

Society of Critical Care Medicine Midwest Chapter Newsletter

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Upcoming Events/ Special Dates

June 30 2021 : Abstracts due for upcoming Conference

August 7, 2021: 2nd Annual MWC SCCM Conference

Our Vision

To share the knowledge, disseminate innovative ideas and practices by collaboration of critical care providers through research, and education, with goal of delivering excellence at bedside of critically ill , and creating future leaders in critical care.

Our Mission

Educate, innovate, network for future of critical care



Girish G. Deshpande, MD, FAAP, FCCM
President & CEO
Midwest Chapter of SCCM

President's Address

As the first President of the Midwest Chapter, I welcome you all with the launch of this first newsletter. We have all been hit hard with the COVID-19 pandemic, which has affected our lives professionally and personally. Our chapter has shown tremendous growth even through this difficult time, due to the hard work, dedication, and commitment of our members. We held a successful Inaugural All Virtual Annual Conference during the fall of 2020. Last year, we also started the Quarterly Webinars with CME/CEU hours for the viewers. We have a strong social media presence on Facebook, Twitter, and LinkedIn. Thank you to our committees, chairs, and members for raising awareness of the chapter—through word of mouth information alone, our numbers have increased to more than 200 in under just two years of inception of chapter. And we launched our own website, www.sccmmwc.org, last month. Despite the challenges the pandemic has created, our commitment to our goals and mission remains firm as we march towards our second Annual Virtual Conference on August 7, 2021. Our medical community must continue in our efforts to spread the correct information regarding this deadly disease and to increase the health and well-being of our communities. Believe the science, use common sense and proper hygiene, and proceed with caution! Thank you for all of the hard work you do and a warm welcome to all our members!

A handwritten signature in black ink, appearing to read "G. Deshpande". The signature is stylized and fluid.

Organizational Structure

Executive Committee

President (Chair)	Girish Deshpande
President-Elect (Vice-Chair)	Varsha Gharpure
Secretary	Padmaraj Duvvuri
Treasurer	Candice White Duvvuri

Board of Directors

State Representing	Members-at-Large
IL	Leah Harris
IL	Eduardo Smith-Singares
IL	Deepak Nair
IL	Kaninika Verma
IN	Judith Jacobi
IN	Babar Khan
IN	Rajat Kapoor
MO	Ali Javed
MO	Keyrouz Salah

Steering committee

Subcommittee	Chair
Membership/Finance	Joe Bodkin
Educations/Simulation	Vinod Havalad
Communications	Payal K. Gurnani
Research	Eduardo Smith-Singares
Nomination	Varsha Gharpure
Outreach	Jarva Chow

Executive Committee



President & CEO

Girish G. Deshpande, MD, FAAP, FCCM
Pediatric Intensivist,
Children's Hospital of Illinois, Peoria, IL
Professor of Clinical Pediatrics and
Critical Care Medicine
University of Illinois College of Medicine
(Peoria)



President Elect

Varsha Gharpure, MD, FAAP, FCCM
Pediatric Intensivist,
Advocate Children's Hospital, Park
Ridge, IL



Treasurer

Padmaraj Duvvuri, MD
Advanced Heart Failure and Transplant
Cardiology Fellow



Secretary

Candace White, MSN, APRN, AGCNS
Advance Practice Nurse,
Structural Heart, Cardiothoracic surgery,
Cardiology
UnityPoint Methodist Hospital



Chair

Payal K. Gurnani,
PharmD, BCPS, BCCCP,
FCCM

Communications Committee

The Communications Committee is excited to announce the launch of our website: www.sccmmwc.org, which features information on our upcoming Second Annual Midwest Chapter Conference, links to our past conference lectures, and how to get involved in the Chapter. Our Committee is also excited for the release of our first Newsletter – these Newsletters will be published quarterly and contain patient cases, committee updates, and educational opportunities, among other information.

Follow us on social media: Facebook (www.facebook.com/SCCMMW/) and Twitter (@SCCMMW).

