

6th Edition of World
OBESITY and
WEIGHT
Management Congress
&
4th Edition of International
Conference on
DIABETES and
ENDOCRINOLOGY

19-21, October 2026
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01801, USA

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Central European Summer Time
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6TH EDITION OF

WORLD OBESITY AND WEIGHT MANAGEMENT CONGRESS

&

4TH EDITION OF

International Conference on

DIABETES AND ENDOCRINOLOGY

HYBRID EVENT

19-21
OCTOBER 2026

BOOK OF
ABSTRACTS

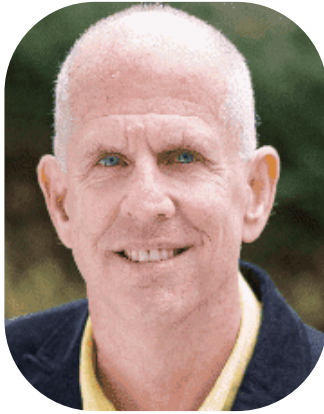


Index

Index

Keynote Speakers	4
Welcome Messages	6
Table of Contents	12
About Magnus Group	17
About CPD Accreditation	18
Keynote Presentations	19
Oral Presentations	43
Poster Presentations	98
Workshops	120

Keynote Speakers



Russell Rising

D & S Consulting Services Inc.,
United States



Scott Isaacs

Emory University School of Medicine,
United States



Hassan Massoud Heshmati

Endocrinology Metabolism Consulting, LLC,
United States



Mahir Khalil Ibrahim Jallo

Thumbay University Hospital,
United Arab Emirates



Bob Esquerre

Esquerre Fitness Group International,
United States



Ann Gilbert

Fit-Her Health & Fitness for Women,
United States



Tracy Norfleet

Weight Liberation®,
United States



Andrzej Bissinger

Medical University of Lodz,
Poland



Michelle Petties

Brand New Now Press,
United States

Keynote Speakers



Vicky Midwood

Go Figure Coaching,
United Kingdom



Wan Rosli Wan Ishak

Universiti Sains Malaysia,
Malaysia



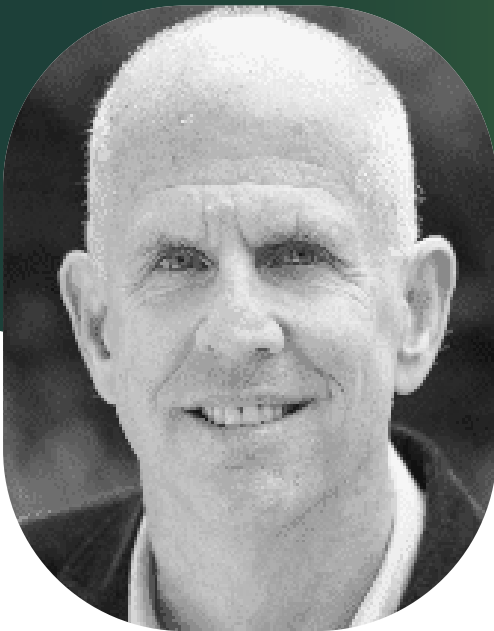
Sujith Rajan

NYU Long Island School of Medicine,
United States



Daryle Wane

Nurse Consultant,
United States



Welcome Message

Russell Rising

D & S Consulting Services Inc., United States

Dear Conference Attendees,

It's an honor to write these welcome notes for this year's WOC. Despite all the scientific advances, obesity still plagues many individuals worldwide. Part of the reason many individuals fail to lose weight is due to inaccurate exercise energetics provided by clinicians utilizing metabolic carts. Furthermore, metabolic carts require physical connection to instrumentation via a face mask or head gear. Moreover, there is no availability of metabolic measurements in local health clubs that could be utilized as an adjunct for continued weight loss. This year's goal is to present a proposal that would bring whole room indirect calorimetry (WRIC) to mainstream health and wellness and have it available for many health clubs to utilize to measure the energetics of any physical activity. This year's WOC is a great opportunity for all participants to gain knowledge of how WRIC can be incorporated into many types of health and wellness centers.



Welcome Message

Bob Esquerre

Esquerre Fitness Group International, United States

Dear Conference Attendees,

See the Person. Honor the Journey. Support the Pathway. Change Lives.

It is an honor and privilege to welcome members of the Obesity Care Advocacy Community attending the 2026 World Obesity and Weight Management Congress in Boston.

We gather at an extraordinary time in obesity care. Our understanding continues to evolve—from focusing primarily on body weight toward recognizing obesity as a complex, chronic, heterogeneous, and multifactorial disease influenced by biological, physiological, psychological, behavioral, social, and environmental factors.

That evolution challenges all of us to think differently about how we support people managing obesity.

Advances in medicine, metabolic and bariatric surgery, pharmacotherapy, nutrition, behavioral health, and research are creating new possibilities. But the journey doesn't end when someone leaves a clinical appointment.

Life Happens Between Appointments.

That is where the Health & Fitness Sector has an opportunity to become a more informed, collaborative, and valuable part of the obesity-management support ecosystem.

The Person-First Pivot

Our sector must be prepared to move from where we are to where we have to go:

From Weight-Loss Outcomes → To Total Health Outcomes

From One-Size-Fits-All → To Individualized, Adaptive Programming

From Exercise Harder → To Appropriate Physiological & Psychological Stimulus

From Prescribe & Expect Compliance → To Listen, Collaborate, Monitor & Adapt

From Designing People Around Programs → To Designing Programs Around People

From Pounds Lost → To Health Gained

This requires more than new programming. It requires new competencies, better conversations, stronger partnerships, and a different mindset.

Success must also extend beyond the scale—to physiological health, strength, cardiorespiratory fitness, functional capacity, mobility, psychological well-being, behavioral health, confidence, social connection, and quality of life.

So, As We Come Together In Boston, Let's Build The Bridge.

Let's connect science, medicine, advocacy, lived experience, community support, and the Health & Fitness Sector.

Let's challenge weight bias, reduce stigma, expand access, strengthen collaboration, and create environments where more people feel welcomed, understood, respected, and supported.

See the Person. Honor the Journey. Support the Pathway. Change Lives.

Welcome to Boston. Now, let's build the future of person-first obesity care—together.



Welcome Message

Ann Gilbert

Purdue University, United States

Dear Conference Attendees,

Thank you for joining me for Weightless, Not Powerless: Reimagining Obesity Care Through Aquatic Fitness. Together, we'll explore how the aquatic environment can transform the way we approach obesity care by reducing physical barriers, restoring confidence, and creating opportunities for safe, effective movement. Whether you work in fitness, rehabilitation, healthcare, or wellness, I hope you'll leave with practical strategies, current research, and renewed inspiration to help individuals move with greater freedom and purpose. Thank you for investing your time in this important conversation. I look forward to learning, sharing, and growing together with you.



Welcome Message

Tracy Norfleet

Weight Liberation®, United States

Dear Conference Attendees,

It is an honor to welcome you to the session entitled Confronting Weight Bias and Cultivating Cultural Humility in Obesity Care. We are living in a time when the field of obesity medicine is advancing rapidly, yet the therapeutic relationship remains foundational to patient engagement and outcomes.

A deliberate, evidence-based approach to addressing provider weight bias and cultivating cultural humility is necessary to advance our understanding of barriers to effective care. This session examines the research on provider weight bias and supports self-examination with validated tools for assessing implicit bias. You will learn to introduce cultural humility as an active, ongoing clinical practice and leave with practical, immediately applicable strategies for weight-inclusive, person-centered care.

This is a great opportunity for WOC participants to gain evidence-based tools and actionable frameworks that directly impact patient care and outcomes.



Welcome Message

Andrzej Bissinger

Medical University of Lodz, Poland

Dear Conference Attendees,

Welcome to the 6th Edition of the World Obesity and Weight Management Congress!

It is my great pleasure to welcome you to the 6th Edition of the World Obesity and Weight Management Congress, taking place in the historic and vibrant city of Boston, Massachusetts, USA.

Boston, a global center of medicine, science, and innovation, provides an inspiring setting for our gathering of experts, researchers, healthcare professionals, and specialists from around the world. This year's congress offers a valuable opportunity to meet in person, exchange knowledge, discuss the latest scientific advances, and explore new perspectives in obesity and weight management.

Obesity remains one of the major challenges facing modern healthcare, requiring a multidisciplinary approach and close collaboration between clinicians, researchers, and other healthcare professionals. During the congress, we will discuss emerging evidence, innovative therapeutic strategies, advances in prevention and management, and the growing role of technology and personalized approaches in improving patient care.

Beyond the scientific program, I hope this congress will be an opportunity to establish new collaborations, share experiences, and strengthen our international community.

I warmly welcome you to Boston and encourage you to actively participate in the discussions, presentations, and networking opportunities throughout the congress.

I wish you an inspiring, productive, and memorable 6th World Obesity and Weight Management Congress!

Table of Contents



Title: Endocrine-specific diabetes risk modeling, glucose–insulin dynamics, and simulation-based metabolic review using the BVIDAL clinical software suite Abhishek Bansal, New Era Consultancy Services, India	44
Title: Epidemiological and diagnostic characteristics of children followed for overweight and obesity at the Albert Royer National Children's Hospital Center in Senegal Aminata Mbaye, Université Cheikh Anta Diop, Senegal	99
Title: Effects of a structured education program on glycemic control in type 1 diabetes Ana Paula Franco Pacheco, Estácio University of Brasília, Brazil	46
Title: Effect of two nutritional interventions in women with obesity at the Portimão Unit of the Algarve Local Health Unit Ana Paula Moreira Carvalho Alves, University Faro, Portugal	48
Title: Can your watch save your life? Cardiovascular monitoring in obesity through wearable technology Andrzej Bissinger, Medical University of Lodz, Poland	20
Title: Weightless, not powerless: Reimagining obesity care through aquatic fitness Ann Gilbert, Fit-Her Health & Fitness for Women, United States	21
Title: Adolescent weight loss medications & surgery Asef Mahmud, AdventHealth, United States	50
Title: The effect of BMI on surgical complications and recovery after operative fixation of tibial plateau fractures Ashlyn Callan, Albert Einstein College of Medicine, United States	101
Title: Redefining the metabolism of weight loss: Exercise signal and material nutrition Auston W Cherbonneau, Independent Researcher, United States	52

Table of Contents

Title: Recurrent diabetic ketoacidosis associated with polysubstance performance-enhancing drug use in previously unrecognised insulin-deficient diabetes Awais Khan, St. Luke's Hospital, Ireland	103
Title: The blueprint of belonging: Aligning clinical intervention and fitness strategy to drive sustainable transformation, function, and well-being Bob Esquerre, Esquerre Fitness Group International, United States	23
Title: Eating patterns vs pharmacological treatment impacting obesity: A case study approach Daryle Wane, Nurse Consultant, United States	24
Title: Association between diabetes technology use and prevalent macrovascular disease in adults with type 1 diabetes: A cross-sectional analysis Divanshi Trivedi, London Northwest Hospital NHS Foundation Trust, United Kingdom	53
Title: Enhancing nutrition therapy on diabetics through increased crop productivity Grace A Asiko, Apiculture Platform of Kenya, Kenya	55
Title: Challenges of obesity in the geriatric population Hassan M. Heshmati, Endocrinology Metabolism Consulting, LLC, Hassan Heshmati and Valerie Shaw Endocrine Research, United States	25
Title: Optimising inpatient hypoglycaemia management: A closed-loop quality improvement project enhancing protocol adherence and patient safety among resident doctors in care of the elderly and acute medicine department at Colchester General Hospital Hyder Khan, Colchester General Hospital, United Kingdom	57
Title: Patient reported outcomes of GLP 1/GIP agonist use for lipedema: Results from a survey based study Jesse Cochrane, Lipedema Foundation, United States	105
Title: Improving diabetes self-management education and support referrals in primary care through a standardized referral workflow: A quality improvement initiative Jordan Gagnon, Creighton University, United States	106
Title: Obesity beyond weight loss: Integrating cardiovascular, kidney and metabolic care for global impact Julien Sanon, Thomas Jefferson University, United States	59
Title: Beyond daily injections: Implementing once-weekly basal insulin to simplify and personalize care Julio Rosenstock, Medical University of South Carolina; University of Texas Southwestern Medical Center, United States Marc Cornier, Medical University of South Carolina; University of Texas Southwestern Medical Center, United States	121
Title: Aging-associated gut microbiota exacerbates western diet-induced obesity and vascular dysfunction Jun Zou, Georgia State University, United States	61

Table of Contents

Title: Using a multi-disciplinary clinic model to prevent diabetic foot ulcer recurrence Kaishi Yang, Albert Einstein College of Medicine, United States	109
Title: Recurrence and functional outcomes following laparoscopic hiatus hernia repair: A single-centre study Khaled Elhadidi, Royal Derby Hospital, United Kingdom	63
Title: The weight we carry: Obesity bias, stigma & workplace mental health Kia Mitchell, Families First Medical Group, International Women's Obesity Network (IWON), United States	64
Title: Improving GLP-1 weight loss quality with a virtual lifestyle companion program Lisa A Stanton, Omada Health, United States	66
Title: IAP: A predictor biomarker of obesity Madhu S. Malo, Stapgen LLC, United States	68
Title: Diabetes pathogenesis and prevention Madhu S. Malo, Stapgen LLC, United States	70
Title: Continuous Glucose Monitoring (CGM) ethical consideration Mahir Khalil Ibrahim Jallo, Thumbay University Hospital, United Arab Emirates	27
Title: Personalizing progress in type 2 diabetes: Peer-led approaches to holistic care Marc Cornier, Medical University of South Carolina; University of Texas Southwestern Medical Center, United States Melanie Duran, UNM Hospitals Albuquerque, United States	123
Title: Atypical anorexia is not that atypical: Eating disorders and obesity – The patient and clinician perspectives Melinda J Watman, Weighty Decision, United States	72
Title: VAMP, the inner work: A new pathway to sustainable weight loss Michelle Petties, Brand New Now Press, United States	29
Title: Intensive versus standard blood pressure control in type 2 diabetes: Cardiovascular and microvascular outcomes Muhammad Basil Raza, East Lancashire Hospitals NHS Trust, United Kingdom	74
Title: Cognitive impairment risk in adults 60 years or older treated with SGLT-2 versus DPP-4 inhibitors Nawris Alhassan, Hope Clinic, United States	110
Title: Racial disparities in osteoarthritis: Prevalence, presentation, and management in the United States Olayemi Olubowale, Massachusetts General Hospital, United States	75

Table of Contents

Title: Differential diagnosis of diabetes in young and prevalence of LADA and LADY in young persons attending tertiary diabetes institute in Bengaluru, India R. Anil Kumar, Karnataka Institute of Endocrinology and Research, India	76
Title: Transforming diabetes care: From genetic discoveries to AI-driven personalized healthcare Rajat Goyal, Maharishi Markandeshwar (Deemed to be University), India	78
Title: A comprehensive analysis of adipose tissue signalling pathways: Bridging molecular mechanisms and therapeutic strategies in obesity Renuka Sharma, Sharda University, India	80
Title: Shaping the future of diabetes care: New advancements in treatment, digital health and personalized patient care Rupesh K. Gautam, Amity Institute of Pharmacy, India	82
Title: Adaptability of whole room indirect calorimetry for mainstream health and wellness Russell Rising, D & S Consulting Services Inc., United States	31
Title: Social determinants of obesity and social disparities Safa Hegazin, Cleveland Clinic Abu Dhabi, United Arab Emirates	84
Title: Artificial intelligence (AI)-driven remote monitoring and predictive management of diabetes patients in home-based care settings: Enhancing early detection, personalized intervention, and long-term health outcomes in Ghana Samira Seidu Bogobiri, Truworth Specialist Clinic, Ghana	86
Title: Teaching metabolism in the exam room: Using macronutrients and early biomarkers to identify and address obesity-related metabolic dysfunction Sarah M. Stewart, Worth The Weight, LLC, United States	88
Title: Obesity, MASLD, and MASH: Integrating liver and cardiometabolic risk in obesity care Scott Isaacs, Emory University School of Medicine, United States	33
Title: Impact of intermittent fasting on glycemic control in adults with type 2 diabetes: A systematic review of randomized controlled trials Shaheen Khan Kaplan, Avalon University School of Medicine, Curacao Rushil Patel, Avalon University School of Medicine, Curacao	112
Title: Metabolic health across generations: Preventing and controlling diabetes in the modern era Souravh Bais, SAGE University Indore, India	90
Title: Regular intake of PM POSHAN-biomedicines midday meal with sports and games regulating world obesity and weight management of school children Subhas Chandra Datta, D N Das High School, India	92

Table of Contents

Title: Predicting AKI in vascular surgery patients: A validation study of the Vascular Surgery Kidney Injury Predictive Score Subrina Anwar, University Hospital Southampton NHS Foundation Trust, United Kingdom Mark Howe, University Hospital Southampton NHS Foundation Trust, United Kingdom	114
Title: Validation of VSKIPS and identification of additional risk factors for post-operative acute kidney injury after vascular surgery Subrina Anwar, University Hospital Southampton NHS Foundation Trust, United Kingdom Mark Howe, University Hospital Southampton NHS Foundation Trust, United Kingdom	94
Title: MTP-ATGL interactions are hydrophobic and change during adipogenesis and fasting to regulate lipolysis in adipocytes Sujith Rajan, NYU Langone Hospitals, United States	35
Title: Integrating continuous glucose monitoring with intensive coaching in a fully online lifestyle intervention for diabetes prevention in adults with prediabetes and obesity: Protocol for a two-arm pilot randomised controlled trial (CGM-RCT online study) Sunaree Pitchaiprasert, Surin Hospital, Thailand	116
Title: Confronting weight bias and cultivating cultural humility in obesity care Tracy Norfleet, Weight Liberation®, United States	37
Title: AI model prediction of dawn phenomenon Venkat Reddy Dornadula, Pacific Union College, United States	118
Title: When treatment creates the problem: Food addiction, identity, and the cost of getting it wrong Vicky Midwood, Go Figure Coaching, United Kingdom	39
Title: The prowess of Overripe Banana Sweetener (OBS) in enhancing nutritive values in food and ameliorating glycaemic responses in type 2 diabetes mellitus Wan Rosli Wan Ishak, Universiti Sains Malaysia, Malaysia	41
Title: An intelligent hierarchical medical platform established upon high-quality datasets improves the effectiveness of glycemic management for all patients in different levels hospitals Zhiheng Zhou, The Eighth Affiliated Hospital of Southern Medical University, China	96

About Magnus Group

About

Magnus Group, a distinguished scientific event organizer, has been at the forefront of fostering knowledge exchange and collaboration since its inception in 2015. With a steadfast commitment to the ethos of Share, receive, grow, Magnus Group has successfully organized over 200 conferences spanning diverse fields, including Healthcare, Medical, Pharmaceuticals, Chemistry, Nursing, Agriculture, and Plant Sciences.

The core philosophy of Magnus Group revolves around creating dynamic platforms that facilitate the exchange of cutting-edge research, insights, and innovations within the global scientific community. By bringing together experts, scholars, and professionals from various disciplines, Magnus Group cultivates an environment conducive to intellectual discourse, networking, and interdisciplinary collaboration.

Magnus Group's unwavering dedication to organizing impactful scientific events has positioned it as a key player in the global scientific community. By adhering to the motto of Share, receive, grow, Magnus Group continues to contribute significantly to the advancement of knowledge and the development of innovative solutions in various scientific domains.

About CPD Accreditation About

Continuing Professional Development (CPD) credits are valuable for **WOC & Diabetes 2026** attendees as they provide recognition and validation of their ongoing learning and professional development. The number of CPD credits that can be earned is typically based on the number of sessions attended. You have an opportunity to avail 1 CPD credit for each hour of Attendance.

Some benefits of CPD credits include:

Career advancement: CPD credits demonstrate a commitment to ongoing learning and professional development, which can enhance one's reputation and increase chances of career advancement. **Maintenance of professional credentials:** Many professions require a minimum number of CPD credits to maintain their certification or license.

Increased knowledge: Attending WOC & Diabetes 2026 and earning CPD credits can help attendees stay current with the latest developments and advancements in their field.

Networking opportunities: This conference provides opportunities for attendees to network with peers and experts, expanding their professional network and building relationships with potential collaborator.

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KEYNOTE PRESENTATIONS





Andrzej Bissinger

Cardiologist, Medical University of Lodz, Poland

Biography: Andrzej Bissinger is a cardiologist and cardiac electrophysiologist. Bissinger graduated Medical University in Lodz, Poland in 1993, received PhD degree in 1997 at the same institution. Bissinger is certified cardiologist since 2003 and cardiac device specialist of European heart rhythm association since 2007. Bissinger is a member of international society of halter & non-invasive electrocardiology, polish cardiac society, European society of cardiology, European heart rhythm association. Bissinger has published more than 76 research articles in sci(e) journals. Bissinger was an

investigator in several clinical studies. At present, Bissinger works as a head of cardiac electrophysiology lab in department of cardiology, kopernik hospital, Lodz, Poland. Bissinger's fields of work are general cardiology, non-invasive and invasive treatment of arrhythmias and treatment patients with heart failure.

Can your watch save your life? Cardiovascular monitoring in obesity through wearable technology

Obesity is associated with a substantially increased risk of cardiovascular disease, including atrial fibrillation, heart failure, hypertension, sleep-disordered, and other sudden cardiac events.

