

Education

iPEC (Institute for Professional Excellence in Coaching) Training to become a certified Coach	2025
Indiana University Kelley School of Business Physician Leadership Course in Business Acumen	2018 – 2019
Northwestern University Graduate School Masters of Science in Clinical Investigation	2013
Kellogg Graduate School of Management, Northwestern University Certificate course - Management Skills for Innovative University Leaders	2009 – 2010
University of Texas – San Antonio Doctor of Medicine	2000
Harvard Extension School Post-Baccalaureate Classes	1996
Brown University Bachelor of Arts, Biology	1991 – 1995

Graduate Medical Education

Harvard Affiliated Emergency Medicine Residency Brigham & Women's / Massachusetts General Hospital	2000 – 2004
Chief Resident Harvard Affiliated Emergency Medicine Residency	2003 – 2004

Academic Appointments

Professor of Emergency Medicine (tenure granted 2020) Professor of Medicine – Cardiology Department of Emergency Medicine & Medicine Indiana University School of Medicine	2019 - Present
Associate Professor of Cardiology (tenure track) Secondary Appointment Indiana University School of Medicine	2018 - 2019
Affiliated Research Scientist Regenstrief Institute Indiana University School of Medicine	2015 – Present
Associate Professor of Emergency Medicine (tenure track) Department of Emergency Medicine Indiana University School of Medicine	2014 – 2019
Indiana University Translational Sciences Fellow Clinical Translational Sciences Institute Indiana University School of Medicine	2014 – 2017
Member Institute for Public Health and Medicine – NUFSM Center for Healthcare Studies & Center for Patient Centered Outcomes	2012 – 2014
Associate Professor of Emergency Medicine Department of Emergency Medicine	2010 – 2014

Northwestern University Feinberg School of Medicine	
Associate Professor of Medicine Cardiology	2010 – 2014
Department of Medicine	
Northwestern University Feinberg School of Medicine	
Assistant Professor of Medicine (adjunct)	2010 – Present
Division of Clinical Pharmacology	
Department of Medicine	
Duke University School of Medicine	
Inaugural Faculty	2009 – 2014
Center for Cardiovascular Innovation	
Northwestern University Feinberg School of Medicine	
Assistant Professor of Medicine (secondary appointment)	2009 – 2010
Northwestern University Feinberg School of Medicine	
Division of Cardiology, Department of Medicine	
Assistant Professor of Emergency Medicine	2004 – 2010
Department of Emergency Medicine	
Northwestern University Feinberg School of Medicine	

Hospital Appointments

Staff Physician	July 2014 – Present
Methodist Hospital, Indianapolis, IN	
Staff Physician	July 2014 – Present
Eskenazi Hospital, Indianapolis, IN	
Staff Physician	2004 – 2014
Northwestern Memorial Hospital, Chicago, IL	

Professional Appointments

Rolly McGrath Professor & Chair	Oct 2020 – Present
Department of Emergency Medicine	
Indiana University School of Medicine	
Chair (Interim)	Oct 2019 – Oct 2020
Department of Emergency Medicine	
Indiana University School of Medicine	
Vice Chair Operations & Clinical Strategy	July 2019 – Oct 2019
Department of Emergency Medicine	
Indiana University School of Medicine	
Vice Chair of Strategic Innovation	July 2018 – July 2019
Department of Emergency Medicine	
Indiana University School of Medicine	
Chief Science Officer	Aug 2016 – Aug 2018
Indianapolis EMS	
Director Clinical Research	Sept 2016 – Feb 2018
Department of Emergency Medicine	
Indiana University School of Medicine	
Associate Director of Clinical Research	July 2014 – 2016

Department of Emergency Medicine Indiana University School of Medicine	
Associate Director – Experimental Therapeutics Center for Cardiovascular Innovation (under Dr. Robert Bonow) Northwestern University Feinberg School of Medicine, Chicago, IL	2010 – 2014
Associate Chief, Clinical Affairs Department of Emergency Medicine Northwestern Memorial Hospital, Chicago, IL	2008 – 2014
Associate Medical Director Department of Emergency Medicine Northwestern Memorial Hospital, Chicago, IL	2006 – 2008

Board Certification and Medical Licensure

Fellow, American Heart Association	2013 – 2020
Fellow, American College of Cardiology	2012 –
Fellow, American Academy of Emergency Medicine	2008 –
Fellow, American College of Emergency Physicians	2007 –
Board Certified, Emergency Medicine	2005
Recertified, Emergency Medicine	2015 & 2025
Indiana State Medical License	2014 –
Illinois State Medical License (voluntary expiration)	2004 – 2014
Massachusetts State Medical License (voluntary expiration)	2003 – 2005

Professional Organizations

Ex-Officio Member of INACEP Board, Indiana ACEP	2022 –
Member, American Academy of Chairs of Emergency Medicine	2020 –
Member, European Society of Cardiology – Heart Failure Association	2014 – 2020
Fellow, American Heart Association	2013 – 2020
Fellow, American College of Cardiology	2012 –
Fellow, American Academy of Emergency Medicine	2010 –
Member, Heart Failure Society of America	2008 – 2020
Member, American College of Physician Executives	2007 – 2008
Member, Society of Academic Emergency Medicine	2003 –
Fellow, American College of Emergency Physicians	2001 –

Honors and Awards

Outstanding Physician Mentor Award, Medical Students – IUSM	April 2025
AAMC DES Engagement Survey Department exceeded/met all national benchmarks for engagement	February 2025
Impact Award – Residency Support and Advocacy IU Emergency Medicine Residents	June 2024
Faculty Honor Roll – IUSM Emergency Medicine Clerkship based on student evaluations of teaching	Feb 2024 & 2025
Alpha Omega Alpha Honor Medical Society	Aug 2022
ACEP Wellness Award 2021 to the Department of EM	June 2021

One Award given Nationwide: “demonstrating an outstanding commitment to developing aspects of wellbeing for emergency physicians.”

Women in Medicine #HeforShe Award	Oct 2020
American Heart Association Research Leaders Academy	Sept 2017
Trustees Teaching Award for the School of Medicine Recognition of Outstanding Teaching	March 2017
Honorary Member, Romanian Society of Cardiology	Sept 2016
‘American Idol Award’	Sept 2016
American College of Cardiology: JACC Heart Failure Awarded to the Associate Editor with the highest citation per refereed paper	
Best Teaching Module – Cardiology Northwestern Emergency Medicine Residency	June 2013
Top 50 Peer Reviewer for Annals of Emergency Medicine 2012	2013
Best Teacher Award Northwestern Emergency Medicine Residency	2004 – 2005

TEACHING

Local

Lecturer, Transitions in Medicine Course Dealing with Mistakes	2022
Directed Career Planning, R1 and/or R2 Year Indiana University Emergency Medicine Residency	2017–
Panel Member, LAMP Session: How to Give a Scientific Presentation Leadership in Academic Medicine Program	2017
Core Faculty Member, IU Emergency Medicine UME & GME didactics: lectures, small groups, simulation (students, residents, fellows, PA students)	2016–
Faculty Member, PGY-2 Year Directed Academic Track	2015
Clinical Teaching, IUSM Bedside teaching to Residents, Medical Students, and Physician Assistants	2014–
Instructor, Communication Skills Course – Patient, Physician, & Society Emergency Medicine Clerkship MS-I, Northwestern Univ. Feinberg SOM	2008
Core Faculty Member, Emergency Medicine Residency NUFSM	2005–2014
Physical Diagnosis Co-Instructor, Northwestern Univ. MS-II Physical Diagnosis	2006–2007
Clinical Teaching, Northwestern Univ. Feinberg School of Medicine Resident and Students – Core Lecturer for student clerkship (2005–2008)	2004–2014

National

Co-Faculty Director, Joint ACEP/SHM National CME Program on Heart Failure	Aug 2017
Course Director, The Heart Course, Las Vegas, NV	2013–

National CME: Cardiovascular Emergencies (100 participants/year, 5–7 faculty, 3 days, virtual as of 2025); lecture topics: Acute Heart Failure, Device Emergencies, Cardiogenic Shock. Updated every other year.

