Causes and Consequences of Moral Distress in ICU Healthcare Workers

Peter Dodek, MD, MHSc

Outline

- Moral Distress in ICUs
- Patient Safety in ICUs
- Research Question and Hypotheses
- Specific Aims
- Progress
- Next Steps

What is Moral Distress?

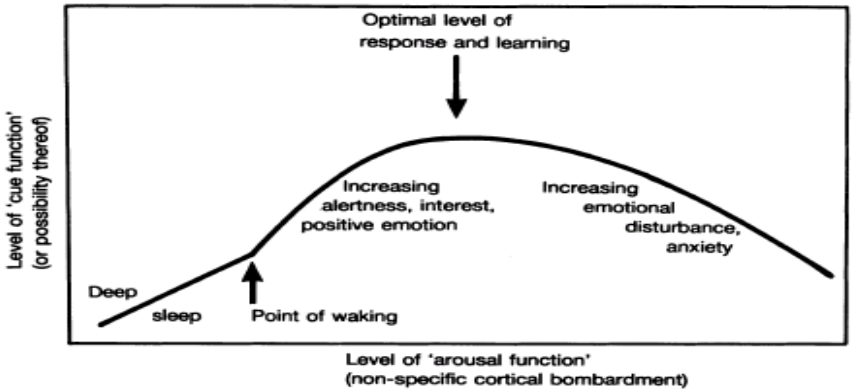
- “the consequence of being constrained from moving from moral choice to moral action”
    - Jameton, 1984; Hamric, 2006
- Can be measured using “Moral Distress Scale”
    - Corley, 2001; Hamric, 2012
- Moral distress score in ICU RNs > ICU MDs
    - Hamric, 2012; Whitehead, 2015
- Associated with burnout and attrition in health care workers
    - Meltzer, 2004

Moral Distress--more

- Associated with lower perception of autonomy , work engagement, and collaboration with physicians
    - Lawrence, 2011; Papathanassoglou, 2012; Karanikola, 2014
- Associated with compassion fatigue and perceptions that poor communication causes medication errors
    - Maiden, 2011
- Workplace distress is associated with decreased confidence in procedures and adverse events
    - Williams, 1997
- Not known if moral distress is associated with general workplace distress or with adverse safety outcomes, and the direction of relationships

Patient Safety Problem in ICUs

- 150 serious errors/1000 patient-days
- 80 serious adverse events/1000 patient-days
  - ➢ Half of these are preventable—most are medication-related
- Human factors influence workplace safety in many industries
- 'Stress' is a human factor that influences cognitive performance



Hebb, 1955 after Yerkes-Dodson, 1908

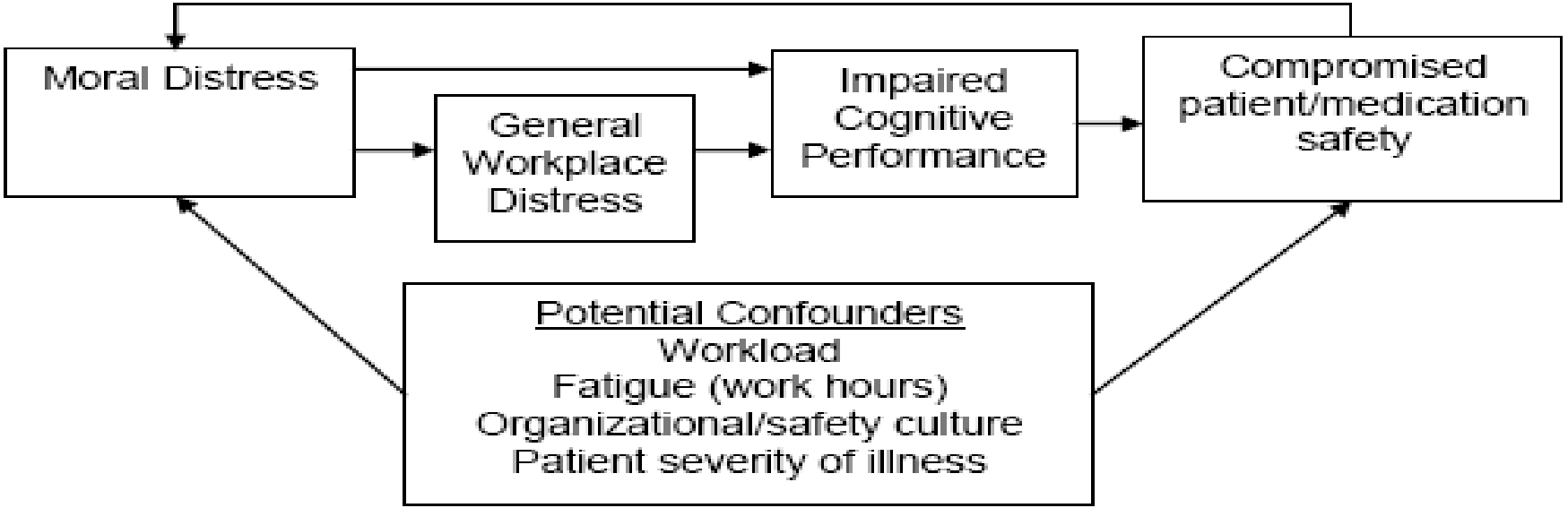
Research Question

- Is there a relationship between moral distress and general workplace distress in health care professionals, and adverse safety outcomes in ICUs?
  - If yes, what is the direction of this relationship--distress leading to increased risk of adverse outcomes, or increased risk of adverse outcomes leading to distress?

