



Vendor Name:

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**TARRANT COUNTY  
PURCHASING DEPARTMENT**

*JACK BEACHAM, C.P.M.  
PURCHASING AGENT*

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ASSISTANT PURCHASING AGENT*

**RFP NO. 2010-040**

**REQUEST FOR PROPOSALS  
FOR  
CONTINUATION OF ELECTRONIC  
MEDICAL RECORDS SYSTEM**

**PROPOSALS DUE MARCH 22, 2010  
2:00 P.M.**

**RFP NO. 2010-040**

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*This Table of Contents is intended as an aid to vendors and not as a comprehensive listing of the proposal package. Vendors are responsible for reading the entire proposal package and complying with all specifications.*

**RFP FOR CONTINUATION OF ELECTRONIC MEDICAL RECORDS SYSTEMS**

**MANDATORY PRE-BID CONFERENCE**

A Mandatory Pre-bid Conference will be held in accordance with HB 3089, effective September 1, 2003, which allows a County to require vendors desiring to submit a bid or proposal to attend a Pre-Bid/Pre-Proposal Conference.

**All bidders must attend the scheduled Mandatory Pre-Bid Conference:**

**DATE: MONDAY, MARCH 8, 2010**

**TIME: 10:00 A.M.  
LATE ARRIVALS WILL NOT BE PERMITTED TO ATTEND!**

**LOCATION: TARRANT COUNTY ADMINISTRATION BUILDING  
PURCHASING DEPARTMENT CONFERENCE ROOM  
100 E. WEATHERFORD, SUITE 303  
FORT WORTH TX 76102**

Persons with disabilities requiring special accommodations should contact Dianna Lee at (817) 884-1143 at least two (2) business days prior to the scheduled Pre-Bid.

**RSVP: Vendors planning to attend the Mandatory Pre-Bid Conference should RSVP, in writing, via facsimile, no later than 5:00 p.m., Friday, March 5, 2010.**

**Send RSVP'S to Dianna Lee, at (817) 884-2629.**

**Questions from vendors will be addressed at the Mandatory Pre-Bid Conference. Any vendor who submits a bid without attending the scheduled pre-bid conference will have their bid disqualified. Such applicant who submits a bid and does not attend the scheduled Mandatory Pre-Bid Conference waives any right to assert claims due to undiscovered conditions.**

**NOTE: Late arrivals will not be permitted to attend the mandatory pre-bid/pre-proposal meeting. Anyone leaving prior to the conclusion of the meeting will be removed from the eligibility list and not permitted to submit a bid/proposal.**

## RFP FOR CONTINUATION OF ELECTRONIC MEDICAL RECORDS SYSTEMS

Tarrant County is soliciting proposals for **CONTINUATION OF ELECTRONIC MEDICAL RECORDS SYSTEM.**

**THE ORIGINAL AND EIGHT (8) COPIES**  
OF  
COMPLETED PROPOSALS  
MUST BE RECEIVED IN THE  
PURCHASING DEPARTMENT  
AT 100 E. WEATHERFORD, SUITE 303  
FORT WORTH, TEXAS 76102  
ON OR BEFORE MARCH 22, 2010 AT 2:00 P.M.

**All proposals, including a "NO BID", are due in the Purchasing Department by the due date,** in sealed envelopes or boxes. All proposals must be clearly marked with the RFP Number, the name of the company/firm submitting the proposal, and date and time of opening on the outside of the envelope/box. Original proposal must be clearly marked "**ORIGINAL**" and contain all original signatures.

**Any proposal received after the date and/or hour set for proposal opening will be returned unopened. Respondent will be notified and will advise Tarrant County as to the disposition by either pick up, return at respondent's expense, or destroyed with written authorization of the bidder.** If proposals are sent by mail to the Purchasing Department, the proposer shall be responsible for actual delivery of the proposal to the Purchasing Department before the advertised date and hour for opening of proposals. If mail is delayed either in the postal service or in the internal mail system of Tarrant County beyond the date and hour set for the opening, proposals thus delayed will not be considered and will be returned unopened.

