

Keeping the Promise of Electronic Health Records

Executive Summary, 6th Report





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TO THE COMMUNITY

I am pleased to submit *Better Health's* sixth Community Health Checkup since June 2008. The full clinical practice-level report, as well as selected region-wide data that we have not included in this Executive Summary, can be found on our web site, betterhealthcleveland.org. Other recent features added to our site include presentations from webinars we are producing to inform our clinical colleagues about incentives to adopt and use electronic health records (EHRs) meaningfully, and community-based activities to encourage the public to adopt healthier eating habits. For those looking for a nearby practice, our "Find a Practice Near You" application identifies and enables you to find out more about *Better Health's* primary care partners from Avon to Willoughby Hills and many places in between. We encourage you to browse the site and give us feedback.

In this Checkup, we recognize and celebrate the recent adoption of EHR by several *Better Health* partners that have been reporting their achievement using information from their paper-based records. We also report the "EHR effect" on achievement of *Better Health's* quality standards, which demonstrates that virtually everyone benefits from care using EHR technology that fosters teamwork and adherence to evidence-based standards. Support for EHR adoption is in full throttle, thanks to federal financial incentives and efforts by the Ohio Health Information Partnership and its northeast Ohio partner, the Case Western Reserve University Regional Extension Center. We call for everyone to get on board!

Better Health's vision is to help make Greater Cleveland a healthier place to live and a better place to do business. We will continue to play our part and encourage others to join us. This year has had an exciting start, with programmatic support from state and local sources, national and regional health plans and employers, and recent recognition of *Better Health's* non-profit corporate status by the Internal Revenue Service. Our collective efforts can help bring the vision to reality.

Many thanks to all who continue to contribute to *Better Health's* efforts.

Randall D. Cebul, M.D., Director
Better Health Greater Cleveland

INTRODUCTION

The promise of health information technology to significantly contribute to better care and health for patients is playing out across Greater Cleveland, in our urban community health centers as well as our largest health systems. *Better Health* and the partners that comprise it begin 2011 poised to use health IT to improve both health outcomes and the value of health care region-wide.

Today, as we publish our sixth Community Health Checkup, electronic health records (EHRs) are front and center in initiatives to transform health care delivery: team-based care models in primary care; payment reform; and “meaningful use” of electronic health records and information exchange to coordinate care and to improve its quality.

This Community Health Checkup features four new adopters of electronic health records (EHRs), all of which are *Better Health* partners whose health centers serve many of the region’s most vulnerable residents. We also describe the progress we’ve made to secure *Better Health*’s future and expand its reach to new partners; our latest programs to bring national perspective to our local initiatives; and new partnerships in state and regional efforts to equip providers with technological tools and the knowledge to use them to achieve meaningful change. Saturating the market with health IT-capable providers will permit our coalition to more broadly improve health, and to address lingering gaps throughout our community.

Last, we present the regional results of our partners’ achievement on care and outcomes of their patients with diabetes. Results for heart failure and high blood pressure can be seen at betterhealthcleveland.org, along with practice-level results on all three conditions.

EXPANDING THE BASE OF MEANINGFUL USERS OF EHRs

Lessons Learned

All three Federally Qualified Health Centers (FQHCs) in Cuyahoga County have or are in the process of implementing EHRs, taking advantage of federal stimulus dollars to help make this investment. The community health center at Cleveland Clinic’s Huron Hospital also began to use MyPractice Community. Each center showcases the strategic and operational decisions that accompany adoption and meaningful use of EHRs, their exciting early success and some of the lessons they learned.

NEON

In the experience of Walter Clark, Jr., M.D., buying an electronic health record system is like buying a box of oatmeal: “You can’t eat it right out of the box; and it is only as good as you make it.”

BETTER HEALTH PARTNERS

Founding Partners

The MetroHealth System, Robert Wood Johnson Foundation grantee
The Center for Community Solutions
Health Action Council Ohio

Primary Care Partners

Care Alliance Health Center
Case Western Reserve University
Practice-Based Research Network
Cleveland Clinic, Main Campus
and Family Health Centers
Huron Hospital, Community Health Clinic
Kaiser Permanente – Ohio
MetroHealth, Main Campus and
Center for Community Health
Neighborhood Family Practice
North Coast Health Ministry
Northeast Ohio Neighborhood Health Services
(NEON)
University Hospitals Family Medicine

Hospital Partners

Cleveland Clinic Health System Hospitals
Cleveland Clinic Main Campus
Euclid
Fairview
Hillcrest
Huron
Lakewood
Lutheran
Marymount
South Pointe
MetroHealth Medical Center

Employers and Health Plan Partners

CareSource
Health Action Council Ohio
Ohio Medicaid
Kaiser Health Plan
Medical Mutual of Ohio
United Healthcare

Organizations and Agencies

Academy of Medicine of Cleveland
& Northern Ohio
Center for Health Affairs
Cleveland Department of Public Health
Cuyahoga County Board of Health
CWRU Regional Extension Center
CWRU Clinical Translational Science Collaborative
Diabetes Association of Greater Cleveland
NetWellness.org
Ohio Department of Health
OneCommunity
SMART Center, Case Western Reserve University Bolton
School of Nursing

Other Valued Supporters

Robert Wood Johnson Foundation
Mt. Sinai Health Care Foundation
The MetroHealth System
Medical Mutual of Ohio
The Cleveland Foundation
Saint Luke’s Foundation
The Bruening Foundation
The Ohio Health Care Coverage & Quality Council
Wellpoint Foundation
Health Action Council Ohio
The Center for Community Solutions
OneCommunity



NEON's Clark

Clark is medical director of NEON (Northeast Ohio Neighborhood Health Services Inc., neonhealth.org), the region's largest FQHC and the first to convert its patients' clinical charts to electronic files. With the big job of implementation behind him, Clark has begun to add new functions to NEON's EHR.

Clark and the NEON management team chose NextGen EHR for its "template-based" design, which supports clinical decision-making, task completion and documentation. Menus of choices guide providers' documentation of problems, observations and treatment, capturing structured data that NEON can query for quality improvement and use to generate narrative summaries for progress notes and referrals.

NEON took its first steps with NextGen in 2008 at its registration desk and billing department, reconfiguring its appointment system and launching a new practice management system. It went live on Election Day 2008, when registration staff began entering patients' current demographic information during the visit rather than relying on the legacy practice management system.

Clark resisted vendors' push for a "big bang" approach to implementation on the clinical side, opting instead for what he calls "EHR-lite." Providers first got their feet wet in NextGen by electronically coding their patient encounters and ordering procedures. Providers were trained by Clark in small groups, spending three days on computers and simulations with fictional patients. Actual patients' electronic records were populated in advance with problem lists, allergies and scanned documents, and full patient charting began with the start of its six-week rolling 'go live' process in July 2009. Providers entered pertinent clinical data at each patient encounter. Paper charts were made available for at least three visits to allow them either to input clinical information from the paper records or mark documents to be scanned into NextGen.

Kudos for NEON in 2009-10

- Outstanding achievement in keeping BMI < 30 for Medicaid patients.
- Among a small # of practices whose diabetes patients' smoking and obesity rates substantially declined.

NEON now has a full year's worth of electronic data and is using its EHR to build registries of patients with diabetes, hypertension, and asthma to improve management of these chronic conditions. Clark has enhanced the new system to align it with other NEON goals for quality, efficiency and safety. Examples include a database he designed to give providers summaries of ultrasound results and a report to summarize physicians' performance on the timely review of laboratory results.

Clark's advice for others ready to take the plunge into EHR: "Make certain you eat, drink and sleep the system. Understand the system fully and think about what you want to do with it."

Care Alliance Health Center

Providing the highest quality of care to all Care Alliance (carealliance.org) patients presents unique challenges. As a FQHC that primarily serves those who live in public housing or are homeless, Care Alliance providers see patients in a variety of locations – including remote locations on the streets of Cleveland. Ensuring that outreach nurses could access EHRs of homeless patients was a technology issue that had to be addressed.