Hypotheses

- **Primary hypothesis:** there are independent relationships between measures of moral distress, general workplace distress, and patient safety/medication safety events in the ICU.
- **Secondary hypothesis:** moral distress due to patient safety/medication safety events is at least as important (measured in units of intensity and frequency) as moral distress due to other issues.

Theory behind our Hypotheses



Specific Aims/Methods--1

- Administer the Moral Distress Scale and Job Content Questionnaire (validated measure of general workplace distress) to all health professionals in 13 tertiary and community ICUs that also measure safety outcomes

  - 3 tertiary, 3 large community, 7 small community hospitals in Vancouver and Fraser Health Authorities; about 1400 potential respondents

Specific Aims/Methods--2

- Determine the relationship between scores of moral distress and general workplace distress
  - Pearson correlation coefficient
- Determine the relationship between scores of moral distress and general workplace distress (exposures), and rates of adverse safety outcomes (dependent variable)
  - VAP, CRBSI, C. Diff, hypoglycemia on insulin, bleeding on anticoagulants, unplanned extubations, medication errors/events
  - Hierarchical, multivariate regression adjusted for APACHE II score, patient sex, number of ICU beds

Specific Aims/Methods--3

- Determine the relationship between scores on the safety-related and non safety-related items in the Moral Distress Scale (absolute and proportionate scores) and rates of adverse safety outcomes to investigate the causal role of moral distress
  - Similar multivariate analysis
- Use focus groups and interviews to further understand the causes and consequences of moral distress
  - focus groups (MD, RN, other) in each of 1 community and 2 tertiary hospitals (8-10 per group)

Surveys

- Demographics—age, sex, experience
- Moral Distress Scale—21 items, each rated for frequency (0-4) and level of disturbance (0-4)
  - plus 1 write-in item, 1 item to rate overall moral distress, and 2 questions about leaving the job
- Job Content Questionnaire—44 items, Likert Scales
- Distributed 1390 surveys (Nurses—870, Other health prof.—452, Physicians--68)
- Responses: Nurses—428 (49%); Others—211 (47%); Physicians—30 (44%)

Sample Moral Distress Items

Please place an X or ✓ in the single most appropriate box for each dimension

	Frequency					Level of Disturbance				
	Never				Very frequently	None				Great extent
	0	1	2	3	4	0	1	2	3	4
1. Provide less than optimal care due to pressures from administrators or insurers to reduce costs.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
2. Witness healthcare providers giving "false hope" to a patient or family.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
3. Follow the family's wishes to continue life support even though I believe it is not in the best interest of the patient.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Sample Job Content Questionnaire items

	Strongly disagree	Disagree	Agree	Strongly agree
1. My job requires that I learn new things.	☐	☐	☐	☐
2. My job involves a lot of repetitive work.	☐	☐	☐	☐
3. My job requires me to be creative.	☐	☐	☐	☐
4. My job allows me to make a lot of decisions on my own.	☐	☐	☐	☐

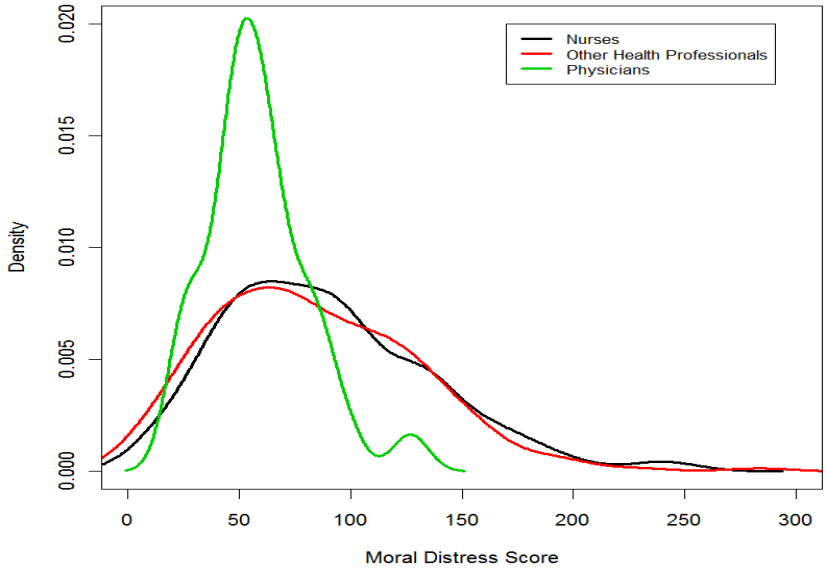
Calculations

- For each item on the moral distress survey, multiply score for frequency by score for level of disturbance. Sum of these products is the Moral Distress Score
- Job Content Questionnaire: items roll up to 4 domains: decisional latitude, psychological stressors, social support, psychological strain
- Hierarchical (ICU) linear and logistic regressions