Teaching Administration and Curriculum Development

Local

Module Leader, Cardiovascular - Northwestern Emergency Medicine Residency	2010–2014
Module Leader, Communication – Northwestern Emergency Medicine Residency	2009
Module Leader, Administration – Northwestern Emergency Medicine Residency	2007
Faculty Head & Course Developer Patient Safety and High Risk Error Management, Seminars in Professional Development – Northwestern Emergency Medicine Residency	2006–2007
Faculty Advisor, Morbidity and Mortality Conference Northwestern Emergency Medicine Residency	2006–2008
Module Leader, Endocrine – Northwestern Emergency Medicine Residency	2006
Faculty Advisor – Students, Core Emergency Medicine Clerkship Northwestern Feinberg School of Medicine	2005–2007
Co-Module Leader, Anesthesia – Northwestern Emergency Medicine Residency	2005
Co-Module Leader, Pediatrics – Northwestern Emergency Medicine Residency	2005
Faculty Head, Core Administrative Rotation Northwestern Emergency Medicine Residency	2004–2007
Faculty Head, Administrative College Northwestern Emergency Medicine Residency	2004–2006
Conference Director, Morbidity and Mortality Conference Northwestern Emergency Medicine Residency	2004–2006

National

Abstract Session Builder – American Heart Association Scientific Sessions, Anaheim, CA	2017
Steering Committee Member – Clinical Advances in Biomarkers and Testing, Medscape Cardiology	2017–2018, 2020–2021
Steering Committee Member – Emergence of a New Era for Heart Failure Management, Medscape Education	2017–2018

RESEARCH

Grants and Contracts

Submitted

Broad Pragmatic Studies – Resubmission – (Multi-PI – Collins/Pang)	Submission Date: 9/3/2025
PCORI – (Contact PI – Pang)	Total Directs: \$11,992,000
<i>Comparative Effectiveness of Short Stay Units vs. Hospitalization in Emergency Department Patients with Decompensated Heart Failure: A Randomized Trial</i> (Initial Score – 35)	

Current

R01EB035679-01 – (Multi-PI: Desai, Goldsmith, Kapur, Pang (20%)) 09/01/2024 -
NIH/NBIB (Contact PI: Kapur) Total Directs: \$1,675,994
An AI-Assisted Strategy for Monitoring Pulmonary Congestion in Acute Heart Failure Patients in Emergency Settings

Completed Grants and Contracts

1R01HS025411 – (PI – Pang) 9/1/17 – 11/30/21
AHRQ Directs: \$1,134,614
Using Short Stay Units (SSU) Instead of Routine Admission to Improve Patient Centered Health Outcomes for Acute Heart Failure (AHF) Patients.

The majority of the over one million annual AHF hospitalizations originate from the emergency department. Admitting and re-admitting lower risk AHF patients who don't need prolonged hospitalization may increase their risk for poor outcomes and decrease their quality of life: Safe alternatives to hospitalization from the ED are needed. We propose a strategy-of-care, short stay unit management of AHF (i.e. less than 24 hours), will lead to improved outcomes for lower risk AHF patients.

R34HL136986 – (PI – Pang) 04/17/2017 – 04/01/19
NIH - NHLBI Directs: \$450,000
B-lines Lung Ultrasound Guided ED Management of Acute Heart Failure (BLUSHED-AHF)

Congestion is the primary reason why over one million Americans are hospitalized for acute heart failure (AHF) every year: Within 30 days, over 25% are dead or are re-hospitalized. These patients initially present to emergency departments (ED), yet they are treated with essentially the same medications as 40 years ago. We propose a new approach to ED AHF management: a strategy-of-care – lung ultrasound guided, protocol driven care – will lead to improved outcomes.

17IRG33411129 – (PI – Pang) 01/01/17 – 12/31/19
American Heart Association Directs: \$147,542
Lung Ultrasound Driven Strategy-of-Care to Treat Pulmonary Congestion in Patients with AHF
1: To determine whether a nitrate intense strategy safely reduces congestion, defined by LUS B-lines, better than a diuretic intense strategy. 2. To demonstrate feasibility of recruitment and compliance with study protocol to inform future study design and enrollment projections, an external site will also test our study protocol.

FC14-1409-21656 – (PI – Collins) 10/1/15 – 9/30/16
PCORI - (Site PI – Pang) \$42,387 (Subaward Only)
Get with the Guidelines Interventions to Reduce Disparities in AHF Patients Discharged from the ED (GWTG:ED)
Major Goals: Test whether a novel transitional program for discharged ED AHF patients results in better outcomes.

Investigator Initiated Study – (PI – Levy)
Wayne State University/Edwards Lifesciences Llc – (Site PI – Pang) \$78,740 (Subaward Only)
The objective of this study is to establish a prospective hemodynamic registry of patients who present with signs and symptoms of AHF and are diagnosed as such in the Emergency Department.

Investigator Initiated Study – (PI – Pang) 9/24/15 – 1/31/17
Roche Diagnostics \$491,711
High Sensitivity cTnT Rules Out Acute Cardiac Insufficiency Trial (TACIT)
Major Goals: To test the hypothesis that serial (baseline and 3 hours) hsTroponinT levels below the 99%ile, when combined with low, age specific NT-proBNP levels, will identify patients at low risk for adverse outcomes.

Investigator Initiated Contract – (Multi-PI – Collins, Levy, Pang) 7/1/14 – 6/30/17

Novartis Pharmaceuticals Corporation RLX030A2301/Task Order 1 EMROC (Contact PI – Pang) <i>A multicenter, randomized, double-blind, placebo-controlled phase III study to evaluate the efficacy, safety and tolerability of Serelaxin when added to standard therapy in acute heart failure patients.</i> Major Goals: The Hub Managers, under the direction of Dr. Pang, will manage and oversee enrollment at a total of ten independent clinical trial sites, which will participate in the clinical study.	\$921,996
Investigator Initiated Clinical Study – (PI – Pang) Cardioxyl <i>Novel utilization of 6-minute walk test in acute heart failure, an observational study.</i>	2014 - 2015 Total: \$8,918
KL2 TR000107- (PI – Donald Lloyd Jones) Multidisciplinary Clinical and Translational Science (MCTS) Program (KL2) (KL2 Scholar – Pang)	05/19/08 - 04/30/14
Investigator Initiated Study – (PI – Pang) Abbott Laboratories <i>Hypoperfusion in Acute Heart Failure Syndromes: A Pilot Study</i>	2010 - 2013 \$23,920
Investigator Initiated Study – (PI – Pang) Merck <i>Early Injury in Acute Heart Failure: A Biomarker Study</i>	2009-2011 \$54,726
Investigator Initiated Study – (PI – Gheorghiade) PDL – BioPharma (US National Director – Pang) <i>URGENT-Survey: A Prospective, Observational, Non-Interventional Study of Patients who Present with Acute Heart Failure Syndromes</i>	2006 - 2008
Eleanor Wood-Prince Grants Initiative – (PI – Pang) A Project of the Women's Board of Northwestern Memorial Hospital <i>Designing an Emergency Care Process for the Older Patient</i>	2006 - 2007 \$25,000
(Fellow – Pang) Augusta Webster Fellowship in Education <i>Curriculum Re-Design Focused on Systems Based Practice to Improve Patient Safety and Quality</i>	2005-2008 \$75,000
Submitted, Not Funded	
R01HS025972 - (PI – Pang) AHRQ <i>Mobile Integrated Health to Improve Outcomes After Hospitalization for Acute Heart Failure (MIH-AHF)</i> Hospitalization and re-hospitalization for HF predominantly affects patients of lower socioeconomic status (SES). These patients suffer not only from unequal health outcomes, but also from disparities in guideline adherence. We propose a novel strategy of health care delivery – Community Paramedicine or Mobile Integrated Health – where visiting lower SES HF patients in their homes after discharge will lead to more days alive and out of the hospital and improved quality of life.	04/01/2018 – 03/31/2023 Total Requested: \$1,963,498
R01HL1383791 – (PI – Pang) NHLBI <i>Community Paramedicine to Improve Heart Failure Guideline Adherence</i> We propose a randomized, controlled, strategy-of-care trial of Mobile Integrated Health (MIH) leveraging community paramedics paired with social workers visiting HF patients at their homes. We hypothesize MIH	09/01/2017 – 02/28/2022 \$1,548,729

plus usual practice (i.e. transitional care program) will significantly improve guideline adherence and patients outcomes compared to usual practice alone

Pilot study (PI – Cooper) 9/1/16 – 8/31/17

HFSA/EMF Grant – (EM Mentor – Pang)

Route of Hospital Admission for Heart Failure and the Association with Worsening Heart Failure and Outcomes

Major Goal: to determine whether the route of admission – ED vs. direct admission – is associated with 30 day outcomes.

