

A NEW WAY TO CARE

New Models | [New Paths](#) | New Initiatives in Community Healthcare





EFFECTIVE WAYS
CON

Connecting Vision with Outcomes. The healthcare landscape is evolving at an unprecedented pace. Yet, for many Americans, access to the right kind of care is still a challenge. To help tackle this problem, The National Association of Chain Drug Stores (NACDS) Foundation works collaboratively with partners to discover new ways to care.

With a focus on care accessibility, efficiency, and promoting the safe and effective use of medicine, the Foundation supports evidence-based research that cuts across the care spectrum, from innovative care delivery models to preventative screenings – promising concepts that can be replicated and scaled into real-world solutions. Seizing this transformational moment in healthcare, our work holds the potential to help people live healthier lives.



Connect with us online at nacdsfoundation.org to learn more about project initiatives and opportunities.

“Bringing about meaningful change across communities requires engagement from multiple stakeholders. NACDS Foundation serves as a critical link that serves to coalesce relationships that create improved patient health.”

—ERIC WRIGHT, PHARM.D.
MPH, DIRECTOR AND SR. INVESTIGATOR
CENTER FOR PHARMACY INNOVATION AND OUTCOMES
GEISINGER HEALTH SYSTEM

ADVANCING TOWARD BETTER HEALTH

The coordination of care is critical for patients moving between healthcare settings, whether the patient is admitted to the hospital or discharged home. At an estimated cost of more than \$26 billion per year, one in five Medicare patients leaving the hospital will be readmitted within 30 days. Because medication error is a contributing factor in readmissions, the NACDS Foundation is researching new ways to bridge care between the hospital and the patient's community. Researching new transitions-of-care models is one way the Foundation strives to improve patient health and support the healthcare system at large.



1 out of every 5
Medicare patients –
2.6 million seniors –
released from the
hospital is readmitted
within 30 days.

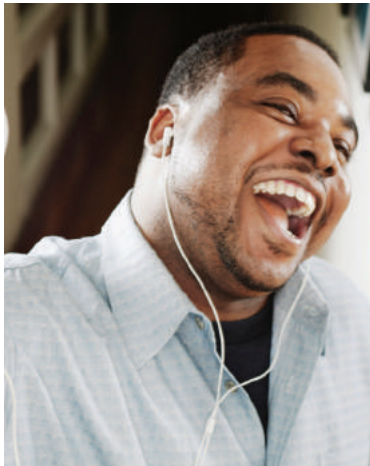
“The NACDS Foundation understands that in order to have an impact on broader population health in our communities, expanding access to preventative healthcare is essential.”

—DEAN ALI S. KHAN, MD, MPH
RETIRED ASSISTANT SURGEON GENERAL, USPHS
COLLEGE OF PUBLIC HEALTH, UNIVERSITY OF NEBRASKA MEDICAL CENTER

EMBRACING INNOVATION

When doctors and medical facilities are in short supply, care delivery innovation provides a beacon of hope. The NACDS Foundation and its partners are researching new ways to address tough problems, such as access to care, speed to treatment and preventive screenings for infectious diseases such as hepatitis C and HIV. Increasing patients' access to timely treatment in a familiar, neighborhood setting serves the broader health care system with the benefits of early detection and prevention.

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An estimated 3.2 million
Americans who are living with the
hepatitis C virus – 3 out of 4 – are
not even aware they are infected.

“At the core of NACDS Foundation’s work is the spirit of collaboration, driving coordinated, innovative care delivery to enhance patient outcomes.”

**—WILLIAM H. SHRANK, M.D., MSHS, CHIEF MEDICAL OFFICER
UPMC INSURANCE SERVICES DIVISION**

FORGING PARTNERSHIPS

Our partnerships with academic institutions, public health entities and other groups offer almost limitless avenues of exploration. The NACDS Foundation maintains a blended portfolio of ongoing research ranging from small scale projects to multi-year, multi-phased initiatives. As the steward of these projects, we coordinate and deliver scalable findings to improve evidence-based outcomes in peer-reviewed medical journals as well as mass media.