Respondent Demographics by Profession

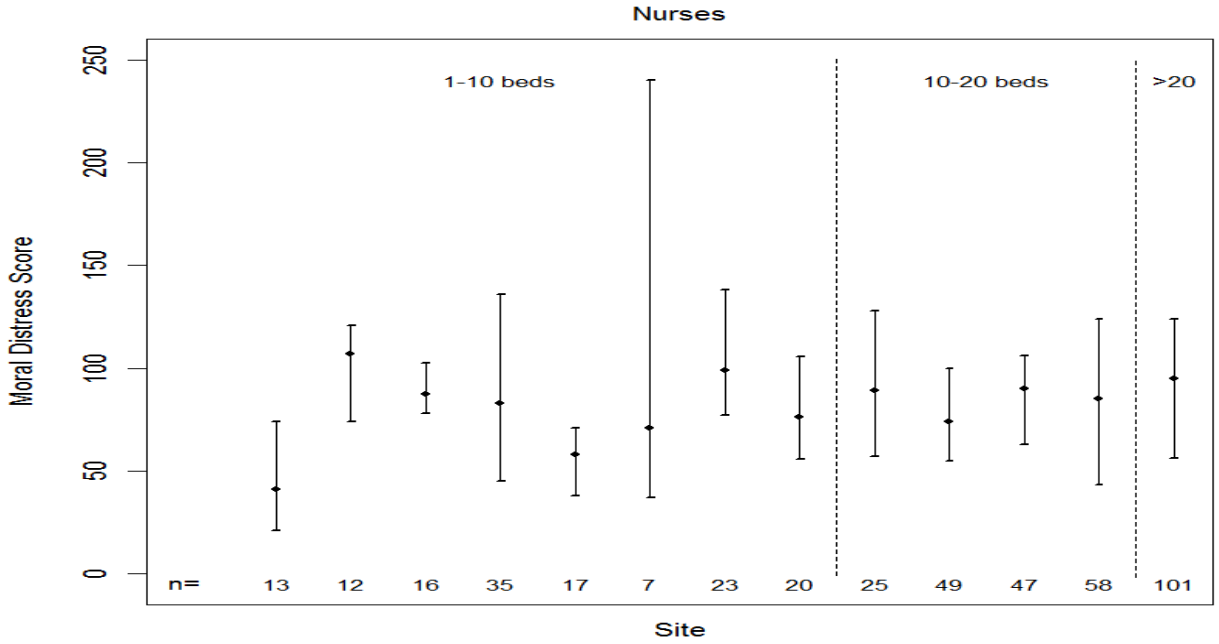
	Nurses	Other Health Professionals	Physicians
N=669	428	211	30
Male (%)	12.8	31.3	86.7
Age (mean (SD))	41.5 (10)	36.7 (10.7)	47.3 (7.6)
Clinical Experience (median years (IQR))	5 (2, 11)	3 (2, 7)	10 (5, 16)
% working less than a year in current unit	10.8	11.6	3.3

Moral Distress Score Density by Profession

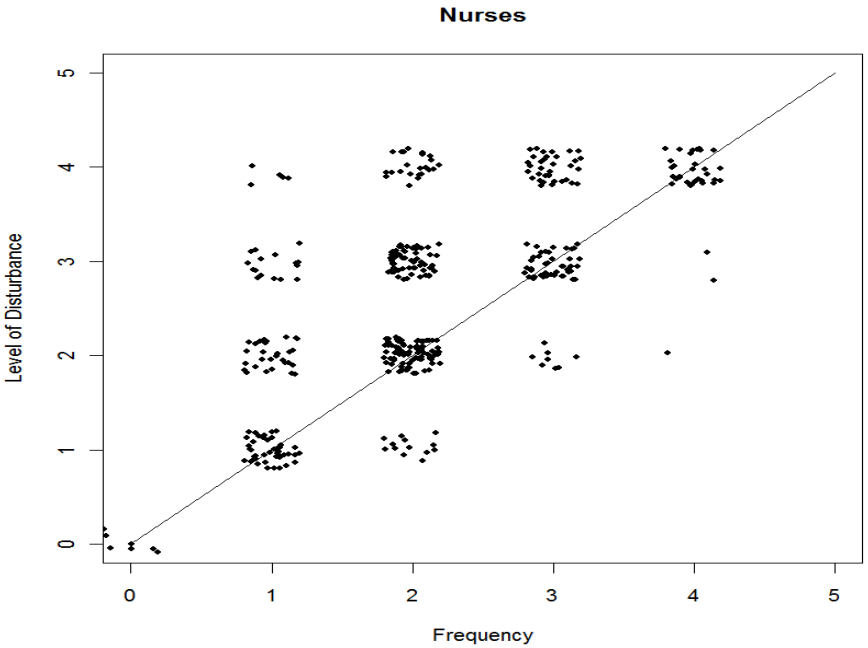


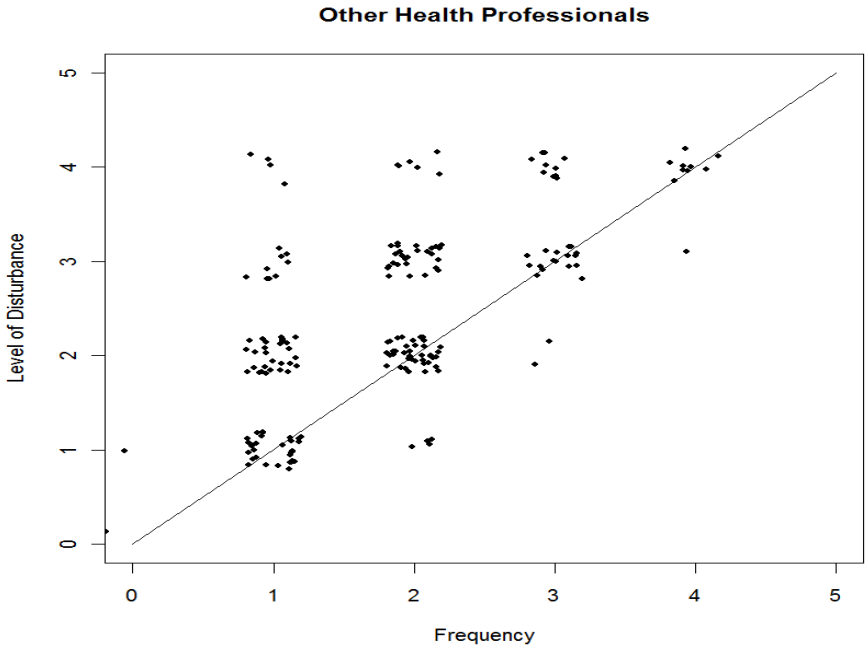
	Nurses	Others	Physicians
n	428	211	30
Moral Distress median (IQR)	83 (55,119)	76 (48, 115)	57 (45, 70)

