White Paper

Population Health Management

A Key Addition to Your Electronic Health Record

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Contents

Introduction

Office-based medical practice is changing fast. The government is providing incentives to those practices that use electronic prescribing and electronic records systems and will soon penalize those that don't. Health reform will shortly deliver many newly insured patients to your office. A host of new patient care models aimed at making health care more team-based are emerging. Reimbursement tied to outcomes will demand a greater level of patient management and engagement in the care process.

Meanwhile, as practices continue to face declining reimbursement and naturally rising operating costs (think about energy and supply costs and retaining staff with competitive wages), the result is shrinking profit margins. It may seem impossible for practices to sustain and even increase profitability despite the challenges posed by a business environment that demands even higher levels of patient service, delivery of clinical benchmark data, and strict attention to financial detail. But it's not.

The Care Continuum Alliance defines population health management (PHM) as a proactive, accountable and patient-centric population health improvement approach centered on a physician-guided health care delivery system and designed to enable informed and activated patients to address both illness and long-term health.

When the bottom line is in jeopardy, most practices' initial instinct is to cut costs, especially with the threat of dramatically different reimbursement models on the horizon.

That's why my suggestion — to invest in a key technology called a population health management system (PHM), sometimes referred to as a patient registry, — may feel counter-intuitive. But the right PHM application can do more to increase profitability than can reducing staff hours. PHMs have also been shown to be a key driver of improving quality measures; can cut down on internal staff time (and associated costs) on a number of communication and administrative tasks; and will likely play an important role in care delivery for the accountable care organizations (ACO) that are emerging.

This white paper will define PHMs and examine how they can be used to:

- manage population health with a focus on specific disease states and preventive care services;
- engage patients to take actions necessary to maintain their health;
- remind patients who have not been seen recently, filling appointment schedules;
- secure and increase pay-for-performance (P4P) revenue;
- help you differentiate your practice from the rest, to compete effectively in a modern healthcare delivery environment.

Now, some of you may be scratching your head and saying to yourself, "I thought my EHR system did all that". Let me assure you that, while EHR systems have reporting solutions, in this paper we will show how the functionality provided by PHMs and the impact that a PHM can have on your practice is distinct and worthwhile in addition to your EHR.

Managing populations of patients

The work of population health management includes coordinating the delivery of care across a population of patients to improve clinical and financial outcomes, through disease management, case management and demand management. The work begins with the identification of a patient population and flows through the entire process of delivering and evaluating interventions, ending with concurrent measurement.

There are many reasons a practice may need to identify and work with a defined group of patients. Primarily, there is a need to identify and proactively work with patients to insure they are receiving care according to the evidenced based standards agreed upon by the practice. Practices may be participating in an incentive program designed by an insurer to manage all health plan members who have a disease, regardless of the severity of individual cases.

For example, a health plan in California is paying providers a bonus for working with their patients with diabetes to achieve these targets:

64.8% have a HbA1c below 9
42.9% have LDL less than 100; and
61.1 % have BP below 140/80.

By managing an entire population with a given disease, interventions can be targeted to sub-populations to achieve improved individual outcomes that, in turn, improve outcomes measures for the entire population. A practice may choose to identify and concentrate resources on those patients who do not meet the above targets. This has a triple benefit of improving the outcomes for these at-risk –patients, decreasing the likelihood of debilitation and high-cost complications and ensuring revenue from participating in P4P programs.

Stage 2 and 3 of Meaningful Use is projected to include the requirement to meet targets for clinical measures. A Population Health Management system is necessary to reach set targets because it gives the care team access to the data for each population, and sub population, every day. This makes it possible to test interventions designed to improve outcomes, measure their effectiveness, redesign them and spread them when they are proven effective. This insures receiving the incentive payments for each stage of Meaningful Use and, in the future, maximum Medicare reimbursement rates.

Why isn't an Electronic Health Record enough to manage and report on a specific population of patients?

As HIT solutions have evolved, providers have become more adept at using solutions to meet their needs. For example, when only a practice management system was available, we determined that we could use that system to create a report to list all the patients with a specific diagnosis based on billing (claims) data. Today, a practice management system may be able to list all the patients with a specific diagnosis that

haven't been seen in the last X months, but can't easily eliminate any of those patients from that list if the patient has an appointment scheduled in the next 6 weeks. Also, with only a practice management system available, thousands of physicians receive incentive payments – a percentage of their Medicare reimbursement for the year, from the national Patient Quality Reporting System (PQRS) by entering and submitting special billing codes transmitted on the insurance claim to reflect the care given to patients. Using a practice management system for population health management is limited to identifying patients in a population and reporting on those patients singularly, or with only one dimension of care.

Today actual clinical data (vs. claims data) about populations of patients is more readily available because about a third of all physician practices use an EHR. This number grows every day, another third are predicted to implement an EHR within in the next few years. An EHR is designed to support documentation needed for billing; it collects and stores data for each individual patient, creating a care plan and a chronological record of their care. In the traditional practice setting, a physician records, reviews and evaluates patients' records, one patient at a time.

In the paradigm population health management, the physician or, in a growing number of practices, the care team looks simultaneously at all patients with a particular diagnosis, or in need of preventive services. Multiple unique populations, and sub-populations, are identified and proactively worked with to bring them into compliance with standards of care.

In a typical EHR, the registry can be used to query the data, however there are significant limitations. EHR registries are commonly used to identify patients who are receiving a medication for which some change is recommended or required, as in the case of a safety recall or the availability of a new and more effective or less expensive alternative. EHR registries can be used to identify patients overdue for a cancer prevention screening tests or patients with a chronic disease needing a single lab test. For example, using the P4P measures above, it is not possible to simultaneously

identify patients with diabetes who are overdue for an appointment, do not have an appointment scheduled, and are outside of the targets for their HbA1c, LDL and BP. This would most likely require multiple separate queries and then it would require someone to manually reconcile them, without custom programming skills in the practice.

Each query in an EHR most often produces an Excel spreadsheet, which is only actionable with some difficulty. Once a list of patients, with addresses and phone numbers, is created, it can be exported to Excel. It is then possible to merge that list with a letter. The challenge in using an EHR, in both of these examples, is that it is a cumbersome, multi-step, multi-application process and the effectiveness is difficult to determine. Once the letters are sent, the issues only continue. For example, how does the staff know who responded to the letter, and more importantly, who did not and therefore needs a second follow up action? How many different populations – and sub populations, of patients must be contacted at regular intervals in order to proactively manage their care? Using an EHR, each day a new Excel spread would be needed, to capture the patients who now due for a test or screening, with no indication of which ones were contacted the day before. Care managers find themselves working with multiple pieces of paper and colors of highlighters, in an attempt to track their work.

