

**The Faculty of Medicine of Harvard University
Curriculum Vitae**

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Place of Birth: Alexandria, Egypt

Education:

9/1997 – 9/2003	MD	Medicine	University of Alexandria, Egypt
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Postdoctoral Training:

3/2004 - 2/2005	Transitional Internship	Medicine	University of Alexandria
3/2005 - 6/2006	Clinical Externship	Internal Medicine	Hassab Medical Center Alexandria, Egypt
9/2006 - 3/2007	Research Assistant	Molecular Biology & Genetics	Mount Sinai School of Medicine, NY
7/2007 - 6/2010	Internship and Residency in Psychiatry	Behavioral Medicine and Psychiatry	West Virginia University (WVU) School of Medicine
7/2010 - 6/2011	Chief Residency	Psychiatry	WVU School of Medicine
7/2011 - 6/2012	Addiction Psychiatry Fellowship	Psychiatry	Yale University School of Medicine

7/2012 - 6/2013	Pain Fellowship	Anesthesiology, Perioperative and Pain Medicine	Brigham and Women's Hospital (BWH)/ Harvard Medical School (HMS)
7/2013 – 3/2014	Forensic Psychiatry Fellowship	Behavioral Medicine and Psychiatry	WVU School of Medicine

Faculty Academic Appointments:

4/2014-	Instructor	Anesthesiology	HMS
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Appointments at Hospitals/Affiliated Institutions:

4/2014-	Attending Physician	Anesthesiology	BWH/Brigham and Women's Faulkner Hospital (BW/FH)
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Major Administrative Leadership Positions:

Local

5/2017-	Medical Director	Pain Management Clinic, BW/FH
2/2018	Pain Medicine Fellowship Director	Dept. of Anesthesiology, BWH

Committee Service:

Local

2010-2011		WVU School of Medicine
	Residency Recruitment Committee 2010-2011	Member
	Residency Training and Education Committee (RTEC) 2010-2011	Member
	Chief Residency Committee 2010-2011	Member

Regional

2017-		Massachusetts Society of Anesthesiologists
	Publications Committee 2017-	Member

National

2013-		American Academy of Pain Medicine
	Scientific Abstract Review Committee	Member
2017-	2017-	North American Neuromodulation Society
	Scientific Abstract Review Committee	Member
2020-	2017-	American Society of Regional Anesthesia and Pain Medicine
	Scientific Abstract Review Committee	Member
2020-	2020-	American Board of Anesthesiology (ABA)
	Pain Medicine Exam Committee	Member and Question Author
	2020-	

Professional Societies:

2007-	American Psychiatric Association	Member
2008-	American Society of Addiction Medicine	Member
2011-	American Academy of Pain Medicine	Member
2011-	American Society of Interventional Pain Physicians	Member
2014-	Massachusetts Society of Anesthesiologists Publications Committee	Member
	2017-	Member
2014-	American Society of Regional Anesthesia and Pain Medicine	Member
	Scientific Abstract Review Committee	Member
	2020-	
2017-	North American Neuromodulation Society	Member
	Scientific Abstract Review Committee	Member
	2017-	

Editorial Activities:

- **Ad hoc Reviewer**

Anesthesia & Critical Care Medicine Journal (ACCMJ)
 Journal of Clinical Imaging Science
 Journal of Medical Case Reports
 Journal of Pain Research
 Pain Medicine Journal
 The Clinical Journal of Pain

- **Other Editorial Roles**

08/2017	Reviewer, Football Players Health Study at Harvard University’s Innovation Challenge	Innovative Research Questions about Treating Chronic Pain in Football Players
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Honors and Prizes:

2011	Resident Recruitment Award	WVU School of Medicine	Commitment to resident recruitment
2011	Resident Recognition Award	WVU School of Medicine	Commitment to resident education
2011	Research Award	WVU School of Medicine, Dept. of Behavioral Medicine & Psychiatry	Outstanding research and medical investigation
2011	First Prize, Clinical Venue Category – GME Week	WVU School of Medicine, Resident Contest	Spinal Cord Stimulation for the Treatment of Chronic Renal Pain Secondary to UPJO: Case Report
2013	Pain Medicine Fellowship Excellence Award	American Academy of Pain Medicine (AAPM)	Fellow representative of BWH fellowship program, AAPM annual meeting
2021	Excellence in Anesthesia Award	Department of Anesthesiology, Perioperative and Pain Medicine - BWH	Nominated for commitment to collegiality, clinical excellence, service to the department, professionalism and inclusivity, education and commitment to junior colleagues and trainees, departmental ambassador locally, regionally and nationally, and in community relations and volunteerism