Care Alliance selected OCHIN in August 2010 and plans to 'go live' April 12. Connectivity is complete, new hardware has arrived, and staff training is underway. Care Alliance mapped its current workflows to help decide how to optimize patient care using the new electronic records and to identify their customization needs. "To make an intervention, you have to understand your current system," said Francis Afram-Gyening, Chief Executive Officer.



Care Alliance's Afram-Gyening

OCHIN is a leading health IT organization serving community health centers based in Portland, OR, that uses *EpicCare*. For Care Alliance, the advantages of OCHIN are its experience with and understanding of community health centers and its Epic platform, the records system used by important clinical partners, including The MetroHealth System and Cleveland Clinic. Care Alliance also recognized the benefit of Neighborhood Family Practice going

Kudos for Care Alliance in 2009-10

- Outstanding overall achievement in care of high blood pressure.
- Particularly strong achievement in high blood pressure care among Medicaid and Uninsured patients.

live with OCHIN first. It could learn from bumps in the road encountered by a fellow FQHC using *EpicCare*.

OCHIN will transfer basic identification information, and registration staff will update demographics at the time of patient visits to one of their three centers. Care Alliance has worked for months to update patients' medication lists, so these are ready to populate the EHR.

Despite the myriad of technical details, Care Alliance also is attending to the challenge of managing the stress of change on its staff. Staff champions who are part of a multidisciplinary implementation team help keep the focus on the *benefits* of the big change for their patients.

As for taking these benefits to the streets of Cleveland, that problem is nearly resolved. Epic has built apps for the EHR system on iPhone and iPad. AT&T staff accompanied Care Alliance outreach nurses to check remote recesses of Cleveland's bridges and other make-shift shelters to ensure that its signals reached where nurses go. They did, and work is underway to test and implement the Epic apps.



A staff training session at Care Alliance, which takes its EHR live in April.

Neighborhood Family Practice

Neighborhood Family Practice (NFP, nfpmedcenter.org) turned on its OCHIN *EpicCare* system November 2, 2010, after surmounting what is perhaps primary care practices' biggest barrier to adoption: money. "The decisions around what system to select and how to implement the system are huge," said Jean Therrien, Executive Director. "I call them the 'bet-the-farm' decisions."

Therrien said failed implementation and/or inadequate financial resources could bankrupt a practice. NFP was concerned about securing dollars for hardware and software, but also the "lost revenue" that comes with decreased productivity due to training and implementation. NFP, a FQHC with over a dozen providers at two locations on Cleveland's west side, was able to tap federal stimulus dollars, two local foundations and loans to finance the implementation. Some of the loans will be repaid with Medicaid 'meaningful use' incentive payments.



Dan Gauntner, Certified Nurse Practitioner and Director of Operations at NFP, enters information on a patient who sits off camera. The video monitor sits atop an arm that can be easily moved up and down, and side to side, to accommodate providers' preferences.

After months of preparation and training, NFP chose a “big bang” implementation, converting its practice management and clinical systems at once. Time was invested in planning practice redesign and on change management training for everyone. A third of the NFP staff were trained as ‘super users,’ having the opportunity to see more of the full system prior to going live. Key records were scanned and blocks of time were scheduled for clinical staff to begin copying clinical data from paper charts to the new system, starting with diagnoses, allergies, problem lists and medications. NFP contracted with extra nurses to abstract charts of patients with multiple medical problems. “One of the big lessons for us was trying to get the key things into the system that needed to be brought forward before the first visit with the patient,” Therrien said.

NFP planned for reduced productivity in the days after it went live, cutting visit schedules in half for the first two weeks and gradually adding more patients to the schedules over a 10-week period. One initial concern – that having front-desk staff populate insurance and demographic information at intake would slow things down – didn’t happen. The biggest adjustment has been for clinical providers (doctors, nurse practitioners and nurses), who had to learn how to document the visit electronically while communicating with their patients. The cash flow impact has been huge, Therrien said, but NFP has had a successful transition thanks to the additional financial resources.

Huron Hospital Community Health Clinic

Huron Hospital’s Community Health Clinic’s 2008 transition to MyPractice Community, an Epic product, was a bit of a challenge at first. Medical residents were anxious to try the EHR, while attending physicians were concerned about the potential loss of patient information. “The physicians and staff did not see the advantage of the electronic medical record,” said Christy Barnes, Director of Quality Management.

That all changed after executive administrators at Huron, a Cleveland Clinic facility, made the EHR system a top priority and provided the resources that clinical staff needed to successfully use the new tool. With help from its IT

Kudos for Neighborhood Family Practice in 2009-10

- Outstanding improvement in diabetes outcomes over the past three years.
- Excellent achievement in diabetes outcomes among Medicaid and Uninsured patients.
- Particularly strong achievement in high blood pressure care for the Uninsured.

Kudos for Huron Hospital in 2009-10:

- Outstanding improvement in diabetes care and outcomes over the past three years.
- Particularly strong improvement in diabetes outcomes of uninsured patients.

CWRU Regional Extension Center (REC)

The REC serves "priority primary care providers" in Cuyahoga, Lorain, Lake, Geauga and Ashtabula counties, providing expertise to support providers' efforts to become meaningful users of certified EHR technology. As part of a state and national network of regional extension centers, the Case Western Reserve University REC has direct access to a pipeline of key information on health IT and meaningful EHR use.

Working in cooperation with the Ohio Health Information Partnership (OHIP), the CWRU REC is one of eight in Ohio designated as having the experience and capacity necessary to assist health care providers with the task of modernizing their practices with certified EHRs.

Learn more at <http://casemed.case.edu/cwru-rec>

department, Huron was able to pull information from narrative progress notes to build a 'Snapshot' screen that neatly displayed tests and procedures due for scheduled patients. It then built new workflows to enable medical assistants to check the Snapshot and cue physicians to consider the "to-do" list. Clinicians were trained to add key elements to the electronic record as structured data and to use Best Practice Alerts to prompt best practices during patient visits.

Barnes' advice: Make sure training is adequate and enlist top leadership to encourage clinicians to embrace the changes. "It's only as good as the training and the buy-in," Barnes said.

REACHING OUT TO NEW CLINICAL PARTNERS

Better Health has launched new efforts to reach practices that are newly wired and to connect those *getting* wired with their peers and information they need to successfully use EHR to improve quality and coordinate care. In addition, our new programs aim to help primary care practices stay current on evolving details of federal incentives available to many practices for EHR adoption and its 'meaningful use.'

On November 10th, Richard Baron, M.D., general internist and past president of the American Board of Internal Medicine, headlined a program on EHR adoption with a talk entitled "*Bringing the Joy Back to Primary Care*". Baron shared the ups, downs and benefits that his small Philadelphia practice experienced in its EHR implementation. Better outcomes, greater physician satisfaction and grateful patients are among the benefits, he said. The Academy of Medicine of Cleveland & Northern Ohio and the CWRU Regional Extension Center co-hosted the event, which also featured talks on incentive programs and regional services available to practices.



Baron



Joe Peter, Director of the CWRU Regional Extension Center, explains how the REC can help providers adopt EHR

Better Health's seventh Learning Collaborative Summit on October 1, 2010, drew 150 health professionals to the idyllic setting of Cleveland Clinic's Lyndhurst facility. Participants learned from each other in small groups and from national speakers, including R. James Dudl, M.D., clinical leader for national diabetes care at Kaiser Permanente, a national leader in using its *Epic* EHR to manage patient populations. The next Summit will be held Friday, March 11. Ronald A. Paulus, M.D., M.B.A., past Chief Innovation and Technology Officer at Geisinger Health System and Current CEO at Mission Health System in Asheville, NC, will give a keynote address on the "secret sauce" in creating effective Patient Centered Medical Homes; Dr. Edward Wagner, health care visionary and creator of the Chronic Care Model, will share his knowledge on how primary care practices are best designed to coordinate care and engage their patients.



