

CLINICAL ISSUE/CURRENT PRACTICE

Sleep duration and sleep quality are significantly affected in hospitalized patients. Extensive research shows that sleep plays an important role in the health and recovery of patients³.

Many simple, non-pharmacological interventions exist to improve sleep during hospitalization, including the utilization of white-noise.

Current sleep hygiene practices on the Hematology/ Stem Cell Transplant unit include relaxation-kits (e.g.: eye masks and noise-canceling earbuds), care channel, clustering care to avoid disturbing sleep, aromatherapy, and implementing sleep hygiene orders for patients who qualify. Usage of white noise was not routine on the unit.

LITERATURE REVIEW

Current evidence suggests:

- White noise machines improve the quality of sleep in hospitalized patients by masking unwanted sounds and decreasing the audibility of background sounds^{1,2,3,4}
- White noise has been shown to decrease HR, RR, and BP, while inducing relaxation and reduce stress¹
- The Richards-Campbell Sleep Questionnaire is a validated tool used to measure sleep depth, sleep latency, awakenings, return to sleep, sleep quality, and noise. Questions are scored ranging from 0 to 100, with higher scores representing better sleep²

EBP QUESTION

In hospitalized patients, how does the use of a white noise application compared to current practice (no white noise application) affect quality of sleep?

INTERVENTIONS

RNs encouraged patients to utilize the White Noise Ambiance app, which was available on the Bedside iPad



Richards-Campbell Sleep Questionnaire was administered to evaluate the impact of white noise on the quality of sleep

Patient Inclusion Criteria

- Oriented x3
- Hemodynamically stable

Patient Exclusion Criteria

- Disoriented patients
- Patients receiving diuretics
- Patients who were hard of hearing

**RESULTS**

The intervention was conducted for two months. Survey results (N=17) revealed sleep interventions used included white noise (N=2), use of use of other sleep aids (e.g.: music/TV/relaxation kit, N=5), or no sleep aids (N=10).

Patients who utilized white noise (N=2) had higher sleep quality scores when compared to patients who did not use the intervention (N=15).

**DISCUSSION & CONCLUSION**

Based on our findings, the use of white noise seems promising, but requires further evaluation to solidify its effectiveness.

Multiple barriers impacted implementation, including:

1. iPad availability, activation, and patient set-up
2. iPad devices malfunctioning or not charged

These barriers made it difficult to implement the intervention in the clinical setting and assess the effectiveness of the white noise application.

Suggested solutions for sustainability:

1. Create a workflow utilizing volunteers, ACPs, and CPs to assist patients with iPad set-up, activation, and education for how to use during hospitalization.
2. Explore the use of white noise machines donated by our former 6E patient, so the intervention can be used without requiring use of the bedside iPad.

REFERENCES

1. Cepceci, E., Pain, K., Almag, E., Chen, X., Philibert, V., & Krieger, A. C. (2022). Systematic review: auditory stimulation and sleep. *Journal of clinical sleep medicine : JCSM : official publication of the American Academy of Sleep Medicine*, 18(6), 1697-1709. <https://doi.org/10.5664/jcsm.9890>
2. Farokhzad, A., Bahramzadeh, F., Asgari, P., & Shari, M. (2016). Effect of White Noise on Sleep in Patients Admitted to a Coronary Care. *Journal of Caring Sciences*, 5(2), 103-109. <https://doi.org/10.15171/jcs.2015.01>
3. Vardi, E., Delva, F., Sarraf, T. S., & Kumar, A. (2021). Impact of a white noise app on sleep quality among critically ill patients. *Nursing in Critical Care*, 27(6), 815-823. <https://doi.org/10.1111/nicc.12742>
4. Yoon, H., & Baek, H. J. (2022). External Auditory Stimulation as a NonPharmacological Sleep Aid. *Sensors (Basel, Switzerland)*, 22(3), 1264. <https://doi.org/10.3390/s22031264>

A Cancer Program's approach to addressing Food Insecurities, Transportation, and Lodging among cancer patients in a Financially Distressed Area

Deborah Lorick, MSN/MHA, RN, CMSRN, OCN, Cynthia Dasaad, MSN, RN, PHN, OCN, ACS(LION), Christy Monteith, MSN, FNP-C, OCN, ACS(LION)

Background and Significance

Antelope Valley Medical Center (AVMC) is a 420 bed - District Community Acute Care Facility. AVMC is a disproportionate facility with Inpatient stays with Medi-Cal and Medicare coverage. Supportive care barriers were identified utilizing the Oncology Navigator Assessment.

Purpose

To address the needs and assist patients receiving treatment who meet criteria of financial necessity, distance barriers and limited access to proper nutrition. Stress related to financial, travel and food insecurities have proven to lead to poorer quality of life.

Interventions

Garnered grant funding and community engagement to support the identified barriers.

Created applications:

Transportation

Lodging

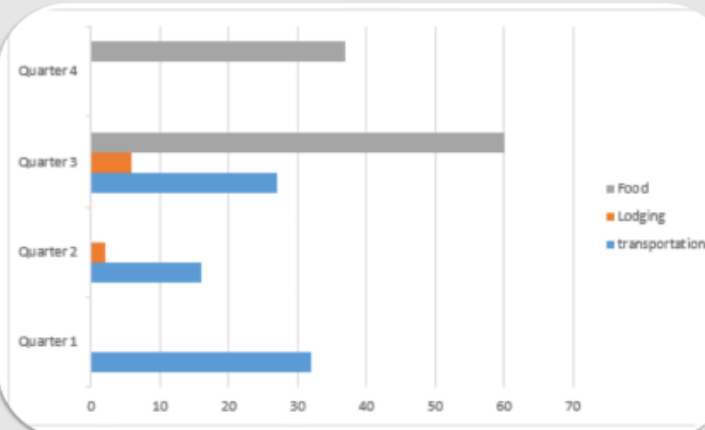
Food Insecurity

Dispersed funding and food utilizing the applications, assisting those with greatest need.