No Difference in Moral Distress Score across Sites



Moral Distress Scores are Driven by Level of Disturbance



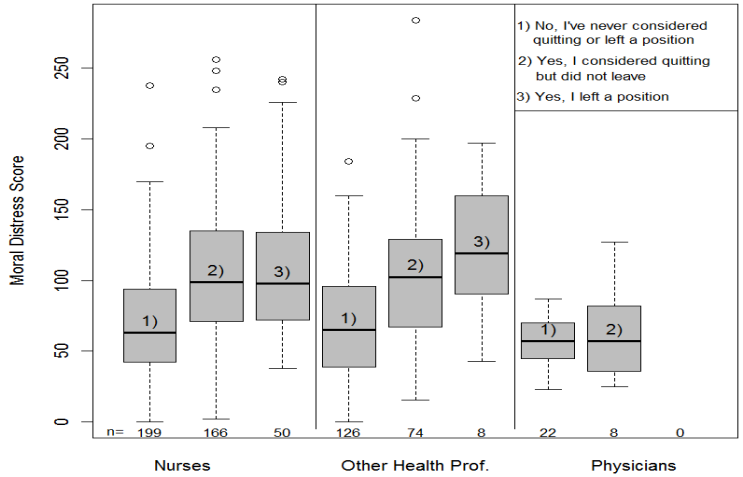


Mixed Effects Regression Models of Factors Associated with Moral Distress Score

Rate ratios:	Nurses	Other Health Professionals	Physicians
Age (per decade)	0.8 (-3.8, 5.5)	**-7.3 (-13.4, -1.2)**	2.8 (-8.8, 14.3)
Sex (male)	-13.3 (-26.9, 0.2)	4.7 (-8.5, 18.0)	-6.6 (-31.9, 18.7)

Rate ratios:	Nurses	Other Health Professionals	Physicians
Years of experience (per decade)	**10.8 (2.6, 18.9)**	4.1 (-7.9, 16.1)	-1.0 (-18.8, 16.8)
Age (per decade)	-5.0 (-11.4, 1.5)	**-8.5 (-16.1, -1.0)**	3.5 (-14.7, 21.8)
Sex (male)	-11.7 (-25.2, 1.9)	4.8 (-8.6, 18.2)	-6.5 (-32.4, 19.4)

Moral Distress Score by Response to “Have you ever left or considered quitting a clinical position because of your moral distress with the way patient care was handled at your institution?”

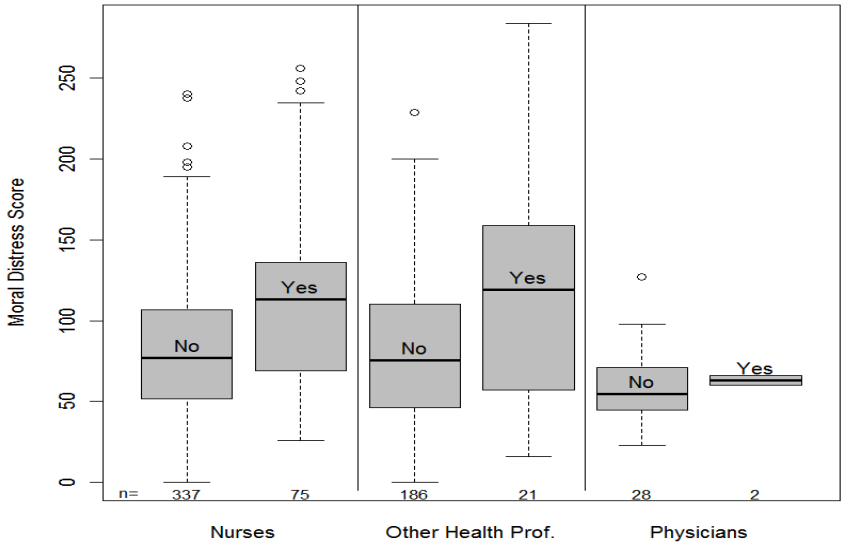


% Responded “yes”:

Nurses=52%
Other Prof.=39%
Physicians=27%

Odds ratios:	Nurses	Other Health Professionals	Physicians
MDS (per 10 points)	**1.20 (1.14, 1.27)**	**1.21 (1.12, 1.30)**	1.18 (0.77, 1.18)

Moral Distress Score by Response to: "Are you considering leaving your position now?"



