

Focus on the Process



The Patrick and Catherine Weldon Donaghue Medical Research Foundation
2021 Annual Report

Vision Statement:

We envision continual improvement in people's health as a result of research being converted into practical benefit.

Mission Statement:

The Donaghue Foundation supports rigorous health research that leads to realized health benefits and thereby gives the vision of Ethel Donaghue its best expression.

Donaghue strives to adhere to these Guiding Principles:**Practical Benefit**

The founder, Ethel Donaghue, directed that the funds support research that provides knowledge of practical benefit to improve health. We interpret this to mean that Donaghue-funded research studies should have the near-term potential to be adopted and implemented by policy-makers, practitioners and the public to improve health.

Engagement

Optimizing the capacity of research in a way that addresses the needs of policy makers, practitioners and the public requires more than simply providing financial resources. Therefore, we commit to continuous learning and actively working with others both internal and external to the research enterprise whose work connects with ours.

Inclusivity

To assure that research can meaningfully contribute to the achievement of optimal health for all, Donaghue will identify and welcome people from under-represented groups to engage as advisers and grantees and to incorporate the health concerns of diverse communities into grant portfolios. Donaghue will assess on an ongoing basis elements of grant programs that may unintentionally exacerbate health inequality.

Integrity

The integrity of grant-awarding programs is an essential responsibility for Donaghue as a research funder. Applicants, grantees, advisers and other colleagues must be assured that the selection, evaluation and oversight are equitable, based on expertise, transparent, accessible, and efficient.

Innovation

Donaghue will explore new ideas and be willing to test them for the purpose of advancing the Foundation's mission.

FROM THE TRUSTEES



Lynne Garner, PhD
Trustee



Amy R. Lynch, JD
Bank of America Trustee

Dear Friends and Colleagues,

We usually do not turn the Annual Report spotlight on the Foundation's staff and day-to-day operations, but we feel that our review of 2021 calls for at least a small spotlight on some of the changes that have taken place over the past six months.

Within the past six months, we have had two retirements, hired a new program coordinator and promoted one of our own to be our new President. Staff members come and go in every organization, but for one that is the size of Donaghue this is a lot of change!

Although we were delighted to celebrate these well-deserved transitions and to share all of this news with our wider community, our goal was for these changes to be seamless because, as you will see in this annual report, the core work of the Foundation continues.

Staff changes have already resulted in fresh approaches to communication materials and other touch points with grantees and the broader Donaghue community. With the guidance of our advisors and staff, we look forward to continuing to explore and integrate new ideas and current trends into our processes, and research programs to advance the mission of the Donaghue Foundation.

The work of the Foundation is only possible with the generous contribution of the expertise, effort, and valuable time of our policy and science advisers and many colleagues. Our heartfelt *Thank You* goes out to each of you.

Handwritten signatures of Lynne Garner and Amy R. Lynch. Lynne's signature is in cursive and reads 'Lynne Garner'. Amy's signature is also in cursive and reads 'Amy R. Lynch'.

Lynne Garner, PhD
Trustee

Amy R. Lynch, JD
Bank of America Trustee

NEW AWARDS

Another Look

NEW

Anil N. Makam, MD, MAS

“Recovery After Transfer to a Long-Term Acute Care Hospital for COVID-19 (RAFT COVID) among Older Adults”

The Regents of University of California, San Francisco
Stakeholder organization: National Association of Long Term Hospitals (NALTH)

CONTINUING

Katherine Abbott, PhD

“The Impact of Person-Centered Care on Nursing Home Quality”

Miami University, Scripps Gerontology Center
Stakeholder organization: Ohio Person Centered Care Coalition

Chiang-Hua Chang, PhD and Ana Montoya, MD

“Transfer Trauma in Nursing Home Long-Term Care Residents”

University of Michigan, Division of Geriatric & Palliative Medicine
Stakeholder organization: Michigan Department of Health and Human Services

Verena R. Cimarolli, PhD

“The Impact of COVID-19 in Nursing Homes”

Leading Age, LTSS Center @ UMass Boston
Stakeholder organization: Wellspring Lutheran Services, WeCare Connect™

Francesca Falzarano, PhD

“Communication Among Family and Formal Caregivers”

Joan & Sanford I. Weill Medical College of Cornell University
Stakeholder organization: LeadingAge LTSS Center @ UMass Boston

Helena Temkin-Greener, PhD, MPH

“End-of-Life Care in Assisted Living Communities”

University of Rochester
Stakeholder organization: American Health Care Association and National Center for Assisted Living

Kali Thomas, PhD

“Examining Disparities in Outcomes for Duals in Assisted Living”

Brown University
Stakeholder organization: National Association for Regulatory Administration

Jasmine Travers, PhD and Jason Falvers, PhD

“Neighborhood Socioeconomic Disadvantage and Nursing Home Outcomes”

New York University, Rory Meyers College of Nursing
Stakeholder organization: Leading Age

Diana L. White, PhD

“Multiple Views of Quality in Long Term Care”

Portland State University, Institute on Aging
Stakeholder organization: Department of Human Resources, Aging and People with Disabilities Division

Greater Value Portfolio

NEW

William Dale, MD, PhD

City of Hope

“Geriatric Assessment-Drive Supportive Care Interventions to Reduce Low-value Care in Older Adults with Cancer in the Community”
Partnering organization: City of Hope (multiple campuses)