R01HL1332851 – (PI – Pang)

7/1/16 – 12/31/19

NIH - NHLBI

\$624,152

Use of Lung Ultrasound to Assess Pulmonary Congestion in Patients Hospitalized for Acute Heart Failure: The BLUSH Study (B-lines Lung Ultrasound in Acute Heart Failure)

Major Goals: In this proposal, we will test whether a safe, easily learned method to assess pulmonary congestion, lung ultrasound B-lines, are associated with 30-day re-hospitalization and mortality.

(PI – Pang)

9/1/16 – 8/31/19

PCORI

\$587,415

Using Goal-Directed Observation Units Instead of Routine Admission to Improve Health Outcomes for Acute Heart Failure Patients

Major Goals: Test the clinical effectiveness of a goal directed observation unit strategy for acute heart failure versus usual care.

R34HL118350 – (PI – Pang)

04/01/2015 – 03/31/201

NIH - NHLBI

Total Directs: \$450,000

Early Aldosterone Blockade in Acute Heart Failure: An Exploratory Safety Study

We will explore the safety of early mineralocorticoid receptor blockade with high-dose spironolactone (100mg/daily), an oral mineralocorticoid receptor antagonist, versus placebo (both in addition to standard therapy), in patients admitted with acute heart failure (AHF) for 3 days.

Research – Industry Clinical Trials and DSMB

Corteria: CRAFT-WHF Phase II study Role: Site PI 2025

Beckman Coulter – NTproBNP trial – Feasibility and Pivotal Role: Site PI 2021

Beckman Coulter – hsTnT diagnostic threshold trial Role: Site PI 2020

OrthoDiagnostics NTproBNP diagnostic trial Role: Site PI 2019

Momentum Trial (Partnership with Pathology) Role: Site Co-I 2018-2021

Abbott Alinity Troponin I (Partnership with Pathology) Role: Site Co-I 2018

OrthoDiagnostics NTproBNP Diagnostic Study in AHF Role: Site PI 2018

MEMOIR-HF Trial: Cognitive Intervention to Improve Memory in Heart Failure Patients Role: Sub-Investigator 2018

STRONG-HF: STRatifying therapies based On NT-proBNP and GDF-15 in Heart Failure, Investigator Initiated Award – Europe (PI: Alex Mebazaa) Role: Member, Data Safety Monitoring Board 2017-2021

STANDUP AHF Trial Role: Site PI 2016-2019

STANDUP AHF Trial, Phase IIB study of a Novel Nitroxyl Donor (Sponsor: Bristol Myers Squibb) Role: US National Leader & Steering Committee Member	2016-2019
ICON-RELOADED, Phase IIIB study of NT-proBNP in AHF (Sponsor: Roche Diagnostics) Role: Site PI and Member, Publication Committee	2015-2018
TACTICS-AHF Trial (Site PI: Finet). Multinational Investigator Initiated Trial at DCRI investigating Tolvaptan in AHF (Sponsor: Otsuka) Role: Sub-Investigator	2015-2016
Specimen Collection in the Emergency Department for The Assessment of Clinical Performance of Troponin Assays (Site PI: Kovacs, Sponsor: Siemens) Role: Sub-Investigator	2015-2016
EMROC – AHF Registry Role: Site PI	2014-2017
Cardioxyl Phase II (ED focused) study Role: Co-Chair – Steering Committee	2014-2016
Insys Medical Role: Chair – DSMB (study halted)	2014-2015
FLOOD Study - Intersection Medical Role: Adjudication Committee Member (study halted)	2014-2015
RELAX-AHF-2 Program – Novartis Role: Executive Committee Member	2013-2018
IMPACT-AHF Trial (study on hold, started in Europe) (ThermoFisher) Role: Steering Committee Member	2013-2015
scPharmaceuticals (pivotal trial on hold) Role: Steering Committee and Advisory Board Member	2012-2013
REGAL-3 (study terminated prior to launch). PI: Alan Maisel MD Role: Co-PI	2012-2013
Novel Therapeutic Development Phase IIb Study, BLAST-AHF Trial – Trevena Role: Chair – International PI	2011-2016
COMMIT Study – Cheetah Medical Role: Site PI	2011-2012
ACTIVATE Study: Tolvaptan in Patient with Elevated Copeptin Levels (PI: Alan Maisel, MD) Role: Co-PI	2010-2013
BAY 58-2667 Phase IIB Randomized, Double Blind, Placebo Controlled (Bayer) Role: Sub-I	2010-2013
IMPROVE-HF Bridge - Pilot Study (Medtronic) Role: Co-PI	2010-2011
Stresscopin Phase IIa (Johnson and Johnson) Role: Member, Data Safety Monitoring Board	2010-2011
Use of Novel Chimeric Natriuretic Peptide in AHF – CONDITION-HF Trial (Nile Therapeutics) Role: Site PI	2009-2011
RELAX-AHF – International, Multi-Center, Randomized, Placebo Controlled Trial (Corthera/Novartis) Role: Site PI and Steering Committee Member	2008-2012
Early use of IV vasopressin antagonist in Acute Heart Failure Syndromes – International, Multi-center, randomized, placebo controlled trial (Astellas Pharmaceuticals) Role: Co-Chair (Steering Committee) and Co-Primary Investigator	2008-2009
Novel use of an adenosine antagonist in AHFS – an International, Multi-Center, Randomized, Placebo Controlled Trial (Solvay Pharmaceuticals) Role: Member Executive Steering Committee	2008-2009
RIGHT Trial – Early use of Rivaroxaban in Heart Failure Role: Sub-Investigator	2008

Pre-RELAX AHF – International, multi-center, randomized, placebo controlled trial Role: Site PI	2007-2008
MINDSET – Multi-marker Index for the Diagnosis of Sepsis in the Emergency Department. Multi Center prospective specimen procurement study for testing of future novel biomarkers in sepsis. Role: Sub-Investigator	2006

Research – Clinical Studies

R21EB034075 – (PI – Kapur)	7/1/23 -
NIH – NBIB – (Consultant – Pang)	Total Directs: \$400,000
<i>Deep Learning Assisted Scoring of Point of Care Lung Ultrasound for Acute Decompensated Heart Failure in the Emergency Department</i>	
(Site Co-PI – Pang)	2011 - 2012
NIH - NHLBI	
<i>Rule Out Myocardial Ischemia/Infarction Using Computer Assisted Tomography: A Randomized, Controlled, Multicenter, Diagnostic Trial</i>	
NIH – NHLBI HF Research Network (External Consultant for Ancillary Study – Pang)	2011-2016
RED-ROSE – Reliable Evaluation of Dyspnea and Outcomes with Acute Heart Failure in the HF Network Rose Study	