Report of Funded and Unfunded Projects

Past

- 2012-2017 Clinical and Genetic Characteristics of Opioid Addiction in Chronic Pain
NIH/NIDA R01 #5R01DA032776-04
Principal Investigator at BWH (Global PI-Martin Cheatle, MD)
This study aims to perform genome-wide analysis in approximately 2000 patients with chronic non cancer pain having been treated for opioid addiction and a control group of 2000 pain patients maintained on chronic opioid therapy not displaying signs of addiction. This data will form the basis of subsequent studies in developing behavioral and genetic risk profiling for prospective testing in patients with chronic pain initiating opioid therapy.
- 2018-2020 A Prospective, Multicenter, Randomized, Double-Blinded, Sham-Controlled Study to Evaluate the Efficacy and Safety of Clonidine Micropellets for the Treatment of Pain Associated with Lumbosacral Radiculopathy in Adults
Funding: Sollis Therapeutics
Co-Investigator (PI – Jason R. Yong, MD, MBA)
The objective of the study is to develop clonidine micropellets for epidural administration for the treatment of pain associated with lumbosacral radiculopathy which has been present for between 8 weeks and 9 months. This phase 3 study is designed to demonstrate statistically significant superiority of clonidine micropellet administration compared to a sham control procedure for the treatment of pain associated with lumbosacral radiculopathy. It is hypothesized that usage of clonidine micropellets for treatment of pain associated with lumbosacral radiculopathy is effective compared to sham control procedure. About 200 subjects will take part in this research study.

Current

- 2020- Dorsal Spinal Cord Stimulation versus Medical Management for the Treatment of Low Back Pain (DISTINCT study)
Abbott Laboratories Fund #124274
Co-Investigator (PI: Christopher Gilligan, MD)
The DISTINCT study is designed to understand how BurstDR stimulation can relieve pain and improve physical function in people with chronic low back pain who have not had back surgery and in people who are not good candidates for surgery.
- 2021 Study to Treat Negative Affect in Chronic Low Back Pain
National Institute of Arthritis and Musculoskeletal and Skin Diseases
Grant # UG3AR076568
Co-Investigator (PI: Ajay Wasan, MD at University of Pittsburgh)
This randomized trial study will include the prevalent subgroup of patients with CLBP who have high NA and may or may not be taking opioids prescribed for pain. We will determine if antidepressants (AD), fear avoidance rehabilitation (EFAR), or the combination of the two is the better treatment for CLBP patients with high NA. Primary objective of the study is to compare the effectiveness of combination therapy with AD+EFAR vs. each treatment alone to improve pain, self-reported function, depression, and anxiety in patients with chronic low back pain and high negative affect

Projects Submitted for Funding

2020- Comparing Mindfulness Oriented Recovery Enhancement (MORE) to a control intervention (Psychoeducation) in Chronic Low Back Patients (CLBP) prescribed buprenorphine-naloxone for Opioid Use Disorder
Funding: National Institute on Drug Abuse (NIDA)
Co-Investigator (PI: Robert Edwards/Mentored Trainee: Asimina Lazaridou)
The objective of the study is to compare Mindfulness Oriented Recovery Enhancement (MORE) therapy to a control intervention (Psychoeducation) in CLBP patients prescribed buprenorphine-naloxone for opioid use disorder. In this randomized, controlled trial, 85 opioid-dependent outpatients (78 completers) that have started buprenorphine-naloxone treatment will be randomized to either MORE or Psychoeducation for an 8-week treatment period, with assessment continuing for 6 months post-treatment. Opioid and substance reductions will be evaluated in both groups along with measures of pain, physical function, reward responsiveness, pain interference, pain acceptance, mindfulness, catastrophizing and substance craving.

Unfunded Current Projects

2021- Botulinum A Toxin Injection for chronic daily headaches – comparison of needle gauges
Unfunded
Principle Investigator
The aim of this study is to compare pain level scores and patient satisfaction when using 27-gauge versus 30-gauge needles for botulinum A toxin injections for chronic daily migraine headaches. Secondary outcomes include objective findings including blood pressure and vital sign changes. Literature has shown mixed results. Accordingly, this study will help clarify these results and set standard of care regarding choice of needle gauge for these injections.

