



THE PATRICK AND CATHERINE WELDON DONAGHUE  
MEDICAL RESEARCH FOUNDATION

2018 ANNUAL REPORT



27

number twenty-seven

## VISION STATEMENT

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

## MISSION STATEMENT

We will be an imaginative, collaborative and engaged participant in the process that begins with rigorous health research and ends in realized health benefits and by doing so give the vision of Ethel Donaghue its best expression.

## GOALS

1. Promote knowledge uptake of health research into the realms of healthcare delivery, practice, and policy.
2. Advance the Foundation's mission by collaborating with people and organizations that have the opportunity and responsibility to improve health.
3. Ensure that our grantmaking programs are structured to support rigorous research that more directly leads to a positive impact on health.
4. Identify and support researchers and organizations whose work encompasses the principles of knowledge uptake.
5. Build networks and collaborations to test innovative ideas related to grantmaking and health research.
6. Contribute to efforts, both internal and external to the research enterprise, that optimize the capacity of health research to address the needs of policymakers, practitioners, and consumers.

## VALUES

Steadfast in our commitment  
Principled and practical  
Engaged to the point of effect  
Respectful and reflective



## from the trustees



**Lynne Garner, PhD**  
President and Trustee



**Amy R. Lynch, JD**  
U.S. Trust, Bank of America, Trustee

Dear Friends,

At a recent strategic communication meeting that Donaghue staff and trustees had with several advisers and colleagues, one person described Donaghue as “a small foundation that punches above its weight class.” We were delighted to hear that statement, and it left us thinking about how organizations succeed in a manner than is outsized to their resources. Our conclusion: networks.

Miss Donaghue’s original bequest of \$54 million to start the Patrick and Catherine Weldon Donaghue Medical Research Foundation has grown to fund nearly \$100,000 million in grant awards and another \$75 million as our current assets. But more than an objective measurement in dollars, we perceive that others have recognized Donaghue’s success in funding consequential research poised to provide practical benefit to health. We couldn’t do this without being part of a broad array of networks in the field of philanthropy, healthcare delivery systems, and academia—among others.

Just as much as having a well described process for individuals to apply to our programs, we consider connecting

with people and organizations to be a fundamental aspect of our work. These relationships allow us to test our assumptions about what makes for a good grant program or event, provide important context when we’re considering the best way to resolve a challenging issue, and gain new ideas and see important trends forming. Our networks help us to leverage our limited dollars by forming funding partnerships with other organizations. We also form alliances with individuals and organizations to fill our science review committees, whose expertise is critical to evaluating applications and forming our funding decisions.

The individuals who are a part of our interconnecting networks have contributed to Donaghue’s success over the years, and we are so indebted to them for their ongoing connection and contributions. We look forward to adding the grantees listed in this report into our future array of networks.

We hope that after reading this annual report you will take the time to read the attached Donaghue Journal. It is another

example of our networks at work. The three authors are part of our extended set of connections—Lauren Backman is an epidemiologist who Lynne met in her role as a public member on the Connecticut Healthcare Acquired Infection Advisory Committee; Kathy Talkington is the director of The Antibiotic Resistance Project funded by The Pew Trusts—a member of the Health Research Alliance along with the Donaghue Foundation; and Barbara Kazmierczak is a former Donaghue Investigator.

Lynne Garner, PhD  
President and Trustee

Amy R. Lynch, JD  
U.S. Trust, Bank of America, Trustee

## awards

### ANOTHER LOOK

**Paula Carder, PhD**

Portland State University  
"Improving Care through Complaints and Inspections Data"

**Verena Cimarolli, PhD**

The New Jewish Home  
"Evaluations of Geriatric Substance Abuse"

**Lara Dhingra, PhD**

MJHS Institute for Innovation in Palliative Care  
"Race, Ethnicity and Pressure Ulcers in Nursing Homes"

**Gayle Doll, PhD****Maggie Syme, PhD, MPH**

Kansas State University  
"Resident and Institutional Outcomes of Person-centered Care"

**Lindsay Peterson, PhD**

University of South Florida  
"Finding the Consumer Voice: Nursing Home Complaints"

### GREATER VALUE PORTFOLIO

**Bryan Dowd, PhD**

University of Minnesota  
"Incorporating Quality of Care Information into a Tiered Cost-sharing Health Insurance Benefit"  
Partner organization: State of Minnesota

**Sapna Kudchadkar, MD, PhD**

Johns Hopkins University  
"Impact of a Multifaceted Early Mobility Intervention on Clinical Outcomes and ICU-acquired Morbidities in Critically Ill Children"  
Partner organizations: Children's Hospital, St. Petersburg, Florida; Our Lady of the Lake Children's Hospital, Baton Rouge, Louisiana; Advocate Children's Hospital, Park Ridge, Illinois; Boston Children's Hospital

**Nadine Jackson McCleary, MD, MPH**

Dana Farber Cancer Institute  
"Assessing Toxicity and Adherence of Oral Cancer Therapy with ePROs"  
Partner Organization: Dana Farber Cancer Institute

**Kai Yeung, PharmD, PhD**

Kaiser Permanente Washington Health Research Institute  
"Value-based Formulary-Essentials: Testing and Expanding on Value in Prescription Drug Benefit Design"  
Partner organization: Premera Blue Cross

### R3

**Amber Barnato, MD, MPH**

Dartmouth College  
"Narrative Engagement to Motivate Advance Care Planning"

**Becca Levy, PhD**

Yale University  
"Creating the Community Health Empowerment Site"

**Simon Mahler, MD**

Wake Forest University  
"The HEART Pathway - Local Implementation to Broad Dissemination"

**Ateev Mehrotra, MD, MPH**

Harvard University  
"Helping States Help Patients Find Price Data"

**Joann P. Reinhardt, PhD**

Fund for the Aged  
"Sustainable Practice Change for Improved Nursing Home Care"

### R3 - 2nd OPPORTUNITY AWARD

**Leslie Curry, PhD, MPH**

Yale School of Public Health  
"Translating 'Leadership Saves Lives' for Greater Impact"

### FUNDING PARTNERSHIPS

**Health Research Alliance, Inc.**

Support for 2018 Spring Members Meeting

**National Governors Association Center for Best Practices**

"Expert Roundtable on Improving the Health and Wellbeing of the Aging Population"

**Lisa Simpson, MB, BCh, MPH**

AcademyHealth  
"Fostering Collaborations to Advance Evidence of Low Value Care"

**Millie Solomon, EdD**

The Hastings Center  
"Promoting Justice, Compassion, Integrity and Stewardship through Expanded Ethics Scholarship and Engagement with Targeted Publics"

**Atheendar Venkataramani, MD, PhD**

**Kristin Underhill, JD, PhD**  
University of Pennsylvania  
"Kentucky Population Survey on Medicaid Waiver Policy"

### 2017 CONTINUATION AWARDS

### ANOTHER LOOK

**Laura Hatfield, PhD**

Harvard Medical School  
"Using Telemedicine to Reduce Hospital Transfers"

**Sherrie Aspinall, PhD**

University of Pittsburgh  
"De-prescribing of Anti-dementia Medications"

### GREATER VALUE PORTFOLIO

**Scott Halpern, MD, PhD**

University of Pennsylvania  
"Behavioral Economics Approaches to Improve Palliative Care for Critically Ill Patients"

**Sophia Jan, MD, MSHP**

The Feinstein Institute for Medical Research  
"Long Term Care Planning for Adults with Intellectual/Developmental Disabilities"

**Ateev Mehrotra, MD, MPH**

Harvard University  
"Just Google It: What is the Impact of Health Care Price Information Being More Accessible to Consumers?"