SERVICE

Chair – Service

Secretary – Vice-Chair, Council of Clinical Chairs, IUSM	2023-
Co-Chair, IUHP Physician Engagement Team with Drs Wuerz and Newby	2023
Co-Chair, Chair of Radiology Search, IUSM	2022
Member, Neurosciences Institute (NSI) – Council of Chairs	2021 – 2023
Member, Medical Staff Executive Committee	2021
Member, Cardiovascular Institute Research Advisory Group, IUSM	2020 – 2022
Member, IUSM School Executive Committee	2019-
Member, IUSM/IUH Council of Clinical Chairs	2019-
Member, Improving Patient Experience Steering Committee, IUHealth	2020

Professional Service – Local

Faculty Advisor	2024-
Asian Pacific American Medical Students Association (APAMSA)	
Search Committee Member, Regenstrief	2025
Department of Medicine Endowed Chair Position (on hold)	
Committee Member, Qualtrics Implementation – IU Health – Patient Experience	2024
Recruitment Committee – IUHMG President, Academic Section (CCC representative)	2024
Co-Lead, Jumpstart in Academic Medicine - Department of EM (Leader: Megan Palmer PhD)	2022
Member, IIS Clinical Research Partnership Council	2022

Member, Physician Alignment Council – hospital based Chair representative (IUHP/IUH)	2021
Member, Indiana University Medical Group Foundation Board	2021-
Member – COO Search Committee, IUHP	2020
Member – ALLIANCE, Alliance of Distinguished and Titled Professors at Indiana University	2020-
IUPUI Elite 50 Judge	2019
ACLS Instructor	2003 – 2006
<i><u>Professional Service – National</u></i>	
Committee Member, AACEM Leadership Group	2025-
Panelist, HF Collaboratory – working group of thought leaders, including industry, CMS, and FDA	Mar 2022
Committee Member, AACEM Diversity, Equity, and Inclusion Working Group	2021
Moderator, SAEM2021 – 3 sessions for National Meeting	May 2021, May 2022
Member, Publication Committee – GUIDED-HF study (PCORI)	2019
Member, American College of Cardiology Accreditation Services	2018
International Mentor, American Heart Association	2018
Member, Society of Academic Emergency Medicine Grants Committee	2018
Member, Society of Academic Emergency Medicine Research Committee	2017
Chair, National Heart Failure Accreditation Program – American College of Cardiology / American Heart Association	Aug 2016 – Aug 2018
ACEP Representative, Emerging Strategies for Heart Failure Roundtable – American College of Cardiology, The Heart House, Washington DC	Jul 2016
Member, Transitional Care – Evidence to Action Network (TC-E2AN), PCORI	2016
Member, Center for Medicare Services, Episode Grouper – Led by Brandeis University	2015
Member, Heart Failure Society of America Program Committee	2014 – 2016, 2015-2017
Member, Center for Medicare Services – Clinical Working Group, Cardiac III Episode of Care Grouper	2014
Co-Leader and Founder, EMROC – Emergency Medicine Research and Outcomes Consortium	2012 – 2018
Chairman, Early Stabilization of AHF, Society of Chest Pain Centers – Accreditation Committee	2012
Advisory Board, Chicago Cardiac Arrest Resuscitation Education Service (CCARES)	2011 – 2014
Member, External Affairs Committee, Society of Academic Emergency Medicine	2011 – 2013
Member: Measures and Evaluation Subgroup, H2H: Hospital to Home National Quality Improvement Initiative	2010
Program Director, Acute Heart Failure Endpoints Meeting – hosted at the FDA, Silver Springs, MD, USA	2010
Committee Member, Accreditation Review Committee – Heart Failure, Society of Chest Pain Centers	2009 – 2010

Member, AHA Scientific Statement Writing Group: Acute Heart Failure Syndromes: Emergency Department Presentation, Treatment, and Disposition	2009
Program Director, Phase II Clinical Trials Meeting – hosted at the FDA, Silver Springs, MD, USA	2009
Committee Member, NMH-NMFF-AMA Working Group – Proposals for NMH as Feasibility Center for PCPI	2008
Physician Leader, Robert Wood Johnson/Joint Commission Communication and Safety Initiative	2008
Program Director, Phase III Endpoints in AHFS Meeting – hosted at the FDA, Silver Springs, MD, USA	2008
Steering Committee Member, ED Acute Heart Failure Working Group – EMERG-HF	2007 – 2012
Committee Member, Guidelines for Risk Stratification of Patient with AHFS, Society of Chest Pain Centers	2007
Committee Member, Guidelines for Treatment of Acute Heart Failure Syndromes, Society of Chest Pain Centers	2007

Professional Service – International

Invited Faculty, Heart Failure Association of the ESC Working Group – Topic: Classification and Clinical Use of Agents with Vasodilator Properties in AHF	Dec 2021
Member, International School of Heart Failure Romanian Society of Cardiology	2016
Program Director, Acute Heart Failure Syndromes and Low Blood Pressure Working Group – Rome, Italy	2010
Program Director, 5th International Acute Heart Failure Syndromes Meeting, Stresa, Italy	2008
Program Director, 6th International Acute Heart Failure Syndromes Meeting – Co-organized with ESC/Cardiovascular Round Table in association with the Heart Failure Association, Nice, France	2008 – 2009

Professional Service – Study Section or Grant Reviewer

Chair, IU Health Values Fund – Education Review Panel	2022
Member, Health Safety and Quality Improvement Research (HSQR) Study Section, Agency for Healthcare Research and Quality (AHRQ)	2019 – 2022
Reviewer, IU Health Values Fund	2015
Committee Member, Eleanor Wood-Prince Grants Initiative Review Committee, sponsored by The Woman's Board of Northwestern Memorial Hospital	2014-2015
Reviewer, Medical Student Summer Research Program, Northwestern University Feinberg School of Medicine	2012
Ad Hoc Reviewer, Switzerland National Science Foundation	2009
Ad Hoc Reviewer, “Limited Competition for the Continuation of the Resuscitation Outcomes Consortium” (Limited Competition) (U01), NHLBI	2009

Professional Service – Editorial Boards

Guest Associate Editor, JACC – Heart Failure	2023
Member, Editorial Committee, EMERGENCIAS, The Official Journal of the Spanish Society of Emergency Medicine	2015
Editorial Board, Journal of Cardiac Failure	2013
Associate Editor, Journal of the American College of Cardiology Heart Failure	2012 – 2022
Section Editor, Therapeutic Case Presentations, American Journal of Therapeutics	2008 – 2014
<i><u>Professional Service – Journal and Abstract Reviewer</u></i>	
Abstract Reviewer, American Heart Association Scientific Sessions	2016–2019
Ad Hoc Reviewer, Internal and Emergency Medicine Journal	2016
Abstract Reviewer, Heart Failure Society of America Annual Scientific Meeting	2014–2019
Ad Hoc Reviewer, Journal of Intensive Care Medicine	2014
Abstract Reviewer, European Society of Cardiology Heart Failure Association Scientific Congress	2014-2018
Abstract Reviewer, European Society of Cardiology Abstract Review Committee Graders Pool	2013 – 2016
Ad Hoc Reviewer, European Journal of Internal Medicine	2013
Ad Hoc Reviewer, European Heart Journal	2013–
Ad Hoc Reviewer, Congestive Heart Failure	2013–2016
Ad Hoc Reviewer, Trends in Cardiovascular Medicine	2012
Ad Hoc Reviewer, JAMA	2012
Ad Hoc Reviewer, Cochrane Heart Group	2012
Ad Hoc Reviewer, BioMed Central Health Services Review	2012
Ad Hoc Reviewer, Biomarkers	2011
Ad Hoc Reviewer, Heart	2011
Reviewer, SAEM Scientific Meeting – Abstract Reviewer	2011–2012
Ad Hoc Reviewer, Circulation	2010–
Reviewer, Journal of Emergency Medicine	2010–
Ad Hoc Reviewer, European Journal of Heart Failure	2010–
Ad Hoc Reviewer, Drugs	2010
Ad Hoc Reviewer, Journal of the American College of Cardiology	2009–2020
Ad Hoc Reviewer, Circulation: Heart Failure	2009–
Reviewer, Annals of Emergency Medicine	2009–
Ad Hoc Reviewer, Cardiovascular Drugs and Therapy	2009
Ad Hoc Reviewer, American Journal of Emergency Medicine	2009–
Ad Hoc Reviewer, Heart Failure Reviews	2008–
Ad Hoc Reviewer, Journal of Cardiac Failure	2008–
Ad Hoc Reviewer, American Heart Journal	2008–

