

**The Ohio Public Health Informatics Committee
(TOPHIC)
November 15, 2012 Meeting Minutes**

Members Present	Affiliation	Members Absent	Affiliation
Bob Campbell	ODH – ODH Data Center	Amy Andres	Ohio Hospital Association
Jim Coates	Cuyahoga Co Health Dept	Bill Burkhart	Public Health –Dayton & Montgomery County
Steve Englender	Cincinnati Health District	Sam Chapman	ODH – Bureau Child and Maternal Health
Kelly Friar	ODH – Vital Statistics	Ron Clinger	Defiance Co Health Dept
Greg Halley	Wayne Co Gen Health Dist	Gary Davis	Miami Co Hea District & OEHA
Bruce Hotte	ODH – Office Mgmt Inf Sys	Joe Ebel	Licking Co Health Dept
Gene Phillips	ODH – ODH – Env Health	Margie Eilerman	Shelby Co Health Dept
Chris Snyder	Clark Co Health Dist	Doug Fisher	Hocking County Health Dist
Roger Wren	Delaware Gen Health Dist	Shelia Hiddleson	Champaign Co Health Dept
		Tim Hollinger	Huron Co Health Dept
		Joe Mazzola	ODH – Local Health
		Richard Mukisa	ODH- Prevention
		Melissa Novits	Youngstown City Health Dept
		Tim Sahr	OSU
		Pete Shade	Erie Co Health Dept
		Tim Snell	Lake Co Gen Health Dist
		Jeff Webb	Champaign Co Health Dept

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1. WELCOME

Bruce Hotte and Greg Halley called the meeting to order at 9:30 a.m. Bruce and Greg welcomed everyone to the meeting.

2. CONSENSUS AGENDA.

Jim Coates provided the following items for the consent agenda. Please see attachments for further details.

a. Centers for Disease Control and Prevention (CDC) is soliciting nominations for possible membership on the National Public Health Surveillance and Biosurveillance Advisory Committee (NPHSBAC). See attachment NPHSBAC.PDF.

b. NACCHO ePublic Health Blog <http://ephinformatics.wordpress.com/>

c. Paper forwarded from AMIA Public Health Informatics workgroup on Big Bad Data. See Attachment BIG BAD DATA.PDF.

d. 2013 HIMSS Interoperability Showcase. See Attachment HIMSS 2013 Interoperability Showcase.PDF

3. ATTENDANCE

The committee reviewed the attendance for members for 2012. It was noted that 6 committee members have not attended any meeting in 2012 and 3 other members have only attended one meeting. The committee recommended that we reach out to the delinquent committee members and ask them if they desire to continue to represent their agency or program in 2013. Members who fail to respond will be dropped from membership.

- a) As was decided in our February 2012 meeting, Greg Halley tenure as co-chair was to expire at this meeting. Nominations were presented and Jim Coates from Cuyohoga County was selected as the new co-chair representing Local Public Health to serve through 2014, along with Bruce Hotte from ODH to serve until November 2013.
- b) Richard Mukisa was selected to continue as secretary.
- c) Bob Campbell is retiring at the end of November 2012 and this was his final meeting as a committee member.

4. COMMITTEE GOALS and OBJECTIVES for 2013

- a) The Committee debated their continued value, including input from members who provided input via email. The consensus was that the Committee was adding value to Public Health and should continue to meet in 2013.
- b) Minutes from the TOPHIC Meeting should be posted to the LHD web page by Joe Mazzola.
- c) The committee would like to have monthly updates from the following areas.
 - i. HIE/EHR updates (HealthBridge, Clinisync, and Jim Carroll)
 - ii. Interoperability Project (John Joseph)
 - iii. Vital Statistics (Kelly Friar)
 - iv. Perceived needs, shortcomings for existing systems

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- v. NACCHO Informatics Workgroup update (Jim Coates)
- d) The committee would like to have quarterly updates on workforce development
- e) The committee selected the following important topics to invite key individuals to the committee to present sometime in 2013.
 - i. MCH Systems
 - ii. Informatics (Jim Coates)
 - iii. NCH NAPHSIS Committee (Kelly Friar)
 - iv. Joint Public Health Informatics Task Force (Kelly Friar)
 - v. Infant Mortality (Dr. James)
 - vi. Prescription drug abuse (OPIATE) and related systems (e.g. Violent Death Reporting) Update
 - vii. Immunization Update
 - viii. Public Health
 - ix. Population Registries and Population Analytics
 - x. IT Standards (Windows, Office, iPads, etc)
 - xi. OHT Transformation Status (Rex Plouck)
 - xii. HPIO Update

5. ENVIRONMENTAL HEALTH

Gene Phillips informed the group that efforts from the last several weeks of meetings between the vendor and stakeholders resulted in completion of Requirements Affirmation. The Fit-Gap Analysis document was provided to ODH on November 13th and that ODH is currently in the process of reviewing and confirming information in the Fit-Gap report. A meeting between the Healthspace (the vendor) and ODH occurred on November 15th to begin reviewing the analysis document. The project is currently on schedule with testing to begin in January with an expected release date of February to March for the Pool Program Module. As of this date, 62 health districts had committed to using the system, which accounts for approximately 375 users. Stakeholder meetings are on-going, with a Mobile device demonstration scheduled for December 7, 2012.

