

# Development of a Health System-Based Aromatherapy Program

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## BACKGROUND

- Clinical aromatherapy is the controlled and therapeutic use of essential oils in the clinical setting for specific outcomes that are measurable.
- Integrative medicine research shows that therapeutic-grade essential oils have chemical properties that can reduce pain, nausea, and anxiety and improve sleep.
- Healthcare systems are increasingly looking to integrative medicine therapies as safe, low-cost, and non-pharmacological methods for patient care that may also improve patient outcomes and patient satisfaction.
- To this end, Allina Health developed and implemented a health system-based nurse-delivered aromatherapy program among ten hospital sites.

## METHODS

### Program Development: February 2011 to February 2012

#### Two certified aromatherapists:

- Created a business plan,
- Identified and secured the support of stake holders,
- Chose the desired essential oils,
- Established a supply chain,
- Wrote policies and procedures,
- Wrote safety procedures,
- Created a collaborative inter-hospital system of implementation,
- Created electronic trainings for nurses,
- Created patient education handouts, and
- Established a uniform method of documentation within patients' electronic medical records.

### Program Implementation: February 1, 2012

#### Nurses chart in the patient's Epic-based electronic medical record:

- When and how the aromatherapy was administered
- Reason for use
- Essential oil used
  - Lavender (*Lavandula angustifolia*)
  - Sweet majoram (*Origanum majorana*)
  - Mandarin (*Citrus reticulata*)
  - Ginger (*Zingiber officinale*)

## METHODS (cont.)

- Clinical outcomes
  - Patients' self-reported pain/anxiety/nausea scores on a 0-10 scale directly prior to and within 60 minutes after administering aromatherapy
  - Sleep information

### Preliminary Descriptive Results: February 1, 2012 to June 30, 2014

- There were 3,715 (67%) Allina Health registered nurses trained to deliver aromatherapy (*Table 1*).
- There have been a total of 21,554 aromatherapy applications delivered to 15,825 unique patients 18 years of age or older (*Table 1*).
- Aromatherapy sessions were included in the analysis examining changes in pain/anxiety/nausea only if 1) both pre- and post-scores were reported, and 2) the pre-score was greater than 0.
- Patients had an average 32.45% decrease in pain, 47.39% decrease in anxiety, and 50.61% decrease in nausea after administration of nurse-delivered aromatherapy (*Table 2*).

### Nurse Comments about the Program

- "As a preop/PACU RN nurse I feel aromatherapy is an important weapon in our arsenal against nausea from anesthesia. Aromatherapy is very effective to give prior to surgery not only to help prevent nausea but also for anxiety. I feel like the hospital's image is more customer service oriented when we are able to give them aromatherapy."
- "The ability to offer aromatherapy as an adjunct to medications in the perioperative area greatly enhance patient satisfaction. I have seen a decrease in preop anxiety and less anti-nausea medication being used postoperatively. The patients love it."