A PHM system interfaced to an EHR provides a comprehensive tool-set for identifying populations of patients, engaging patients in their care, documenting encounters, and on-demand reporting.

It is also worth noting that the ability to create a list of patients using the registry and analytics in an EHR or in a PHM is predicated on the use of structured documentation features within the EHR. For example, capturing smoking status and identifying patients who smoke and do not have a cessation plan requires the use of structured data. If a provider or care team member documents smoking status and cessation plan in unstructured text notes, it is nearly impossible in most commercially available

EHRs to create a registry list based on this unstructured information or to get this same data into a Population Health Management system.

Population Health Management to the rescue

The nature of technology is iterative. The more we use it, the more we want it to do for us. Physicians and practices need to consider technology to support their population-level care management, not only as an essential component to effective practice within the Chronic Care Model, but also as a necessary tool for responding to the forces driving quality improvement, such as pay-for-performance and incentives for achieving Patient Centered Medical Home recognition. Without EHRs, and without active and effective use of PHMs, physicians and practices will have much greater difficulty in efficiently delivering safe and effective preventive care and care for patients with acute and chronic problems.

A PHM system interfaced to an EHR provides a comprehensive tool-set for identifying populations of patients, engaging patients in their care, documenting encounters, and on-demand reporting. The EHR is focused on capturing the data about each individual patient and the PHM system takes this data, aggregates it and supports taking action with groups of patients, creating an environment where quality improvement and improved reimbursement goals can be achieved with greater efficiency, thereby improving profitability.

The PHM system supports the provider and the provider led-care team by regularly, even daily, monitoring patients by age, gender, diagnosis and/or conditions. It delivers tools to easily take action to reach out to patients. You can identify a specific group of patients and with the click of one button send a customized email or produce a letter – printed, folded and sealed, ready for pick up by the postal service. For example, you can easily use the PHM to find the patients in the P4P example earlier: patients with diabetes whose HbA1c is greater than 9, an LDL greater than 100, a BP over 140/80. With a PHM, unlike a registry in an EHR, it is possible to see which patients fall into one, two or all three of these

groups and take actions accordingly.

In addition, a Population Health Management system fulfills the constantly changing need for access to clinical data by delivering reporting tools designed specifically for clinical data. EHR analytic solutions are most often imported from other industries, requiring an expert data analyst to adapt them for use with clinical data. Each clinical report and adaptation of a report requires hours of the analyst's time, which is a costly investment many practices cannot afford.

Another important component of population health management work is to coordinate follow-up with patients who have a specific test result, for example those with an abnormal cervical cancer screening test.

Compare and contrast how an EHR and a PHM each do this work.

1. Test result delivered to provider
2. Provider tasks support staff to contact patient (via letter, email or phone)
3. Staff creates a recall action for a repeat test within the prescribed time period

EHR model:

4. Staff manually tracks patient return for test using paper log. Periodically, calling patients or printing and manually addressing letter for mailing.
or, alternately…

A data analyst develops a custom analytics report, identifying patients with a recall action that is overdue and no future appointment is scheduled for that patient. Run report periodically, export to Excel, merge with letter that is printed and mailed. Each time, manually working list to exclude patients who received a letter from a previous mailing.

PHM model:

4. Standard query set up and run regularly identifying all patients due and single click action to generate letter, email or text message to patient. Automatic tracking in the PHM identifies patients that did not respond, for a second and even third contact at defined intervals, with no custom reporting or manual tracking.

We can see from this comparison how and why a PHM is considerably more effective and efficient at following up with patients. The impact of this on a practice is significant, given the complexities of follow up protocols and the increasing number of different groups of patients requiring follow-up action.

The effective use of health information technology (HIT) depends on integrating diverse systems in order to record, organize and use data to maintain a longitudinal patient record, for decision-making, proactively working with patients and reporting.

Why both EHR and PHM?

The effective use of health information technology (HIT) depends on integrating diverse systems in order to record, organize and use data to maintain a longitudinal patient record, for decision-making, proactively working with patients and reporting.

At the practice level, the electronic health record (EHR), and a Population Health Management system are the informatics backbone.

Population Health Management systems have been used when working with populations of patients for more than a decade. The strategies supported by a PHM system represent an important opportunity to maximize patient outreach, engagement and coaching that, in turn, promote self-care and healthier populations. PHM systems foster comprehensive, successful accountability for the clinical, economic and patient experiential outcomes of an attributed population.

We've talked about the EHR and PHM and how they work together. An EHR is core to cost-efficient information exchange, visit documentation, and e-prescribing. PHM is core to achieving quality outcomes and improving population health. An EHR without a PHM is like a practice management system without a clearinghouse[1]; as the song says, "you can't have one without the other".

[1] A clearinghouse is essential for filing insurance claims and getting paid.

About the Author:

Rosemarie Nelson, MS Principal Consultant, MGMA

Rosemarie Nelson's, experience in medical office management and information technology, combined with her years of consulting to physicians and practice professionals, gives her unique insight into the needs of and challenges facing physicians and medical practices. As a medical practice consultant, Rosemarie has established significant expertise in system implementation. As a manager in the Office of the Future project, she led new technology planning and development for improved clinical operations. Rosemarie has managed project implementation teams and software engineers in the design and implementation of medical practice software and subsequent training of personnel. Drawing on diverse operational, clinical and financial experience, she provides practical solutions help medical groups achieve success in their objectives.

About the Sponsor:

i2iSystems®
Creating Healthier Populations

Founded in 2000, i2i Systems is focused exclusively on creating healthier populations, by helping healthcare organizations achieve excellence in clinical performance. Today, health care professionals at over 700 facilities including over 70% of all community health centers in California, rely on i2iSystems for critical clinical insights and powerful tools that improve the health of the communities they serve.

i2i Systems' family of population health management solutions enables clinicians to implement clinical guidelines of care across large populations and identify patient sub populations that are out of compliance. i2i goes beyond typical reporting tools, by automating specific action plans that allow the care team to proactively manage and coordinate the care of defined patient groups, in order to meet targeted standards of care. By both managing clinical data to gain insights and proactively implement action plans, i2i Systems enables practices to maximize their pay for performance revenue and improve staff efficiency, ultimately improving profitability.

For more information visit us on the web at www.i2isys.com

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PRESS RELEASE

FOR IMMEDIATE RELEASE
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I2I SYSTEMS RECEIVES CERTIFICATION FOR MEANINGFUL USE

i2iTracks 7 Certified as a Modular EHR
Helps Providers Qualify for ARRA Incentives

Santa Rosa, CA July 27, 2011 - i2i Systems, a leading provider of population health management solutions, is pleased to announce that i2iTracks 7 has been certified by InfoGuard as a modular Electronic Health Records (EHR) Solution for Meaningful Use.