Evaluation and Discussion

The aim was to decrease worries of patients and families so that they could focus on treatment while alleviating feelings of fear, confusion and being overwhelmed.



Acknowledgements

AVMC Marketing Team, AVMC Volunteers, Community Cancer Partnerships, local businesses, ACS and AVMC Foundation

Nurse Delivered Massage (NDM): Complementary Integrative Pain Management for All Ages in Any Setting

Karen Maree Pike RN MSN OCN, PMGT-BC PHN, Dip.Hom. Swedish MT S4OM Preferred Practitioner Integrative Care Concepts, Palm Springs, CA

Nurse Delivered Massage

Nurse performed manipulation of the body's soft tissues & muscles to safely nurture one affected by disease or its treatments

Comfort oriented non-procedural touch, is non-pharmacological pain management intervention Joint Commission approved
Combines ~ Massage ~ Acupressure ~ Breathing Techniques ~

Basic Philosophical Principle *vis Medicatrix naturae*
(Touch is the fundamental medium of massage therapy)

Massage aids the ability of the body to heal itself through achieving or increasing health and well-being.

Ethical Principles of Nurse Delivered Massage

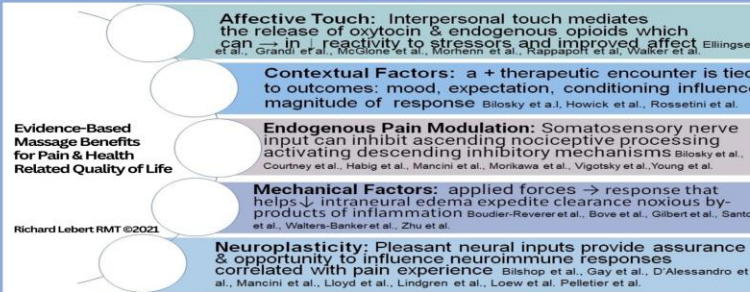
Beneficence
Equanimity
Trustworthiness
Integrity

Autonomy
Authenticity
Responsibility
Accountability

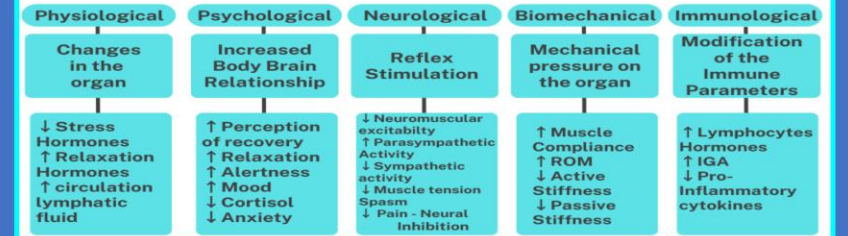
Respect
Harmony
Mutuality

Justice
Advocacy

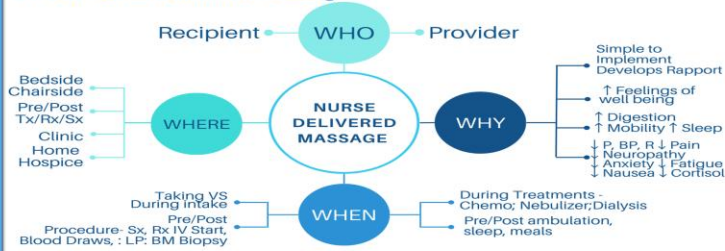
Align with those of TIA@ 11-21-2021
reported by Hanley, et al, 2021



Mechanisms of Massage



5Ws of Nurse Delivered Massage



NDM – What's in it for Me?



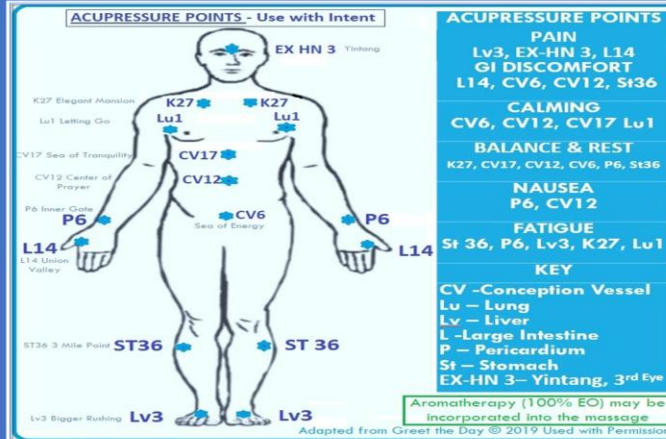
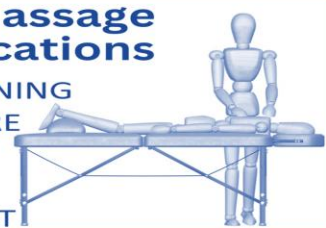
- Establishes/extends connection beyond words
- Assists with Compassion Fatigue
 - Centering – brings into the present
 - Activation of Autonomic NS
 - Rest & Digest
 - Calms "fight or flight"
 - Similar benefits for provider as recipient
 - Brief Escape
- Enhanced professional satisfaction
- Immediate Start with any patient population/location
- Big rewards for small education time investment
 - Improved patient:
 - Compliance
 - Satisfaction
 - Outcomes
 - QOL
- No start up cost - employs existing equipment
- Integration of evidence-based skill, applicable to nursing theories and models

Compassion Fatigue "The Cost of Caring"



Core Massage Modifications

- POSITIONING
- PRESSURE
- PACE
- SITE
- PRODUCT



Nurse Delivered Massage
Affirming
Grounded Implementation
Distinct Specialty
Holistic approach Professional Service
Varied Settings

Adapted from NANMTA Philosophy for RN MTs

Due to the theoretical congruence between nursing practice and the practice of complementary therapies, nurses are in a unique position to bridge the gap between traditional, Western health care and complementary therapies.