Report of Local Teaching and Training

Teaching of Students in Courses:

2014-2018 The Difficult Patient: Identification and Categorization Tufts PREP 235 Course

Formal Teaching of Residents, Clinical Fellows and Research Fellows (post-docs):

2014 Psychiatric Co-morbidities and Pain Fellow Lecture
Department of Anesthesiology,
Perioperative and Pain Medicine

2014	Personality Disorders and Chronic Pain	Fellow lecture Department of Anesthesiology, Perioperative and Pain Medicine, BWH
2015	Treatment of pain in the addicted patient	Fellow lecture Department of Anesthesiology, Perioperative and Pain Medicine, BWH
2016	Pain Medicine for the Psychiatrist	Psychiatry Resident lecture Department of Behavioral Medicine and Psychiatry, BWH
2016	Overview of Analgesic Psychopharmacology and Pain Medicine	Psychiatry Resident lecture Department of Behavioral Medicine and Psychiatry, BWH
2016	Massachusetts Opioid Policy	Fellow lecture Department of Anesthesiology, Perioperative and Pain Medicine, BWH
2017	Pain Management in the Opioid Dependent Patient	Fellow lecture Department of Anesthesiology, Perioperative and Pain Medicine, BWH
2017	Psychiatry for the Pain Doctor	Fellow lecture Department of Anesthesiology, Perioperative and Pain Medicine, BWH
2018	Chronic Pain and Addiction	Fellow lecture Department of Anesthesiology, Perioperative and Pain Medicine, BWH Psychopharmacology and Pain Medicine
2019	Treating Pain with Co-morbid Addiction	Fellow lecture Department of Anesthesiology, Perioperative and Pain Medicine, BWH
2020	Psychopharmacology and Analgesia	Multi-institutional fellow lecture Department of Anesthesiology, Perioperative and Pain Medicine, BWH
2021	Buprenorphine	Fellow lecture Department of Anesthesiology, Perioperative and Pain Medicine, BWH

2022	Managing Pain Patients with Opioid Use Disorder	Pain Didactic Lecture Department of Anesthesiology and Pain Medicine, John Hopkins University School of Medicine
2022	Analgesic Properties of Buprenorphine	Fellow lecture Department of Anesthesiology, Perioperative and Pain Medicine, BWH

Clinical Supervisory and Training Responsibilities:

2014-2017	Ambulatory Outpatient Addiction Psychiatry Clinic Preceptor and Supervisor Pain Fellows and Psychiatry Residents	One day per week (8 hours/week)
2014-	Ambulatory Pain Clinic Preceptor and Supervisor at BWH Pain Fellows	One day per week (8 hours/week)
2014-	Ambulatory Pain Clinic Preceptor and Supervisor at BW/FH Pain Fellows	Three days per week (24 hours/week)

Formal Teaching of Peers (e.g., CME and other continuing education courses):

No presentations below were sponsored by 3rd parties/outside entities

2015	Overview of Opioid Dependence. Clinical Update in Medicine: A Multi-Disciplinary Approach	Brigham and Women's Faulkner Hospital CME Course
2015	Psychopharmacology and Analgesia.	Comprehensive Review of Pain Medicine CME Course by Oakstone Publishing/CMEinfo (offering category 1 CME credits)
2015	Psychiatry for the Pain Doctor	Comprehensive Review of Pain Medicine CME Course by Oakstone Publishing/CMEinfo (offering category 1 CME credits)
2018	Treating Pain in the Addict	Comprehensive Review of Pain Medicine CME Course by

		Oakstone Publishing/CMEinfo (offering category 1 CME credits)
2018	Pain and Dementia	Comprehensive Review of Pain Medicine CME Course by Oakstone Publishing/CMEinfo (offering category 1 CME credits)
2018	Opioids, Toxicology and Use Patterns.	Comprehensive Review of Pain Medicine CME Course by Oakstone Publishing/CMEinfo (offering category 1 CME credits)
2019	The Interventionist's Perspective on Psychology and Outcomes	Evaluating and Treating Pain / Harvard Medical School CME Course
2020	Managing Pain Patients with Opioid Use Disorder	Comprehensive Review of Pain Medicine CME Course by Oakstone Publishing/CMEinfo (offering category 1 CME credits)

Local Invited Presentations:

No presentations below were sponsored by 3rd parties/outside entities

2007	Grave's Disease: Clinical Case / Case presentation Department of Medicine, West Virginia University (WVU)
2008	Obsessive Compulsive Disorder: Pharmacotherapy vs. CBT / Oral presentation Department of Psychiatry, WVU
2008	Wernicke's encephalopathy: Diagnosis & Management / Oral presentation Addiction Conference. Department of Psychiatry, WVU
2009	Acute Pain Management in Patients on Opioid Agonist Therapy / Oral presentation Addiction Conference. Department of Psychiatry, WVU
2009	Proper Pain Management in the Addicted Patient / Grand Rounds Department of Psychiatry, WVU