As part of The American Recovery and Reinvestment Act (ARRA), clinics, hospitals and physicians may receive financial incentives based on their use of Electronic Health Records, but only if they can demonstrate to be "meaningful users" themselves. Organizations who wish to qualify for incentives are required to use Certified EHR Technology and must demonstrate use of a qualified EHR in a meaningful manner. i2iTracks 7 now joins the list of systems that may be used to support the application and award of financial incentives under Meaningful Use. Specifically, Tracks 7 is 2011/2012 compliant and has been certified by an ONC-ATCB in accordance with the applicable certification criteria adopted by the Secretary of Health and Human Services.

i2iTracks, the industry's leading population health management system, aggregates data from practice management systems, medical records, and providers such as labs and pharmacies into a single analytic framework. Physician groups, hospitals and health clinics use i2iTracks to identify subpopulations of patients who require follow-up from their healthcare provider. Unlike typical reporting solutions, i2iTracks then manages the workflow and specific tasks required to address or complete each patient's care. Using data from practice management and other systems i2iTracks can ensure that patients are contacted, seen as needed, and that the necessary tests or immunizations are provided. In doing so, i2iTracks helps improve clinical measures for ambulatory care. The result is increased pay-for-performance funding, increased revenue, and healthier patients. Today, i2iTracks is used by over 700 healthcare sites nationwide to lower costs, enhance revenue and improve patient health.

"As the emphasis in healthcare reimbursement shifts from rewarding activities to rewarding enhanced performance, Meaningful Use is one benchmark healthcare organizations need to achieve in order to remain competitive and grow," said Janice Nicholson, CEO and cofounder of i2i Systems. "We are pleased that i2iTracks has been recognized as a certified solution to enable healthcare professionals to improve the health of their populations. Our mission remains to help our clients create healthier populations, and this certification is an important step toward achieving that goal."

i2iTracks 7 will be released to clients in September 2011. Visit www.i2isys.com for updates and a list of the clinical quality measures for which i2iTracks 7 has been tested and certified. This certification does not represent an endorsement by the U.S. Department of Health and Human Services or guarantee the receipt of incentive payments.

About i2iTracks

i2iTracks is the industry's leading population management system, used by over 700 community health care clinics, physician practices and hospitals nationwide. I2i Tracks securely integrates clinical data from practice management systems, electronic health records, labs, pharmacies and other providers, into a single unified view, with reports to identify subpopulations that require follow-up actions. Unlike typical report writers, i2iTracks manages the workflow and specific patient follow up actions, to ensure that both staff and patients complete the required tasks. In this way, i2iTracks actually improves clinical measures across populations, resulting in increased pay-for-performance revenue, reduced labor costs and healthier populations.

About i2i Systems

i2i Systems is a leading provider of population health management software to enable healthcare that is quality focused, patient centered and proactive. i2i Tracks, the company's flagship product, is used by over 700 healthcare delivery sites nationwide to increase pay-for-performance revenue, improve staff efficiency, reduce healthcare costs and create healthier populations. Founded in 1999, the company is staffed by an experienced team comprised of healthcare and quality improvement professionals, and software development experts. i2i Systems is based in Santa Rosa California and has sales offices nationwide. For more information see www.i2isys.com

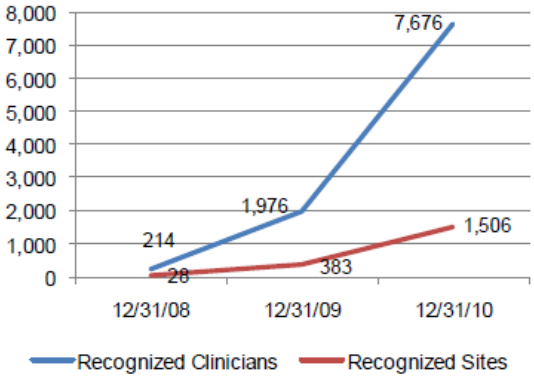
i2iTracks & Patient Centered Medical Home Recognition

Patient-Centered Medical Home (PCMH) is a model of care that seeks to strengthen the physician-patient relationship by replacing episodic care, based on illnesses and patient complaints, with proactive, coordinated care and a long-term healing relationship. In the PCMH model, the physician-led care team is responsible for ensuring that all of a patient's care needs are met. This includes referring and tracking care delivered by other qualified physicians. PCMH also assures timely care through open scheduling, expanded hours and prompt communication. Several organizations offer PCMH frameworks and assessment tools. This document references those from the National Clinical Quality Association (NCQA) ~ Transformed (http://www.transformed.com/index.cfm) and The Joint Commission (http://www.jointcommission.org/accreditation/pchi.aspx) also offer frameworks and tools.

From Traditional Practice to PCMH

Transforming a traditional practice into a PCMH involves a number of changes. The first steps involve reorganizing care delivery, moving from a provider model to a care team. The goal is to standardize care, establish protocols and delegate routine tasks across the team. This gives the physician time to perform specific tasks and establish a long-term, healing relationship with each patient. The care team, led by the physician, may need new members, updated job descriptions and retraining. Corresponding operational changes, including changes to the physical layout of the facility, may be needed to equip the practice for these changes.

The next set of changes comes in response to the open access requirements of PCMH. A practice needs to develop the ability to see patients within a short period – rather than filling the schedule months in advance which results in a high no show rate. After-hours and electronic two-way communications are also part of this requirement.



The number of organizations receiving NCQA PCMH recognition has increased 400% in the past year, indicating a groundswell of interest in achieving recognition. (Source: NCQA)

Population Health Management and PCMH

Population health management and continuous quality improvement are two significant requirements of PCMH. To achieve NCQA PCMH recognition, organizations must identify at least three preventive and three chronic care services, remind patients and families of these service and provide outreach to patients not recently seen. Data for these measures must be reported to demonstrate improvement as the result of a continuous quality improvement program. This performance data needs to be stratified for vulnerable populations.

For NCQA PCMH recognition, sites are assessed and scored based on a point scale (subject to 6 must-pass elements) with three levels of certification:

Level 1	35–59 points and all 6 must-pass elements
Level 2	60–84 points and all 6 must-pass elements
Level 3	85–100 points and all 6 must-pass elements

i2iTracks, the leading Population Health Management system, empowers organizations to achieve PCMH recognition. As described in the following table, i2iTracks directly impacts more than seventy-five percent of the points required to meet PCMH requirements.