Captain Andrew Sparber, RN, MS, CS 2001

Touch Hunger & the Pandemic
(Touch Starvation / Touch Deprivation / Skin Hunger)
Occurs when a person experiences little to no touch form other living things

LOCKDOWN SURVIVAL KIT

DOPAMINE
the pleasure chemical
• Self-care-massage, medication
• Laughter
• Exercise
• Eating food - protein
• Listening to music
• Achieving something

OXYTOCIN
the love hormone
• Cuddling & touch including pets
• Connecting with others via phone or screen
• Listening to music
• Giving a compliment

SEROTONIN
feel good hormone
• Exercise
• B Vitamins & eat tryptophan
• Sun exposure
• Meditating or walk in nature
• Nurture your gut

ENDORPHINS
natural pain killers
• Exercise especially in sunshine
• Laughter
• Dark chocolate
• Listening to music
• Making love

YOUR HEALTHY CHOICE
<https://www.yourhealthychoice.com.au/>

The Role of Oncology Massage (OM) in Pain Management

Karen Maree Pike RN-BC, MSN, OCN, PHN, Dip.Hom

Integrative Care Concepts LLC, Palm Springs, Ca

"Oncology massage is the adaptation of massage techniques to safely nurture the body of someone affected by cancer and its treatments"

Society for Oncology Massage

These adaptations, "Core Client Modifications", can be safely integrated as part of management for other types of pain & associated symptoms

ADAPTATIONS ARE MADE FOR:

Short, long term, & late effects of Tx, Rx, Sx
Low Blood Counts | Blood Clots | Medications
Fatigue | Pain, Bone Pain | Medical Devices
Lymphedema | Removed Lymph Nodes

Oncology Massage (OM) is Recognized & Practiced Worldwide

Practitioners are trained to customize & innovate, tailor, each service to individual unique needs

OM & Esthetician Skin Care (SC) Positively Impacts Side Effects, Symptoms & QOL during Cancer Tx, Recovery & Survivorship, and those experiencing non cancer related pain (All ages)



MASSAGE

Manipulation of the soft tissues to:

- Improve blood and lymphatic flow
- Reduce muscular tension &/ flaccidity, spasms
- Stimulate or sedate the nervous system
- Enhance soft tissue(ST) healing

USE IN PRACTICE

- ↓ Pain and swelling related to ST injury
- ↑ Flexibility limbs & joints ↑ Posture X changing tension
- ↑ Efficiency, ease of movement
- ↓ Tension headache & eye strain
- ↑ Feeling of well-being ↓ Anxiety
- ↓ Emotional stress
- ↑ Awareness mind-body connection → ↑ Mental awareness

ONCOLOGY MASSAGE

- **✓ with MD**
- **OM & SC Intake Assessment & Obtain Client Consent**
- **Position - With care as to the comfort, condition of the Client in comfortable environment.**
- **Pressure Considerations - Stationary still/ Weightless touch to Max of 2 on a 5 Point Scale**
- **Acupressure Points (e.g.CV6, CV12, Lu1, K27, St36)**
- **Appropriate oils/creams/Lotions +/- aromatherapy**
- **✓ Reputable practitioner/Knowledgeable caregiver**
- **Client contact post (2 days) session, interaction with care team**

HISTORY OF MASSAGE IN NURSING

Part of nursing practice since Florence Nightingale
1882 Anna Maxwell "American Florence Nightingale" began instructing massage to nursing students Mass. Gen. Hospital, Boston
1920s Nursing textbooks & writings show massage in the nursing process, part of patient care plans
20th Century prevalence of routine evening back massage diminished with advances in analgesia, technology and time demands on nurses (Documentation/Monitoring)

MOST NOTED BENEFITS

- Reduced Pain
- Reduced Anxiety
- PHYSIOLOGICAL
- ↑ Natural Killer Cells
- ↑ Lymphocytes
- ↓ Nausea
- ↓ Fatigue
- ↓ Pain

PSYCHOSOCIAL

- Improves Sleep
- Eases Feelings Of Isolation
- Promotes Greater Sense Of Well Being
- Enhances Body Image
- Reduces Anxiety

Role of the OM /HBM T Trained Therapist

- Informed, prepared, communicate therapists/practitioners understand role, importance of "presence" and providing the client space to share
- Remain up to date with advancements in medical care
- Preserve & promote the skins acid mantle by adjusting bodywork & strokes to not burden an interrupted/damaged/compromised immune system
- Safely assess & deliver treatment working within a clinical framework for those in cancer treatment or with a history of cancer treatment

Do No Harm

- a. Not trigger Lymphedema (LE) or Pre-Existing Conditions (PEC)
 - b. Not aggravate LE or PEC
 - c. Preserve skin acid mantle barrier
- ### Fundamentals of Care
1. Open the door to the Lymphatic System
 - a. Begin & end with Quadrant Exit Strokes (QES)
 - b. Incorporate QES throughout session
 2. Pressure Considerations
 - a. Clients place on Cancer Care/Pain Management Continuum
 - b. Compromised Lymph Nodes(CLN)
 - c. Sx, Rx area
 - d. Medical conditions - DVT, Low Blood Counts, Bone Mets, Skin tumor, Peripheral Neuropathy, Nausea, Bony Mets, Pain
 3. Observe the Quadrant Principle

