

PATIENTS' PERCEPTION AND USE OF MEDICAL MARIJUANA

Kelly Gavigan¹, Shilpa Venkatachalam¹, Jeffrey Curtis², Seth Ginsberg¹, W. Benjamin Nowell*¹

¹Global Healthy Living Foundation, Upper Nyack, United States of America, ²University of Alabama at Birmingham, Birmingham, United States of America

Background:

Though the introduction of biologics has resulted in significant improvements in their quality of life, people living with rheumatic and musculoskeletal disease (RMD) often seek alternative treatments, such as marijuana (THC) and cannabidiol (CBD). As these substances become more widely available, and legal in some jurisdictions, health care providers (HCP) need to understand patients' THC/CBD perceptions, use and information needs.

Objectives:

To examine patient behavior and information needs regarding THC/CBD medical use.

Methods:

A 77-item survey was developed in partnership with RMD patient partners and administered online via CreakyJoints and the ArthritisPower research registry. Participants (pts) were eligible if they were ≥19 years of age, resided in the US and reported physician-diagnosed RMD. Pts reported current health status (NIH PROMIS Global Health), use and perceptions of THC/CBD, and related information needs.

Results:

To date, 189 pts completed the survey. A majority of pts were female (87%) and white (93%), with mean age of 55(11). More than half of all pts (62%) reported a diagnosis of rheumatoid arthritis. Most pts (78%) reported fair/poor health (PROMIS Global Physical Health <43). Only 30% of all pts were satisfied with their current treatment, and more than half (63%) had been on their current treatment for >1 year. Of those surveyed, a majority of pts (n=168, 89%) reported trying THC and/or CBD for a purpose they perceived as medical and offered various reasons for initiating its use (Table). Half of all pts (n=98, 52%) reported ever using CBD and a third (n=70, 37%) ever using THC "for medical reasons," fifty-one (73%) of whom currently use THC. More than half (53%) of those currently using THC reported using it at least once daily. Top reasons for stopping among the 19 who previously used THC were cost (26%) and illegality (26%). Most pts who had ever used THC reported that THC improved their symptoms (83%) and/or their condition (71%). Pain (100%) and sleep disturbance (73%) were the main symptoms pts sought to relieve with THC. Many pts had used THC in lieu of prescribed (56%) or OTC (73%) medications. Two thirds (67%) reported telling their HCP about their THC use, most of whom (64%) reported that their HCP did not consider it when making treatment changes nor offer advice about mode of administration or dosage. When acquiring THC, 39% of pts used a medical marijuana card issued by the state; the main reason given for not using a card was that THC was not legal for medical use where the pt lived (44%). Whether they had used THC for medical reasons or not, nearly all pts wanted information about THC, including its effectiveness (37%) and its interaction with other medications (34%); a majority preferred to receive information from HCPs (55%) or online educational resources (34%). Two thirds (60%) of all pts expressed interest in THC/CBD trial participation.

Table: Participants' Reasons for Initiating THC/CBD Use (N=168)

Reasons (not mutually exclusive)	n (%)
To address symptoms (e.g. pain)	74 (44)

experienced despite taking medication	
To address symptoms with less or no medication	50 (30)
Nothing else worked to treat condition or symptoms	33 (20)
Friend suggested it	30 (18)
Saw information online	28 (17)
Had used marijuana recreationally and wanted to try it for medical reasons	25 (15)
Medical marijuana became legal in state	24 (14)
To address side effect(s) from medication	19 (11)
Physician suggested it	17 (10)
Relative suggested it	17 (10)

Conclusion:

Though many pts have used or currently use THC/CBD to substitute for or augment their prescribed treatment, pts lack adequate information to guide its use for medical reasons.