Utilizing i2iTracks to Achieve PCMH Recognition (2011 Scoring)

Standard 2: Identify and Manage Patient Populations		
NCQA Requirement	**Points**	**i2iTracks and PCMH Requirements**
A. Patient Information	3	i2iTracks interfaces with PM and EHR systems, accessing all collected demographic data. As a result, i2iTracks can produce the required numerator and denominator for each of the patient information elements collected. i2iTracks can report on missing data and provide insight into clinic performance in data collection.
B. Clinical Data	4	With an EHR interface, i2iTracks can report for Factors 2, 3, 4, 5, 6 and 8, with required numerator and denominator.
D. Using Data for Population Management*	5	i2iTracks is a purpose-built Population Health Management system designed to generate all required lists and support proactive care for patient populations.
Standard 3: Plan and Manage Care		
NCQA Requirement	**Points**	**i2iTracks and PCMH Requirements**
A. Implement Evidence-Based Guidelines	4	i2iTracks delivers proactive care modules, like i2iTracks Today (customized dashboard) and Patient Search, to identify and engage patients who are lacking services as per evidence-based guidelines.
B. Identify High-Risk Patients	3	i2iTracks reports are easily produced. Reports display data based on high-risk criteria and measure the percentage of high-risk patients in a population. i2iTracks also delivers a powerful Population Analytics module that can be used to evaluate resource use and identify patients with co-morbidities or who are out of compliance.
C. Manage Care*	4	i2iTracks outreach modules support communication with patients regarding appointments, re-care needs, outstanding referrals and pre-appointment needs (e.g. labs or referrals). i2iTracks Patient Summary helps care teams prepare for patient visits and becomes educational material for the patient. i2iTracks Patient Search tool identifies follow-up with patients who do not keep important appointments or simply need additional communication on treatment plans and self-management goals. i2iTracks Today provides quick access to information that can be used to prepare for patient visits and discover all care opportunities that should be addressed during the upcoming visit.

Standard 4: Provide Self Care and Community Support		
NCQA Requirement	**Points**	**i2iTracks and PCMH Requirements**
A. Self-Care Process*	6	i2iTracks provides the tools to track, and report progress on, measurable self-care goals.
B. Referral to Community Resources	3	i2iTracks delivers a complete referral tracking module for referral care management. This module enables reporting on frequency and the types of referrals made to community agencies.
Standard 5: Track and Coordinate Care		
NCQA Requirement	**Points**	**i2iTracks and PCMH Requirements**
A. Test tracking and Follow-	6	i2iTracks delivers tools to track lab and imaging tests and notify patients/families of results. (e.g. cancer screening for women)
B. Referral tracking and Follow-up*	6	i2iTracks referral tracking module tracks all aspects of referrals to a specialist, internal or external. The module monitors all outstanding referrals, generates reminders and follow-ups, and supports referral management to meet time requirements. This module enables reporting on all data related to referrals including referring provider, specialist, and the types of referrals.
C. Coordinate with Facilities/Care Transitions	6	Factors 4: i2iTracks facilitates patient and family contact within the appropriate period following hospital admission or emergency department visit. Factor 6: i2iTracks provides tools to track the completion of a care plan when patients transition from pediatric to adult care.
Standard 6: Measure and Improve Performance		
NCQA Requirement	**Points**	**i2iTracks and PCMH Requirements**
A. Measure Performance	4	i2iTracks Population Analytics module enables reporting and performance review on any number of preventive care measures and chronic or acute care clinical measures. Reporting can be by organization, site or provider. Performance data can be stratified to access disparities in care.
B. Patient/Family Feedback	4	i2iTracks can email or mail patient satisfaction surveys and could be used to record and report results.
C. Implements Continuous Quality Improvement	4	I2iTracks reports produced in D. and E. below can be submitted as evidence of Implementation of CQI. Reports can be used at any point in CQI process to guide and inform efforts, including identifying disparities and highlighting vulnerable areas of focus.
D. Demonstrates Continuous Quality Improvement	3	i2iTracks supports regular reviews of performance data and performance evaluation against goals. As a reporting tool, i2iTracks makes it easy to show effects of interventions and clinical outcome improvements, including producing graphs of data over time.
E. Performance Reporting	3	i2iTracks enables reporting on performance data for all measures in A., by individual clinician and across the practice. Results can be reported to patients or publicly by practice or clinician.
F. Report Data Externally	2	i2iTracks is certified for reporting Meaningful Use clinical measures and supports the electronic submission of data to an immunization registry or information system.
Total	**70**	

*must-pass element

As the table above illustrates, i2iTracks plays a vital role in PCMH attainment, especially for those elements highlighted in golden. In addition, i2iTracks supports Meaningful Use and P4P target achievement. For more information or a demonstration of i2iTracks, please contact i2i Systems today at 866-820-2212 or visit us on the web at www.i2isys.com.

PRESS RELEASE

FOR IMMEDIATE RELEASE
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i2i Systems Among Recipients of Blue Shield of California Foundation's $9 Million Grants in Fourth Quarter of 2011

Part of a pilot program to use technology to improve the quality and delivery of healthcare in California

Santa Rosa, CA April 05, 2012

i2i Systems, a pioneer and leading provider of population health management solutions, today announced that it had been awarded a portion of the Blue Shield of California Foundation (BSCF) $9 million fourth-quarter grants to pilot the development of a state-wide approach for aggregating health center data and providing system-level analytic tools. The project is designed to help regional networks of community clinics use data more effectively to improve their performance and the health of their patients. Networks in northern California, the central valley and southern California will be participating.

i2i Systems will provide networks and centers with their innovative PopIQ solution. With its powerful interface engine that brings together data from disparate electronic health record systems, PopIQ provides an efficient, real-time comparative analytics tool that empowers networks with national standardized measures for tracking and improving performance across clinics and regions.

"Analytic tools that leverage health data in a practical way will help healthcare providers deliver the highest quality care more efficiently," says i2i Systems President and CEO Janice Nicholson. "We are honored to be a recipient of the Blue Shield of California Foundation grant."

In an earlier release on the fourth quarter grants, Peter V. Long, Ph.D., president and CEO of BASCF, said: "Our focus is on supporting California's safety net providers to become a first-class system of care."

About i2i Systems

With over 1,000 health care delivery sites nationwide,i2i Systems is a pioneer and leading provider of Population Health Management solutions and services. We are focused exclusively on creating healthier populations by partnering with – and empowering – healthcare organizations in their journey to deliver the highest quality care. Success, we believe, takes both powerful tools and close collaboration.

i2iTracks®
Population Health Management System

Success Story

Community Health Centers of the Central Coast

i2iTracks Recall and Clinical Benefits

BUSINESS CHALLENGE

- Improve case management , while tracking and reporting on disease measures easily and efficiently.

SOLUTION

- i2iTracks helps CHCCC manage the population health of all its patients, track chronic diseases, and increase patient recall to clinical sites.