CORE CLIENT MODIFICATIONS

- ❖ POSITIONING
- ❖ PRESSURE
- ❖ PACE
- ❖ SITE
- ❖ PRODUCT

POSITIONING

- PATIENT MOVES AT OWN PACE
- BEGIN SUPINE
- OFFER BOLSTERS
- KNEES
- SHOULDERS
- LUMBAR
- SPINE
- NECK

"OUR TOUCH IS AS POWERFUL AS OUR PRESENCE"
Karen M Pike,
March 12,2020

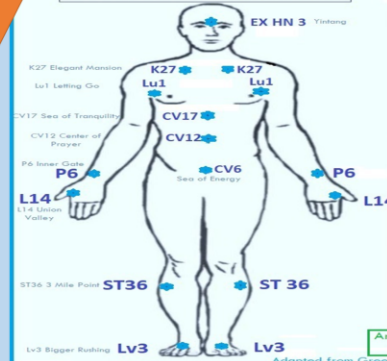
Goal of Skin Care Treatments (Product)

- Analysis of skin begins at start of encounter
- Initiate & finish with quadrant exit strokes
- Active Treatment - Designed to soothe & replenish
- Standard Precautions practiced
- Choose products for environmentally challenged skin
 - Double mask vs microexfoliation
 - No extractions during facials
 - No cuticle clipping during nail treatments
 - No applications that cause inflammation
 - No waxing
- Well into Recovery or Long-Term Survivorship -
 - Strengthen & restore
 - Clients skin type guides product choices
 - Skin strong enough steam can be added during microexfoliation
 - Extractions with care
 - Highly Sensitizing Agents
 - Irritants
 - Coal Tar Derivatives | Mineral Oil | Petrochemicals
 - Oxybenzone | Propylene glycol | SLS
 - High on the Watchlist
 - Phthalates | Formaldehyde | Talc | MEA, DEA, TEA |
 - Triclosan | Aluminium | Parabens (banned in the EU)

5 POINT PRESSURE SCALE

(ADAPTED FROM WALTON MASSAGE THERAPY PRESSURE SCALE & GREET THE DAY FOUNDATIONAL PROGRAM)		
SCALE	NAME	DESCRIPTION
0	STILL TOUCH TOUCH ENERGY MODALITIES WITH BODY CONTACT: THERAPEUTIC TOUCH®: HEALING TOUCH®: COMFORT TOUCH®:REIKI	STATIONARY, WEIGHTLESS, FULL HAND CONTACT TOUCH ZERO GRAVITY, STILL TOUCH HAND-HELD BROAD & SOFT, ENTIRE HAND SURFACE, FINGERPADS IN CONTACT WITH RECIPIENTS' SKIN, CLOTHING OR COVERS
1	LIGHT LOTIONING or OTS (Over the Sheet) NEURAL STROKING	SLIGHT SKIN MOVEMENT IF ANY AT ALL HANDS TAKE THE SHAPE OF THE TISSUES NOT TISSUE SHAPE E.g. GENTLY APPLYING EYE CREAM MAXIMUM PRESSURE FOR SEVERELY MEDICALLY FRAIL CLIENTS (SIDE EFFECTS OF DISEASE) [HIGHLY UNSTABLE TISSUES]
2	GENTLE MESSAGE AKA HEAVY LOTIONING	SUPERFICIAL MOVEMENT OF ADIPOSE TISSUE & MUSCLE TESTING THE "AVOCADO" GENTLY APPLYING FACE MOISTURIZER MAX MESSAGE PRESSURE FOR MOST MEDICALLY SENSITIVE CLIENTS
3	MEDIUM/MODERATE MESSAGE	RECOGNIZED AS AN EVERYDAY MASSAGE PRESSURE TRADITIONALLY BELIEVED TO INCREASE CIRCULATION
4	STRONG MESSAGE	USED WITH HEALTHY CLIENTS WHO PREFER STRONG PRESSURE TRADITIONALLY BELIEVED TO INCREASE CIRCULATION
5	DEEP MESSAGE	USED WITH HEALTHY CLIENTS WHO PREFER THE DEEPEST PRESSURE TRADITIONALLY BELIEVED TO INCREASE CIRCULATION

ACUPRESSURE POINTS - Use with Intent



ACUPRESSURE POINTS

- PAIN**
Lv3, EX-HN 3, L14
GI DISCOMFORT
L14, CV6, CV12, St36
- CALMING**
CV6, CV12, CV17 Lu1
- BALANCE & REST**
K27, CV17, CV12, CV6, P6, St36
- NAUSEA**
P6, CV12
- FATIGUE**
St 36, P6, Lv3, K27, Lu1
- KEY**
CV - Conception Vessel
Lu - Lung
Lv - Liver
L - Large Intestine
P - Pericardium
St - Stomach
EX-HN 3 - Yintang, 3rd Eye

Aromatherapy (100% EO) may be incorporated into the massage
Adapted from Greet the Day © 2019 Used with Permission

Phrasing/Terminology When Using OM

- Client in place of patient
- Session in place of treatment/therapy
- Treated in place of bad/affected side
- Untreated in place of good or unaffected
- Massage in place of treatment
- HBM T-Hospital Based Massage Therapy in place of OM

MASSAGE TRUTHS & MYTHS

Truth: A too demanding or aggressive massage may cause

- * Pain
- * Trigger Inflammation
- * Damage Tissue
- * Cause or aggravate lymphedema | PEC
- * Development of systemic side effects
- * Flu-Like Symptoms
- * Fatigue
- * Muscle Pain
- * Body Aches
- Massage spreads