Kaiser's Dudl



Top: Team work at the Summit

Bottom: A Learning Exchange Session

C. Martin Harris, M.D., Chief Information Officer and Chairman of the Information Technology Division at Cleveland Clinic, provided an up-to-the-minute overview of the federal government's Meaningful Use regulations in a live webinar presented at MetroHealth on January 10. Harris sits on the national committee setting health IT standards and the Measures Taskforce that works with the Meaningful Use Committee, and he shared significant developments that occurred since he spoke at the Learning Collaborative Summit on October 1. With the official start of Meaningful Use on January 1, Harris stirred a new sense of urgency. "The gun has fired, and the race has started," said Harris, whose talk is available at betterhealthcleveland.org "It's time to become very knowledgeable."

"It is very helpful to network and learn best practices from other organizations."

— Paula Hadley, RNC, BS,
Kaiser Permanente



Cleveland Clinic's Harris and MetroHealth's Kaelber

Harris' talk is the first in a series of webinars that will extend the reach of *Better Health's* efforts to support primary care professionals. The next webinar in *Better Health's* series will be webcast from St. Vincent Charity Hospital on February 24 at 5:30 p.m. David Kaelber, M.D., Ph.D., M.P.H., Chief Medical Informatics Officer at The MetroHealth System, will moderate a panel of new EHR adopters.

EXPANDING OUR VISION AND BASE OF REGIONAL STAKEHOLDERS

With its application for the third round of funding from the Robert Wood Johnson Foundation's *Aligning Forces for Quality* program, *Better Health* expands its vision, as well as its reach to stakeholders.

Our vision is to help make Greater Cleveland a healthier place to live and a better place to do business. We believe we can lead Northeast Ohio in becoming an accountable health care community by improving the health and value of health care, and eliminating disparities in health and health care, throughout the region.

We have the tools and the will to achieve this ambitious vision. Our collaborative is strengthening its infrastructure. We are seizing new opportunities presented by the acceleration and spread of health IT capabilities. And we're at the forefront in building new team-based care models in primary care, as well as the multi-payer payment reform that will enable practices to successfully implement them.

Better Health is playing leadership roles in federally-supported state and local activities, including the Ohio Health Care Coverage and Quality Council and CWRU Regional Extension Center (REC), to expand the universe of EHR users and team-based primary care homes. We anticipate adding new clinical partners who will recognize their personal interests, as well as their patients' interests, in collaborating for quality improvement, "meaningful use" incentive payments, and more effective models of primary care delivery. Collectively,

the “aligning forces” of these national priorities are enabling *Better Health* to transition from a fledgling grant-funded program to a broadly supported multi-stakeholder community asset.

Building a Strong Infrastructure

On December 8, 2010, we were pleased to receive the IRS determination of our non-profit status under Sec. 501(c)(3) of the Revenue Code, an important foundational step in sustaining our alliance. We are working to expand our Board of Directors, form an External Advisory Committee and implement other governance measures necessary to advance our collaborative’s mission. We are in the process of hiring a business development director to lead our efforts to grow our base of members and sponsors, pursue grant opportunities that align with our work, and identify new opportunities of value to our stakeholders and community.

Late last year, we were able to obtain new support for this operational work in 2011 from The Cleveland Foundation and the Saint Luke’s Foundation. A grant from The Bruening Foundation will support memberships of the FQHCs in *Better Health*, so they can take full advantage of our expanded services and programs. We are grateful for their financial support, as well as ongoing support from the Mt. Sinai Health Care Foundation, Health Action Council Ohio and Medical Mutual of Ohio. Our clinical partners, most importantly including The MetroHealth System, which serves as *Better Health’s* home base, have been both inspirational and constant in their commitments to our vision and operations. See page 1 for a list of our partners.

Commitment to Multi-Payer Patient-Centered Medical Home

Achieving our ambitious vision will require all players of our multi-stakeholder collaborative to play a part. With re-tooled delivery models in primary care, and a big assist from EHRs and health information exchange, we are confident our partners can reduce their patients’ Emergency Room visits, hospitalizations and re-hospitalizations.

Implementing approaches to care like the Patient Centered Medical Home (PCMH), which shows promise in reducing the costs of care, requires a new payment model. Current payment systems provide incentives for treating illness, not optimizing health. Reimbursements for primary care don’t cover the costs of care teams that help patients manage their medical problems, interact more efficiently and effectively with their health care providers or permit providers to better coordinate patient care. Providers should be motivated by incentives not only to keep their patients healthy, but also to minimize the avoidable use of Emergency Departments (EDs) and other expensive hospital resources. Purchasers of health care – the government, employers, health plans, and consumers – should “pay for what they want” out of health care services.

Better Health partners have committed to accelerating these changes in health care delivery and to measuring their impact in order to inform our efforts and gauge our progress. New and evolving capabilities to enable providers to share patients’ medical information across health systems will help primary care

Patient Centered Medical Home (PCMH)

The PCMH approach provides comprehensive primary care to adults, youth and children; broadens access to primary care and enhances care coordination. Clinicians practicing in the highest level of PCMH are:

- Responsible and accountable for ongoing care;
- Accessible to patients on short notice;
- Able to consult with patients by email and phone;
- Using the latest health IT and evidence-based medical approaches;
- Doing regular check-ups to identify looming health crises, and acting to prevent costly emergencies;
- Advising patients on preventive care based on their risk factors;
- Helping patients make healthy lifestyle decisions; and
- Coordinating care and ensuring that it is relevant, necessary and efficient.

To learn more, go to <http://www.pccpcc.net/patient-centered-medical-home>

Aligning Forces for Quality's Hospital Quality Network

The need to be re-hospitalized soon after a hospital stay is expensive and too often could have been avoided with better care in the hospital, follow-up care after discharge and patient education. Nationally, 24.7% patients with heart failure are re-hospitalized within 30 days. The average re-hospitalization rate for hospitals in Cuyahoga County is higher, at 26.1%, according to Medicare's HospitalCompare data.

The 11 Cleveland-area hospitals participating in the Reducing Readmissions program receive expert consultation, coaching and tools to help them reduce 30-day readmission rates after heart failure hospitalization by at least 20% by March 2012, while achieving compliance with recommended therapies.

Euclid Hospital

Fairview Hospital

Hillcrest Hospital

Huron Road Hospital

Lakewood Hospital

Lutheran Hospital

Marymount Hospital

Medina Hospital

South Pointe Hospital

St. Vincent Charity Medical Center

The MetroHealth System

providers more effectively manage their patients' care for diabetes, heart failure and hypertension in outpatient settings and to know when they are hospitalized. Our practices' success in achieving this goal will be measured using new metrics that will identify ED visits, hospitalizations and re-hospitalizations, all of which are economically important and clinically relevant to successful management of chronic conditions. Re-hospitalizations for heart failure can be found at betterhealthcleveland.org, as well as on Hospital Compare, the web site of the Centers for Medicare & Medicaid Services. We expect to report on ED visits and hospitalizations beginning next year.

We are pleased that all 10 *Better Health* hospital partners participate in the *Aligning Forces for Quality (AF4Q) Hospital Quality Network to Reduce Readmissions*, a national program available exclusively to hospitals in the 17 regions that are part of The Robert Wood Johnson Foundation's AF4Q initiative. These efforts are being coordinated locally with the help of the Center for Health Affairs, which leads our Transitions of Care Committee, supplemented by physician leaders in heart failure and diabetes care.

Serving as convener, *Better Health* has engaged purchasers and multiple payers to support our clinical partners that have EHR in transforming primary care practices into patient-centered medical homes (PCMH). Discussions are underway that would bring increased financial support to practices to coordinate patients' care, with financial gains linked to avoiding unnecessary ED and hospital care.

The Ohio Health Care Coverage and Quality Council, which includes *Better Health's* PCMH initiative as part of its state-wide strategy for primary care homes, also is providing support. Health plans, including the regional market leaders among commercial and Medicaid plans, have committed support through *Better Health* memberships, as well as practice-level support for PCMH-related resources. In a major new initiative, *Better Health* is building a "toolkit" to help EHR-equipped primary care physicians incorporate nationally recognized guidelines for depression screening and treatment for their patients with diabetes, heart failure and hypertension.

With assistance from Princeton, NJ-based Center for Health Care Strategies (CHCS), *Better Health* and Ohio Medicaid are exploring how the new health reform law can advance common goals to improve the care and outcomes of our most complex and costly patients. CHCS is a nonprofit organization that works with state Medicaid and federal health agencies to identify strategic and innovative approaches to higher quality and lower cost. We are fortunate to have their knowledge and experience available through AF4Q.

