

Integrative and Palliative Medicine in a Community Hospital: Impact of Inpatient Acupuncture for Symptom Management and Patient Well-Being

Background

Pain is multifactorial, complex and often intertwined with affective disorders. Pharmacologic approaches to pain, mood disorders, insomnia, and other symptoms common in hospitalized palliative medicine patients, may cause serious adverse events such as delirium, respiratory depression and addiction. Patients with multiple comorbidities, common in the palliative medicine patient population, may be particularly at risk.¹ Non-pharmacologic pain and symptom management tools, such as acupuncture, may reduce patient suffering with less risk of adverse events.

As health care organizations across the nation address their policies and processes regarding pain management, the Joint Commission² has provided guidance for evidence-based, non-opioid treatment options that can be considered for treating pain. When providers are developing a patient's individualized pain and symptom management plan, it is important to use a systematized approach to look at all aspects of the patient's situation, while focusing on symptomatic relief. The use of non-opioid treatment options may be helpful in either eliminating the need for an opioid or reducing the number of opiates used or prescribed. These reductions in opiate use can help reduce side effects as well as the potential for addiction and abuse.

Acupuncture provided in the outpatient setting has been shown to alleviate symptoms experienced by palliative care patients³ such as pain, anxiety, fatigue and more⁴. Less is known about the acceptability and efficacy of acupuncture provided in the inpatient setting. The Edmonton Symptom Assessment Scale (ESAS) is a validated commonly employed metric used to assess symptom burden in both inpatient and outpatient palliative care populations⁵. The modified ESAS includes a 0-10 scale for symptoms of pain, tiredness, drowsiness, nausea, lack of appetite, SOB, depression, anxiety, wellbeing, as well as sleep, constipation, diarrhea, numbness/tingling in extremities, taste change, and dry mouth. In addition to these symptoms, chemotherapy-induced peripheral neuropathy and taste disorders are common problems in oncology patients and there is some evidence that acupuncture may be helpful for these conditions,^{6,7} however more studies are needed.

Gilchrist/GBMC recently initiated an integrative medicine palliative care program that cares for patients in both the inpatient and outpatient settings. The program is led by a physician with expertise in both integrative medicine and palliative care and it has a steady stream of patients. This will provide fertile ground for a study of acupuncture in the palliative care population.

Assessment of the acceptability and feasibility of providing acupuncture services in the inpatient setting will be performed using a Was It Worth It (WIWI) questionnaire. This is a standardized 5 question instrument that has been used to assess patient satisfaction with treatment modalities such as radiotherapy, acupuncture in breast cancer patients, etc. The specific questions of the WIWI questionnaire are:

1. Was it worth it?
2. Would you do it again?

3. Was quality of life improved?
4. Was the satisfaction level related to the outcome?
5. Would you recommend the treatment to others?

The clinician survey would be a tool to query hospital staff to assess attitudes about acupuncture, knowledge of the uses of acupuncture, concerns about acupuncture in the inpatient setting and likelihood of referring patients for acupuncture.

Innovation

The value of integrative therapies in traditional healthcare practice in general and in palliative cancer care specifically is difficult to measure. Typically, integrative therapy is administered in an *ad hoc* fashion, usually outside the confines of traditional clinical care delivery. We propose to use integrative therapy methods (such as acupuncture) incorporated into the same clinical care pathway and to collect the outcomes of care using validated palliative care specific quality of life tools. This will allow the aggregation of disparate data from sources not typically aligned and interoperable, thereby allowing direct measurement of the global impact (e.g., reduction in opioid use and control of symptoms) of integrative medicine techniques on the delivery of palliative care.

Specific Aims

(1) Inpatient Acupuncture

Goal: assess feasibility and acceptance of providing acupuncture as part of an inpatient palliative care service in a community hospital.

Inclusion Criteria and Methods

Patients on the GBMC Integrative and Palliative Medicine consultation service who have a score of 4-10 on any of the ESAS (Edmonton Symptom Assessment Score) questions will be offered acupuncture. Each patient will be their own control as ESAS will be measured before and immediately after acupuncture treatments. Primary metrics will be patient satisfaction, hospitalist physician acceptance, total modified ESAS score(s) and modified ESAS score change.