- 2010 Guides for People to Work With Mental Health Staff and Health Care Students on Specific Issues of Well-Being / Oral presentation
Department of Behavioral Medicine & Psychiatry, WVU School of Medicine
- 2011 Buprenorphine: Considerations in Pain Management / Grand Rounds
Department of Psychiatry, WVU
- 2011 Neurologic Aspects of Chronic Pain / Oral presentation
Neuropsychiatry Conference. Department of Psychiatry, WVU
- 2011 Spinal Cord Stimulation for the treatment of Chronic Renal Pain Secondary to Uretero-Pelvic Junction Obstruction: Case Report / Podium oral presentation
Graduate Medical Education week competition 2011, WVU School of Medicine
- 2012 Overview of Prescription Drug Monitoring Programs / Oral presentation
Substance Abuse Firm Meeting, Department of Psychiatry, VA Connecticut Healthcare system
- 2012 Anatomy and Physiology of Pain / Oral presentation
Department of Anesthesiology, Perioperative and Pain Medicine, BWH
- 2012 Migraine Headaches / Oral presentation
Department of Anesthesiology, Perioperative and Pain Medicine, BWH
- 2012 Addiction in the Context of Chronic Pain / Oral presentation
Department of Anesthesiology, Perioperative and Pain Medicine, BWH
- 2012 Evaluation of Low Back Pain / Oral presentation
Department of Anesthesiology, Perioperative and Pain Medicine, BWH
- 2012 Irritable Bowel Syndrome and Crohn's Colitis / Oral presentation
Department of Anesthesiology, Perioperative and Pain Medicine, BWH
- 2012 Gender, Sex and Pain Response / Oral presentation
Department of Anesthesiology, Perioperative and Pain Medicine, BWH
- 2013 Patient with Visceral Hypersensitivity Syndrome / Case presentation
Department of Anesthesiology, Perioperative and Pain Medicine, BWH
- 2013 Evaluation of the Chronic Pain Patient / Oral presentation
Department of Anesthesiology, Perioperative and Pain Medicine, BWH
- 2013 Pain Management in Elderly Patients / Oral presentation
Department of Anesthesiology, Perioperative and Pain Medicine, BWH
- 2014 Pain Medicine and the Law / Grand Rounds
Department of Psychiatry, WVU
- 2016 Opioids and Safe/Effective Pain Management / Grand Rounds
Department of Anesthesiology, Perioperative and Pain Medicine, BWH

- 2016 Interface between Chronic Pain and Addiction in Pregnancy / Grand rounds
Department of Obstetrics and Gynecology, BWH
- 2017 Pain and Addiction / Nurse Practitioner Grand rounds
Brigham and Women's Faulkner Hospital
- 2019 Chronic Pain and Addiction / Grand Rounds
Spaulding Rehabilitation Hospital, Cape Cod, MA
- 2019 Buprenorphine: Analgesic Properties / Grand rounds
Department of Anesthesiology, Perioperative and Pain Medicine, BWH
- 2019 Buprenorphine and its Peri-operative Management / Nursing CNE program
BW/FH

Report of Regional, National and International Invited Teaching and Presentations

No presentations below were sponsored by 3rd parties/outside entities

Regional

- 2013 The Use of Gasserian Ganglion Block in Neoplastic Trigeminal Neuralgia – A Case Series / Oral presentation
Regional Anesthesiology and Acute Pain Medicine 38th Annual Meeting
Boston, MA
- 2018 Chronic Opioid Therapy and Medicinal Marijuana / Grand rounds
Northwestern Medical Center, VT
- 2018 Difficult Patient: Identification and Categorization / Oral Presentation
Tufts PREP 235 Course

National

- 2012 Patient Satisfaction with Residents Vs. Attending Following Fluoroscopy-Guided Pain Injections / Oral presentation
American Academy of Pain Medicine (AAPM) 28th Annual Meeting, Palm Springs, CA
- 2012 Use of Observational Mechanical Gateway Connector in Spinal Cord Stimulation Trials / Oral presentation
AAPM 28th Annual Meeting, Palm Springs, CA
- 2013 Patient Preference of Manufacturer Features for Spinal Cord Stimulation / Oral presentation
AAPM 30th Annual Meeting, Phoenix, AZ
- 2017 Tonic, Burst, DRG and High Frequency: Which One to Choose? / Oral presentation