Better Health supports and coordinates these initiatives in several ways. Our Learning Collaborative Summit and webinar series provide training and knowledge-sharing for our partner primary care practices in their transitions to the PCMH model. Moreover, we recently expanded our capabilities and capacity to provide tailored, on-site coaching to member practices on issues related to health IT, EHR-enabled patient-and population-management tools,

organizational development, quality improvement, and practice operations to achieve PCMH goals.

Recent efforts to directly engage the business community, which pays the lion's share of private health care costs, include an event that featured IBM Corp. Vice President Martin Sepulveda, M.D., on November 1, 2010. Sepulveda spurred IBM's national leadership in supporting the PCMH model, based on analyses of its ability to improve health and reduce costs. We plan to continue our outreach to corporate leaders, along with the many others with a stake in our region's health and economy.



IBM's Sepulveda

REGION-WIDE QUALITY OF CARE AND OUTCOMES IN 2009-10: ACHIEVING THE PROMISE OF ELECTRONIC HEALTH RECORDS (EHRs).

In this Checkup, we celebrate the recent adoption of EHRs by key partners who have been measuring and reporting their achievement against *Better Health's* quality standards using paper-based medical records systems. As shared in their stories, EHR adoption is a consuming and expensive undertaking, one for which returns on investments – both in financial terms and in patient health and well-being – will not be fully captured for years. Benefits in the care and outcomes of these patients will emerge in future Checkups and by support for their efforts through “Meaningful Use” provisions in the federal HITECH Act¹. To achieve federal financial support for Meaningful Use, eligible providers must document their ability to report 15 “core measures” and at least five “optional measures” designed to improve quality of care and health information exchange. Although federal support for Meaningful Use (up to \$63,000 for high-volume Medicaid providers and \$44,000 for those with large numbers of Medicare patients) does not cover the costs of purchasing EHR systems, downtime for provider training, or short-term reductions in provider capacity, our new EHR partners have high long-term expectations for their patients and practices. We think they have made the right decision! In the months ahead, “priority primary care providers” can receive free support for EHR adoption through the new Case Western Reserve University Regional Extension Center (REC), supported

¹ The Health Information Technology for Economic and Clinical Health (HITECH) Act. See Blumenthal D and Tavenner M. The “Meaningful Use” regulation for electronic health records. *New Engl J Med.* 2010; 363 (6): 501-504.



Better Health, the Diabetes Association of Greater Cleveland, Neighborhood Family Practice and Dave's Markets collaborated to produce two afternoon events in January to help west-side consumers start 2011 with healthy eating and get some tips for improving their health care.

At Dave's Mercado location on Ridge Road, dietitians and Spanish translators were on hand to share samples of healthy meals that had Puerto Rican flair (the Plantain Soup and Island Red Beans were awesome!). Shoppers could tour the store with a dietitian, and they took home bags filled with simple recipes and helpful brochures -- in English or Spanish. Dave's contributed gift cards to be raffled, and WEWS-TV NewsChannel 5's *Live On Five* and Fox 8 were there, too, helping to spread the healthful information to their viewers.

by federal funds through the Ohio Health Information Partnership (OHIP). These services include assistance in selecting and contracting with vendors and on Meaningful Use-related issues. Priority providers include Nurse Practitioners (NPs) and other Advanced Practice Nurses (APNs), as well as primary care physicians. Anticipating these federal policies, and recognizing that care for patients with chronic disease is a team activity, *Better Health* now measures and reports the achievement of our practices' NPs and other APNs alongside physicians in general internal medicine, family practice, and medicine-pediatrics. This Checkup is the first to include the achievement of NPs and APNs when they serve in a primary care role for eligible patients with diabetes, high blood pressure, or heart failure.

Other firsts in this Checkup include our report of the number of patients with more than one of our targeted chronic conditions; achievement stratified by our patients' language preferences; and results among our adult patients with diabetes that compare the "EHR effect" (differences in achievement between EHR and paper-based practices) for all of our diabetes quality standards, and across insurance subgroups. These results are highlighted below. While this Summary focuses principally on diabetes, region-wide achievement for patients with high blood pressure and heart failure is reported in detail at betterhealthcleveland.org.

Our Clinical Partners and Their Patients

Table 1, right, summarizes our clinical practice partners and patients by chronic medical conditions (top section) and according to use of EHRs or paper-based medical records for measurement (bottom section). This Checkup reports achievement from July 1, 2009, through June 30, 2010, and is the sixth to report on patients with diabetes, third on patients with heart failure, and second on patients with high blood pressure. Collectively, diabetic and high blood pressure patients are reported by all 48 partner practices of seven health care systems, while heart failure patients are not reported by Huron Hospital or by the paper-based sites.

We see in Table 1 that compared with our patients with high blood pressure or heart failure, our 27,000+ patients with diabetes are younger (average age, 57.8 years), more often non-white (48.1%), and more likely to be either uninsured or have Medicaid as their primary insurance (21.1%). Diabetes patients also are heavier (mean BMI = 34.1) and a bit more likely to be non-smokers (79%) as compared to our patients with high blood pressure. Patients with high blood pressure are noteworthy for their large numbers (107,000) and are more often female (57.8%) than patients with diabetes or heart failure. As compared with our diabetes and high blood pressure patients, patients with heart failure are older (average age, 70.8 years) and much more likely to be insured by Medicare (73.2%).

Our 34 EHR-based practices care for most of our partners' patients with diabetes (90.1%) and high blood pressure (92.7%). As compared with EHR practices, the paper-based practices serve a substantially less advantaged population. Diabetic and high blood pressure patients of the paper practices are generally younger, poorer, more often non-white and more likely to be uninsured or have Medicaid as their primary insurance as compared to their EHR counterparts.

TABLE 1. CHARACTERISTICS OF PATIENTS INCLUDED IN THIS REPORT

	Diabetes		High Blood Pressure		Heart Failure	
# of Patients	27,258		107,241		4,824	
# of Primary Care Practices	48 (7 health systems)		48 (7 health systems)		33 (3 health systems)	
	Better Health Population	Range of Values Across Sites	Better Health Population	Range of Values Across Sites	Better Health Population	Range of Values Across Sites
Insurance (%)						
Medicare	35.1	3 – 47	45.7	3 – 95	73.2	22 – 87
Commercial	43.9	1 – 74	43.1	0 – 62	18.9	1 – 39
Medicaid	8.6	0 – 35	4.5	0 – 32	5.1	0 – 35
Uninsured	12.4	0 – 88	6.7	0 – 90	2.8	0 – 26
Medicaid + Uninsured	21.1	0 – 96	11.2	0 – 97	7.9	0 – 47
Race/Ethnicity (%)						
White	51.9	3 – 97	62.2	2 – 99	63.3	1 – 98
African-American	40.3	1 – 96	33.4	0 – 97	33.4	0 – 97
Hispanic	5.0	0 – 65	2.2	0 – 55	1.9	0 – 45
Other	2.8	0 – 66	2.2	0 – 53	1.4	0 – 33
Non-White	48.1	3 – 97	37.8	1 – 98	36.7	2 – 99
Preferred Language (%)						
English	95.5	32 – 100	97.1	41 – 100	96.0	84 – 100
Spanish	2.5	0 – 58	1.0	0 – 52	1.2	0 – 12
Other Languages	2.0	0 – 66	1.8	0 – 58	2.8	0 – 10
Average Age	57.8	50 – 61	62.9	52 – 68	70.8	57 – 77
% Female	53.8	39 – 76	57.8	37 – 82	50.4	21 – 70
Median Household Income (\$)	40,700	24,400 – 67,500	44,400	23,400 – 71,200	42,800	24,400 – 67,900
High School Graduation Rate (%)	79.3	64 – 91	81.7	66 – 92	80.7	66 – 91
Average Body Mass Index	34.1	29 – 37	31.4	28 – 34	Not reported.	
% Not Smoking	79.1	20 – 92	83.0	38 – 92		
COMPARISON OF ELECTRONIC to PAPER MEDICAL RECORD SYSTEMS						
	EHR Practices	Paper Systems	EHR Practices	Paper Systems	EHR Practices	Paper Systems
# of Practices	34	14	34	14	33	Not reported.
# of Patients	24,569	2,689	99,396	7,845	4,824	
Insurance (%)						
Medicare	36.7	20.2	44.9	55.3	73.2	
Commercial	47.6	9.9	45.4	13.0	18.9	
Medicaid	7.1	22.5	4.0	10.0	5.1	
Uninsured	8.7	47.4	5.6	21.7	2.8	
Medicaid + Uninsured	15.8	69.9	9.6	31.7	7.9	
Race/Ethnicity (%)						
White	56.1	15.5	66.1	15.7	63.3	
African-American	36.3	74.5	29.6	78.1	33.4	
Hispanic	4.5	9.4	2.0	5.0	1.9	
Other	3.0	0.6	2.2	1.2	1.4	
Non-White	43.9	84.5	33.9	84.3	36.7	
Preferred Language (%)						
English	95.4	95.9	97.0	98.1	96.0	
Spanish	2.4	4.0	1.0	1.7	1.2	
Other Languages	2.2	0.1	2.0	0.2	2.8	
Average Age	58.3	53.3	62.6	54.6	70.8	
% Female	53.5	56.5	57.0	67.9	50.4	
Median Household Income (\$)	42,100	28,400	45,800	26,900	42,800	
High School Graduation Rate (%)	80.1	72.4	82.6	70.8	80.7	
Average Body-Mass Index	34.0	34.9	31.4	30.9	Not reported.	
% Not Smoking	82.1	52.2	85.0	57.0		

