical Practices by Country. *Addiction.* 115(12): 2243-2254. <https://doi.org/10.1111/add.15087>
12. KING C., COLLINS D., PATTEN A., NICOLAIDIS C., ENGLANDER H. (2022): Trust in Hospital Physicians among Patients with Substance Use Disorder Referred to an Addiction Consult Service: A Mixed-Methods Study. *J Addict Med.* 16(1): 41-48. <https://doi.org/10.1097/adm.0000000000000819>
13. LAMANNA F., MAREMMANI A. G. I., MAREMMANI I. (2020): Nearly Thirty Years of Experience of Real-World Long-Term Treatment with Agonist Opioids. *Heroin Addict Relat Clin Probl.* 22(1): 41-48. <https://www.heroinaddictionrelatedclinicalproblems.org/article.php?id=4316>
14. LEHMANN K., KUHN S., BASCHIROTTI C., JACOBSEN B., WALCHER S., GÖRNE H., BACKMUND M., SCHERBAUM N., REIMER J., VERTHEIN U. (2021): Substitution Treatment for Opioid Dependence with Slow-Release Oral Morphine: Retention Rate, Health Status, and Substance Use after Switching to Morphine. *J Subst Abuse Treat.* 127: 108350. <https://doi.org/10.1016/j.jsat.2021.108350>
15. LING W., NADIPELLI V. R., SOLEM C. T., RONQUEST N. A., YEH Y. C., LEARNED S. M., MEHRA V., HEIDBREDER C. (2020): Effects of Monthly Buprenorphine Extended-Release Injections on Patient-Centered Outcomes: A Long-Term Study. *J Subst Abuse Treat.* 110: 1-8. <https://doi.org/10.1016/j.jsat.2019.11.004>
16. LINTZERIS N., DUNLOP A. J., HABER P. S., LUBMAN D. I., GRAHAM R., HUTCHINSON S., ARUNOGIRI S., HAYES V., HJELMSTRÖM P., SVEDBERG A., PETERSON S., TIBERG F. (2021): Patient-Reported Outcomes of Treatment of Opioid Dependence with Weekly and Monthly Subcutaneous Depot Vs Daily Sublingual Buprenorphine: A Randomized Clinical Trial. *JAMA Netw Open.* 4(5): e219041. <https://doi.org/10.1001/jamanetworkopen.2021.9041>
17. MAREMMANI A. G. I., BACCIARDI S., MAREMMANI I., DELLA ROCCA F., LAMANNA F., SOCCI C., CERRAI E., ZALLOCCO L., CERNIGLIA L., CIMINO S., GIUSTI L., LUCACCHINI A., PROTTI M., MERCOLINI L., PERUGI G., MAZZONI M. R. (2020): Toward Patient-Tailored Therapy in Agonist Opioid Treatment: The Role of Psychopathology, Craving Behavioural Covariates, Stress Reaction and Methadone Blood Concentration. A Case Series. *Heroin Addict Relat Clin Probl.* 22(6): 57-72. <https://www.heroinaddictionrelatedclinicalproblems.org/article.php?id=4288>
18. MATTICK R. P., BREEN C., KIMBER J., DAVOLI M. (2014): Buprenorphine Maintenance Versus Placebo or Methadone Maintenance for Opioid Dependence. *Cochrane Database Syst Rev.* (2):CD002207. <https://doi.org/10.1002/14651858.CD002207.pub4>
19. MAYET S., ARSHAD S., MCCAW I., HASHMANI Z., DROZDOVA Z., GLEDHILL A., SHAHBAZ S., PHILLIPS T. (2022): Patient Satisfaction with Telemedicine in Addictions. *Heroin Addict Relat Clin Probl.* 24(2): 13-17. <https://www.heroinaddictionrelatedclinicalproblems.org/article.php?id=4219>
20. MEDVED D., CLAUSEN T., BUKTEN A., BJØRNESTAD R., MULLER A. E. (2020): Large and Non-Specific Somatic Disease Burdens among Ageing, Long-Term Opioid Maintenance Treatment Patients. *Subst Abuse: Treat Prev Policy.* 15(1): 1-9.
21. MULLER A. E., BJØRNESTAD R., CLAUSEN T. (2018): Dissatisfaction with Opioid Maintenance Treatment Partly Explains Reported Side Effects of Medications. *Drug Alcohol Depend.* 187: 22-28. <https://doi.org/10.1016/j.drugalcdep.2018.02.018>
22. NUTT R., GILCHRIST G., MARSALA-SAMBOLA F., BALDACCINO A. (2017): Staff Regard Towards Working with Patients with Co-Morbid Depression and Substance Misuse: An Exploratory Study. *Heroin Addict Relat Clin Probl.* 19(2): 5-16. <https://www.heroinaddictionrelatedclinicalproblems.org/article.php?id=4421>
23. PACINI M., MAREMMANI A. G. I., PATRICIO L., BARRA M., MAREMMANI I. (2017): Crime Issues in Substance Use Disorders: Need for a Medically-Based Algorithm. *Heroin Addict Relat Clin Probl.* 19(5): 63-72. <https://www.heroinaddictionrelatedclinicalproblems.org/article.php?id=4405>
24. PÉREZ DE LOS COBOS J., ALCARAZ S., SIÑOL N., GONZÁLEZ-SAIZ F., VERGARA-MORAGUES E., TRUJOLS J. (2020): Towards a Common Metric for Assessing Heroin-Dependent Patient Satisfaction with Medications: Testing Methadone and Buprenorphine-Naloxone. *Drug Alcohol Depend.* 212: 108010. <https://doi.org/10.1016/j.drugalcdep.2020.108010>
25. RENBARGER K. M., TRAINOR K. E., PLACE J. M., BROADSTREET A. (2022): Provider Characteristics Associated with Trust When Caring for Women Experiencing Substance Use Disorders in the Perinatal Period. *J Midwifery Womens Health.* 67(1): 75-94. <https://doi.org/10.1111/jmwh.13320>
26. ROSIC T., NAJI L., PANESAR B., CHAI D. B., SANGER N., DENNIS B. B., MARSH D. C., RIEB L., WORSTER A., THABANE L., SAMAN Z. (2021): Are Patients' Goals in Treatment Associated with Expected Treatment Outcomes? Findings from a Mixed-Methods Study on Outpatient Pharmacological Treatment for Opioid Use Disorder. *BMJ Open.* 11(1): e044017. <https://doi.org/10.1136/bmjopen-2020-044017>
27. SANGER N., PANESAR B., ROSIC T., DENNIS B., D'ELIA A., HILLMER A., CHAWAR C., NAJI L., HUDSON J., SAMAN M. C., DE SOUZA R. J., MARSH D. C., THABANE L., SAMAN Z. (2021): The Future of Precision Medicine in Opioid Use Disorder: Inclusion of Patient-Important Outcomes in Clinical Trials. *Braz J Psychiatry.* 43(2): 138-146. <https://doi.org/10.1590/1516-4446-2019-0734>
28. SIKT (2023): Norwegian Agency for Shared Services in Education and Research (Sikt). Available Online At: <https://Sikt.No/En/Home>. <https://sikt.no/en/home>
29. SILVA T. C., ANDERSSON F. B. (2021): The "Black Box" of Treatment: Patients' Perspective on What Works in Opioid Maintenance Treatment for Opioid Dependence. *Subst Abuse Treat Prev Policy.* 16(1): 41. <https://doi.org/10.1186/s13011-021-00378-7>
30. SKEIE I., BREKKE M., LINDBÆK M., WAAL H. (2008): Somatic Health among Heroin Addicts before and During Opioid Maintenance Treatment: A Retrospective Cohort Study. *BMC Public Health.* 8(1): 43.