RESULTS

- Generated over 14,475 additional annual encounters using recalls, resulting in an estimated $1.8M in additional revenue
- i2iTracks paid for itself in less than 2 months due to increased patient visits & greater administrative efficiency
- Greater efficiency with i2iTracks eliminated the need for 3 additional administrative employees
- Increased the number of diabetic patients whose HbA1c < 7.0 by 57% over the national average
- **Increased pap smear compliance numbers by 52%**

Customer Profile

Community Health Centers of the Central Coast Inc. is a nonprofit network of twenty-two community health centers, located throughout Northern Santa Barbara and San Luis Obispo Counties. CHCCC focuses on providing quality, compassionate care for individuals in the Central Coast. In 2010, CHCCC will serve 75,000 patients, in over 300,000 visits. CHCCC offers medical, dental, mental health, and chiropractic services, as well as health education and specialty care to its patients.

Business Challenge

CHCCC has been monitoring clinical outcomes for years, constantly working to improve its diabetic care in particular. Initially, CHCCC participated in a diabetes collaborative using an access database to track and report data on its diabetic patients. Vince Surra, QI Director, explains, "We realized it was not a great system. It required a lot of manual data entry, it was very hard to generate reports, and it required duplication of efforts." CHCCC did not have the technology to run the population management it wanted. Surra describes the system, saying, "Before, the only patients we tried to contact were the most critical ones, like those whose HbA1c level was 11 or above. We would need to hire 2 additional full time staff members if we wanted to contact everyone over 7."

i2iTracks Implementation

CHCCC addressed this problem by adopting i2iTracks in the Spring of 2009. After implementation of i2iTracks CHCCC discovered the software had the ability to manage its patient population above and beyond diabetes. Surra explains, "We didn't even realize all the other things i2iTracks did. We got it as a disease registry for diabetes, and then realized there were far more possibilities." CHCCC is currently using i2iTracks for diabetes, mammograms, pap smears, asthma, perinatal management, and referral tracking. Surra explains the power of i2iTracks saying, "I used to not know what was going on in the clinics without a chart audit. But now I have a global view of what's going on in our clinics. It's beautiful." CHCCC is in the process of implementing an EHR, but Surra says, "There is no way we are getting rid of i2iTracks because it does things our EHR cannot do."

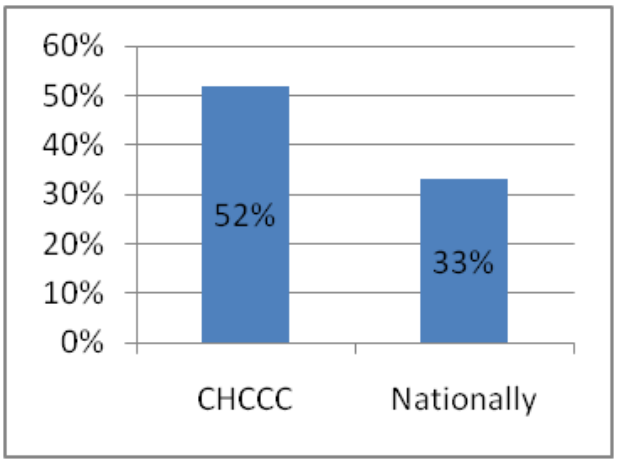
> "Using the power of i2iTracks, we are able to improve outcomes of chronic illness, increase preventive health, and generate revenue at CHCCC.
>
> *Vince Surra*
> *Director of Quality Improvement*
> *CHCCC*

CHC Community Health Centers

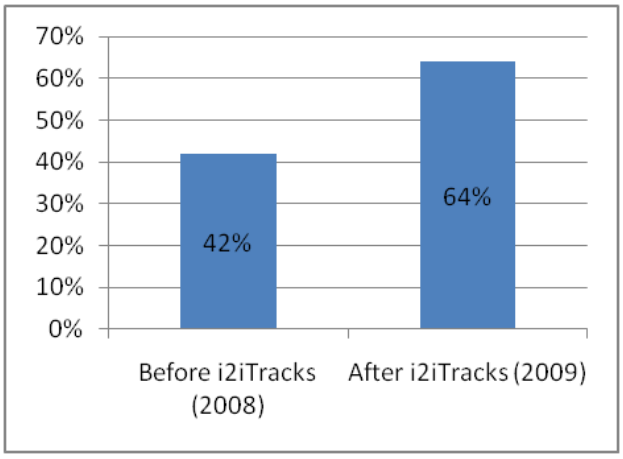
Financial Improvements

Using i2iTracks recall letters, CHCCC has increased its active patient base by 3,707 patients. If each of these patients is seen in a CHCCC clinic 3.9 times a year—CHCCC's average patient visit rate—this will generate approximately 14,475 additional annual encounters. This increase puts CHCCC on track to generate an estimated $1.8 million in additional annual revenue.

i2iTracks also allows CHCCC to gather the required information for grant reporting easily and efficiently. CHCCC compiled a report for their Managed Medi-Cal Care in 2 hours using i2iTracks, which resulted in $35,000 in incentive funds for CHCCC.



i2iTracks increased the percentage of diabetics with an HbA1c < 7.0 by 52% over the national average



i2iTracks helped CHCCC increase their pap smear compliance rate from 42% to 64%

Clinical Improvements

i2iTracks has helped CHCCC monitor patient care more closely, which has improved its clinical outcome data. Surra explains, "As we bring people in the door our clinical results have improved tremendously. We were already doing well, and now we're doing excellent—especially in diabetic care." CHCCC is able to track progress with i2iTracks as well. "Beyond the efficiency and savings for us, it's been really nice to be able to track improvement, and see that this is truly benefitting our patients. I now know our exact diabetic recall response rate, which shows the effectiveness of CHCCC's outreach campaigns. It highlights areas we can improve."

i2iTracks' population health management also pinpoints which patients need immediate attention. Liz Ramirez, an RN at CHCCC confirms, "i2iTracks really helps with case management. I can run a report to see how many patients have a HbA1c above 9. In this manner, i2iTracks lets me know who our most critical patients are, and who I need to focus on." Every one unit increase in HbA1c corresponds to a 2-3% increased risk for serious diabetic complications in the future. By focusing on preventative care now, CHCCC is improving clinical outcomes for its patients down the road.

Provider Experience

i2iTracks acts as a safety net for CHCCC, ensuring that none of their patients fall through the cracks. CHCCC runs i2iTracks reports on mammograms, pap smears, diabetes, and patient referrals every day, to better monitor patient care. If patients are being seen on a regular basis, their clinical outcomes will get better. Surra agrees, saying, "With i2iTracks, our clinical outcome data in every single area has improved."