% Responded
"Yes, I'm considering leaving":

Nurses=18%
Other Prof.=10%
Physicians=7%

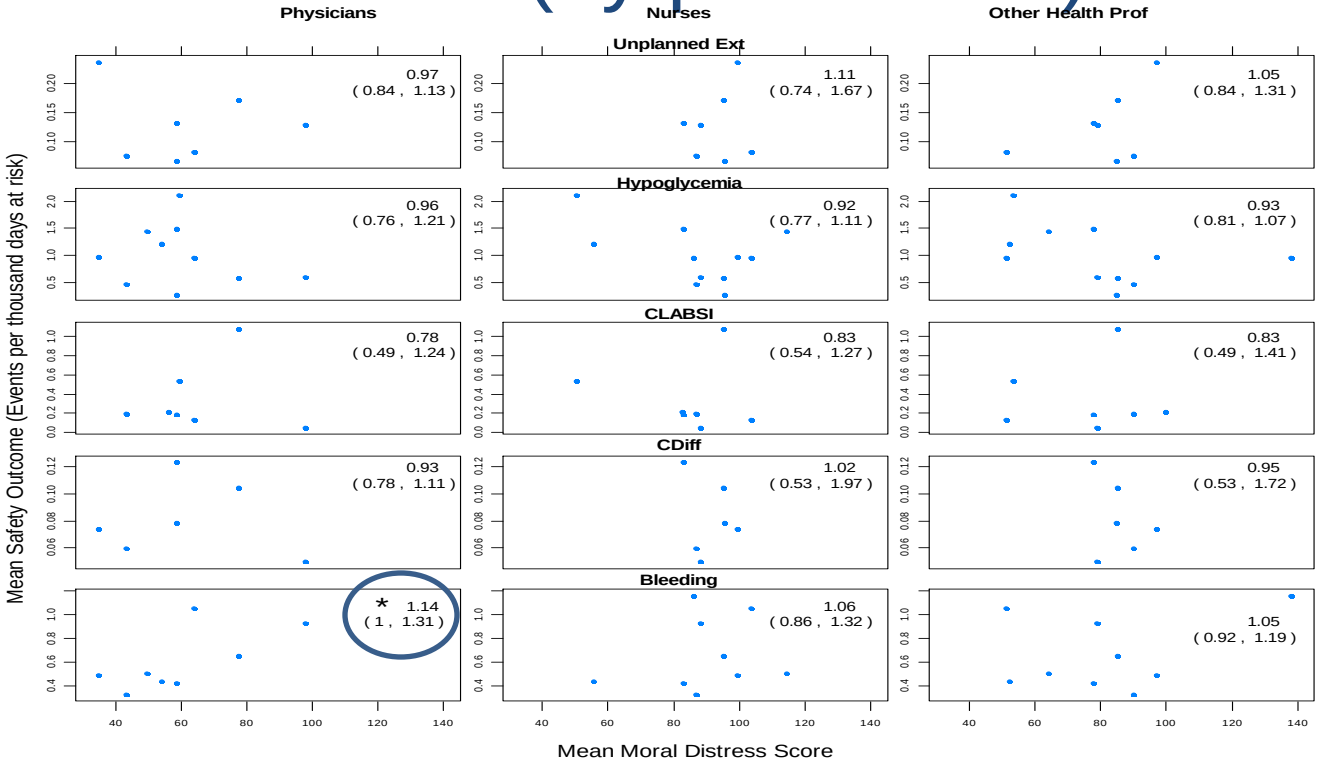
Odds ratios:	Nurses	Other Health Professionals	Physicians
MDS (per 10 points)	**1.13 (1.07, 1.19)**	**1.16 (1.05, 1.27)**	1.10 (0.58, 2.08)

Association between Moral Distress and General Workplace Distress

	Decision Latitude	Total Psychological Stressors	Social Support	Composite Psychological Strain
Nurses	**0.81 (0.68, 0.97)**	**1.06 (1.04, 1.08)**	**0.84 (0.78, 0.91)**	**1.05 (1.03, 1.08)**
Others	0.87 (0.65, 1.16)	**1.06 (1.03, 1.09)**	**0.81 (0.72, 0.90)**	**1.07 (1.04, 1.10)**
Physicians	1.9 (0.35, 10.2)	0.91 (0.76, 1.10)	0.73 (0.33, 1.62)	1.03 (0.88, 1.22)