6. VITAL STATISTICS UPDATE

Kelly Friar reported that VS operations are running smoothly. She gave an update on the work of the Ohio Perinatal Quality Collaborative, specifically how ODH is working to improve the quality of data collected in IPHIS. There is confusion among hospital staff entering the data about the correct definitions of the data and how to find the data elements in the patient's medical record. Currently, VS is working with ODH Creative Services and OPQC to create on-line learning modules to clarify data definitions in IPHIS. The modules will also speak to how birth teams can work together to improve the accuracy of data. One of the most important initiatives to reduce infant mortality and improve birth outcomes is to reduce the number of non-medically indicated scheduled deliveries prior to 39 weeks gestation. In order to get an accurate baseline and measure improvement, gestational age must be recorded correctly in IPHIS. This is one of the several variables teams are working to improve. She also distributed a flyer on the Ohio Infant Mortality Summit, November 28, 2012, at the Greater Columbus Convention Center. She will be on a panel about birth certificate data. Kelly also shared a letter from Charles Rothwell, Director, Division of Vital Statistics,

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NCHS, indicating that the Directors of health jurisdictions (states and territories) will be receiving score cards about their vital statistics office performance in data submission timeliness and accuracy.

7. EHR/HIE/Data Warehouse Update

Bob Campbell provided an update on the Electronic Health Record/Health Information Exchange, and the Data Warehouse Priority area of the State Health Improvement Plan (SHIP).

Assessment:

- Virtually all Ohio hospitals have implemented or are planning implementation of EHRs
- 32% of health care providers and 49% of primary care providers have adopted

EHRs Workforce Development:

- Over 1000 persons in Ohio have been trained through the Midwest Community College Health Information Technology Consortium
Coordinated by the Cuyahoga Community

College Adoption/Implementation of EHR and

HIE:

- ORC guidelines for HIEs in Ohio became effective September 9, 2012
- HealthBridge serving 11 Ohio counties has 22 hospitals and over 7000 physicians on their HIE
- Ohio Health Information Partnership serving 77 counties has 3 hospitals and 266 physicians live on their HIE CliniSync, with 47 more hospitals in implementation.

8. Shane Hegarty from RxNT provided an overview of their EHR product.
 - a) Attached is a brief description of each product below along with full literature. If you have any questions about any of these products or our pricing, please email or call Shane per his contact information below. He can also provide a short demo upon request to anyone interested. Pricing is negotiable once he understands the needs.
 - b) RxNT eRx - our nationally recognized ePrescribing product that has won many awards including SureScripts Gold Rx certification 6 years in a row. This product provides real-time medication history, drug and allergy interactions, real-time formulary review, and pharmacy connectivity to more than 65,000 U.S. pharmacies.
 - c) RxNT EPCS - Yes, you can now register to electronically prescribe controlled

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substances. Be one of the first in your area to use RxNT EPCS for your patients using the first fully SureScripts certified eHr for EPCS in the U.S.

- d) RxNT eHr - our comprehensive electronic medical record solution that is 2012 ONC-ATCB certified and CCHIT certified meeting all the requirements for Meaningful Use allowing you to receive your share of the \$44,000 per provider in Federal Incentives.
- e) RxNT PM - offering a seamlessly integrated Practice Management solution for those using RxNT eHr. Now, all your charges are captured at the point of care and electronically flow to your billing staff saving time and money.
- f) CONTACT: Shane Hegarty | RxNT | National Sales, Phone: 800-943-RxNT (7968) ext. 7023, e-mail: Shegarty@RxNT.com.

9. NEXT MEETING

There will be no meeting in December. The next TOPHIC meeting will be on January 17,

2013. LIST OF REMAINING MEETING DATES FOR YEAR 2012

- 1. No December meeting – Happy Holidays

Meeting Dates for 2013

- 1. January 17, 2013
- 2. February 21, 2013
- 3. March 21, 2013
- 4. April 18, 2013
- 5. May 16, 2013
- 6. June 20, 2013
- 7. July 18, 2013
- 8. August 15, 2013
- 9. September 19, 2013
- 10. October 17, 2013
- 11. November 21, 2013
- 12. No December meeting – Happy Holidays

LINKS AND ATTACHMENTS

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Source	Attachment	Topic/Type	How to Access It
Jim Coates	Consent Agenda	PDF	NPHSBAC.PDF
Jim Coates	Consent Agenda	PDF	BIG BAD DATA.PDF
Jim Coates	Consent Agenda	PDF	HIMSS 2013 Interoperability Showcase.PDF
Jim Coates	Consent Agenda	Web Link	http://epinformatics.wordpress.com/
Shane Hegarty	RxNT Demo	PDF	Updated Comparison HER.PDF
Shane Hegarty	RxNT Demo	Word	2012 HER Benefits.docx
Shane Hegarty	RxNT Demo	PDF	RxNT-EHR-Brochure.PDF
Shane	RxNT Demo	PDF	RxNT-PM-Brochure.PDF

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Hegarty			
Shane Hegarty	RxNT Demo	PDF	MU Testimonials RxNT.PDF