Myth: cancer
Truth: DNA instruction causes the spread of cancer

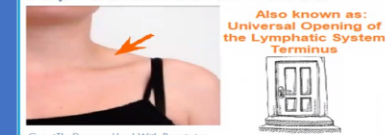
BEST PRACTICE

- PHYSICIAN (PCP) ENDORSEMENT/RELEASE
- DETAILED INTAKE ASSESSMENT
- OBTAIN INFORMED CONSENT
- CLIENT FOLLOW-UP (Text/Phone/Email)
- PAIN MANAGEMENT TEAM FEEDBACK
- THERAPIST UNDERSTANDS ROLE & GOAL OF BODYWORK
- CLEAR, CONCISE DOCUMENTATION

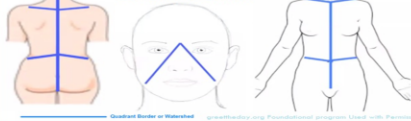
Oncology Massage Training

GREET THE DAY
UCSF Osher Center for
INTEGRATIVE MEDICINE
TRACY WALTON & ASSOCIATES
AMERICAN MASSAGE THERAPY
ASSOCIATION
FIND A PREFERRED PRACTITIONER -
S4OM

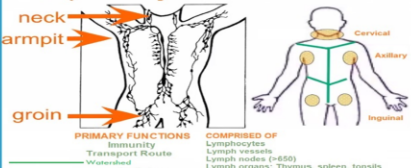
supraclavicular fossa



Quadrant Borders or Watersheds of the Lymphatic System



3 primary node clusters



Quadrant Exit Strokes

- Create connection btw 2 areas of body
- QES Clear a path
- Start at or before quadrant border inside of uncompromised area
- Uncompromised Area=Safety Zone (Area of Safety)
- Begin Proximal (Compromised area) to Area of Safety opening a pathway
- Strokes-proximally -> move by increment distally
- Choice of exit strokes depend on client position on table/bed and compromised area
- INTENT -Modify hands on applications used during traditional massage & Facial treatments to safely accommodate compromised lymph nodes from a primary routing area

Establishing Content Validity of the ProfEssional APN ReLationships (PEARL) Survey to Measure Advanced Practice Nurse and Provider Collaboration

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Rachelle Vered Levy, MSN, CPNP-AC, Nimian Bauder, DNP, RN, AGCNS-BC, NPD-BC, EBP-C, Jeannine M. Brant, PhD, APRN, AOCN, FAAN

PURPOSE

- To develop the ProfEssional APN ReLationships (PEARL), a survey to measure collaboration between APNs (Advance Practice Nurses) and Collaborating Providers (CPs).
- A model by Jones and Way (2006), which has seven essential elements of interprofessional collaboration:
 - Cooperative, assertiveness, autonomy, responsibility/accountability, communication, coordination, and mutual trust/respect
 - Served as a foundational framework to develop the instrument.

SIGNIFICANCE

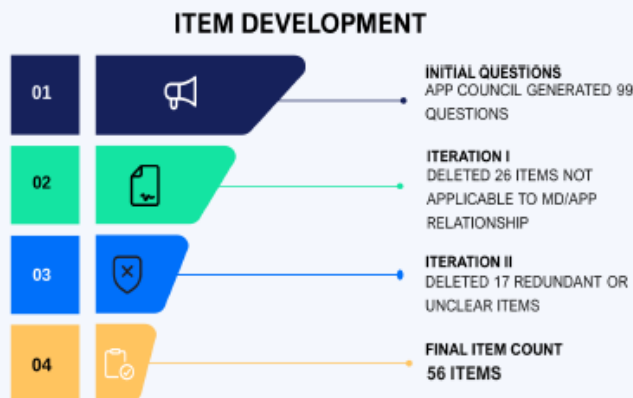
- APNs bring a comprehensive and holistic approach to managing patients across the life continuum.
- In 27 states APNs function independently; however, most APPs work collaboratively with individual physicians or physician teams.
- No instruments were found in the literature that comprehensively measured the collaborative relationship between APNs and CPs.
- APNs at an NCI-designated cancer center sought to further explore these relationships.

REFERENCES

Jones, L. and D. Way, *Collaborative practice learning guide*. Supporting Interdisciplinary Practice (CD Rom), 2006: p. 11-16.

Pett, M., N. Lackey, and J. Sullivan, *Making Sense of Factor Analysis*. 2003, Thousand Oaks, CA: Sage Publications.

METHODS



Recruited Known National and International APN Experts

- Inclusion Criteria
 - APN at least 10 years
 - Known APN leader, author, speaker
 - Included CEOs and presidents of national and international APP and nursing organizations
 - Emailed each selected individual and provided a \$25.00 gift card for participation
 - 100% response rate

RESULTS

ITEM REVIEW



SAMPLE

Expert Panel (n=10)	Mean (Range)	Number
Age	57 (45-71)	
Years APN Experience	25 (13-37)	
Sex		
Female		9
Male		1
Race		
Asian		1
Black		1
Caucasian		8
Ethnicity		
Latino or Hispanic		2
non-Latino, non-Hispanic		8
Patient Population		
Outpatient		3
Both Inpatient and Outpatient		7
Work Setting		
Academic		6
Community		4
Specialty (may have >1)		
Oncology		5
Primary Care		3
Hematology		2
Palliative or Supportive Care		2

DISCUSSION

- The goal of the PEARL survey is to provide a better understanding of the relationship(s) between APNs and CPs and identify opportunities for growth.
- Next steps include administering the instrument to APNs nationwide to a large diverse sample to further refine the instrument.

From Generation to Generation

Robin Herman AOCNS, L.A. General Hospital

Background and Significance

I am a baby boomer RN working as a CNS. My responsibilities include chemotherapy education for all the RNs on the oncology unit. As I have aged, and educated over the years I experienced differences in learning characteristics among the different generations Y & Z. A review of aged related learning characteristics can improve understanding of generational learning needs and develop educational tools to assist them in learning.