Design

Interventional Clinical Trial:

- (1) Measure the feasibility and acceptance of adding acupuncture to palliative care treatment in the inpatient environment regimen as reflected in the Was It Worth It (WIWI) score.
- (2) Measure the effect of adding acupuncture to the palliative care treatment regimen in the inpatient environment on common symptoms – pain, anxiety, fatigue, etc – as reflected in changes in ESAS score.

Sample size:

Measurement of satisfaction scores (both patients and clinicians) will allow an assessment of feasibility and acceptance of adding acupuncture to the palliative care treatment in the inpatient environment regimen. Serial administration and measurement of ESAS scores pre- and post-

acupuncture treatments will allow direct measurement of the therapeutic impact of acupuncture on defined symptoms.

Based on recent activity on the Integrative Medicine and Palliative Care services we would expect to see the following volumes of patients who would be eligible to participate in the trial:

- Inpatient: 3 unique new patients per week, each of which would get 1-4 treatments (and then be discharged)

Based on these expectations we would expect to accrue >100 patients in this group of inpatients. Administering the modified ESAS survey before and after each treatment would yield >200 scores. Studies⁸ have measured the MCID and revealed the optimal cutoff in the receiver operating characteristic (ROC) curve. A sensitivity analysis was conducted through the estimation of MCIDs and determined that the optimal cutoffs were ≥ 1 point for improvement and ≤ -1 point for deterioration for each of the 10 symptoms. The clinically important difference in the ESAS score is 1 (in each direction) therefore, the volume of patients and completed surveys should be more than sufficient to test the hypothesis of the effect of acupuncture on symptom management and patient well-being.

Budget

- Acupuncturist salary: \$130/hour
- Two 4-hour sessions per week for 40 weeks
- Total cost: \$41,600 for 40 weeks

References

1. Tick H, et al. [Evidence-Based Nonpharmacological Strategies for Comprehensive Pain Care](#). The Consortium Pain Task Force White Paper.
2. <https://www.jointcommission.org/issues/detail.aspx?Issue=A3BjHXplZhr%2bLhZWIMWuvijQ2X%2bW1qMW6zHnAXlz9wo%3d>
3. Zeng YS, Wang C, Ward KE, Hume AL. Complementary and Alternative Medicine in Hospice and Palliative Care: A Systematic Review. *J Pain Symptom Manage*. 2018 Nov;56(5):781-794.e4. doi: 10.1016/j.jpainsymman.2018.07.016. Epub 2018 Aug 2.
4. Miller KR, Patel JN, Symanowski JT, Edelen CA, Walsh D. Acupuncture for Cancer Pain and Symptom Management in a Palliative Medicine Clinic. *Am J Hosp Palliat Care*. 2019 Apr;36(4):326-332. doi: 10.1177/1049909118804464. Epub 2018 Oct 4.
5. Romeo MJ, Parton B, Russo RA, Hays LS, Conboy L. Acupuncture to Treat the Symptoms of Patients in a Palliative Care Setting. *Explore (NY)*. 2015 Sep-Oct;11(5):357-62. doi: 10.1016/j.explore.2015.06.001. Epub 2015 Jul 2.
6. Molassiotis A, Suen LKP, Cheng HL, Mok TSK, Lee SCY, Wang CH, Lee P, Leung H, Chan V, Lau TKH, Yeo W. A Randomized Assessor-Blinded Wait-List-Controlled Trial to Assess the Effectiveness of Acupuncture in the Management of Chemotherapy-Induced Peripheral Neuropathy. *Integr Cancer Ther*. 2019 Jan-Dec;18:1534735419836501. doi: 10.1177/1534735419836501.
7. Ben-Arye E, Doweck I, Schiff E, Samuels N. Exploring an Integrative Patient-Tailored Complementary Medicine Approach for Chemotherapy-Induced Taste Disorders. *Explore (NY)*. 2018 Jul - Aug;14(4):289-294. doi: 10.1016/j.explore.2017.09.012. Epub 2018 Apr 22.
8. Hui, D, Shamieh, O, Paiva, CE, et al. Minimal clinically important differences in the Edmonton Symptom Assessment Scale in cancer patients: A prospective, multicenter study *Cancer* 2015;121:3027–3035.

