Pain Management: Innovation, Information and Translation

**AFAR: American Federation for Aging Research**

Held October 16th, 2012 at the Cornell Club, 6 East 44th Street, New York City

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AFAR’s Mission

The American Federation for Aging Research (AFAR) is a national non-profit organization whose mission is to support and advance healthy aging through biomedical research.

Key Initiatives

AFAR focuses its activities on these major initiatives:

- Identifying and funding a broad range of cutting-edge research most likely to increase knowledge about healthy aging.
- Attracting more physicians to specialize in geriatric medicine to meet the demands of an aging population with expert health care.
- Creating opportunities for scientists and clinicians to share knowledge and exchange ideas to drive innovation in aging research.
- Providing information to the public on new medical findings that can help people live longer lives, less susceptible to disease and disability.

Conference Overview

The purpose of the daylong conference *Pain Management: Innovation, Information and Translation* was to promote cutting edge pain management research. Leading experts in the field of pain management discussed novel approaches, considerations and challenges facing the field of pain management research moving forward.
Conference Agenda

9-930AM: Registration & Breakfast

930-10AM: Overview Cary Reid, MD, Cornell

Charles Argoff, MD, Albany Medical College; Roma Tickoo, MD, Memorial Sloan Kettering
Moderator – Cary Reid, MD, Cornell

1045-11: Discussion

11-1115: Coffee Break

1115-12: Panel Two – Beliefs & Their Impact on Pain Management
Joanna Sale, PhD, University of Toronto; Mark Jensen, PhD, University of Washington;
Moderator - Cary Reid, MD, Cornell

12-1215: Discussion

1215-1: Lunch

1-230: Panel Three – Novel Interactive Technologies in Pain Management
Josh Richardson, PhD, Cornell; Jeff Kaye, MD Oregon Health & Science University; Alex Cahana, MD, University of Washington
Moderator – Stephen Thielke, MD, University of Washington

2-215: Discussion

230-245: Concluding remarks: What is the Next Step for Research?
Stephen Thielke, MD, University of Washington

Networking & Coffee
Conference Summary

“We cannot reuse approaches that do not work. We need to change our mindset on what pain is.”—Stephen Thielke, MD, co-moderator at Pain Management: Innovation, Information and Transformation

Pain Management: Innovation, Information and Transformation uncovered pivotal needs and considerations that will potentially shape the evolution of pain treatment and research in North America. Esteemed clinicians and researchers in the field of pain management and in related fields gathered to discuss cutting edge research and treatment findings. Five key themes emerged for moving the pain management field forward: Managing Perceptions, Evidence Based Medicine, Personalization through Data, Access through Technology, and Collaboration.

Managing Perceptions

Addressing beliefs, attitudes and perceptions of pain has not formally been a priority in the field of pain management. However over time clinicians have developed an appreciation for the psychosocial elements of pain and how they can impact patient outcomes. Research in this area is starting to unveil beliefs, attitudes and perceptions that create barriers to treatment, and show a correlation between how these elements impact outcomes. Addressing mental and emotional barriers to pain management and pairing traditional medication-based treatment methods with treatment methods that provide patients with a sense of control over pain can improve outcomes. An appreciation for the psychosocial elements of pain presents an opportunity to expand treatment as well as refine the language used to discuss pain so as to better manage perceptions.

Evidence Based Medicine

The older adult population 65 years of age and older is vastly unrepresented in pain treatment research. Clinical trials are not designed to capture this population, and yet this population is the most effected by pain. It is important that moving forward more studies are designed for older populations so as to produce more evidence based treatment measures that can be shared across the field. Study integrity has to be held to the highest standards, as in any medical specialty, in order for findings to be valuable in treatment decision-making.

Personalization through Data

A holistic approach to pain management that listens to the patient and tailors treatment to fit into the context of a patient’s life is critical to success. What works for one patient may not necessarily work for the next patient based on physiology, beliefs, attitudes and perceptions of pain, or living situation. Frequent collection of both physiological and quantifiable data as well as qualitative psychological and non-verbal observation data on patients must be used to monitor patient outcomes and re-assess treatment. Time and patient involvement are integral to this process.