**David Meltzer, MD, PhD**

University of Chicago  
"Longitudinal Effects of the Comprehensive Care Physician Program"

**Amol Navathe, MD, PhD****Mitesh S. Patel, MD, MBA**

The University of Pennsylvania  
"The REDUCE Trial: Randomized trial of EHR Defaults and Using social Comparison feedback to Effectively decrease opioid prescription pill burden"

**Jennifer Raymond, MD, MCR**

Children's Hospital Los Angeles  
"CoYoT1 to California (CTC) - Telemedicine to Engage Young Adults with Diabetes"

**Karen Sepucha, PhD**

Massachusetts General Hospital  
"Matching the Right Person to the Right rTreatment: Shared decision making for high cost elective procedures"

**Peter Ubel, MD**

Duke University  
"Examining Best Practices for Factoring Out-Of-Pocket Expenses into Patients' Health Care Decisions"

### GRANT PROGRAMS

**Another Look**

Funding to use existing data for research with the near-term potential to improve the health of elders in care facilities.

**Funding Partnerships**

Donaghue working with other funders to leverage its resources.

**Greater Value Portfolio**

Projects that test new ways to increase the benefits of health care delivery to more people at an equivalent or reduced cost.

**R3 - Making Research Relevant & Ready**

R3 funds enable grantees to access experts in areas relevant to scaling, spread and implementation.

# funding partnership awards

Donaghue working with other funders to leverage its resources



## AcademyHealth's Research Communities on Low Value Care

Donaghue has made a grant award to AcademyHealth to help fund their Research Community on Low Value Care. The \$130,000 award will help support the low value care research activities through December 2020. The Community is also funded by the ABIM Foundation. ABIM is the architect of the Choosing Wisely campaign that encourages conversations between medical practitioners and patients to help patients choose care that is supported by good evidence, not duplicative, and reduces potential harm. The purpose of the Community is to promote the development and adoption of evidence regarding the deleterious effects of low value health care on patients and on our health care system more broadly. Specifically, the current effort by the Research Community will focus on the impact of low value care on African-Americans and Latinos and on the potential that new and emerging technologies have for reducing or exacerbating low value care. AcademyHealth is the country's leading organization to support health services research through collaborative work among researchers, policy makers and funders. Many of its accomplishments are done through member-driven communities and interests groups, such as the Research Community on Low Value Care.



## Kentucky HEALTH Medicaid Survey

Donaghue and the Rx Foundation are co-funding a survey of the Kentucky population conducted by the University of Pennsylvania about the state's new Medicaid program intended for the Medicaid expansion population – low-income adults who are not disabled, not pregnant or not medically frail. Both funders are equally contributing to the \$270,000 two-year award. Because the program was approved under the Medicaid waiver policy, Kentucky HEALTH is required to have an evaluation. The Commonwealth of Kentucky

has contracted with the University of Pennsylvania to do this evaluation, which will include a randomized controlled trial. The Donaghue and Rx Foundation-funded survey will complement this evaluation by asking the general Kentucky population about their awareness, understanding, attitudes and beliefs about the new program. This study will go beyond existing research that has asked only broad questions related to support for personal responsibility and will compare differences between new Medicaid enrollees and the general population regarding the role of the state in health care and in beliefs, knowledge and support for the new program. Data collection will continue for two years, making it possible to detect changes over time about people's beliefs and knowledge of the new program. The results of both the RCT evaluation and the population-level survey will be valuable information to other states that are either implementing or developing plans with similar waivers to their Medicaid programs.



## The Hastings Center Impact Fund

Donaghue has recently committed \$800,000 over five years to The Hastings Center to develop and implement greater capacity to engage public officials, opinion leaders, and the broader public in the most pressing ethical issues of our time. The Hastings Center is an independent bioethics research institute located in Garrison, New York. For the past fifty years, The Hastings Center has conducted original research in a wide array of topics that support deliberation on two broad foci – the delivery of just and compassionate health care across the life span and the wise use of emerging technologies. The purpose of the Donaghue award is to produce, disseminate, and enable the uptake of guidance about sound health and science policy for scholars, policymakers, members of the public, and for key intermediaries such as journalists and physicians. To achieve this, The Hastings Center is expanding its research portfolio to address urgent ethical questions arising in contemporary science and health policy and will transform its capacity to reach and influence a far broader audience, ensuring both wider dissemination of Hastings' ideas as well as their uptake into practice and policy by policymakers, professionals and the public.



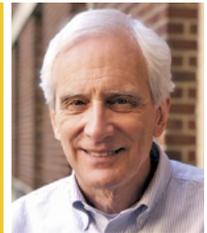
## National Governors Association Center for Best Practices

Donaghue, along with The SCAN Foundation, National PACE Association and National Association of Areas on Aging, sponsored the National Governors Association Center for Best Practices Health Division expert roundtable on "Improving the Health and Well-Being of Aging Populations: Surfacing Best Practices for States to Provide More Efficient and Effective Long-Term Care." The purpose of the Roundtable was to review new strategies to improve care and reduce costs to states for their aging populations. State-level innovations and opportunities were identified that can support governors and state leaders in driving toward those objectives. Subject matter experts from the Altarum Institute and the Kaiser Family Foundation along with NGA staff framed the issues and guided the discussions among the 40 attendees. State leaders responsible for policies and service delivery to Medicaid recipients and the elderly residents in their states and national experts discussed a range of ideas on the future of long term support services. The Donaghue award was for \$25,000.

## Greater Value Portfolio Research Spotlight

### INCORPORATING QUALITY OF CARE INFORMATION INTO A TIERED COST-SHARING HEALTH INSURANCE BENEFIT

Bryan Dowd, PhD, University of Minnesota



#### Contribution to Improved Value

Test models of care and coverage that address current financial disincentives for systemic change

#### About This Project

This study will develop and test ways to present data on both quality of care and cost to employees choosing among primary care clinics. The two-year award is for \$367,659. Dr. Dowd and his research team are partnering with the Minnesota State Employees Group Insurance Program (SEGIP).

#### The Problem

Currently it is difficult for consumers to compare both the quality and the expected cost of care when choosing among primary care clinics. Economists cite this lack of comprehensive cost and quality data, presented in a useful way to consumers, as one of the causes of inefficiency in the U.S. health system — i.e., our inability to maximize quality at any level of health care spending.

#### Project Approach

Quality measures such as ambulatory care sensitive admissions, avoidable emergency department visits, potentially preventable rehospitalizations, and low-value care will be developed using claims data and quality information from state and federal agencies. Interviews will be conducted with health care providers, health plan administrators, and union leadership to understand the best ways to present and use these quality measures.

#### Translating Research into Practice

Minnesota SEGIP has a national reputation for successfully using a tiered cost-sharing system for primary care clinics. Adding quality data will be of interest to other employee groups. The results of this project will be shared with employers, health plans, policymakers, and academicians through in-person presentations, research briefs, policy memoranda, and articles in the peer reviewed academic literature.