If you have any questions about the Communications Committee or would like to be involved, please email: sccmmwccommunications@gmail.com

Committee Members

Vice-Chair—TBD
Nekaiya Jacobs, MD
Ali Javed, MD (BOD Liaison)
Krishnaji Aparanji, MD
Ruth Avelino, PharmD
Varsha Gharpure, MD
Nisha Agasthya, MD



Chair

Vinod Havalad, MD

Education and Simulation Committee

We are working hard to complete preparations for the Second Annual Virtual Conference on August 7th. We also continue to work towards securing speakers for our quarterly webinar series.

We are always looking for new members. This is a great opportunity for motivated individuals to get involved in the broader critical care community and to help steer the direction of critical care in the Midwest.

Please direct all questions to sccmmwceducation@gmail.com.

Committee Members

Megan Kupferschmid, CCRN
(Vice-Chair)

Rajat Kapoor, MD (BOD Liaison)

Amy Stewart, MD

Toufic Khairallah, APN

Bhagat Aulakh, MD

Usman Raheemi, MD

Lauren Rissman, MD



Chair

Joe Bodkin, PharmD,
BCCCP

Membership and Finance Committee

We are excited to announce our current endeavors for the Midwest chapter and our members in general:

1. We are garnering sponsorships for our coming second annual chapter conference to assist with our grants and other chapter expenses.
2. We are actively working with members to ensure they are engaged in their membership and reaching out to those that have let their membership expire.
3. We will be evaluating our membership and participation at the second annual chapter conference to continue to grow our chapter.

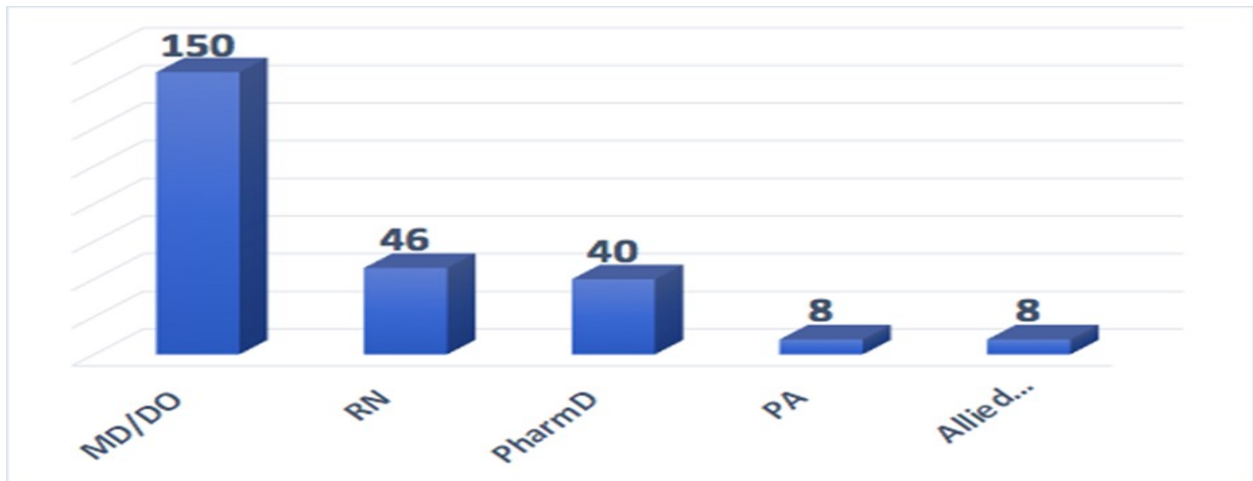
Please direct all questions
to sccmmwcfinance@gmail.com.