Access through Technology

Technology such as mHealth, telehealth and online portals has opened up access to information for both clinicians and patients in the past several years, and has the potential to further expand access. The proliferation of smartphones and other devices that easily connect to the Internet is changing the
dynamic of healthcare by providing information when, where and how patients want it and is providing opportunities to talk and monitor progress in between office visits. This is important from a clinical perspective since more data can be collected, but is also important from a psychological perspective for patients because of online communities. Patients can share experiences, progress, set-backs and get a layer of emotional support that in the past has been difficult to coordinate through other channels. Technology supports both the quantifiable and qualitative aspects of pain management that are going to further advance the field.

**Collaboration**

At the end of the day, no treatment methods, clinical trial structures or prescriptions are going to be successful without collaboration in the pain management field. Collaboration to share knowledge between members of a patient’s care team, collaboration to advance education for practitioners, and also collaboration with patients to understand what is working and not working. Pain management is interdisciplinary and involves a large team that includes the patient and his/her caregivers.
Discussion Summaries

Panel One – Innovations & Challenges in Cancer Pain Management

Charles Argoff, MD, Albany Medical College: *Innovative and Not So Innovative Strategies to Consider for Improving Cancer Pain Management*

"Expectations are not appropriate as to what medicine can and cannot do. It’s about the whole person. It is more important to know who your patient is rather than what condition they have. And we have lost that, and we need to get that back.” – Dr. Argoff, MD

Dr. Argoff stressed the need to reset expectations about what medicine can achieve and ensure that research and treatment are looked at in context of the patients. Looking at pieces of research in isolation can lead to a one-size-fits-all model that is ineffective and unrealistic at best and intentionally deceiving at worst. Dr. Argoff identified four recommendations:

- Design pain management study models for consistency and transparency
- Start pain management education early in medical school
- Coordinate access to care
- Specific to cancer, define cancer pain

In the case of the last point on cancer pain, Dr. Argoff pointed out how pain can come from various sources in the case of cancer. Pain can be caused by a tumor, by the spread of the cancer or as a result of the course of treatment. Understanding the cause of the pain in context to the patient’s overall health circumstances can lead to better results.

Roma Tickoo, MD, Memorial Sloan Kettering: *Here, Now and Where We Are Headed*

Dr. Tickoo highlighted the need for a multi-disciplinary approach to pain that focuses on the whole person, not just the individual symptoms of pain. With the 65+ and 85+ populations expected to grow significantly over the next several years due to a multitude of factors such as advances in medicine and access to healthcare, it is critical that physicians in the pain management specialty be prepared. Resources and training are needed to ensure that physicians can identify pain in their patients and work collaboratively with them to find solutions that fit their quality of life.

Dr. Tickoo identified several factors that contribute to the effective treatment of chronic pain patients:

- Timely prescriptions and delivery of medication
- 24/7 access to Pain and Palliative care team
- Continuity of care
- Assessment and reassessment
- Collaborative monitoring by physicians, overall care team and patient
- Communication and documentation between all parties
Discussion Highlights:

Post-panel discussion focused on holistic treatment of pain in the field – evidence based medicine, CAM (Complementary and Alternative Medicine) and individual treatments.

Q: Older adults think that pain is universal. In the field, I have seen adults using conventional and CAM. What can we do to further research the combination of conventional and alternative practice to pain management?

Dr. Tickoo: My sense is to ask the patient if they have pain. We institute plans sometimes without their involvement in the process. That is the first step. Everything is so specialized, and it should be patient catered.

Dr. Reid: The lack of a randomized control trial is problematic. An increasing number of hospitals are adopting integrated medicine. This trend is growing in Europe where CAM is integrated in the healthcare system. I expect that we’ll see that here too.

Q: I hear here that diagnosis is necessary so that treatment can be individualized. Others say that treatments are one size fits all. That begs the question of if there are specific individual treatments that depend on diagnosis.

Dr. Argoff: In the infectious disease world, if you culture something, you can figure out the organism causing infection and how to treat. Pain management is a young field, we need to figure out how to do this.

Q: Is there a concern that government will regulate treatment and how?

Dr. Argoff: If the knee-jerk reaction is to have a number, and then use an algorithm based on that number to determine treatment, that’s a problem. That is not what it was intended to do. There are unintended consequences... “for a hammer everything is a nail” does not work in healthcare.
Panel Two – Beliefs & Their Impact on Pain Management

Joanna Sale, PhD, University of Toronto: Pain Beliefs and Pain Management – Perspective of Older Adults Living in the Community

Researchers at the University of Toronto and University of Washington set out to intimately understand and describe the experience of pain, pain medication use, and pain management strategy from the perspective of older adults living the reality of pain management. Pain plays a critical role in quality of life for many older adults yet is dramatically undertreated in this population. This disparity is shaped in large part by attitudes and believes on pain held by older adults.