PATIENT PREFERENCES FOR THE USE OF DIGITAL TOOLS AND SOCIAL MEDIA IN DIET AND EXERCISE INTERVENTIONS

W. Benjamin Nowell*¹, Kelly Gavigan¹, Jeffrey Curtis², Shilpa Venkatachalam¹, Francois Ban¹, Amin Yakubu¹, Alixis Ogdie³

¹Global Healthy Living Foundation, Upper Nyack, United States of America, ²University of Alabama at Birmingham, Birmingham, United States of America, ³Perelman School of Medicine, University of Pennsylvania, Philadelphia, United States of America

Background:

Healthy behavior changes such as improving diet/exercise are important to improve outcomes in rheumatic and musculoskeletal disease (RMD) patients. These changes require incentives, whether internal or external motivation or social support.

Objectives:

To assess feasibility of using digital symptom tracking and social media peer support to conduct diet/exercise health behavior change interventions among adults with inflammatory arthritis (IA) and osteoarthritis (OA).

Methods:

A 37-item cross-sectional survey was developed and administered online and via mobile app in the ArthritisPower research registry. Participants (pts) were eligible if they were ≥ 19 years of age, resided in the US, and reported physician diagnosis of IA or OA. Pts reported on use of technology and social media, experience with exercise and weight loss programs, and interest in various program features. We descriptively reported differences between respondents with IA (RA, PsA, AS) and OA.

Results:

418 pts completed the survey. A majority were female (89.5%) and white (89.5%); mean age was 56 (10.5). The proportion of pts who were obese (BMI >30) was higher among OA than IA pts (67.7% and 50.0%, respectively; $p < 0.001$). Most pts were willing to provide blood samples remotely and use WiFi-enabled digital scale and blood pressure monitor for a trial (Table). Interest in social media for peer support and apps differed between IA vs. OA pts: more IA pts used an app to help them exercise (35.1% vs. 19.2% of OA pts, $p = 0.001$) and were interested in using an app to track diet and exercise in the context of peer support on Facebook (72.2% vs. 62.3% of OA pts, $p = 0.04$). The most commonly used social media platform overall was Facebook (93.3% of pts) followed by Twitter (51.9%) and Instagram (41.9%). Pts cited pain/difficulty moving (57.4%) and sedentary behavior, such as watching TV, (47.6%), as their biggest weight loss challenges. OA pts reported depression (46.9%, $p = 0.01$) and disliking exercise (34.6%, $p = 0.003$) as bigger challenges to weight loss than did pts with IA (34.0% and 20.8% respectively). Motivations to exercise also differed between groups: more IA than OA pts said building muscle was a top motivation (54.5% and 43.1%, respectively; $p = 0.03$).

Table: Interest in program features by arthritis type

	n (%)	Inflammatory Arthritis (n=288)	Osteoarthritis (n=130)	p-value

Regularly using WiFi-enabled digital scale to measure weight and blood pressure monitor automatically linked to study	332 (79.4)	236 (81.9)	96 (73.9)	0.12
Providing blood samples for study by going to nearby Quest or other lab	320 (76.6)	222 (77.1)	98 (75.4)	0.88

Participating in study that would provide an activity tracker (e.g. Fitbit) and resources to increase daily steps	313 (74.9)	224 (77.8)	89 (68.5)	0.03*
Participating in peer support (via Facebook private group), with other arthritis patients	299 (71.5)	207 (71.9)	92 (70.8)	0.82
Participating in peer support (via Facebook private group), that includes patients without arthritis	40 (9.6)	27 (9.4)	13 (10.0)	0.84
Using a mobile app to track my diet and exercise	289 (69.1)	208 (72.2)	81 (62.3)	0.04*
Participating in group facilitated by professional weight loss counselor	274 (65.6)	189 (65.6)	85 (65.4)	0.96
Using wireless scale that automatically sends my weight to the counselor	270 (64.6)	187 (64.9)	83 (63.9)	0.83
Sharing my banking information so study could provide compensation	222 (53.1)	161 (55.9)	61 (46.9)	0.23

*Statistically significant at alpha=0.05

Conclusion:

Program focus and format may need to be tailored depending on arthritis type, but pts with both IA and OA are interested in social media peer support and digital symptom tracking to motivate achievement of health behavior change goals.