Wearable technologies, including smartwatches and wearable sensors, offer the possibility of continuous or prolonged monitoring of heart rate, rhythm, physical activity, temperature, oxygen saturation and other physiological parameters. Sophisticated algorithms can detect different forms of arrhythmias, and potentially other clinically relevant abnormalities, creating opportunities for earlier diagnosis and intervention.

My presentation will review the current and emerging role of wearable technology in cardiovascular monitoring of patients with obesity, focusing on arrhythmia detection, heart rate and activity monitoring, sleep-related abnormalities and the potential role of artificial intelligence. It will also discuss current limitations, false-positive findings and the evidence required before wearable-derived data can reliably influence clinical decision-making.



Ann Gilbert

BS Purdue University, AEA Aquatic Exercise Association, ACE American Council on Exercise, Fit-Her Health & Fitness for Women, United States

Biography: Ann Gilbert is an owner of Fit-Her Health & Fitness for Women. Ann oversees the operations of as many as 10 certified Personal Trainers, 15 Group Fitness professionals, and coordinates fee based group personal training programs for ages 28–98. Ann was awarded ACE / IHRSA Personal Trainer of the Year in 2001 and has been a popular speaker at ICAA, IDEA, SCW MANIA, AFC, SUCCEED, and HFA Conventions since 2002. Ann is the creator of S.E.A.T. Supported Exercise for Ageless Training and My Future Me a program especially for the AOM customer. Ann is a member of the IDEA

Fitness Mentor Network 2025. Ann is known for innovative aquatic choreography and was the choreographer for Waterinmotion Platinum for over four years.

Weightless, not powerless: Reimagining obesity care through aquatic fitness

Obesity management continues to face a critical barrier: adherence. Traditional land-based exercise models often fail individuals living with obesity due to joint pain, mobility limitations, and psychological barriers such as fear, discomfort, and perceived failure. As a result, many individuals disengage before meaningful progress can occur, reinforcing cycles of inactivity and weight gain.

Aquatic fitness offers a powerful, yet underutilized, solution. By leveraging the principles of buoyancy and hydrostatic pressure, the aquatic environment reduces joint loading by up to 90%, enhances circulation, and provides natural resistance for strength and cardiovascular conditioning. This creates a unique setting where movement becomes accessible, comfortable, and achievable—often for the first time in years.

This keynote will explore how aquatic fitness serves not merely as a modification, but as a primary intervention for individuals on a lifelong health and weight management journey. Attendees will gain insight into the physiological, psychological, and behavioral benefits of water-based exercise, including improved movement confidence, reduced pain, and significantly increased adherence rates.

Drawing from real-world programming and long-term community-based outcomes, this session will present a practical framework for implementing aquatic fitness across the continuum of care—from initial engagement to progression and, when appropriate, transition to land-based activity.

Ultimately, this presentation challenges the traditional exercise paradigm by positioning aquatic fitness as a gateway to sustainable movement, improved quality of life, and long-term weight management success.



Bob Esquerre

Esquerre Fitness Group International, United States

Biography: Bob brings 38 years in the health & fitness sector, Bob Esquerre has dedicated a career to helping people move—from inactive to active, and from active to thriving long-term. As a global lecturer and trusted advisor to club owners and fitness professionals, Esquerre blends real-world strategy with human connection. Esquerre's work focuses on building inclusive, customer-centric communities that truly engage the 80%+ inactive population, while elevating professionals through Emotional Intelligence.

The blueprint of belonging: Aligning clinical intervention and fitness strategy to drive sustainable transformation, function, and well-being

Join Bob as he returns to the WOC for the 3rd time, bringing energy and insight to the evolving conversation on transforming health outcomes. He'll continue to review how aligning clinical care and fitness coaching can move individuals from treatment to true transformation.

Centred on the clinical obesity triad—behaviour modification, anti-obesity medications, and bariatric surgery—his session will highlight practical, integrated strategies to support individuals living with obesity in achieving sustainable health, improved function, and a higher quality of life through personalized, results-driven pathways.

Bob's thesis, It's Not About Weight Loss.....It's About Physiological and Psychological Health.

If you're passionate about transforming lives—not just programs—come meet Bob. You'll leave with practical insights, fresh perspective, and strategies you can apply immediately.



Daryle Wane

Nurse Consultant, USA

Biography: Dr. Wane has a PhD in Nursing Science as well as a master's degree from the University of South Florida and is a Board-Certified Family Nurse Practitioner with undergraduate degrees in Nutrition and Nursing from Brooklyn College and Downstate Medical Center College of Nursing. After 32 years, Dr. Wane has retired from academia and is a Nurse Consultant. Wane has published numerous supplements in textbooks as well as journal articles, serves as an editorial board member and peer reviewer for several journal publications. Wane is also a member of Sigma Theta Tau Nursing Honor Society and a CCNE evaluator

Eating patterns vs pharmacological treatment impacting obesity: A case study approach

In today's world, we are all impacted by how policies affect our nutritional status in terms of food development, processing, lifestyle choices, environment, and genetics. Exploration of EBP resources will help to serve as a framework for discussion for future practice management. We will utilize a case study approach to examine the dynamic relationship between eating patterns versus pharmacological treatment of obesity. And while it may be easier to incorporate injections as part of one's nutritional regimen, it is also time to focus on how improvements can be made in our overall food/lifestyle pattern so that food and exercise and well-being will become the ultimate patient-centred healthcare goal.



Hassan M. Heshmati

Endocrinology Metabolism Consulting, LLC, Hassan Heshmati and Valerie Shaw Endocrine Research, USA

Biography: Hassan M. Heshmati, Medical Doctor, Endocrinologist, has 50 years of experience in clinical research in Academia (University-Affiliated Hospitals, Paris, France and Mayo Foundation, Rochester, MN, USA), Pharmaceutical/Biotech Companies (Sanofi, Malvern, PA, USA, Essentialis, Carlsbad, CA, USA, and Gelesis, Boston, MA, USA), and personal Company (Endocrinology Metabolism Consulting, LLC, Hassan Heshmati and Valerie Shaw Endocrine Research, Anthem, AZ, USA). Heshmati's research activity has been related to pituitary tumor, hyperthyroidism, thyroid cancer,

osteoporosis, diabetes, and obesity. Heshmati has extensive knowledge in the development of anti-obesity products. Heshmati is the author of 370 abstracts, articles, book chapters, and book related to Endocrinology and Metabolism.

Challenges of obesity in the geriatric population

Obesity is a major health problem worldwide. Over 1 billion adults around the globe have obesity. The global epidemic of obesity mainly results from a combination of genetic susceptibility, increased availability of high-energy foods, increased exposure to environmental obesogens, and decreased requirement for physical activity in a modern society. Obesity causes morbidities, mortality, and high cost for the society. All age groups (e.g., children, adolescents, young adults, and elderly people) have been affected by the obesity pandemic.

There has been a dramatic expansion of the worldwide elderly population over the last decades. The worldwide population of people older than 64 years is around 10%. It is estimated that by the year 2030, at least 20% of the population of the USA will be aged 65 years or older. Geriatric obesity is becoming a growing global health concern and represents a medical challenge for healthcare professionals. The worldwide prevalence of geriatric obesity is around 20%. In the USA, the prevalence of geriatric obesity using Body Mass Index (BMI) criteria parallels the prevalence of non-geriatric obesity, currently around 42%. Interestingly, the centenarians (people living at least 100 years) have a lower prevalence of obesity (below 10%).

In general, body weight increases through later middle age, then declines in older age. Fat mass (mainly visceral fat) increases with aging, peaking around 65–70 years, but decreases in

very old age, while non-fat mass including muscle mass (especially in men) and bone mass (especially in women) decreases. There is also a decrease in height (especially in women), mainly due to the compression of spinal discs, impacting the BMI calculation. Elderly people tend to have low food intake and limited physical activity. The decreased muscle mass (sarcopenia) is a significant factor causing functional limitations. Due to the high prevalence of sarcopenia and the height decrease in the elderly population, BMI is not a reliable marker for the diagnosis and follow-up of geriatric obesity as it may not accurately reflect the fat mass.

The most common complications of geriatric obesity include hypertension, ischemic heart disease, atrial fibrillation, stroke, type 2 diabetes, osteoarthritis, obstructive sleep apnea, metabolic dysfunction-associated steatotic liver disease, cancer, impaired physical function, depression, and decreased quality of life. Geriatric obesity can lead to institutionalization and ultimately to death.

Obesity in adults is managed through multidisciplinary approaches including lifestyle (e.g., diet, exercise, and behavioral change), food supplements, drugs, medical devices, gut microbiome modulation, body contouring, and bariatric surgery. In the absence of contraindication, the elderly population with obesity can benefit from these treatments. However, the management of geriatric obesity is a medical challenge and weight loss intervention is a controversial topic. Although weight loss has several health benefits (attenuation or reversal of comorbidities), because of its potential detrimental impact on muscle mass and bone mineral density (osteopenia, osteoporosis), in selected cases, treatment should focus on improvement of dietary habits (including sufficient protein intake) and physical fitness/function (aerobic exercise and resistance training), and maintenance of body weight rather than weight loss.



Mahir Jallo^{1*}, Alaq Khalid Hameed¹, Maryam Muayad²

¹Gulf Medical University & Centre of Internal Medicine,
Thumbay University Hospital, UAE

²Faculty of Sciences, School of Interdisciplinary Science,
McMaster University, Toronto, Canada

Biography: Prof. Mahir Jallo is Clinical Professor of Medicine & Senior Consultant, Internal Medicine - Diabetes & Endocrinology in Gulf Medical University since 2004. Granted MB,ChB from College of Medicine – University of Mosul in IRAQ, postgraduate Board Certification in Internal Medicine CABM (PhD) from the Arab Board, Internal Fellowships from the Royal College of Physician in Edinburgh FRCP Edin. & the Royal College of Physicians & Surgeons in Glasgow FRCP Glasg. Endocrinology Fellowship from the American College of Endocrinology FACE & certified with Diploma in Dyslipidemia

from Boston University School of Medicine. Affiliated Faculty in the Department of Medicine, Mosul College of Medicine & Department of Clinical Pharmacy, Mosul College of Pharmacy – in IRAQ till 2004. Jallo's record includes active participation & speaker invitation in many National & International conferences & CME programs. Organizer of the annual GMU Diabetes & Endocrinology Conference since 2012. Editor In Chief: Diabetes Digest from Iraq, Editorial Board Member & reviewer for many international Diabetes & Endocrinology journals, with many publications in medical periodicals and medical conferences abstract & Active Principle Investigator in many National & International Clinical studies. Member of many AACE, EASD, ISPAD, ESE & European Atherosclerosis Society. Awarded twice A Special Honor & Award in recognition of the exemplary achievements in the field of Internal Medicine & Endocrinology and for the invaluable service to the community.

Continuous Glucose Monitoring (CGM) ethical consideration

Continuous glucose monitoring (CGM) has rapidly emerged as a revolutionary technology for diabetes management, moving beyond traditional finger pricks to provide constant, real-time glucose data from a sensor under the skin. This technology provides vital information about glucose levels, trends, and alerts for potential highs or lows, empowering users to make informed decisions about their health and significantly improve glycemic control. While challenges like sensor accuracy, cost, sensor design & connectivity remain in focus, the ethical consideration of CGM is a less focused topic.

Ethical considerations for Continuous Glucose Monitors (CGM) include justice and access & healthcare equity, ensuring all qualified patients receive a CGM regardless of socioeconomic factors. Unequal access to CGMs, often due to cost, creates health inequalities, preventing some people from benefiting from the technology. A population-based approaches is needed implementing systems like patient registries to identify qualifying individuals and systematically educating all people with diabetes about CGM benefits can help reduce

disparities and provider bias. Equitable distribution with efforts to ensure CGMs are offered to all patients who meet clinical guidelines, not just those who can afford them or are in specific treatment programs is needed.

Another ethical consideration is data privacy and security, as CGM companies store and analyze sensitive patient data with insufficient oversight. CGM manufacturers store significant amounts of patient health data, raising concerns about data protection and potential misuse. There are limited specific guidelines and oversight mechanisms for managing the data collected by CGM devices.

Other ethical considerations involve informed consent for data sharing, patient autonomy in decision-making, and addressing potential bias in access and data interpretation, ensuring the technology is used equitably and effectively. While some companies provide privacy policies, there is a need for clearer, more accessible information and stronger patient control over how their data is used and shared.

Patient empowerment is fundamental with any technology. Patients need comprehensive information about CGM's benefits and limitations to engage in shared decision-making with their healthcare providers. Providers must be transparent about CGM accuracy, which can vary and may be perceived as less reliable in certain situations, ensuring patients make informed choices.

Bias in practice is expected, provider bias can influence healthcare providers' prescribing practices for diabetes technologies, including CGMs, even among well-intentioned professionals.

Accuracy and reliability is a concern mainly for hypoglycemia with clinical acceptance concern. While CGMs may show lower readings compared to traditional Blood Glucose Meters (BGM) during hypoglycemia, their benefits in early detection and intervention often make these differences acceptable to users.

Despite all these ethical considerations in CGM, it remains an important player with fundamental role in improving diabetes care & control with appropriate use & patients understanding that CGMs are tools for monitoring and management, and their data should be used appropriately, with awareness of potential inaccuracies.



Michelle Petties

Leaving Large: The Stories of a Food Addict, Annapolis, Maryland, Brand New Now Press, USA

Biography: Michelle Petties is a TEDx speaker, Food Story coach, and author of the award-winning memoir, *Leaving Large – The Stories of a Food Addict*. After gaining and losing over 700 pounds, Petties finally discovered the secret to quieting the battle between mind, body, and hunger – Petties' story. Michelle's memoir, a category winner in The 2022 Memoir Prize for Books, explores the deep emotional and psychological connections to food and how these food stories shape our eating behaviors and weight management struggles. Petties speaks to organizations, large and small, sharing insights and stories

of hope, healing, triumph, and transformation. Petties' latest ebook, *Mind Over Meals: 7 Secrets to Rewire Your Brain for Healthy Eating and High Performance*, reveals the core principles for losing weight and keeping it off for good.

VAMP, the inner work: A new pathway to sustainable weight loss

For decades, obesity treatment has focused primarily on the body—calories, compliance, medications, and surgical interventions—often overlooking the emotional, psychological, and trauma-based drivers that shape eating behaviors and long-term outcomes. This keynote presents a compelling, real-world case study that challenges the dominant paradigm and expands the conversation around sustainable weight loss.

The presentation centers on a 55-year-old, college-educated, African American professional woman with a master's degree who had struggled with obesity throughout her entire adult life. When she entered my community in January 2024, she was nearly immobile, emotionally exhausted, and deeply discouraged after years of unsuccessful weight-loss attempts. Over the past three years, she has lost more than 300 pounds—without GLP-1 medications, bariatric surgery, gastric bypass, lap band procedures, or prescription weight-loss drugs.

Rather than beginning with food rules or physical interventions, our work started with the mind. Using VAMP, a trauma-informed, emotion-centered framework, I taught her how to identify, understand, and regulate the emotions that had long driven her eating behaviors. By learning to name emotional hunger, process unresolved emotional pain, and develop emotional literacy, she gained the capacity to make intentional food choices rather than reactive ones. As emotional mastery increased, her use of food shifted—from using it as protection, comfort, and coping to using it as nourishment and care.

This keynote will explore how emotional regulation, self-awareness, and meaning-making, storytelling can unlock beliefs that traditional approaches often fail to achieve. Attendees will gain insight into how addressing emotional drivers first can create conditions for sustainable weight loss, increased mobility, and restored agency—particularly among women who have lived at the intersection of trauma, chronic stress, and obesity.

By highlighting this client's transformation, this presentation invites clinicians, researchers, and health professionals to consider an expanded model of obesity care—one that integrates emotional intelligence, trauma awareness, and belief mastery alongside medical and nutritional interventions. The outcome is not simply weight loss, but reclaimed autonomy, dignity, and long-term sustainability.



Russell Rising

D & S Consulting Services Inc., New York, USA

Biography: Dr. Russell Rising obtained a Ph.D. from the University of Arizona, Tucson. Rising started a career by inventing the world's first whole room indirect calorimeter (WRIC) for infants at Maimonides Medical Center, Brooklyn, NY. Rising then created several types of animal WRIC's, including one for non-human primates. Finally, Rising has created nine human WRIC laboratories worldwide comprising of 25 metabolic rooms. Rising has over 60 publications, been featured on television broadcasts, as well as previously holding a full adjunct professorship at China's largest medical school. Currently, Rising is

President of Research and Development of D & S Consulting services Inc.

Adaptability of whole room indirect calorimetry for mainstream health and wellness

History of indirect calorimetry: Until recently clinical Energy Expenditure (EE) measurements consisted of Resting Metabolic Rate (RMR) or Exercise Energetics (EXEE) obtained by Metabolic Carts (MC). The first MC available was the Beckman MMC Horizon System (1975-1984). Shortly thereafter, the Deltatrac Metabolic Monitor was introduced in 1987 and remained the gold standard for RMR measurements until the early 2000's, when the SensorMedics Vmax 2900 MC became available.

The first United States based Whole Room Indirect Calorimeter (WRIC) was built in 1986. This WRIC offered a way to measure 24-hour sedentary EE, Respiratory Quotient (RQ), Glucose (GluOX) and Fat Oxidation (FatOx) in a comfortable environment. However, its complexity limited its use to research universities and institutions.

Disadvantages of MC's: Metabolic carts required physical connection of the subject to instrumentation through a ventilated hood or face mask. Furthermore, recently available wearable calorimeters have an additional disadvantage of added weight carried on the subject's back. Moreover, MC's limits exercise VO₂max testing to mainly running or cycling. Finally, claustrophobia and anxiety associated with the use of MC's can cause inaccuracies in metabolic measurements.

Advantages of WRIC: Since metabolic measurements require that the subject reside in a small room the size of an average household bedroom, this eliminates all the disadvantages

of MC's mentioned above plus added accuracy in metabolic measurements. Metabolic measurements of various physical activities utilizing WRIC have been conducted and published as shown in the table below:

Physical activity	Duration (Min)	Gender	BMI (kg/m ²)	EXEE (kcal)	RQ (VCO ₂ /O ₂)	GluOx (g)	FatOx (g)
Jazz drumming	25	M	24.6	125.0	0.73	0.3	12.8
Trumpet playing	40	M	34.0	100.8	0.85	1.6	3.1
Guitar playing	30	F	23.8	81.8	0.78	3.0	6.0
Opera singing	40	F	21.4	66.0	0.85	8.0	2.0
One-man band	107	M	25.1	327.4	0.83	-----	-----
Yoga practice	30	F	22.8	243.1	0.93	55.2	2.1
Shadow boxing	30	F	25.2	267.0	0.88	43.2	6.9
Aerobic dancing	40	M	24.1	400.0	0.80	32.0	27.6
Irish Step Dancing	40	F	21.8	238.8	0.90	28.8	12.4
Step exercise	40	F	20.6	320.8	0.93	73.6	2.9
Half-marathon	77	M	21.9	1100.0	0.85	144.8	54.7
Tennis (forehand)	20	M	27.4	146.0	0.84	18.0	7.6
Tennis (backhand)	20	--	-----	135.4	0.86	19.6	5.8
Online training	60	M	25.2	292.2	0.88	47.1	10.2
Trampoline exercise	30	F	40.0	219.5	0.83	-----	-----

Proposal: G.O.A.T Training Inc., in partnership with D & S Consulting Services Inc., plans to open the first scientifically based health club that would incorporate WRIC and body composition measurements as part of an individual's training or wellness regimen. Initially, a 2,500 square-foot space is being sought in Manhattan for the new facility. We are seeking investors to provide capital funding to lease and build out the necessary space, create the WRIC and purchase the metabolic instrumentation and body composition equipment, along with support for the first two years of operations. The final measurement of success will be accomplishments of members' individual goals in terms of physical fitness, athletic training and general overall wellness.



Scott Isaacs

Emory University School of Medicine, Department of Endocrinology, Metabolism and Lipids, Atlanta, Georgia, USA

Biography: Scott Isaacs, MD, FACP, FACE, is an endocrinologist and obesity medicine expert at Emory University School of Medicine in Atlanta, Georgia. Isaacs is Past President of the American Association of Clinical Endocrinology and is internationally recognized for work in obesity, type 2 diabetes, and MASLD/MASH, contributing to major clinical guidance and educational initiatives in metabolic liver disease and cardiometabolic care.

Obesity, MASLD, and MASH: Integrating liver and cardiometabolic risk in obesity care

Obesity and Metabolic Dysfunction-Associated Steatotic Liver Disease (MASLD), including Metabolic Dysfunction-Associated Steatohepatitis (MASH), are tightly linked disorders that should be approached as part of a unified cardiometabolic disease spectrum rather than as isolated hepatic conditions. MASLD affects about 30.0% of the global population, with especially high prevalence in regions heavily burdened by obesity and type 2 diabetes, underscoring its major public health relevance.

This presentation will examine how obesity drives ectopic fat deposition, insulin resistance, chronic inflammation, lipotoxicity, atherogenic dyslipidemia, endothelial dysfunction, and multi-organ injury across the cardio-reno-hepato-metabolic axis. The talk will highlight that MASLD is a systemic disease associated not only with progressive liver fibrosis and cirrhosis, but also with type 2 diabetes, cardiovascular disease, chronic kidney disease, sarcopenia, sleep apnea, and several malignancies. Cardiovascular disease remains the leading cause of death in patients with MASH, reinforcing the need to integrate liver risk into broader obesity and cardiometabolic care pathways.