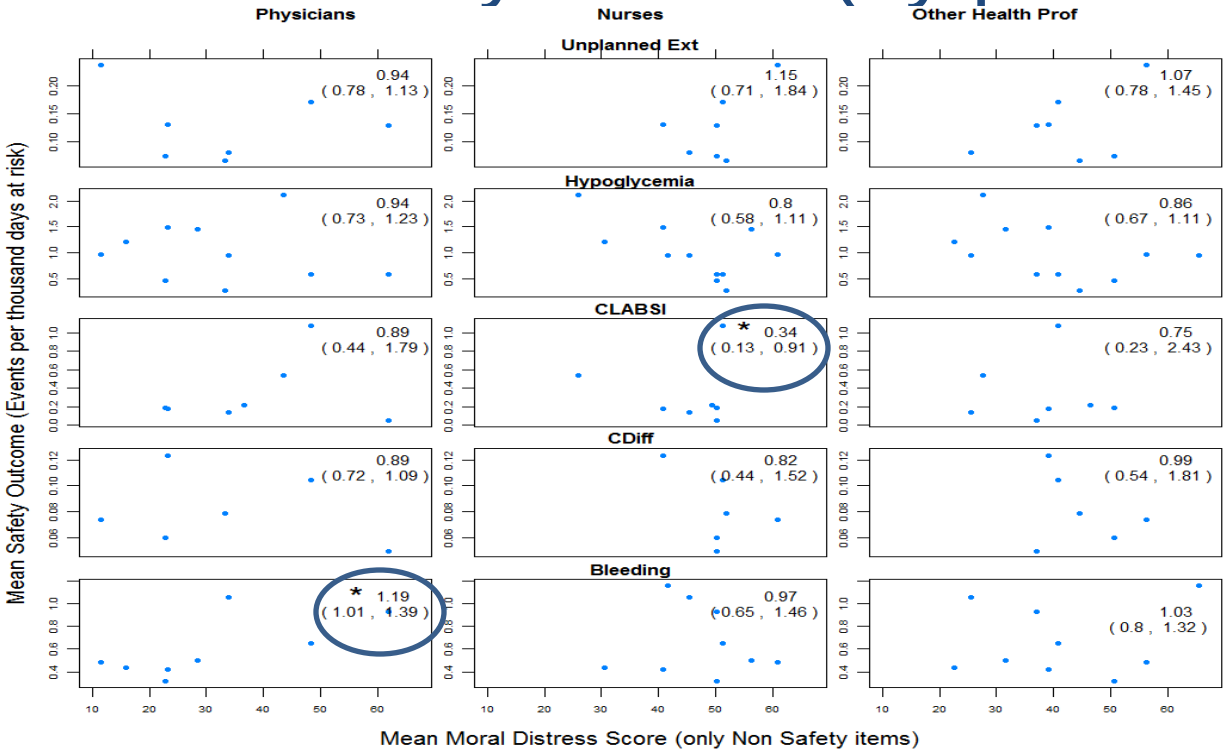
rate ratios and 95% CI per 10 points of moral distress score adjusted for age, sex, and years of experience of respondent

Overall Moral Distress and Adverse Safety Events (by profession)



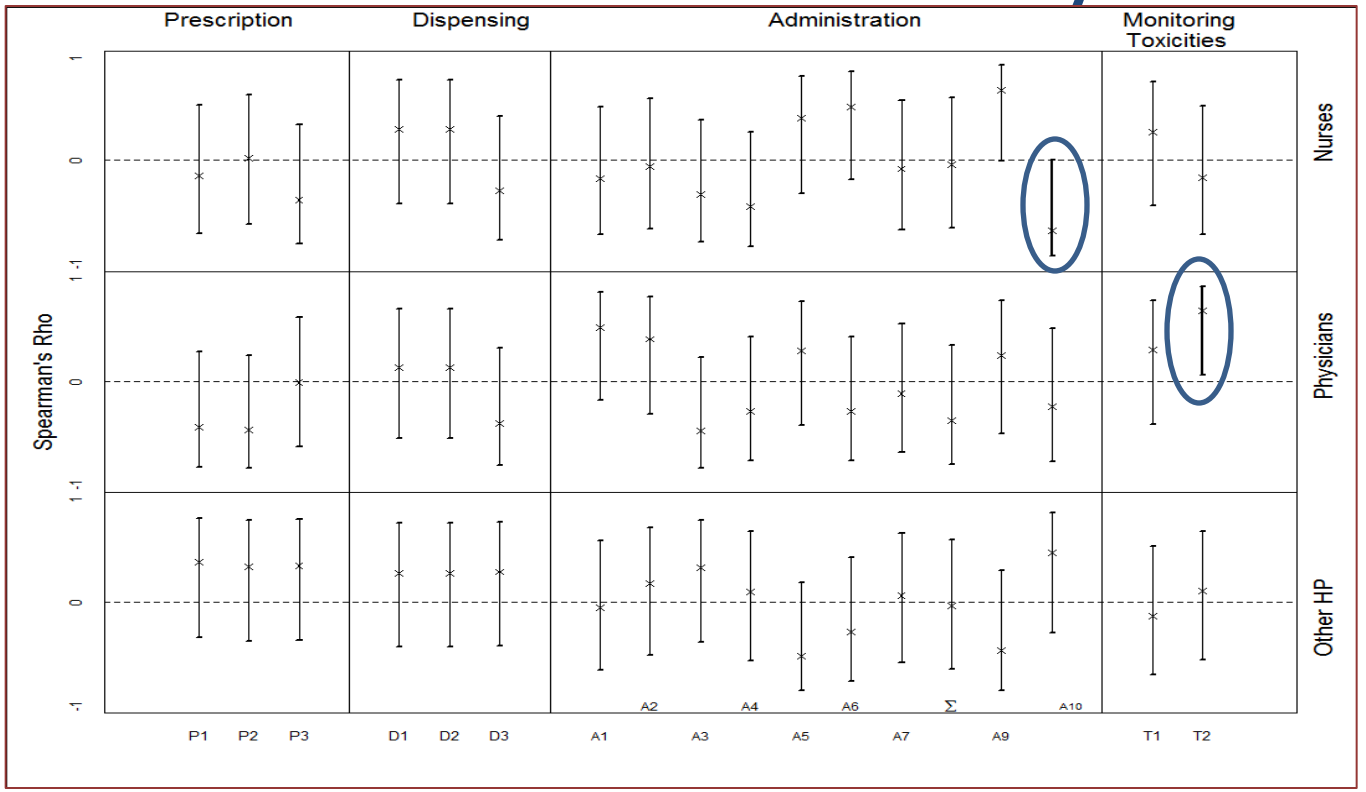
* hazard ratio (95% CI) adjusted for number of ICU beds, and for age, sex, and APACHE II score of the patient

Moral Distress *Unrelated to Patient Safety* and Adverse Safety Events (by profession)



* hazard ratio (95% CI) adjusted for number of ICU beds, and for age, sex, and APACHE II score of the patient

Correlation between Moral Distress and Medication Safety



Additional Findings from Surveys

- Survey items that correlate most strongly with overall moral distress score relate to **end-of-life decision-making and communication**

- No consistent correlation between general workplace distress and adverse safety events

Moral Distress Focus Groups

Thanks to Natalie Henrich!!