Proposals may be withdrawn at any time prior to the official opening. Alterations made before opening time must be initialed by proposer/respondent guaranteeing authenticity. After the official opening, proposals become the property of Tarrant County and may not be amended, altered or withdrawn without the recommendations of the Purchasing Agent and the approval of Commissioners Court.

Tarrant County is exempt from Federal Excise and State Sales Tax. The County is not exempt from Surplus Lines Tax or Texas Stamping Tax. Therefore, only applicable taxes must be included in this proposal.

**No oral explanation in regard to the meaning of the proposal specifications will be made and no oral instructions will be given before the award of the contract. Request from interested proposers for additional information or interpretation of the information included in the specifications and all questions should be directed in writing via facsimile to:**

**DIANNA LEE, C.P.M., SENIOR BUYER  
FAX: (817) 884-2629**

## RFP FOR CONTINUATION OF ELECTRONIC MEDICAL RECORDS SYSTEMS

All documents relating to this RFP including but not limited to, the RFP document, questions, responses to questions, addenda and special notices will be posted under the RFP number on the Tarrant County web site. It is the bidders'/respondents' sole responsibility to review this site and retrieve all related documents prior to the RFP due date.

The deadline for receipt of all written questions shall be 12:00 (Noon), Fort Worth time, Thursday, March 11, 2010.

Proposal Response Forms must be fully completed and included in your response. Forms that have been retyped or altered may result in rejection of proposal. Detailed specifications have been provided and any deviations or exceptions must be referenced on the designated response forms which have been provided. Unless deviations are specifically stated herein, services will be provided according to the specifications at no additional charge.

This RFP is issued in compliance with the County Purchasing Act, Section 262.030. Negotiations shall be conducted with responsible vendor(s) who submit proposals determined to be reasonably susceptible of being selected for award.

**CONFIDENTIALITY:** Any material that is to be considered confidential in nature must be clearly marked as such and shall be treated as confidential to the extent allowable in the Open Records Act. Pricing information is not considered confidential. Trade secrets or confidential information **MUST** be placed in a separate envelope marked "**CONFIDENTIAL INFORMATION**" and **EACH PAGE** must be marked "**CONFIDENTIAL INFORMATION.**" Tarrant County will make every effort to protect these papers from public disclosure as outlined in LGC, Section 262.030(c) of the State of Texas County Purchasing Act.

"The Texas Public Information Act gives the public the right to request access to government information, subject to certain narrow exceptions. Tarrant County is an entity subject to this Act. Therefore, please be advised that your company's declaration that certain information submitted in response to an RFP is "confidential" will not be treated as such if the County receives a request for a copy of the RFP. The County will of course make every effort to inform your company of such a request and to provide you with an opportunity to object to the release of any proprietary information, but Tarrant County cannot and will not make an agreement to withhold information from the public contrary to the County's responsibilities under the Act."

Additionally, to the extent your response is incorporated into the contract, that contract will become an official record available for public inspection.

Proposals shall be opened so as to avoid disclosure of contents to competing offerors and kept secret during the process of negotiation. All proposals that have been submitted shall be open for public inspection after the contract is awarded, except for trade secrets and confidential information contained in the proposals and identified as such.

The successful Contractor shall defend, indemnify, and hold harmless Tarrant County from any and all liability or loss of any nature whatsoever arising out of or relating to the Contractor performing work on County premises, including, without limiting the generality of the foregoing coverage, any act or omission of the contractor, its agents, servants, employees, or invitees in the execution or performance of the contract.

## RFP FOR CONTINUATION OF ELECTRONIC MEDICAL RECORDS SYSTEMS

**Continuing non-performance** of the vendor in terms of Specifications shall be a basis for the termination of the contract by the County. The County shall not pay for work, equipment, or supplies which are unsatisfactory. Vendors will be given a reasonable opportunity before termination to correct the deficiencies. This, however, shall in no way be construed as negating the basis for termination for non-performance.

The **contract may be terminated** by either party upon written thirty (30) days notice prior to cancellation.