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TOPHIC Members

Attendance

Contact Name	Email	Feb 12	Mar 12	Apr 12	May 12	Jun 12	Jul 12	Aug 12	Sep 12	Oct 12	Nov 12
Amy Andress	amy@ohanet.org		X								
Bill Burkhardt	wburkhardt@phdmc.org	X		X				X			
Bob Campbell	bob.campbell@odh.ohio.gov	X	X	X			X	X			X
Sam Chapman	sam.chapman@odh.ohio.gov	X									
Ron Clinger	rclinger@defiance-county.com		X	X							
Jim Coates	jcoates@ccbh.net		X	X			X				X
Gary Davis	gdavis@miamicountyhealth.net	X									
Joe Ebel	jebel@lickingcohealth.org										
Margie Eilerman	margie.eilerman@odh.ohio.gov	X		X				X			
Steve Englender	steven.englender@cincinnati-oh.gov			X			X				X
Doug Fisher	dfisher@hockingchd.com		X				X				
Kelly Friar	kelly.friar@odh.ohio.gov	X	X	X			X	X			X
Greg Halley	ghalley@wayne-health.org	X	X	X			X	X			X
Shelia Hiddleson	shiddleson@champaignhd.com			X			X				
Tim Hollinger	thollinger@huroncohealth.com										
Bruce Hotte	bruce.hotte@odh.ohio.gov	X	X	X			X	X			X
Joe Mazzola	joe.mazzola@odh.ohio.gov										
Richard Mukisa	richard.mukisa@odh.ohio.gov	X	X	X			X	X			
Melissa Novits	mnovits@ychd.com										
Gene Phillips	gene.phillips@odh.ohio.gov		X	X			X	X			X
Tim Sahr	timothy.sahr@osumc.edu	X	X					X			
Peter Schade	pschade@eriecohealthohio.org										
Tim Snell	tsnell@lcghd.org						X				
Chris Snyder	csnyder@ccchd.com						X	X			X
Jeff Webb	jwebb@champaignhd.com		X	X							
Roger Wren	rwren@delawarehealth.org	X	X	X				X			X

Subject: Nominations for the National Public Health Surveillance and Biosurveillance Advisory Committee

From: Michael Coletta <mcoletta@naccho.org>

Date: 11/12/2012 11:47 AM

To: BioSurveillance Workgroup <BioSurveillanceWorkgroup@naccho.org>, "PH Informatics Workgroup" <PHInformaticsWorkgroup@naccho.org>

CC: "'Lloyd Hofer, M.D., MPH'" <LLoyd.Hofer@gnrhealth.com>, Colleen Ryan Smith <colleen.ryan-smith@montgomerycountymd.gov>, Robert Kim-Farley <rkimfarley@ph.lacounty.gov>, 'Anna Dillingham' <adillingham@ualhd.org>, 'Laverne Snow' <lavernesnow@utah.gov>, "anne.o'keefe@douglascounty-ne.gov" <anne.o'keefe@douglascounty-ne.gov>, "'Davidson, Arthur MD'" <Arthur.Davidson@dhha.org>, "mcheatham@mmdhd.org" <mcheatham@mmdhd.org>, "Paul R. Decknick" <pdecknick@naccho.org>, Paul Etkind <petkind@naccho.org>, Jack Herrmann <jherrmann@naccho.org>

As you may know, the CDC has decided to re-organize the National Biosurveillance Advisory Subcommittee (NBAS) into a broader committee on surveillance and biosurveillance. They are looking for nominations and we would love to put some local names forward. Please nominate yourself or someone you know and respect that has the time and ability. We have to send names forward by Nov 30, so please send me your thoughts by 11/16.

Below are the details for nomination per the federal register:

The Centers for Disease Control and Prevention (CDC) is soliciting nominations for possible membership on the National Public Health Surveillance and Biosurveillance Advisory Committee (NPHSBAC). This committee provides advice and guidance to the Secretary of the Department of Health and Human Services and the Director of the Centers for Disease Control and Prevention, regarding the broad range of issues impacting the human health component of biosurveillance. The Committee will ensure that the Federal Government is meeting the goal of enabling State and local government public health surveillance capabilities. Specifically, this includes recommendations related to both traditional and innovative information sources of human health related data from State and local government public health authorities and appropriate private sector health care entities. This also includes recommendations to enable healthcare and public health information exchange.

Nominations are being sought for individuals who have expertise and qualifications necessary to contribute to the accomplishments of the Committee's objectives. Nominees will be selected based upon expertise in the field of public health surveillance and biosurveillance; multi-disciplinary expertise in public health; scientific and technical expertise. Whenever possible, nominees should be acknowledged experts in their fields whose credibility is beyond question. All nominees should have demonstrated skills in critical evaluation of data and communication skills necessary to promote efficient and effective deliberations.

Federal employees will not be considered for membership. Members may be invited to serve up to four-year terms. Consideration is given to representation from diverse geographic areas, both genders, ethnic and minority groups, and the disabled. Nominees must be U.S. citizens.

The following information must be submitted for each candidate: Name, affiliation, address, telephone number, and current curriculum vitae. Email addresses are requested if available.

Sincerely,

Michael A. Coletta, MPH
Lead Informatics Analyst
National Association of County & City Health Officials (NACCHO)
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2013 Public Health Preparedness Summit

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Big Bad Data: Law, Public Health, and Biomedical Databases

**Sharona Hoffman
Andy Podgurski**

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BIG BAD DATA: LAW, PUBLIC HEALTH, AND BIOMEDICAL DATABASES

By: Sharona Hoffman* and Andy Podgurski**

The accelerating adoption of electronic health record (EHR) systems will have profound impacts on clinical care. It will also have far-reaching implications for public health research and surveillance, which in turn could lead to changes in public policy, statutes, and regulations. The public health benefits of EHR use can be significant. However, researchers and analysts who rely on EHR data must proceed with caution and understand the potential limitations of EHRs.