Rachel L. Epstein, MD, MSc

Boston Medical Center

“Cost-effectiveness and Clinical Outcomes of Liver Disease Staging Evaluations in Chronic Hepatitis C Virus (HCV) Infection: Strategies to Increase Hepatitis C Treatment Access and Achieve HCV Elimination”
Partnering organizations: National Viral Hepatitis Roundtable, Center for Health Economics of Treatment Interventions for Substance Use Disorder, HCV, and HIV, and the Rhode Island Department of Health

Mark D. Neuman, MD, MSc

University of Pennsylvania

“Accelerating de-adoption of low-value care for older surgical patients through behavioral economics and patient empowerment”

Partnering organization: U.S. Anesthesia Partners

Anna Sick-Samuels, MD, MPH
Johns Hopkins University
“Reducing overuse of respiratory cultures and antibiotic use in mechanically ventilated children across a national pediatric critical care collaborative”
Partnering organizations: Children’s Hospital of Philadelphia and Boston Children’s Hospital

Cassandra Thiel, PhD
NYU Grossman School of Medicine
“Increasing Value through Optimized Cataract Surgical Care Pathways and Supply”
Partnering organization: NYU Langone Eye Center

CONTINUING

Hannah Cohen-Cline, PhD
Providence Health & Services
“Does a Rising Tide Lift All Boats? Assessing the Direct and Indirect Effects of APMs in Primary Care”
Partner organization: Care Oregon

Megan Cole, PhD, MPH and June-Ho Kim, MD, MPH
Boston University School of Public Health
“Value and Equity of Telehealth for Low-Income Patients with Chronic Conditions at Federally Qualified Health Centers”
Partner organization: Community Care Cooperative

Sophia Jan, MD, MSHP
Feinstein Institute for Medical Research
“Long Term Care and Future Planning for Adults with Intellectual or Developmental Disabilities”

Malini Nijagal, MD and Courtney Lyles, PhD
The Regents of University of California, San Francisco
“Use of Telemedicine to Achieve Higher Value Pregnancy Care”
Partner Organization: San Francisco Health Network

Fasika Woreta, MD
Johns Hopkins University School of Medicine
“Real-time Prescription Benefit Tools in the Electronic Health Record: Working towards greater value for prescribers and patients”
Partner organizations: Froedtert and Medical College of Wisconsin, Yale New Haven Health System, and Johns Hopkins Health System

Opportunity Portfolio
NEW

AcademyHealth
Advancing Research on High-Value, Equitable Care

Connecticut Health Advancement & Research Trust
Beyond COVID: Connecting Communities, Health, and Care

CONTINUING

The Hastings Center
Expanded Ethics Scholarship and Engagement with Targeted Publics

AcademyHealth
Fostering Collaborations to Advance Evidence on Low Value Care

OPPORTUNITY AWARDS

From time to time Donaghue chooses to advance the Foundation's mission through grant opportunities that are outside its standard funding programs. These can be a variety of projects such as research, engaging the public or stakeholders in research, or activities related to enhancing evidence transfer.

AcademyHealth

Advancing Research on High-Value, Equitable Care

The project aims to support the development of research focused on achieving high-value, equitable care. As health care costs continue to rise and health disparities persist, the need to redesign our health care system to deliver better, more equitable care is paramount—and we must have a strong evidence base grounded in the needs of our communities to inform this work.



Using a collaborative approach, this project sets out to:

- frame and define high-value, equitable care;
- generate a research agenda aimed at improving health care value and equity;
- disseminate and gain traction for the research agenda; and
- foster a thriving and inclusive Research Community focused on high-value, equitable care.

AcademyHealth will work in close collaboration with the Donaghue Foundation and relevant stakeholders to ensure their efforts address the needs of health care systems, researchers, patients, and the broader community. They will convene a consensus group to guide their work and invite key stakeholders to generate and prioritize research questions for the development of a research agenda focused on high-value, equitable care. The agenda will be widely disseminated, including targeted outreach to key funders and policy leaders to spur action on priority research areas. The project will also support and foster a Research Community on high-value, equitable care, sharing information about promising research, practices, and policies to advance health care value and equity.

Connecticut Health Advancement & Research Trust

Beyond COVID: Connecting Communities, Health, and Care

This webinar series explored the topics of community health centers, public health, mental health, and hospitals. The goal of the series was to learn how COVID-19 broke down the silos these systems work in, identify new relationships or partnerships formed as a result, and determine structural reforms on the horizon. Leaders in the areas of community health centers, public health, hospitals, and mental health shared lessons learned from COVID-19 and how those lessons can be applied as we move through and past the COVID-19 pandemic.