In 2009, *Better Health's* practice partners committed to identifying patients who prefer to discuss their health care in a language other than English. In this Checkup, preferred language is reported for 86.9% of patients with diabetes, 87.6% of patients with heart failure, and 87.5% of patients with high blood pressure. Across conditions, fewer than 5% of patients prefer to be addressed in a language other than English, with Spanish the most common non-English preference. In certain practices, as many as 58% of patients prefer Spanish. More patients with diabetes (2.5%) prefer Spanish as compared to patients with high blood pressure (1.0%) or heart failure (1.2%), reflecting higher prevalence of Hispanics in *Better Health's* diabetic patient population.

While *Better Health* reports achievement and trends for specific chronic health conditions, these conditions seldom exist without other health problems. These "co-existing conditions" frequently have a common foundation in environmental exposures, social circumstances, and health behavior, which collectively account for as much as 60% of modifiable factors in premature morbidity and mortality in the United States². Further, these co-existing illnesses complicate treatments of each condition, requiring more medications and yielding higher costs. Figure 1 highlights the overlap of the three conditions reported in this Checkup. For instance, nearly three-quarters (74%) of our patients with diabetes also have either high blood pressure or heart failure or both.

² Schroeder S.A. We can do better – improving the health of the American people. *New Engl J Med.* 2007; 357: 1221-28.

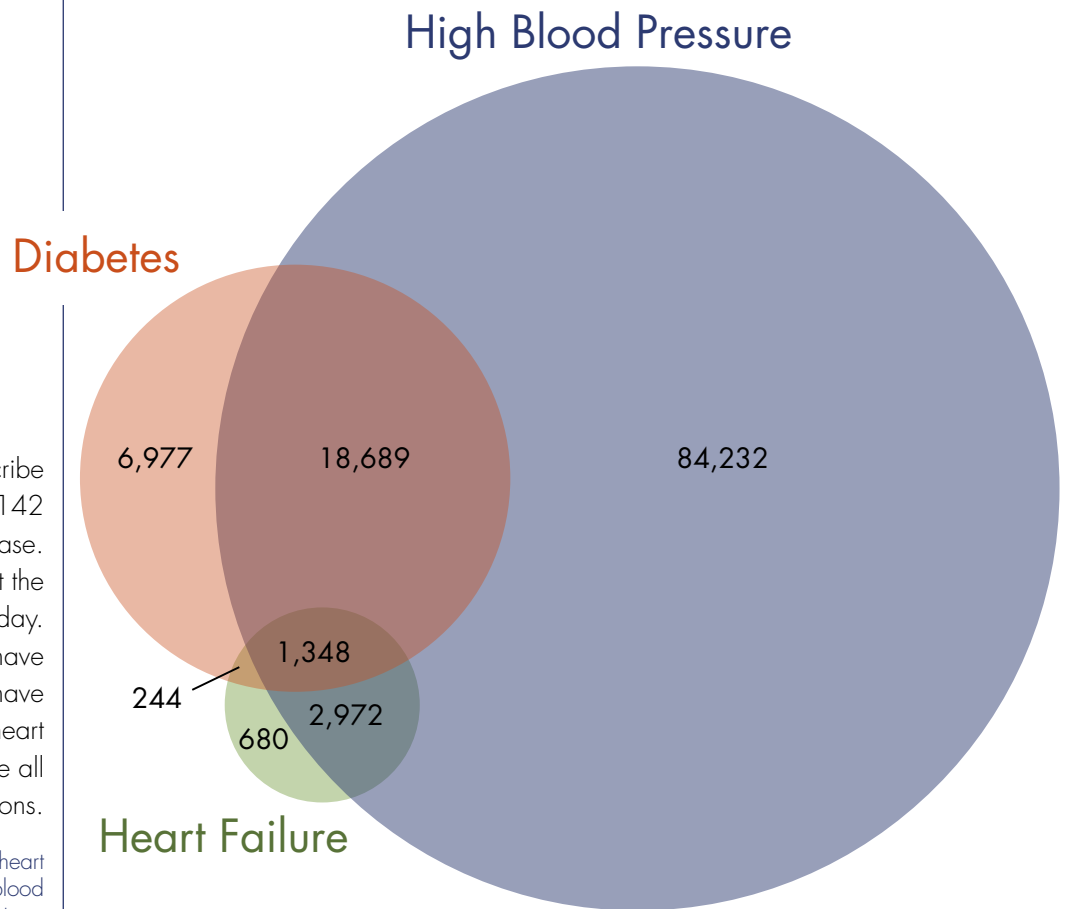


Figure 1. In this report, we describe the health and health care of 115,142 Northeast Ohioans with chronic disease. The figure shows the conditions that the people reported here live with every day. More than 107,000 of these patients have high blood pressure, over 27,000 have diabetes, and more than 5,000 have heart failure.* 1,348 of these patients have all three of these conditions.

* 420 patients included here live with heart failure as well as either diabetes or high blood pressure (or both), and get their care from systems with paper-based medical records. For these patients, heart failure data are not reported.

These results have at least two implications. Most importantly, it is imperative to address the underlying environmental, social, and behavioral causes of these epidemic conditions, both in northeast Ohio and the U.S. more broadly. Smoking and obesity are the chief markers that *Better Health* uses to track these underlying behavioral causes of chronic medical conditions. We stratify our results by estimated household income and educational attainment to highlight our patients' social circumstances. Also, as *Better Health* and national quality organizations move forward to address the challenges of multiple co-existing health problems, quality standards must be established that recognize the variable risks and benefits of different treatments in different subgroups.

Achievement and Trends in *Better Health's* Different Patient Subgroups. Virtually Everyone Benefits, Some More than Others.

With this Checkup, we report three full years of achievement among *Better Health's* adult patients with diabetes, 18 months (three Checkups) among patients with heart failure and 12 months (two Checkups) among patients with high blood pressure. In this Executive Summary, we highlight our results in diabetes.

Table 2 summarizes *Better Health's* individual and composite standards for care and outcomes in diabetes. Note that the "all-or-none" requirement for meeting the care composite standard is more strict than the "4 out of 5" requirement for meeting the outcome composite.

Figure 2 summarizes results for diabetes care (top section) and outcomes (bottom section), overall ("region-wide") and by insurance type (Medicare, commercial, Medicaid and uninsured); race/ethnicity (White, African-American, and Hispanic); estimated household income (defined as high, medium, and low within Cuyahoga County) and educational attainment (defined as high, medium, and low high school graduation rates within Cuyahoga County).