Three key pervasive attitudes and believes are presenting large barriers to treatment. The first is that pain is an inevitable part of getting old, and is part of the culture of aging. This impacts motivation to seek treatment. The second is that pain is something to fight against, and that taking pain medication is giving in. This results in the elderly changing their lifestyle to adjust to the pain as opposed to undergoing treatment to adjust the pain to their lifestyle. The third is that pain treatment equals pain medication, and that pain medication will lead to addiction. Despite research that shows that older adults are only a minor portion of the addicted population, the elderly are sensitive to anti-addiction messaging, making treatment a last resort.

Getting at some of these misbeliefs and limiting preconceptions can motivate older adults to better manage their pain and make pain management part of the culture, not pain tolerance and avoidance.

Mark Jensen, PhD, University of Washington: Pain Beliefs and Their Impact on Pain Management

Dr. Jensen discussed pain beliefs as a viable treatment target. His research has shown a correlation between pain beliefs and resulting levels of pain. Patients with more positive thoughts about their control over pain have less pain intensity and a better sense of well-being than those who ruminate about the negative aspects of pain. Given that pain is processed and thus created in the brain, it is logical that beliefs can impact the levels of pain experienced.

There are a range of non-medical treatments that address pain management beliefs by putting control over pain in the hands of the patient and focusing attention away from pain. Exercise as an active treatment method, biofeedback monitoring of muscle tension and heart rate, cognitive behavioral therapy that refocuses the patient on positive thoughts and self-hypnosis training are examples of viable treatments that target how one thinks about pain. Combining both passive medication-based treatments and active behavioral treatments and increasing access to these treatments is important.
Discussion Highlights:

Post-panel discussion covered a range of topics related to pain attitudes and beliefs, such as the message that pain belief research can send to patients, the language used to talk about pain, and when psychosocial interventions should be considered in pain management.

Q: Looking at beliefs and personalities – pessimistic versus optimistic – it creates the perception that if you are not upbeat and positive it is your fault you feel pain.

Dr. Jensen: There are things you can do to hurt less and do more. It is a dissociative approach, giving them control and evaluating their thoughts. How much they hurt is influenced by many things. It’s not your fault though. It’s not about removing pain, rather, about getting life back. That’s what treatment ought to be about.

Dr. Cahana: It is unfortunate that in the English language that we use the same language for pain as a byproduct of disease as we do pain as the disease. If we start to embrace that pain is a thing that we do and not a thing that we feel, the dialogue shifts. If pain is something that I feel, I am here and pain is there, and it is our job to do something. Whereas if I understand that I am the vehicle for pain, then… pain is something that we do, and we need to do it better.

Q: What implications are there for the transition from acute to chronic pain?

Dr. Jensen: If it is two to three months, it has probably transitioned. If it has been there for years, you need to make sure someone is getting good belief treatment. It is never too early to do belief interventions. Psychosocial interventions were considered last line interventions, but I believe they should be first line, it can impact outcomes.
Panel Three – Novel Interactive Technologies in Pain Management

Josh Richardson, PhD, Cornell: Human Computer Interaction (HCI) and Clinical Communication About Pain – Delivering Patient-Centered Care with mHealth

Communication barriers impact patient centered care. Currently there is little feedback to physicians until an acute event. Mobile health, or mHealth, bridges that gap, providing an opportunity for feedback and guidance that prevents acute events. Dr. Richardson identified several non-pain management case studies to demonstrate how mHealth works. Smoking cessation, weight loss, asthma control and other wellness programs have a mHealth component for patients to log data and experiences, solicit feedback and guidance from professionals and peers, and visualize their progress over time. This model can be applied to pain management and touches upon the need for increased data, psychosocial patient support and access to information.