> "With i2iTracks, our clinical outcome data in every single area has improved
>
> *Vince Surra*
> *Director of Quality Improvement*

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i2iTracks®
Population Health Management System

Success Story

Golden Valley Health Centers
i2iTracks and HealthPort

BUSINESS CHALLENGE
- Need to find technology to manage its patient population and track diseases while integrating an EHR system, HealthPort.

SOLUTION
- i2iTracks manages the population health of all patients seen in Golden Valley clinics, while interfacing with other health information.

RESULTS
- Saved nearly a FTE admin position due to increased efficiency
- Saved over $27,000 annually by eliminating duplicate data entry
- Generated an 18% increase in diabetic patient visits in one year
- Reduced average diabetic patient HbA1c level from 8.9 to 7.6 in over 4,000 diabetic patients
- Easily manage four chronic diseases with the same amount of effort it took previously to manage diabetes alone

Customer Profile

Golden Valley Health Centers is a private, non-profit network of twenty-one medical sites, three mobile sites, and eight dental sites located throughout Merced and Stanislaus Counties, California. In 2008, Golden Valley saw 80,000 individual patients during 260,000 medical visits. Golden Valley provides family practice, pediatric, OB/GYN, dental, chiropractic, podiatry, and optometry services to its patient population, while focusing on medical care for migrant workers and their families.

Business Challenge

Golden Valley has always been ahead of the curve, insisting on electronic patient recording and participating in several chronic disease collaboratives. However, the technology Golden Valley employed was not meeting its expectations. Christine Noguera, Deputy CEO explains, "As an FQHC we have been tracking paps for years; tickler files in some sites, log books in other sites. They were antiquated and ineffective systems as the sheer number of paps that we tracked was steadily growing." Golden Valley needed a way to manage its patients easily and effectively, and to ensure it was addressing the needs of all patients. Kennoris Bates, Nutritional Services Manager says, "We found our chronic disease patients falling through the cracks, and not really being accounted for. We didn't have a good way to track them."

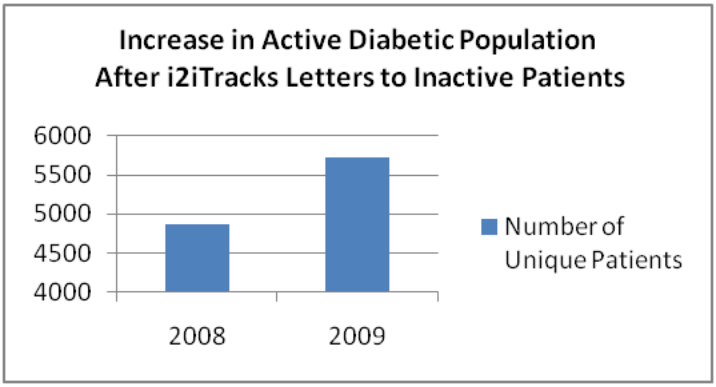
i2iTracks Implementation

In 2005, Golden Valley purchased i2iTracks to address its population health needs. After implementation Golden Valley was immediately able to manage its diabetes, nutrition, pap smear, mammogram, and perinatal measures simultaneously. i2iTracks allows Golden Valley to interface its lab, Electronic Diabetic Retinopathy Screening, and HealthPort PM/EHR, eliminate duplicate data entry, and save hundreds of clinical staff hours. In 2009, Golden Valley also purchased an Electronic Health Record system, HealthPort, to document its patient visits. Teresa Weir, Golden Valley's Application Specialist, emphasizes how essential i2iTracks is in addition to an electronic health record, saying, "I really have a hard time seeing Golden Valley doing the patient care that we do now if we didn't have i2iTracks. Our EMR is just that—an electronic medical record; it is not managing our patient care. I can't do that in my EMR, it's not possible."

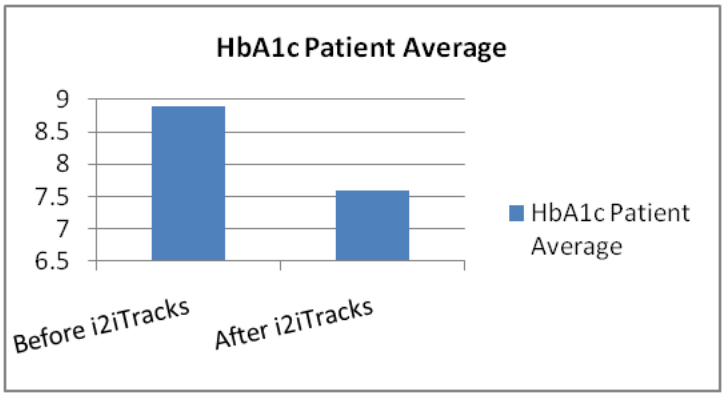
> "Our staff knows that just about anything they need to know about a patient, they can find in i2iTracks. We use it for just about everything.
>
> *Teresa Weir*
> *Application Specialist*
> *Golden Valley Health Centers*

Financial Improvements

i2iTracks has increased physician efficiency, which allows Golden Valley to see more patients annually. This in turn increases revenue. Bates explains, "With i2iTracks we can recover some of the provider's time, so now they have a more focused visit. Then we can target some of the things that really need to be worked on for that visit. That recovered time allows us to see more patients, and address their health needs. It speaks to best care practices." i2iTracks also saved over 800 hours of administrative work for Golden Valley in 2008 by implementing an intelligent interface between i2iTracks and Golden Valley's lab data. This is saving Golden Valley $27,878 annually, and eliminating nearly a full administrative job due to increased efficiency.



Inactive diabetic patients who received a clinical visit increased from 4,869 to 5,723 after i2iTracks recall letters



With the help of i2iTracks, average hemoglobin A1c levels in 4,000 diabetic patients decreased from 8.9 to 7.6

Clinical Improvements

Using i2iTracks' patient recall, Golden Valley was able to send a letter to every diabetic patient who had not seen a provider in the last 3 months, reminding them to schedule a visit. This increased patient visits by 18%, allowing Golden Valley to manage its patients' clinical outcomes more closely. Noguera explains, "We can use the information from i2iTracks to drill down and identify our high risk patients; all patients with an HbA1c over 10 will receive a personalized phone call from a health educator. Using our system, we have been able to decrease our average HbA1c from 8.9 to 7.6 for over 4,000 patients within the registry."

Provider Experience

i2iTracks helps Golden Valley track and address the needs of all its patients. Noguera explains, "i2iTracks has absolutely improved the quality of our care by helping us identify patients who have more serious health conditions." Connie Diers, Director of Nursing adds, "i2iTracks brought things to the surface we weren't doing so well. It's a great tool for tracking how well sites are following up with their patients." This improves the health of Golden Valley's patient population, and ensures that Golden Valley is devoting its time to the thing that matters most—patient care. Weir agrees saying, "If we didn't have i2iTracks, I don't know if we would be able to do it. Before, because patient management was so time consuming, it wasn't always going to get done. Now we know the concerns of every patient are being addressed."