Much has been written about the risk of EHR privacy breaches.¹ This paper focuses on a different set of concerns, those relating to data quality. EHR data can be erroneous, miscoded, fragmented, and incomplete. In addition, if causation is at issue, analysts must grapple with the complexities of causal inference. Public health findings can be tainted by the problems of selection bias, confounding bias, and measurement bias. These and other obstacles can easily lead to invalid conclusions and unsound public health policies.

The paper will highlight the public health uses of EHRs. It will also probe the shortcomings of EHR information and the challenges of collecting and analyzing it. Finally, we outline several regulatory and other interventions to address data analysis difficulties.

Public Health Benefits of EHRs

The advent of EHRs brings with it a wealth of opportunities for enhanced public health initiatives. EHR systems can report real-time data that will facilitate surveillance of infectious diseases, disease outbreaks, and chronic illnesses. Software can extract data from records, analyze them, and electronically submit them to public health authorities, which will likely soon receive unprecedented amounts of information.² In fact, the meaningful use regulations with which providers must comply in order to be granted federal incentive payments for EHR adoption already require that providers be able to submit three types of data to public health authorities: lab results, syndromic surveillance, and immunizations.³

EHRs will also promote public health research. Large EHR databases can enable researchers to conduct comprehensive observational studies that include millions of records from patients with diverse demographics who are treated in real clinical settings over many years. Researchers could use these rich collections of data to study disease progress, health disparities, clinical outcomes, treatment effectiveness, and the efficacy of public health interventions, and

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** Professor of Electrical Engineering and Computer Science, Case Western Reserve University. B.S., M.S., Ph.D., University of Massachusetts. The authors thank Corbin Santo for his dedicated research assistance.

their findings may influence many public health decisions. To this end, the Patient Protection and Affordable Care Act of 2010 embraces the concept of “comparative effectiveness research” and supports the use of observational studies to evaluate and compare health outcomes.⁴

EHRs may be particularly valuable during public health emergencies. EHR systems may enable responders to obtain critical medical information about disaster victims in the absence of access to their physicians’ offices and in the face of local computer failures.⁵ Basic EHR systems can also be deployed at disaster scenes or in field hospitals to facilitate data sharing, decision-making, and efficient administrative operations.⁶

Equally beneficial are EHR alert and decision support mechanisms that could serve as a continuous communication channel between clinicians and public health authorities. Public health officials could provide electronic updates and recommendations to clinicians both during emergencies and in ordinary times.⁷

EHR Shortcomings

The proliferation of available data is generating much excitement in the public health community. However, this enthusiasm must be tempered by recognition of the potential limitations of EHR data.

EHRs often contain data entry errors. Busy clinicians sometimes type quickly and invert numbers, place information in the wrong patient’s record, click on incorrect menu items, or cut and paste narrative from prior visits without carefully editing and updating it.⁸

Much of the information in EHRs is coded using the International Classification of Diseases (ICD-9) and customized lists incorporated into EHR products, and coding can introduce further errors. Codes may be confusing, misleading or too general to indicate the specifics of patients’ conditions.⁹ Furthermore, EHRs may not accommodate detailed and nuanced natural language notes about patients’ medical histories and diagnostic findings.¹⁰

Commentators have noted that providers collect data for clinical and billing purposes rather than for public health reasons. Thus, EHR content is not always well-suited for public health uses. Furthermore, clinicians may have incentives to “upcode” in order to maximize charges, and this practice can compromise the accuracy of records.¹¹

In some instances, EHRs are incomplete, lacking essential information such as treatment outcomes. Patients who receive medication from their doctors often do not report whether the therapy was effective. The absence of return visits may mean that the patients were cured, but it could also indicate that they failed to improve or deteriorated and decided to visit different doctors or specialists.¹²

In addition, patient records are frequently fragmented. A patient may see multiple doctors in different facilities, and if these practices do not have interoperable EHR systems,

pieces of the individual's record will be scattered in different locations. Such fragmentation can hinder surveillance and research efforts because the patient's medical history cannot easily be put together into a comprehensive whole.¹³

EHR vendors are making slow progress towards achieving interoperability, the ability of two or more systems to exchange information and to operate in a coordinated fashion. In 2010 only 19% of hospitals exchanged patient data with providers outside their own system.¹⁴ Vendors may have little incentive to produce interoperable systems because interoperability might make it harder to market products as distinctive and easier for clinicians to switch to different EHR products if they are dissatisfied with the ones they purchased.

The lack of interoperability in EHR systems can also impede data harmonization. Different systems may use different terminology to mean the same thing or the same terminology to mean different things. For example, the abbreviation "MS" can mean "mitral stenosis," "multiple sclerosis," morphine sulfate" or "magnesium sulfate."¹⁵ If the term's meaning is not clear from the context, analysts may not be able to interpret it correctly.

Causal Inference

Even if the EHR data themselves are flawless, analysts seeking to answer causal questions, such as whether particular public health interventions have had a positive impact, will face significant challenges relating to causal inference.¹⁶ These include selection bias, confounding bias, and measurement bias.

Selection bias can occur when analysts study a subgroup that is not representative of the population of interest. The group studied might not have sufficiently diverse clinical, demographic, or genetic attributes, and therefore, it would be inappropriate to generalize study conclusions to the population at large.¹⁷ It is even possible that individuals with personal or political agendas will selectively report information to public health authorities in order to skew outcomes and promote particular public health policies that they favor.