Jeff Kaye, MD Oregon Health & Science University: Home Monitoring Technologies for Pain – New Paradigms for Assessing Meaningful Clinical Change

Jeff Kaye identified an area where technology is allowing researchers to understand the dynamic nature of pain and how it impacts everyday life for patients. Home monitoring technologies such as activity sensors, door sensors, walking sensors, medication device tracking, physiological sensors for glucose and blood pressure, etc. are allowing researchers to monitor pain in an unobtrusive way that provides more data for progress evaluation. This type of technology can lead to more productive conversations and earlier interventions. For example, monitoring walking gait, a physician see if a patient’s pain is impacting their ability to walk comfortably before the patient comes to them to discuss. While this methodology for patient monitoring is not feasible for all patients at an individual level, research studies in a home monitoring setting can lead to improved targeted monitoring methodologies and uncover areas of opportunity for improved care and outreach.

Alex Cahana, MD, University of Washington: Pain, Technology and Healthcare Reform

The integration of telecommunication technology in outpatient pain management treatment has the potential for improved outcomes, improved efficiency and access, and ultimately healthcare cost savings. Telehealth, mobile health and the use of personalized visual data are areas of innovation that are already changing the way that office visits are conducted. Dr. Cahana spoke of the “impoverished office visit”, a term he uses to describe the time crunch that physicians face when meeting with patients and managing their schedule. In Washington State, the use of patient self-reports is allowing physicians to use their time more effectively by asking patients targeted questions upfront that address variances in their patients. Increasing patient access to information and monitoring resources has a large potential for further streamlining and improving the effectiveness of the office visit, ultimately saving time, resources and costs.
Discussion Highlights:

Post-panel discussion explored the practical barriers to technology adoption by the aging population and by physicians. The needed evolution of compensation models to support telehealth was at the forefront of this discussion.

Q: We have been talking about telemedicine for 15 years. The technology is there, but it is not happening. There is something missing from this discussion, the white elephant in the room: Who is going to pay for it? Who is going to profit or not profit? This can’t survive through research programs that get discontinued when the grant funding ends.

Dr. Cahana: Absolutely. My answer is that you are absolutely right. We are not doing this through any research pilot or exploratory phase. We are doing this through legislation in the state of Washington. Payment schedules are a movement of soft money, grants and philanthropy to hard money backed by insurance. The reason it doesn’t disseminate is that it has to do with human nature. The folks in Alaska, the only way to get them on board was to go and visit them and talk to them. Learn from them. The time for pilots is over.

Dr. Kaye: I disagree. Money does drive these decisions, but money in technology and healthcare has blossomed. Verizon and AT&T are healthcare companies now... The flood of these non-traditional, very technology-oriented industries into healthcare arena is going to transform things quickly. How many views on YouTube were there in 2005? Now there are 3 billion a day. There is a curve that these things naturally occur on. VA has done a lot of work, 50 thousand more veterans with telemedicine being used in an integrated system. We are investing heavily in this area, and are making important change through a reimbursement transition from office to home visits. Codes were written previously so that you had to have a face to face. Now remote follow-ups via phone and video are a new kind of visit that can be billed against.

Dr. Richardson: Ubiquity of these devices is phenomenal. There will be more mobile phones on the planet than people by 2015. Cost is going down. Social informatics is growing. The integration of technology in our lives is happening. People can decide how they want these devices to support their lives.

Q: How are individual doctors compensated for these remote office visits? What is in it for physicians?

Dr. Kaye: Depends on insurer and state. Nothing is more frustrating than telephone tag and voice mails. There are a lot of motivations for being efficient. It’s about alternatives, everything won’t be handled the same way. In Oregon, there are a lot of patients who will travel long distances for 15 minute appointments – a phone call or video chat is more efficient.
Panelist Bios

Charles Argoff, MD

Dr. Charles Argoff specializes in pain management and chronic headaches, predominately treating patients with chronic and neuropathic pain. He has expertise in several types of pain treatments, including interventional pain management and botulinium toxins.

Dr. Argoff is part of a team of specialists who offer a comprehensive approach to care, while constantly exploring new and innovative ways to diagnose and treat chronic pain. Dr. Argoff’s goal is to offer patients a better quality of life through proper diagnosis and effective treatment: “I pride myself on being compassionate and down to earth toward my patients, while teasing out the complexities of their pain problems,” he explains. Internationally renowned for his work, Dr. Argoff is a member of the International Association for the Study of Pain, the American Academy of Pain Medicine, and the American Academy of Neurology, among other professional organizations. He also serves on the editorial board of the Clinical Journal of Pain. He is one of the editors of the recently published textbook *Raj’s Practical Management of Pain, Fourth Edition*. He is the co-author of *Defeat Chronic Pain Now*, a just-published book for people with chronic pain. He has recently published the third edition of *Pain Management Secrets*.