A major focus will be practical risk stratification in patients with obesity, prediabetes, and type 2 diabetes, including use of FIB-4 and second-line noninvasive testing such as elastography or ELF testing to identify clinically significant fibrosis. The presentation will also review key limitations of FIB-4, particularly in people with obesity and type 2 diabetes, where clinically important fibrosis may be missed if clinicians rely on a single test alone. Evidence-based algorithms from endocrine practice will be discussed to support earlier detection, multidisciplinary referral, and cirrhosis prevention.

Finally, the session will address treatment implications, including the dose-dependent hepatic benefits of weight loss, lifestyle intervention, and the emerging role of incretin-based and other metabolic therapies in MASH management. Clinical data supporting semaglutide, tirzepatide, survodutide, and other liver-relevant obesity therapies will be placed in the context of improving both hepatic and cardiometabolic outcomes. This session will highlight how clinicians caring for people with obesity across endocrinology, hepatology, primary care, cardiology, and obesity medicine can implement integrated management strategies that reduce both major adverse liver outcomes and major adverse cardiovascular events in patients with obesity and MASH.



Sujith Rajan*, Swati Valmiki, Jay Chung, Binu Prakesh, M. Mahmood Hussain

Department of Foundations of Medicine, NYU Grossman Long Island School of Medicine, and Diabetes and Obesity Research Center, NYU Langone Hospitals - Long Island, Mineola, NY, United States

Biography: Dr. Sujith Rajan is a Research Assistant Professor at the NYU Grossman Long Island School of Medicine, USA, with extensive expertise in adipose tissue biology, lipid metabolism, and metabolic diseases. Rajan's research focuses on understanding the role of adipose dysfunction in obesity, insulin resistance, MASLD/NASH, and atherosclerosis, with a particular emphasis on microsomal triglyceride transfer protein (MTP)-mediated metabolic regulation. Dr. Rajan has received several prestigious honors, including the American Heart Association Postdoctoral Fellowship and the

Charles Trey, MD Memorial Liver Scholar Award from the American Liver Foundation. Rajan serves as Principal Investigator and Co-Investigator on NIH- and foundation-funded projects exploring adipose-liver crosstalk and lipid homeostasis. An active contributor to the scientific community, Dr. Rajan has authored multiple high-impact publications, serves as an editorial board member and peer reviewer for leading journals, and is a frequent invited speaker at international conferences on obesity, diabetes, and endocrinology. Rajan is also deeply committed to mentorship, inclusive research environments, and advancing translational science in metabolic health.

MTP-ATGL interactions are hydrophobic and change during adipogenesis and fasting to regulate lipolysis in adipocytes

Background: Microsomal Triglyceride Transfer Protein (MTP) is a key regulator of lipid metabolism, facilitating lipid transfer and lipoprotein assembly in enterocytes and hepatocytes. We have shown that MTP interacts with Adipose Triglyceride Lipase (ATGL) in adipocytes and modulates lipolysis. Molecular basis and physiological significance of these interactions remain unclear.

Aim: To examine physiological importance and nature of MTP-ATGL interactions.

Methods: Physiological MTP-ATGL interactions were studied in human adipocytes during adipogenesis and fasting. We used HDOC software to predict motifs and amino acids in MTP-ATGL interactions and site directed mutagenesis to test their importance. MTP expression and activity were determined with western blot and TG transfer assay. MTP mutants with robust activity and expression were used to study interactions with purified human ATGL using ELISA and co-immunoprecipitations.

Results: Immunoprecipitation experiments and activity assays showed that MTP expression and activity remain constant during adipogenesis and fasting in human adipocytes. In contrast, ATGL expression was detectable on the fifth day during adipogenesis. Fasting had no effect on ATGL protein expression but enhanced activity. MTP-ATGL interactions coincided with the expression of ATGL. However, ATGL binding to MTP decreased with fasting. MTP-ATGL interactions were unaffected by high salt concentrations but decreased with increasing detergent concentrations. In silico modeling predicted that the N-terminal region of MTP interacts with nonpolar residues in the hydrophobic domain of ATGL. Mutagenesis studies revealed that Y138E MTP mutant retained TG transfer activity but showed significantly less inhibition of ATGL binding and activity, highlighting the importance of this residue in protein-protein interactions and in regulating lipolysis.

Conclusion: Our data show that MTP-ATGL interactions occur as soon as ATGL protein is expressed during adipogenesis. However, these interactions are reduced with fasting likely increasing ATGL activity in adipocytes under nutrient deprivation. These studies suggest MTP-ATGL interactions are hydrophobic and dynamic in nature that they are affected by protein expression and fasting. Targeting MTP-ATGL interactions in adipocytes could modulate lipid metabolism and help prevent obesity and hepatic steatosis.



Tracy Norfleet

Weight Liberation®, St. Louis, Missouri, USA

Biography: Dr. Tracy Norfleet is a triple board-certified physician in Internal Medicine, Obesity Medicine, and Lifestyle Medicine, with over 24 years of clinical experience in St. Louis, Missouri. Norfleet is the founder of Weight Liberation®, empowering patients through education, coaching, and health advocacy. A passionate advocate for weight bias awareness and health equity, Dr. Norfleet delivered the TEDxUF talk, Breaking Weight Bias in Healthcare and Society. Norfleet is a member of the Obesity Medicine Association, The

Obesity Society, and The Obesity Action Coalition, and a GoodRx Health contributor whose work bridges lived experience, clinical expertise, and systems-level thinking.

Confronting weight bias and cultivating cultural humility in obesity care

Background and Rationale: Weight bias, the tendency to hold negative attitudes toward individuals based on body weight, is well-documented in the general population. Less openly examined is its presence within healthcare itself, including among the obesity medicine specialists charged with treating it. Studies show that physicians, nurses, and allied health professionals harbor measurable implicit bias against patients with obesity, resulting in shorter consultations, less preventive care, and lower-quality counseling. Patients respond by delaying care, avoiding appointments, and disengaging from treatment. Not because of their disease, but because of how they are treated. Specialization does not eliminate this bias. Without deliberate self-examination, it can reinforce it.

Objectives: This presentation aims to (1) establish the evidence base for weight bias in clinical settings, including among obesity specialists; (2) guide healthcare professionals through structured self-reflection using validated implicit bias tools; (3) introduce cultural humility as an active, ongoing clinical practice; and (4) equip attendees with practical, immediately applicable strategies for weight-inclusive, person-centered care across diverse patient populations.

Content and Approach: Drawing on over 24 years of clinical practice in Internal Medicine and Obesity Medicine, as well as her widely viewed TEDxUF talk Breaking Weight Bias in Healthcare and Society, Dr. Norfleet structures this session around three pillars: The Evidence, The Mirror, and The Practice.

The Evidence presents the research landscape on provider weight bias, its prevalence, mechanisms, and downstream effects on patient behavior and outcomes. The Mirror invites clinicians to examine their own assumptions through patient narratives, validated self-assessment tools, and Dr. Norfleet's own experience navigating healthcare as a person with weight, demonstrating that transparency is not a liability but a clinical asset. The Practice translates awareness into action: Person-first language, compassionate communication, equitable care environments, and culturally humble engagement with patients from multiple backgrounds and communities.

Significance: A review of five years of WOC programming (2022 to 2026) reveals that weight bias among providers and cultural humility in obesity care have not been directly addressed at this congress. As the field of obesity medicine advances pharmacologically and surgically, the therapeutic relationship remains foundational. Weight bias remains one of the most significant and under-addressed barriers to effective care. This session fills that gap with evidence, empathy, and actionable tools, delivered by a clinician who has lived both sides of the patient-provider dynamic.

Conclusion: Words have weight. The language clinicians use, the assumptions they carry, and the environments they create either open or close the door to effective treatment. This presentation challenges obesity medicine specialists to turn the clinical gaze inward, not with shame, but with the rigor and curiosity that define excellent science. Cultural humility is not a soft skill. It is clinical excellence.



Vicky Midwood

Go Figure Coaching, United Kingdom

Biography: Vicky Midwood is a leading health and behaviour change expert, coach, and speaker known for transforming the conversation around alcohol, obesity, diabetes, and disordered eating. With a bold, no-nonsense approach, Midwood helps high-performing individuals and organisations reclaim their energy, focus, and wellbeing without shame, restriction, or burnout. Midwood's work bridges the gap between science, real-world behaviour, and lived experience – challenging quick fixes and cultural conditioning in favour of sustainable, whole-person health. Now invited to keynote

for the third year, Midwood's impact is clear: Midwood doesn't just inspire – Midwood ignites change.

When treatment creates the problem: Food addiction, identity, and the cost of getting it wrong

Obesity, food addiction, and eating disorders are often approached as problems of behaviour, compliance, and personal responsibility.

But what if part of the system designed to treat them is quietly reinforcing them?

This talk challenges the prevailing narrative that patients simply need more knowledge, more discipline, or better adherence.

Drawing on real-world behavioural work with high-functioning individuals, this session explores the intersection of physiology, psychology, and identity and how these layers interact to drive patterns of overeating, restriction, and relapse.

It will examine how:

- Ultra-processed foods are engineered to override biological regulation, increasing drive, cravings, and loss of control
- Socioeconomic factors shape exposure, access, and vulnerability with lower-income populations disproportionately affected
- Clinical language and messaging, often unintentionally, reinforce shame, inadequacy, and a sense of not being enough

- These internalised beliefs strengthen the very coping behaviours patients are trying to stop
 - including emotional eating, bingeing, and reliance on food for regulation

Critically, the talk will introduce an identity-driven model of behaviour change, demonstrating why sustainable change does not come from targeting the habit alone, but from understanding the role that behaviour plays in how a person thinks, feels, and functions under pressure.

Attendees will leave with:

- A clearer understanding of why traditional approaches often fail, even in motivated individuals
- Insight into the feedback loop between biology, belief, and behaviour
- Practical considerations for shifting patient conversations away from blame and toward meaningful, sustainable change

This is not a rejection of medical intervention.

It is a call to integrate it with a deeper understanding of human behaviour — so that treatment stops fighting the symptom and starts addressing the system driving it.

Wan Rosli Wan Ishak^{1*}, Yee Vern Ng¹, Majid Khan Majahar Ali², Wan Mohd Izani Wan Mohamed³

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³School of Medical Sciences, Universiti Sains Malaysia, Kubang Kerian, Kelantan, Malaysia



Biography: Wan Rosli Wan Ishak is a professor of Nutrition Program at the School of Health Sciences (SHS), Universiti Sains Malaysia (USM), Health Campus, Kota Bharu, Kelantan, Malaysia. Currently, Wan Ishak has been a Dean of SHS of USM since 2022. Wan Ishak's research theme emphasizes more on the utilization of natural agricultural by-products into popularly consumed processed foods. Various healthy and low glycemic index (GI) based on these agricultural by-products have been developed. Wan Ishak was selected among Top 10 Innovators for SYMBIOSIS project funded by Malaysian Technology

Development of Malaysia (MTDC) to facilitate the commercialization of functional and health cookies from oyster mushroom (Nutri-Mush® Cookies). Wan Ishak has also transferred one technology licensing to PS Foods and Beverage Sdn Bhd, a Malaysian company on the commercialization of overripe banana extract. Besides, Wan Ishak has published more than 160 articles in various renowned reputable indexed journals.

The prowess of Overripe Banana Sweetener (OBS) in enhancing nutritive values in food and ameliorating glycaemic responses in type 2 diabetes mellitus

The worldwide burden of Non-Communicable Diseases (NCDs) continues to rise, with the prevalence of diabetes anticipated to increase from approximately 180 million cases in 2010 to 368 million by 2030. Diabetes remains a leading contributor to morbidity and mortality worldwide, significantly impairing health outcomes and reducing quality of life. Epidemiological evidence has consistently associated diets high in refined carbohydrates and low in Dietary Fibres (DFs) to an elevated risk of metabolic disorders, including cardiovascular disease and type 2 diabetes mellitus. Overripe bananas, which are generally discarded, are a rich source of bioactive components, particularly DFs, natural sugars, and have substantial antioxidant qualities. This work focuses on the use of natural sweeteners and DFs derived from Overripe Banana Extract (OBE) in the development of nutritious food products. Extraction parameters, including water ratio, temperature, and incubation time, were systematically varied based on a central composite design. Responses evaluated included Total Phenolic Content (TPC), Total Flavonoid Content (TFC), DPPH radical scavenging activity, and Ferric Reducing Antioxidant Power (FRAP). The results highlighted the significant influence of extraction temperature and time on bioactive compound recovery, with moderate conditions ensuring maximal yield while minimizing thermal degradation of sensitive compounds.

Optimal extraction conditions were determined as a banana:water ratio of 1:3.2 (w/w), temperature of 51.5°C, and incubation time of 33.5 min. Predicted values under these conditions were 84.7 mg GAE/100 g for TPC, 69.5 mg CEQ/100 g for TFC, 75.1% for DPPH, and 25.8 mM TE/g for FRAP. Experimental validation closely matched these predictions, yielding 85.3 mg GAE/100 g for TPC, 68.9 mg CEQ/100 g for TFC, 76.5% for DPPH, and 26.8 mM TE/g for FRAP. In glycaemic index determination, the blood glucose response of 15% OBE cookie showed a significantly lower as compared to other test foods. The cookies formulated with 15% OBE to replace table sugar recorded GI values of 50 (low). In the intervention study, OBE demonstrates potential as a natural, functional food supplement for glycemic management in type II diabetes mellitus. This work demonstrated that overripe bananas can be an alternative novel DF-rich and low-GI food ingredient, which could widely be utilized in developing various overripe banana-based functional foods. By leveraging overripe bananas, this work supports sustainability and promotes the development of high-value functional ingredients.

Keywords: Overripe Banana, Diabetes, Glycaemic Parameters, Nutritional Composition, Antioxidative Activities.

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Abhishek Bansal

New Era Consultancy Services, India

Endocrine-specific diabetes risk modeling, glucose–insulin dynamics, and simulation-based metabolic review using the B VidAL Clinical Software Suite

Diabetes mellitus is a complex endocrine and metabolic disorder involving impaired glucose regulation, altered insulin response, pancreatic β -cell dysfunction, adiposity-related metabolic load, vascular stress, renal vulnerability, and long-term complication risk.

Conventional diabetes screening and prediction systems often classify patients using isolated laboratory or demographic variables, but they may provide limited explanation of how endocrine instability develops over time or how glucose–insulin imbalance relates to systemic disease progression. This work presents an endocrine-specific diabetes review and simulation framework implemented within the fully free SaMD (Software as a Medical Device) B VidAL Clinical Software Suite for interpretable, review-only clinical decision-support research.

The proposed software workflow integrates laboratory, clinical, and time-series glucose evidence into a structured endocrine model. Core variables include fasting glucose, random or postprandial glucose, HbA1c, fasting insulin, C-peptide, body mass index, blood pressure, lipid markers, renal markers, medication exposure, and continuous glucose monitoring parameters. These measurements are organized into pancreatic, metabolic, vascular, renal, and therapeutic review layers. Continuous glucose monitoring data are further analyzed through time-in-range, glycemic variability, hypoglycemia frequency, hyperglycemia burden, and glucose excursion patterns.

A simulation component is included to model glucose–insulin state behavior under different physiological and therapeutic contexts. The simulation layer supports review of glucose

response trends, insulin-response sensitivity, carbohydrate-load influence, exercise-context effects, medication-associated modulation, and progression from stable glycemic control toward dysglycemia, prediabetes, or diabetes-risk states. The goal is not to replace clinical judgment or provide standalone diagnosis, but to generate transparent, reproducible, and interpretable endocrine-state summaries from public retrospective datasets and software-based simulation experiments.

Potential dataset evidence includes diabetes-risk tabular data, NHANES endocrine laboratory data, continuous glucose monitoring datasets, and hospital diabetes medication records. The BVidAL Medical Analyzer workflow supports dataset normalization, endocrine analyte mapping, glucose–insulin simulation, glycemic variability review, risk stratification, and structured report generation. Complication-oriented review can also connect diabetes-state patterns with renal risk, retinopathy context, neuropathy indicators, and diabetic foot-risk evidence where relevant datasets are available.

The clinical relevance of this approach is its ability to combine measurable diabetes variables with simulation-based endocrine interpretation. By linking laboratory markers, CGM behavior, medication context, and complication risk into a unified review workflow, the system may assist researchers and clinicians in understanding dominant contributors to dysglycemia, identifying unstable glucose–insulin patterns, and exploring individualized metabolic-risk trajectories. This study is presented as a proof-of-concept public-dataset and simulation-based demonstration for diabetes and endocrine decision-support research, without claims of regulatory approval, standalone diagnosis, or prospective clinical validation..

Biography

Abhishek Bansal is an independent consultant, researcher, and amateur scholar whose recent work reflects over 20 years of fully self-funded, self-directed research. Bansal has proposed novel B-Equations and related engineering frameworks for impedance analysis, transformers, inverters, generators, pumps, solar systems, machinery, turbines, batteries, SMPS, and short-circuit analysis. In biomedical science, Bansal has formally claimed Novel Bansal-NonLinear Theory and Novel Bansal-Biology Theory with nine frameworks, including B-Phy, B-Chem, B-Disease, B-Pharma, B-AI, and B-Prosthetics, and has developed the free BVidAL Clinical Software Suite in beta version and BVidAL RTOS (Real Time Operating System) for biomedical analysis, simulation, imaging, signals, and medical-device research.



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Effects of a structured education program on glycemic control in type 1 diabetes

Type 1 Diabetes Mellitus (T1DM) is a chronic autoimmune disease characterized by the destruction of pancreatic beta cells, leading to absolute insulin deficiency. It is most commonly diagnosed in childhood, adolescence, or early adulthood, and requires lifelong treatment with exogenous insulin. Despite advances in technology, such as insulin pumps and continuous glucose monitoring systems, the management of T1DM remains complex and demanding. Patients must balance insulin administration, dietary choices, physical activity, and frequent glucose monitoring to achieve optimal glycemic control. Poorly managed T1DM is associated with acute complications, such as hypoglycemia and diabetic ketoacidosis, as well as long-term microvascular and macrovascular complications. Education has therefore emerged as a cornerstone of diabetes care, empowering patients with the knowledge and skills necessary to manage their condition effectively. Structured Education Programs (SEPs) are designed to enhance self-care, improve treatment adherence, and foster confidence in disease management, ultimately reducing morbidity and improving quality of life.

Objective: Diabetes mellitus is associated with significant morbidity and mortality, and education is known to play a key role in managing this disease. This study addresses the effects of a Structured Education Program (SEP) on self-care in subjects with Type 1 Diabetes Mellitus (T1DM). The aim was to evaluate the effect of a SEP on glycemic control, knowledge, and skills associated with diabetes care in subjects with T1DM.

Subjects and methods: A total of 47 adults with T1DM were followed up for 20 months (32 participated in the SEP and 15 served as a control group). The SEP consisted of workshops, individualized care, 24-hour distant support, and a questionnaire assessing knowledge of diabetes care. Glycosylated Hemoglobin (HbA1c) levels were measured before and after the SEP implementation.

Results: Compared with pre-SEP levels, the mean HbA1c levels decreased by approximately 20% (21 mmol/mol) at 1 year, with a further 11% reduction (10 mmol/mol) observed 8 months later ($p<0.001$). Knowledge about diabetes care increased by 37% between the pre-SEP and post-SEP questionnaires ($p<0.005$).

Conclusion: Relevant improvements occurred after SEP activities. The sustained decrease in HbA1c levels and the overall increase in knowledge and confidence regarding diabetes care reinforce the importance, necessity, and positive outcomes of a SEP intervention in T1DM.

Biography

Dr. Ana Paula Franco, graduated in nursing from the Federal University of Santa Catarina, Brazil, in 2008. Professor of the Nursing course at the Estácio University Center. Specialist in Non-Communicable Chronic Diseases. Expert in Chinese Medicine from the Santiago de Compostela College, in Spain; Master in Health Education in Diabetes, with research conducted in England. PhD in Medical Sciences in Technology and Health System in Diabetic Neuropathy in 2017. Conducts research and publications in the area.



Ana Paula Carvalho Alves

University of Algarve, Portugal

Effect of two nutritional interventions in women with obesity at the Portimao Unit of the Algarve Local Health Unit

In Portugal, the prevalence of pre-obesity is 34.8% and obesity is 22.3%. This prevalence is higher in the female population (24.3% vs. 20.1%). In the Algarve Region, the weighted prevalence of obesity is 30.4%.

Around 322 million people live with depression, and it is even considered the most disabling disease. This pathology is more prevalent in female individuals. In Portugal, the 2019 mental health observatory reported anxiety disorders at 11% and depressive disorders at 7%.

Intervention by a multidisciplinary team is required to achieve health gains. Several approaches have proven effective in weight reduction and were associated with more consistent long-term behavioral changes: the Mediterranean diet, low-carbohydrate diet, vegetarian diet, Dietary Approaches to Stop Hypertension (DASH), and the Nordic diet.

A prospective experimental clinical study was implemented with a sample of female individuals with pre-obesity and grade 1 obesity associated with a diagnosis of depression. A low-energy, low-carbohydrate, and high-protein diet is implemented, and its effect is evaluated over six months. The main objective is to evaluate the efficacy in reducing weight, Body Mass Index (BMI), body fat percentage, and visceral fat through the implementation of a low-energy, low-carbohydrate, and high-protein diet in female individuals diagnosed with pre-obesity or grade 1 obesity associated with depression. As secondary objectives: to evaluate the association between weight loss and improvement in anxiety levels; the relationship between depression and diet compliance; and to evaluate the relationship between waist circumference and the reduction of visceral fat.