Purpose

Generations of people are defined by the shared patterns of behavior, attitudes, and beliefs that emerge within a group born within a specific time-period. Understanding who we are as individuals at a given time can help educators develop educational tools that support their learning needs.

Interventions

Characteristics of Millennials (Y) born 1981-1996 include confidence, high expectations, question everything including authority, self centered. They focus on having control, focus and recognition. They like to work independently and are not interested in teamwork.

Characteristics of Generation Z born 1996-2012, have been called Gen Y on steroids. Difficult to work with or manage, very competitive with high anxiety.

Both generations want their employers to invest in them, however there is no company loyalty. Both use devices to communicate, switch tasks often, and have short attention spans.



Discussion

The importance of educating GEN Z and Gen Y is to set clear goals and a deadline. Insure you have lots of evidence for your teachings. If they believe you lack knowledge, they will make it known. Make sure they have online access to all of your educational resources. Encourage them to focus on the patient more than the me factor. Provide shorter education topics to keep their attention. Encourage them to slow down to absorb what they are learning.

Evaluation

For both generations using a nurturing atmosphere, consistently conveying the need for safety when administering chemo, was my primary goal. I now make sure that each RN feels satisfied with how much time I spent training them to ensure their need for safe learning.

Utilizing Wellness Retreats to Address the Psychosocial Needs of Young Patients Diagnosed with Breast Cancer



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Significance & Background

- 10% of patients diagnosed with breast cancer are under age 45
- Young patients face unique challenges during & after treatment
- Social isolation & lack of peer support decreases quality of life
- Some psychosocial concerns can't be resolved during a clinic visit

Purpose

- Create a safe, relaxing environment for young patients to gather
- Encourage community building & peer support
- Provide evidence-based, age-appropriate education & resources
- Foster self-care by providing whole-person wellness activities
- Improve feelings of loneliness by 25%
- Improve feeling supported by 20%

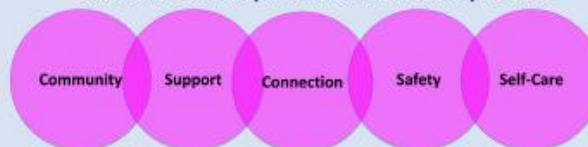
Interventions

- Pre-intervention needs assessment revealed patients < age 45 desire peer connection & treatment related education
- Five-hour wellness retreat was created in response to assessment
- Program content: keynote speaker, yoga, lunch, craft & resources
- Keynote speaker vetted for quality content & presentation style
- Young survivors throughout San Diego County invited to participate
- Nurse led program staffed by UCSD personnel & volunteers
- Online evaluation sought quantitative & qualitative feedback
- 53 participants completed the post-retreat evaluation

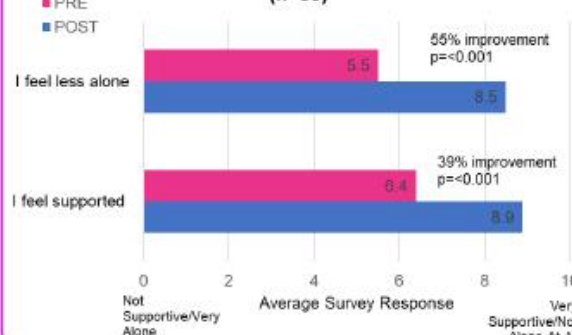
Results



Themes found in open-ended evaluation question:



Perception of Participants Pre/Post Retreat (n=53)



Discussion

- Wellness retreats effectively address psychosocial needs of patients
- Off-site, non-clinical venue creates a safe, nurturing environment
- Incorporating non-structured time is key to building community
- Dedication of nurses is central to program development & success
- Patients enjoy non-medical interactions with healthcare providers
- Increased multi-disciplinary staff participation could enhance program
- Future events will incorporate feedback from retreat evaluations
- Wellness retreats are an innovative contribution to patient care



References

- Office of the Surgeon General. (2023). Our Epidemic of Loneliness & Isolation: The U.S. Surgeon General's Advisory on the Healing Effects of Social Connection & Community. US Department of Health & Human Services
- Van de Ven P. (2020). The Journey of Sensemaking & Identity Construction In the Aftermath of Trauma: Peer support as a vehicle for connection. *Journal of Community Psychology*, 48(6), 1825–1839



Temporary Toilet Lids Minimizes Contamination of Bathroom Surfaces with Hazardous Drugs

Eliane Vieira, BSN, RN-BC, OCN; Grace Allen, MSN, RN, OCN; & Sadeeka Al-Majid, PhD, RN.
Orange Coast Medical Center (OCMC), Fountain Valley, California

Problem and Significance

- Excretion of active hazardous drugs (HDs) and/or their metabolites in the urine of patients receiving such drugs has been documented in the literature (Eisenberg et al, 2021).
- Particles of excreted HDs, which are aerosolized when uncovered toilet is flushed, settle on bathroom surfaces (Arnold & Kaup, 2019; Chauchat et al., 2019; Walton et al., 2020).
- Absence of toilet lids in hospitals' bathrooms increases the likelihood of surface contamination.
- Chronic exposure other patients, healthcare workers, and janitorial service staff to HDs residues predisposes them to potentially harmful side effects through dermal contamination (Hon et al, 2014, Hon et al, 2015).
- Recognizing the risk associated with flushing uncovered hospital toilets, the Oncology Nursing Society (ONS) recommends covering the toilet while flushing.
- A commercially available temporary toilet lid has been suggested to minimize aerosolization of HDs particles in bathrooms used by patients receiving HDs.

Purpose

The purpose of this study was twofold: To test the effectiveness of a temporary toilet lid in blocking HDs particles from aerosolizing when the toilet is flushed in the bathroom of a hospitalized patient receiving intravenous chemotherapy; and to compare the effectiveness of bleach vs alcohol-based sanitation in removing HDs residues on the used toilet lid.