Musculoskeletal Education and Research Center (MERC) Annual Symposium,
Philadelphia, PA

- 2018 Interface between Addiction and Chronic Pain / Oral presentation
North American Neuromodulation Society Annual Meeting, Las Vegas, NV
- 2020 Challenges in Caring for Patients with Chronic Pain: Expression, Impression and
Compassion. Building the Patient Trust Relationship: Differences in Compassionate
Care / Oral presentation
American Society of Regional Anesthesia and Pain Medicine 19th Annual Pain
Medicine Meeting, Virtual Meeting
- 2020 In Each Other's Shoes: A Multidisciplinary Perspective on a Common Pain Topic:
Major Joint Pain/Major Joint Chronic Pain: Talk about It, Analyze It, and Cope with It
/ Oral presentation
American Society of Regional Anesthesia and Pain Medicine 19th Annual Pain
Medicine Meeting, Virtual Meeting
- 2020 Detectives in Pain Medicine: Causes, Treatments, and Prognosis of Chronic Pain
Syndromes/Challenges in Pain Medicine Diagnosis: Social and Psychological
Interactions / Oral presentation
American Society of Regional Anesthesia and Pain Medicine 19th Annual Pain
Medicine Meeting, Virtual Meeting
- 2020 When the Nerves Suffer: Central Neuropathic Pain Syndromes/Living with Pain:
Psychological Tools in Central Neuropathic Pain Syndromes / Oral presentation
American Society of Regional Anesthesia and Pain Medicine 19th Annual Pain
Medicine Meeting, Virtual Meeting
- 2020 Should Addiction Psychiatrists Recommend Sublingual Buprenorphine to Chronic
Pain Patients on High-Dose, Long-Term Opioid Therapy? / Workshop
American Academy of Addiction Psychiatry 31st Annual Meeting and Scientific
Symposium, Virtual Meeting
- 2021 Managing Pain Patients with Opioid Use Disorder / Grand Rounds
West Virginia University School of Medicine, WV

International

- 2020 Major Joint Chronic Pain / Oral Presentation
European Society of Regional Anesthesia (ESRA) and American Society of Regional
Anesthesia (ASRA) International eCongress

Report of Clinical Activities and Innovations

Current Licensure and Certification:

- 2007 Educational Commission for Foreign Medical Graduates (ECFMG) Certification

2009	Electroconvulsive Therapy (ECT) Certification
2011	Board Certified in Psychiatry, American Board of Psychiatry and Neurology
2011	SAMHSA Buprenorphine Certification
2011	Acupuncture Certification
2012	Commonwealth of Massachusetts Medical License
2012	Board Certified in Addiction Psychiatry, American Board of Psychiatry and Neurology
2013	Board Certified in Pain Medicine, American Board of Psychiatry and Neurology
2016	Probuphine Prescriber and Implanter Certification

Practice Activities:

2014-2017	Ambulatory Care	Outpatient Addiction Psychiatry Clinic, BW/FH	One day per week (8 hours/week)
2014-	Ambulatory Care	Pain Clinic, BWH	One day per week (8 hours/week)
2014-	Ambulatory Care	Pain Clinic, BW/FH	Three days per week (24 hours/week)

Report of Teaching and Education Innovations

Development of multi-institutional didactic schedule for fellows in BWH Pain Medicine (2020-present)

Opportunities for collaboration and learning not previously available arose with the arrival of COVID19 in the United States. Online learning/meeting platforms became the norm, removing a barrier that has prevented academic medicine from group collaboration that corporate America has long since overcome. That, along with general unease and panic, allowed for a melting of the barriers that separate academic institutions due to tradition, competition, and physical distance. However, in the modern era collaboration and diversity have been proven to be advantageous for many in terms of innovation and scientific advancement. Education is no exception. With this in mind, the pain fellowship at Brigham and Women’s Hospital, in collaboration with the University of Washington, reached out to similar pain fellowships nationwide to establish a learning platform to mitigate the reduced hands-on learning opportunities, to offer networking opportunities for both fellows and faculty, and to share ideas and practice styles. Though it was impossible to replace the hands-on experience of engaging with patients

and performing interventional pain procedures in clinic, this program proved to be very effective and well received in other areas vital to the development of future leaders in the field. It provided an educational depth that was not previously available. The educational advantage of this didactic became a valuable addition to the participating fellowships and, with some modifications to the schedule, continues on despite resumption of clinical duties.