Alex Cahana, MD

Dr. Cahana joined the University of Washington (UW) as Professor and Chief of the Division of Pain Medicine in 2008. He is adjunct Professor in Bioethics and Medical Humanities, adjunct Professor in Radiology and is the holder of the Hughes & Katherine Blake Endowed Professorship in Behavioral Science. He studied Medicine and Anesthesiology at Tel Aviv University, completed a Pain fellowship at Vanderbilt University, is a decorated combat medical officer and holds degrees in Bioethics, Philosophy and Theology. He served as director of the Interventional Pain program at Geneva University, Switzerland. Dr. Cahana promotes measurement-based care as the standard of care in Pain Medicine in the states of Washington, Alaska, Wyoming, Montana and Idaho, advised to the Department of Defense, the Veterans Health Systems and is involved in State and Federal legislation. He is associate editor for *Pain Practice* and *Pain Medicine* and co-chaired the American Academy of Pain Medicine (AAPM) research committee. He was assistant president of the World Institute of Pain (WIP) and was President of the American Academy of Pain Medicine Foundation (AAPMF). During his tenure at the University of Washington he received the American Pain Society (APS) 2010 Centers of Excellence Award, the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) Best Practice Mention and the 2011 World Institute of Pain (WIP) best comprehensive pain program award. Dr. Cahana received the 2011 Honorable Mention for Innovative Health Care of the Association of American Medical Colleges (AAMC), the Army Surgeon General Commander’s Coin, the 2011 Purple Heart Military Service Order Award and recently received from the President of the UW the 2012 David B. Thorud Leadership Award.
Mark P. Jensen, PhD

Mark P. Jensen, PhD, is a Professor and Vice Chair for Research in the Department of Rehabilitation Medicine, University of Washington School of Medicine. Dr. Jensen’s research program focuses on the development and evaluation of psychosocial interventions in persons with physical disabilities. He has been awarded a number of grants from the National Institutes of Health and other funding sources to test and extend biopsychosocial models of chronic pain, and to study the frequency, course, impact, and treatment of secondary health conditions in individuals aging with a disability. He is the author or co-author of over 300 articles, and is the Editor-in-Chief of the Journal of Pain.

Jeffrey Kaye, MD

Jeffrey Kaye, MD is the Director of the NIA-Oregon Center for Aging and Technology (ORCATECH) and Director of the NIA-Layton Aging and Alzheimer’s Disease Center. Dr. Kaye serves as the Layton Endowed Professor of Neurology and Biomedical Engineering at Oregon Health and Science University. He also directs the Geriatric Neurology program at the Portland Veterans Affairs Medical Center in Portland, Oregon. His research has focused over the past two decades on the question of why some individuals remain protected from frailty and dependency at advanced ages while others succumb at much earlier times. This work has relied on a number of approaches ranging across the fields of genetics, neuroimaging, physiology and continuous activity monitoring. He leads several longitudinal studies on aging including the ongoing Oregon Brain Aging Study, established in 1989 and the Intelligent Systems for Detection of Aging Changes (ISAAC) study using ubiquitous, unobtrusive technologies for assessment of elders in their homes to detect changes signaling imminent decline of function. Dr. Kaye has received the Charles Dolan Hatfield Research Award for his work. He is listed in Best Doctors in America. He serves on many national and international panels and review boards in the fields of geriatrics, neurology and technology including as a commissioner for the Center for Aging Services and Technology (CAST), chair of the Technology Professional Interest Area workgroup for the National Alzheimer’s Association and on the Leadership Council of the Network on Environment, Services and Technologies for the American Society on Aging. He is author of over 250 scientific publications and holds several major grant awards from federal agencies, national foundations and industrial sponsors.

M. Carrington Reid, MD

Dr. Reid is Associate Professor of Medicine at Weill Medical College at Cornell University. Dr. Reid’s research is directed towards improving the management of pain among older persons. Current projects include testing non-pharmacologic strategies for pain among older persons in both clinical and non-clinical settings, identifying barriers to the use of self-management strategies for pain, and examining optimal strategies for managing pain across ethnically diverse populations of older persons. Additional areas of interest include the epidemiology and treatment of substance use disorders in older persons.