ANOTHER LOOK

Research to Improve Health for Older Adults in Long Term Care Facilities



RAFT COVID: Recovery After LTACH Transfer for Older Adults

Anil N. Makam, MD, MAS

University of California, San Francisco

Stakeholder Organization: National Association of Long-Term Hospitals (NALTH)

About this Project

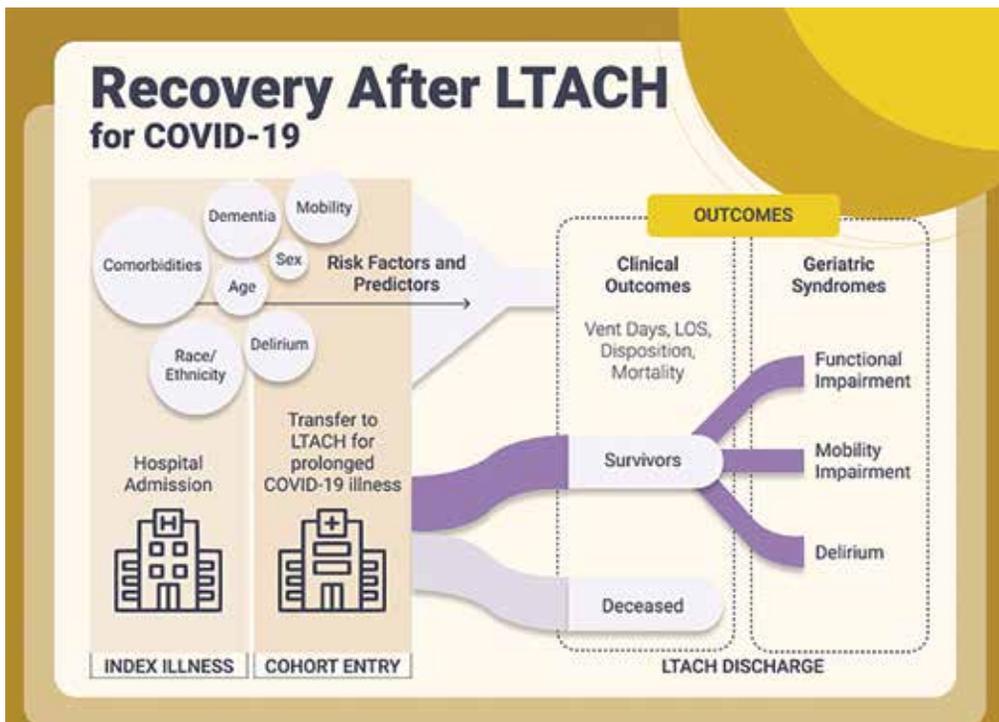
This proposal leverages a collaborative relationship with a national association that has facilitated sharing of patient assessment data from 38 LTACHs across the U.S on ~2,500 older adults with COVID-19. They will characterize geriatric syndromes and outcomes (Aim 1), identify risk factors, develop prognostic models (Aim 2), and examine for racial/ethnic disparities in recovery (Aim 3).

The Problem

Each year, over 100,000 hospitalized older adults survive a critical illness and are transferred to a long-term acute care hospital (LTACH) to recover. LTACHs are post-acute care facilities for patients who often need months of additional therapy, many of whom are older adults weaning from mechanical ventilation. During the SARS-Cov-2 (COVID-19) pandemic, LTACHs have cared for many convalescing older adults with COVID-19 who are most susceptible to developing long-term sequelae.

Stakeholder Role

By partnering with the National Association of Long-Term Hospitals (NALTH), they developed a robust national, multicenter cohort of ≈2,500 older adults recovering from the most severe and prolonged COVID-19 illness cared for in 38 LTACHs across the U.S. Their cohort includes detailed patient assessment data that LTACHs are federally mandated to collect on LTACH admission and discharge.



Cost-effectiveness and Clinical Outcomes of Liver Disease Staging Evaluations in Chronic Hepatitis C Virus (HCV) Infection: Strategies to Increase Hepatitis C Treatment Access and Achieve HCV Elimination



Rachel L. Epstein, MD, MSc

Boston Medical Center Corporation

Partnering Organizations:

National Viral Hepatitis Roundtable, Center for Health Economics of Treatment Interventions for Substance Use Disorder, HCV, and HIV, and the Rhode Island Department of Health

Contribution to Improved Value

This project will contribute to improving and assessing value in healthcare by:

- 1) Increasing transparency in liver fibrosis staging requirement for Medicaid and commercial payer HCV treatment prior authorizations (PAs)
- 2) Assessing the cost-effectiveness of fibrosis staging strategies in different settings
- 3) Allowing programs to employ their limited resources available to increase HCV treatment and eliminate wasteful spending
- 4) Working with Medicaid partners, key stakeholders locally and nationally, and patient advocacy groups to disseminate and implement findings.

About this Project

Prior to the COVID-19 pandemic, hepatitis C virus (HCV) was the leading infectious killer in the United States. This research seeks to determine current state Medicaid and commercial insurer requirements, costs, benefits, and risks of 5 fibrosis staging tests, and compare US state and payer-specific cost-effectiveness of strategies utilizing these tests to stage liver disease for HCV pre-treatment evaluation.

The Problem

Medicaid programs, which care for a disproportionate share of HCV, struggle to treat their HCV-infected enrollees with limited resources and must therefore maximize the value of HCV care they provide. HCV leads to progressive liver fibrosis (scarring) and ultimately cirrhosis in many people, if untreated. Diagnosing cirrhosis in HCV-infected individuals is critical to informing DAA regimen adjustments and routine care, including surveillance for liver cancer.