Methods

- Design:** Descriptive design
Setting: Oncology Unit of a Magnet [®]-recognized.
Sample: Six surface areas from a single bathroom used by a 26-year-old male patient (BSA 1.97 m²) receiving intravenous chemotherapy for lymphoma. Chemotherapy protocol included:
- Day 1: Rituximab 375mg/m²
 - Days 2, 3, & 4: Etoposide 50mg/m², Vincristine Sulfate 0.4 mg/m², Doxorubicin HCL 10mg/ m² continuously.
 - Day 5: Cyclophosphamide 562 mg/m²
 - Prednisone 60mg/m² oral days 1-5.

Ethical Considerations: The hospital's Institutional Review Board approved this study as a non-human subject research.

Methods Cont'd

Data Collection Procedures :

- A total of six surface areas were swabbed using swab kits and material provided by Bureau Veritas Laboratory.
- Swabbing of bathroom surfaces was performed as per manufacturer's instruction.
- The swabs were then shipped on dry ice to the Bureau Veritas Laboratory using the laboratory's safe handling and shipping guidelines.



Data Analysis and Results

- All comparisons were performed using paired samples t test. The number of particles from each of the 3 hazardous drugs were measured in nanograms (ng) in 6 different locations in the bathroom.
- Contaminations were statistically significant for the toilet flush handle, toilet seat and doorknob for each of the three drugs ($p < 0.05$) (Figures 1, 2, & 3).
- All statistical analyses were performed using R Statistical Package Version 4.2.2
- Wiping the used temporary lid with bleach for 15 seconds was more effective than alcohol-based solution in eliminating HDs residues from the used toilet lid.
 - Detectable levels of Etoposide residues were found on used toilet lids that were wiped with alcohol.
 - Wiping with bleach resulted in a <5 Etoposide residues, which is below the detectable level (Table 1).

	Doxorubicin HCL (ng)	Etoposide (ng)	Vincristine Sulfate (ng)
Soiled Toilet Lid 1	159	9680	5.4
Soiled Toilet Lid 1 -Cleaned with Alcohol	<5	10.9	<5
Soiled Toilet Lid 2	163	9490	5.5
Soiled Toilet Lid 2 -cleaned with Alcohol	<5	7.8	<5
Soiled Toilet Lid 3	330	23000	15.9
Soiled Toilet Lid 3 -Cleaned with Bleach	<5	<5	<5
Soiled Toilet Lid 4	202	21300	7.7
Soiled Toilet Lid 4-Cleaned with Bleach	<5	<5	<5

Results Cont'd

Figure 1. Amount of Doxorubicin HCL (ng) Detected on Bathroom Surfaces With and Without Toilet Lid

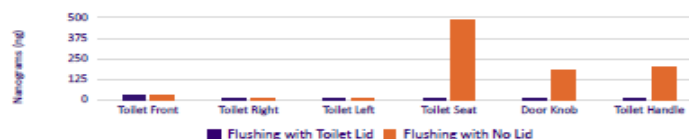


Figure 2. Amount of Vincristine Sulfate (ng) Detected on Bathroom Surfaces With and Without Toilet Lid

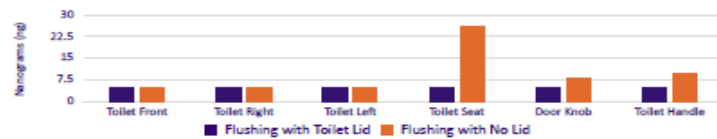
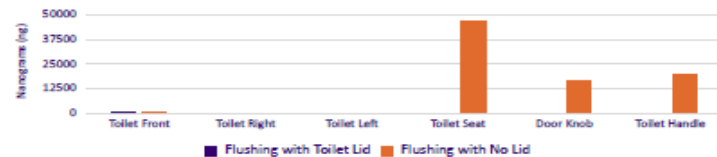


Figure 3. Amount of Etoposide (ng) Detected on Bathroom Surfaces With and Without Toilet Lid



Conclusion

- Our results are consistent with other studies that showed contamination of the surfaces of the bathroom used by the patient who received HDs.
- Wiping the used temporary lid with bleach for 15 seconds was more effective than alcohol-based solution in eliminating HDs residues from the used lid.
- We recommend using a temporary toilet lid in bathrooms used by patients receiving HDs.

Background

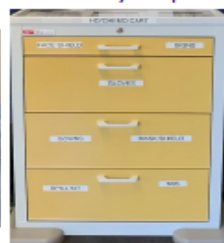
- Healthcare workers exposed to hazardous drugs are at increased risk for adverse reactions.
- The Oncology Nursing Society's (ONS) guidelines recommend using personal protective equipment (PPE) when administering chemotherapy and hazardous drugs (HD) and when disposing of wastes from patients receiving these drugs.
- Registered nurses (RNs) working on the Inpatient Oncology Unit in our Magnet-designated community hospital followed guidelines for administering intravenous (IV) but not oral chemotherapy and other hazardous drugs. Additionally, registered nurses and patient care assistants (PCAs) did not use PPE when disposing of hazardous wastes.

Purpose and Objectives

- To increase staff knowledge of and adherence to ONS guidelines related to safe handling of chemotherapy and other hazardous drugs and contaminated waste through an evidence-based educational intervention.