Proposals will be considered irregular if they show any omissions, alteration of form, additions or conditions not called for, or irregularities of any kind. However, Tarrant County reserves the right to waive any irregularities and to make award in the best interest of the County.

Tarrant County reserves the right to accept or reject in part or in whole any proposals submitted, and to waive any technicalities for the best interest of the County. Proposals may be rejected, among other reasons, for any of the following specific reasons:

1. Proposals received after the time limit for receiving proposals.
2. Proposals containing any irregularities.
3. Unbalanced value of any items.
4. Proposals not based on open source, open standard EMRS solution.

Vendors may be disqualified and their proposals not considered, among other reasons, for any of the following specific reasons:

1. Reason for believing collusion exists among the Vendors.
2. Reasonable grounds for believing that any Vendor is interested in more than one Bid for the work contemplated.
3. The Vendor being interested in any litigation against the County.
4. The Vendor being in arrears on any existing contract or having defaulted on a previous contract
5. Lack of competency as revealed by a financial statement, experience and equipment, questionnaires, etc.
6. Uncompleted work which in the judgement of the County will prevent or hinder the prompt completion of additional work, if awarded.
7. Respondents shall not owe delinquent property tax in Tarrant County.

Failure to provide signatures, where required and/or submission of required forms, including but not limited to the Bid Proposal Signature Form, Reference Page, Bid Forms/Documents Checklist, Questionnaires (when applicable), Addenda (including revised forms), and any other specified forms or documents will be grounds for rejection of entire bid.

Due care and diligence has been used in preparation of this information, and it is believed to be substantially correct. However, the responsibility for determining the full extent of the exposure and the verification of all information presented herein shall rest solely with the proposer. Tarrant County and its representatives will not be responsible for any errors or omissions in these specifications, nor for the failure on the part of the proposer to determine the full extent of the exposures.

The successful proposer/respondent may not assign their rights and duties under an award without the written consent of the Purchasing Agent. Such consent shall not relieve the assignor of liability in the event of default by the assignee.

# RFP FOR CONTINUATION OF ELECTRONIC MEDICAL RECORDS SYSTEMS

## SPECIAL CONDITIONS

### INSURANCE REQUIREMENTS

- A. The Contractor shall take out, pay for and maintain at all times during the prosecution of the work under the contract, the following forms of insurance, in carriers acceptable to and approved by Tarrant County.
1. Workers' Compensation — statutory
  2. Employer's liability — \$500,000
  3. Comprehensive Commercial General Liability:
    - a. Bodily Injury/Personal Injury — \$1,000,000 per occurrence  
— \$2,000,000 aggregate
    - b. Property Damage — \$1,000,000 aggregate
  4. Professional Liability / Errors and Omissions — \$1,000,000
- B. The County reserves the right to review the insurance requirements of this section during the effective period of the contract and to require adjustment of insurance coverage and their limits when deemed necessary and prudent by the County based upon changes in statutory law, court decisions, or the claims history of the industry as well as the Contractor.
- C. Required Provisions:
1. Proof of Carriage of Insurance - All certificates of insurance will be required in duplicate and filed with the Purchasing Agent and the Budget and Risk Management Department at 100 East Weatherford Street.
  2. All certificates shall provide Tarrant County will receive an unconditional thirty days written notice in case of cancellation or any major change.
  3. As to all applicable coverage, certificates shall name Tarrant County and its officers, employees, and elected representatives as an additional insured.
  4. All copies of the certificates of insurance shall reference the project name and bid number for which the insurance is being supplied.
  5. The Contractor agrees to waive subrogation against Tarrant County, its officers, employees, and elected representatives for injuries, including death, property damage, or any other loss to the extent the loss, if any, is covered by the proceeds of insurance.
  6. The Contractor/Vendor is responsible for making sure any sub-contractor(s) performing work under this agreement has the required insurance coverage(s) and supplies Tarrant County with the proper documents verifying the coverage.