Project Approach

To determine real-world US liver disease staging costs and practices, they will leverage NVHR's expertise to survey Medicaid and commercial payers and utilize multiple unique data sources to populate and analyze their Hepatitis C Cost-Effectiveness (HEP-CE) microsimulation model to compare the clinical and cost-effectiveness of fibrosis staging strategies to determine which yields the best value in each setting.

Translating Research to Practice

They will work with NVHR to publish findings on PA fibrosis staging criteria on their website and in the literature. They will then utilize these findings to determine the most clinically- and cost-effective methods to stage fibrosis in individuals with HCV. To measure the acceptability of potential recommendations and enhance messaging of these findings, they will send an anonymous survey via email to their combined networks. This data will assist them in shaping our publications, social media dissemination, and framing to key stakeholders and clinicians.

Increase Hepatitis C Treatment Access for Medicaid Patients



2.4M
infected



99%
cured by
oral meds



\$3.3B
possible
savings

Prior to the COVID-19 pandemic, hepatitis C virus (HCV) was the leading infectious killer in the United States. **As of 2016, 2.4 million persons were infected, and national HCV incidence more than tripled from 2009 - 2019**, creating major medical, societal, and economic burdens.

Reported Acute Hepatitis C Incidence Rate
per 100,000

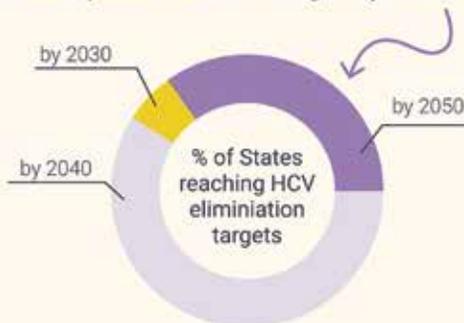


Direct-acting antiviral agents (DAAs) are safe, **oral medications that can cure 99% of HCV infections**, which improves quality of life, reduces the risk for liver failure, hepatocellular carcinoma (HCC), liver-related and all-cause mortality, and prevents transmission. **Yet only 37% of HCV-infected individuals in the U.S. have achieved a cure.**

67% viremic

37% cured

Treatment scale-up can decrease HCV incidence to make HCV elimination possible, **saving an estimated \$3.3 billion in future U.S. healthcare costs**. However, only 3 states are on track to eliminate HCV by 2030 and **18 states (35%) are not expected to meet the targets by 2040**.



Geriatric Assessment-Driven Supportive Care Interventions to Reduce Low-Value Care in Older Adults with Cancer in the Community



William Dale, MD, PhD

City of Hope

Partner Organization:

City of Hope Antelope Valley,

City of Hope Upland

Contribution to Improved Value

The goal of this study is to test the impact of Geriatric Assessment-Driven Multidisciplinary Support Care Intervention (GAIN-S) on advanced directives and costs, as well as determine outcomes of the earlier implementation of the GAIN-S versus Standard of Care (SOC) and delayed implementation. They will also test the value of the intervention when implemented in a community setting.

About this Project

This study aims to demonstrate a Geriatric Assessment (GA) directed model of telemedicine-delivered multidisciplinary supportive care to improve the value of care for older patients (65+) with cancer through innovative care model systems. The preliminary data has shown that their telemedicine-based intervention GAIN-S is feasible, can significantly improve advanced directive completion, and earlier implementation of supportive care reduces the length of hospitalizations and costs in an academic setting.

The Problem

Cancer is primarily a disease of older adults, with almost 60% of cancer cases and 70% of cancer survivors and deaths in the U.S. occurring in patients aged 65 and older. By 2030, more than 70% of cancer patients are expected to be over the age of 65. Although older patients can benefit greatly from cancer treatments, they are more susceptible to adverse effects than younger patients.

Project Approach

After completing the first GA before the treatment starts, using a randomized delayed intervention design, patients will be randomized to immediate GAIN-S vs. delayed GAIN-S arm using a 1:1 ratio. In the immediate GAIN-S arm, a geriatrics-trained multidisciplinary team led by a Nurse Practitioner (NP), social worker, physical/occupation therapist, nutritionist, and pharmacist will review GA results and implement interventions based on pre-specified thresholds built into the GA's domains.

Translating Research to Practice

This study will integrate GA and supportive care screening tools into the guidance of clinical practice and utilize the results of these assessments to inform interventions performed by a multidisciplinary team including a geriatric NP, social worker, rehabilitation therapists, nutritionist, and pharmacist, to care for older adults with cancer. GA-driven intervention must not only improve patient outcomes and be cost-effective, but it must also be practical and realistic to integrate into clinic practice. They will explore the feasibility of billing for the geriatric oncology NP and other multidisciplinary providers' services to help offset program costs in future years. This study has the potential to bring the best practice from geriatric medicine to the community oncology setting by delivering a multidisciplinary team approach via telemedicine.

Geriatric Assessment for Cancer Patients



70%
expected to
be over 65 by
2030



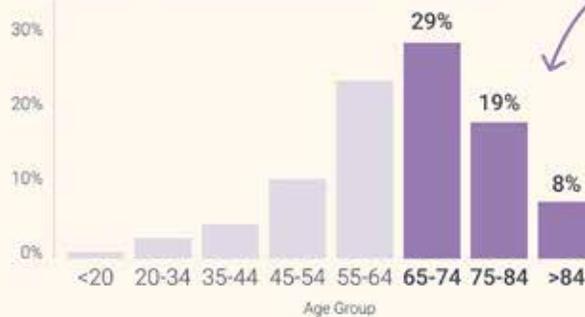
80%
cancer care
occurs in the
community



1/3
have an
unplanned
hospitalization

Cancer is primarily a disease of older adults with **55% of new cancer cases** occurring in patients aged 65 and older. By 2030, more than **70% of cancer patients** are expected to be over the age of 65.