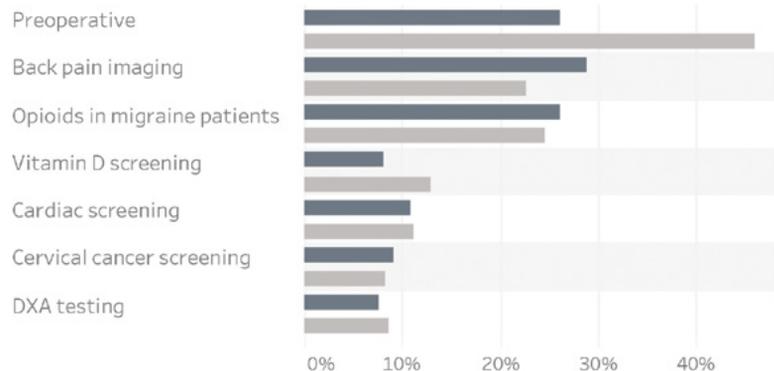
## In the US, 8% of healthcare expenditures was spent on unnecessary clinical treatment.



\*2016 expenditures

By giving consumers **access to the average usage and quality** of certain low-value service use, like those displayed here, **costs may be reduced and care improved.**

Average prevalence (usage) rates | ● Private payers ● Medicare



## Greater Value Portfolio Research Spotlight

### IMPACT OF A MULTIFACETED EARLY MOBILITY INTERVENTION ON OUTCOMES AND ICU-ACQUIRED MORBIDITIES IN CRITICALLY ILL CHILDREN

Sapna R. Kudchakar, MD, PhD, Johns Hopkins University



#### Contribution to Improved Value

Value refers to both how much we pay and, just as importantly, the outcomes we get for that cost

#### About this project

The goal of this project is to determine the impact of an early mobility program on children in ICUs and assess facilitators and barriers to its wider implementation. The two-year award is for \$443,448. The partnering organizations are four tertiary-care pediatric ICUs of diverse size, setting, and geographic location.

#### The Problem

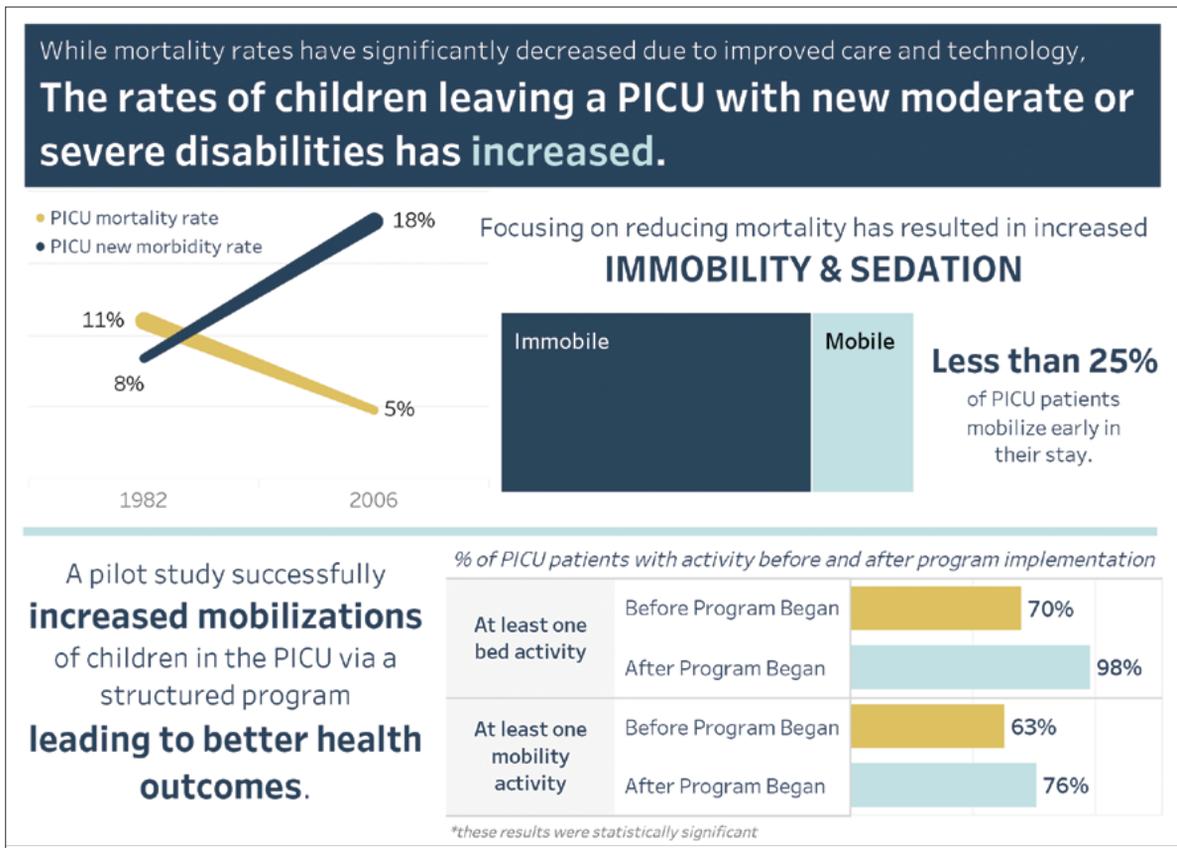
Although mortality in pediatric ICUs has decreased, long-term ICU stays are associated with longer immobility, heavier sedation, and insufficient delirium prevention that increase ICU-acquired morbidities and hospital lengths of stays.

#### Project Approach

A pilot study of a multi-intervention program to promote early mobility, efficient sleep, and delirium prevention had positive results for safety and feasibility. This study will assess patient-level clinical outcomes and will identify facilitators and barriers to facility-level success in implementing the program.

#### Translating Research into Practice

In addition to traditional scholarly dissemination, translation approaches include developing key messages for stakeholders and researchers from the partnering organizations, summaries in lay language about the benefits of an early mobility program for families, and a set of summaries, tools and resources for clinicians.



## Greater Value Portfolio Research Spotlight

ASSESSING TOXICITY AND ADHERENCE OF ORAL CANCER THERAPY WITH ELECTRONIC PATIENT REPORTED OUTCOMES (EPROS)

Nadine Jackson McCleary, MD, MPH, Dana-Farber Cancer Institute



### Contribution to Improve Value

This project studies the impact of systematic electronic patient reported data to improve outcomes for patients receiving oral anticancer therapy as part of routine clinical practice in a large oncology academic and community practice

### About this project

This study will leverage cancer informatics to improve oral chemotherapy treatment outcomes, increase treatment adherence, and manage toxicity. The goal is to develop the tools needed for the oral cancer therapy monitoring system; conduct a pilot implementation at the point of care and between visits; and assess clinician and patient engagement, and overall impact of the program for better outcomes. The two-year award is for \$440,000. The partnering organization is Dana-Farber Cancer Institute.