Was It Worth It? Questionnaire

- 1. Was it worth it? YES/NO
- 2. Would you do it again? YES/NO
- 3. Was quality of life improved? YES/NO
- 4. Was the satisfaction level related to the outcome? YES/NO
- 5. Would you recommend the treatment to others? YES/NO

Modified Edmonton Symptom Assessment Scale (mESAS)

Patient Name: _____ Gender _____ Date: _____

Date of Birth: _____ Medical Conditions: _____

Please circle the number that best reflects how you've been feeling, on average, over the past few days

FEELING WELL

FEELING BADLY

Pain	0	1	2	3	4	5	6	7	8	9	10
Fatigue	0	1	2	3	4	5	6	7	8	9	10
Drowsiness	0	1	2	3	4	5	6	7	8	9	10
Nausea	0	1	2	3	4	5	6	7	8	9	10
Poor Appetite	0	1	2	3	4	5	6	7	8	9	10
Short of Breath	0	1	2	3	4	5	6	7	8	9	10
Feel Depressed	0	1	2	3	4	5	6	7	8	9	10
Feel Anxious	0	1	2	3	4	5	6	7	8	9	10
Poor Sleep	0	1	2	3	4	5	6	7	8	9	10
Constipation	0	1	2	3	4	5	6	7	8	9	10
Feeling Stressed	0	1	2	3	4	5	6	7	8	9	10
Other	0	1	2	3	4	5	6	7	8	9	10

How would you rate your sense of wellbeing overall? (circle one)

Very High High In Between Low Very Low

Hospital Physician Acupuncture Attitude Survey

1. Acupuncture can be helpful for hospitalized patients

Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
1	2	3	4	5

2. Acupuncture can be helpful in the management of pain

Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
1	2	3	4	5

3. Acupuncture can be helpful in the management of stress and anxiety

Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
1	2	3	4	5

4. I would support my patients getting acupuncture during their hospital stay

Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
1	2	3	4	5

5. I would have concerns if one of my patients got acupuncture

Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
1	2	3	4	5

6. Acupuncture should be available to hospitalized patients

Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
1	2	3	4	5

Please share comments about providing acupuncture in the hospital setting:

ACUPUNCTURE INFORMED CONSENT TO TREAT

I hereby request and consent to the performance of acupuncture treatments and other procedures within the scope of the practice of acupuncture on me (or on the patient named below).

I understand that methods of treatment include acupuncture, electrical stimulation, and tuina (Chinese massage and acupressure).

I have been informed that acupuncture is a generally safe method of treatment, but that it may have some side effects, including bruising, numbness or tingling near the needling sites that may last a few days, and dizziness or fainting. Unusual risks of acupuncture include spontaneous miscarriage, nerve damage and organ puncture, including lung puncture (pneumothorax), Infection is another possible risk, although the practitioner uses sterile disposable needles and maintains a clean and safe environment.

I understand that while this document describes the major risks of treatment, other side effects and risks may occur.

While I do not expect the practitioner to be able to anticipate and explain all possible risks and complications of treatment, I wish to rely on the practitioner to exercise judgment during the course of treatment which the practitioner thinks at the time, based upon the facts then known, is in my best interest. I understand that results are not guaranteed.

I understand the practitioner and administrative staff may review my patient records and lab reports, but all my records will be kept confidential and will not be released without my written consent.

By voluntarily signing below, I show that I have read, or have had read to me, the above consent to treatment, have been told about the risks and benefits of acupuncture and other procedures, and have had an opportunity to ask questions. I intend this consent form to cover the entire course of treatment for my present condition and for any future conditions for which I seek treatment.

Acupuncturist name: _____

Patient signature _____
(or patient representative) (indicate relationship if signing for patient)

Date: _____