## RFP FOR CONTINUATION OF ELECTRONIC MEDICAL RECORDS SYSTEMS

### DEFINITIONS OF TERMS AND ACRONYMS

.NET	Software framework that can be installed on computers running Microsoft Windows Operating Systems
AED	Academy for Educational Development
AHS	Adult Health Services
ARIES	AIDS Regional Information and Evaluation System
BAFO	Best and Final Offer
BCCCP	Breast and Cervical Cancer Control Program
BioSense	Centers for Disease Control and Prevention (CDC) program used to access data from health organizations across the Country.
BSL 3	BioSafety Level 3 Core.
CCR	Continuity of Care Records
COHORT	Computer Information System
Contractor	Proposer or vendor selected to provide the services in the RFP
CSV	Comma Separated Value File
DME	Durable Medical Equipment
DSHS	Department of State Health Services
EHARS	HIV/AIDS Reporting System
EHR	Electronic Health Record
EMRS	Electronic Medical Records System
EPMC	Enhancing Primary Medical Care
ERA	The NIH's infrastructure for conducting interactive electronic transactions for the receipt, review, monitoring, and administration of NIH grant awards to biomedical and behavioral investigators worldwide.
ESSENCE	Electronic Surveillance System for Early Notification of Community-Based Epidemics
HIDPort	Health and Infectious Disease Portal
HIE	Health Information Exchange



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HIPAA	Health Insurance Portability and Accountability Act
HIT	Health Information Technology
HIV	Human Immunodeficiency Virus
HL7	Health Level 7 is an all volunteer, not-for-profit organization involved in development of international healthcare standards
IHI	Institute for Healthcare Improvement
J2EE	Java 2 Platform, Enterprise Edition
LIMS	Laboratory Information Management System
Linux	Free Unix-type operating system
LIS	Laboratory Information System
LOINC	Logical Observation Identifiers Names and Codes
NCTRL	North Central Texas Regional Laboratory
NEDSS	National Electronic Disease Surveillance System
OB/GYN	Obstetrics and Gynecology
OCR	Optical Character Recognition
PC	Personal Computer
PDF	Portable document format
PHC	Public Health Centers
PHIN	Public Health Information Network
PMC	Preventive Medicine Clinic
Proposal	A response submitted by firm or vendor
Proposer	An individual, organization, or firm responding to this RFP
RCAMS	Records Control and Management System
RODS	Real Time Outbreak and Disease Surveillance

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RSS	Really Simple Syndication – a family of web feed formats used to publish frequently updated works
SNHC	Supporting Networks of HIV Care
SNOMED	Systematized Nomenclature of Medicine
SOAP	Society for Obstetric Anesthesia and Perinatology
SQL	Structured Query Language
STD	Sexually Transmitted Disease
STD-MIS	Sexually Transmitted Disease Management Information System
TB	Tuberculosis
TBCMS	Tuberculosis Case Management System
TCIR	Tarrant County Immunization Registry
TCPH	Tarrant County Public Health
TWICES	Texas Wide Integrated Clinic Encounter System
UNTHSC	University of North Texas Health Science Center
VACTRAC	Scheduling software package allows medical professionals to: <ul style="list-style-type: none"> <li>a. Report and track patient immunizations and booster shots</li> <li>b. Schedule follow-up vaccination appointments</li> <li>c. Generate personalized e-mail reminders</li> </ul>
VMWare	Virtualization software
WIC	Woman, Infant and Children
XML	Data exchange standard