### The Problem

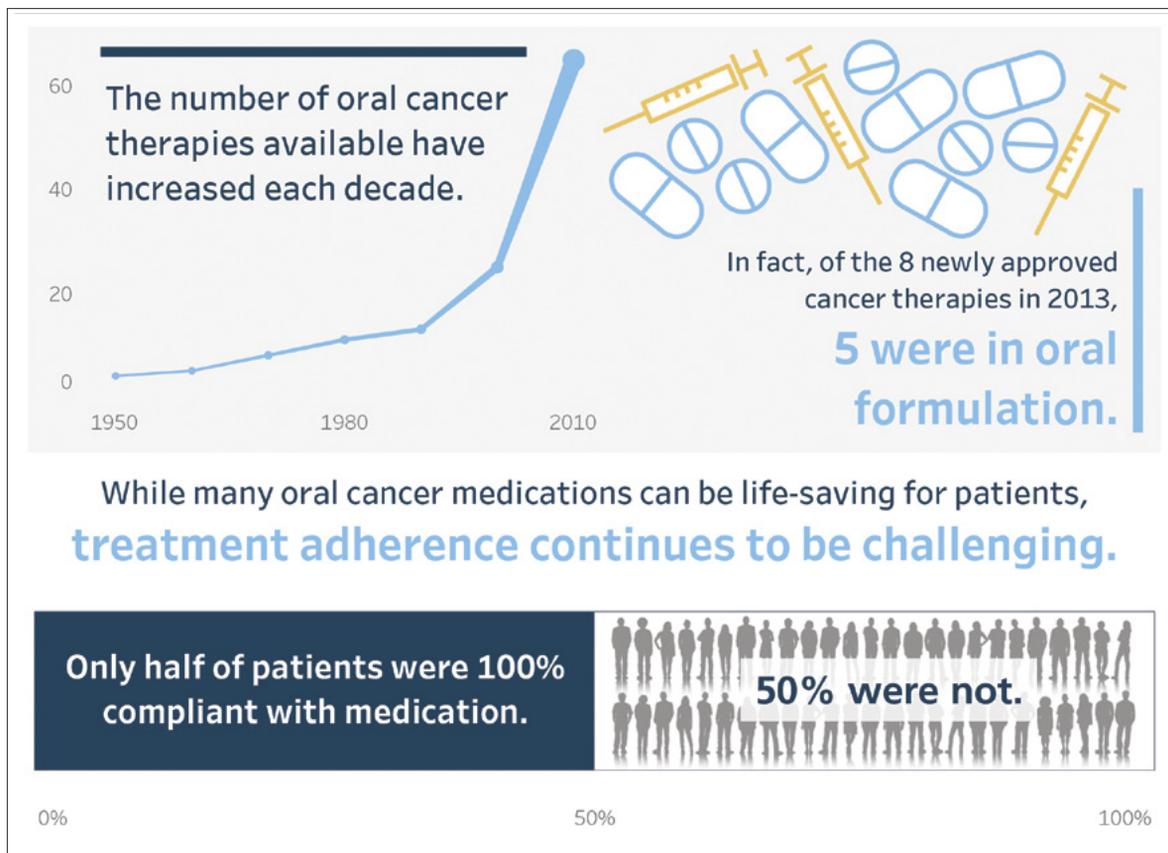
The number of oral cancer-directed therapies (OCDT) is expected to increase over time, potentially increasing risk of non-adherence and unique toxicities. Patients and their caregivers need additional access to communicate concerns as well as enhanced skills to learn how to safely administer, store and monitor potential adverse effects.

### Project Approach

After an in-clinic electronic system (ePRO) to collect patient report of symptoms related to treatment or disease was recently found to be feasible, ePROs will be captured via tablets during clinic visits or by mobile devices between clinic visits to understand the impact of ePRO for OCDT administered for breast or gastrointestinal cancers on outcomes, adherence, toxicity, and patient and provider engagement.

### Translating Research into Practice

The project results will guide future implementation strategies for OCDT adherence and toxicity monitoring and inform scalable strategies for oncology.



## Greater Value Portfolio Research Spotlight

VALUE-BASED FORMULARY ESSENTIALS: TESTING AND EXPANDING ON VALUE IN PRESCRIPTION DRUG BENEFIT DESIGNS

**Kai Yeung, PharmD, PhD, Kaiser Permanente Washington Health Research Institute**



### Contribution to Improved Value

Test models of care and coverage that address current financial disincentives for higher value healthcare

### About this project

This study will expand a small pilot study of aligning out-of-pockets costs for drugs with their estimated value. The two-year award is for \$399,917. Premera Blue Cross is the partnering organization.

### The Problem

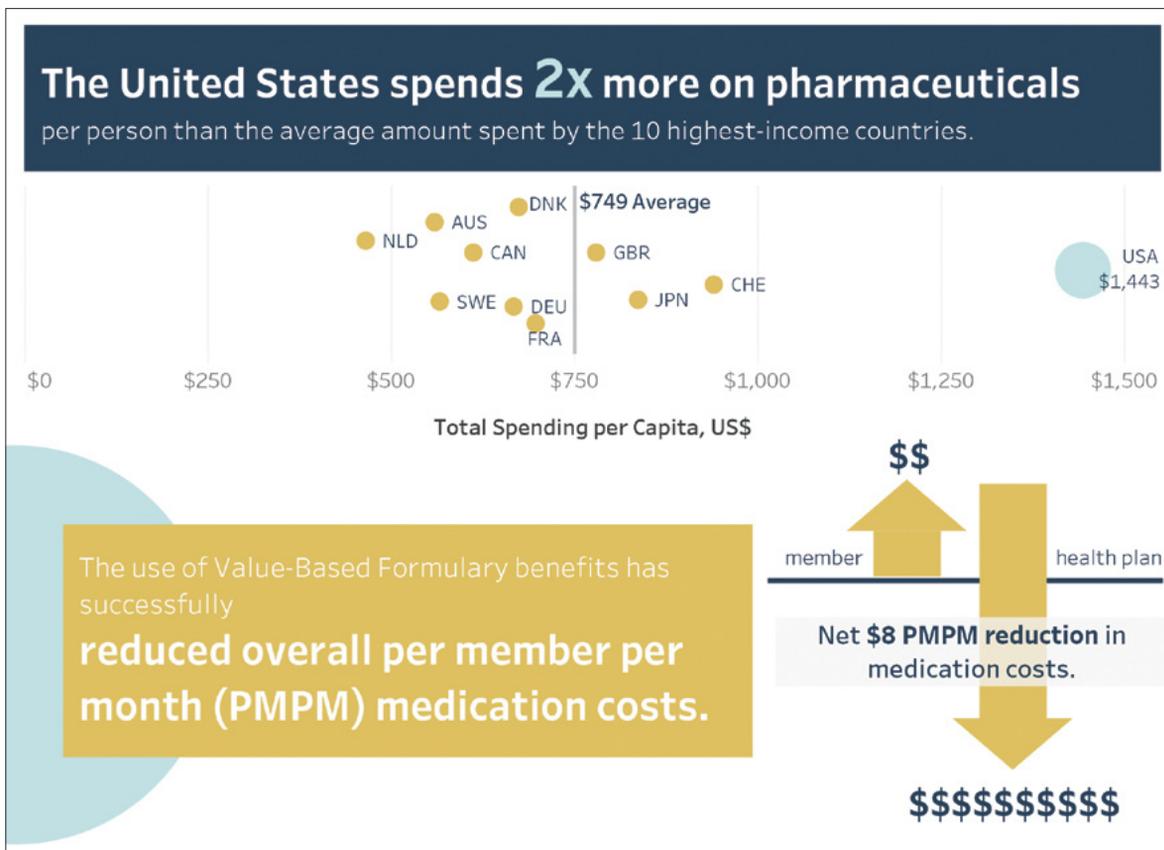
Pharmaceutical costs are a significant and increasing factor in the high cost of healthcare in the U.S. Employers and health plans have enacted cost-sharing drug formularies to reduce the employers' cost burden, but some of these may have unintended consequences by reducing patient adherence to drugs that improve health outcomes.