TABLE 2. BETTER HEALTH'S INDIVIDUAL AND COMPOSITE STANDARDS FOR DIABETES

Care 4 standards for good routine care	Outcomes 5 standards of good control
Blood Sugar Control Test done Screening for or Treatment of Kidney Problems Annual Eye Examination Pneumonia Vaccine given	Blood Sugar Controlled (Hemoglobin A1c < 8%) Blood Pressure Controlled (BP < 140/80) LDL ("Bad") Cholesterol < 100 or Statin Prescription Weight Controlled (Body Mass Index < 30) Documented Non-Smoker
Care Composite: Percent of patients who meet all 4 standards	Outcomes Composite: Percent of patients who meet at least 4 of the 5 standards

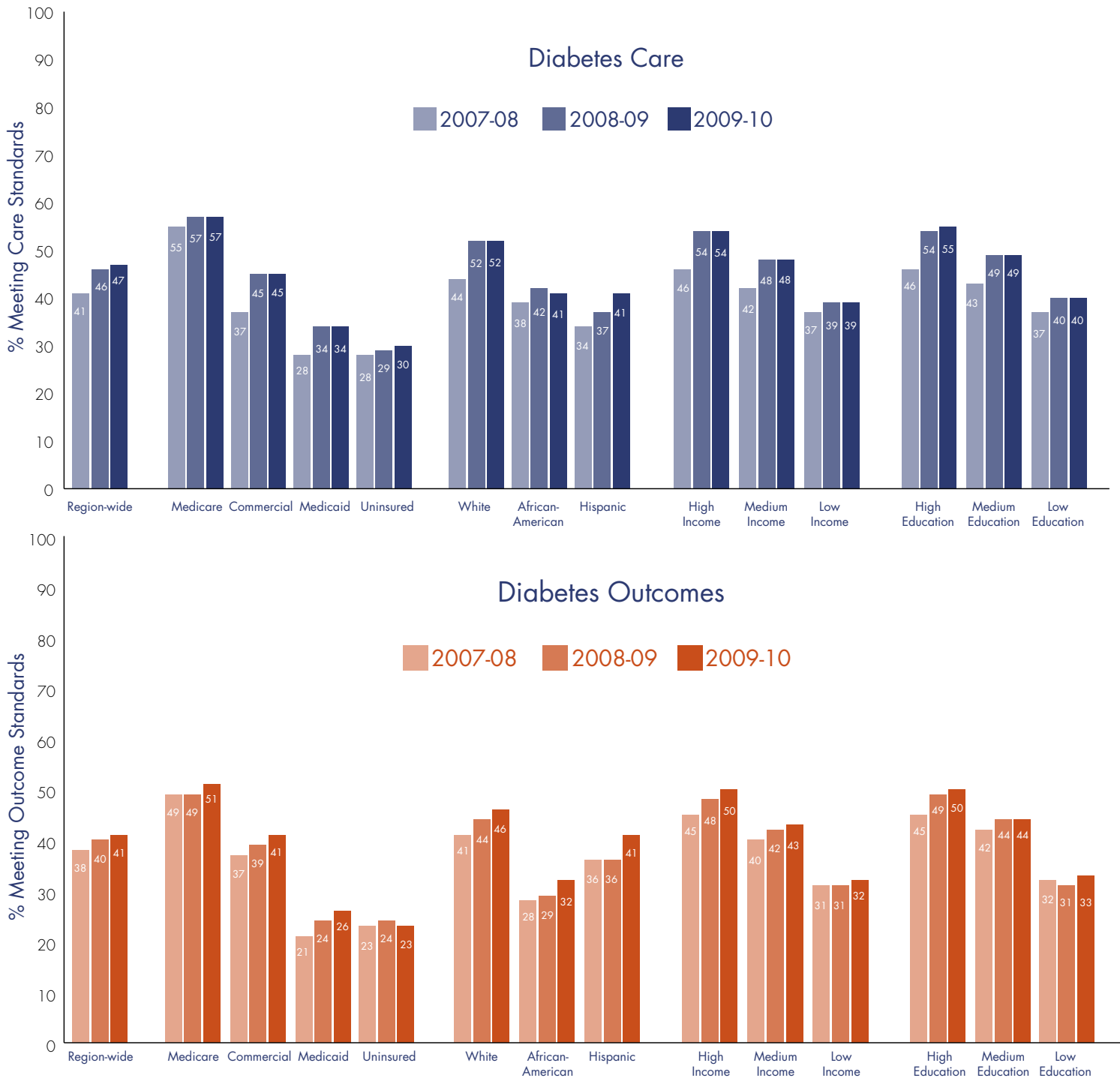


Figure 2. Trends in Achievement of Diabetes Care (top panel) and Diabetes Outcome (bottom panel) Standards over the past three years across the Region, and within patient subgroups defined by Insurance type, Race/Ethnicity, and by Neighborhood Income and Educational Attainment. Virtually all of these subgroups of patients show consistent improvement from our report in 2007-08 to our current report for 2009-10.

We focus on two main conclusions from these results.

1. **First, despite *Better Health's* stricter criterion for meeting care versus outcome standards, achievement is higher for care than outcomes.** There are several explanations for this. Most importantly, care is more responsive to provider actions than are outcomes. Improved outcomes require more active patient engagement and resources, including insurance coverage for medications, access to healthy food and social support for adopting a healthy lifestyle, and clinical practice-centered assistance for adherence, including outreach. Practice-based resources are especially important for patients in resource-poor social settings.

2. Second, improvement is seen in virtually all patient subgroups, by insurance type, race/ethnicity, income, and education, with the following caveats:

- a. Typically more advantaged subgroups (Medicare/commercial, white, and higher income and education) have higher baseline levels of achievement and improve more than less advantaged subgroups.
- b. Outcomes among the uninsured are the lowest and have actually declined in the most recent reporting period.

While we are pleased to observe broad-based improvement, we remain concerned that socio-economic forces relate so strongly to baseline performance and to the magnitude of improvement. Practice-level support is especially valuable for “priority primary care providers” serving disadvantaged patient populations. With the protracted economic downturn and the “jobless recovery”, the decline in outcomes among the [increasingly prevalent] uninsured is of particular concern.

The Effect of Electronic Health Records

Our results suggest that health care systems and practices with EHR should achieve better than systems and practices using paper-based medical records. While there is widespread debate about the size of quality-relevant benefit that EHRs may bring, we offer two confident conclusions: 1) that EHRs are important *infrastructure* for quality care, but that *how they are used* is most important to achieving best results; and 2) that social determinants of health² are likely to have important effects on health outcomes that may modify the effects of EHRs. In this section, we report the influence that EHRs have on care and outcomes of *Better Health’s* patients with diabetes while we simultaneously recognize the diversity and differences in patient characteristics across our practices.

OUR MISSION

Better Health Greater Cleveland is a multi-stakeholder partnership that improves the health and value of health care provided to people with chronic medical conditions in Northeast Ohio.

We are committed to:

- improving care and outcomes of all people with chronic conditions;
- eliminating disparities in health observed among disadvantaged populations by insurance, race and income; and
- transparency across collaborating organizations, and, through public reporting of patient care data, with our community.

² See footnote on page 14.