Ad Hoc Reviewer, Emergency Medicine Magazine	2008
Ad Hoc Reviewer, International Journal of Cardiology	2007–
Ad Hoc Reviewer, Journal - Teaching and Learning in Communication	2007

University Service – Departmental

Medical Student Career EM Mentor, IUSM Advisee: Adrian Huffard, class of 2021	2020
Intern Advisor, Indiana University Emergency Medicine Residency Advisees: Rachel Courtney, David Crowe, 2019?	2016, 2017, 2019
Faculty Development Committee (EM) – Member	2018
Ad Hoc Interviewer for EM Residency Candidates, IUSM Emergency Medicine Residency Program	2016
Ad Hoc Quality Review, Departmental Peer Review of IUH ED Cases	2016 – 2017
Faculty Recruitment Committee, Department of Emergency Medicine – Chair	2015 – 2018
Task Force for Academic Productivity, Department of Emergency Medicine – Member	2015
Research Committee, Department of Emergency Medicine – Lead	2016
Research Committee, Department of Emergency Medicine – Member	2014 – 2016
Clinical Competency Committee, Northwestern Emergency Medicine Residency – Co-Chair	2013 – 2014
ED Budget, Finance, Operations Group, NUFSM – Northwestern University Feinberg School of Medicine – Member	2010 – 2013
Emergency Department Quality Management Committee, NUFSM – Member	2004 – 2013
Emergency Department Executive Leadership Committee, NUFSM – Member	2004 – 2011
Ad Hoc Interviewer for EM Residency Candidates, NUFSM Emergency Medicine Residency Program	2004 – 2013

Practice Plan or Hospital Service

Mentor, IUHMG Physician Mentoring Program Mentee: Ellen Klink, MD	2025
Volunteer Faculty, CLER Visit: Clinical Learning Environment Review	2016
CDU HF Pathway – Collaborated with CDU Director and Hospitalists to develop the Heart Failure OU pathway at EZ	2015
Heart Failure Performance Improvement Committee, Hospital and Science Domains, Methodist Hospital – Member	2014
Clinical Excellence Awards Committee, NMFF – Physician Lead	2013
Negotiated change with BC/BS for CT-CA policy for emergent ED use in lower risk CP patients (NMFF)	2013
Clinical Excellence Awards Committee, NMFF – Member	2012

Critical Care / Emergency Department Technology and Device Subcommittee – Member	2012 – 2013
Galter 10 Cardiology Committee – ER Physician Lead	2011 – 2013
Clinical Excellence Awards Committee, NMFF – Member	2011
Pharmacy and Therapeutic Committee, Cardiovascular, Northwestern Memorial Hospital – Member	2010 – 2014
Care Coordination Team, Cardiac Care, GAMC – Member	2010
Patient Satisfaction, NMH/ED Strategic Goals – Owner	2010
Rapid Cycle Improvement Team, Mezzanine ER Throughput – In-process and Discharge Group, NMH – Member	2010
Heart Failure - DMAIC Committee, Emergency Department Physician Lead, Northwestern Memorial Hospital	2009 – 2013
Space Committee, Northwestern Memorial Faculty Foundation – Member	2009 – 2010
Telemetry - DMAIC Committee, Emergency Department Physician Lead, Northwestern Memorial Hospital	2009 – 2010
Compassionate Care - DMAIC Committee, Northwestern Memorial Hospital – Member	2009
Medical Staff Peer Review Committee, Northwestern Memorial Hospital – Member	2008 – 2010
Telemetry Committee, Northwestern Memorial Hospital – Ad Hoc Member	2008
Critical Care Leadership Committee, Emergency Department Physician Lead, Northwestern Memorial Hospital	2007 – 2008
Heart Failure - DMAIC Committee, Member, Northwestern Memorial Hospital	2007 – 2008
Central Line Steering Committee, Emergency Department Physician Lead, Northwestern Memorial Hospital	2007
Sepsis Steering Committee, Northwestern Memorial Hospital – Member	2007
Emergency Department Operations Committee, Northwestern Memorial Hospital – Member	2006 – 2012
Human Capital Committee, Northwestern Memorial Faculty Foundation – Member	2006 – 2009
Trauma Quality Management (QM) Committee, Northwestern Memorial Hospital – Member	2006 – 2008
Medical Staff QM Committee, Northwestern Memorial Hospital – Member	2006 – 2008
Diversion and External Transfer Workgroup, ED Workgroup Member, Northwestern Memorial Hospital	2006 – 2007
Procedure Time Out – DMAIC Committee, ED Working Group Member, Northwestern Memorial Hospital	2006 – 2007
Medication Reconciliation, DMAIC Committee, ED Working Group Member, Northwestern Memorial Hospital	2006 – 2007

Ready to Move (ED Throughput) – DMAIC Committee, ED Working Group Member, Northwestern Memorial Hospital	2006 – 2007
Women's Cardiovascular Health Planning Committee, Northwestern Memorial Hospital – Member	2006
Patient Care Committee, Northwestern Memorial Hospital – Member	2004 – 2006
Early Goal Directed Therapy – DMAIC Project Co-Leader, ED Workgroup, Northwestern Memorial Hospital	2004 – 2006
ED-Spinal Cord Injury Working Group Liaison, Northwestern Memorial Hospital	2004 – 2005

University Service - Campus

Ad Hoc Member, Department of Ophthalmology Promotion and Tenure Review Committee	2024
Self-Study Committee for Standard 4 (Faculty Preparation, Productivity, Participation, and Policies), LCME Committee	2023 – 2025
LCME Accreditation Executive Steering Committee	2022 – 2024
Physician Mentor, IUSM (Mentored four students throughout entire 4-year IUSM journey: Costa Dalis, Kang Phang, Jack Sansone, Paul Skelly)	2021
Member, Financial – Administrative Supplement Working Group, IUSM under Executive Associate Deans	2020
Coach/Mentor, Leadership in Academic Medicine Program (LAMP), Career Development Consultation	2019 – present
Erin Weber MD, PhD – Plastic Surgery	
Tony Ren MD – Hospital Medicine	
Kanika Puri MD – Pediatric GI	
Melissa Makar MD – Nephrology	
Ryan Fitzgerald MD – Orthopedics	
Erika Zevin MD – Pediatrics	
Kara Kowalczyk MD – Pediatric Emergency Medicine	
Nancy Guber MD – Emergency Medicine	
Member, IUSM Strategic Planning Steering Committee	2017
Ad Hoc Interviewer, School of Nursing Faculty Candidate	2017, 2018
Member, Clinical Trial Organization – Extended Lead Meeting	2016
Scientific Reviewer, Tufts Scientific Review Committee Pilot with IU CTSI	2016 – 2017
Chair, Sub Committee, Effective Communication and Interpersonal Skills Competency, Northwestern University Feinberg School of Medicine	2008 – 2009
Member, Effective Communication and Interpersonal Skills Competency, Feinberg School of Medicine	2007 – 2008

Mentoring

Program/Position	Mentor/Mentee	Details	Year
Chair to Chair: peer mentor	Mike Feldman MD & Jason Allen MD		2023