### Project Approach

A pilot study conducted by Premera Blue Cross added cost effectiveness of drugs to the method used to rank medication on how much patients should pay for them. After safety review and efficacy review, a cost effectiveness review was added to estimate the value of each drug. In general, members would pay less for drugs that had a higher estimated value for improving health. The findings showed that although copayments for members increased modestly, total medication expenditures decreased significantly. This project extends a new evaluation of the value-based drug formulary and cost-sharing plan to 50,000 members.

### Translating Research into Practice

The results of this study will be used by Premera to help determine the degree to which they will expand their pilot value-based formulary. Beyond that, a communication plan will be developed to disseminate the study findings to health policy journals and to other entities that are designing value-based healthcare plans.





## another look

Funding to use existing data for research with the near-term potential to improve the health of elders in care facilities.

### **Paula Carder, PhD**

Portland State University  
"Measuring Quality through Complaints and Inspections Data"

Stakeholder Organization: Oregon Department of Health Services

The objective of the proposed study is to understand the relationship between community and resident characteristics, consumer complaints, regulatory violations, and resident health outcomes. The findings will inform ongoing efforts by the stakeholder organization, Oregon Department of Human Services, to improve the safety and quality of care provided by AL/RC facilities and provide a model for national efforts to use administrative records to identify prevalence of critical incidents, including abuse, among Medicaid beneficiaries. The study team combines administrative data, including complaints and regulatory deficiencies, with data from our own annual assisted living and residential care surveys. Analysis of the combined data set will also assess differences in substantiated complaints or inspection findings by facility characteristics such as ownership, location, staffing level, Medicaid, and dementia care certification. Recent organizational planning at Oregon Department of Human Services identified a need for information on risk factors associated with consumer dissatisfaction, rule violations, and health outcomes. Because Oregon's community-based care system is a national model, this project can inform other states' oversight and quality improvement efforts.

### **Verena R. Cimarolli, PhD**

The New Jewish Home  
"A Geriatric Substance Abuse Recovery Program"

Stakeholder Organization: LeadingAge

To meet the need of treating substance abuse in older adults, The New Jewish Home created a Geriatric Substance Abuse Recovery Program (GSARP) for post-acute care patients within its skilled nursing facility. The GSARP integrates medical rehabilitation and substance abuse recovery services. This 18-month study will entail further analyses of medical record data of patients who were program participants and those who refused participation. A primary goal is to determine the impact of GSARP participation on rehabilitation outcomes and to identify factors associated with program refusal. Guided by the Andersen Behavioral Model of Health Services Use, the analysis will determine if GSARP participants have better post-acute care outcomes when compared to refusers and which GSARP components are most beneficial to participants; identify individual characteristics and health behaviors associated with successful outcomes; and identify individual characteristics associated with program participation and refusal. Study findings will reveal the effects of GSARPs for rehabilitation outcomes and inform how to best engage patients in skilled nursing facilities who are in need of substance abuse treatment services in GSARPs. Clinicians and therapists in post-acute care units of skilled nursing facilities are the intended users of the findings from this research.



**Lara Dhingra, PhD**

MJHS Institute for Innovation in Palliative Care

“Race, Ethnicity and Pressure Ulcers in Nursing Homes”

Stakeholder Organization: LeadingAge New York

Prior studies suggest that pressure ulcer-related outcomes are characterized by racial and ethnic disparities; blacks have nearly twice the prevalence of PUs than whites. Studies of these disparities are very limited, however, and additional studies are needed to evaluate the nature of racial/ethnic disparities and explore their effects relative to significant clinical and nursing home characteristics. This study will analyze the 2015 and 2016 Long Term Care Minimum Data Set Version 3.0 for 3.2 million nursing home residents to evaluate the associations between race/ethnicity and pressure ulcer-related outcomes, including prevalence, change over time, and co-morbid pain and analgesic use. It will determine whether race/ethnicity is an independent predictor of pressure ulcer-related outcomes in nursing homes when controlling for a broad array of potential covariates, such as nursing home size, staffing, and location. The team of researchers, clinicians and community leaders will disseminate the findings and jointly develop and deliver a continuing education webinar about best practices for pressure ulcer prevention and care, with implications for nursing homes nationally.



**Gayle Doll, PhD and Maggie Syme, PhD, MPH**

Center on Aging and Geriatrics, Kansas State University

“Resident and Institutional Outcomes of Person Centered Care: A Longitudinal Evaluation of the Promoting Excellent Alternative in Kansas Nursing Homes”

Stakeholder Organization: Kansas Department for Aging and Disability Services

Promoting Excellent Alternative in Kansas nursing homes (PEAK 2.0) is a statewide pay-for-performance program that provides an unparalleled opportunity to conduct an outcome evaluation of a standardized person-centered care (PCC) program with increasing levels of PCC adoption, which has shown promising preliminary resident outcomes. We propose to evaluate whether increased adoption of PCC practices—via participation in the PEAK 2.0 program—impacts resident health outcomes, resident quality of life outcomes, and facility outcomes.

This project will analyze longitudinal data during PEAK 2.0 years 2014 to 2019. The source population is residents from all certified Kansas nursing homes in order to compare non-adopters to PCC adopters across levels. Data will be merged from three different sources: the Minimum Data Set 3.0, Online Survey, Certification and Reporting (OSCAR), and the state agency’s resident quality of life data. The results will directly inform PCC implementation statewide and affect near- and long-term resident wellbeing, with the potential to translate findings to other practice jurisdictions.



**Lindsay Peterson, PhD**

School of Aging Studies, South Florida University

“Finding the Consumer’s Voice: Nursing home complaints”

Stakeholder Organization: The National Consumer Voice for Quality Long-Term Care

Complaints are considered a unique indicator of the voice of the consumer. While complaint data are incorporated into the Nursing Home Compare Five-Star rating, the government does not explain the role of complaints in ratings or what complaint scores may signify. The proposed research will examine complaint and other data used in the Five-Star rating, with a larger goal of helping to identify and amplify the consumer’s voice to provide additional quality information. A key Five-Star component is based on deficiency citations resulting from annual recertification surveys and complaint inspections. The project will examine whether there are differences between the information contained in these two sources. First, total complaints (including unsubstantiated complaints not used in Five-Star calculations) will be examined and an estimate will be made of the nursing home characteristics that predict higher numbers. Then the study will compare the numbers of total complaints with numbers of substantiated complaints and estimate factors that predict substantiated complaints to determine if they are different from factors predicting unsubstantiated complaints. Finally, differences between the two health inspection elements—deficiency scores from recertification surveys and complaint inspections—will be compared. These analyses could aid in the Five-Star system’s refinement and help consumer advocates explain the significance of complaints. Results could help nursing homes understand more about complaints, quality, and effective grievance practices.

## r3

Funds enable grantees to access experts in areas relevant to scaling, spread and implementation.



### **Amber E. Barnato, MD, MPH**

Dartmouth College  
*Narrative Engagement to Motivate  
Advance Care Planning*

Consultant: Sound Physicians

This R3 project will develop a web-based CME intervention to increase providers' motivation for advanced care planning and will be focused on hospitalists who care for patients with serious illnesses. The consultant will guide CME development to complement existing e-learning in serious illness communication and advanced care planning. The initial plan is to have providers listen to stories about surrogates experiences making decisions about life support for incapacitated family members in the ICU and then compare them to generate simple, memorable decision principles. The stories will be drawn from their ICUStoryWeb and Donaghue-funded debriefing interviews.