Report of Education of Patients and Service to the Community

No presentations below were sponsored by 3rd parties/outside entities

Activities

- 2015 New England Cable News (NECN) morning news / Guest Speakaer
Topic featuring Spice and Drug Overdoses
- 2017 Neal Howard on Health Professional Radio (HPR) / Guest Speaker
Topic on Abuse Deterrent Opioids

Recognition:

- 2015-2021 Top Doctor (Psychiatry and Pain Boston Magazine / Castle Connolly
Medicine) 
- 2015-2022 Best Doctors (Pain Medicine)  Best Doctors Award

Report of Scholarship

Peer-Reviewed Scholarship in print or other media:

Research Investigations

1. Kim CH, Issa M, Vaglianti R. Flushing following interlaminar lumbar epidural steroid injection with dexamethasone. Pain Physician 2010 Sep-Oct;13(5):481-4. PMID: 20859317.
2. Kim CH, Issa M, Vaglianti R. Use of observational mechanical gateway connector in spinal cord stimulation trials. Pain Physician 2011 Nov-Dec;14(6):525-530. PMID: 22086093
3. Issa M, Kim CH. Patient satisfaction with residents versus attending following fluoroscopy-guided pain injections. Pain Med. 2012 Feb;13(2):185–9. doi: 10.1111/j.1526-4637.2011.01303.x. PMID: 22221331
4. Kim CH, Green AW, Rodgers DE, Issa M, Ata MA. Importance of axial migration of spinal

cord stimulation trial leads with position. *Pain Physician* 2013;16(6):E763-8. PMID: 24284857

5. Iheanacho T, **Issa M**, Marienfeld C, Rosenheck R. Use of naltrexone for alcohol use disorders in the Veterans' Health Administration: a national study. *Drug Alcohol Depend.* 2013 Sep 1;132(1-2):122-6. doi: 10.1016/j.drugalcdep.2013.01.016. PMID: 23434041
6. Marienfeld C, Iheanacho T, **Issa M**, Rosenheck RA. Long-acting injectable depot naltrexone use in the Veterans' Health Administration: a national study. *Addict Behav.* 2014 Feb;39(2):434-8. doi: 10.1016/j.addbeh.2013.05.006. PMID: 23790742
7. **Issa M**, Narang S, Jamison RN, Michna E, Edwards RR, Penetar DM, Wasan AD. The subjective psychoactive effects of oral dronabinol studied in a randomized, controlled crossover clinical trial for pain. *Clin J Pain* 2014 Jun;30(6):472-8. doi: 10.1097/AJP.000000000000022. PMID: 24281276
8. Suzuki J, Zinser J, Klaiber B, Hannon M, Grassi H, Spinoso M, Ramirez A, **Issa M**, Chin Feman SP. Feasibility of implementing shared medical appointments (SMAs) for office-based opioid treatment with buprenorphine: a pilot study. *Subst Abus.* 2015;36(2):166-9. doi: 10.1080/08897077.2014.998400. PMID: 25738320.
9. Martel M, Finan P, McHugh R. K, **Issa M**, Edwards R, Jamison R, Wasan A. Day-to-day pain symptoms are only weakly associated with opioid craving among patients with chronic pain prescribed opioid therapy. *Drug Alcohol Depend.* 2016 May 1; 162:130-6. doi: 10.1016/j.drugalcdep.2016.02.047. PMID: 27021805.
10. Suzuki J, Zinser J, **Issa M**, Rodriguez C. Quantitative testing of buprenorphine and norbuprenorphine to identify urine sample spiking during office-based opioid treatment. *Subst Abus.* 2017 Oct-Dec;38(4):504-507. doi: 10.1080/08897077.2017.1356796. PMID:28723256.
11. **Issa M**, Gilligan CJ. Tonic, burst, dorsal root ganglion, and high frequency: which one to choose? *Spine (Phila Pa 1976).* 2018 Apr 01;43(7S Suppl 1):S17-S18. PMID: 29538068.
12. Orhurhu V, Urits I, Olusunmade M, Owais K, Jones M, Galasso A, Salisu Orhurhu M, **Issa M**. Trends of co-morbid depression in hospitalized patients with failed back surgery syndrome: an analysis of the nationwide inpatient sample. *Pain Ther.* 2018 Dec;7(2):217-226. doi: 10.1007/s40122-018-0104-y. PMID: 30218424
13. McPoland P, **Issa M**, Fields K, Vijjeswarapu MA, Chai NC, Maida E, Adekoya P, Dale R. Inter-Institutional pain learning exchange (PLEX): Virtual opportunities for learning and collaboration in chronic pain fellowships during the COVID-19 pandemic and beyond. *Pain Med.* 2021 Apr 30. Epub ahead of print. PMID: 33930172