PhD Advisory Panel	Jason Collins PhD candidate		2020-2022
Research Mentor	Diane Kuhn MD, PhD	Working towards K award, I3 program	2022 -
Research Mentor	Kyra Reed MD	Working towards K award	2021 -
Research Mentor	Nicholas Harrison	KL2 award recipient, working towards independent funding	2021 - 2025
T32 External Advisory Panel	Indiana University School of Nursing T32		2020-2022
T35 Short Term Research Training Program Summer Medical Student Mentor	Student: Kaleb Alan Kramer	Matched into EM	2018, 2019
TransK12 NINR scholar EM Research Mentor	Christine Haedtke PhD –		2017- 2019
HFSA/EMF Grant	Stephen Green MD	Current faculty at Duke	2017 – 2018
Research mentor	Frances Russell MD	Co-I on NHLBI funded R34	2017- 2022
Research mentor	Benton Hunter MD	Written multiple publications together. He is site PI for TACIT	2017-2018
IMPRS Program (Indiana Medical Student Program for Research and Scholarship)	Melissa Egert MS-2		2017-Summer
HFSA/EMF Grant	Joseph Pare, MD	Faculty at Boston University	2016 – 2017
Research Mentor during Residency and long-distance mentor after graduation	Brian Patterson MD	Received NOGA for K08 9-22-16. Currently on faculty at University of Wisconsin - Madison	2014-2016
Academy for Quality and Safety Improvement	Rocky Samuel	Project: Safe and Efficacious Use of Procedural Sedation in the ED. NUEM Residency	2013
Academy for Quality and Safety Improvement	Charles Pearce	Project: Safe and Efficacious Use of Procedural Sedation in the ED. NUEM Residency	2013
Resident mentor	Kori Sauser MD	After residency, she became an RWJ fellow at U Michigan. Current funded investigator at MGH	2010-2012
K01 Recipient	Richard Holden PhD	IUPUI Faculty at Center for Bioinformatics	2014-2015
Physician Shadowing Program	High School Students	NUFSM	2013-2014
	Dan Reschke MD (candidate)	Northwestern University Feinberg School of Medicine. Area of Scholarly Concentration as MS1 and 2	2012-2014
Advisory Board Member	Campus Wide Graduate Students	NUVentions – Campus wide program involving Medicine, Law, Business, Engineering to spur creative and innovative solutions	2007 & 2009

Other Professional Activities

Invited Presentations – Local

<u>Event/Title</u>	<u>Location/Organization</u>	<u>Date</u>
Invited Faculty Speaker	Indiana ACEP (INACEP) Spring Conference	2021, 2022, 2023
Chair Panel: What I Look for in Faculty	Mid-west Regional SAEM (virtual)	Oct 2020
Acute Heart Failure & Mobile Integrated Health	IU School of Nursing Grand RoundsCenter for Enhancing Quality of Life in Chronic Illness	Feb 2018
Acute Heart Failure	Krannert Cardiology Grand Rounds - IUSM	Dec 2017
Medications in Heart Failure (Invited Lecturer representing HFSA – for patients and caregivers)	Mended Hearts (HFSA) "Dr. Pang is a hoot. He was so full of energy and laughter. Everyone loved listening to him talk. He was full of information that was helpful." - Mended Hearts local contact	Oct 2017
Acute Heart Failure – A View from the ER	Pulmonary Research Conference - IUSM	Jan 2016
Acute Heart Failure	4th Annual Hoosiers CME Event	2015
NMH Educational Forum – Current Topics in Health Care: Insider's Guide to the ED	NMH Educational Forum	Oct 2006

Invited Presentations – National

<u>Title / Role / Event</u>	<u>Location & Organization</u>	<u>Date</u>
Invited Panel Member: Future Trends for Emergency Medicine	Becker's Hospital Review	March 2021
Invited Faculty: How to Become an AHRQ Funded Researcher	Society of Academic Emergency Medicine Congress, Las Vegas, NV	May 2019
Invited Faculty: An n of 1: Tradition, Trials, and Tribulations of Getting Funded	Department of Emergency Medicine, Wake Forest School of Medicine	Aug 2018
Invited Faculty: Hospital Wide Grand Rounds – Acute Heart Failure: Quo Vadis	Broward County Health System, Fort Lauderdale, FL	July 2018
Invited Faculty: Cardiac Conundrums Conference – Loop Diuretics in Acute Heart Failure	Department of Emergency Medicine, University of Maryland	March 2018
Invited Faculty: Can We Improve Outcomes in Acute Heart Failure? 2018 Update	Society of Academic Emergency Medicine Congress, Indianapolis, IN	2018
Invited Faculty: American Heart Association Scientific Sessions – Acute HF in the ER: Early Management, Risk Stratification and Patient Triage	Anaheim, CA	2017
Invited Faculty: proCardio International Symposium on Biomarkers in CV Disease	Reston, VA	2017
Invited Faculty: Year in Review: Acute Heart Failure	INOVA Heart and Vascular Institute, Advanced Heart Failure Symposium (CME Accredited), Fairfax, VA	2016

Invited Faculty: Heart Failure Society of America – FDA Special Session: Off Label Drug Use	Orlando, FL	2016
Invited Faculty: Emergencies in Medicine Conference – Diuretics in AHF: Are They Evil?	Park City, UT	2016
Faculty & Course Director: Mastering Clinical Challenges in the Multidisciplinary Management of AHF (www.med-iq.com/a818), Over 2100 viewers by 11-11-2015	Johns Hopkins CME / medIQ	2014
Moderator, Invited Faculty, & Didactic Creator: Can We Improve Outcomes in Acute Heart Failure? 2014 Update on Acute Heart Failure Research (State of the Art Session)	Society of Academic Emergency Medicine, Dallas, TX	May 2014
Invited Lecturer: hsTroponin and AHF in the Emergency Department (Co- Chair: Demonstrating the Medical Value of Cardiac Biomarkers and Synergy to Patient Outcomes)	proCardio - International Biomarker Meeting (Roche Diagnostics), NY, NY	Oct 2014
Invited Faculty: Care in the Emergency Department vs. Short Stay Units	American Heart Association Scientific Sessions, Dallas, TX	Nov 2013
Invited Faculty: AHF: Decision to Admit or Discharge to Early Follow Up	24th Annual Trends in Cardiovascular Medicine Conference (CME), Squaw Valley, NV	2013

Invited Presentations - International

Title / Role & Event	Location	Date
Invited Faculty – European Society of Cardiology – Heart Failure Association Lecture: Utility of Ultrasound in Pulmonary Congestion	Athens, GR	2019
Invited Faculty – CVCT – Cardiovascular Clinical Trialists Forum Lecture: BLAST-AHF: The One Thing – Lessons Learned	French Embassy, Washington, DC	2017
Invited Faculty & Moderator & Session Chair – Romanian Society of Cardiology Meeting Session: Multi-organ Injury in AHF Lecture: BLAST-AHF and the Angiotensin System	Sinaia, Romania	Sept 2016
Chair, Global Acute Heart Failure Academy This international educational initiative, supported by Novartis Pharmaceuticals, brought together international leaders (> 10 from the US, Germany, England, Cyprus, Italy, Finland, Spain, Brazil) in AHF to develop methods on how to best teach about AHF management.		2013 - 2015
Invited Faculty – European Society of Cardiology - Heart Failure Congress Lecture: Which Patient Can I Discharge Directly From the ED?	Florence, IT	June 2016
Invited Faculty – European Society of Cardiology – Heart Failure Association Lecture: Cardiac and Pulmonary Ultrasound in the Emergency Department	Seville, Spain	May 2015