For this purpose, a prospective experimental study was designed and conducted over a 6-month period. The sample will be representative of the female population with pre-obesity, grade 1 obesity, and depression from the Nutrition Consultation at ULS Algarve.

Body composition assessment is performed via tetrapolar bioimpedance: weight, BMI, % body fat, % fat-free mass, total body water, visceral fat, and phase angle. Height and waist circumference will also be assessed. The Anxiety, Depression, and Stress Scale (EADS), validated for the Portuguese population, is applied.

Assessments take place during two moments: at the baseline and three months after. A total of 130 appointments were scheduled, of which 96 took place. There was a non-attendance rate of 26% (n=34). Among the evaluated participants, 70 meet the inclusion criteria and agreed to join the study. Currently, the clinical study is in the final stage of recruitment.

Biography

Ana Paula Alves earned a degree in Clinical Nutrition from the Faculty of Food and Nutrition Sciences at the University of Porto in 1993, followed by a master's degree in 2004. Alves is currently pursuing a PhD in Clinical Research and Translational Medicine at the Faculty of Medicine and Biomedical Sciences of the University of Algarve, under the supervision of Professor Carla Pedrosa. Ana Paula Alves is actively involved in research, teaching, and innovation, and works in the Dietetics and Nutrition service at the Portimão Unit of the Algarve Local Health Unit. Since 2019, Alves has also served as a lecturer for the European Society for Clinical Nutrition and Metabolism.



Asef Mahmud

Internal Medicine, Pediatrics & Obesity Medicine,
AdventHealth Orlando, USA

Adolescent weight loss medications & surgery

The treatment of pediatric obesity is an urgent clinical priority because it prevents long-term health complications such as atherosclerosis, type 2 diabetes, high blood pressure, and various cancers that contribute to premature mortality and increased hospitalization. While lifestyle-based management is the standard starting point, it often results in significant weight regain—between 40% and 65% within two years—due to biological mechanisms that increase hunger and metabolic efficiency as the body resists weight loss. The American Academy of Pediatrics suggests that severe obesity is unlikely to be managed by lifestyle programs alone, making more intensive interventions necessary. Pharmacological treatments like phentermine/topiramate and semaglutide are the most effective options currently available for reducing BMI in adolescents, serving as a critical bridge in treatment. However, these medications can cause gastrointestinal side effects, and weight loss is typically only maintained during active use; additionally, insurance coverage remains a significant barrier for many pediatric patients.

For more durable and substantial weight loss, bariatric and metabolic surgery is recognized as a safe and effective strategy for severe pediatric obesity, offering rapid reversal of comorbidities and long-term total body weight loss of 26% to 29%. The primary procedures include the sleeve gastrectomy, which removes a large portion of the stomach to restrict volume and reduce the hunger hormone ghrelin, and the Roux-en-Y gastric bypass, which provides both restrictive and malabsorptive benefits. Candidates for these surgeries are typically developmentally mature with a BMI of 35 or higher accompanied by comorbidities, or a BMI of 40 or higher. Achieving successful outcomes requires a multidisciplinary approach involving surgeons, pediatricians, psychologists, and nutritionists to ensure comprehensive support. The pediatrician plays a central role in early intervention and the lifelong monitoring of nutritional status, specifically for deficiencies in iron and vitamin B12. The overarching

goal of these medical and surgical interventions is to normalize life expectancy and prevent cumulative organ damage rather than focusing solely on aesthetic weight metrics.

Biography

Asef Mahmud, MD, FACP, FAAP, DABOM, is board-certified in Internal Medicine, Pediatrics, and Obesity Medicine. Mahmud is the Medical Director of the Adolescent Bariatric Surgery Clinic at AdventHealth Orlando, leading multidisciplinary care for surgical patients. Dr. Mahmud serves as Assistant Director of the Internal Medicine Residency Program at AdventHealth Orlando and holds faculty appointments at Florida State and Loma Linda Universities. Additionally, Mahmud leads adult care at the AdventHealth Lifespan Down Syndrome Clinic and Pediatric Complex Care Clinic.



Auston W. Cherbonneau

Freelance, United States

Redefining the metabolism of weight loss: Exercise signal and material nutrition

Calories in, calories out: that is what healthcare professionals are taught globally. A simplified model of metabolism, of our energy in the body, and the model we use to target fat-loss in the mission to conquer obesity. Despite this model's best efforts, it has not been able to conquer the rising global obesity epidemic, costing billions in economic loss every year. Obesity is a multifaceted condition, and only with better models at each facet can we hope to overcome this social, psychological, physical, personal, and genetic condition.

In this presentation I will present different models for exercise, nutrition, and the relationship between them. This model will help healthcare practitioners and the public describe and prescribe exercise and nutrition to the health benefits of their patients and themselves. This will help reshape how we view metabolism as well as provide strategies to mitigate and alleviate excessive fat accumulation with new targets and measurements in both exercise and nutrition.

Biography

Auston Cherbonneau began studying Kinesiology in 2011 at San Diego State University under Pete McCall, the creator of the American Council on Exercise's IFT model. Cherbonneau quickly became certified as an ACE Certified Personal Trainer, and expanded the studies to include more chemistry, management, nutrition, and psychology classes. Unable to finish the undergrad, Cherbonneau continues to pursue research independently. Auston was previously certified as a NSCA CPT, NSCA Tactical Strength and Conditioning Facilitator, NASM Corrective Exercise Specialist, USA Olympic Weightlifting Coach, a USA Olympic Rugby Coach, and specialty certificates in athletic performance, weight loss, mental toughness, and nutrition.



Divanshi Trivedi*, Hemalata Veerasamy, Apichaya Amrapala, Kalyani Parvathy, Andrew Solomon

London Northwest Hospital NHS Foundation Trust, United Kingdom

Association between diabetes technology use and prevalent macrovascular disease in adults with type 1 diabetes: A cross-sectional analysis

Background: Diabetes technologies, including Continuous Glucose Monitoring (CGM), insulin pumps and Hybrid Closed Loop (HCL) systems, have transformed the management of Type 1 Diabetes Mellitus (T1DM) by improving glycaemic control, increasing time in range and reducing hypoglycaemia. A recent systematic review demonstrated consistent improvements in these glycaemic outcomes with diabetes technology; however, evidence demonstrating a reduction in cardiovascular endpoints, including acute coronary syndrome, stroke and peripheral arterial disease, remains limited. We therefore aimed to investigate the association between diabetes technology use and prevalent macrovascular disease in adults with T1DM attending a tertiary diabetes service.

Methods: A retrospective cross-sectional study was conducted including 325 adults with T1DM attending a specialist diabetes service. Demographic data, HbA1c, diabetes technology use and previous macrovascular disease (acute coronary syndrome, stroke and peripheral arterial disease) were collected from electronic health records – specifically focusing on keywords such as “ischaemic heart disease, ischaemic cardiomyopathy, transient ischaemic attacks, stroke, peripheral arterial disease”. Univariable analyses were performed using chi-square and independent-samples t-tests via the SPSS software. Multivariable logistic regression was used to assess the association between diabetes technology use and prevalent macrovascular disease after adjustment for age, gender and HbA1c.

Results: Overall, 202/325 (62.2%) patients were using diabetes technology and 39/325 (12.0%) had established macrovascular disease. Technology use was not associated with prevalent macrovascular disease on univariable analysis (13.9% vs 8.9%, $p=0.186$). In multivariable

logistic regression, increasing age was independently associated with macrovascular disease (adjusted OR 1.12, 95% CI 1.08–1.17, $p < 0.001$). HbA1c demonstrated a non-significant trend towards increased odds of macrovascular disease (adjusted OR 1.03, 95% CI 1.00–1.06, $p = 0.059$). Diabetes technology use was not independently associated with prevalent macrovascular disease (adjusted OR 1.98, 95% CI 0.68–5.72, $p = 0.210$).

Conclusions: In this cross-sectional cohort of adults with T1DM, diabetes technology use was not independently associated with prevalent macrovascular disease after adjustment for age, sex and HbA1c. Increasing age remained the strongest independent predictor of macrovascular disease. These findings suggest that optimisation of glycaemic control alone may be insufficient to reduce macrovascular disease burden and reinforce the importance of a comprehensive cardiovascular risk reduction strategy, including optimisation of blood pressure, lipid management, renal protection, smoking cessation, lifestyle modification and patient education. Prospective longitudinal studies incorporating diabetes duration and timing of technology initiation are required to determine whether diabetes technologies influence future cardiovascular risk.

Biography

Dr Divanshi Trivedi is an internal medicine year 1 trainee at Northwick Park hospital, London Northwest Hospital NHS Foundation Trust. Trivedi graduated from Aston Medical School, ranking 1st in the cohort and went onto achieving the MRCP diploma within the first 2 years of post-graduate training. Trivedi is interested in pursuing a career in cardiology with a focus on Cardiovascular risk reduction and is currently working in Northwick Park's Endocrinology and diabetes department to analyse ways to reduce cardiovascular risk in patients with T1 and T2 diabetes mellitus across north London.



Grace A. Asiko

Apiculture Platform of Kenya, Kenya

Enhancing nutrition therapy on diabetics through increased crop productivity

The dual role honeybees play in increased crop and fruit production through pollination, in addition to Apitherapy, cannot be under-estimated. 80% (percent) of food crops, mainly fruits and vegetables, rely on insect pollination, most of which is done by bees. There are over 30,000 bee species in the world and valuation of honeybee pollination services worldwide was \$ US 238.9 billion in the year 2009. The current outcry on bee colony decline, impacting negatively on food and nutrition security, depicts clear evidence on the importance of bee pollination for increased productivity. In the wake of climate change jeopardy, there is depletion of the age-old food basket, with bee habitat loss, due to environmental degradation, hence an upsurge of lifestyle diseases: Diabetes, high blood pressure and cancer. There is urgent need for smart and innovative strategies to increase food production to counter famine and complement conventional medicine for early diabetics through Agri-Nutri-therapy. Comparative pollinated and pollinator deficient studies, were conducted from the year 2010-2020. The experimental design and methodology involved planting of a select quick flowering fruits and vegetables, all of which are bee pollinated (Strawberry, *Fragaria × ananassa* Duch; Cucumber, *Cucumis sativa* Linneaus; Sweet pepper, *Capsicum annuum* Linneaus; Tomato, *Lycopersicum esculentum* Mill; Spider plant, *Gynandropsis gynandra*; Pumpkin, *Cucurbita pepo* Linneaus and Rose coco beans, *Phaseolus vulgaris* Linneaus). The studies were done, in and outside a controlled environment (the greenhouse, 8x24 meters in size) at the National Beekeeping Institute, Lenana-Nairobi (Coordinates: UTM 37M 0257490, 9858862). This provided a comparable environment for testing pollination efficiency and effectiveness of different bee species, singly, in cohorts or combination, on specific crops, with a display of symmetric and asymmetric formations/malformations, indicating super quality for accomplished pollination and nil/malformed or missing seeds, for pollinator deficient fruits/pods, respectively. Collected data was analyzed quantitatively and qualitatively, using Statistical Package for Social Scientists,

SPSS Software, version 23. Regression, correlation, and student t-test on strawberry revealed significant relationships between the bee pollinator and the plant species, impacting positively on fruit/vegetable productivity, to support a healthy, nutrient-dense mixed diet for diabetics, as per the World Diet classification. Alternative and specialized bee pollinators ensured steady and continuous production of the fruits and vegetables.

Keywords: Enhancing, Nutrition Therapy, Diabetic, Productivity.

Biography

Grace Adala Asiko, holds a PhD Degree in Agricultural Entomology, obtained from the University of Nairobi in the year 2012 and a Bachelor of Science Degree in Botany and Zoology, from the same University. Asiko too has a Masters in Tropical Bees and Beekeeping in Tropical Climates, obtained in January 2004 from Utrecht University, Netherlands. Asiko studied Geography as well. Dr. Asiko was employed by the Ministry of Agriculture, State Department of Livestock Production and rose through the ranks to Deputy Director of Livestock Production. Asiko was appointed to Head the National Beekeeping Institute in Lenana-Nairobi in the year 2010, where the mandate included overseeing the functions of the institution, Policy formulation, training, research and innovation, in all aspects pertaining to the beekeeping industry. Asiko authored and co-authored over 50 scientific publications and articles on Beekeeping and the Agricultural sector at large. Asiko is a recipient of Utumishi Bora Award presented by Kenya Christian Professional Forum in 2017, for work Excellence, Research and Documentation, particularly in the area of Stingless Bee research. Dr Asiko, among others, earned the Anglican Church of Kenya Stewardship Award, 2015. Asiko has actively participated in several National and International Seminars and conferences and continues to attend educative webinars. Asiko is passionate on professional presentations and student mentorship. Dr. Asiko, progressively positioned herself on the executive and technical advisory committees of re-known Professional organizations/societies: The Animal Production Society of Kenya, The Kenya Business and Professional Women, The Apiculture Platform of Kenya, The Kenya Pollinator Initiative and the Bee health committee, where she served with great zeal and commitment. Asiko too, has taught at the University of Nairobi, on part-time basis.



Hyder Khan*, MD Aziz Mazumdar,
Areeba Nakhuda, Prash
Ganeshwaran

Colchester General Hospital, UK

Optimising inpatient hypoglycaemia management: A closed-loop quality improvement project enhancing protocol adherence and patient safety among resident doctors in Care of the Elderly and Acute Medicine Department at Colchester General Hospital

Background: Inpatient hypoglycaemia is a high-risk medical emergency requiring rapid, standardized management. Adherence to Joint British Diabetes Societies (JBDS) guidelines is critical to prevent severe neuroglycopenia, acute confusion, falls, and extended hospital stays, particularly among frail elderly patients. Baseline evaluation at a large NHS trust identified significant knowledge gaps and protocol non-adherence among resident doctors across Care of the Elderly (COTE) and Acute Medicine wards.

Methods: A closed-loop Quality Improvement Project (QIP) was conducted across two cycles using Plan-Do-Study-Act (PDSA) methodology. Baseline knowledge was assessed in Cycle 1 (N=30). Key targeted interventions included point-of-care cognitive aids (lanyard reference cards and ward flowchart posters), QR-coded digital guideline access on blood glucose meters, targeted 10-minute micro-teaching sessions during handovers, and appointing ward Hypo Champions. Interventions were evaluated in Cycle 2 (N=32).

Results: In Cycle 1 (N=30), the mean overall clinical knowledge score was 6.77/10. Critical deficits included: only 40.0% correctly identifying the 10–15-minute re-testing interval (Rule of 15), 23.3% recognizing the mandatory 40g long-acting carbohydrate recovery dose following glucagon administration, and 30.0% failing to identify <4.0 mmol/L as the treatment threshold. Following multi-modal intervention rollout, Cycle 2 demonstrated marked clinical improvement: the mean knowledge score increased to 8.84/10 (median 9/10). Protocol threshold recognition

reached 100.0% (32/32), 10–15-minute re-testing interval knowledge improved to 93.8% (30/32), post-glucagon recovery dosing awareness nearly tripled to 65.6% (21/32), and high-risk sulphonylurea awareness increased to 84.4% (27/32).

Conclusion: Multi-modal educational interventions and point-of-care visual prompts successfully resolved critical knowledge deficits in inpatient hypoglycaemia management. Closing the audit loop demonstrated sustained alignment with JBDS national guidelines, mitigating recurrent hypoglycaemic events, improving patient safety, and establishing a scalable framework for trust-wide acute care quality improvement.

Biography

Dr. Hyder Khan is an Internal Medicine Registrar at Colchester General Hospital with the NHS. Khan completed the MRCP in July 2026 and serves as an Associate College Tutor for the Royal College of Physicians. Khan also holds leadership roles as Internal Medicine Trainee Lead and Acute medicine Teaching Lead. Khan graduated from Ras al-Khaimah Medical and Health Sciences University in 2019, completed internship with the UAE Ministry of Health, and worked as a general physician for two years before moving to the UK. In the UK, Khan began as an SHO at Basildon Hospital in 2023 before joining the IMT program at Colchester in August 2024. Khan is now an Internal Medicine Registrar in the final training year with a focus on Diabetes and Endocrinology.



Julien Sanon

Clinical Assistant Professor of Medicine, Thomas Jefferson University, United States

Jefferson–Lehigh Valley Health Network / WellSpan Health Network, United States

Obesity beyond weight loss: Integrating cardiovascular, kidney and metabolic care for global impact

Obesity is a complex chronic disease that exerts profound and interconnected effects on cardiovascular, kidney, and metabolic health. Yet most global care models continue to prioritize weight change alone while overlooking the multisystem nature of obesity-related organ dysfunction. This gap contributes to underdiagnosis of early CKM disease, delayed initiation of protective therapies, and persistent disparities across diverse populations.

This presentation outlines a practical, integrated care framework that unifies cardiovascular, kidney, and metabolic principles into routine obesity management. Drawing on multidisciplinary guidelines, global epidemiologic trends, and real-world experience across hospital medicine, nephrology, obesity medicine, and nutrition, the session highlights how coordinated treatment pathways—incorporating pharmacotherapy, metabolic monitoring, renal and cardiovascular surveillance, and targeted lifestyle intervention—can simultaneously reduce cardiometabolic risk and organ decline.

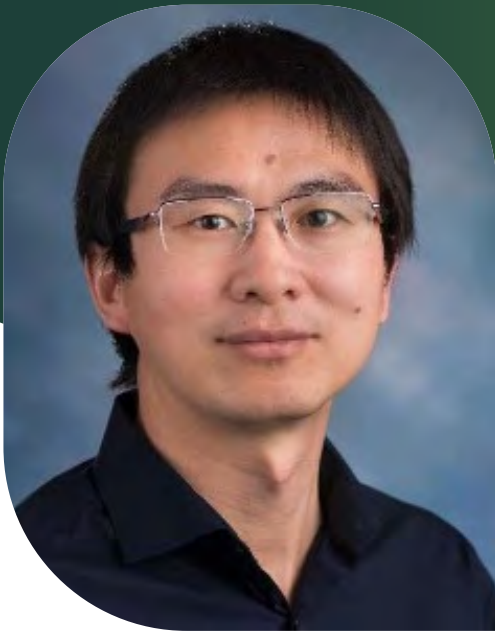
Special emphasis will be placed on operationalizing the emerging Cardiovascular–Kidney–Metabolic (CKM) model in clinical practice, clarifying key patient phenotypes, and identifying high-yield strategies applicable in both high-resource and low-resource settings worldwide. By shifting the focus from weight loss alone to comprehensive multisystem disease modification, this approach offers a scalable roadmap capable of improving outcomes, reducing global disease burden, and enhancing long-term prevention.

Attendees will gain actionable tools for implementing CKM-aligned obesity care in diverse clinical environments, with direct relevance to international health systems, primary care networks, and specialty practices.

Keywords: Obesity, CKM Syndrome, Cardiometabolic Health, Kidney Disease, Global Health, Metabolic Dysfunction, Integrated Care.

Biography

Julien Sanon is a Clinical Assistant Professor of Medicine at Thomas Jefferson University and a practicing Hospitalist and Nephrologist within the Jefferson–Lehigh Valley Health Network and WellSpan Health Network. Sanon's multidisciplinary expertise spans nephrology, obesity medicine, heart failure, and clinical nutrition, uniquely positioning Sanon at the forefront of Cardiovascular–Kidney–Metabolic (CKM) integration in clinical practice. Dr. Sanon is among a group of U.S. clinicians with combined board certifications in Nephrology, Obesity Medicine, and Heart Failure, and formal licensure in Nutrition (LDN), with a Master of Public Health (MPH) in Nutrition and International Nutrition. Sanon's academic and clinical work emphasizes the multisystem nature of obesity, the early identification of CKM risk, and the development of integrated care pathways that target disease modification rather than weight reduction alone. Sanon has lectured nationally and internationally on obesity-related organ dysfunction, CKM syndrome, cardiohepatorenal physiology, and onconeurology. With publications in leading cardiology and nephrology journals, Dr. Sanon contributes to advancing evidence-based strategies that bridge hospital medicine, primary care, and specialty care. Sanon's current focus includes developing pragmatic CKM implementation frameworks that can be adopted across both high-resource and low-resource healthcare settings. At the World Obesity & Weight Management Congress 2026, Dr. Sanon will present an integrated CKM model designed to transform global obesity care through multisystem risk reduction, organ protection, and scalable population-level strategies.



Yadong Wang, Jian Li, Zhenkai Hao, Chao Li, Yanling Wang, Vu L. Ngo, Andrew T. Gewirtz, Ye Ding, Jun Zou*

Center for Inflammation, Immunity & Infection, Georgia State University Institute for Biomedical Sciences, Atlanta, GA, USA

Aging-associated gut microbiota exacerbates western diet-induced obesity and vascular dysfunction

Obesity prevalence increases with age and is further exacerbated by consumption of a Western-Style Diet (WSD), which is characterized by high fat, refined sugars, processed foods, and low dietary fiber. Consistent with this, our studies show that adult/middle-aged mice develop markedly more severe Diet-Induced Obesity (DIO) and metabolic dysfunction than young mice when exposed to a high-fat diet that models key features of a WSD. This heightened obesity susceptibility in adult mice was associated with reduced energy expenditure and increased food intake, rather than increased nutrient absorption. Importantly, age-related DIO was accompanied by vascular inflammatory remodeling and barrier dysfunction.