### **Becca Levy, PhD**

Yale School of Public Health  
*Creating the Community Health  
Empowerment Site*

Consultant: Yale Web Technology Team

The R3 grant funds will create an innovative evidence-based website that builds on existing tools, such as a computer presentation of positive age images, that originated from their successful Donaghue-funded randomized controlled trial. Because recent research has found that ageism is increasing, a growing public-health need exists to develop an effective dissemination platform. The R3 funds will be used to collaborate with a creative web-designer team to develop an interactive website that has the capability of improving views of aging and, therefore, well-being among older individuals on a large scale.



### **Simon Mahler, MD**

Wake Forest University  
*The HEART Pathway: Local  
Implementation to Broad Dissemination*

Consultants: Innovative Public Relations, Inc; RevBoss; g-Innovations

The goal of this R3 project is to develop a comprehensive strategy for scaling the HEART Pathway beyond its successful local implementation toward the goal of improving the quality and value of chest pain care across the U.S. The research team has established a substantial body of scientific evidence supporting the safe and effective use of the HEART Pathway to guide chest pain care. To enhance the scalability of the HEART Pathway, Mahler's team has partnered with Impathiq Inc, to translate the HEART Pathway into SMART-FHIR technology, which is compatible with most EHR systems and allows health systems to download applications using minimal IT resources


**Ateev Mehrotra, MD, MPH**

Harvard Medical School  
*Helping States Help Patients Find Price Data*

Consultant: Freedman HealthCare

This project will create a roadmap for state organizations that seek to increase consumers' use of health care prices data. First, they will describe the regulatory landscape by focusing on at least 10 states who have all payer price databases (APCDs). Second, the project team will explore the needs and objectives of potential data users to define needs and opportunities for this data. Through interviews and surveys with at least 15 organizations (e.g., Angie's list, Google, Bing) who use similar data, the project team will explore data availability, data access provisions, costs of production and legal obstacles to understand their needs such as data use permissions, format, contractual requirements and financial arrangements. The findings from the interviews on barriers and opportunities will be summarized in a white paper for states to use in advancing the design and implementation of reporting projects. Another key component will be suggestions to states on how to use current technology such as Google Analytics to monitor internet search traffic and interest in price and data use that can help states adjust dissemination efforts.


**Joann P. Reinhardt, PhD**

The New Jewish Home Research Institute  
 on Aging  
*Sustainable Practice Change for Improved Nursing Home Care*

Consultant: Spragens Associates, LLC

R3 funds will be used to design, implement, and test a sustainable Goals of Care Plan and associated interview tool to assist inter-disciplinary care-planning teams. They will include a formal care plan and structured conversation guide to help clinicians navigate the process of establishing personal preferences for health care decision making. The development and testing of user friendly, standardized materials for communication to establish goals of care, educate elders and families about treatment options for end-of-life care, and document choices via medical orders is necessary for high quality nursing home care.


**Leslie Curry, PhD, MPH**

Yale School of Public Health  
*Translating "Leadership Saves Lives" for Greater Impact*

This R3 – 2nd Opportunity award will continue a long-term collaboration with the American College of Cardiology to leverage, provide additional resources and disseminate Leadership Saves Lives tools to hospitals seeking to improve outcomes for patients with acute myocardial infarction.

# advisory committees

## **POLICY ADVISORY COMMITTEE**

### **Carrie Brady, JD**

Principal  
CBrady Consulting & Possibilities Farm

### **Carol Buckheit, MS**

Director of Communications  
Connecticut Community Foundation

### **Heather Crockett-Miller, DDS, MPH**

Director of Dental Services  
Equitas Health

### **Mehul Dalal, MD, MPH**

Chronic Disease Director  
Connecticut Department of Public Health

### **Jean Larson, MBA**

Education and Community Outreach  
Manager, Yale University Human  
Investigation Committee (retired)  
Compliance Manager, APNH: A Place to  
Nourish Your Health

### **Katie S. Martin, PhD**

Vice President and Chief Strategy Officer  
Foodshare

### **Marie Massaro**

Principal  
Massaro Consulting

### **Patrick McKenna, AIA**

Senior Project Manager  
Community Solutions Northeast Hartford  
Partnership

### **Russell Munson, MD**

Senior Medical Director  
CarePartners of Connecticut

### **Michelle Spoto**

Student  
University of Connecticut Schools of  
Dentistry and Medicine

### **Lawrence Young, MPH**

Director, Community Health and  
Well-Being  
Saint Mary's Hospital

## **ANOTHER LOOK:**

### **Better Health for Elders in Care Facilities**

### **Lisa Barry, PhD, MPH**

Assistant Professor, Psychiatry  
University of Connecticut Center on Aging

### **Randi Berkowitz, MD**

Chief Medical Officer  
Lowell Community Health Center

### **Eilon Caspi, PhD**

Research Associate  
University of Minnesota

### **Emil Coman, PhD**

Research Associate  
University of Connecticut

### **David M. Dosa, MD, MPH**

Associate Professor of Medicine and  
Health Services, Policy and Practice  
Brown University

### **Mary Jane Koren, MD, MPH**

Program Consultant  
John A. Hartford Foundation

### **Julie T. Robison, PhD**

Professor of Medicine  
University of Connecticut Center on Aging

### **Jennifer Tjia, MD**

Associate Professor  
University of Massachusetts Medical  
School

### **Stephen Walsh, ScD**

Associate Professor, School of Nursing  
University of Connecticut

### **Emily Wilson, MS**

Geospatial Educator  
University of Connecticut

## **GREATER VALUE PORTFOLIO**

### **Ann Bonham, PhD**

Former Chief Scientific Officer, American  
Association of Medical Colleges  
Emeritus Executive Associate Dean and  
Professor of Medicine and Pharmacology  
University of California, Davis School of  
Medicine

### **Diana Buist, PhD, MPH**

Director of Research and Strategic  
Partnerships  
Kaiser Permanente Washington Health  
Research Institute

### **Eilon Caspi, PhD**

Research Associate  
University of Minnesota

### **Charles Cutler, MD**

President  
Cutler Healthcare

### **Emmy Ganos, PhD**

Program Officer  
Robert Wood Johnson Foundation

### **Courtney Gidengil, MD, MPH**

Assistant Professor  
Harvard School of Medicine

### **Emil Coman, PhD**

Research Associate  
University of Connecticut

### **Philmon Gona, PhD**

Associate Professor  
University of Massachusetts, Boston

### **Sarah Greene, MA**

Executive Director  
Health Care Systems Research  
Network

### **Michael Gusmano, PhD**

Research Scholar  
The Hastings Center

### **Jack Hoadley, PhD**

Professor, Health Policy Institute  
Georgetown University

### **Sean Jeffery, PharmD**

Clinical Professor of Pharmacy  
Practice  
University of Connecticut

### **Valerie Lewis, PhD**

Associate Professor  
University of North Carolina

### **Mark D. Neuman, MD**

Associate Professor  
University of Pennsylvania

### **Anne Thorndike, MD**

Assistant Professor  
Harvard School of Medicine

### **Victor Villagra, MD**

President  
Health & Technology Vector, Inc

### **Stephen Walsh, ScD**

Associate Professor, School of Nursing  
University of Connecticut

## **R3 - MAKING RESEARCH RELEVANT & READY**

### **Carol Buckheit, MS**

Director of Communications  
Connecticut Community Foundation

### **Konstantine Drakonakis, PE**

Venture Partner, LaunchCapital/  
Pritzker Vlock Family Office  
Mentor-In-Residence TSAI Center for  
Innovative Thinking at Yale

### **Anne Elwell, RN, MPH**

Principal Emeritus,  
Qualidigm

### **Veronica Nieva, PhD**

Vice President  
Westat

### **Laurel Pickering, MPH**

Chief Revenue Officer  
WellDoc, Inc.