Committee Members

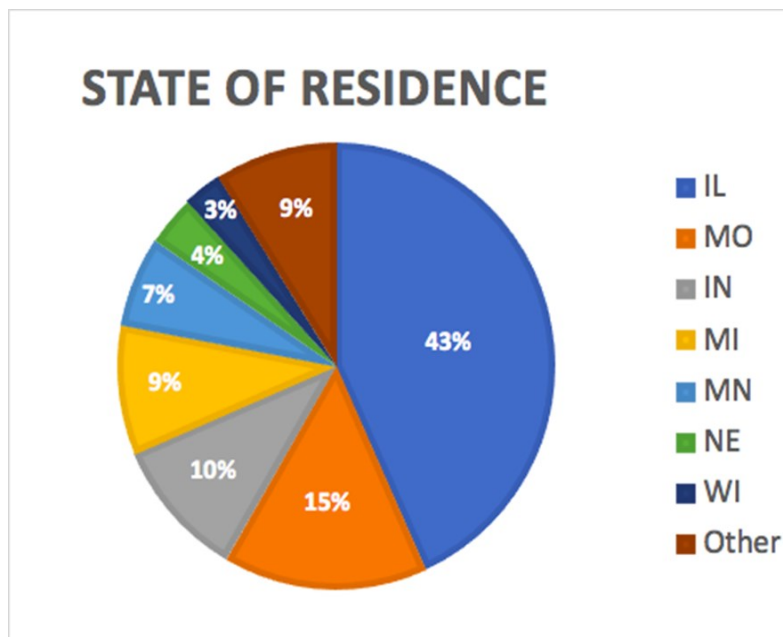
Vincent Soriano, PharmD
Deepak Taneja, MD
Candice White, MSN, APRN
Padmaraj Duvvuri, MD
Laura Smith, MD
Varsha Gharpure, MD

Membership

We are 200 + members strong!



From different disciplines in critical care and areas of the Midwest





Chair

Varsha Gharpure, MD, FAAP,
FCCM

Nomination Committee

The nominations committee is excited to hold the first election of the SCCM Midwest Chapter for various office positions in June 2021.

We had a great response from members. Kudos to Dr. Lauren Koffman for building our voting platform through Google Forms. Results will be announced at our Chapter's Annual Congress in August 2021!

Looking forward to meeting you all Virtually!

Please direct all questions to sccmmwcnomination@gmail.com.

Committee Members

Bhagat Aulakh, MD
Lauren Kaufmann, MD
Ruth Avelino, PharmD



Chair

Edwardo Smith-Singares, MD

Research Committee

We are excited to announce our current endeavors for the Midwest chapter and our members in general:

1. We are receiving abstracts for our coming second annual chapter conference: they will be evaluated and ranked according to set criteria.
2. We are receiving research proposals for our first round of seed-grant funding; details and eligibility criteria are on our website.
3. We will be chairing panels and breakout sessions during the conference in collaboration with our other team members.

Please direct all questions to sccmmwcresearch@gmail.com.

Committee Members

Nikunj Choksi, MD
(Vice Chair)

Salah Keyrouz, MD
Sandeep Tripathi, MD

Education Corner— Toxicology Pearls

Hyperinsulinemia Euglycemic Therapy (HIET)

Rosario Ruth Avelino, PharmD, BCPS, BCCCP

Background:

According to the 2019 American Association of Poison Control Centers Data ,4.84% of all fatal substance exposures were associated with CCBs (Calcium Channel Blocker) and 3.31% were associated with BBs (Beta-Blockers) ⁽¹⁾. In 2017, a workgroup of international experts made consensus recommendations regarding the management of CCB Poisonings in Adults.⁽²⁾They recommend that, in addition to standard supportive care, Hyperinsulinemic Euglycemic Therapy (HIET), should be used as a first line therapy (1D =Strong recommendation with Very low level of evidence) for symptomatic patients with myocardial dysfunction. It is also recommended as an initial therapy in severe Beta-Blocker overdose (3, 4). Although controlled studies in humans are lacking, growing evidence in animal studies and human case reports, demonstrate that this therapy appears to be superior in terms of safety and survival for poisonings involving CCBs and BBs. Many regional poison control centers now consider this therapy as first line, in addition to standard of care, in potentially severe CCBs and BBs overdose ^(2,3,4)

Pharmacology: ^(2,3,4)

HIET's mechanism of action is thought to be related to:

- Increased inotropy via direct, concentration-dependent inotropic effect of insulin. This counteracts the depressed myocardial activity induced by CCBs and/or BBs poisonings.
- Improved glucose supply and utilization in cardiac myocytes for energy due to insulin and extra dextrose provided. This counteracts the glucose uptake impairment in cardiac myocytes induced by CCBs and BBs poisonings.
- Direct vascular dilation effect of insulin, leading to decreased systemic vascular resistance, improved cardiac output and improved systemic perfusion.