Goal: To understand ICU providers' experiences with moral distress

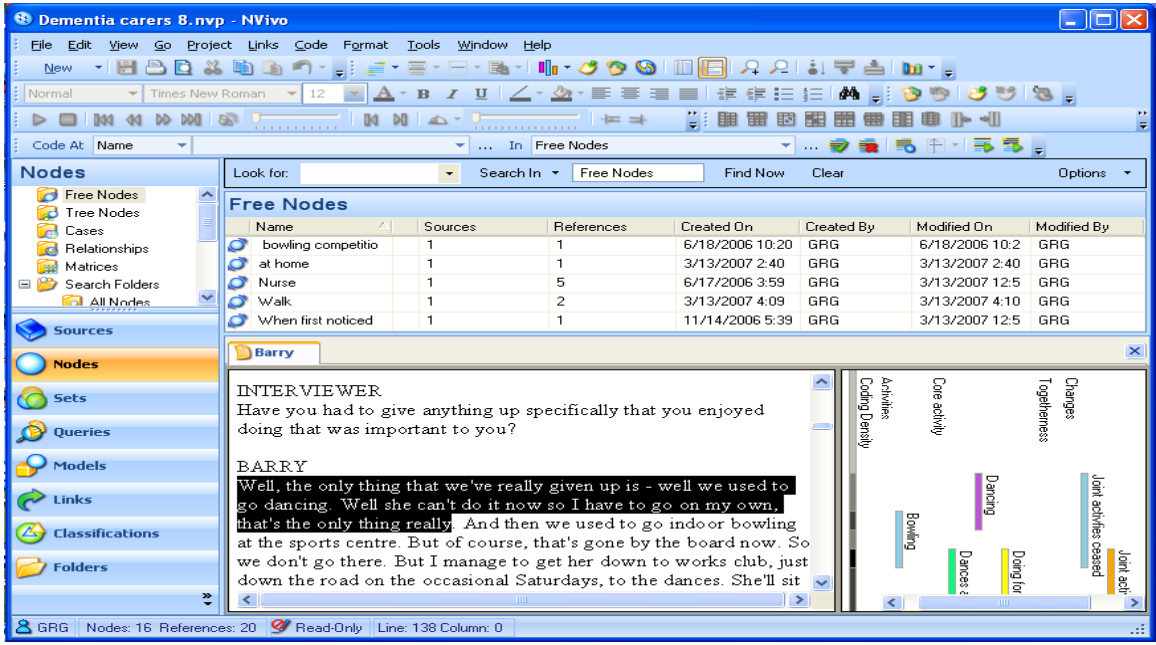
- What they see as the causes and consequences of Moral Distress

Methods

- Separate groups for nurses, physicians, other health professionals
- 2 tertiary hospitals
- 1 community hospital
- Semi-structured questions
- Supplemented with phone-interviews

Analyses

- Deductive and inductive codes
- Comparison of number of coded references across hospitals and provider type
- Descriptive analysis



Number of participants by hospital and provider type

	Tertiary Hospital 1	Tertiary Hospital 2	Community Hospital	Total
Nurses: registered nurses	6	8	5	*19*
Nurses: clinical nurse leaders	--	4	--	*4*
Other health professionals	9	7	4	*20*
Physicians	5	3	5	*13*
Total	*20*	*22*	*14*	*56*

Causes of Moral Distress—All Sites

Number of **focus groups** in which the theme/sub-theme was mentioned, by respondent type

	Nurses (n=4)	OHP (n=3)	Physician (n=3)	Total (n=10)
Quality of care				
Concerns about other providers' care	*4*	*3*	*3*	***10***
Teaching vs. optimal care	*0*	*2*	*1*	*3*
Lack of end of life conversations	*0*	*0*	*2*	2
Pain management	*2*	*0*	*0*	2
Amount of care provided				
Too much care provided: physician's choice	*4*	*1*	*1*	*6*
Too much care provided: family's choice	*4*	*2*	*2*	***8***
Too little care provided: physician's choice	*3*	*1*	*2*	***8***
Inconsistent care plans	4	1	2	7
Poor communication: within the ICU team or between ICU staff and families	*4*	*2*	*2*	***8***
End of life decision making: family and patient involvement	3	3	0	6
Interactions and conflict between ICU staff and family	3	1	2	6
Recommendations of ICU staff for patient care ignored by other ICU staff	3	2	0	5
Support or resources				
Lack of resources	*2*	*2*	*1*	*5*
Lack of support from management	*1*	*1*	*1*	*3*