Other peer-reviewed scholarship

1. Kim CH, Issa M. Spinal cord stimulation for the treatment of chronic renal pain secondary to uretero-pelvic junction obstruction. *Pain Physician* 2011 Jan-Feb;14(1):55-9. PMID: 21267042
2. Issa M, Kim CH. Cervical spinal cord stimulation with 5-column paddle lead in Raynaud's disease. *Pain Physician* 2012 Jul-Aug;15(4):303-9. PMID: 22828684
3. Green A, Issa M, Kim CH. Peripheral nerve stimulation for treatment of chronic headache: a case report. *W V Medical J.* 2013 Nov-Dec;109(6):24,26-8. PMID: 24371861

Scholarship without named authorship

1. American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders (5th edition)**. Arlington, VA. (*Co-investigator in DSM-5 clinical field trials)

Reviews, chapters, monographs and editorials

1. Issa M, Celestin J, Wasan AD. Issues Associated with Opioid Use. In: Benzon HT, Rathmell JP, Wu CL, Turk DC, Argoff CE, editors. *Practical Management of Pain, 5th Edition*. Philadelphia, Pennsylvania: Elsevier Mosby; 2014. p. 683-93
2. Issa M, Wasan AD, Smith MT, Edwards RR. Psychological Evaluation of the Pain Patient. In: Wallace MS, Staats P, editors. *Pain Medicine and Management: Just the Facts, 2nd edition*. United States: McGraw-Hill Education; 2015. p. 65-72
3. Issa M, Psychological Evaluation of the Surgical Pain Patient. In: Narang S, Weisheipl A, Ross E, editors. *Surgical Pain Management: A Complete Guide to Implantable and Interventional Pain Therapies, 1st edition*. New York: Oxford University Press; 2016. p.39-48.
4. Issa M, Raheel B. Chronic Pelvic Pain and Psychological Disorders. In: Valovska A, editor. *Pelvic Pain Management*. New York: Oxford University Press; 2016. p. 143-8.
5. Chow R, Issa M. Methadone. In: Yong RJ, Nguyen M, Nelson E, Urman RD, editors. *Pain Medicine - An Essential Review*. Switzerland: Springer International Publishing; 2017. p. 157-8.
6. Chow R, Issa M. Buprenorphine. In: Yong RJ, Nguyen M, Nelson E, Urman RD, editors. *Pain Medicine - An Essential Review*. Switzerland: Springer International Publishing; p. 159-160.
7. Yong RJ, Issa M. Tricyclic Antidepressants. In: Yong RJ, Nguyen M, Nelson E, Urman RD eds. *Pain Medicine - An Essential Review*. Switzerland: Springer International Publishing; 2017. p. 165-6.
8. Chow R, Issa M. Selective Serotonin Reuptake Inhibitors. In: Yong RJ, Nguyen M, Nelson E, Urman RD, editors. *Pain Medicine - An Essential Review*. Switzerland: Springer International Publishing; 2017. p. 167-8.
9. Chow R, Issa M. Serotonin-Norepinephrine Reuptake Inhibitors. In: Yong RJ, Nguyen M, Nelson E, Urman RD, editors. *Pain Medicine - An Essential Review*. Switzerland: Springer

International Publishing; 2017. p. 169-170.

10. Chow R, **Issa M**. Anticonvulsants. In: Yong RJ, Nguyen M, Nelson E, Urman RD, editors. Pain Medicine - An Essential Review. Switzerland: Springer International Publishing; 2017. p. 175-6.
11. Chow R, **Issa M**. Muscle Relaxants. In: Yong RJ, Nguyen M, Nelson E, Urman RD, editors. Pain Medicine - An Essential Review. Switzerland: Springer International Publishing; 2017. p. 177-8.
12. Chow R, **Issa M**. Local Anesthetics. In: Yong RJ, Nguyen M, Nelson E, Urman RD, editors. Pain Medicine - An Essential Review. Switzerland: Springer International Publishing; 2017. p. 179-180.
13. Zinboonyahgoon N, **Issa M**. Serotonin Syndrome. In: Yong RJ, Nguyen M, Nelson E, Urman RD, editors. Pain Medicine - An Essential Review. Switzerland: Springer International Publishing; 2017. p. 201-2.
14. Marshall Z, **Issa M**, Wasan AD. Psychopharmacology for Pain Medicine. In: Benzon H, Raja SN, Fishman S, Liu S, Cohen SP, editors. Essentials of Pain Medicine 4e. Philadelphia, PA: Elsevier; Dec 2017. p 427-36
15. Pisansky A, Wasan A, **Issa M**. Biopsychosocial Pre-Screening for Spinal Cord and Peripheral Nerve Stimulation Devices. In: Benzon H, Raja SN, Fishman S, Liu S, Cohen SP, editors. Essentials of Pain Medicine 6e. Elsevier; In-print.
16. Starr J, **Issa M**, Wasan A. Opioid Crisis, Federal, Legal, and Other Issues Associated with Opioid Use. In: Benzon H, Raja SN, Fishman S, Liu S, Cohen SP, editors. Essentials of Pain Medicine 6e. Elsevier; In-print.
17. Starr J, **Issa M**. Interscalene and Superior Trunk Block. In: Banik R, editor. Anesthesiology In-Training Exam Review: Regional Anesthesia and Chronic Pain. Springer; In-print.