Confounding bias is a systematic error associated with the failure to account for the effect of variables that influence both the treatment or exposure being studied and the outcome.¹⁸ For example, socioeconomic factors may be confounders. To illustrate, low income may cause individuals to choose sub-optimal inexpensive treatments and may also separately lead to deteriorated health because of stress or poor nutrition. A failure to account for socioeconomic status may thus skew study results.

Measurement biases are generated by errors in measurement and data collection resulting from faulty equipment or human error. In addition, patients may provide clinicians with incorrect information regarding their medical histories, symptoms, or treatment compliance because they are confused, have impaired memories, or are embarrassed to tell the truth.¹⁹ Like other EHR inaccuracies, measurement bias can skew analytical results.

Adequate Infrastructure

EHR information that is submitted pursuant to the meaningful use regulations may soon inundate public health agencies. It is entirely unclear that these agencies have the infrastructure to receive, store, process, analyze, and make sense out of the data that is submitted. According to one source, only 15% of states with general communicable disease surveillance systems were able to receive EHR data, and other commentators have noted inadequacies in computing resources and shortages of qualified public health analysts.²⁰ Having large volumes of electronic information available will not promote public health if the government does not have the capacity to process it and apply the findings it yields.

Recommendations

Secondary use of EHR data in order to promote public health can be facilitated through a variety of approaches. Interoperability, improved infrastructure, and appropriate data analysis techniques are all important contributing factors.

Interoperability

Establishing interoperability and data harmonization is of critical importance to the success of the EHR initiative in general and to its positive impact on public health in particular. Semantic interoperability is defined as the ability to interpret and effectively use exchanged information, achieved through “shared data types, shared terminologies, and shared codings.”²¹

As discussed above, vendors may not be eager to support interoperability on their own, and the absence of this capacity remains a major concern in the health care community.²² Consequently, vendors should be incentivized or compelled to produce interoperable EHR systems. One option is to include semantic interoperability requirements in forthcoming Stage 3 Meaningful Use regulations.

Data Collection and Storage

Interoperability alone, however, will not be sufficient to leverage EHRs for public health uses. Health information technology experts will need to develop software that can scan clinicians’ EHRs, extract relevant data, analyze it, and communicate findings in the appropriate format to public health agencies. Such efforts are already underway, as illustrated by the example of the Electronic Medical Record Support for Public Health surveillance platform, described in a recently published paper.²³ Furthermore, to the extent that EHRs do not organically contain all of the information that public health authorities will need, vendors should add forms and fields to their systems that will ask clinicians to capture and enter the necessary information.

In addition, the federal government should provide public health departments with funding to enhance their infrastructure in order to receive and process EHR data. Admittedly,

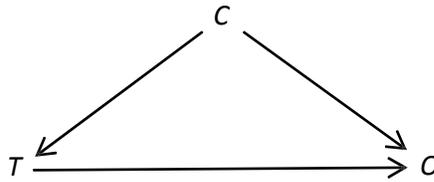


Figure 1: Causal diagram showing causal arrows between treatment variable *T*, outcome variable *O*, and confounder *C*.

however, the current financial climate may make this recommendation more aspirational than realistic.

Data Analysis

Because the quality of EHR data is variable, analysts should take steps to estimate error rates and characterize uncertainty about data accuracy. The data originators, i.e. clinicians, are in the best position to assess data quality because they can audit a sample of EHRs and verify whether information is accurate by interviewing or examining patients. Public health authorities will receive information from numerous providers and will not have access to patients. Therefore, their ability to assess data quality will be limited. Nevertheless, they may be able to compare data sets from different sources, identify values that appear anomalous, and ask the data originators to investigate their accuracy.²⁴

When causal inferences are required, public health analysts should consider employing causal diagrams, which are already used in the disciplines of biostatistics, epidemiology, and computer science. These diagrams consist of points representing different variables, such as treatment, outcome, and other factors (clinical, demographic, genetic, etc.) that should be considered, and the points are connected by arrows, representing causal relationships. Figure 1 above is a simple causal diagram that depicts the relationships among three variables: treatment, outcome, and a confounder. The confounder is a variable, such as age, that might independently affect treatment choice and outcome and thus should be controlled for. In creating causal diagrams, analysts are compelled to articulate their assumptions about causal relationships between variables and to try to identify all elements that might affect the outcome of interest. The diagrams constitute maps of cause and effect relationships that enable researchers to construct sound statistical models, avoid confounding, and correctly interpret data.²⁵

Conclusion

The transition from paper medical records to EHR systems could have significant benefits for public health. However, public health researchers and surveillance authorities must recognize the potential shortcomings of EHR data and understand how difficult it is to infer causal effects correctly. The public health community should embrace initiatives to leverage

EHRs to promote public health, but should approach these with a realistic understanding of the obstacles and challenges they pose.

¹ See e.g. L. M. Lee and L. O. Gostin, “Ethical Collection, Storage, and Use of Public Health Data: A Proposal for a National Privacy Protection,” *JAMA* 302 (2009): 82-84; J. O’Connor and G. Matthews, “Informational Privacy, Public Health, and State Laws,” *American Journal of Public Health* 101 (2011): 1845-50; A. Wilson, note, “Missing the Mark: The Public Health Exception to the HIPAA Privacy Rule and Its Impact on Surveillance Activity,” *Houston Journal of Health Law & Policy* 9 (2008): 131-56.