Furthermore, we demonstrated that gut microbiota alteration is a key driver of this age-dependent metabolic and vascular phenotype. Aging induced progressive changes in gut microbial composition, including enrichment of pro-inflammatory taxa and increased microbiota-derived LPS and flagellin activity. These changes were associated with increased intestinal permeability and colonic inflammatory/metabolic reprogramming. Depletion of gut microbiota with antibiotics markedly attenuated WSD-induced obesity and improved glucose metabolism in adult mice. Conversely, fecal microbiota transplantation from adult donors into young germ-free recipient mice transferred susceptibility to severe DIO, metabolic dysfunction, reduced energy expenditure, and vascular dysfunction upon WSD exposure. Together, these findings support a model in which aging promotes a pro-inflammatory gut microbiota that exacerbates WSD-induced obesity, metabolic dysfunction, and vascular barrier impairment.

Biography

Dr. Jun Zou has over a decade of experience investigating host-microbial interactions, with a focus on metabolic disease. At Georgia State University, Zou's laboratory studies how diet-microbiota interactions regulate metabolic and immune homeostasis in obesity and diabetes. Zou's work has demonstrated that dietary fiber reshapes the gut microbiota to improve metabolic outcomes through IL-22 and short-chain fatty acids, and that microbiota alterations can be vertically transmitted to influence disease risk. Building on this foundation, current research focuses on how aging-associated gut microbiota increased western diet induced obesity.

Khaled Elhadidi

Royal Derby Hospital, United Kingdom

Recurrence and functional outcomes following laparoscopic hiatus hernia repair: A single-centre study

Background: Laparoscopic hiatus hernia repair is widely used for the management of hiatal hernias, but long-term recurrence remains a major concern. Evidence regarding Royal Derby Hospital, United Kingdom predictors of recurrence, particularly in routine single-centre practice, remains limited. This study evaluated recurrence and functional outcomes after laparoscopic hiatus hernia repair in a single-centre cohort.

Methods: A retrospective cohort study was conducted at Wirral University Teaching Hospital NHS Foundation Trust, United Kingdom, including all consecutive adult patients who underwent primary or revisional hiatus hernia repair between 1 January 2014 and 31 January 2024. The primary outcome was postoperative hernia recurrence documented on imaging or endoscopy. Secondary outcomes included postoperative complications, length of stay, intensive care unit admission, 30-day remission, mortality, dysphagia, Proton Pump Inhibitor (PPI) use, and reflux symptoms at 6 months. Time-to-event outcomes were analysed using Kaplan–Meier methods, and multivariable logistic regression was used to identify factors associated with recurrence.

Results: A total of 216 patients underwent hiatus hernia repair, including 201 primary repairs and 15 revisional procedures. Median age was 62 years, 63% were female, and median body mass index was 29.4 kg/m². Fundoplication was performed in 93% of cases, and mesh reinforcement was used in 6%. Postoperative complications occurred in 35% of patients, although most were minor. At 6 months, dysphagia was reported in 14% of patients, while PPI use decreased significantly from 94% preoperatively to 40% postoperatively ($p<0.001$). Hernia recurrence occurred in 19% of patients, with a median time to recurrence of 10 months. Reoperation for recurrence was required in 18 patients. On multivariable analysis, revisional surgery was independently associated with recurrence (OR 9.86, 95% CI 2.17–55.1; $p=0.003$), whereas age, sex, body mass index, mesh use, operative approach, and fundoplication type were not significantly associated with recurrence.

Conclusion: Laparoscopic hiatus hernia repair was associated with meaningful functional improvement, including reduced postoperative PPI use and generally favorable symptom control. However, recurrence remained an important long-term issue, occurring mainly within the first 2 years after surgery.



Kia Mitchell

Families First Medical Group; International Women's Obesity Network (IWON); Limitless Me Wellness — Jacksonville, FL, USA

The weight we carry: Obesity bias, stigma & workplace mental health

Obesity is a chronic disease, but for millions of working adults its heaviest burden is carried not in the exam room but in the workplace. This session examines the psychological toll of workplace weight stigma through three converging vantage points: the patient, her treating obesity medicine physician, and her employer using a composite clinical case (Angela) to trace how workplace bias radiates outward into anxiety, depression, disordered eating patterns, burnout, and disengagement from obesity care.

The presentation is grounded in the pillars of obesity treatment: nutrition therapy, physical activity, behavioral modification, and medical interventions. The Weight We Carry demonstrates how workplace systems actively undermine each: shaming wellness challenges, shift structures that make activity inaccessible, chronic identity-based stress that elevates cortisol and disrupts behavior change, and benefit plan design that restricts access to anti-obesity medications regardless of medical necessity. Two underexamined structural forces are also addressed: biometric surveillance embedded in corporate wellness platforms and the paradox of individual-responsibility wellness programming that quietly reinforces the stigma it claims to address.

Rather than treating weight stigma as solely interpersonal or clinical, this session positions it as a social and structural determinant of health that intersects directly with diversity, equity, and inclusion efforts, most of which currently exclude body size as a considered dimension. Attendees will leave with the LIFT™ Framework (Lead with Truth, Identify the Bias, Fix the System, Transform the Culture), a practical model for clinicians, HR leaders, and employers to jointly redesign workplace systems that currently treat obesity as a personal failing rather than a chronic disease deserving of accommodation, privacy, and equitable benefit design.

Learning objectives: (1) Describe the bidirectional relationship between workplace weight stigma and mental health outcomes; (2) Describe how each of the four pillars of obesity treatment can be undermined by workplace conditions; (3) Analyze structural and social determinants of health embedded in workplace systems including benefit design, biometric surveillance, hiring/promotion practices and situate body size within existing health-equity frameworks.

As employers increasingly grapple with coverage decisions for anti-obesity medications, mental health benefit design, and DEI programming under public scrutiny, obesity medicine specialists have a timely opportunity and responsibility to shape how workplaces treat the disease of obesity.

Biography

Dr. Kia Mitchell, *The Voice for Everybody*, is a double board-certified physician in Family Medicine and Obesity Medicine practicing at Families First Medical Group in Jacksonville, Florida. Mitchell is the founder of the International Women's Obesity Network (IWON), a 501(c)(3) nonprofit advancing women's obesity health equity, and Limitless Me Wellness, an aesthetics, wellness, and consulting practice. A 2026 HRCI-certified physician, Mitchell developed a training program bridging clinical obesity medicine with workplace policy. Next year, in partnership with the City of Jacksonville, Mitchell is planning the inaugural World Obesity Day of Awareness in the spring.



Lisa A. Stanton*, Jeanean B. Naqvi,
Susan Devaraj, Amanda McGill,
Todd Norwood, Thomas Tsang,
Sarah Linke

Omada Health, United States

Improving GLP-1 weight loss quality with a virtual lifestyle companion program

Background: Glucagon-Like Peptide-1 (GLP-1) receptor agonists can produce rapid weight loss, but this loss is frequently accompanied by disproportionate lean mass loss, especially during the early phase of GLP-1 treatment. Physical activity, particularly resistance training, is the most effective behavioral strategy for enhancing fat reduction while preserving lean mass during weight loss, yet little is known about whether remote virtual health programs can deliver the structured, strength-focused support needed to achieve high-quality weight loss in this population.

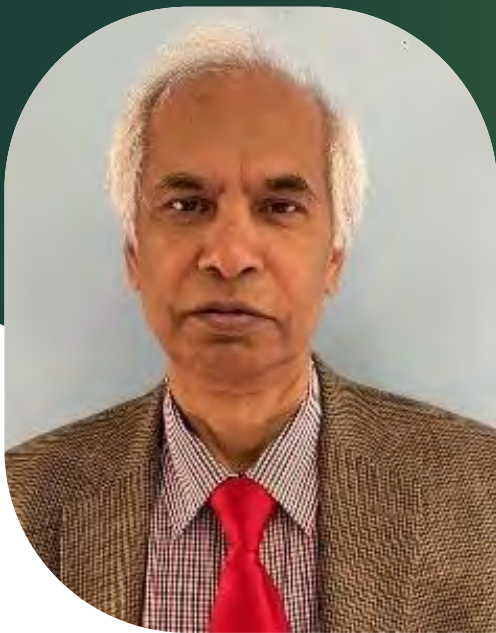
Methods: This work used a quasi-experimental design to evaluate whether a 12-week virtual GLP-1 lifestyle companion program that includes physical activity coaching is associated with increased weight loss and preservation of muscle mass among adults with obesity who initiated GLP-1 therapy for weight loss ≤ 8 weeks prior to baseline. A total of 245 adults received either a virtual GLP-1 lifestyle companion program ($n=151$) or usual care ($n=94$). The GLP-1 lifestyle companion program provides virtual health coaching, GLP-1-specific peer support groups, digital tools for meal logging and behavior tracking, AI-based nutrition support, and a tailored resistance- and function-focused physical activity plan, plus asynchronous messaging with an exercise coach certified in personal training. Body composition was measured using home bioelectrical impedance analysis scales, and psychosocial and behavioral outcomes were self-reported. Outcomes analyses were conducted using linear mixed-effects models fit by restricted maximum likelihood. Our primary focus was the timepoint $\times$ group interaction, which tests whether changes over time differ between participants in the GLP-1 lifestyle companion program and control group.

Results: Among the primary analytic sample (n=245), mean age was 42.9 years, 72.7% were female, and mean BMI was 36.3 kg/m², with no significant differences in these characteristics between the GLP-1 lifestyle companion and usual care groups at baseline (all $p > 0.05$). Participants in the GLP-1 lifestyle companion program lost approximately 6.0% of their baseline body weight versus 3.3% in the control group (between-group difference 2.8%, $p < 0.001$). Compared with usual care, GLP-1 program participants also experienced a greater decline in body fat percentage (-3.3% vs. -1.6%, $p < 0.001$), a greater increase in muscle mass percentage (+0.6% vs. +0.2%, $p < 0.01$), and greater improvements in weight loss self-efficacy, well-being, physical functioning, depression symptoms, and anxiety symptoms.

Conclusions: Personalized, virtually delivered physical activity programming as part of a GLP-1 lifestyle companion program may meaningfully improve the quantity and quality of weight loss during GLP-1 therapy as well as improve patient psychosocial and behavioral outcomes.

Biography

Dr. Lisa A. Stanton earned a PhD in Social Psychology from the University of Minnesota in 2019 and completed a postdoctoral fellowship in Preventive Medicine at Northwestern University Feinberg School of Medicine. Stanton is currently a Clinical Research Scientist at Omada Health, where Stanton's work centers on behavioral science and obesity research.



Madhu S. Malo^{1,4,7*}, Jagannath Malo¹, Md. Jahangir Alam², Salekul Islam³, Md. Abdul Mottalib⁴, Md. Mehedi Hasan Rocki¹, Ginok Barmon¹, Shamema Akter Tinni¹, Swapan K. Barman¹, Tapas Sarker¹, Md. Nayeemul Islam Khan⁴, Kanakaraju Kaliannan⁵, Muhammad A Hasanat⁶, Salimur Rahman⁶, Md. Faruque Pathan⁴, AK Azad Khan^{1,4}, Biplab K. Malo⁷

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IAP: A predictor biomarker of obesity

Background: Obesity is a chronic metabolic disease defined by the World Health Organization as excessive fat accumulation risking health, typically diagnosed by a BMI ≥ 30 kg/m². Globally, it affects over 1 billion people and costs the global economy roughly \$2.2 trillion annually (about 2.19% of global GDP) in direct medical expenses and lost productivity, according to World Obesity Federation data. In the United States, the crisis is acute, with adult obesity prevalence at 40.3% and severe obesity near 10%. As documented in the U.S. Congress Joint Economic Committee's 2025 Economic Report, managing the disease imposes heavy financial burdens: individual medical costs directly tied to clinical obesity care average an extra \$4,043 annually per patient, skyrocketing to \$9,895 per year for severe cases.

Previously, we observed that mice deficient in Intestinal Alkaline Phosphatase (IAP) are obese, suggesting that IAP may serve as an etiological factor in human obesity. In the current study, we investigated the long-term effects of IAP Deficiency (IAPD) on the pathogenesis of obesity to better understand its underlying role in metabolic dysregulation.

Research Design and Methods: A healthy cohort of participants aged 30–60 years (N=574) was followed for 5 years. The cohort comprised 188 individuals without IAPD (normal control; stool IAP ≥ 65 U/g) and 386 individuals with IAPD (stool IAP < 65 U/g). Over the follow-up period, Body Mass Index (BMI) and Stool IAP (STAP) levels were longitudinally evaluated.

Results: Based on persistent IAP levels over the 5-year study period, participants were stratified into quintiles: Quintile 1 (< 15 U/g stool), Quintile 2 (15.1–33 U/g stool), Quintile 3 (33.1–55 U/g stool), Quintile 4 (55.1–115 U/g stool), and Quintile 5 (> 115 U/g stool). Sensitivity analyses demonstrated that the longitudinal rate of BMI increase across Quintiles 1 to 5 was 14.1%, 4.1%, 3.1%, 2.8%, and 1.2%, respectively. The difference in BMI acceleration between Quintile 1 (lowest IAP) and Quintile 5 (highest IAP) was statistically significant ($p=0.040$).

Conclusions: These findings indicate that IAPD significantly elevates the risk of developing obesity. Consequently, routine STAP screening could serve as an effective tool to stratify individual metabolic vulnerability, establishing stool IAP as a novel predictive biomarker for obesity. Furthermore, these data suggest that oral IAP supplementation may offer a viable therapeutic strategy for obesity prevention.

Biography

Dr. Madhu S. Malo is currently working as the Chief Scientist of Stapgen LLC (Reading, MA, USA). Dr. Malo is an Adviser of the Diabetic Association of Bangladesh. Malo is also a Visiting Professor at BMU and BIRDEM, Bangladesh. Dr. Malo was an Assistant Professor at Massachusetts General Hospital, Harvard Medical School, and a Postdoc at MIT. Malo had the medical degree MBBS from Dhaka Medical College in Bangladesh in 1977, and in 1988, obtained a PhD in Molecular Biology from the Department of Biochemistry, Sydney University, Australia. Malo has many publications related to IAP, Obesity and Diabetes.



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Diabetes pathogenesis and prevention

Background: Type 2 Diabetes Mellitus (T2DM), characterized by hyperglycemia (≥ 126 mg glucose/100 ml blood after overnight fasting) and insulin resistance, presents an escalating global health and economic crisis. According to the 11th edition of the International Diabetes Federation (IDF) Diabetes Atlas, approximately 589 million adults live with diabetes worldwide as of 2024, a figure projected to surge to 853 million by 2050. The global financial strain is unprecedented: global diabetes-related healthcare expenditures reached \$1.015 trillion in 2024. In the United States, the annual economic burden has reached \$412.9 billion, comprising \$306.6 billion in direct medical expenses and \$106.3 billion in indirect costs due to lost productivity and disability, amounting to 25% of the national healthcare cost.

In the context of etiology of diabetes, in 2007, Cani et al. demonstrated that mice develop obesity and insulin resistance when infused with Lipopolysaccharides (LPS), the endotoxin component of the Gram-negative bacterial cell wall. Endotoxin in blood, defined as endotoxemia, leads to low-grade systemic inflammation. Previously, we have shown that LPS is detoxified by

intestinal alkaline phosphatase (IAP), a gut enzyme secreted by villus-associated enterocytes and excreted with stool. IAP acts as an anti-inflammatory agent by dephosphorylating and detoxifying LPS alongside other bacterial toxins. In IAP-knockout mice (Akp-/-) lacking this baseline defense, the animals spontaneously develop metabolic syndrome characteristics, including hyperglycemia, dyslipidemia, and fatty liver. However, exogenous oral delivery of calf IAP effectively shields the mice from these metabolic disruptions.

Based on animal data we hypothesized that IAP Deficiency (IAPD) might be associated with diabetes in humans. In 2015, we conducted a case-control study, and observed that, indeed, IAPD is associated with type 2 diabetes, revealing that the IAP level is half in the stool of diabetes patients compared to healthy persons (35 U/g stool vs 65 U/g stool, respectively). We then decided to conduct a prospective cohort study to determine if IAPD plays any role in the pathogenesis of diabetes.

Methods: We conducted a 5-year prospective cohort study targeting healthy, non-diabetic adults aged 30 to 60. Our sample included 188 subjects without IAPD (defined as IAP level ≥ 65 U/g stool) and 386 subjects suffering from IAPD (defined as IAP level < 65 U/g stool). By recording longitudinal changes in Stool IAP (STAP) and fasting plasma glucose, we successfully extracted Risk Ratios (RR) through log-binomial regression analyses to quantify the exact likelihood of diabetes development.

Results: The longitudinal human cohort study confirmed a direct causal link, revealing that T2DM incidence rates scaled dramatically with the severity of IAP Deficiency (IAPD), resulting in a 14-fold higher risk of developing T2DM over 5 years in individuals with severe IAPD (IAP level: < 15 U/g stool) compared to those with higher IAP levels (> 115 U/g stool). Also, the rate of increase of glycemia was double in the people with severe IAPD. Furthermore, remission of IAPD prevented the development of diabetes. The study established IAP as a predictor biomarker of diabetes.

Conclusion: IAPD is a foundational pathology driving metabolic endotoxemia and systemic insulin resistance. Measuring fecal IAP using the STAP assay offers a highly sensitive framework to diagnose incipient (latent) diabetes before blood glucose levels rise. Intervening via targeted oral IAP supplementation represents a powerful preventative opportunity to mitigate the catastrophic global and domestic economic toll of the diabetes pandemic.

Biography

Dr. Madhu S. Malo is currently working as the Chief Scientist of Stapgen LLC (Reading, MA, USA). Dr. Malo is an Adviser of the Diabetic Association of Bangladesh. Malo is also a Visiting Professor at BMU and BIRDEM, Bangladesh. Dr. Malo was an Assistant Professor at Massachusetts General Hospital, Harvard Medical School, and a Postdoc at MIT. In 1977, Dr. Malo received the medical degree MBBS from Dhaka Medical College in Bangladesh, and in 1988, obtained a PhD in Molecular Biology from the Department of Biochemistry, Sydney University, Australia. Malo has many publications related to IAP and Diabetes.



Melinda J Watman^{1*}, Kelly Broadwater²

¹President & Founder, Weighty Decision, Boston, MA, United States

²Executive Director, Chrysalis Center for Counseling and Eating Disorder Treatment

Atypical anorexia is not that atypical: Eating disorders and obesity – The patient and clinician perspectives

The majority of people with Eating Disorders (ED) are of higher-weight yet EDs are minimized, underreported and often go untreated in these individuals. These individuals are half as likely to receive a clinical diagnosis of an eating disorder from a health care practitioner as those who were of normal weight or underweight. This lack of diagnosis and subsequent treatment is attributable to several things including a general lack of knowledge and awareness of EDs as well as the biased belief that only very thin people have EDs. Untreated EDs set patients up for increased medical complications and difficulty with weight management options. The seriousness of EDs is startling. They have the second highest mortality rate of any mental health condition and up to 20% of those with anorexia nervosa attempt suicide and as many as 43% report suicidal ideation.

We are all well-versed in the language and knowledge of obesity. We are aware of weight bias and, for the most part, we practice what we preach and we often preach/advocate outside of our jobs – be it political, educational, and/or personal advocacy. We are generally not so well-versed on the topic of EDs particularly when in conjunction with obesity. The overall sense is that having obesity precludes having EDs and especially Anorexia Nervosa (AN). After all, how could someone have anorexia with overweight or obesity?

Our presentation focuses on the use of the patient experience coupled with clinical expertise. Patient advocacy is an effective way to affect clinical practice changes and we will bring this aspect into the presentation providing first-hand insights into the personal and clinical care experiences.

In order to treat patients with EDs, it is imperative to have knowledge about EDs – the types, the patient profiles, the risks, etc. as well as consider whether biases exist about EDs. We will explore these topics providing guidelines for care and resources for additional learning.

Obesity and EDs are deeply interconnected and treating them as separate issues does a disservice to those who are struggling. The reality is that many individuals live in the overlap between these conditions, fighting a daily battle between wanting to lose weight and feeling powerless against disordered eating patterns. By approaching these issues with science-backed interventions, we can help break the cycle and create a healthier, more supportive environment for those affected.

Biography

Melinda J Watman has been involved in healthcare for several decades as a clinician and entrepreneur. Watman is currently president and founder of Weighty Decision providing the pharma industry with a patient-centric model to educating internal and external stakeholders in the areas of obesity and eating disorders. Personal experiences with these chronic conditions as well as a clinical background bring authenticity and credibility to Watman's work and speaking engagements. Watman is also a board member of the Obesity Action Coalition working with local and federal governments on equal access to obesity care and anti-weight bias/discrimination legislation.

Ali Akhtar¹, Muhammad Basil Raza^{2*}, Harsh Chawla¹, Lubna Alabdallat³, Nissy Valsan Mathew¹, Harikrishnan Srinivasan⁴

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Intensive versus standard blood pressure control in type 2 diabetes: Cardiovascular and microvascular outcomes

Introduction: Optimal Blood Pressure (BP) targets in Type 2 Diabetes Mellitus (T2DM) remain uncertain. This study aimed to update the evidence on intensive versus standard BP control in T2DM by incorporating recent large-scale trial BPROAD and reassessing cardiovascular and microvascular outcomes across diverse trials.

Methods: This meta-analysis included eight randomized controlled trials (ABCD, Mehler 2003, ABCD-2V, SANDS, INVEST, ACCORD-BP, J-DOIT3, and BPROAD), comprising a total of 25,686 participants. Intensive arms consistently achieved $\sim$ 120/70 mmHg regardless of specific trial targets. Follow-up ranged 1.9–8.5 years. The primary end-point was a composite of fatal/non-fatal cardiovascular events; secondary endpoints were diabetic retinopathy, neuropathy and Urine Albumin Excretion (UAE). Pooled Odds Ratios (ORs) with 95% Confidence Intervals (CIs) were calculated with a random-effects model; heterogeneity was expressed as I^2 .