### **Beccah Rothschild**

Principal  
Health Engagement Strategies

### **C. Todd Staub, MD**

Senior Vice President, Physician  
Relations  
OptumCare

# financials

Investment in marketable securities as of December 31	\$66,745,814
Cash and cash equivalent	\$ 6,295
Other assets	\$ 9,594
Total assets and fund balance	\$66,761,703

Income \$ 1,366,977

## Expenditures

Program	
Grants	
Another Look - Better Health for Elders in Care Facilities	\$ 434,289
Funding Partnerships	\$ 326,492
Greater Value Portfolio	\$ 1,871,991
R3 - Making Research Relevant & Ready	\$ 335,500

Subtotal \$ 2,968,272

Program support and Foundation-administered projects \$ 201,586

Management and General \$ 629,847

Investment Management \$ 186,316

Total Expenditures \$ 3,986,021

Note: In addition to these expenditures, an estimated amount of up to \$2,591,746 has been earmarked for future spending in support of ongoing grants.

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

## research grants

Institution	New	Continuation	Total
AcademyHealth	1		1
Children's Hospital of Los Angeles		1	1
Dana Farber Cancer Institute	1		1
Dartmouth College	1		1
Duke University		1	1
The Feinstein Institute for Medical Research		1	1
Fund for the Aged, Inc.	1		1
Harvard University	1	2	3
The Hastings Center	1		1
Health Research Alliance	1		1
Johns Hopkins University	1		1
Kaiser Permanente Washington Health Research Institute	1		1
Kansas State University	1		1
Massachusetts General Hospital		1	1
Metropolitan Jewish Health System	1		1
National Governors Association Center for Best Practices	1		1
The New Jewish Home	1		1
Portland State University	1		1
University of Chicago		1	1
University of Minnesota	1		1
University of Pennsylvania	1	2	3
University of Pittsburgh		1	1
University of South Florida	1		1
Wake Forest University	1		1
Yale University	2		2

20 10 30

## funds awarded by grant program for grant cycle

### Another Look

New (5)	\$ 336,403
Continuing (2)	\$ 97,886

### Funding Partnerships

New (5)	\$ 326,492
Continuing (0)	\$ 0

### Greater Value Portfolio

New (4)	\$ 644,275
Continuing (8)	\$1,227,716

### R3 - Making Research

#### Relevant & Ready

New (6)	\$ 335,500
Continuing (0)	\$ 0

**\$99,319,568**

Grants made since Foundation's inception



**\$53,438,074**

Original value of Ethel Donaghue's gift

**Lynne L. Garner, PhD**  
Trustee and President  
garner@donaghue.org

**Nancy C. Yedlin, MPH**  
Vice President  
yedlin@donaghue.org

**Stacy Cloud**  
Grants Administrator  
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**Farrell Design**  
Design

**HealthDataViz**  
Research Spotlights & Data Visualizations

MAY 2019

THE PATRICK AND CATHERINE WELDON DONAGHUE MEDICAL RESEARCH FOUNDATION



Donaghue **j**ournal

How to Preserve Existing Antibiotics—  
and Find New Ones

*Kathy Talkington, MPAff*

Using Infection Prevention to Reduce Outpatient  
Hemodialysis-Related Infections

*Lauren Backman, RN, MHS*

Discovering More Targeted Approaches  
to Fight Infections

*Barbara Kazmierczak, PhD, MD*

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*A periodic collection of perspectives on issues important for medical research*

## **A periodic collection of perspectives on issues important for medical research**

Microbes – bacteria, viruses and fungi – are all around us. And in us. And on us. Although science has demonstrated our dependence on many microbes, we are now in jeopardy of not being able to control the bacteria and viruses that cause disease. Our overzealous use of antibiotics has made relatively common diseases harder to treat, and rare, deadly microbes are emerging and being transported globally through travel.

The race to prevent healthcare-acquired infections and develop new effective treatments against disease-causing bacteria is a collaboration between public health officials, advocates, and scientists. *The Donaghue Journal* is focused on three experts in the microbiome and their work. Please refer to the online Donaghue Journal for data citations.

**The Advocate** – The Antibiotic Resistance Project fights superbugs with stewardship programs in agriculture, healthcare and by advocating for greater resources to develop new drugs.

### **How to Preserve Existing Antibiotics—and Find New Ones**

Kathy Talkington, MPA

Project Director, The Antibiotic Resistance Project - the Pew Charitable Trust

**The Epidemiologist** – Say “thank you” to your public health heroes on the front line of preventing infections in healthcare.

### **Using Infection Prevention to Reduce Outpatient Hemodialysis-Related Infections**

Lauren Backman, RN, MHS

Epidemiologist III, Connecticut Department of Public Health

**The Scientist** – Researchers are working to understand how antibiotics change the microbiome in the human gut and its consequences for our ability to fight disease.

### **Discovering More Targeted Approaches to Fight Infections**

Barbara Kazmierczak, PhD, MD

Gustav and Louse Pfeiffer Research Foundation MD-PhD Program Director, Yale University School of Medicine



The Patrick and Catherine Weldon Donaghue Medical Research Foundation  
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# How to Preserve Existing Antibiotics—and Find New Ones

**Kathy Talkington, MPAff**  
**Director of the Antibiotic**  
**Resistance Project, The**  
**Pew Charitable Trusts**



Two worrisome trends have escalated over the past several decades: bacteria are growing increasingly resistant to available antibiotics, and too few drugs in development have even the potential to treat the most dangerous antibiotic-resistant bacteria, or superbugs. Addressing antibiotic resistance requires measures that will ensure both the prudent use of existing drugs—in both human health care and food animal production—and a robust pipeline of new ones.

Although all antibiotic use contributes to the emergence of resistance, roughly 30 percent of U.S. antibiotic prescriptions for human health care are unnecessary. Antibiotic stewardship programs (ASPs) ensure that patients get the right drug at the right dose at the right time and for the right duration—not only slowing the emergence of resistance and rates of resistant infections, but also allowing patients to heal as quickly as possible while minimizing the risk of adverse side effects. Similar stewardship programs can also help ensure the judicious use of antibiotics in animal agriculture, especially to reduce the use of antibiotics that are medically important to humans.

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Pharmaceutical companies have downsized or discontinued antibiotic research programs—in large part due to limited revenue potential.

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The Centers for Medicare & Medicaid Services (CMS) requires that ASPs be used in long-term care facilities and should require them in hospitals as well. Improving antibiotic use in outpatient settings—such as doctors' offices, emergency rooms, retail health clinics, and urgent care centers—must also be a priority because a large proportion of antibiotics in the U.S. are prescribed in these facilities. Physician practices, health systems, and the operators of retail clinics and health plans, among others, can discourage unnecessary antibiotic use; research shows that they can be inspired to do so merely by learning how their rates of prescribing antibiotics compare with their peers. The agriculture sector, too, must reduce unnecessary use of antibiotics in livestock production.