Dr. Reid is a graduate of the University of South Carolina School of Medicine. Dr. Reid completed his residency at Dartmouth-Hitchcock Medical Center and holds fellowships in both clinical epidemiology and geriatric medicine at Yale University. Dr. Reid is currently a Robert Wood Johnson Generalist Physician Scholar and an AFAR Paul Beeson Faculty Scholar on Aging Research. He joined the faculty of Weill Cornell in January 2003.
John Richardson, PhD

Joshua E. Richardson, PhD, MLIS, MS, is a biomedical informatician and faculty member at the Center for Healthcare Informatics and Policy (CHiP). He leverages his scientific knowledge and professional experience to inform and evaluate the design, implementation, and adoption of clinical informatics applications and health information technologies. Dr. Richardson’s current efforts include investigating user-defined barriers and facilitators to using mobile health technologies, particularly as those technologies are applied to the area of chronic pain for older adults. Additionally, he has investigated the challenges in designing and implementing health information technologies intended to facilitate patient transfers between skilled nursing facilities and hospital emergency departments. His efforts go toward informing state and national health IT policies. Dr. Richardson received his PhD and master’s in library and information science from San Jose State University, San Jose, CA.

Joanna Sale, PhD

Joanna Sale is an Associate Scientist in the Mobility Program Clinical Research Unit at St. Michael’s Hospital, Toronto, and an Assistant Professor in the graduate department of the Institute of Health Policy, Management and Evaluation at the University of Toronto. She is a clinical epidemiologist by training, receiving her doctoral degree from McMaster University in 2003, and her post-training doctoral training in 2006 from the Faculty of Medicine at the University of Toronto.

Sale’s current interests are in evidence-to-care gaps (especially medication use) in older adults with musculoskeletal conditions. She is also interested in pain, the patient perspective, and models of behavior change. While her main area of research focuses on osteoporosis (patients with osteoporotic fractures), she is also involved in projects related to osteoarthritis, rheumatoid arthritis, and Parkinson’s disease.

Stephan Thielke, MD, MSPH

Stephen is a geriatric psychiatrist and health services researcher at the University of Washington and the Puget Sound VA Geriatric Research, Education, and Clinical Center (GRECC). He is the GRECC Associate Director for Education and Evaluation. He conducts research about depression and pain in older adults, and about the use of monitoring technologies in health care. He is the first recipient of an NIMH-funded Beeson Career Development Award, which currently supports his research. He is a past president of the Washington State Psychiatric Association.

Roma Tickoo, MD, MPH

Roma Tickoo, MD, MPH, is an internist and a geriatrician who cares for patients with acute and chronic cancer pain and other symptoms resulting from cancer or its treatment. Dr. Tickoo becomes involved early in the course of a patient’s care to ensure that the patient and his or her caregivers have the support they need as they make the transition from curative to palliative care – addressing not only physical symptoms such as pain, shortness of breath, and nausea, but also non-physical causes of suffering, such as anxiety and depression. Dr. Tickoo works with a multidisciplinary team that includes
specialists from interventional/anesthesia pain management, rehabilitation medicine, psychiatry and behavioral sciences, integrative medicine, chaplaincy, social work, pharmacy, wound care, radiation oncology, neuro-oncology, neurosurgery (the spine team, managing pain and providing palliative care for patients with advanced cancer near the spine or brain that causes discomfort), various oncology teams, and the Urgent Care Center to prevent pain crises and suffering. Together, they work to preserve the function and quality of life of their patients as well as their families.

In addition to her work in the pain and palliative care clinic, Dr. Tickoo supervises a dedicated outpatient clinic for patients age 65 and older. Dr. Tickoo and her colleagues manage pain and symptoms in these patients, identify needs that are specific to this age group, and make referrals to other healthcare professionals when necessary. She also works with patients’ primary care physicians to share decision-making and facilitate access to resources as close to patients’ homes as possible. Dr. Tickoo discusses end-of-life issues with patients and their families and work compassionately with them on advanced care planning. Dr. Tickoo is also interested in medical bioethics and public policy.

In her research, Dr. Tickoo is studying hospice and palliative care practices at various facilities and leading a study of end-of-life care and advance directives. Dr. Tickoo is interested in identifying and addressing barriers to patients’ access to pain management, and exploring new pharmacologic and non-pharmacologic approaches to pain management. Together with her colleagues in the Department of Psychiatry, Dr. Tickoo is involved in research assessing the value of family-focused grief therapy in cancer patients.