Results: Compared to standard BP control, intensive BP lowering reduced composite cardiovascular events (OR 0.88, 95% CI 0.79–0.97; $I^2=17\%$). Retinopathy likewise fell (OR 0.84, 95% CI 0.71–0.98; $I^2=0\%$). UAE risk declined (OR 0.82, 95% CI 0.71–0.94; $I^2=62\%$). The analysis showed an OR of 1.48 (95% CI 1.05–2.10; $P=0.03$; $I^2=0\%$) for neuropathy, but the small sample size and wide confidence interval limit confidence in this result.

Conclusion: Lowering BP to approximately 120/70 mmHg, representing a more stringent target than standard control ($\sim$ 135/80 mmHg) is associated with modest reductions in cardiovascular events and improvements in microvascular outcomes including retinopathy and albuminuria in type 2 diabetes. While these benefits are modest and neuropathy data remain limited, the findings support consideration of lower BP targets in this population, applied thoughtfully and tailored to individual risk and tolerability.



Olayemi Olubowale^{1*}, Youssef Abdullah², Kevin Hackshaw³

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Racial disparities in osteoarthritis: Prevalence, presentation, and management in the United States

Osteoarthritis (OA) is the most common form of arthritis in the United States, affecting approximately 24% of adults. This review aims to summarize racial and ethnic disparities in OA prevalence, presentation, disability, diagnosis, and management among different groups in the U.S. The review found significant disparities, particularly affecting African Americans (AAs) and Hispanics (HISs) compared to non-Hispanic whites (WHs). AAs showed higher odds of developing symptomatic and radiological knee OA, with more severe radiological features. Pain and disability due to OA were also more pronounced in AAs and HISs. Disparities extended to imaging workup, with AAs less likely to undergo hip X-rays and MRIs for hip OA. Management strategies, including physical therapy, pharmacological treatments, and surgical interventions, were less utilized by AAs and HISs compared to WHs. These disparities are influenced by complex, multifaceted factors including socioeconomic status, education level, and healthcare access. The review highlights the urgent need for targeted interventions and policy changes to address these racial-ethnic disparities in OA care and outcomes.

Biography

Dr. Olayemi Yemi Olubowale is a physician-scholar currently specializing in Nutrition & Obesity Medicine after completing a fellowship at Massachusetts General Hospital. Yemi's interdisciplinary perspective was shaped by a B.S. in Biology from Georgia Tech and an M.A. in Medicine, Health & Society from Vanderbilt University. After earning an M.D. from Tulane, Olubowale completed Internal Medicine training at Duke University. Combining a rigorous clinical foundation with a deep appreciation for the intersection between health and society, Dr. Olubowale is committed to delivering evidence-based care that addresses the complex factors driving metabolic health.



R. Anil Kumar

Professor and HOD Diabetes and Endocrinology, Karnataka Institute of Endocrinology and Research, Bangalore, India

Differential diagnosis of diabetes in young and prevalence of LADA and LADY in young persons attending tertiary diabetes institute in Bengaluru, India

3370 young diabetes persons were clinically screened 2414 (71.6%) were type 2 diabetes, 843 (25%) were type 1 diabetes and 3.4% constituted LADA, MODY and FCPD. GAD and IA2 antibodies were measured in 381 persons, statistical analysis was done and 2.1% were LADA and 5.1% belong to LADY.

Materials and Methods: 381 patients were randomly selected from patients with age of onset of diabetes less than 35 years attending the outpatient department of Karnataka Institute of Endocrinology and Research Bangalore over a period of 2 years. A fasting and post prandial blood sample was taken for estimation of plasma glucose by hexokinase method. HbA1c was measured by the high-performance liquid chromatography method using the Bio-rad Variant 2 turbo analyzer. Diagnosis of diabetes was made by using criteria of fasting plasma glucose ≥ 126 mg/dl and HbA1c $\geq 6.5\%$. GAD 65 and IA 2 antibodies were estimated using ELISA methods.

Results: Age of onset of all diabetes subjects is less than 35 years. 34.6% and 60.6% of the subjects were in the age group of 20 to 30 and 31–40 years, 72.4% were males. Newly diagnosed subjects were 17.3%, duration of diabetes 1 to 5 years in 63.8% and 6 to 10 years in 14.2% of type 2 diabetes subjects. BMI was 18.5 to 24.9 in 54.3% and 25 to 29.9 in 38.1% of subjects. Antibody positivity was detected in 29 (7.61%) of 381 subjects studied. GAD antibody positive in 22 (6.04%), IA 2 antibody positive in 5 (1.3%) and 2 (0.52%) were positive for both antibodies in diabetes subjects. 2.1% were LADA and 5.1% belong to LADY.

Conclusions: Antibody positivity was detected in 29 (7.61%) of 381 subjects studied. 2.1% patients were LADA and 5.1% were LADY. So if we test GAD antibodies in Indian diabetes subjects we can detect many LADA and LADY patients. Immunomodulator therapy in antibody positive type 2 diabetes subjects may help to reduce beta cell destruction.

LADA-Latent autoimmune diabetes in adults and LADY-Latent autoimmune diabetes in young.

Keywords: LADY, LADA, GAD Antibodies, IA2 Antibodies, C-Peptide.

Biography

Dr. R. Anil Kumar MD, FRCP (Edinburgh) FICP, FRSSDI, WHO Fellowship in Diabetology. Professor and HOD of Diabetes and endocrinology. Karnataka institute of endocrinology and research, Bangalore. Chairman 2017-2018 RSSDI Karnataka, Secretary 2012 – 2015 RSSDI Karnataka chapter. President diabetes club. Scientific chairman KRSSDI 2012 Raichur and DESERT 2014, KRSSDI 2017 Bengaluru, Governing council member RSSDI 2008-2009 and 2011-2012. Scientific adviser KRSSDI 2020. Aryabhata international award winner in 2026. RGUHS post MD Diabetology Fellowship co-ordinator. Co guide – PHD project in NIMHANS, Principal investigator RGUHS MODY Project, 43 Original research publications in international and national journals. Reviewer of Lancet regional health, South East Asia and international journal of diabetes in developing countries. Delivered National MMS Ahuja oration at RSSDI 2024 Delhi, Basvarajendra oration at KAPICON 2022, Manipal, Dr Munichoodappa oration at KRSSDI 2023 Bangalore, KRSSDI 2018 Presidential oration at Mysore and Diacon oration at Vijayapur, Dr M.B.Patil endowment lecture Vijayapur. Speaker at IDF 2011 Dubai, 4th global diabetes and endocrinology conference 2024 at Bangkok and international diabetes and endocrinology conference at Orlando. Selected for B.B. Tripathy vitamin D symposium at national RSSDI Delhi 2013, oral presentations on GAD antibody positivity in type 2 diabetes in RSSDI 2011 and Platelet aggregation response in type 2 diabetes in RSSDI 2014. RSSDI USV award for best innovation in diabetes care in challenging situations. Scientific committee member national RSSDI 2014 and national APICON 2018. Scope certified in obesity management by world obesity federation. Special invitee Karnataka state diabetes treatment protocol committee. Member Karnataka state committee to draft curriculum on Non communicable diseases in schools. Trained 20 Paramedical persons in type 1 diabetes education under SPEED programme.



Rajat Goyal^{1*}, Kajal Garg², Sumeet Gupta¹

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Transforming diabetes care: From genetic discoveries to AI-driven personalized healthcare

Diabetes mellitus is one of the most rapidly growing chronic diseases in the world and continues to be a major health and economic problem. Despite considerable advances in diagnosis and treatment of the disease, optimal control of blood glucose and prevention of long-term consequences remain major challenges. Recent advances in genetics, Artificial Intelligence (AI) and precision medicine are transforming our understanding, diagnosis and management of diabetes, and offering new promise for more effective and patient-centred care. Recent advances in diabetes research will be presented, including how genetic insights have improved our understanding of susceptibility and progression of disease, and response to therapy in individuals. It also addresses the growing use of AI and machine learning in diabetes management, such as early risk prediction, real-time glucose monitoring, personalized treatment plans, smart insulin delivery systems and clinical decision-support tools. These breakthrough technologies help healthcare professionals to make better informed decisions and allow patients to play an active role in managing their illness. This presentation emphasizes the need to combine scientific research and technological innovation to define the future of diabetes prevention, diagnosis and treatment.

Biography

Dr. Rajat Goyal is an Assistant Professor in Pharmaceutical Chemistry with more than 05 years of teaching and research experience in Pharmaceutical Sciences. Expertise includes medicinal chemistry, drug design, prodrug development, molecular docking, nanomedicine and artificial intelligence in drug discovery. Actively engaged in teaching, research, scientific writing and student mentoring while contributing to academic and research activities. Goyal has a strong research profile with an H-index 17, and has authored more than 60 review and

research articles, along with approx. 28 book chapters published in reputed international journals. Goyal also serves as a reviewer for reputed international journals published by leading publishers, including Elsevier, Springer, Wiley and Hindawi.



Renuka Sharma

MD Postgraduate Resident, Department of Human Physiology, Sharda School of Medical Sciences and Research (SSMSR), Sharda University, India

A comprehensive analysis of adipose tissue signalling pathways: Bridging molecular mechanisms and therapeutic strategies in obesity

Background: Obesity is a complex, multifactorial metabolic disorder characterised by excessive adipose tissue accumulation and chronic low-grade systemic inflammation. Once regarded solely as an energy reservoir, adipose tissue is now recognised as a dynamic endocrine organ that secretes bioactive adipokines — including leptin, adiponectin, and resistin — which govern appetite, insulin sensitivity, lipid metabolism, and inflammatory responses. Dysregulation of adipose-derived signals is central to the pathogenesis of insulin resistance and the constellation of obesity-related comorbidities, including type 2 diabetes, cardiovascular disease, and non-alcoholic fatty liver disease.

Objectives: This review aimed to (1) elucidate the molecular mechanisms underlying key adipose tissue signalling pathways; (2) examine inter-organ crosstalk between adipose tissue, liver, skeletal muscle, brain, and gut; and (3) identify existing and emerging therapeutic targets within these pathways relevant to obesity management.

Methods: A comprehensive narrative review was conducted using PubMed and Scopus databases. Articles published between 2000 and 2025 were systematically searched using terms related to adipose tissue, signalling pathways, insulin resistance, and obesity therapeutics. Data synthesis integrated findings from in vitro adipocyte models, in vivo animal studies, and human clinical investigations.

Results: Critical impairments were identified across multiple interconnected pathways in obese adipose tissue. Disruption of insulin/PI3K-Akt signalling promotes glucose uptake failure and lipogenesis dysregulation. Leptin resistance — characterised by elevated circulating

leptin with loss of satiety signalling via JAK2/STAT3 — perpetuates hyperphagia. Reduced adiponectin-mediated AMPK activation impairs insulin sensitisation and exacerbates inflammation. Concurrent upregulation of NF- κ B and TNF- α inflammatory pathways drives macrophage infiltration and systemic metabolic dysfunction. Hyper-activated mTOR signalling further suppresses autophagy and promotes anabolic lipid accumulation. Dysregulation of brown/beige adipose tissue thermogenic capacity, mediated via UCP1, was also identified as a key contributor to impaired energy expenditure.

Conclusion: Adipose tissue signalling pathways represent a convergent therapeutic frontier in obesity. Emerging strategies — including GLP-1 receptor agonists, AMPK activators, nutraceuticals (resveratrol, curcumin), gene-editing approaches (CRISPR-Cas9), and adipose browning inducers — hold significant promise for restoring metabolic homeostasis. Integrating mechanistic molecular understanding with clinical translation is imperative for the development of personalised, pathway-targeted obesity therapeutics.

Keywords: Adipose Tissue, Obesity, Signalling Pathways, Insulin Resistance, Leptin, Adiponectin, AMPK, mTOR, NF- κ B, Therapeutic Strategies.

Biography

Dr. Renuka Sharma brings a wealth of expertise in patient care and medical administration. Holding an MBBS and an MBA in Hospital Administration, Sharma is currently an MD Postgraduate Resident in Human Physiology at the Sharda School of Medical Sciences and Research (SSMSR), Sharda University, India — demonstrating a deep commitment to continuous learning and academic excellence. Alongside vast clinical experience across prestigious hospitals, Sharma is an active academic and researcher, having authored three publications and delivered three conference presentations.



Rupesh K. Gautam^{1*}, Rajat Goya¹²

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Shaping the future of diabetes care: New advancements in treatment, digital health and personalized patient care

Diabetes care is rapidly changing as new therapies, digital technologies and personalized healthcare approaches continue to improve the way the disease is managed. Due to the increasing global burden of diabetes, there is a growing need for healthcare strategies that focus on improvement of overall well-being, prevention of complications and enhancement of the quality of life of patients. Nowadays, the new advancements in the field of medical research and technology help to make the treatment of diabetes more effective, accessible and personalized to the individual needs of each patient. The major focus of this presentation is to explore these newer advancements involved in shaping the future of diabetes mellitus. It includes the role of innovative approaches, such as improved insulin delivery systems and advanced glucose-lowering medications, in accomplishment of better clinical outcomes. This presentation also involves a discussion about how digital health technologies such as continuous glucose monitoring, mobile health applications, telemedicine, wearable devices and remote patient monitoring help to both patients and healthcare professionals and thus improve day-to-day disease management. The importance of personalized patient care is also highlighted in this presentation, which showed that the adoption of personalized therapies helps the healthcare providers to design treatment plans that are more suitable for each patient and thus leads to improved treatment adherence, greater patient engagement and improved long-term outcomes.

Biography

Dr. Rupesh K. Gautam is currently working as Professor, Centre for Pharmacology, at Amity Institute of Pharmacy, Amity University Uttar Pradesh, Noida. Gautam has more than 17 years of teaching and research experience. Gautam is featured in the list of World's top 2% scientist

-2025 released by Elsevier-Stanford University. Gautam is having more than 20,000 citation both in Scopus and Google scholar. Gautam has more than 100 research and review articles to Gautam's credit in various journals of repute. Gautam has also published twelve books and more than fifty book chapters with Elsevier, Springer, Wiley, Scivener, Bentham, NOVA etc. Gautam has published four patents and registered forty two copyrights. Gautam has supervised 21 M. Pharm scholars. Dr. Gautam has also received grants from various government agencies/associations for conducting FDP/seminars/conferences/workshops. Gautam has attended and organized several International and National seminar, conferences and workshops as a team member and organizing secretary/coordinator. Gautam has been Guest Editor of Phytomedicine, Current Pharmaceutical Design, Neuroscience and Biobehavioral Reviews, Evidence-Based Complementary and Alternative Medicine and Biomed Research International.



Safa Hegazin

Cleveland Clinic Abu Dhabi, Abu Dhabi, UAE

Social determinants of obesity and social disparities

This presentation explores obesity through the lens of social determinants of health, emphasizing how social, economic, and environmental factors drive unequal obesity risk and outcomes across populations. Obesity is not solely the result of individual behavior or biological predisposition; it is deeply shaped by where people live, work, learn, and access care. Factors such as income inequality, food insecurity, neighborhood design, access to safe spaces for physical activity, education level, chronic stress, cultural norms, and exposure to weight stigma all play a critical role in shaping metabolic health.

These disparities influence not only obesity prevalence but also access to timely diagnosis, evidence-based treatments, anti-obesity medications, bariatric surgery, and long-term follow-up care. The presentation highlights the bidirectional relationship between obesity and social disadvantage, where obesity itself can worsen social marginalization through stigma, employment discrimination, and reduced healthcare engagement.

The presentation concludes with practical strategies to address social disparities in obesity, including multidisciplinary care models, community-based interventions, culturally sensitive counseling, and policy advocacy. By shifting the narrative from blame to context, this session aims to equip clinicians, policymakers, and healthcare leaders with a deeper understanding of obesity as a socially patterned disease and to inspire action toward more just, effective, and sustainable obesity care.

Biography

Dr. Safa Hegazin is a triple board-certified physician in Obesity Medicine, Internal Medicine, and Lifestyle Medicine, and a NAMS-certified menopause specialist. Hegazin

serves as Director of the Medical Obesity Program at Cleveland Clinic Abu Dhabi, leading a multidisciplinary, evidence-based approach to metabolic and weight-related care. Hegazin's clinical interests include obesity, metabolic health, menopause, and lifestyle interventions, with a strong focus on integrated medical and surgical pathways, research, and regional education initiatives advancing comprehensive obesity care in the MENA region.



Samira Seidu Bogobiri

University for Development Studies (UDS), Ghana

Artificial intelligence-driven remote monitoring and predictive management of diabetes patients in home-based care settings: Enhancing early detection, personalized intervention, and long-term health outcomes in Ghana

Objective: This study investigates the effectiveness of artificial intelligence-driven remote monitoring systems in managing diabetes patients within home-based care settings, with a focus on improving early detection of complications, personalized treatment interventions, patient adherence, and long-term health outcomes in rural communities in Ghana

Methods: The study adopts a mixed-methods approach involving the review and analysis of AI technologies applied in diabetes home care, including machine learning algorithms, predictive analytics, wearable biosensors, telemedicine platforms, and AI-powered virtual health assistants. Patient-generated health data such as blood glucose levels, insulin usage, physical activity, sleep patterns, dietary habits, and cardiovascular indicators are continuously collected and analyzed. Predictive models are used to identify abnormal patterns, forecast potential health risks, and support healthcare professionals in making proactive clinical decisions.

Results: Findings indicate that AI-driven remote monitoring significantly improves glycemic control, reduces emergency hospital admissions, and enhances patient compliance with treatment plans. Real-time alerts generated by AI systems allow for early intervention during episodes of hyperglycemia or hypoglycemia. Personalized recommendations on medication adjustments, dietary planning, and physical activity further improve self-management. Healthcare providers benefit from remote access to patient progress, enabling efficient

clinical supervision and reducing the burden on healthcare facilities. The integration of AI also supports precision medicine by tailoring interventions to individual patient profiles.

Conclusion: AI-driven remote monitoring presents a transformative approach to diabetes management by shifting care from hospital-centered treatment to continuous home-based supervision. This study contributes to the growing body of knowledge on intelligent healthcare systems and supports the development of sustainable AI-based diabetes care models for the future.



Sarah M. Stewart

Worth The Weight, LLC, USA

Teaching metabolism in the exam room: Using macronutrients and early biomarkers to identify and address obesity-related metabolic dysfunction

Background: Obesity is frequently approached through outdated weight-centric metrics and late-stage disease markers, often overlooking early metabolic dysfunction and the physiologic drivers of appetite regulation. While pharmacologic therapies have expanded treatment options, many patients and clinicians lack a clear understanding of how macronutrient intake as well as eating patterns influences appetite-regulating hormones and how commonly available laboratory markers can identify metabolic risk well before the onset of diabetes.

Purpose: This presentation aims to demonstrate a practical, patient-centered framework for obesity care that integrates macronutrient physiology, early metabolic biomarkers, and exam-room education to improve patient understanding, engagement, and early intervention.

Approach: Drawing from primary care and obesity-focused clinical practice, this session reviews the differential effects of protein, carbohydrates, and dietary fat on key appetite-regulating hormones, including insulin, ghrelin, leptin, GLP-1, and peptide YY. The presentation further explores the interpretation of accessible laboratory marker; such as fasting insulin, HOMA-IR, and triglyceride-to-HDL ratio as early indicators of metabolic dysfunction, even when traditional laboratory values remain within normal ranges. Emphasis is placed on identifying metabolic risk earlier in the disease trajectory to guide prevention-focused care.

Clinical Application: A core component of this session highlights the use of a visual teaching board during routine clinical encounters to explain metabolic physiology in a clear, non-stigmatizing manner. This low-cost, time-efficient educational tool is used to connect food choices, hormonal signaling, laboratory trends, and appetite regulation in real time, supporting shared decision-making and reducing patient shame. Case-based examples illustrate how this approach improves patient comprehension and facilitates individualized nutrition and lifestyle interventions alongside pharmacologic therapy when indicated.

Implications: By translating complex metabolic concepts into accessible clinical education, clinicians can shift obesity care toward earlier identification of metabolic dysfunction, improved patient engagement, and more sustainable behavior change. This practical framework is designed to be immediately applicable across primary care and obesity medicine settings, supporting comprehensive, physiology-informed obesity management.

Biography

Sarah Stewart, MSN, APRN, FNP-C, is a Family Nurse Practitioner practicing in rural Maine and the founder of Worth the Weight, LLC. Stewart is certified in Obesity Medicine with a clinical focus on metabolic health, nutrition, and early identification of metabolic dysfunction. Stewart's work centers on translating complex metabolic physiology into practical, patient-centered education in the primary care setting. In addition to clinical practice, Stewart delivers a monthly educational segment on Fox 22 Good Morning Maine, provides health coaching, and community education aimed at reducing weight stigma and improving long-term metabolic health outcomes.



Souravh Bais*, Renu Kumari, Raghvendra Dubey

Institute of Pharmaceutical Sciences SAGE University Indore,
India

Metabolic health across generations: Preventing and controlling diabetes in the modern era

Diabetes mellitus constitutes an escalating global metabolic crisis impacting individuals across all age groups, from early childhood to adulthood. Contemporary diabetes care necessitates a paradigm shift from episodic glycemic management to the promotion of sustained metabolic health throughout the lifespan. This presentation examines an integrative, generation-spanning framework for the prevention and management of diabetes through coordinated public health, clinical medicine, and precision medicine strategies.