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³ 45 C.F.R. §170.205(c)-(e) (2011); Public Health Information Network, *Meaningful Use Fact Sheet: Syndromic Surveillance*, at http://www.cdc.gov/phn/library/PHIN_Fact_Sheets/FS_MU_SS.pdf.

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Subject: HIMSS 2013 Interoperability Showcase: ONC and FHA Area Call for Participants

From: ONC Health IT <onchealthit.@service.govdelivery.com>

Date: 11/13/2012 10:31 AM

To: jcoates@ccbh.net



HIMSS 2013 Interoperability Showcase ONC and FHA Area Call for Participants

Is your organization successfully using nationally recognized standards to securely share electronic health information with other organizations? Demonstrate your successes within the Office of the National Coordinator for Health IT (ONC) and Federal Health Architecture (FHA) area in the HIMSS 2013 Interoperability Showcase!

March 3-7, 2013
Ernest N. Morial Convention Center
New Orleans, LA

ONC and FHA are looking to highlight cutting-edge interoperable health information exchange at HIMSS 2013, with a focus on ONC-related programs, including:

- Nationwide Health Information Network
- CONNECT
- Direct Project
- State HIE Programs
- SHARP/Innovation Program
- Standards & Interoperability Framework
- Beacon Communities

All nominated demonstrations must include interoperable health information exchange among **at least three end user organizations**. End users include healthcare organizations (hospitals, clinics, state or federal agencies, etc.) and health information exchanges, **not health IT vendors or IT service providers**. All demonstrations must be live. No canned demonstrations or static presentations will be considered.

A panel of ONC and FHA staff will evaluate all nominations and determine which nominated demonstrations will be included within the ONC/FHA area of the Interoperability Showcase. Only nominations directly related to ONC programs will be considered. **Nominations are due Friday, November 30 at 5:00 p.m.**, and the determination of who will be included will be made by December 7, 2012.

Your nomination must include: a description of the proposed demonstration including a description of the link to an ONC/FHA initiative (maximum 200 words), the list of all organizations participating in the demonstration, and contact information for the group.

There will be a cost for participating in this area of the Interoperability Showcase in line with the cost of participating in the Showcase at large. More details about these costs will be shared with the selected demonstrators in advance of your having to make a final commitment about participation.

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Our award winning, nationally recognized electronic health record (RxNT *ehr*) offers seamless integration with RxNT eRx (ePrescribing) and RxNT *pm* (Practice Management). RxNT *ehr* allows secure access to critical healthcare information through the click of the mouse using our cloud-based solution. This empowers you with access to your patients from virtually anywhere you have internet connectivity.

RxNT *ehr* can provide your practice with a cost-effective method to document patient encounters, streamline clinical workflow, and securely exchange clinical data.

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Features that are available through our *ehr* solution (but not limited to) include:

- Encounters
- Charting
- ePrescribing
- eMessaging
- eLabs
- eReferrals
- Scheduling
- Immunizations
- Document scanning
- Task Manager
- Patient messaging system

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RxNT's *ehr* will help streamline your practice workflow, optimize access to patient information, and provide access to real-time data that will offer a higher quality of patient care.

With RxNT's *ehr*, all of your patient information and records are available online allowing for easy access from multiple points of contact. From visits, medications, labs, medical documentation and their results — each and every valuable piece of information is available to you and your team at all times.



Regain a 360 view of your patients

RxNT is fully prepared to aid your Practice in meeting MU (Meaningful Use) through our dedicated training staff. We can not only help you achieve MU but also better your understanding of how RxNT works and streamline your workflow. Unlimited Live Technical Support, which means help when you need it!

What do you expect out of your support system? RxNT believes having a good support system is a necessity.

One of the basic advantages of having good tech support is that the technicians of these companies have an extensive knowledge and expertise to render optimal tech support services.

Discover integration beyond your practice. Our *ehr* connects you with your patients, lab companies, health plans, and other practices.

It is important to stay closely connected with all aspects of your practice, patients, and partners in the healthcare industry. Our *ehr* opens new avenues of connectivity with everyone directly linked to your patient to help exchange chart notes, referrals, clinical information, pharmacies, and labs with speed and confidence.



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Delivering one Solution eases your daily activities and prevents redundancy. Through RxNT's *eRx*, *ehr*, and *pm* you can get astonishing results while keeping your bookshelves free and clear of paper charts.

RxNT's *ehr* is specifically designed to meet the needs of clinicians by:

- Optimizing patient visits
- Offering a higher level of accuracy and completion of all medical documentation and records
- Allowing more time to focus on patient care
- Reduces costs and improves workflow
- Connectivity with patients, labs, pharmacies, and other practices

Platforms:

DEVICES:

Desktop PC, Tablets, Laptop, or Mac

HANDHELD DEVICES:

- iPhone and iPad (*Free App Available*)
- Web services available for Android Smartphones, BlackBerry, Nokia, Windows 7 Phone, and more!