Target Population

- Registered nurses and Patient Care Assistants working on the Oncology Unit at our Magnet-Designated Community Hospital

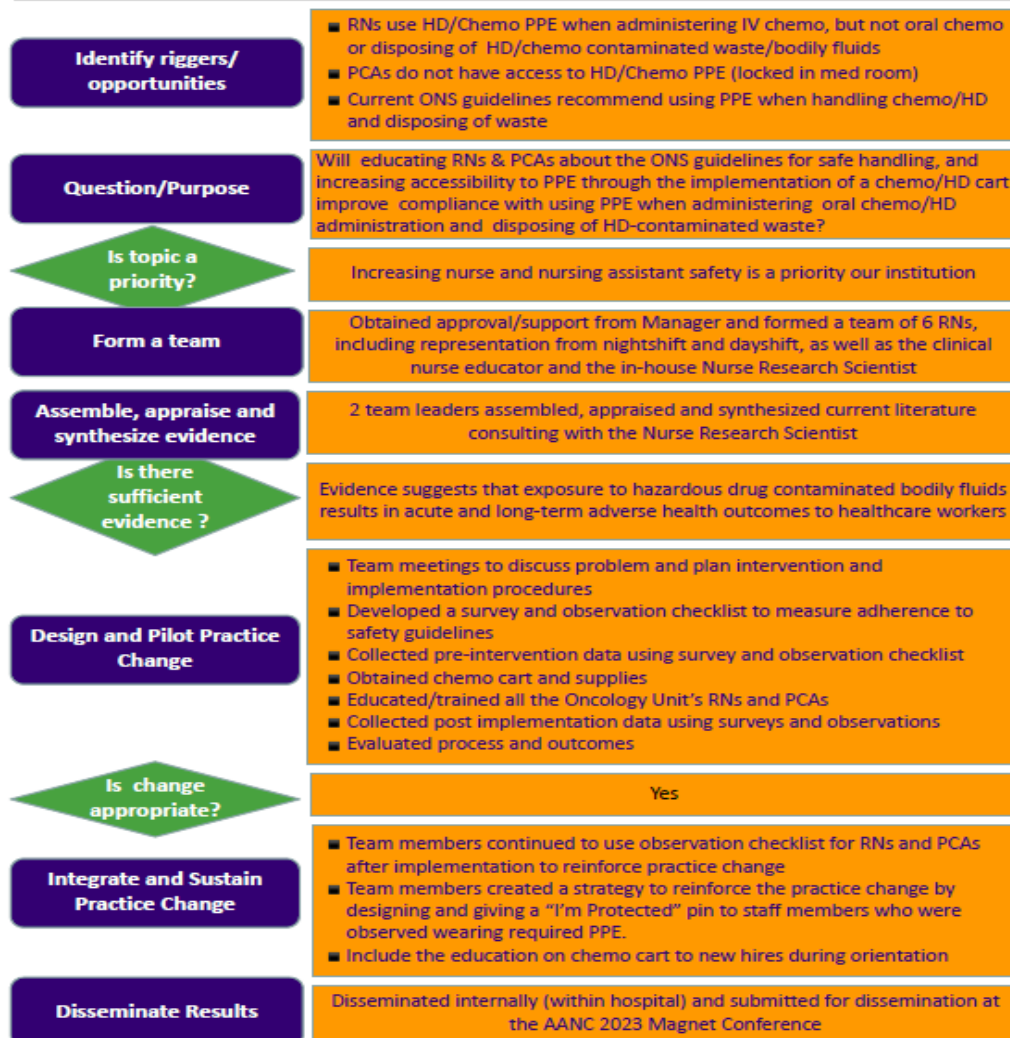


Measurements

Adherence to safe handling guidelines was measured before and after the educational and Chemo Cart intervention

- Objectively using an observation check list
- Subjectively, using a 5-item survey adopted from the Hospital Safety Climate Scale (Gershon et al, 2000).

Iowa Model of Evidence-Based Practice Used as a Guide



Data Analysis

- We compared self-reported and observed adherence to safe handling guidelines for oral administration of hazardous drugs and disposal of contaminated wastes.
- All comparisons were performed using independent t- tests with Bonferroni correction; significance level set at $P < 0.05$.

Results

Figure 1. Self-Reported Adherence to Safety Protocols for Administering Oral Chemotherapeutic Agents and Waste Disposal

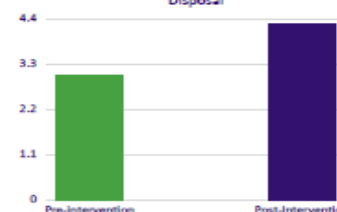


Figure 2. Observed Pre-intervention and Post Intervention Adherence to Safety Protocol during Administration of Oral Chemotherapy

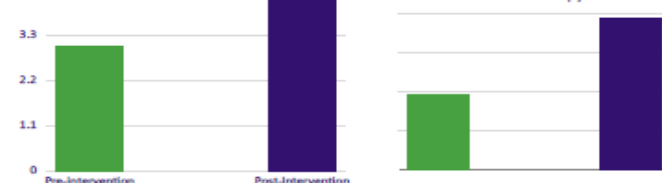
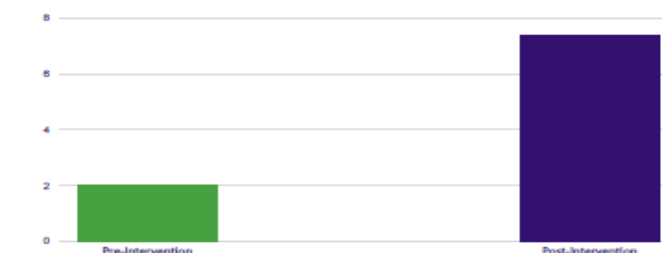


Figure 3. Observed Pre-intervention and Post Intervention Adherence to Safety Protocol during Disposing off Contaminated Waste



Implications for Practice

Increasing awareness of nurses and PCA about guidelines related to safe handling of chemotherapy/HD along with increasing accessibility to PPE increased adherence to safety guidelines.