Early life determinants, such as genetic susceptibility, intrauterine metabolic programming, childhood obesity, and lifestyle transitions, are critical in the development of both type 1 and type 2 diabetes. Consequently, preventive strategies must commence with risk identification, nutritional interventions, and behavioral modifications during childhood and adolescence. In adults, metabolic syndrome, insulin resistance, and β -cell dysfunction exacerbate disease progression and elevate cardiovascular morbidity. The focus is on early metabolic screening, individualized pharmacotherapy, and comprehensive risk reduction.

Recent advancements in endocrinology and metabolic medicine, including incretin-based therapies, SGLT2 inhibitors, continuous glucose monitoring systems, and digital health platforms, have markedly transformed glycemic control and long-term outcomes. These innovations facilitate precision-based treatment models that integrate genomics, metabolic biomarkers, lifestyle analytics, and patient-centered care pathways. Additionally, special attention is given to gestational diabetes, intergenerational metabolic transmission, and the prevention of microvascular and macrovascular complications.

This presentation also underscores the influence of inflammation, gut microbiota modulation, and epigenetic factors in shaping metabolic health trajectories. By bridging prevention science with advanced therapeutic control, this lifespan approach emphasizes sustainable, equitable, and interdisciplinary strategies for diabetes management.

A generational perspective on metabolic health not only enhances individual outcomes but also fortifies public health systems, ensuring long-term diabetes control in an increasingly urbanized and aging global population.

Biography

Dr. Souravh Bais is a Professor and Research Coordinator in Pharmaceutical Sciences at Sage University, India. Bais's research focuses on metabolic disorders, advanced drug delivery systems, and translational therapeutic strategies. Bais actively contributes to interdisciplinary research initiatives and has guided multiple research projects in pharmaceutical and biomedical sciences. Bais's academic work emphasizes integrating preventive medicine, precision pharmacotherapy, and innovative healthcare approaches to improve long-term metabolic health outcomes. Bais published more than 65 research articles and books in international repute and is a member of editorial board in very renowned journals.



Subhas Chandra Datta

PhD, Department of Zoology, Visva-Bharati, and Headmaster, Kanchannagar D N Das High School (HS), West Bengal, India

Regular intake of PM POSHAN-biomedicines midday meal with sports and games regulating world obesity and weight management of school children

Background: According to the World Health Organisation (WHO), more than 43% of adults are overweight, and the obesity rate is increasing quickly in the high-, low- and middle-income countries. Recently obesity is a chronic disease with a multifactorial etiology including genetics, environment, lifestyle, metabolism and behavioral components, and near about 1 in 8 people, including 1 (one) billion people (880 million adults and 159 million adolescents' children), suffering with obesity due to consumption of ultra-processed foods, changing dietary habits, reduced physical activity, and mobile affinity particularly in urban areas. It causes cancers, type 2 diabetes, cardiovascular diseases, neurological degeneration, and stroke. On the other hand, different natural disasters and activities like COVID-19, lockdowns, influenza, monkeypox, and Nipah, affect 'PM POSHAN-Midday Meal', hampering human civilization; global health and education, research, scientific-technical-research, and well-being, biodiversity conservation, ecological balance, food-producing systems, and climate regulation, enrolment, classroom hunger and malnutrition, socialization, attendance, dropouts and retention rates.

Objectives: To concur, the main objective is to further use of PM POSHAN-Biomedicines Midday Meal with Sports and Games to regulate obesity in school children, regulating 'World Obesity and Weight Management'.

Materials and Methods: Here, the PM POSHAN-Biomedicines Midday Meal diet is used as a mixture of root and leafy vegetables among students. These are potatoes, carrots, beetroot, and coriander, which are selected as PMPOSHAN-biomedicines and regularly included in the everyday diet in a particular ratio. Different physical exercise (PT) is done during the games class of students.

Results: PMPOSHAN-biomedicines diet with little exercise achieves different positive impacts; significantly influences obesity, improves overall growth and health, promotes better physical, cognitive, and nutritional outcomes contributing to long-term health and food security.

Conclusion: PMPOSHAN-biomedicines diet with little exercise serves as a preventive natural PMPOSHAN-Vaccine against obesity, malnutrition, many diseases, colds, and flu, including eye problems, and improves a sedentary lifestyle with food habits and boosts immunity. It focuses on the convergence of research, innovation, and practical strategies at the 6th Edition of World Obesity and Weight Management Congress 2026 (WOC 2026), under the theme Global Perspectives on Obesity: Innovation to Impact. Ultimately, it provides a unique platform for healthcare professionals, nutritionists, endocrinologists, researchers, policymakers, and industry leaders to connect, exchange ideas, and foster collaboration in the evolving field of obesity and weight management for better well-being.

Keywords: PM POSHAN-Biomedicines-Midday-Meal, Sports-and-Games, Obesity-and-Weight, Children.

Biography

Dr Subhas Chandra Datta, M.Sc., PhD, President Awardee, is an Innovative Researcher in various fields since 1993, Assistant Teacher, and Headmaster of Kanchannagar at D.N. Das High School (HS) from 1996 to 2007 to date. Dr Datta has expertise in evaluation and a passion for improving health and wellbeing. Datta's research interests are in Healthcare, biomedicine, Physiology, Education, Environment, Plant Protection, Agriculture, Pathology, Allelopathy, and homoeopathy. Datta's open and contextual evaluation model based on responsive constructivism creates new pathways for improving healthcare. Datta's 1st plant-based biomedicines in homoeopathic forms 'Cina' achieved the 'World's Top Most Articles' in the 'Public Medical Health of WHO'. Datta's valuable work received a Patent under the Central Silk Board (CSB) in 2005. Datta is an honorary Member of different prestigious organisations. Datta has published more than 145 papers in reputed journals and has been serving as an editorial board member of repute.



**Subrina Anwar*, Mark Howe*,
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Enemosah**

University Hospital Southampton NHS Foundation
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Validation of VSKIPS and identification of additional risk factors for post-operative acute kidney injury after vascular surgery

Introduction: Post-operative AKI is not an uncommon complication following vascular surgery and it's linked to poorer outcomes and longer hospital stay. The VSKIPS tool predicts risk factors for AKI (older age, low eGFR, emergency surgery, preoperative diuretics and beta blockers, previous vascular intervention and hypertension). This study aimed to validate VSKIPS in our local population and identify any additional risk factors to enhance preoperative assessment and improve patient's outcome.

Methods: We conducted a retrospective cohort study of 100 randomly selected vascular surgery patients from 2022-2024. Patients were divided into two postoperative groups: 50 who developed AKI 2 or above and 50 who did not develop AKI. Data were collected from electronic health records. Statistical analysis was performed using SPSS. Chi-squared and T-tests were used to compare groups.

Results: Diabetes mellitus, emergency surgery, perioperative beta-blocker use, and low perioperative eGFR were significantly associated with postoperative AKI in our cohort ($P < 0.001$).

Interestingly, traditional predictors like older age ($P = 0.8$), hypertension ($P = 0.069$), nephrotoxic drug exposure ($P = 0.41$), and prior vascular procedures ($P = 0.78$) did not show statistical significance, contrary to VSKIPS study. Our findings suggest the addition of diabetes as an important independent risk factor in our patient population.

Conclusion: Our study validates key components of the VSKIPS and recognises diabetes as a major risk factor in developing AKI. Enhancing proactive preoperative risk assessment, risk factor optimisation, and a multidisciplinary approach is recommended to prevent AKI in vascular surgical patients.

Biography

Dr Subrina Anwar completed MBBS from Holy family Red Crescent Medical College Dhaka Bangladesh and completed an MSc in clinical Endocrinology at Queen Mary University of London. Anwar subsequently completed foundation Year 2 training in the United Kingdom and is currently working as a senior resident medical officer at Wollongong Hospital, New South Wales. Anwar has a strong interest in internal and emergency medicine and clinical research.

Dr Mark Howe from the UK, completed medical training at St George's University London and proceeded to completed foundation training in Southampton. Mark is perusing a career in Palliative medicine driven by personal interests in medical ethics, philosophy and an understanding of systems and power structures that affect healthcare.



**Zhiheng Zhou^{1*}, Danian Jin¹,
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An intelligent hierarchical medical platform established upon high-quality datasets improves the effectiveness of glycemic management for all patients in different levels hospitals

Currently, the management of blood glucose for inpatients outside the endocrinology department lacks standardization. Common issues include inconsistent diagnosis and treatment of diabetes among hospitals at different levels, inefficient referral procedures, and a shortage of data sharing and intelligentization. To tackle these issues, this study constructed a data production model via cross-domain standardized data collection, structured input, and intelligent annotation. A dynamic three-color (red-yellow-green) hierarchical medical labeling system for diabetes was established, with the generation of a high-quality diabetes three-color label dataset, and the integrated regional blood glucose management information system. Within hospitals, the information system automatically identifies hyperglycemic patients in non-endocrinology inpatient departments, initiating consultation reminders and blood glucose management, and set up a virtual ward for these patients. The endocrinology specialty teams offered cross-departmental blood glucose management services. Treatment standards for patients with red, yellow, and green labels was formulated, along with a unified diabetes medication catalog across the entire region. Through diabetes alliances and information platforms, doctors at regional medical center hospitals observed in real-time the blood glucose control and treatment status of patients at 10 secondary hospitals and 10 community hospitals, offering guidance to attain homogeneous and precise management (Fig1,2,3,4). Following three years of implementation, this hierarchical medical system for diabetes encompassed 119,000 diabetes patients. The standardized management rate of diabetes at the primary healthcare level increased from 53.2% to 65.3%, the blood glucose control rate among patients rose

from 55.8% to 62.7%, patient satisfaction improved from 94.2% to 98.63%. 87% of diabetes patients undergo routine management at the primary level, and the average inpatient cost per diabetes admission decreased by 7.3%. The volume of primary-level medical treatment increased by 15.16%. Compared with 2022, in 2025, the ratio of drugs and consumables decreased by 12.3%, and the proportion of medical service income increased by 7.2%. This study established a new model of hospital-wide blood glucose management with a three-color label grading, based on a high-quality dataset and artificial intelligence, and has achieved satisfactory outcomes, which is worthy of promotion and application.

Biography

Zhiheng Zhou has completed a PhD from Capital medical university of China 2012, and postdoctoral studies from postdoctoral fellow at Massachusetts general hospital, Harvard medical school. Zhou is the director of Chronic Disease Management Center, The eighth affiliated hospital of Southern Medical University. Zhou has published more than 200 papers in reputed journals and has been serving as an editorial board member of 5 Journals.

6TH EDITION OF

WORLD OBESITY AND WEIGHT MANAGEMENT CONGRESS

&

4TH EDITION OF

International Conference on

DIABETES AND ENDOCRINOLOGY

HYBRID EVENT

19-21
OCTOBER 2026

POSTER PRESENTATIONS





Aminata Mbaye

UCAD, Senegal

Epidemiological and diagnostic characteristics of children followed for overweight and obesity at the Albert Royer National Children's Hospital Center in Senegal

The WHO defines obesity as an abnormal or excessive accumulation of body fat that may impair health. Obesity should be suspected when weight increases more rapidly than height; weight-for-height charts are the clinician's primary tool. The WHO defines overweight as a BMI above +2 z-score and obesity as a BMI above +3 z-score. The global prevalence of obesity has nearly tripled between 1975 and 2016. In Senegal, 1% of children are considered overweight according to the 2017 DHS. The main objective of our study is to determine the epidemiological and diagnostic characteristics of children followed for overweight and obesity at the Albert Royer National Children's Hospital Center in Dakar.

Patients and Methods: We conducted a retrospective, longitudinal, descriptive, and analytical study of children monitored for overweight or obesity at the Albert Royer Children's Hospital Center.

Results: The mean age was 8 years, with a male predominance. More than half of the children lived in urban areas. Two children had dropped out of school due to stigma. Seventy-one-point seven nine percent (71.79%) of the children received mixed feeding; 40.74% had a family history of being overweight; 51.9% had a good socioeconomic status; 48.1% had no physical activity. Cardiorespiratory complications were the most frequent (17.28%), followed by psychosocial complications (7.41%). Eighty-two percent of the children in our study had common obesity. Among the 57 children, 98.25% had a weight-for-height ratio greater than +3 z-score.

Ninety-eight percent of the children in our study had a BMI above the 97th percentile.

Adipogynecomastia was the most frequent associated sign in boys, observed in 23.45% of cases. Twenty percent of female patients had severe obesity compared to 4% of male patients. The difference was statistically significant, with a p-value of 0.02. Female patients were six times more likely to present with severe obesity than boys.

Conclusion: Obesity is a public health problem that requires multidisciplinary management. It is important in our developing countries to develop prevention strategies in order to slow its progression toward chronic complications.

Biography

Aminata Mbaye is a pediatrician specialized in pediatric endocrinology, and Mbaye work in a referral center in Dakar. Mbaye is also a teacher-researcher at the University of Dakar. Mbaye particularly interested in research in the fields of obesity and nutrition. Current research areas include disorders of sexual differentiation, pediatric obesity, and childhood diabetes.



Ashlyn A. Callan^{1*}, Grace Chong¹, Charles Kazlow¹, Emma Johnson², Pamela Zuckerman², Yungtai Lo¹, Mani Kahn²

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The effect of BMI on surgical complications and recovery after operative fixation of tibial plateau fractures

Introduction: Tibial plateau fractures (TPF) are high-energy fractures that often require surgery for proper healing. Literature identifies high Body Mass Index (BMI) as a risk factor for poor surgical outcomes. This study aims to better understand how BMI affects outcomes after TPF surgery, comparing groups of patients with BMI<25, 25-35, and >35. We hypothesized that patients with BMI<25 would have fewer complications and shorter time to weightbearing compared to patients with BMI 25-35 and BMI>35.

Methods: The study retrospectively collected patient data through one institution's electronic medical records for patients who had billing codes for TPF surgery between March 2016 and April 2025. Variables collected included patient demographics, surgical methods, complications, time to weight bearing, and other outcome metrics. Inclusion criteria were adult patients who underwent surgery for repair of TPF sustained from a trauma mechanism. Exclusion criteria were pediatric patients, patients who received solely subchondroplasty surgery, and patients who suffered a fracture due to malignancy. 418 patients were initially analyzed, and excluding 170 based on these criteria led to 248 total included patients. Data were analyzed using SPSS.

Results: Rates of reoperation were significantly highest in the population with BMI 25-35 as compared to the groups of patients with BMI<25 and >35. Rates of hardware removal were also significantly highest in the population with BMI 25-35 as compared to the groups of patients with BMI<25 and >35. There was no significant difference between the three groups for time to weightbearing, total complication rates, or length of stay.

Conclusion: Understanding factors that affect surgical outcomes is imperative for prevention of complications and allowing patients to make informed decisions regarding their care. With the data demonstrating a lack of significant increases in major complications or time to recovery, it is crucial to advocate for patients with increased BMI to pursue surgery that could greatly improve their long-term quality of life.

Biography

Ashlyn Callan is a third year medical student at Albert Einstein College of Medicine. Callan received a Bachelor of Science in Human Biology and a Master of Science in Biology from Stanford University. Callan has presented research at regional and national scientific meetings and is committed to advancing evidence-based approaches for improving surgical outcomes for all patients.



Awais Khan*, Farooq Khan, Ayesha Riaz*

St. Luke's Hospital, Kilkenny, Ireland

Recurrent diabetic ketoacidosis associated with polysubstance performance-enhancing drug use in previously unrecognised insulin-deficient diabetes

Introduction: Diabetic Ketoacidosis (DKA) is a life-threatening metabolic emergency typically associated with type 1 diabetes but may also occur as the first presentation of previously unrecognised diabetes or in response to metabolic stressors. Performance-Enhancing Drugs (PEDs), including growth hormone secretagogues and anabolic agents, are increasingly used despite limited safety data and may adversely affect glucose metabolism.

Case Presentation: We report a case of recurrent DKA in a man in his 30s with previously unrecognised diabetes following prolonged use of multiple performance-enhancing substances, including Ibutamoren (MK-677) and other hormonal agents. Initial presentation demonstrated severe metabolic acidosis, marked hyperglycaemia (HbA1c 109 mmol/mol), and ketonemia. Autoimmune screening was negative, while follow-up testing revealed profoundly suppressed C-peptide levels, consistent with severe insulin deficiency. A prior episode of DKA had occurred several years earlier following anabolic steroid exposure.

Investigations and Management: There was no evidence of infection, pancreatitis, or other precipitating illness. The patient was managed with standard intravenous insulin therapy and fluid resuscitation, followed by transition to basal-bolus insulin. Despite initial stabilisation, recurrent ketosis occurred, requiring ongoing insulin therapy. Metformin was later added to assist glycaemic control.

Discussion: This case highlights diagnostic uncertainty regarding diabetes phenotype in the context of antibody-negative, insulin-deficient diabetes. Differential considerations

included ketosis-prone diabetes, idiopathic type 1 diabetes (type 1B), and antibody-negative autoimmune diabetes. Growth hormone secretagogues and other PEDs may have contributed to insulin resistance and metabolic decompensation, although causality cannot be definitively established. Interpretation of C-peptide in the post-DKA setting is complex but persistent suppression supports significant beta-cell dysfunction.

Conclusion: Clinicians should consider unregulated performance-enhancing drug use as a potential contributor to metabolic decompensation in patients presenting with DKA. Careful assessment of diabetes phenotype, including antibody status and C-peptide measurement, is essential to guide long-term management.

Biography

Dr Awais Khan is an Internal Medicine Senior House Officer at St. Luke's General Hospital, Kilkenny, Ireland, where Khan has been working for the past three years. Khan has a strong interest in Diabetes and Endocrinology and intends to pursue specialist training in Endocrinology. During a rotation in the Endocrinology Department, Khan encountered a rare and clinically significant case of recurrent diabetic ketoacidosis associated with polysubstance performance-enhancing drug use. The uniqueness of the case and its important clinical implications inspired Khan to investigate it further and prepare it for presentation at the International Conference on Diabetes and Endocrinology. This work was undertaken in collaboration with Khan's colleague, Dr Ayesha Riaz, an Internal Medicine Senior House Officer at St. Luke's General Hospital, Kilkenny, who was also actively involved in the patient's care and the preparation of the case report.



Jesse Cochrane

Lipedema Foundation, United States

Patient reported outcomes of GLP 1/GIP agonist use for lipedema: Results from a survey based study

Lipedema is a chronic condition characterized by disproportionate fat accumulation, inflammation, and pain, predominantly affecting women. Traditional treatments focus on symptom management, but emerging therapies, such as GLP-1/GIP receptor agonists like semaglutide and tirzepatide, offer potential benefits beyond weight loss. These medications have demonstrated anti-inflammatory effects, improved metabolic health, and enhanced mobility in other conditions. However, their specific impact on lipedema remains under explored. This study aims to investigate the experiences of lipedema patients using GLP-1/GIP agonists, focusing on perceived benefits or limitations.

Biography

Jesse is the Vice President of Research at the Lipedema Foundation. Jesse earned a BS from the Massachusetts Institute of Technology and a PhD from Yale University. As a Research Fellow at Massachusetts General Hospital and Harvard Medical School, Cochrane investigated epigenetics and chromatin remodeling. Before joining the Foundation, Cochrane contributed to developing the next generation of genetic medicines at Tome Biosciences.

Jordan Gagnon

Creighton University, United States

Improving diabetes self-management education and support referrals in primary care through a standardized referral workflow: A quality improvement initiative

Background: Diabetes mellitus affects more than 38 million Americans and is associated with significant morbidity, mortality, and healthcare expenditures. Despite strong evidence supporting Diabetes Self-Management Education and Support (DSMES) as an essential component of comprehensive diabetes care, utilization remains low. DSMES participation has been associated with improved glycemic control, reductions in diabetes-related complications, enhanced self-management behaviors, and decreased healthcare utilization. National organizations, including the American Diabetes Association (ADA), Centers for Disease Control and Prevention (CDC), and the Association of Diabetes Care & Education Specialists (ADCES), recommend DSMES at diagnosis, annually, when treatment goals are not met, when complications develop, and during transitions in care. However, fewer than half of individuals with diabetes receive DSMES, and participation rates remain particularly low in primary care settings. Evidence suggests that inconsistent referral practices, lack of standardized workflows, and limited provider awareness contribute significantly to underutilization.

Purpose: The purpose of this quality improvement project is to increase DSMES referrals for adults with poorly controlled diabetes mellitus in primary care through implementation of a standardized, evidence-based referral workflow integrated into existing clinical processes.

Methods: This 12-week quality improvement initiative will be implemented at two rural primary care clinics in Minnesota. The intervention combines three evidence-based strategies: workflow standardization, provider education, and patient engagement. Providers and nursing staff will receive education on DSMES benefits, ADA-recommended referral checkpoints, and utilization of a standardized referral algorithm. During pre-visit planning, registered nurses will identify eligible patients and initiate a structured referral workflow. Providers will discuss DSMES as a routine component of diabetes management, provide targeted education regarding program benefits, and distribute patient education materials. Following review of updated HbA1c results, providers will determine DSMES recommendations using the referral algorithm. Registered nurses will then reinforce

education, assess readiness to participate, facilitate referrals within the electronic health record, and document barriers to participation when referrals are declined.

Primary outcomes include changes in DSMES referral rates and adherence to the referral workflow. Secondary measures include provider participation in DSMES education, patient education delivery, provider perceptions of workflow feasibility and sustainability, and identification of barriers to DSMES participation.