Invited Faculty and Chair – European Society of Cardiology Heart Failure Association 2014	Athens, Greece	May 2014
1. Rapid Fire – Acute Heart Failure		
2. Point-of-care cardiopulmonary ultrasound: utility in assessing pulmonary congestion		
3. Biased ligand at the angiotensin I receptor: TRV027		
Invited Faculty – Mediterranean Emergency Medicine Congress AHF - Satellite Symposium	Marseilles, France	Sept 2013
Invited Faculty – European Society of Cardiology Lecture: Advances in Therapy	Amsterdam, Netherlands	Sept 2013
Session Co-Chair & Abstract Evaluation Committee – 3rd International GREAT Network Acute Heart Failure	Rome, Italy	2013
Invited Faculty – 4th International Cardio Event Acute Heart Failure: Epidemiology, Outcomes & Pathophysiology Cardiology towards the future / Innovation in Cardiology	Florence, Italy	2012
Invited Faculty – 2nd International GREAT Network ED Management of AHFS	Rome, Italy	2011
ACLS Instructor – First AHA certified ACLS course taught in the UAE	Dubai, UAE	2004

PUBLICATIONS (Google Scholar metrics: 15041 citations, h-index = 52 last accessed Aug 2025)

* = in rank as Associate Professor (2010), ^ = learner also author on manuscript

Teaching – Data Driven Publications

1. Mercer LM, Tanabe P, **Pang PS**, Gisondi MA, Courtney DM, Engel KG, ^Donlan SM, Adams JG, Makoul G. Patient perspectives on communication with the medical team: Pilot study using the communication assessment tool-team (CAT-T). Patient Educ Couns 73: 220-223, 2008. PMID: 18703306.
2. Cameron, KA, Engel, KG, McCarthy, DM, Buckley, BA, Mercer Kollar, LM, ^Donlan, SM, ***Pang PS**, Makoul, G, Tanabe, P, Gisondi, MA, Adams, JG. Examining emergency department communication through a staff-based participatory research method: Identifying barriers and solutions to meaningful change. Ann Emerg Med 56:614-22, 2010. PMID: 20382446.
3. ^Goloback M, McCarthy DM, Schmidt M, Adams JG, ***Pang PS**. Emergency Department operational factors associated with patient satisfaction. Am J Emer Med 33:111-112, 2015. PMID: 25445872.
4. ^Reschke DJ, Seeskin ZH, Hahn EA, ***Pang PS**. Patient preferences regarding medical decision making in the emergency care setting: a pilot-study. Am J Emerg Med 33:719-721, 2015. PMID: 25687619.
5. Sauser K, ^Alkhawam L, Pierchala L, ***Pang PS**. Lactate levels as a marker of tissue hypoperfusion in acute heart failure patients seen in the emergency department: a pilot study. Emergency Care Journal. 2016; 12:5458
6. Kelly TD, de Venecia BT, **Pang PS**, Turner JS, Reed KD, Pettit KE. Bereavement scheduling policy for emergency medicine residents: A descriptive pilot study. AEM Educ Train. 2024 Jul 10;8(4):e11009. doi: 10.1002/aet2.11009. eCollection 2024 Aug. PMID: 38993542

Research Publications

7. Thomas SH, Winsor GR, **Pang PS**, Driscoll KA, Parry BA. Use of a radial artery compression device for noninvasive, near-continuous blood pressure monitoring in the ED. *Am J Emer Med* 22:474-478, 2004. PMID: 15520942.
8. **Pang PS**, Konstam MA, Krasa HB, Swedberg K, Zannad F, Blair JE, Zimmer C, Teerlink JR, Maggioni AP, Burnett JC, Jr., Grinfeld L, Ouyang J, Udelson JE, Gheorghiade M. Effects of tolvaptan on dyspnoea relief from the EVEREST trials. *Eur Heart J* 30:2233-2240, 2009. PMID: 19561338.
9. Mebazaa A, **Pang PS**, Tavares M, Collins SP, Storrow AB, Laribi S, Andre S, Courtney DM, Hasa J, Spinar J, Masip J, Peacock WF, Sliwa K, Gayat E, Filippatos G, Cleland JGF, Gheorghiade M. The impact of early standard therapy on dyspnoea in patients with acute heart failure syndromes: the URGENT-Dyspnoea Study. *Eur Heart J* 31:832-41, 2009. PMID: 19906690.
10. Styron JF, Jois-Bilowich P, Starling R, Hobbs RE, Kontos MC, **Pang PS**, Peacock WF. Initial emergency department systolic blood pressure predicts left ventricular systolic function in acute decompensated heart failure. *Congest Heart Fail* 15: 9-13, 2009. PMID: 19187401.
11. Collins SP, ***Pang PS**, Lindsell CJ, Kyriacou DN, Storrow AB, Hollander JE, Kirk JD, Miller CD, Nowak R, Peacock WF, Tavares M, Mebazaa A, Gheorghiade M. International variations in the clinical, diagnostic, and treatment characteristics of emergency department patients with acute heart failure Syndromes. *Eur J Heart Fail* 12:1253-1260, 2010. PMID: 20797987.
12. ***Pang PS**, Mehra M, Maggioni AP, Filippatos G, Middlebrooks J, Turlapaty P, Kazei D, Gheorghiade M. Rationale, design, and results from RENO-DEFEND 1: A randomized, dose-finding study of the selective A1 adenosine antagonist SLV320 in patients hospitalized with acute heart failure. *Am Heart J* 161:1012-1023.e3, 2011. PMID: 21641345.
13. ***Pang PS**, Gheorghiade M, ^Dihu J, Swedberg K, Khan S, Maggioni AP, Grinfeld L, Zannad F, Burnett JC Jr, Ouyang J, Udelson JE, Konstam MA. Effects of tolvaptan on physician-assessed symptoms and signs in patients hospitalized with acute heart failure syndromes: Analysis from the efficacy of vasopressin antagonism in heart failure outcome study with Tolvaptan (EVEREST) Trials. *Am Heart J* 161: 1067-1072, 2011. PMID: 21641352.
14. Blair J, ***Pang PS**, Schrier, RW, Metra M, Traver B, Cook T, Campia U, Ambrosy A, Burnett JC, Grinfeld L, Maggioni AP, Swedberg K, Udelson J, Zannad F, Konstam MA, Gheorghiade M. Changes in renal function during hospitalization and soon after discharge inpatients admitted for worsening heart failure in the placebo group of the EVEREST trial. *Eur Heart J* 2011. 32:2563-2572. PMID: 21785107.
15. Gheorghiade M, ***Pang PS**, ^Ambrosy AP, Lan G, Schmidt P, Filippatos G, Konstam M, Swedberg K, Cook T, Traver B, Maggioni A, Burnett J, Grinfeld L, Udelson J, Zannad F. A comprehensive, longitudinal description of the in-hospital and post-discharge clinical, laboratory, and neurohormonal course of patients with heart failure who die or are re-hospitalized within 90 days: analysis from the EVEREST trial. *Heart Fail Rev* 17:485-509, 2012. PMID: 21932146.
16. Collins SP, Lindsell CJ, Storrow AB, Fermann GJ, Levy PD, ***Pang PS**, Weintraub N, Frank Peacock W, Sawyer DB, Gheorghiade M. Early changes in clinical characteristics after emergency department therapy for acute heart failure syndromes: identifying patients who do not respond to standard therapy. *Heart Fail Rev* 17:387-394, 2012. PMID: 22160814.
17. Vaduganathan M, Gheorghiade M, ***Pang PS**, Konstam MA, Zannad F, Swedberg K, Grinfeld L, Burnett JC Jr, Krasa HB, Zimmer C, Blair J, Ouyang J, Maggioni AP, on behalf of the EVEREST investigators. Efficacy of oral tolvaptan in acute heart failure patients with hypotension and renal impairment. *J Cardiovasc Med* 13:415-422, 2012. PMID: 22673023.