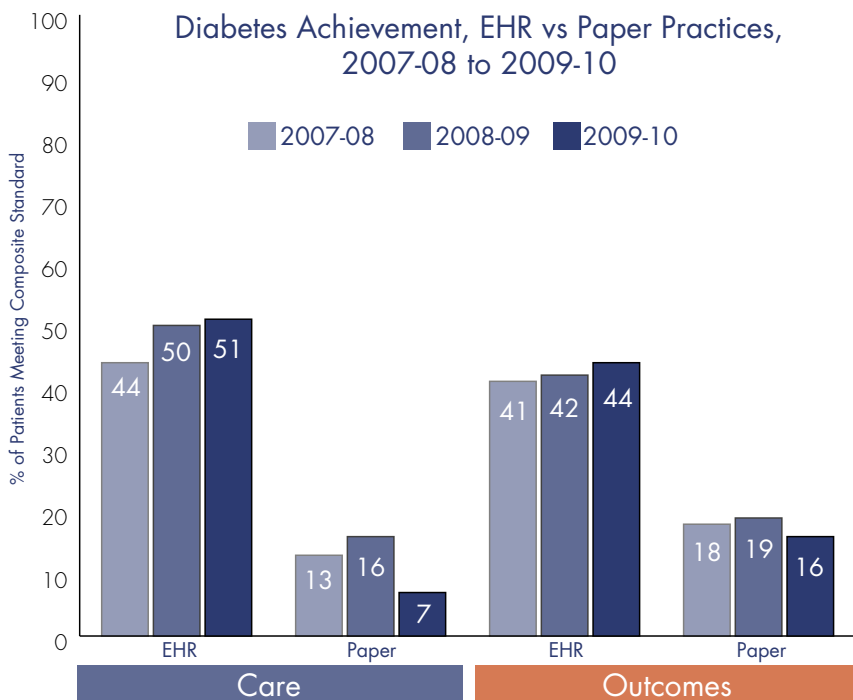
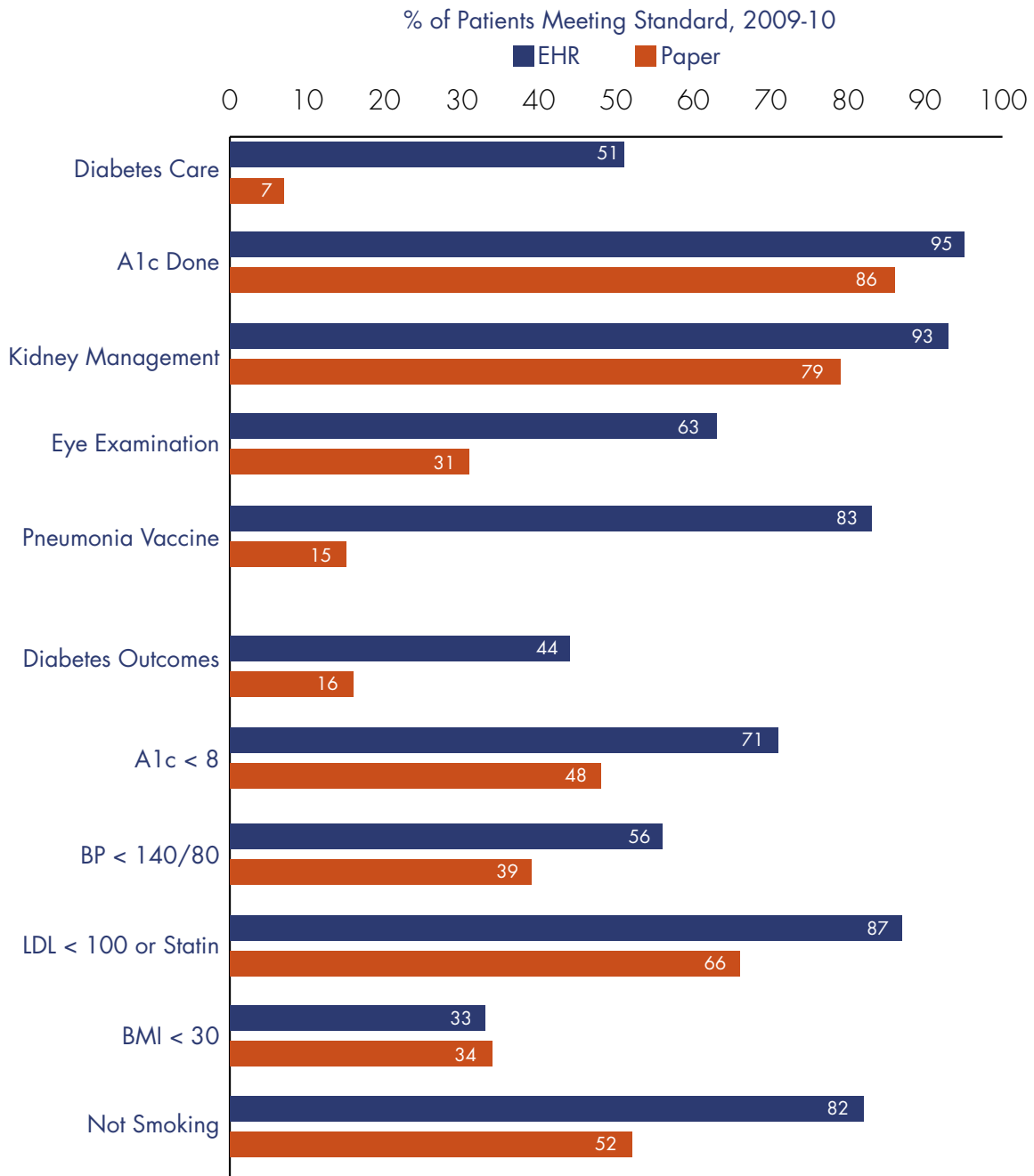


Figure 3. Comparison of Electronic Health Record Systems to Paper Record Systems on Achievement of Diabetes Standards over the past three years.

Figure 4. Achievement of Diabetes Composite and Individual Standards in 2009-10 by EHR Systems and by Paper Medical Record Systems. With the exception of maintaining a healthy weight (BMI less than 30), achievement in EHR systems is better than that of paper record systems.

Figure 3, page 17, summarizes trends in diabetes care and outcomes across EHR and paper practices, whose data stretches from July 2007 through June 2010. In the 2009-10 reporting period, we observe dramatic differences favoring EHR over paper - specifically 44 percentage points (51% achievement vs. 7% achievement) for *care* and 28 points (44% achievement vs. 16% achievement) for *outcomes*.

Below, Figure 4 summarizes the differences in EHR vs. Paper practice achievement for care and outcomes overall and for each component of the composite standards. Achievement of certain care processes, such as obtaining eye examinations and providing vaccinations, are particularly amenable to EHR-related prompts and teamwork, as discussed in previous Checkups.