31. SORDO L., BARRIO G., BRAVO M. J., INDAVE B. I., DEGENHARDT L., WIESSING L., FERRI M., PASTOR-BARRIUSO R. (2017): Mortality Risk During and after Opioid Substitution Treatment: Systematic Review and Meta-Analysis of Cohort Studies. *BMJ*. 357: j1550.
 32. TiL., TZEMIS D., BUXTON J. A. (2012): Engaging People Who Use Drugs in Policy and Program Development: A Review of the Literature. *Subst Abuse Treat Prev Policy*. 7: 47. <https://doi.org/10.1186/1747-597x-7-47>
 33. TIDDER J., BALDACCHINO A., TECK J. (2022): Medication-Assisted Treatment (Mat) 1: Opioid Substitution Therapy. In: Cruz S. (Ed.) *Opioids Pharmacology, Abuse, and Addiction*. Springer, Mexico.
 34. TRUJOLS J., GARIJO I., SINOL N., DEL POZO J., PORTELLA M. J., PEREZ DE LOS COBOS J. (2012): Patient Satisfaction with Methadone Maintenance Treatment: The Relevance of Participation in Treatment and Social Functioning. *Drug Alcohol Depend*. 123(1-3): 41-47. <https://doi.org/10.1016/j.drugalcdep.2011.10.014>
 35. TRUJOLS J., IRAURGI I., OVIEDO-JOEKES E., GUARDIA-OLMOS G. (2014): A Critical Analysis of User Satisfaction Surveys in Addiction Services: Opioid Maintenance Treatment as a Representative Case Study. *Patient Preference Adherence*. 8: 107-117.
 36. TRUJOLS J., IRAURGI I., SINOL N., PORTELLA M. J., PEREZ V., PEREZ DE LOS COBOS J. (2012): Satisfaction with Methadone as a Medication: Psychometric Properties of the Spanish Version of the Treatment Satisfaction Questionnaire for Medication. *J Clin Psychopharmacol*. 32(1): 69-74. <https://doi.org/10.1097/JCP.0b013e3182401e09>
 37. UiO (2023): Nettskjema, Web-Based Secure Survey Tool from University of Oslo. Available Online At: <https://Nettskjema.No/?Lang=En>. <https://nettskjema.no/?lang=en>
 38. UiO (2023): Services for Sensitive Data (Tsd), University of Oslo. Available Online At: <https://www.UiO.No/English/Services/It/Research/Sensitive-Data/>. <https://doi.org/https://www.uio.no/english/services/it/research/sensitive-data/>
 39. WELLE-STRAND G. K., BJØRNESTAD R., OLSEN I. K., PIERRON M. (2021): 861 Users – About OMT in Norway (Only Summary in English). proLAR Nett (user organization), proLAR Nett. <https://proLARnett.no/proLAR-nett-brukerundersokelse/>
 40. YARBOROUGH B. J., STUMBO S. P., MCCARTY D., MERTENS J., WEISNER C., GREEN C. A. (2016): Methadone, Buprenorphine and Preferences for Opioid Agonist Treatment: A Qualitative Analysis. *Drug Alcohol Depend*. 160: 112-118. <https://doi.org/10.1016/j.drugalcdep.2015.12.031>
- and the manuscript and Pål Henrik Lillevold, who helped us with the online survey (Nettskjema), both from the Norwegian Centre for Addiction Research.