Each year, nearly 100 corporate
benefactors from a diverse range
of industries support the NACDS
Foundation's work to advance patient care.

RSHIPS



A NEW WAY TO CARE

We fund evidence-based research and educational initiatives designed to improve patient outcomes and advance public health. Join us, as we discover new ways to care.

RESEARCH PROJECTS



NACDS FOUNDATION



NATIONAL ASSOCIATION OF CHAIN DRUG STORES (NACDS) FOUNDATION

1776 Wilson Blvd. Suite 200 Arlington, VA 22209 | nacdsfoundation.org | (703) 837-4278

PREVENTIVE SCREENINGS



NACDS FOUNDATION PROJECTS



Goal:

To evaluate the impact of providing neighborhood access to preventive screenings and linkage to care for people who are at-risk for the hepatitis C virus (HCV) and the human immunodeficiency virus (HIV).

Timeline:

2015 to 2017

Study Locations:

Georgia, Michigan,
West Virginia & Ohio

Research Team:

Centers for Disease
Control and Prevention
(CDC), Division of
HIV/AIDS Prevention

OVERVIEW

Statistics from the CDC are staggering. An estimated 3.2 million Americans are living with hepatitis C virus (HCV), and most of them – 3 out of 4 – are not even aware they are infected. Further, an estimated 1.2 million Americans are living with HIV, and about 14% are unaware. But there is hope. Early identification not only can result in less transmission, it can lead to a better quality of life. That prompted us to ask: What if preventive screenings for these two disease states were offered more routinely in patients' neighborhoods? Could a change in the healthcare delivery model make a meaningful difference to patient care?

NACDS FOUNDATION RESEARCH

Preventive Screenings for HIV & Hepatitis C (ongoing)

The Foundation built this study based on information from public health focus groups with state and local health departments. During the public health focus groups, participants consistently expressed a desire to partner with community pharmacies for disease prevention and linkage to treatment, among other key public health themes. In cooperation with health officials in several states, the NACDS Foundation gained an understanding of how to coordinate our efforts with state and local health departments, who are supportive of expanding testing access in less stigmatizing settings. Thus, this study was built on the focus group input combined with prior research provided by CDC on expanding access to HIV screenings in community settings.

(continued on reverse)

PREVENTIVE SCREENINGS



NACDS FOUNDATION PROJECTS

Research Team continued:

University of Nebraska
Medical Center

Ferris State University

Community Partners:

Michigan Department
of Community Health

Georgia Department
of Public Health

West Virginia
Department of Health
and Human Services

Cabell-Huntington
Health Department, WV

Pharmacy Partners
across four states

Small-Scale Pilot Project for HCV

The first pilot project was launched in Lansing, Michigan. Screenings of individuals at high risk for HCV were conducted at a network of eight community pharmacies. Participating pharmacists received 20 hours of point-of-care testing training that included a refresher on physical assessment and patient counseling, among other key topics. Enrollment of patients began in the spring of 2015. Those who experienced reactive results were counseled by a community pharmacist and the Department of Health for confirmatory testing and follow-up care. Reactive cases were reported to the Michigan Department of Community Health for disease surveillance.

Four-State HIV and HCV Expansion Study

Launched on the heels of the smaller-scale pilot project, which was limited to HCV, this larger study evaluates the impact of increasing access to HCV and HIV screenings. In addition to our academic partners, the CDC joined the research team to provide public health expertise and insight into study design and implementation.

The project, which began in East Lansing, Michigan, was expanded to include Detroit, Michigan, Atlanta, Georgia, sites across West Virginia, and portions of southern Ohio. Currently, more than 60 community pharmacies have joined the study to offer their patients access to these screenings.

Recent advances in the treatment of HCV have made it a curable disease, resulting in an even greater need to detect and treat patients early. Additionally the treatment of HIV has advanced to a point where patients are able to live full lives with the diagnosis if they start treatment early. Through providing more opportunities and locations for patients to receive this screening, a large impact may be seen on these two disease states.