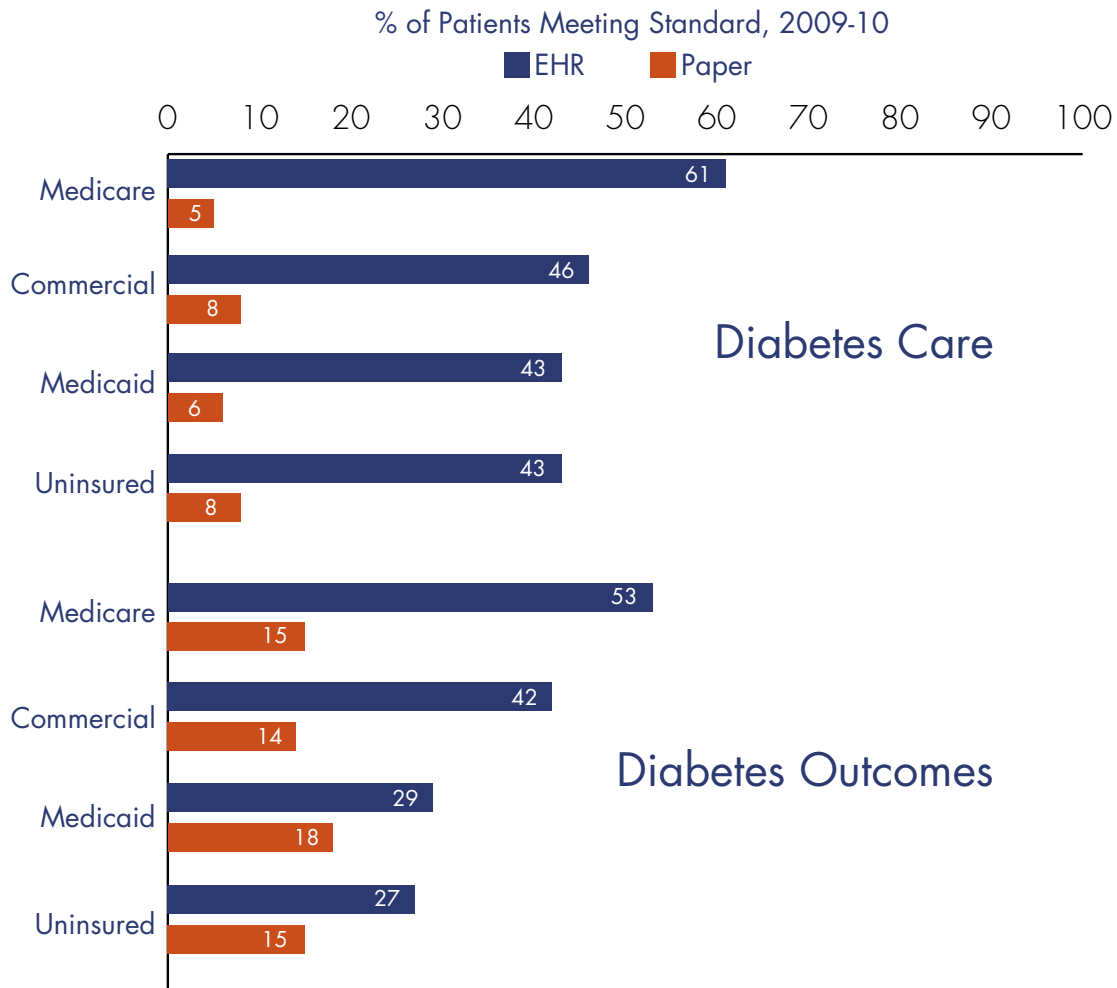


Figure 5. Achievement of Diabetes Care and Outcomes across EHR and Paper Record Systems, by Insurance Type, 2009-10

Figure 5 compares overall diabetes care and outcomes of EHR and paper practices across our four different insurance types. Two conclusions are especially noteworthy that also are supported by separate analyses that account for differences in the socioeconomic characteristics of patients cared for in EHR and paper systems. First, the effect of EHRs is especially dramatic for achieving better care. Importantly, all purchasers benefit from better care associated with sophisticated use of EHRs. Second, patients cared for in EHR systems also have better outcomes across insurance types, and particularly among those insured by Medicare or commercial insurers.

Better Health is starting its fifth year in the prestigious *Aligning Forces for Quality* program, the signature health improvement initiative of the Robert Wood Johnson Foundation.

We are in good company, with 16 other region- or state-wide organizations that are leading health care change through collaboration within and across communities from Portland, OR, to Portland, ME. We learn from each other and from the national expertise that the AF4Q's national program office at George Washington University has assembled to support our work. We are fortunate to have such capable, innovative and passionate partners.

Learn more at <http://www.rwjf.org/qualityquality/af4q/index.jsp>

³ Suchetka, Diane. Cleveland Clinic and MetroHealth to begin sharing electronic medical records after patients give OK. *The Plain Dealer*. Jan. 5, 2011.

REGION-WIDE QUALITY OF CARE AND OUTCOMES IN 2009-10: ACHIEVING THE PROMISE OF ELECTRONIC HEALTH RECORDS (EHRs)

Director's Comment

When *Better Health* was formed four years ago, our clinical partners committed to transparency and accountability in measuring and reporting our achievement using information from electronic health records. Although President Bush committed in 2004 to EHR-for-all within 10 years, by 2007 there was little cause for optimism that we would reach this goal. The past two years have changed the trajectory, with federal support for adopting EMRs and additional incentives for using them meaningfully. The fundamental aspiration is that meaningful use will improve health outcomes and blunt increases in health care costs. We're getting closer to being able to envision how this might be achieved.

Recently, the Cleveland Plain Dealer reported that Cleveland Clinic and MetroHealth agreed to share patient information using their electronic records for consenting patients who had visited facilities of both systems³ – real-time, during a patient visit. One week into this new world, I can personally attest to the value of this health information exchange. In my modest twice weekly patient care activities at Metro, I already have had four occasions to use “Care Everywhere” – the Epic product that facilitates this exchange – for patients who had very recently used Cleveland Clinic facilities. All patients consented to obtaining their information without hesitation. In a matter of a few minutes, all of the data we obtained helped me avoid ordering redundant tests, and one helped me make a treatment decision that otherwise would have been delayed. For one patient who had visited a Clinic hospital's Emergency Department for a “syncope episode” (passing out) the previous night, the number of tests whose results were available to me, and did not need repeating, undoubtedly saved hundreds if not thousands of dollars.



As electronic health information exchange spreads, we will be able to document the benefits in care, health outcomes, and costs. In the meantime, *Better Health* already has demonstrated the benefits of electronic health records, even without real-time health information exchange, in the care and outcomes of patients with important chronic medical problems. As this report documents, the “EHR effect” is apparent for virtually all patient groups, benefitting those whose care is paid for by Medicare, commercial insurers (employers and employees), and Medicaid. Uninsured patients served at MetroHealth by physicians who use its EHR also benefit. We will soon be joined by others whose EHR adoption stories are chronicled here, and we look forward to documenting continued technologic progress as well as improvement in our patients' care and outcomes.

SPOTLIGHTING OUTSTANDING ACHIEVEMENT AND IMPROVEMENT

These 32 practices had quality scores in the top 10% of one of our composite measures in diabetes, high blood pressure or heart failure in 2009-10, or improved the most in their care of diabetes or heart failure patients through 2009-10. All have earned gold stars. Congratulations to you and your patients!



TABLE 3. OUTSTANDING ACHIEVEMENT AND IMPROVEMENT (2009-10)

	OVERALL	MEDICARE	COMMERCIAL	MEDICAID	UNINSURED
CARE ALLIANCE					
Care Alliance	HBP			HBP	HBP
THE CLEVELAND CLINIC					
Beachwood Family Health Center		HBP			
Brunswick Family Health Center	HF	HF			
Cleveland Clinic - Main Campus	DM	HF†	DM HF	DM	DM
Chagrin Falls Family Health Center	HF	DM DM† HF HBP			
Huron Hospital	DM†				DM†
Independence Family Health Center	DM DM†	DM†	DM		HBP
Lakewood Family Health Center			DM†		
Solon Family Health Center	DM HF	DM HF	DM		HBP
Strongsville Family Health Center	DM DM† HF	DM† HF	DM		
Westlake Family Health Center	HBP	HF† HBP	HF HF†		
Willoughby Hills Family Health Center	HBP	HBP			DM HBP
KAISER PERMANENTE					
Avon Medical Facility	HBP		HBP		
Bedford Medical Center	DM HBP	DM	DM		
Chapel Hill Medical Center	HF† HBP	HF HF† HBP	HBP		
Fairlawn Medical Center	DM DM† HF HF† HBP	DM DM† HBP	DM HBP		
Lakewood Medical Center		DM†			
Parma Medical Center			HF HF†		
Strongsville Medical Center	DM	DM			
Twinsburg Medical Center		HBP			
Willoughby Medical Center	DM HF†	DM HF†	DM		
METROHEALTH					
Asia Plaza Medical Group					HBP
Broadway Health Center					DM†
Brooklyn Medical Group	HBP	HBP	HBP		
Buckeye Health Center	HF		HBP		
Lee-Harvard Health Center				DM DM†	
MHMC - Faculty/Residents	HF	HF		DM HF HF† HBP	
MHMC - Internal Medicine	HF	HF			
Strongsville Medical Group	DM†	DM†	DM†		
Thomas F. McCafferty Health Center	DM†	DM†	DM†	DM†	DM DM†
NEIGHBORHOOD FAMILY PRACTICE					
Neighborhood Family Practice	DM†		HBP	DM	DM DM† HBP
UNIVERSITY HOSPITALS					
UH / Family Medicine			HBP	HBP	

Outstanding Achievement in
 DM - Diabetes Care or Outcomes
 HF - Heart Failure Evaluation or Treatment
 HBP - High Blood Pressure Care or Control
 DM† - Most Improved from 2007-08 to 2009-10 in Diabetes Care or Outcomes
 HF† - Most Improved from 2008-09 to 2009-10 in Heart Failure Evaluation or Treatment



A program of the Robert Wood Johnson Foundation's *Aligning Forces for Quality* initiative and other funders

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