Indications: ^(2,3,4,5)

Patients with severe BB or CCB overdose, specially those with symptomatic myocardial contractility and perfusion issues.

It is recommended to start early in therapy, with guidance from, and collaboration with, regional poison control centers/ toxicologists.

HIET Management entails the following ^(2,3,4,5)

1. Initial IV bolus of Regular insulin at 0.5-1unit/kg
2. Start Initial Regular insulin infusion rate at 0.5-1unit/kg/hr.
3. May titrate insulin rates (in 0.5 -1unit/kg/hr increments) every 10-15min up to a max of 10units/kg/hr, if refractory shock or Peri-arrest/ refractory to first line treatment oc-

Education Corner— Toxicology Pearls

Hyperinsulinemia Euglycemic Therapy (HIET)

HIET Management entails the following ^(2,3,4,5)

5. Monitor Potassium and replace as needed; Permissive hypokalemia (goal K = 2.8 -3) is recommended to
avoid abrupt extracellular shifts when tapering rates down
 - Monitor every 1-2hrs while insulin rate being titrated
 - Monitor every 4-6hrs when insulin rate is stable and electrolyte corrected
 - Maintain K (above 3meq/L)
6. Monitor other electrolytes: Mag, Phos (baseline and every 4-6hrs) when stable .

Goals of Therapy ^(2,3,4,5)

- Reversal of hypotension, stabilization of vital signs and increased end-organ perfusion/ cardiac function.
- Maintain euglycemia
- Maintain stable potassium (permissive hypokalemia)/electrolytes

Practical Issues to consider: ^(5,6,)

- Fluid overload may be a problem with high infusion rates of insulin and dextrose – consider using more concentrated insulin infusion (i.e 10units/ml; 16units/ml); consider using more concentrated dextrose solutions (Central line access needed if dextrose concentrations exceed osmolality above 900 mOsm/L). ⁽⁶⁾
- If therapeutic endpoints achieved ⁽⁵⁾
 1. Wean pressors first
 2. Wean /taper insulin drip if hemodynamically stable and only on insulin infusion. Slow taper is recommended to avoid rapid electrolyte shifts, particularly potassium. Decrease insulin rates no faster than 0.5units/kg/hr every 1-2hrs, while monitoring electrolyte shifts (particularly potassium). Slower in the setting of renal failure unless dialysis is involved.

Reference:

1. (2020) 2019 Annual Report of the American Association of Poison Control Centers' National Poison Data System (NPDS): 37th Annual Report, *Clinical Toxicology*, 58:12, 1360-1541
2. St-Onge, M, Gilchrist IC , et al. Experts Consensus Recommendations for the Management of Calcium channel blocker poisonings in Adults. *Crit Care Med* 2017;45:e306-315
3. Engebretsen KM, Kaczmarek KM, et al. High-dose insulin therapy in Beta Blocker and calcium channel - blocker poisoning. *Clinical Toxicology* (2011) 49,277-283
4. Krenz, JR , Kaakch Y. An Overview of Hyperinsulinemic-Euglycemic Therapy in Calcium Channel Blocker and Beta Blocker Overdose. *Pharmacotherapy* 2018;38(11):1130–1142)
5. Illinois Poison Control Center
6. Safe Practices for Parenteral Nutrition: Task Force for the Revision of Safe Practices for Parenteral Nutrition. *J Parenter Enteral Nutr.* 2004 ;28(6):S39-S70.