Professional educational materials or reports, in print or other media

1. Issa M (2021). NEJM Knowledge+. Common Interventional Pain Procedures. Pain Management and Opioids. This is a comprehensive lifelong learning product from NEJM Group aimed at trainees at all levels; used nationally and internationally. Available at <http://knowledgeplus.nejm.org/>

Narrative Report

I am a recognized expert in the field of pain management with unique expertise in psychiatry and addiction medicine. I have dedicated my training and career to better understanding the interface of addiction and chronic pain. My training includes residency in psychiatry at West Virginia University with one year of chief residency, addiction fellowship at Yale School of Medicine, pain fellowship at Brigham and Women's Hospital/Harvard Medical School, and forensic fellowship at West Virginia University. I am the current Program Director of the pain fellowship at Brigham and Women's hospital and have been in this role for the past three years. Our fellowship program is one of the biggest pain programs in the country and attracts some of the most qualified national candidates who proceed to be national and international leaders in this field. Under my direction, the reputation of

our fellowship program has substantially grown. Since I assumed the leadership position of this program, the number of applications we receive annually has tripled making it over 300 applications per year. We have been successful in matching our top applicants every year mostly due to our focus on providing trainees with cutting edge clinical and academic exposure, and novel advances in the field of pain medicine.

Besides being the pain fellowship Program Director, I also serve as the current Medical Director of the pain clinic and spine center at Brigham and Women's Faulkner Hospital since 2017. During my role as a Medical Director, we have expanded our clinic to include five full-time pain faculty members whom we have recruited from different disciplines and backgrounds. It has created a true multi-disciplinary environment for our patients. The clinic's patient satisfaction rating has consistently been excellent (over 90%) over the past four years, and our reputation amongst referring providers from all specialties has been outstanding. This success was achieved by focusing on providing a true multi-disciplinary care to our patients, seeing referrals in a timely manner, and ensuring clear communication to the referring provider and entire treatment team about the patients' care plan. Our pain clinic has been recognized as a Center of Excellence in 2019.

In addition to my clinical and administrative roles, I have an extensive academic experience and have published over 30 book chapters and scientific articles focused on bridging the gap between chronic pain, psychiatry, and addiction. It is an inherently neglected area in the field of medicine. My recent research work (both funded and unfunded) has been directed to opioid use, psychiatric comorbidities, and behavioral therapies in chronic pain. I have also written multiple book chapters highlighting the relationship between addiction and chronic pain. Given the novelty of my research and academic work, I have been a frequent speaker in local, national, and international meetings. The topics of my presentations typically cover the role of psychiatry and addiction in chronic pain and utilization of psychological treatments in pain management. I have been recognized in multiple national meetings as an expert in the field of psychiatry and addiction in chronic pain. I have spent extensive hours of continuous medical education on teaching students, residents, fellows, and colleagues these disciplines. I have been a mentor to numerous trainees and assisted many of them in becoming experts in this emerging field.

I frequently evaluate and review articles for major pain journals including Pain Medicine Journal and Journal of Pain Research. I am on the scientific committees of three major national societies that focus on pain management (American Academy of Pain Medicine, North American Neuromodulation Society, American Society of Regional Anesthesia and Pain Medicine). I am also a question author for the Pain Medicine Examination Committee for American Board of Anesthesiology. These roles have given me an opportunity to review novel cutting-edge research in the areas of chronic pain and behavioral medicine and allowed me to leave an imprint on the education and training of emerging generations of pain physicians all over the country. I have been consistently recognized as a "Top Doc" in annual rankings by Boston Magazine since 2015, and have received multiple "Best Doctors" peer-voted awards that recognize only the top 5% national physicians in the field.