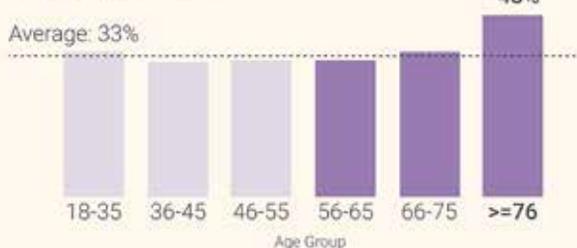
Percent of New Cancer Cases by Age, 2015-2019



Nearly **80% of care for older adults with cancer occurs in the community setting**. A survey found fewer than 25% of community oncologists surveyed said they were confident they could identify dementia or accurately assess a patient's functioning or risk of falling in older adults - factors associated with worse outcomes for cancer treatment.

More than **one-third of patients with cancer have an unplanned hospitalization during the first year** following diagnosis. In patients over 75 years of age, the number is greater than **40%**. Hospitalizations account for 48% of the cost of medical care among patients with advanced cancer.

Unplanned Hospitalization (%) in the Year After Cancer Diagnosis, 2009-2012



The Geriatric Assessment (GA) has proven to be significantly more accurate in predicting chemotherapy toxicity and identifying vulnerabilities in older patients. Unfortunately, fewer than 25% of older patients with cancer receive a GA, indicating a strong need for training and demonstration projects.

Telemedicine

Community

GAIN-S

Reducing Overuse of Respiratory Cultures and Antibiotic use in Mechanically Ventilated Children Across a National Pediatric Critical Care Collaborative



Anna Sick-Samuels, MD, MPH

Johns Hopkins University
Partnering Organizations:
Children's Hospital of Philadelphia and Boston Children's Hospital

Contribution to Improved Value

The goal of this study is to assess the impact of clinical decision support tools to improve the evaluation of VAIs and reduce testing and treatment overuse among critically ill children across a national PICU collaborative and inform reproducible implementation strategies. The long-term objective of this work is to shift the paradigm for the evaluation of ventilator-associated infections to reduce antibiotic overuse and provide high-value care. This research will provide the necessary data to develop adaptable and reproducible strategies to reduce avoidable patient harm and improve the efficiency of care of thousands of critically ill children.

About this Project

In this study, the goal is to improve healthcare value by implementing diagnostic stewardship strategies to foster mindful testing and treatment practices. They will reduce the overuse of testing and treatment, to both improve clinical management and reduce healthcare costs for complex pediatric patients. In a pilot program at the Johns Hopkins Hospital pediatric intensive care unit (PICU), they demonstrated that clinical decision support tools successfully reduced respiratory culture use and antibiotic treatment for VAI which led to cost savings without negative impacts on clinical outcomes.

The Problem

The number of children living with mechanical ventilation who are at risk for developing ventilator-associated infections (VAIs) is rising. Frequently, clinicians use respiratory cultures to help diagnose VAIs, however, the respiratory tract is not sterile and the growth of bacteria in these cultures is often misinterpreted as evidence of infection requiring antibiotic treatment. Over-testing leads to over-treatment, compounding patient morbidity by promoting antibiotic resistance, antibiotic-associated adverse events, and increasing healthcare costs in chronically and critically ill children.

Project Approach

Using mixed methods, they will assess the impact on respiratory culture use, antibiotic use, and clinical outcomes, and identify facilitators and barriers of successful implementation to inform tools for broader dissemination. They plan to 1) determine the impact of implementing respiratory culture diagnostic stewardship initiatives on respiratory culture use, antibiotic use, and clinical outcomes across a national PICU collaborative, and 2) Identify facilitators and barriers to implementation of respiratory culture diagnostic stewardship programs to inform reproducible pragmatic implementation strategies.

Translating Research to Practice

They anticipate that the research findings on the overall impact of the respiratory culture stewardship initiatives will be analyzed in the Summer of 2023. The results of these evaluations will be prepared for publication, and they will formalize a toolkit that incorporates data from the program's effectiveness and safety, and considers, facilitators and barriers to implementation.

Reducing Overuse of Respiratory Cultures & Antibiotics

The population of mechanically ventilated children has increased almost **8000%** since the 1990s. These hospitalizations accrue charges of over **\$1.5 billion** annually.

Average Inpatient Charges for Children Dependent on LTMV vs. CCC Discharges



\$1.5B
annual charges



80x
more children



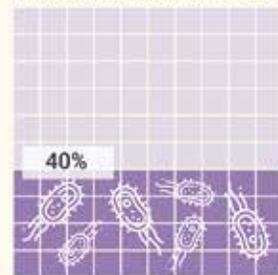
87%
treated with antibiotics

Over-reliance on respiratory cultures compounds patient morbidity by promoting antibiotic resistance, antibiotic-associated adverse events, and increasing healthcare costs in chronically and critically ill children. Up to **87% of PICU patients are treated with antibiotics**, and **50% of the antibiotics are for suspected ventilator-associated infections (VAIs)**.