Contributors

GKW-S: Conceptualization, Methodology, Formal analysis, Writing – original draft, Writing – reviewing & editing. **MP:** Conceptualization, Investigation, Writing – reviewing & editing. **ICO:** Conceptualization, Investigation, Writing – reviewing & editing. **RB:** Conceptualization, Investigation, Writing – reviewing & editing. **RMcd:** Conceptualization, Methodology, Writing – reviewing & editing.

Role of the funding source

This study did not receive any specific grant.

Conflict of interest

Gabrielle K. Welle-Strand served as scientific advisor for proLAR Nett on the survey and actively supported participant recruitment on Facebook. She wrote the original report from the survey in cooperation with proLAR Nett in 2021. ProLAR Nett paid GWS a fee for this work and covered GWS's expenses for attending an international conference in 2022. GWS also received a consultancy fee and travel reimbursement from Camurus in 2022. Marianne Pierron, Ida K. Olsen and Ronny Bjørnstad are employed by proLAR Nett. ProLAR Nett receives core funding from the Norwegian Directorate of Health. During the last three years proLAR Nett has also received supplemental funding/grants from Bergen municipality, Camurus pharma, DNE pharma, Indivior PLC, Oslo municipality, South-Eastern Norway Regional Health Authority, Oslo University Hospital (RusForsk), University of Oslo (Seraf) and Western Norway Regional Health Authority. Rebecca McDonald: Nothing to declare.

Ethics

Authors confirm that the submitted study was conducted according to the WMA Declaration of Helsinki – Ethical Principles for Medical Research Involving Human Subjects. This study does not require ethics committee approval.

Acknowledgements

We want to thank all the participants who took part in the survey and all the people who helped us recruit participants by encouraging patients in OMT to participate. We also thank Anne Bukten for assisting us with data analysis

Received February 21, 2024 – Published March 30, 2024

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