MINIMUM SYSTEM REQUIREMENTS

OPERATING SYSTEM:

PC: Windows 98, ME, NT, 2000, XP

MAC: Mac OS X Tiger 10.4.9 or higher

BROWSER:

PC: Internet Explorer V5.5 or higher or Firefox 3.0

MAC: Firefox 3.0 or higher or Safari 3.0 or higher

INTERNET CONNECTION:

1 MB or higher is optimal

(no less than 56K is acceptable)

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800 x 600 optimal *(no less than 640x480)*

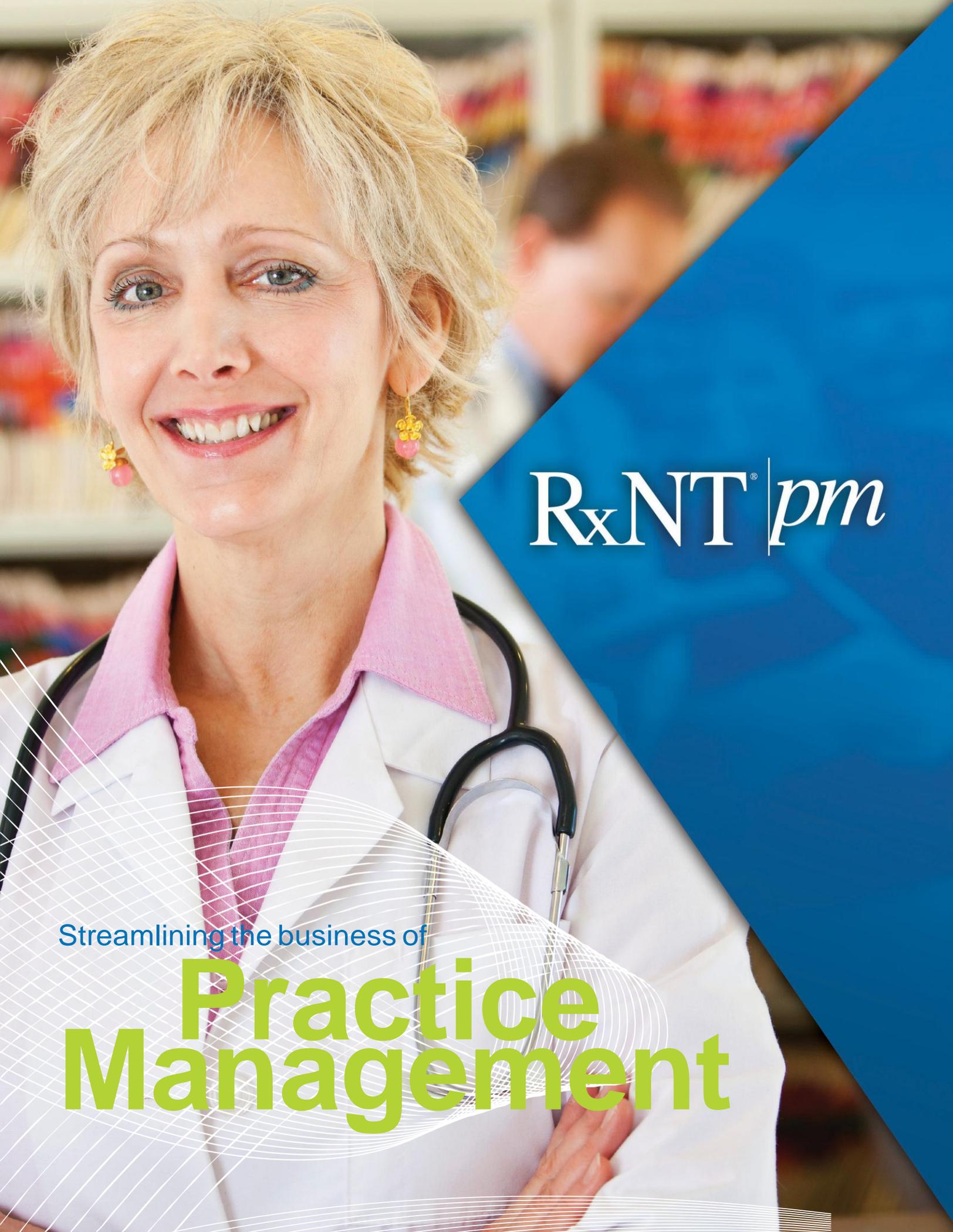


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Practice Management



We are excited to announce the most recent addition to our eHealth suite of products named RxNT Practice Management (PM). RxNT PM is an easy, web-based billing solution that allows simple user-friendly input of charges and coding which can be easily submitted to thousands of payers electronically. RxNT PM also allows your staff to manage payments from both insurers and patients and consequently invoices your patients as appropriate for any balances due after insurance. Your staff will have the ability to complete secondary and tertiary billing as needed, and will be able to run reports which indicate aging trends and payer issues which may need attention.

Because this is a completely web-based solution there are no programs to purchase or products to download. And because this is web-based we can offer it to providers for much, much less than our software-based competitors.

Some of the highlights of this solution include:

ACCOUNTS RECEIVABLE

RxNT PM's automation enhances your ability to reduce your practice's days in receivable:

- Charges are represented once posted and payment can be collected on the spot.
- Claims are submitted directly to payers/clearinghouse using HIPAA-compliant 837 format
- Statements can be printed in-house or exported to a third party
- There is the option to assess late fees and/or missed visit fees
- Ability to print statements that include only case-related encounters

ELECTRONIC CLAIMS

- RxNT PM scrubs (checks for errors or missing information) the claim before electronically submitting to a HIPAA-compliant payor or to a clearinghouse.
- Quick turn-around time for acknowledgement of payer's receipt of claim and adjudication status

When used alone the RxNT PM is a user-friendly, affordable solution to manage your billing and accounts receivable.