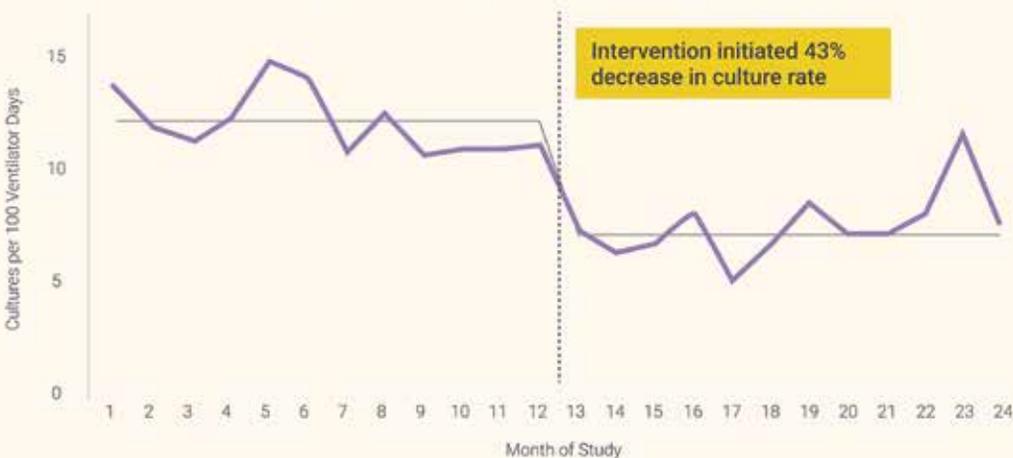
Up to **40% of healthcare-associated infections are caused by antibiotic-resistant bacteria**. Resistant infections increase the mortality rate, prolong the duration of admission, and increase healthcare costs.

Preliminary data from the Johns Hopkins PICU demonstrated that implementation of guidelines to **standardize respiratory culture practices safely reduced respiratory culture use by 43% and antibiotic-treated VAI episodes by 59%**.

All healthcare-associated infections



Monthly Rate of Endotracheal Aspirate Cultures per 100 Ventilator Days in the PICU



Increasing Value through Optimized Cataract Surgical Care Pathways and Supply



Cassandra Thiel, PhD
NYU Grossman School of
Medicine
Partner Organization:
NYU Eye Center

Contribution to Improved Value

The goal of this project is to test value-improvement interventions in cataract surgery, analyzing the clinical, financial, and environmental impacts of various interventions. In addition, by documenting the drivers and barriers to successful implementation, they hope to elucidate clearer pathways towards sustainability for surgeons and surgical facilities across the US. Sadly, healthcare systems are large contributors to waste and environmental emissions. Reducing waste and emissions from this incredibly common surgical procedure will improve public health and reduce its impact on the environment.

About this Project

This project will systematically recommend and pilot value-improvement interventions in cataract surgery at the NYU Langone Eye Center. Value-improvement interventions aim to reduce the cost of care while maintaining quality outcomes and standards of care. Previous studies from high-volume, resource-optimized settings identify pathways, policies, and approaches that optimize surgical supplies and the cataract care pathway. Using this existing research, they will identify, prioritize, and demonstrate the best approaches for safe and effective new cataract surgery practices.

The Problem

Cataract surgery is one of the most common procedures in the world. Unfortunately, cataract surgery often includes unnecessary process steps and needlessly wastes surgical supplies, adding to the cost of care without improving value. Large variability exists in the supplies used, costs, and duration of cases. For example, a single cataract extraction in the US was found to generate between 5.5 to 18 lbs. of solid waste depending on the study site.

Project Approach

Through a combination of qualitative and quantitative research, this study will employ unstructured observations, semi-structured interviews, and quantitative analysis methods to identify both barriers to implementing intervention and the facilitators or drivers aiding in implementation. For interventions that achieve pilot testing, they will collect financial and clinical data and estimate the environmental impacts of interventions, resulting in a comparative longitudinal (pre, and post) assessment.

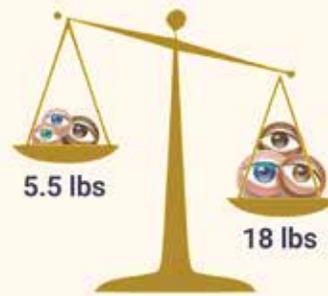
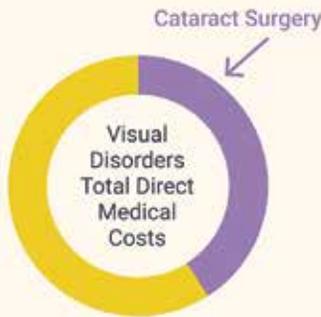
Translating Research to Practice

This research will be used to establish best practice guidelines on resource conservation and value improvement for all US eye care facilities. They anticipate that the strategies piloted here will reduce the cost of cataract surgery without compromising clinical outcomes. They will utilize their connections with ophthalmic professional organizations to establish best practice guidelines on resource efficiency for eye surgery that can be shared nationally. The research team will share their results with eye health specialists, medical supply-chain management experts, and clinical leadership at hospitals nationwide through publications, media reports, and attendance at national meetings and conferences.