To learn more about our work, visit nacdsfoundation.org.

HEALTH CARE MODELS EMERGING



NACDS FOUNDATION PROJECTS



Goal:

To learn if patient health is improved by introducing medication management into innovative health care models, such as medical homes and accountable care organizations.

Timeline:

2012 to 2015

Study Locations:

North Dakota, Iowa & Nebraska

Research Team:

Duke University School of Medicine

University of Iowa

University of Nebraska Medical Center

OVERVIEW

Now more than ever, groups of health professionals are coming together to deliver coordinated care to their patients through emerging health care models, such as Accountable Care Organizations (ACOs) and Patient-Centered Medical Homes (PCMHs). We set out to discover what might happen if medication management became an integral part of this team-based care approach. Would patient health improve? Would healthcare system costs go down?

NACDS FOUNDATION RESEARCH

Emerging Health Care Models

The NACDS Foundation sponsored three studies involving community settings in the Midwest to evaluate the delivery of medication management within novel, patient-centered healthcare models.

The Team Approach to Medication Management

In Nebraska, researchers examined the integration of the community pharmacist as another healthcare provider into a PCMH care team in order to make a positive outcome to a patient's overall health. The study findings revealed that in patients who experienced additional access to care, more frequent blood pressure monitoring and education, a decline was seen in emergency room and unscheduled clinic visits.

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Research Team continued:

North Dakota State University

Community Partners:

Blue Cross and Blue Shield of Nebraska

Blue Cross and Blue Shield of North Dakota

Iowa Pharmacy Association

Kearney Clinic, Nebraska

MediQHome, North Dakota

OutcomesMTM, Iowa and Nebraska

The Community Pharmacy Foundation

Thrifty White Pharmacy

Trinity Regional Medical Center, Iowa

UnityPoint Clinic, Iowa

UnityPoint Health, Iowa

Walgreens

Coordinating Adherence to Medication Study: North Dakota

In a separate study in North Dakota, healthcare system costs dropped significantly in patients who took their medications as directed and were managed in a medical home setting. In this study, the system costs were measured in terms of insurance payments to hospitals. Specifically, there were lower system costs from in-patient hospitalization when patients were seen by healthcare teams that provided medication management services and were successful in enabling patients to correctly take their medications as prescribed, such as beta-blockers, calcium channel blockers, diuretics (all medications used for high blood pressure and/or heart failure) or anti-diabetic medications.

Empowering Medication Management Providers

This study evaluated the integration of community pharmacists into an ACO healthcare team in the state of Iowa. These pharmacists were empowered to perform a variety of services, such as conducting comprehensive reviews of a patient's medication list, resolving medication-related problems like interactions and ineffective treatments, intervening to ensure patients were taking their medications correctly and recommending more cost-effective treatment. The findings of the study revealed that the integration of medication management services by community pharmacy in a rural "Pioneer" ACO was associated with lower hospitalization rates and costs of care over time.

To learn more about our work, visit nacdsfoundation.org.

CARE FOR MINOR AILMENTS



NACDS FOUNDATION PROJECTS



Goal:

To evaluate an innovative care delivery model that can provide timely access to assessment and initiation of treatment in a narrow set of minor ailments in community-based settings.

Timeline:

2015 to 2017

Study Location:

Washington

Research Team:

Washington State
University

OVERVIEW

Patients often turn to the most accessible healthcare providers for minor ailments, such as allergic reactions or cuts and scrapes. The provider settings can range from urgent care centers, to emergency rooms, to physicians' offices or community pharmacies. Technology for many lab tests has advanced to the point where both assessment and treatment can take place all in one visit. That led the Foundation to the following questions: What would happen to patient outcomes if a narrow set of common minor ailments were treated in an accessible setting? What benefits might there be for patients, and for the healthcare system overall?