THE PATIENT EXPERIENCE: A PROCESS EVALUATION OF A PILOT PRAGMATIC USING REMOTE MONITORING OF SYMPTOMS

Alexis Ogdie¹, Michael George¹, Kathleen Bush¹, Mitesh Patel¹, W. Benjamin Nowell², Joshua Baker¹

¹Perelman School of Medicine, University of Pennsylvania, Philadelphia, United States of America,

²Global Healthy Living Foundation, Upper Nyack, United States of America

Background:

Traditional randomized controlled trials (RCTs) are important for testing drug efficacy but this study design is burdensome for patients (pts) and clinicians. Pragmatic trials addressing real world comparative effectiveness are equally important but challenging to conduct. We piloted a trial platform aspiring to optimize the patient experience and minimize patient and physician burden. The trial (NCT02912221) tests an incentive strategy informed by behavioral economics to increase physical activity in pts with rheumatoid arthritis (RA) and psoriatic arthritis (PsA).

Objectives:

To understand patient experiences using mobile applications (apps) and wearable activity devices (WAD) in a pilot pragmatic trial

Methods:

Pts had RA or PsA with active disease defined by a Routine Assessment of Patient Index Data (RAPID3) score >3 (range 0-30). After screening and informed consent, pts received a WAD (FitBit™) and were assisted in setting up the device and an ArthritisPower account, a research registry where pts track patient-reported outcomes (PRO). A web-based platform, WayToHealth, was used to collect WAD data and deliver incentives. After a two-week baseline period, pts selected a daily step goal and were randomized to a financial loss-aversion incentive arm or control. Pts in both arms received weekly text messages reporting the number of days the step goal was met. In-person assessments were conducted at baseline and 14 weeks; pts completed weekly PROs (RAPID3, PROMIS Fatigue, PROMIS Sleep Disturbance and adverse event assessment) via mobile app or a web link. At 14 weeks, pts underwent a semi-structured interview to assess the patient experience in the trial. Content analysis was used to evaluate the responses

Results:

To date, 27 pts completed the 14-week follow-up interview. Mean age was 48 (SD 14), 85% were women, 17 (63%) had PsA and 10 (37%) had RA. Mean disease duration was 9 years, mean swollen joint count (0-66) was 6.2 (SD 5.6) and tender joint count (0-68) was 8.1 (SD 9.1). The mean RAPID3 was 10.3 (SD 4.6). Overall pts enjoyed participation in the study and provided useful feedback for improvement (Table). Weekly PRO capture was acceptable to most but PROs need to be streamlined to remove repetitive questions. Pts frequently set goals they were not able to achieve and suggested the ability to change their goal in future studies

Conclusion:

In this pilot pragmatic trial, only two in-office visits were conducted and all other data captured remotely. Pts enjoyed the experience and found the digital platform easy to use. Such trial designs will become increasingly important in conducting real-world comparative effectiveness and adjunct therapy trials

References:

Table: Lessons learned from patient perspective in pragmatic trial
<p>Trial Format Pt enjoyed tracking progress Weekly surveys were ok; 2 pts recommended EOW; Weekly check ins kept pts accountable Most pts completed surveys via a text link (over App or web portal) Time to complete surveys was 5 min Pt requested a text box to record reasons for not feeling well (e.g., injury, illness)</p>
<p>PROs Repetitive questions in the PROMIS measures annoyed pts MDHAQ questions were not always relevant Tracking sleep helped understand level of fatigue Emotional wellbeing questions were appreciated Desire to track individual PRO goals</p>
<p>Wearable Activity Device Served as a reminder to move Annoyed by need to charge Creating teams and self-competition was motivating and fun Finger arthritis directed type of bracelet Some exercise not captured (e.g., swimming, biking)</p>
<p>Physical activity Goals frequently set too high; allow for a goal change Weekly goals may be better than daily goals Weather influenced physical activity; being accountable encouraged exercise indoors Overexertion sometimes lead to pain and stiffness Some reported knee/foot pain with increasing steps</p>