Increasing Value through Optimized Cataract Surgical Care Pathways and Supply

The US spends **\$6.8 billion a year on cataract surgery**. The surgery accounts for **over 40% of the total direct medical costs** for visual disorders.

A single cataract extraction in the US could generate between **5.5 and 18 pounds of solid waste** depending on the study site.




\$6.8B
a year

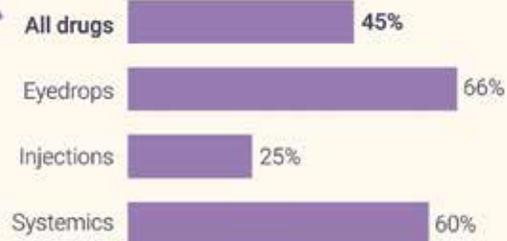


15-40%
of expenses

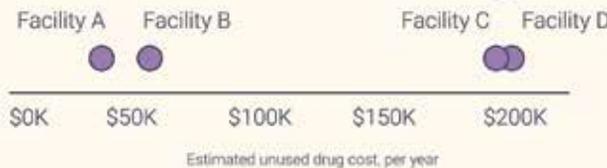
Focusing on supply optimization may help reduce costs and improve health care value, as the **medical supply chain represents 15-40% of a hospital's expenses**.

A study of pharmaceutical waste in cataract surgeries found that across four facilities, an average of **45% of drugs (by volume) went unused** and were discarded after every case.

Volume of Unused Drugs After Surgery



In one study, two out of four facilities in one study **discarded over \$190,000 worth of drugs each year** from cataract surgeries.



Using this existing research, we will identify, prioritize, and demonstrate best approaches for safe and effective new cataract surgery practices - advancing implementation at our Eye Center and informing practices at hospitals nationwide.

Accelerating De-Adoption of Low-Value Care for Older Surgical Patients through Behavioral Economics and Patient Empowerment



Mark Neuman, MD MSc
University of Pennsylvania
Partner Organization:
U.S. Anesthesia Partners

Contribution to Improved Value

This project will contribute to improving value by testing the effectiveness of 3 low-cost approaches—clinician “nudges” incorporating peer comparisons, education-based patient empowerment, or both—that will adapt proven behavior change strategies to accelerate de-adoption of low-value benzodiazepine administration during surgery. The specific aims are:

1. To test the effectiveness of (1) smartphone-delivered clinician “nudges” incorporating peer comparisons, (2) education-based patient empowerment, or (3) both combined for supporting de-adoption of benzodiazepines during anesthesia care for older surgical patients.
2. To assess the impact of the interventions versus control on satisfaction with anesthesia care.
3. To explore associations between the study interventions versus control and (1) postoperative pulmonary complications, (2) delirium, and (3) inpatient length of stay.

About this Project

This work will produce rigorous evidence as to whether and to what degree these strategies, applied individually or together, can increase the value of care delivered to older surgical patients nationally by promoting benzodiazepine de-adoption. This project will be carried out across 394 hospitals, ambulatory surgery centers, and physician offices staffed by USAP providers.

The Problem

Over 21 million surgical procedures take place among adults aged 65 and older in the U.S. each year, and many older surgical patients in the U.S. now receive benzodiazepines (e.g., midazolam, lorazepam) during anesthesia care. Benzodiazepines are commonly administered during anesthesia care for older U.S. surgical patients, yet much current benzodiazepine administration is likely to represent low-value care. In this context, persistently high rates of benzodiazepine administration to older surgical patients nationally highlight a need for effective, scalable interventions to support the de-adoption of this low-value practice.

Project Approach

They propose to test three low-cost interventions to support the de-adoption of this practice: (1) smartphone-delivered clinician “nudges” incorporating peer comparisons; (2) education-based patient empowerment; and (3) both interventions combined. They will test these interventions via a 2x2 factorial stepped-wedge cluster-randomized trial that will enroll over 300,000 patients aged 65 and older receiving general anesthesia at 394 U.S. hospitals, surgery centers, and physician offices in 8 U.S. states.

Translating Research to Practice

This project will have a broad impact nationally on strategies to decrease low-value care for older surgical patients across a range of settings. The project will provide health systems and practice groups with needed evidence regarding effective tools to accelerate the de-adoption of low-value benzodiazepine prescribing during anesthesia that will be suitable for broad implementation at low cost across diverse hospital and ambulatory surgery facility settings.

Reducing Benzodiazepine in Older Surgical Patients

Over 21 million major surgeries occur each year among U.S. adults aged 65 and older. Data indicates that **over half of all older surgical patients receive benzodiazepines** during anesthesia care.