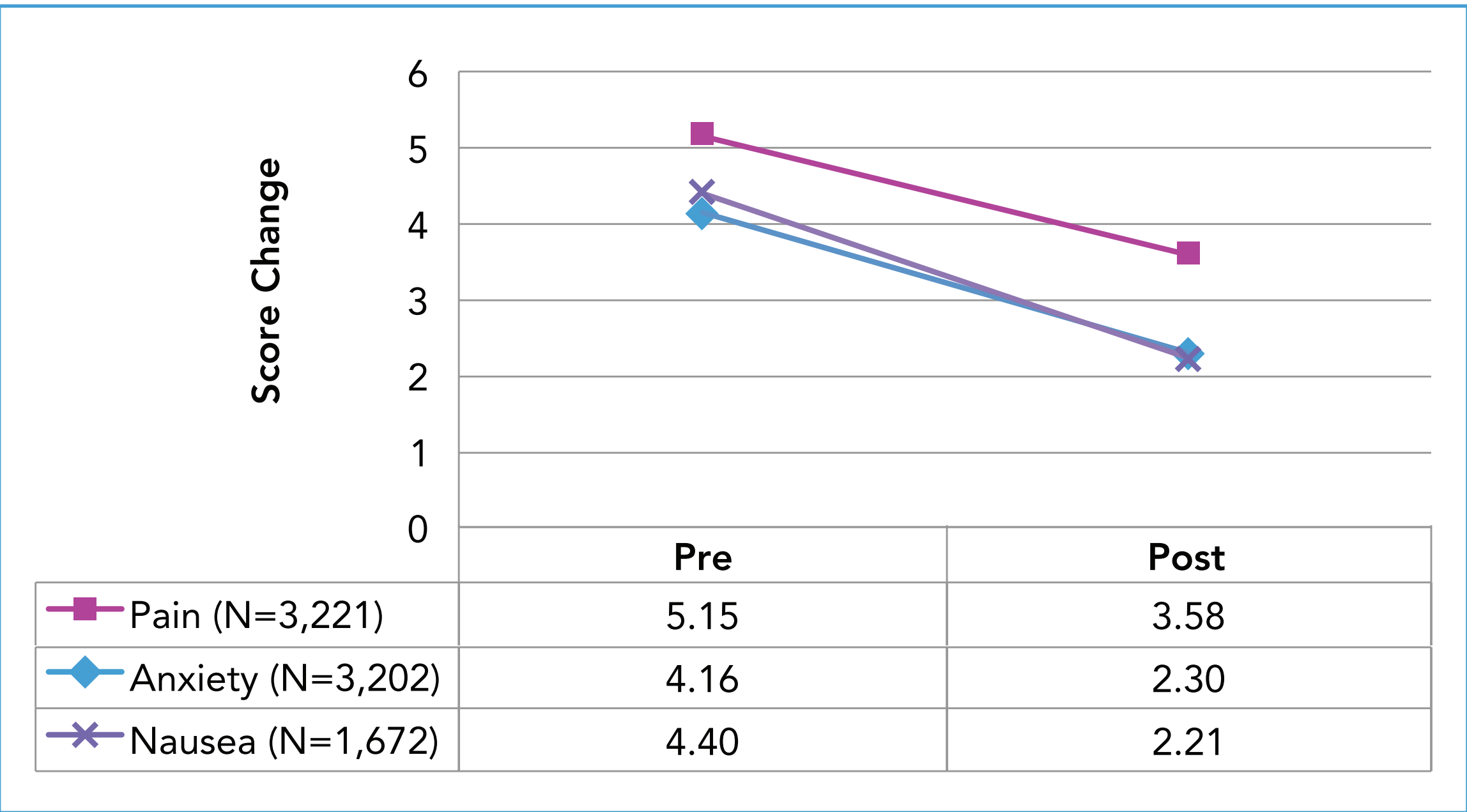
Table 1: Aromatherapy training and delivery, 2/1/2012 – 6/30/2014

Number of registered nurses employed across all sites	5,523
Number registered nurses trained across all sites	3,715
Number of unique hospital stays that included aromatherapy	16,705
Number of unique patients that received aromatherapy	15,825
Total number of aromatherapy applications delivered	21,554
Mean number of aromatherapy applications per hospital stay	1.29

Table 2: Change in pain, anxiety, and nausea outcome measures

Outcome		
Pain	No. Observations	3,221
	Mean pre score	5.15
	Mean post score	3.58
	Mean change in pain	-1.57 (-32.45%)
Anxiety	No. Observations	3,202
	Mean pre score	4.16
	Mean post score	2.30
	Mean change in anxiety	-1.86 (-47.39%)
Nausea	No. Observations	1,672
	Mean pre score	4.40
	Mean post score	2.21
	Mean change in nausea	-2.18 (-50.61%)

Figure: Pre- and post-aromatherapy pain, anxiety, and nausea scores from nurse-administered aromatherapy



## CONCLUSIONS

- The development and implementation of a nurse-delivered aromatherapy program among ten Allina Health hospitals has been highly successful; nurses are interested in and satisfied with the program and patients have shown improved clinical outcomes.
- The positive experiences of Allina Health may provide guidance for hospitals and healthcare systems looking to incorporate aromatherapy into patient care.