

Barriers to Post-arrest Therapeutic Hypothermia Adoption and Methods to Increase Implementation

Audrey L. Blewer, MPH; Marion Leary, BSN, RN; Gail Delfin, MSN, RN; David F. Gaieski, MD; Raina M. Merchant, MD, MS; Lance B. Becker, MD; Benjamin S. Abella, MD, MPhil

Department of Emergency Medicine and the Center for Resuscitation Science, University of Pennsylvania, Philadelphia, PA, USA

BACKGROUND

- Post-arrest therapeutic hypothermia (TH) has been shown to dramatically improve outcomes after resuscitation, yet studies have revealed inconsistent and slow adoption of TH.¹
- Little is known about barriers to TH implementation and methods to increase adoption.²⁻³

OBJECTIVES

We hypothesized that lack of education surrounding implementation is a more important barrier to TH adoption than lacking institutional leadership support or physician acceptance, and that an intensive, structured educational intervention might increase TH use.

METHODS

We administered mixed quantitative/qualitative surveys to clinicians before and after enrollment in a series of TH educational courses from 10/2009 to 10/2011, to determine usage and barriers to implementation. Six months post-training, self-reported clinician confidence and use of TH was assessed in the same cohort.

RESULTS

- Clinicians completed 160 surveys (81 pre-training and 79 post-training).
- A ranking survey (score range 1-7; 7 as most challenging) found that communication challenges (mean score 4.5±1.4) and lacking adequate education (4.3±1.9) were the two most emphasized barriers to TH implementation. Lacking institutional leadership support or physician acceptance was the least emphasized barrier (2.8±1.6, 3.6±2.0 respectively).
- Post-survey results found that 97% of respondents felt more confident initiating TH post-educational intervention. There was a statistically significant increase in self-reported TH usage by surveyed clinicians after participation in our TH educational programs (p<0.01).



Presented at the American Heart Association Resuscitation Science Symposium
November 2011 -- Orlando, FL

Demographics of Study Participants

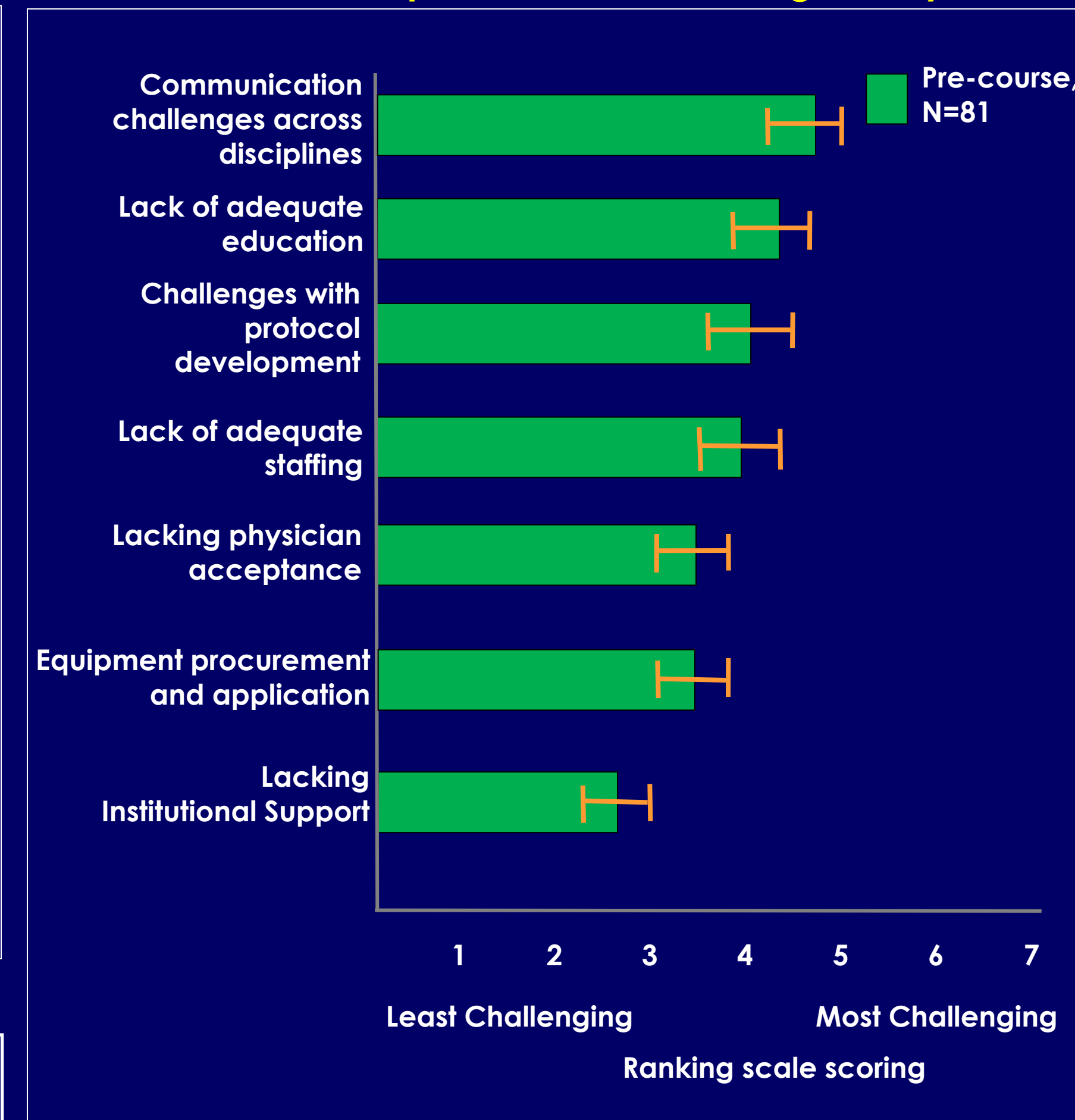
		Pre-Training N=81	Post-Training N=79
Classification	Nursing:	62%	62%
	Physician, Attending:	30%	22%
	Physician, Trainee:	1%	3%
	Other:	7%	4%
Department	Emergency Dept:	24%	*
	Medical ICU:	19%	*
	Other ICU:	23%	*
	Other:	32%	*
	No Response:	2%	*
Experience with TH	Poor:	44%	0% [†]
	Fair:	31%	1%
	Good:	21%	8%
	Excellent:	1%	80%
	No Response:	1%	11%