Results/Outcomes: Attendees will gain practical knowledge regarding implementation of a standardized DSMES referral process within primary care settings. The presentation will highlight strategies for integrating evidence-based referral practices into existing workflows, improving interdisciplinary collaboration, and addressing common barriers to DSMES utilization. Participants will receive adaptable tools and implementation strategies that can be translated to a variety of outpatient and community-based settings. Learning outcomes will be evaluated through participant feedback, audience discussion, and self-assessment of confidence in applying workflow-based quality improvement strategies.

Conclusions: DSMES remains one of the most effective yet underutilized interventions in diabetes care. Standardized referral workflows offer a practical and scalable approach to improving DSMES access and utilization by reducing variability in referral practices and embedding evidence-based recommendations into routine care delivery. Broader implementation of similar workflow-driven interventions may increase participation in DSMES, strengthen patient self-management, improve glycemic outcomes, reduce diabetes-related complications, and support healthcare organizations in achieving population health and quality improvement goals. This project demonstrates how primary care teams can operationalize national diabetes care recommendations through sustainable systems-level change.

Biography

Jordan Gagnon BSN, RN is a Doctor of Nursing Practice–Family Nurse Practitioner (DNP–FNP) student at Creighton University and a Registered Nurse with Accent Care Home Hospice in Minnesota. Jordan has clinical background includes experience in critical care, primary care, and chronic disease management across a variety of healthcare settings. Jordan pleased to submit abstract, Improving Diabetes Self-Management Education and Support Referrals in Primary Care Through a Standardized Referral Workflow. This quality improvement project addresses a significant gap in diabetes care by implementing evidence-based strategies to increase referrals to Diabetes Self-Management Education and Support (DSMES), a proven intervention associated with improved glycemic control, reduced complications, and enhanced patient self-management. Jordan believe this presentation would be valuable to conference attendees because it offers practical, scalable strategies that can be adapted across diverse healthcare settings to improve diabetes outcomes. By sharing lessons learned from implementing a standardized referral process, provider education, and patient engagement interventions, this presentation aims to support clinicians and healthcare leaders in translating evidence-based recommendations

into sustainable practice improvements. Thank you for your consideration. Jordan has appreciate the opportunity to contribute to the conference and advance discussions surrounding innovative approaches to diabetes care. Sincerely, Jordan Gagnon BSN, RN
Doctor of Nursing Practice–Family Nurse Practitioner Student Creighton University.



**Kaishi Yang^{1*}, Ava Tsapatsaris,
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Using a multi-disciplinary clinic model to prevent diabetic foot ulcer recurrence

Diabetic Foot Ulcer (DFU) is the leading cause of lower extremity amputations in patients living with diabetes. The International Working Group on the Diabetic Foot defines a healed DFU as a DFU in remission since it has a recurrence rate comparable to that of cancer. Given that care for patients with diabetes and DFU can often be complex, requiring involvement of multiple different specialties and services, we implemented a multidisciplinary clinic in the Bronx, New York, that brings together podiatry, endocrinology, infectious disease, vascular surgery, behavioral health, and orthopedic shoe-fitting services. We believe that by minimizing administrative burden, enabling real-time coordination, and providing comprehensive care, patients will have lower DFU recurrence, thereby also experiencing fewer DFU complications such as amputations, and less diabetes distress. We present these health outcome data after 1 year of implementing this multidisciplinary approach.

Biography

Kaishi Yang is a current third year medical student at Albert Einstein College of Medicine. Yang went to New York University for undergraduate study, where Yang studied biological science with minors in chemistry and philosophy. As a life-long New Yorker, Yang is passionate about mitigating health inequities in underrepresented communities and helping patients manage chronic health conditions.



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Cognitive impairment risk in adults aged ≥ 60 years treated with SGLT-2 versus DPP-4 inhibitors

Background: Age is the strongest non-modifiable risk factor for dementia, with incidence increasing sharply after 60 years of age. However, most pharmaco-epidemiologic studies evaluate broad adult populations, potentially obscuring treatment-specific effects in older adults. Concurrently, interest has grown in repurposing antidiabetic agents for dementia prevention. Sodium-Glucose Cotransporter-2 (SGLT-2) inhibitors and Dipeptidyl Peptidase-4 (DPP-4) inhibitors are widely used second-line therapies for type 2 diabetes, yet current guidelines do not provide class-specific recommendations regarding their comparative impact on dementia risk.

Objective: This meta-analysis is the first to directly compare SGLT-2 inhibitors versus DPP-4 inhibitors in reducing dementia risk, with analyses restricted to adults aged ≥ 60 years to better characterize effects in this high-risk population.

Methods: A systematic literature search of PubMed, Scopus, and Web of Science was conducted on September 19, 2025, to identify comparative studies evaluating dementia outcomes among older adults treated with SGLT-2 or DPP-4 inhibitors. Risk Ratios (RRs) with 95% Confidence Intervals (CIs) were pooled using a random-effects model. Certainty of evidence was assessed using the GRADE approach.

Results: Seven studies published between 2023 and 2025 were included, encompassing 743,641 participants. Pooled analysis demonstrated a significantly lower risk of incident all-cause dementia among SGLT-2 inhibitor users compared with DPP-4 inhibitor users (RR 0.72; 95% CI 0.59–0.86; $p=0.0005$), with moderate certainty of evidence. Subgroup analyses

of three studies further revealed that SGLT-2 inhibitors were associated with a significantly reduced risk of Alzheimer's disease (RR 0.60; 95% CI 0.56–0.65; $p < 0.00001$) and vascular dementia (RR 0.54; 95% CI 0.48–0.60; $p < 0.00001$).

Conclusion: Among adults aged ≥ 60 years, SGLT-2 inhibitor therapy is associated with a significantly lower risk of all-cause dementia, Alzheimer's disease, and vascular dementia compared with DPP-4 inhibitors, suggesting potential neuroprotective benefits in older populations with diabetes.

Keywords: SGLT-2 Inhibitors, DPP-4 Inhibitors, Dementia, Alzheimer's Disease, Vascular Dementia.

Biography

Nawris Alhassan is a nurse from Utah, USA. Alhassan has clinical experience in surgical-trauma, intensive care units, postpartum, and Psychiatric nursing. Alhassan currently volunteers at a free health clinic as a triage nurse. In this work, Alhassan has noticed many deficiencies in care for older adults with diabetes. Alhassan drew inspiration for the research on the risk of cognitive impairment in adults 60 years of age or older receiving SGLT-2 versus DPP-4 inhibitors. Alhassan finds nursing rewarding and hopes to build on this experience by pursuing further training in medicine, with an interest in clinical research and community health equity.

Shaheen Khan Kaplan*,
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Curaçao



Impact of intermittent fasting on glycemic control in adults with type 2 diabetes: A systematic review of randomized controlled trials

Background: Intermittent Fasting (IF) has emerged as a popular dietary strategy for weight loss and metabolic health. Its role in improving glycemic control in individuals with Type 2 Diabetes Mellitus (T2DM), however, is still being explored.

Methods: A systematic review of randomized controlled trials was conducted using PubMed, following PRISMA 2020 Guidelines. Studies published between 1996 and 2024 were included if they evaluated intermittent fasting interventions in adults with T2DM and reported outcomes such as Glycated Hemoglobin (HbA1c) or fasting blood glucose. Seventeen randomized controlled trials met inclusion criteria, encompassing time-restricted eating, intermittent energy restriction, and 5:2 fasting protocols.

Results: Intermittent fasting was associated with improvements in glycemic control across several studies. Reductions in HbA1c were observed in multiple trials, with post-intervention values reaching as low as 6.3% in intervention groups. Fasting blood glucose decreased more in IF groups compared to controls in some studies, with reductions of approximately 10–20 mg/dL. Weight loss was consistently reported, with reductions ranging from 2 to 6 kg. Some studies also demonstrated decreased medication requirements and improved insulin sensitivity. However, findings were not uniform, with several trials showing similar outcomes between IF and continuous energy restriction. Intermittent fasting was generally well tolerated, though hypoglycemia risk was noted in insulin-treated individuals, highlighting the need for medication adjustment and monitoring.

Conclusion: Intermittent fasting appears to be a practical and effective dietary approach for improving glycemic control and promoting weight loss in adults with T2DM. While results are encouraging, variability in study design and duration underscores the need for larger, long-term trials to determine optimal fasting strategies and ensure safety, particularly in patients receiving insulin therapy.

Biography

Shaheen K. Kaplan, PharmD, MBA, is a Doctor of Medicine candidate at Avalon University School of Medicine, expected to graduate in 2027. Kaplan has completed basic sciences and the United States Medical Licensing Examination Step 1 and is currently undertaking core clinical rotations in West Virginia. Prior to medical school, Kaplan held senior leadership roles in global medical affairs within the biopharmaceutical industry, contributing to scientific strategy, medical communications, and product development initiatives. Kaplan's academic interests include metabolic disease, diabetes management, and evidence-based medicine, with a focus on lifestyle interventions and their application in clinical practice.

Rushil P. is an MD candidate with interests spanning medicine, fitness, nutrition, and metabolic health. His interest in diabetes research stems from his broader focus on how exercise, nutrition, and sustainable lifestyle changes can improve metabolic health. He is also pursuing his own fitness journey as a way to better understand the challenges of lifestyle change and eventually help others achieve healthier lives.



Subrina Anwar*, Mark Howe*

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Predicting AKI in vascular surgery patients: A validation study of the Vascular Surgery Kidney Injury Predictive Score

Introduction: Post-operative AKI is not an uncommon complication following vascular surgery and it's linked to poorer outcomes and longer hospital stay. The VSKIPS tool predicts risk factors for AKI (older age, low eGFR, emergency surgery, preoperative diuretics and beta blockers, previous vascular intervention and hypertension). This study aimed to validate VSKIPS in our local population and identify any additional risk factors to enhance preoperative assessment and improve patient's outcome.

Methods: We conducted a retrospective cohort study of 100 randomly selected vascular surgery patients at a UK tertiary hospital from 2022-2024. Patients were divided into two postoperative groups: 50 who developed AKI 2 or above and 50 who did not develop AKI. There were no statistically significant differences between groups. Data were collected from electronic health records.

Statistical analysis was performed using SPSS. Chi-squared and T-tests were used to compare groups.

Results: Diabetes mellitus, emergency surgery, perioperative beta-blocker use, and low perioperative eGFR were significantly associated with postoperative AKI in our cohort ($P < 0.001$).

Interestingly, traditional predictors like older age ($P = 0.8$), hypertension ($P = 0.069$), nephrotoxic drug exposure ($P = 0.41$), and prior vascular procedures ($P = 0.78$) did not show statistical significance, contrary to VSKIPS study. Our findings suggest the addition of diabetes as an important independent risk factor in our patient population.

Conclusion: Our study validates key components of the VSKIIPS and recognises diabetes as a major risk factor in developing AKI. Enhancing proactive preoperative risk assessment, risk factor optimisation, and a multidisciplinary approach is recommended to prevent AKI in vascular surgical patients.

Biography

Dr Subrina Anwar completed MBBS from Holy family Red Crescent Medical College Dhaka Bangladesh and completed an MSc in clinical Endocrinology at Queen Mary University of London. Anwar subsequently completed foundation Year 2 training in the United Kingdom and is currently working as a senior resident medical officer at Wollongong Hospital, New South Wales. Anwar has a strong interest in internal and emergency medicine and clinical research.

Dr Mark Howe from the UK, completed medical training at St George's University London and proceeded to completed foundation training in Southampton. Mark is perusing a career in Palliative medicine driven by personal interests in medical ethics, philosophy and an understanding of systems and power structures that affect healthcare



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Integrating continuous glucose monitoring with intensive coaching in a fully online lifestyle intervention for diabetes prevention in adults with prediabetes and obesity: Protocol for a two-arm pilot randomised controlled trial (CGM-RCT Online Study)

Objective: Prediabetes with obesity is a high-risk phenotype for progression to type 2 diabetes.

Continuous Glucose Monitoring (CGM) may strengthen lifestyle intervention through real-time feedback, and intensive coaching may amplify behaviour change, yet comparative data in this population and the feasibility of fully online delivery are limited. This pilot randomised controlled trial was designed to compare real-time CGM with intensive coaching versus CGM with standard self-directed support, added to a fully online Diabetes Prevention Program-based lifestyle programme, and to estimate effect sizes and feasibility parameters for a future full-scale trial in adults with prediabetes and obesity.

Methods: This single-centre, open-label, two-arm parallel pilot randomised controlled trial is conducted entirely online in Thailand and registered in the Thai Clinical Trials Registry. Seventy adults aged 30–65 years with prediabetes (ADA criteria) and obesity (BMI ≥ 25 kg/m²) are randomised 1:1, stratified by sex and baseline HbA1c, to Arm A (real-time CGM plus weekly intensive coaching) or Arm B (CGM plus standard self-directed support). All participants receive the same video-delivered lifestyle programme (weight-loss goal 5–7%). The same CGM device is worn at weeks 4, 8 and 13 in Arm A and at week 13 in Arm B; total participation is 16 weeks (run-in weeks 1–2, intervention weeks 3–14, close-out weeks 15–16).

Outcomes and planned analysis: The primary outcome is the change in Glucose Management Indicator (GMI) derived from CGM. Secondary outcomes include body weight, waist circumference, time in range, glycaemic variability, physical activity, dietary intake, quality of life, diabetes distress, self-efficacy, CGM satisfaction, and feasibility (recruitment, retention, and CGM data completeness). Analyses will follow the intention-to-treat principle using mixed-effects models for repeated measures, emphasising effect sizes with 95% confidence intervals appropriate to the pilot design.

Conclusions: This trial will provide preliminary efficacy and feasibility evidence for a scalable, fully online CGM-based diabetes-prevention model with intensive coaching in adults with prediabetes and obesity. Results are forthcoming and will inform the design of a future adequately powered multicentre online trial. (Study completed; outcome analysis in progress.)

Keywords: Prediabetes, Obesity, Continuous Glucose Monitoring, Diabetes Prevention, Telehealth, Lifestyle Intervention.

Biography

Dr. Sunaree Pitchaiprasert graduated with a Doctor of Medicine degree from the Faculty of Medicine, Chulalongkorn University in 2005, and is a Diplomate of the Thai Board of Obstetrics and Gynecology (2009, 2011). Pitchaiprasert serves as Head of the Gynecologic Oncology Division and staff physician in the Department of Obstetrics and Gynecology at Surin Hospital, Thailand. Pitchaiprasert has extensive clinical-research experience, holding diplomas in Clinical Epidemiology, Clinical Statistics, and Clinical Research, with expertise in survival analysis and propensity-score methods, and received an Outstanding Clinical Research award in 2022. Dr. Pitchaiprasert serves as the clinical lead for the CGM-RCT Online Study.



Venkat Reddy Dornadula

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AI model prediction of dawn phenomenon

The dawn phenomenon is characterized by a rise in blood glucose levels in the early morning, usually between 4:00 AM and 8:00 AM. It is very common in individuals with diabetes. The rise has been speculated to be due to hormonal regulation that promotes glucose production and reduces insulin sensitivity. Continuous Glucose Monitoring (CGM) is a tool that can be used to assess these trends and provide information to better understand and detect this phenomenon at the individual level. This study focuses on CGM data from a single adult with diabetes over 180 days to evaluate patterns related to the dawn phenomenon and to train an AI model to readily detect these trends and use the patient's past data to predict future results, specifically accounting for the dawn phenomenon. Glucose levels were measured between 3:00 AM and 8:00 AM, and trends were recorded to fine-tune the model to the study and the patient's interests. A personalized model was developed to predict early-morning glucose increases based on nocturnal glucose trends. Results showed consistent, significant increases of 20-200 mg/dL above the nocturnal nadir. The model effectively predicted glucose elevation with minimal error after repeated data inputs and manual fine-tuning. Application of the model was associated with a 2 percentage-point reduction in hemoglobin A1C, suggesting meaningful impacts on duration. CGM enables detailed analysis of the dawn phenomenon on an individual basis, which can be further refined depending on the amount of data given. Further research is needed to generalize the study's findings and to validate them with other clinical cases.

Biography

Venkat Reddy Dornadula is a graduate student with degrees in Biochemistry & Health Sciences. Dornadula aims to build knowledge in research and healthcare. Dornadula has experience in a laboratory setting, serving as a Teaching Assistant in Biochemistry and

Biology. Dornadula has completed hours in hospital volunteering, transporting patient samples, discharging patients, and performing miscellaneous tasks. Dornadula had the opportunity to volunteer and observe international physicians in the ER, Surgery, Family Medicine, and OBGYN departments. Dornadula conducted research during a senior capstone, analyzing carbon nanonions for cancer drug delivery, and presented work exploring AI's role in the early detection of atrial fibrillation.

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WORKSHOPS





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Beyond daily injections: Implementing once-weekly basal insulin to simplify and personalize care

Beyond Daily Injections: Implementing Once-Weekly Basal Insulin to Simplify and Personalize Care is designed for US-based endocrinologists and endocrinology-focused NPs and PAs involved in the management of patients with Type 2 Diabetes (T2D). Once-weekly basal insulin regimens are poised to enter the treatment armamentarium for diabetes management. Gaps in understanding the unique molecular design and pharmacology of, and latest clinical data on these novel formulations may contribute to therapeutic inertia and delayed implementation of a more convenient, flexible, and potentially safer alternative to daily insulin regimens for patients with T2D.

Biography

Dr. Marc Cornier is a Professor of Medicine with Tenure, James A. Keating Endowed Chair in Diabetes, and Director of the Division of Endocrinology, Diabetes and Metabolic Diseases at the Medical University of South Carolina. Dr Cornier has focused a career on cardiometabolic diseases such as obesity, diabetes, and lipid disorders. Prior to that Dr. Cornier received undergraduate education at Vanderbilt University and medical doctorate at the Medical College of Georgia. Cornier completed an internal medicine residency at Georgetown University Medical Center followed by a fellowship in Endocrinology, Metabolism and Diabetes at the University of Colorado. Cornier was then on faculty at the University of Colorado with the Division of Endocrinology, Metabolism and Diabetes until 2021. Since then, Dr Cornier continues to focus on cardiometabolic diseases such as diabetes, lipid disorders and obesity at MUSC. Cornier is an active clinical and translational investigator with a primary research interest in body weight regulation and in studying optimal interventions for weight management and metabolic health. Cornier is also actively involved in clinical trials for investigational treatments for lipid disorders, diabetes and obesity. Dr. Cornier has been an active volunteer and leader in a number of important health-related associations and currently serves as the Immediate Past-President of The Obesity Society.

Julio Rosenstock, MD is Director of the Dallas Diabetes Research Center at Medical City, and Clinical Professor of Medicine at the University of Texas Southwestern Medical Center, Dallas. Rosenstock received an MD from the University of Costa Rica School of Medicine and completed fellowships in Endocrinology and Diabetes at the Royal Postgraduate Medical School, Hammersmith Hospital, London, UK, and at the University of Texas Southwestern Medical Center. Rosenstock is board certified in Internal Medicine, and Endocrinology and Metabolism. Rosenstock's clinical and research activities have focused on exploring novel agents and therapeutic strategies to improve glycemic control, particularly early insulin intervention with combination strategies in Type 2 Diabetes helping to develop the concept of fixed-ratio combination of Basal Insulin with a GLP-1 RA. Over the last 30 years, Rosenstock has participated in hundreds of clinical trials and has had an active role in the development of new oral agents and insulin preparations acting often as a lead clinical investigator and scientific advisor. Dr Rosenstock has been the author or co-author of more than 470 publications, including peer-reviewed papers and numerous abstracts. Rosenstock has also contributed to several clinics and book chapters on various topics in the field of diabetes. Rosenstock is currently Associate Editor of Diabetes Care, an Editorial Board member of Practical Diabetology and Cardiovascular Diabetology and is an active reviewer for several journals. Dr Rosenstock has chaired or been a featured speaker at multiple lectures and presentations both nationally and internationally.



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Biography

Dr. Marc Cornier is a Professor of Medicine with Tenure, James A. Keating Endowed Chair in Diabetes, and Director of the Division of Endocrinology, Diabetes and Metabolic Diseases at the Medical University of South Carolina. Dr Cornier has focused a career on cardiometabolic diseases such as obesity, diabetes, and lipid disorders. Prior to that Dr. Cornier received undergraduate education at Vanderbilt University and medical doctorate at the Medical College of Georgia. Cornier completed an internal medicine residency at Georgetown University Medical Center followed by a fellowship in Endocrinology, Metabolism and Diabetes at the University of Colorado. Cornier was then on faculty at the University of Colorado with the Division of Endocrinology, Metabolism and Diabetes until 2021. Since then, Dr Cornier continues to focus on cardiometabolic diseases such as diabetes, lipid disorders and obesity at MUSC. Cornier is an active clinical and translational investigator with a primary research interest in body weight regulation and in studying optimal interventions for weight management and metabolic health. Cornier is also actively involved in clinical trials for investigational treatments for lipid disorders, diabetes and obesity. Dr. Cornier has been an active volunteer and leader in a number of important health-related associations and currently serves as the Immediate Past-President of The Obesity Society.

Melanie Duran has personally lived well with type 2 diabetes for over 25 years and is passionate about diabetes advocacy. After graduating from nursing school in 2013, Melanie

moved into a diabetes education role, and then graduated from the University of Missouri DNP FNP program in 2021 and began work as a primary care nurse practitioner. Duran began working as a diabetes specialist in 2023 and now works with people with diabetes in both the inpatient and outpatient setting at the University of New Mexico academic medical center.

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