> "We can use the information from i2iTracks to drill down and identify our high-risk patients...i2iTracks has absolutely improved the quality of our patient care."
>
> *Christine Noguera*
> *Deputy CEO*

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i2iTracks®
Population Health Management System

Success Story

Primary Health Care, Inc.
i2iTracks and GE Centricity

BUSINESS CHALLENGE
- Primary Health Care needed a tool to analyze populations on a large scale, while improving disease management and eliminating double entry of data.

SOLUTION
- i2iTracks allows Primary Health Care to manage its population data easily and efficiently, generate data to receive grant funding, and interface with PMS and EHR software.

RESULTS
- Eliminated the need for two additional employees due to increased efficiency.
- Increased its pediatric immunization rate from 42% to 85%.
- Tobacco tracking type helped 13 Iowa CHCs secure over $1.8M in incentive funds, while managing a statewide tobacco cessation initiative.
- Patient population monitoring helped over 1,000 people quit using tobacco via Iowa's cessation program.

Customer Profile

Primary Health Care, Inc. is a nonprofit community health center, which has provided quality medical care throughout Central Iowa for nearly thirty years. Its four clinical sites offer medical, dental, pediatric, and maternal services to its patients, 56% of which are uninsured. In 2009, Primary Health Care saw 24,425 patients, in over 82,000 clinical visits.

Business Challenge

Primary Health Care has been committed to improving efficiency and clinical outcomes for its patients for many years now. Primary Health Care had been utilizing PECs to monitor its patient population, but the software was not an effective tool for its clinical sites. Dr. Bery Engebretsen, Medical Director explains, "We weren't very happy with the PECs software. We wanted to be able to easily do more things with the data, and it was very restrictive. The double entry of data was also inefficient and cumbersome." Primary Health Care needed a better way to manage its patient population. Dr. Engebretsen adds, "We had been participating in a chronic disease collaborative, and we wanted to be able to continue and expand on the kind of data analysis that we had learned, which our PECs software wasn't doing."

i2iTracks Implementation

Primary Health Care purchased i2iTracks in 2007 to address its population health needs. i2iTracks eliminated the double entry of data, allowed sophisticated patient searches, and created a comprehensive population health management solution. i2iTracks' population health management ensures that every patient counts. Dr. Engebretsen explains this fact, saying, "i2iTracks is so much easier to use than our practice management system. We have moved beyond just diabetes tracking and into the world of tracking multiple chronic diseases and preventive measures for all patients. This was a huge leap forward in ensuring a healthier patient base."

> "i2iTracks helps Primary Health Care save time, increase efficiency, & expand the scope of patient monitoring; without it, our patient care would be affected."
>
> *Dr. Bery Engebretsen, M.D.*
> *Medical Director*
> *Primary Health Care, Inc.*

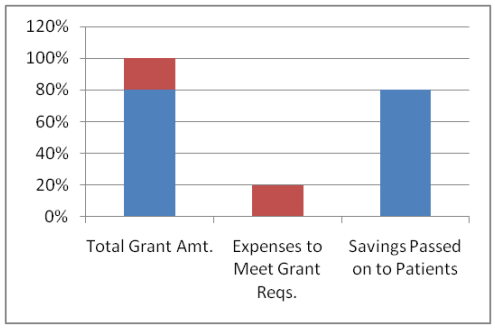
Financial Improvements

Primary Health Care received a grant for eliminating barriers in self-management of diabetes. Dr. Engebretsen explains, "Because i2iTracks is so efficient, we only used 1/5 of that grant, and passed the savings onto our patients, allowing them to purchase their diabetes medication at an extremely reduced price."

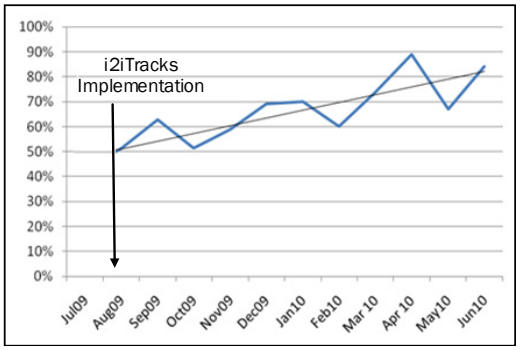
i2iTracks' interface with PHC's Practice Management System eliminated the need for 2 additional employees. Dr. Engebretsen explains, "If we didn't have the interface between i2iTracks and our PMS that i2i Systems built for us, we would be entering all that data by hand, and transferring it onto the clinical form as well. So not only would someone at the clinical end have to enter that data, but we'd also need an administrative staff member to enter it for the health center."

Clinical Improvements

PHC also implemented i2iTracking in its quality improvement department, to closely monitor clinical outcomes. PHC used i2iTracks to sample 70 pediatric patients each month, to estimate its immunization rate. Using this tool, the predicted childhood immunization rate improved from 42% to 85%.



The efficiency of i2iTracks allowed grant savings to directly benefit patients



Childhood Immunization Rates Increased from 42% to 85% using i2iTracking

i2iTracks & GE Centricity

PHC is in the process of implementing an Electronic Health Record system, GE Centricity. However, Dr. Engebretsen explains that i2iTracks will still be essential for PHC, saying, "The disease management that i2iTracks can do, our EMR won't do. EMRs can't do what i2iTracks does in terms of managing populations." i2iTracks will interface with PHC's EHR, synthesizing a large amount of patient information in one location. i2iTracks and GE Centricity's EHR will each improve patient care, albeit in different ways.

Statewide Population Management using i2iTracks

Using i2iTracks' population management, the Iowa Department of Public Health constructed a statewide incentive program to encourage tobacco cessation for its citizens. i2iTracks allowed Iowa's CHCs to pinpoint the patients they wanted to help quit smoking, and receive incentive funds based on the number of tobacco cessation sessions conducted.

PHC is one of the 13 CHCs in Iowa participating in this statewide campaign. i2iTracks allowed each CHC to manage all the tobacco users in its patient population, and receive incentive payments based on its ability to monitor these patients and conduct tobacco cessation sessions. The power of i2iTracks allowed the program to gather data from the 13 different CHCs and synthesize it in an efficient and straightforward manner.

Using the power of i2iTracks, PHC achieved a 20% quit rate, and received $223,628 in the past 3 years in incentive funds. Statewide, i2iTracks helped over 1,000 people quit using tobacco, and the 13 participating CHCs secured over $1.8M in incentive funds. Dr. Engebretsen explains, "With i2iTracks we could track and locate data on smokers, specifically those who wanted to quit smoking. It made our campaign more effective."