At the same time, more needs to be done to spur the discovery and development of new antibiotics. Only 11 antibiotics currently in clinical development have the potential to treat the world's most

dangerous superbugs, yet several pharmaceutical companies have downsized or discontinued antibiotic research programs—in large part due to limited revenue potential. One of them—Achaogen—filed for Chapter 11 in the spring of 2019. To address the economic barriers, the Biomedical Advanced Research and Development Authority—part of the Department of Health and Human Services' Office of the Assistant Secretary for Preparedness and Response—established the Combating Antibiotic Resistant Bacteria Biopharmaceutical Accelerator, or CARB-X, the world's largest public-private partnership for preclinical antibiotic development. CARB-X has been instrumental in helping companies to advance promising antibiotic candidates. In addition, The Pew Charitable Trusts, the Infectious Diseases Society of America, Trust for America's Health, and those companies still engaged in antibiotic research and development are calling on Congress to advance a set of economic incentives to fix the broken antibiotics market. Supporting antibiotic innovation and improving stewardship for existing drugs are essential to the fight against antibiotic-resistant bacteria—and ensure that these life-saving medications will be effective for generations.



Lauren A. Backman, RN  
Epidemiologist III,  
Connecticut Department  
of Public Health

# Using Infection Prevention Practices to Reduce Outpatient Hemodialysis-Related Infections in Connecticut

Patients with chronic kidney disease have a compromised immune system that puts them at increased risk for infectious diseases. Those with kidney disease that progresses to needing ongoing hemodialysis are at an even higher risk for infections associated with the dialysis process. In this environment, multiple patients typically receive dialysis concurrently, and there are repeated opportunities for person-to-person transmission of infectious agents via contaminated devices, equipment, supplies, environmental surfaces, or the hands of healthcare personnel when infection prevention practices are not followed.

Of these infections, bloodstream infections and vascular access infections are among the most life threatening. Approximately 29,000 bloodstream infections occur in hemodialysis patients annually in the United States. In 2017 Connecticut outpatient hemodialysis facilities reported to the Centers for Disease Control and Prevention (CDC) National Healthcare Safety Network (NHSN) system 231 dialysis-associated bloodstream infections and 309 vascular access infections. This reporting showed that several hemodialysis facilities had infection rates higher than expected when compared to national data.

With funding from the CDC, the Connecticut Department of Public Health Healthcare Associated Infections (DPH HAI) Program began evaluating out-patient hemodialysis facilities. The purpose of these evaluations was to identify infection prevention gaps and implement mitigation activities to prevent infection transmission. Through use of CDC developed assessment tools, site visit observations, and review of hemodialysis facility infection

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The importance of sharing results of the surveillance data with all clinical healthcare personnel, from administrators to technicians, was emphasized so that they all could contribute to implementing better infection prevention practices to improve rates over time.

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prevention policies and practices, significant gaps were identified and mitigation activities were developed and implemented based on these findings.

The Connecticut DPH HAI Program instituted several educational sessions for all Connecticut hemodialysis healthcare personnel. One of the important components of the sessions was to assure that healthcare personnel understood the NHSN Dialysis

Event definitions, protocols, and reporting of infections to assure accurate and reliable data that targets areas for infection prevention and successful use of data for bloodstream infections prevention. NHSN allows hemodialysis facilities to enter infection data, calculate rates, and compare their rates with national, state and hemodialysis networks. The importance of sharing results of the surveillance data with all clinical healthcare personnel, from administrators to technicians, was emphasized so that they all could contribute to implementing better infection prevention practices to improve rates over time. Other major educational initiatives were to train healthcare personnel on infection control “best practices” including hand hygiene; access care and aseptic technique; injection and medication safety; environmental cleaning and disinfection; annual healthcare personnel competency skills evaluations; and patient education.

With these interventions, the program anticipates lower rates of hemodialysis-related infections in the future.

# Discovering More Targeted Approaches to Fight Infections

**Barbara Kazmierczak, MD, PhD**  
**The Gustav and Louse Pfeiffer**  
**Research Foundation MD-PhD**  
**Program Director, Yale University**  
**School of Medicine**



Antibiotic resistance has become front-page news. Stories about “superbugs” resistant to antibiotics considered the last line of defense are now common, raising concerns of untreatable infections occurring in our hospitals and communities. The Centers for Disease Control and Prevention estimated in 2011 that over 23,000 deaths per year in the US were linked to infections caused by these antibiotic resistant organisms, while a more recent study looking at the European Union placed that number at over 33,000.

The behaviors that led us to this point are well-described. Antibiotics have been overused and often misused both in humans, who are treated inappropriately for a viral or parasitic infection that won't respond to these types of drugs, and in livestock, where antibiotics have been used to promote growth of healthy animals. But even though these behaviors are relatively new—after all, antibiotics have only been commercially available since the 1940s—the ways in which bacteria respond are ancient. Studies of 30,000-year-old permafrost samples containing DNA from the time of the woolly mammoth document the presence of genes encoding resistance to multiple classes of antibiotics, results that have been replicated widely in other studies of ancient DNA. These findings are not so difficult to understand once we realize that most types of antibiotics are naturally produced and secreted by bacteria competing for space

and resources in the soil and other natural environments. Resistance to these self-produced antibiotics is a necessary trait that can be passed not only from mother to daughter cells, but also transferred between unrelated bacteria on mobile pieces of DNA. Carrying around such extra genetic “baggage” might not do a bacterium much good most of the time—but in the presence of an antibiotic, cells that now have the appropriate antibiotic resistance gene will survive.

An infection with a multidrug resistant (MDR) bacterium or fungus can be life-threatening for an individual patient. Much effort is currently directed at discovering new approaches to treat MDR infections, including new drugs that block bacterial behaviors required to cause disease, rather than drugs that just kill bacteria. Bacteriophages, or viruses of bacteria, have been used in many parts of the world over the past century to treat bacterial infections, and are being revisited in the United States as treatments for intractable MDR infections. These approaches also differ from classical antibiotics in one significant way: they specifically target a particular disease-causing bacterium rather than broadly killing both pathogenic and non-disease causing bacteria alike. This very narrow “spectrum of activity” may be among the most important features of such new treatments, as it means that the complex and beneficial populations of bacteria and fungi that make up the human

“microbiome” will be spared by such a treatment.

The relationship between the microbiome, which colonizes the human gut and skin, and human health is complex and has evolved over millenia. These microbes are necessary for proper development of our immune system, for extraction of nutrients from food, and for crowding out pathogenic bacteria. Broad-spectrum antibiotics significantly alter the number and kinds of bacteria in the microbiome. The resulting decrease in bacterial number and diversity makes it easier for pathogenic bacteria like *Clostridium difficile* to take over in the gut and cause a severe and sometimes fatal diarrheal illness. Antibiotic use in childhood is also correlated with later risk of developing asthma, inflammatory bowel disease and early-onset obesity. We are still far from understanding whether a microbiome altered by antibiotic exposure causes these chronic illnesses, and even further from knowing how to restore a “healthy” microbiome. But the alarm has been raised: much as human changes on climate and planet threaten the extinction of thousands of species, widespread and often indiscriminate use of antibiotics has caused many bacteria to disappear from the human microbiome in developed countries. We can only hope that more prudent and targeted use of antibiotics will halt this decline in microbiome diversity—and preserve the efficacy of antibiotics to treat and cure infections in the future.