NACDS FOUNDATION RESEARCH

Increase Access to Care for a Narrow Set of Minor Ailments (ongoing)

This NACDS Foundation project is studying the quality of care, time to treatment and cost for several minor ailments in community pharmacies as compared to other healthcare settings. The study is built on the idea that patients need, and will continue to seek affordable, accessible, high quality care. This innovative care model seeks to better examine and understand healthcare settings that offer accessible and timely treatment for a narrow set of minor ailments.

Patients enrolled in the study are assessed and receive therapy for minor ailments in more than 30 community pharmacies across Washington under physician-pharmacist collaborative practice agreements.

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CARE FOR MINOR AILMENTS



NACDS FOUNDATION PROJECTS

Community Partners:

The Bartell Drug
Company

Costco Wholesale dba
Costco Pharmacies

Fred Meyer, Inc.

Rosauers
Supermarkets, Inc.

Yoke's Fresh Market
Pharmacy

Premiera Blue Cross

Listed below, a selection of the 20 minor ailments included in the study:

- Bronchospasm (tightening of the airways), wheezing, shortness of breath from asthma or COPD
- Eye or nasal seasonal allergy symptoms
- Urinary tract infections
- Anaphylactic allergic reactions (patients who stop breathing)
- Lacerations and abrasions (minor cuts and scrapes)
- Nausea and vomiting
- Wound infections from burns
- Migraine headaches
- Lack of fluoride for oral health

Researchers are evaluating quality of care and frequency of follow-up care for the same condition within 30 days.

To learn more about our work, visit nacdsfoundation.org.



Goal:

To evaluate and educate community healthcare providers on the proper techniques and applications to advance patient care in a subset of personalized medicine known as “pharmacogenomics.”

Timeline:

2014 to 2016

Study Location:

Indiana

Research Partner:

Manchester University
College of Pharmacy

Community Partner:

RxGenomix

OVERVIEW

Personalized medicine is about ensuring that each patient receives medication that is right and effective for them by identifying responders and non-responders for targeted therapies. One way to achieve personalized medication is through the use of pharmacogenomics, the science that allows us to predict a response to drugs based on an individual’s genetic makeup. This vast, new frontier in medicine holds the potential to make medications better for patients and advance public health. With more than 360 million prescriptions written each year for medications that may be impacted by genetic factors, we set out to see if patient health could be improved in this emerging field by bringing it closer to home. What if genetic testing and corresponding pharmacogenomics counseling was provided in the patient’s own community.

NACDS FOUNDATION RESEARCH

Personalized Medicine (ongoing)

The small pilot study is built on the rise of personalized medicine as a mainstream component of patient care. The amount of medications that could be affected by patients’ genes is only expected to increase as the US Food and Drug Administration and pharmaceutical companies work to build personalized medicine into drug development.

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PERSONALIZED MEDICINE



NACDS FOUNDATION PROJECTS

This pilot program focuses on the potential to improve health outcomes by enabling healthcare workers to understand and provide pharmacogenomics services in 16-20 community pharmacies. Included in the study design is determining the right training to offer as well as interpreting genetic tests through the collection of patient samples and helping patients achieve the best results from their care through counseling and collaboration with prescribers.

Once the pharmacogenomics data has been gathered, a prescriber and the community pharmacist can work together to determine if a certain medication or dose is right for a patient. For example, if a patient's information reveals that the patient is a slow metabolizer of a certain drug, an adjustment of the dose of that medication can be made to avoid potentially serious adverse events.

This study holds promise to support additional discovery into how personalized care can become incorporated into quality patient care nationwide.

To learn more about our work, visit nacdsfoundation.org.

TRANSITIONS OF CARE



NACDS FOUNDATION PROJECTS



Goal:

To determine if the number of hospital readmissions can be reduced by using a team approach and warm hand-offs during the hospital discharge process.

Timeline:

2014 to 2017

Study Locations:

Mississippi, Ohio & Pennsylvania

Research Team:

University of Mississippi

University of Cincinnati

Geisinger Center for Health Research

OVERVIEW

When patients with medical problems move from one healthcare setting to another, such as from a hospital back into the patient's home, the coordination is a critically important "transition of care." According to the Centers for Medicare and Medicaid Services (CMS), nearly one in five Medicare patients who leave the hospital — approximately 2.6 million seniors — return within 30 days, at a cost of over \$26 billion every year. Because medication mismanagement is a major factor driving readmissions, we set out to determine whether bridging care management could be improved between the hospital and the patient's neighborhood.