> "The mission of i2i Systems, Inc. as a company so closely aligns with what health centers are trying to do… without i2iTracks our patient care would be affected
>
> *Bery Engebretsen, M.D*
> *Medical Director*

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i2iSystems

i2iTracks®
Population Health Management System

Success Story

Santa Barbara Neighborhood Clinics
i2iTracks and Grant Funding

BUSINESS CHALLENGE
- Providing quality care with limited funds
- Managing patients' health needs

SOLUTION
- i2iTracks provides an accessible way to track patient populations and gather necessary data to receive grant funding.

RESULTS
i2iTracks helped secure over $1 million in grants by:
- tracking immunization rates
- gathering data for screening mammograms in uninsured patients
- managing patients' preventive health assessments
- i2iTracks recall letters helped generate a 40% increase in dental prophy exams

Customer Profile

Santa Barbara Neighborhood Clinics is a non-profit, community health clinic organization serving the needs of the Santa Barbara community. The mission of Santa Barbara Neighborhood Clinics is to provide high-quality, affordable care, while acting as a critical health safety net for the medically underserved in the community. In 2010, their three clinical sites served 16,933 unduplicated low-income, uninsured and homeless patients with over 75,000 encounters and health education visits.

Business Challenge

With 64% of their patients below the federal poverty line, Santa Barbara Neighborhood Clinics has limited funds and must be as efficient as possible. Leslie Kearney, Clinical Services Director, explains, "We are stressed financially, so we try to utilize everything we can and everyone we can to provide an effective service to our patients." However, its practice management system was not living up to these expectations. Yessenia Marroquin, Director of Clinic Operations describes the system, saying, "We had to keep excel logs in the past, and unless you have somebody that is really thorough and has a lot of time, patients are going to get lost." Santa Barbara Neighborhood Clinics was struggling to make sure this did not happen.

i2iTracks Implementation

Santa Barbara Neighborhood Clinics purchased i2iTracks in 2004 to address its population health needs. Kearney sees a huge difference in the ability of SBNC to manage patient health saying, "i2iTracks is a necessary component for providing the most efficient care for our patients; we have come a long way with the software." With i2iTracks, SBNC is better able to manage its patient population, recall patients to its clinics with automated letters, and access data for grant writing easily and effectively. Marroquin explains, "With i2iTracks we know we are complying with all patients and with all their needs in our office as well as in their referral care. Everything is entered into the software, so you can prepare patient files in advance. It's efficient; it's a winner, no matter what." i2iTracks paid for itself in just 3 months and helped Santa Barbara Neighborhood Clinics capture nearly $500,000 in grant funds.

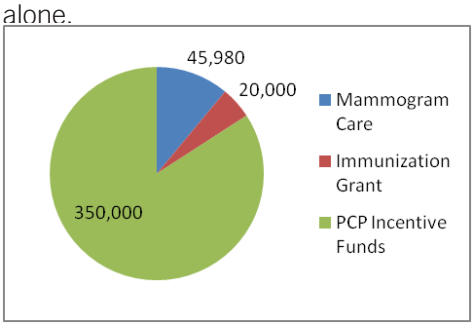
> "i2iTracks is an invaluable tool for SBNC. It increases productivity, keeps patients healthy and ensures that patients are not falling through the cracks!

SBNC

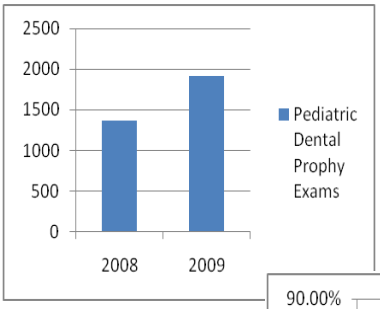
Leslie Kearney
Clinical Services Director

Financial Improvements

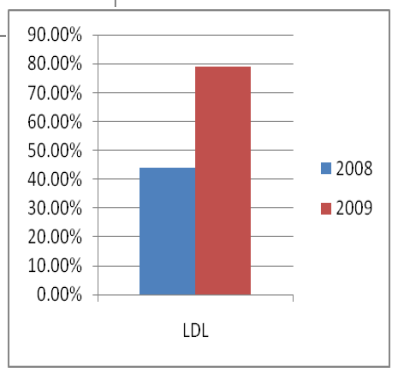
Santa Barbara Neighborhood Clinics has been able to harness the power of i2iTracks for reporting measures, to remain financially viable. Due to the specificity of tracking and the dedication and hard work of Santa Barbara Neighborhood Clinics' staff, the clinic received the equivalent of $45,980 in care for screening mammograms. Administrators use i2iTracks to run quarterly immunization reports for a California Immunization Grant, receiving $20,000 a year. i2iTracks allowed staff to easily document the clinical improvements its providers are constantly working towards. This population documentation allowed Santa Barbara Neighborhood Clinics to easily submit its clinical measures to its Managed Care Medi-Cal plan, generating over $350,000 in incentive funds in 2009 alone.



i2iTracks helped SBNC gather data to secure $415,980 in financial benefits to continue to provide care for the medically underserved.



SBNC showed a 40% increase in the number of dental prophy exams due to i2iTracks



SBNC showed a 44% increase in the number of diabetics receiving an LDL test

Clinical Improvements

In 2009, Santa Barbara Neighborhood Clinics lost funding from the state of California for mammograms for uninsured women ages 40 - 49, and had to document the number of women this affected to recoup these services free of charge. Marroquin says, "Two-hundred and forty-two patients would have lost coverage for screening mammograms. It was so easy to run a search in i2iTracks for that patient population to get the data for the grant funding; we couldn't have done it otherwise."

Santa Barbara Neighborhood Clinics also works with Managed Medi-Cal in a Primary Care Provider Incentive Program for preventive health assessments, after hours visits, and encounters. Staff members have created a Custom Tracking type in i2iTracks, which helps schedule patient visits and provides closer monitoring for preventive health assessments.

Santa Barbara Neighborhood Clinics has utilized i2iTracks' recall letters at its Dental Clinic to contact 2,600 new patients, and to generate a 40% increase in pediatric dental prophy exams from 2008 to 2009. Dental Director Dr. Quynh Nguyen explains, "SBNC is the only non-profit dental clinic in Santa Barbara, which offers a crucial health service to the have-nots of our community who would otherwise suffer pain and infection from lack of oral care."

> "With i2iTracks we know we are complying with all patients and with their needs in our office, as well as in their referral care. It's efficient; it's a winner, no matter what.
>
> *Yessenia Marroquin*
> *Director of Clinic Operations*

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