But that's not all...

Built for Office Automation

We have also interfaced RxNT PM with our existing eHr and eRX for seamless integration resulting in a complete practice management solution which handles scheduling, electronic health records, e-prescribing, and billing and accounts receivables all together.

From scheduling to collections, RxNT PM can automate administrative workflow for your practice. Our implementation and training team will help your practice configure your system to reflect your specific management rules. Some of the benefits of utilizing RxNT PM with the integrated systems include:

- Centralized practice management, such as billing, receivables management, and collection activity.
- Reduce cost of IT and system administration.
- Share demographics, clinical and administrative data for better communication, while complying with HIPAA laws.
- Streamline referrals within your practice.
- Generate reports at all levels of the organization.

Additional components of RxNT PM which are utilized with the integrated systems and demonstrable benefits of those include the following.

SCHEDULING

Scheduling is centralized for every location in your practice and is customizable for time durations starting with 5 minute increments. Additional features include:

- Step-by-step process for check-in/check-out.
- Streamline registration by capturing demographics, provider, HIPAA-privacy notice, employer, and insurance information in one place.
- Scan and store insurance card images and documents
- Combine multiple encounters into a single case for work-related accidents, auto accidents, liability claims, etc.

CHARGES

Charges entered by the provider will automatically flow to Practice Management, reducing the need for paper fee tickets. This point of service charge entry process also benefits your practice by:

- Reducing instances of lost charges and charge errors.
- Having the ability to print a patient bill or statement of services prior to patient exiting the office
- Less duplication of effort from having the provider circle the charge ticket and another staff member review the ticket and manually enter the charge on the encounter

REPORTS

Reporting capabilities assist in both account follow up and management of staff duties. Keep up with problem payers and identify recurring issues by utilizing the reporting functions which include:

- Generation of reports right from RxNT PM
- A library of existing built-in standard reports
- Option to view reports on screen with detailed access into patient's accounts so follow up can be done right from the reports
- Print and export reports to Excel or HTML standard formats



The Future of Your Practice in Mind.

FUTURE ENHANCEMENTS

In this day and age we are all aware that what is new today is already not so new tomorrow. With that in mind, we have a schedule of enhancements we will be rolling out once the basic RxNT PM goes live. These enhancements will include:

- Task manager which routes problems to specific staff members who are responsible to resolve the problem prior to moving on to the next step
- Online approval of guarantor and patient personal checks and credit cards
- Real-time eligibility and claims status
- Payer-specific claims checks to drill down on the nuances of each individual payer
- Addition of provider specific super bill templates and the ability to print a paper fee ticket if desired (for patient copy)
- Appointment reminders via email and/or telephone for patients upcoming appointments
- Denial management in which specific denial codes will trigger the task manager to remind staff to follow up on the denial
- Internal Collections letters and rules for account balances that are past due
- Customizable statement messages for patient and insurance balances
- Automatic posting of Electronic Remittance Advice

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eHr | e-Prescribing Comparison Chart

System Features



Competitors

System Features	RxNT ehr	NEXTGEN HEALTHCARE	Allscripts	Competitors
Web/Cloud Based	✓	✓	✓	✓
Patient Data Upload- Interfacing	✓	✓ + Fee	✓ + Fee	✓ + Fee
Initial Provider Training	✓	✓ + Fee	✓ + Fee	✓ + Fee
Custom Encounters per Specialty	✓	✓	✓	✓
ONC-ATCB/CCHIT Certified	✓	✓	✓	✓
Seamlessly Integrated Practice Management	✓	✓	✓	
PBM/Formulary Information	✓	✓ + Fee	✓ + Fee	
EPCS (Controlled Substances) Certified	✓	✓		
SureScripts GOLD Rated	✓			
Unlimited Support	✓			
24/7 Live Support	✓			
Unlimited Training for All Staff & Providers	✓			
Office Staff- Usage free	✓			
No Support or Service Fees	✓			
Annual Per Provider Price	\$650	\$5,000+	\$1,000+	\$1,800+
Practice Management- Per Year per Provider	\$300			



**Did you know you currently have access to RxNT's EHR at NO ADDITIONAL charge?
\$650 a year per provider not only includes e-Prescribing BUT Electronic Health Records!**

What is RxNT EHR?

- We are an Award Winning Nationally Recognized EHR Solution that is 2012 CCHIT and ONC-ATCB Certified
- The Most Cost Effective Bundled Solution, we took 12 years of our eHealth technology and embedded it into the perfect solution
- Our eRx is the only standalone ePrescribing solution in the US to receive the "SureScripts Platinum Solution Provider" 2008 Award as well as the 2012 Gold Solution Provider

Why RxNT EHR?

- We charge a low flat rate of \$650 per licensed provider per year for the EHR including e-Prescribing
- RxNT's offers the full bundled solution with our integrated PM system available for an additional \$300 per licensed provider per year
- We meet ARRA Meaningful Use requirements for Government incentives!
- RxNT can be interfaced with your current billing or practice management system free of charge

What Makes RxNT EHR Unique?

- Customizable Specialty Encounter forms
- eScheduling, eLabs, eReferrals
- Electronic Prescribing of Controlled Substances (EPCS)
- Cloud Based, So no bulky software for your PC or Mac
- RxNT can Interface with multiple wireless devices such as iPads, BlackBerry, Palm, Windows Mobile, and Droid.
- **UNLIMITED** Product and Meaningful Use Training!
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