18. Mentz RJ, Chung MJ, Gheorghiade M, ***Pang PS**, Kwasny MJ, Ambrosy AP, Vaduganathan M, O'Connor CM, Swedberg K, Zannad F, Konstam MA, Maggioni AP. Atrial fibrillation or flutter on initial electrocardiogram is associated with worse outcomes in patients admitted for worsening heart failure with reduced ejection fraction. *Am Heart J* 164:884-892, 2012. PMID:23194489.
19. Teerlink JR, Cotter G, Davison BA, Felker GM, Filippatos G, Greenberg BH, Ponikowski P, Unemori E, Voors AA, Adams KF Jr, Dorobantu MI, Grinfeld LR, Jondeau G, Marmor A, Masip J, ***Pang PS**, Werdan K, Teichman SL, Trapani A, Bush CA, Saini R, Schumacher C, Severin TM, Metra M; for the RELAXin in Acute Heart Failure (RELAX-AHF) Investigators; "Serelaxin, recombinant human relaxin-2, for treatment of acute heart failure (RELAX-AHF): a randomized, placebo-controlled trial" *Lancet* 381:29-39, 2013. PMID:23141816.
20. Metra M, Cotter G, Davison BA, Felker GM, Filippatos G, Greenberg BH, Ponikowski P, Unemori E, Voors AA, Adams KF Jr, Dorobantu MI, Grinfeld L, Jondeau G, Marmor A, Masip J, ***Pang PS**, Werdan K, Prescott MF, Edwards C, Teichman SL, Trapani A, Bush CA, Saini R, Schumacher C, Severin T, Teerlink JR; RELAX-AHF Investigators. Effect of Serelaxin on cardiac, renal, and hepatic biomarkers in the Relaxin in Acute Heart Failure (RELAX-AHF) development program: correlation with outcomes. *J Am Coll Cardiol* 61:196-206, 2013. PMID: 23273292.
21. Ambrosy AP, ***Pang PS**, Khan S, Konstam MA, Fonarow GC, Traver B, Maggioni AP, Cook T, Swedberg K, Burnett JC Jr, Grinfeld L, Udelson JE, Zannad F, Gheorghiade M; on behalf of the EVEREST trial investigators. Clinical course and predictive value of congestion during hospitalization in patients admitted for worsening signs and symptoms of heart failure with reduced ejection fraction: findings from the EVEREST trial. *Eur Heart J* 34:835-843, 2013. PMID: 23293303.
22. Girerd N, ***Pang PS**, Swedberg K, Fought A, Kwasny MJ, Subacius H, Konstam MA, Maggioni A, Gheorghiade M, Zannad F; for the EVEREST investigators. Serum Aldosterone is associated with mortality and re-hospitalization in patients with reduced ejection fraction hospitalized for acute heart failure: analysis from the EVEREST trial. *Eur J Heart Fail* 15:1228-1235, 2013. PMID: 23787720.
23. Payvar S, Spertus JA, Miller AB, Casscells SW, ***Pang PS**, Zannad F, Swedberg K, Maggioni A, Reid KJ, Gheorghiade M. Association of low body temperature and poor outcomes in patients admitted with worsening heart failure *Eur J Heart Fail* 15:1382-1389, 2013. PMID: 23858000.
24. Maisel A, Xue Y, van Veldhuisen DJ, Jaarsma T, ***Pang PS**, Butler J, Pitt B, Clopton P, de Boer RA. Effect of Spironolactone on 30-day death and heart failure rehospitalization (from the COACH Study). *Am J Cardiol* 114:737-742, 2014. PMID: 25129066.
25. Grieg D, Austin PC, Zhou L, Tu JV, ***Pang PS**, Ross HJ, Lee DS. Ischemic Electrocardiographic Abnormalities and Prognosis in Decompensated Heart Failure. *Circ Heart Fail* 7:986-993, 2014. PMID: 25281654.
26. Voors AA, Davison BA, Teerlink JR, Felker GM, Cotter G, Filippatos G, Greenberg BH, ***Pang PS**, Levin B, Hua TA, Severin T, Ponikowski P, Metra M. Diuretic response in patients with acute decompensated heart failure: characteristics and clinical outcome: an analysis from RELAX-AHF." *Eur J Heart Fail* 16:1230-1240, 2014. PMID: 25287144.
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28. ^Sauser K, Spertus JA, Pierchala L, ***Pang PS**. Quality Of Life Assessment For Acute Heart Failure Patients From Emergency Department Presentation Through 30 Days Post-Discharge: A Pilot Study with The Kansas City Cardiomyopathy Questionnaire. *J Card Fail* 20: 18-22, 2014. Erratum *J Card Fail* 20:378.e11-15. PMID: 24296380
29. ***Pang PS**, Collins SP, Sauser K, Andrei AC, Storrow AB, Hollander JE, Tavares M, Spinar J, Macarie C, Raev D, Nowak R, Gheorghiade M, Mebazaa A. Assessment of dyspnea early in acute heart failure: patient characteristics and response differences between Likert and visual analog scales. *Acad Emerg Med* 21:659-666, 2014. PMID: 25039550.
30. Januzzi JL, Sharma U, Zakrofsky P, Truong QA, Woodard PK, Pope JH, Hauser T, Mayrhofer T, Nagurney JT, Schoenfeld D, Peacock WF, Fleg JL, Wiviott S, ***Pang PS**, Udelson J, Hoffmann U. Sensitive troponin assays in patients with suspected acute coronary syndrome. *Am Heart J*. 169:572-8, 2015. PMID: 25819865.
31. Patterson B, Venkatesh A, ^AlKhawam L, ***Pang PS**. "Abdominal CT Utilization and 30 day Re-visits in Emergency Department Patients Presenting with Abdominal Pain." *Academic Emergency Medicine*. 2015 Jul;22(7): 803-10. Doi: 10.1111/acem.12698. PMID 26112159
32. AbouEzzeddine OF, Lala A, Khazanie PP, Shah R, Ho JE, Chen HH, ***Pang PS**, McNulty SE, Anstrom KJ, Hernandez AF, Redfield MM; NHLBI Heart Failure Clinical Research Network. Evaluation of a provocative dyspnea severity score in acute heart failure. *Am Heart J*. 2016 Feb;172:34-41. doi: 10.1016/j.ahj.2015.10.009. Epub 2015 Oct 20. PubMed PMID: 26856213; PubMed Central PMCID: PMC4748181.
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35. Cotter G, Voors AA, Prescott MF, Felker GM, Filippatos G, Greenberg BH, ***Pang PS**, Ponikowski P, Milo O, Hua TA, Qian M, Severin TM, Teerlink JR, Metra M, Davison BA. Growth differentiation factor 15 (GDF-15) in patients admitted for acute heart failure: results from the RELAX-AHF study. *Eur J Heart Fail*. 2015 Nov;17(11):1133-43. doi: 10.1002/ehf.331. Epub 2015 Sep 3. PubMed PMID: 26333529.
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40. Hou PC, Filbin MR, Napoli A, Feldman J, ***Pang PS**, Sankoff J, Lo BM, Dickey-White H, Birkhahn RH, Shapiro NI. Cardiac Output Monitoring Managing Intravenous Therapy (COMMIT) to Treat Emergency Department Patients with Sepsis. *Shock*. 2016 Jan 12. [Epub ahead of print] PubMed PMID: 26925867.
41. Kim HS, Lank PM, ***Pang PS**, Courtney DM, Lambert BL, Gravenor SJ, McCarthy DM. ED opioid prescribing is not associated with higher patient satisfaction scores. *Am J Emerg Med*. 2016 Jul 21. pii: S0735-6757(16)30428-4. doi: 10.1016/j.ajem.2016.07.033. [Epub ahead of print] PubMed PMID: 27471063.
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AHF: Strategies to Reduce Readmissions
VuMedi Webinar

2017 Invited Faculty
Clinical Strategies to Reduce Interferences in Lab Testing
Medscape CME Program

2016 - Invited & Lead Faculty
Utility of Biomarker Guided Therapy in Heart Failure (CME Course)
Medscape <http://www.medscape.org/viewarticle/859203>
By Dec 2016, over 30,000 learners, 17,129 test takers

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