NACDS FOUNDATION RESEARCH

Transitions of Care (ongoing)

To reduce hospital readmission, hospitals have traditionally focused on facility systems, such as quality of care and reduction of costs during the patient's transfer from the hospital to a home care setting. However, evidence has shown that multiple factors along the care continuum impact the patient's likelihood of being readmitted to the hospital, and it is critical for hospitals and their downstream partners, such as community pharmacies, to address key drivers of readmissions.

This research is built on the knowledge that medication discrepancies and mistakes can lead to clinical adverse events and re-hospitalization.

The NACDS Foundation is supporting research projects in three locations, which are scheduled to conclude patient enrollment late 2016 or early 2017.

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TRANSITIONS OF CARE



NACDS FOUNDATION PROJECTS

Health System Partners:

The Jewish Hospital –
Mercy Health

University of
Mississippi Medical
Center

UC Health - Greater
Cincinnati's Academic
Health System

Community Partners:

CareSite Pharmacy

Harrold's Pharmacy, Inc.

The Kroger Company

Medicine Shoppe

Walgreen Co.

Weis Markets, Inc.

Project I: In rural Pennsylvania, a team is studying the effect of a collaborative healthcare team to reduce hospitalization readmission rates in a high-risk patient population.

Project II: In the greater Cincinnati, Ohio area, investigators are exploring the improvement of care transitions through innovative Medication Therapy Management (MTM) in an effort to reduce hospital readmissions.

Project III: In Mississippi, researchers are studying the impact on patient health of community pharmacist-provided medication management on hospital readmissions.

Underscoring the need for this type of research, the Patient Protection and Affordable Care Act includes specific reforms, such as incentives and penalties to motivate providers to prevent hospital readmissions and making sure Medicare and Medicaid payments reward excellent in-patient care.

To learn more about our work, visit nacdsfoundation.org.

NON-ADHERENCE MEDICATION



NACDS FOUNDATION PROJECTS



Goal:

To explore ways to measure when patients fail to pick up a newly initiated prescription and to study innovative interventions designed to improve adherence rates.

Timeline:

2011 to 2013

Study Location:

Nationwide

Research Team:

Harvard University

University of
Mississippi

Wilkes University

OVERVIEW

Patients suffering from chronic illnesses often fail to take their medicines as prescribed. The result is an imposing public health problem. Estimates of avoidable costs due to non-adherence are as high as \$290 billion a year in the US, and can lead to hospitalization, disability and death. In the past, studies have examined ways to improve adherence, but little data has been generated on what's known as "primary medication non-adherence" (PMN). This phenomenon describes patients who receive new prescriptions but fail to ever fill them for the first time. This research project explored both how to measure and characterize PMN and studied a novel intervention to improve the rate of "first-fill."

NACDS FOUNDATION RESEARCH

Interventions for Cardiovascular Medications

This study evaluated innovative interventions designed to reduce PMN for cardiovascular medications. The study found that personalized intervention by phone to patients had a more profound effect than automated calls, increasing the number of new medications acquired by patients by almost five percent (5%). Specifically, the study showed that these live interventions decreased PMN in antihypertensive (blood pressure lowering drugs) but did not affect antihyperlipidemics (cholesterol lowering drugs) or other cardiovascular medication classes.