Causes of Moral Distress—All Sites

Number of **times** each **theme/subtheme was mentioned**, by respondent type

	Nurses	OHP	Physicians	Total
Quality of care				
Concerns about other providers' care	***22***	*9*	***18***	***49***
Teaching vs. optimal care	*0*	*3*	*5*	*8*
Lack of end of life conversations	*0*	*0*	*14*	*14*
Pain management	*12*	*0*	*0*	*12*
Amount of care provided				
Too much care provided: physician's choice	*9*	*1*	*4*	*14*
Too much care provided: family's choice	*13*	*6*	*2*	*21*
Too little care provided: physician's choice	*7*	*5*	*7*	*19*
Inconsistent care plans	**16**	3	6	**25**
Poor communication: within the ICU team or between ICU staff and families	12	4	4	14
End of life decision making: family and patient involvement	9	**17**	0	**26**
Interactions and conflict between ICU staff and family	5	7	6	18
Recommendations of ICU staff for patient care ignored by other ICU staff	10	7	0	17
Support or resources				
Lack of resources	*6*	*5*	*4*	*15*
Lack of support from management	*4*	*1*	*5*	*10*

Concerns about other providers' care

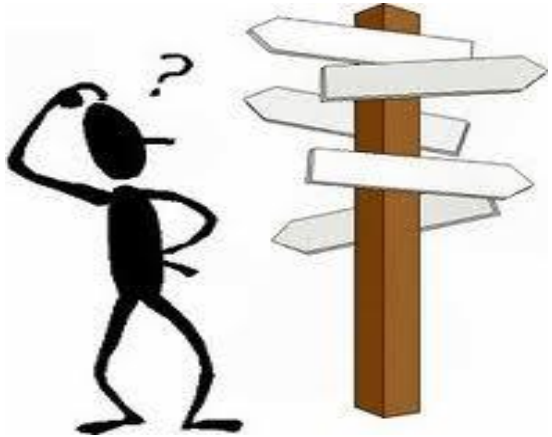
- Nurses:
  - Other nurses lacking effort/ commitment to patients
  - Physicians delay providing care

- Physicians:
  - Don't trust care provided in wards
  - ICU colleagues mismanage care; give false hope

- Other Health Professionals:
  - Residents/students giving wrong information or doing painful procedures

Inconsistent care plans

- Nurses distressed by changes in plans when attendings change
  - Confuses nurses and families/patients
  - Impacts trust in nurses



- Some physicians frustrated

by nurses' reaction to changes

Amount of care provided

1. Family wants life-support even when situation is hopeless
2. Physician wants life-support because situation might not be hopeless
3. Physician withdraws life-support when nurses or other health professionals think patient has chance of recovery

End of life decision making

- Nurses and Other Health Professionals: families given too much responsibility
- Medical team should make decision then explain to family
- Distress when patient excluded from process

Emotional response to moral distress

- FRUSTRATED!

- Physicians: annoyed, sad, guilty, stressed
- Nurses: angry, worn down, stressed, embarrassed, more compassionate, dishonest

- Other Health Professionals: guilty, embarrassed, helpless, disillusioned

Coping with moral distress

- Talking with colleagues
  - Feeling supported; venting
  - Debriefing
- Compartmentalize emotions
- Don’t internalize
  - Not a personal failure

- Detach from work
- Hide or repress emotions

Perceived Impact of Moral Distress on Patient Care

	Number of references			
	Nurses	Others	Physicians	Total
Negative impact	10	11	5	26
Positive impact	6	1	4	11
No impact	4	3	3	10

Impact of Moral Distress on Desire to Quit the ICU

	Number of references			
	Nurses	OHP	Physicians	Total
Have *not* thought about quitting	6	3	5	14
Have thought about quitting	9	6	1	16

Wanting to quit: burned out, demoralized

Not wanting to quit: love the job, interesting, rewarding

Moral distress varies by provider type

Examples:

- Nurses have distress associated with pain management
- Physicians do **not** have distress associated with opinions not being heard
- Physicians have distress when end of life discussions don’t occur
- Other Health Professionals have distress about end of life decision making process

Moral distress varies by ICU

Examples:

- Community hospital has high moral distress associated with insufficient resources
- 1 tertiary hospital distressed about lack of patient involvement in end of life decision making
- 2 hospitals felt culture unaccepting of distress

Summary

- Nurses and Other health professionals report higher moral distress than physicians
- Moral distress scores are dominated by level of disturbance (vs. frequency of events)
- No obvious association between size of ICU and moral distress
- Age is associated (inversely) with moral distress, only in other health professionals
- Years of experience is associated with moral distress, only in nurses

Summary

- Moral distress is associated with quitting the job
- Also associated with general workplace distress
- Inconsistent effect of moral distress on safety outcomes
- Moral distress is often caused by:
  - Amount of care provided, competency of other providers
  - Inconsistent care plans, end-of-life decision making process
- Mixed perception of effect on patient care
- Leads to frustration, anger, embarassment
- Reduced by debriefing with supportive colleagues

Next Steps

- Use a participatory approach to develop unit-specific interventions to address causes and consequences of moral distress
- Test and evaluate interventions
- Long term goal: tool kit of solutions that can be adapted to individual ICUs

CIHR…

Thanks to the Research Team!

- Lynn Alden
- Najib Ayas
- Vinay Dhingra
- Ann Hamric
- Natalie Henrich
- Sean Keenan
- David Kuhl
- Kim Macfarlane
- Malcolm Maclure
- Monica Norena
- Steve Reynolds
- Paddy Rodney
- Sarah Shepherd
- Miriam Stewart
- Harriet Tholin
- Hubert Wong