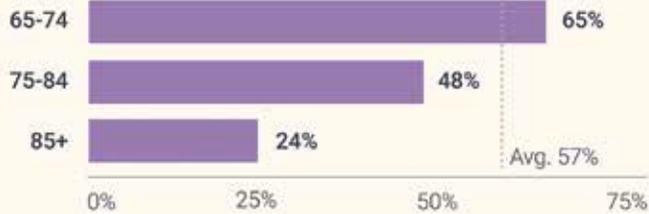


21M
surgeries
among patients
aged 65+



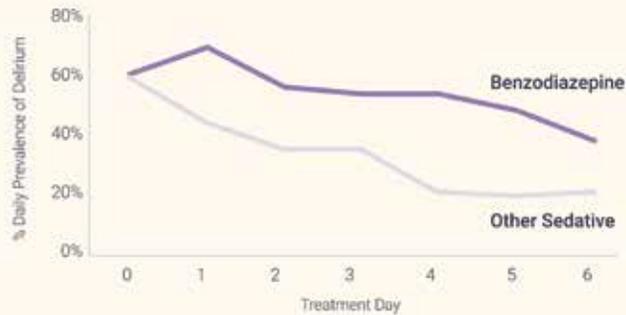
3x
more likely to
experience
delirium

Rates of Benzodiazepine Administration Post Major Non-Cardiac Surgery in Older Adults



Benzodiazepines carry dose-dependent risks for older surgical patients, **including delirium and respiratory depression**. Taken together, available evidence suggests that much benzodiazepine administration to older adults undergoing general anesthesia is unlikely to produce benefits and may cause harm.

Daily Prevalence of Delirium Among Intubated Intensive Care Unit Patients Treated With Dexmedetomidine vs **Midazolam**



Research initiatives suggest that provider-targeted behavioral interventions such as **education, EMR-based reminders, and comparative performance dashboards** can **accelerate de-adoption** of low-value benzodiazepine administration to older surgical patients.

This project will innovate by creating new opportunities for pragmatic trials through a novel **partnership between leading academic investigators and a national private physician practice**, leveraging mobile technologies for **rapid delivery of behavioral interventions** to clinicians, and **evaluating patient empowerment** as a strategy to reduce low-value anesthesia care.



2021 FINANCIAL INFORMATION

FUNDS AWARDED BY GRANT PROGRAM
(Some awards may have received payment after December 31, 2021.)

Another Look

New (1) \$ 186,248
Continuing (8) \$ 582,474

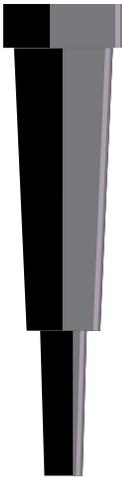
Opportunities

New (2) \$ 341,024
Continuing (2) \$ 182,000

Greater Value Portfolio

New (5) \$1,105,032
Continuing (5) \$1,196,851

\$107,903,215
Grants made since
Foundation's inception



\$53,438,074
Original value of
Ethel Donaghue's gift

Investment in marketable securities as of December 31, 2020 \$93,067,146
Cash and cash equivalent \$ 6,803
Other assets \$ 11,112
Total assets and fund balance \$93,085,061

Income \$ 2,011,728

Expenditures

Program

Grants

Another Look - Better Health for Elders in Care Facilities \$ 768,722
Opportunity Awards \$ 523,024
Greater Value Portfolio \$ 2,301,883

Subtotal \$ 3,593,629

Program support and Foundation-administered projects \$ 43,667

Management and General \$ 745,646

Investment Management \$ 275,406

Total Expenditures \$ 4,658,348

Note: In addition to these expenditures, an estimated amount of up to \$1,645,865 has been committed for future spending in support of ongoing grants.

The figures listed above are unaudited. Fair market values are approximate.

RESEARCH GRANTS

Institution	New	Continuation
AcademyHealth	1	1
Boston Medical Center	1	
Boston University School of Public Health		1
Brown University		1
City of Hope	1	
Connecticut Health Advancement & Research Trust	1	
The Feinstein Institute for Medical Research		1
The Hastings Center		1
Johns Hopkins University	1	1
LeadingAge		1
Miami University		1
New York University	1	1
Portland State University		1
Providence Health and Services		1
University of California, San Francisco	1	1
University of Michigan		1
University of Pennsylvania	1	
University of Rochester		1
Weill Medical College		1
Total	8	15

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Compliance Manager
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Medicine

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Principal Consultant
Global Living Consulting

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GREATER VALUE PORTFOLIO

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Diana Buist, PhD, MPH
Director of Research and
Strategic Partnerships
Kaiser Permanente
Washington Health Research
Institute

Yuchiao Chang, PhD
Assistant Professor
Massachusetts General
Hospital

Courtney Gidengil, MD, MPH
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Harvard School of Medicine

Sarah Greene, MA
Strategic Advisor on Health
Care Research and Strategy

Michael Gusmano, PhD
Research Scholar
The Hastings Center

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Harvard Medical School

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Rush University

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Associate Dean for Academic
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University of Nebraska
Medical School

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Professor
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Associate Professor in the
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University of Michigan
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Clinical Research
Department of Emergency
Medicine
Wake Forest School of
Medicine

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ANOTHER LOOK: BETTER HEALTH FOR OLDER ADULTS IN CARE FACILITIES

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Center on Aging

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University of Connecticut

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Healthy Aging Program
Fan Fox & Leslie L. Samuels
Foundation

Stephen Walsh, ScD
Associate Professor,
Department of Statistics
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In addition to these advisers, there are many individuals who assist the Donaghue Foundation with its review of letters of intent and with grant opportunities that are outside of its standard program. We are very grateful for the generous contribution of their time and expertise.



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