(continued on reverse)

NON-ADHERENCE MEDICATION



NACDS FOUNDATION PROJECTS

Community Partners:

CVS Health

Geisinger Center for
Health Research

Pharmacy Quality
Alliance

Sutter Health

The Kroger Company

Mississippi: Store and Prescription Characteristics

Our study in Mississippi was among the first to use the Pharmacy Quality Alliance's PMN proposed measure, a way of describing the number of prescriptions that are classified as PMN in community pharmacies, and to measure a rate of PMN using store-level dispensing data. The study found that more work needed to be done when the patient was younger and/or if the patient was filling multiple medications at the same time. Additionally, the study successfully demonstrated that pharmacy transaction data can be used to calculate PMN rates for electronic prescriptions when using the Pharmacy Quality Alliance's quality measure. Lastly, the study confirmed what several studies had previously indicated, that PMN is a prevalent issue and in order to make a meaningful impact on public health, PMN rates must be addressed and lowered.

Pennsylvania: A Randomized Telephone Intervention Trial

A subsequent study in Pennsylvania investigated a population of patients who had not picked up new prescriptions after two automated calls and one live call from the pharmacy. This study examined whether additional nurse-directed interactions with patients would increase the "first fill." In the study, nurses from the patient's care team reached out to remind the patient that they had a new medication to begin. The study found that patients who still did not pick up their medications after the initial automated and live calls were not likely to fill with this additional outreach by a nurse. The study team concluded that reconnecting the patient to their prescriber may be needed to increase adherence.

To learn more about our work, visit nacdsfoundation.org.

POINT-OF-CARE TESTING



NACDS FOUNDATION PROJECTS



Goal:

To discover the efficiencies and public health benefits of rapid, pharmacy-based testing for illnesses; specifically influenza and group A streptococcus (strep throat).

Timeline:

2012 to 2016

Study Location:

Multiple States (10)

Research Team:

University of Nebraska
Medical Center

Ferris State University

Community Partners:

Network of community
pharmacies

Several state and local
health departments

OVERVIEW

All too often, symptoms of a cold or flu strike on weekends, evenings and holidays, requiring patients to resort to expensive medical care. Additionally, patients prefer speed of care and accessibility in times of common illnesses. We wanted to know what would result from testing and treating patients at an accessible and affordable health care setting. This form of testing falls under the category of “point-of-care testing,” (POCT which simply means testing while the patient is right in front of you rather than sending the patient’s specimen to a lab). Besides potential efficiencies, would patient health improve? Could there be additional benefits to the healthcare system at large?

NACDS FOUNDATION RESEARCH

Point-of-Care Testing

In 2012, the NACDS Foundation launched a retrospective study to explore the health benefits of POCT. This study is built upon CDC’s prior research which analyzed influenza-like illness claims over a two-year period and found that POCT could result in a reduction in the use of anti-viral medication. The study was also designed to respond to CDC’s call for better antibiotic stewardship to combat antibiotic resistance. These findings paved the way for our research that would explore the potential for POCT in community-based settings.

Flu and Strep Pilot Program

From 2013-2014, the Foundation, with its academic and healthcare partners, launched a pilot program to test and treat patients in 55 community pharmacies in Michigan, Minnesota and Nebraska.

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POINT-OF-CARE TESTING



NACDS FOUNDATION PROJECTS

This pilot employed a new patient care model where pharmacists worked collaboratively with physicians. In the event of a positive test, prescription medication could be dispensed immediately. In more complex cases, patients were referred to appropriate care outside the pharmacy setting.

The pilot findings: A significant increase in access to care occurred in patients who tested positive for the flu, with 38% of patients seen outside of business hours. Further, more than one third of patients who were seen in the pilot did not have a primary care provider – another factor in access to care. Additionally, there was a theoretical 30% reduction in improper antibiotic use since this process has patients only starting antivirals or antibiotics if they test positive. Past articles have shown that 30% of patients are prescribed antibiotics for the flu, even though antibiotics have no effect on the influenza virus. This potential reduction in antibiotic overuse could contribute to the ongoing efforts to address this issue at the national level.

Large-Scale Retrospective Flu and Strep Study

To further the results of the pilot program, NACDS Foundation has launched a larger-scale research project to further examine how this innovative care delivery model for flu and strep can improve patient health and healthcare usage. The study has expanded to 10 states with more than 100 pharmacies actively participating.

To learn more about our work, visit nacdsfoundation.org.