† p=NS
* information was not collected

Post Course Implementation Survey n=79

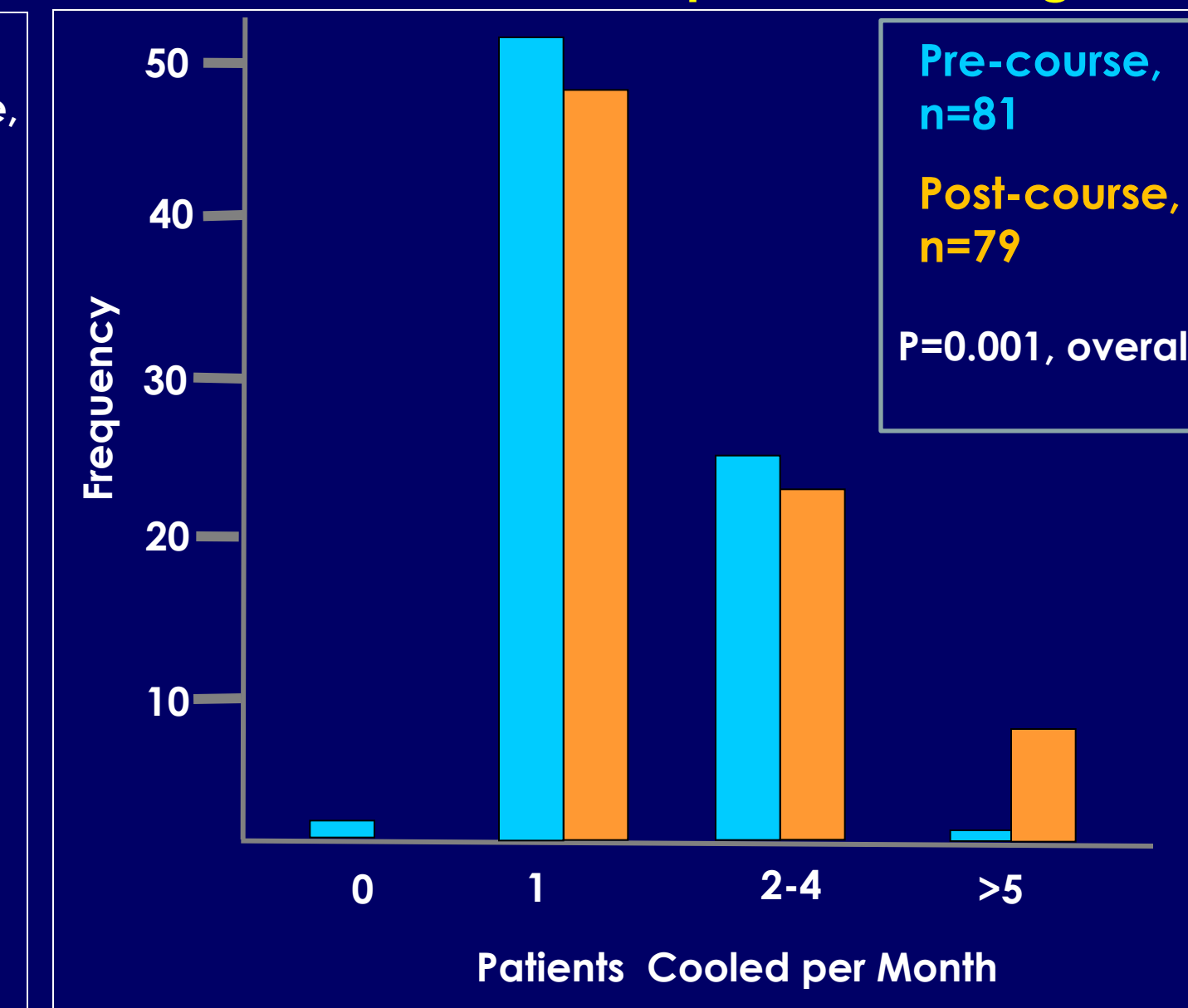
Educational course allowed me to become a champion:	96%
Course empowered me to be the "go to" person for TH questions:	86%
Course gave me confidence in initiating TH :	97%

Barriers to Implementation Ranking Survey



Survey Results

Increase in Self-Reported TH Usage



CONCLUSIONS

Practitioners highlighted lack of education surrounding TH implementation as a key barrier to TH use. A focused TH training course led to increased confidence and TH usage among participants. Future work will focus on targeted training to address specific barriers and increase appropriate TH utilization.

REFERENCES

1. Merchant et al. *Critical Care Med.* 2006; 34:1935-40.
2. Toma et al. *Critical Care Med.* 2010; 38:504-9.
3. Bigham et al. *Resuscitation.* 2010; 81:20-4.

Photographs and internet link to the educational course



<http://www.med.upenn.edu/resuscitation/hypothermia/HypothermiaTraining.shtml>