# RFP FOR CONTINUATION OF ELECTRONIC MEDICAL RECORDS SYSTEMS

## SCOPE OF WORK

### I. Introduction

- A. Tarrant County Public Health (TCPH) provides services to all Tarrant County residents aimed at promoting, protecting, achieving and maintaining a healthy standard of living. Tarrant County Public Health employs more than 400 public health professionals and operates 8 public health centers and 21 Women Infant and Children (WIC) clinics in the county. Due to the growing needs of the county, Tarrant County Public Health has a need to automate its current methods of storing, retrieving and utilizing client health information and managing associated workflow processes. TCPH has initiated the process of automating its processes by implementing an Electronic Medical Records System (EMRS) in the Adult Health Services (AHS) clinic and Preventive Medicine Clinic (PMC).
- B. List of programs and services at Tarrant County Public Health:
1. Adult Health Services (AHS) program provides HIV/STD testing and screening, education and counseling. STD treatment is also available.
  2. Preventive Medicine Clinic (PMC) program provides ambulatory outpatient care and medical case management, prescription assistance, medical referrals and lab services for people living with HIV.
  3. Tuberculosis (TB) Elimination Clinic provides screening and treatment of TB. Program also responds to TB occurrences, conducts outreach services, and operates a refugee program that provides health screening to foreign nationals settling in Tarrant County. Program supports health research activities conducted by University of North Texas Health Science Center (UNTHSC).
  4. Breast and Cervical Cancer Control Program (BCCCP) provides breast exams, PAP smears, other testing, limited treatment and referral services to medically underserved and underinsured women.
  5. Woman, Infants and Children (WIC) program provides nutrition assessment and education.
  6. Public Health Centers (PHC) provide immunizations, child health screenings, and pregnancy testing.
  7. Travel Health Services Clinic provides international vaccination yellow cards, preventive immunizations and hard to find vaccines.
  8. Epidemiology Division provides services that include communicable disease reporting, active surveillance, case investigation, management, tracking and follow-up, PHIN alerts and notifications, and bio-surveillance.
  9. North Central Texas Regional Laboratory (NCTRL) provides lab testing services for HIV/STD diagnosis, drinking water quality, milk and dairy product quality, and other microbiology testing for influenza and other infectious diseases – BSL 3 certified laboratory.

## RFP FOR CONTINUATION OF ELECTRONIC MEDICAL RECORDS SYSTEMS

### C. Current Applications by Area:

1. AHS – STD\*MIS (Sexually Transmitted Disease Management Information System), EHARS (HIV/AIDS Reporting System). Open source, open standard application for EMRS.
2. PMC – Medisoft and ARIES (AIDS Regional Information and Evaluation System), RCAMS and TCIR. Open source, open standard application for EHR.
3. TB – TWICES (Texas Wide Integrated Clinic Encounter System), TBCMS (TB Case Management System), DSHS COHORT, TB Net Server, and R-CAMS.
4. BCCCP- MED/IT.
5. Travel Health – VACTRAC/TCIR.
6. WIC/PHC – TCIR (Tarrant County Immunization Registry).
7. Epidemiology – NEDSS, PHIN, HIDPort, RODS, ESSENCE, BioSense.
8. NCTRL – Quickbooks, Excel.
9. TCPH – Microsoft based solutions e.g. Outlook, Excel, Access.

- D. The funding to implement an Electronic Medical Records System (EMRS) was approved in co-pilot projects for Tarrant County Public Health (TCPH) through general and grant funds. A pilot project is currently in place with an open source, open standard EMRS in the Adult Health Services (AHS) clinic. TCPH is pursuing to complete the development of an open source, open standard EMRS in this RFP with the TB Elimination/Refugee clinic, BCCCP clinic, Travel Health Clinic, and Tarrant Immunization Registry (TCIR) finalizing the department wide EMRS solution. In addition, Electronic Health Records (EHR) was approved through an Academy for Educational Development (AED), Supporting Networks of HIV Care by Enhancing Primary Medical Care Project (SNHC by EPMC) grant. The Preventive Medicine Clinic (PMC) is part of the co-pilot EMRS project and was funded through grant monies. The PMC is also using an open source, open standard system for its EHRs.

## II. Background and Purpose

- A. Tarrant County Public Health is seeking the necessary professional consulting services from an experienced and knowledgeable source to deploy an open-source, open standard EMRS software application that is currently being utilized in other public health and/or clinical practices. The continuation of EMRS project will include a preliminary workflow analysis and implementation of an open source EMRS solution in the TCPH's TB, BCCCP, and Travel Health Clinics and will tie in TCIR. The project should be interoperable with current TCPH EMRS/EHR open source, open standard applications and current County systems and standards.

## RFP FOR CONTINUATION OF ELECTRONIC MEDICAL RECORDS SYSTEMS

- B. At the conclusion of the Request for Proposals process, Tarrant County expects to have received and evaluated proposals from potential open source EMRS providers or consultants, select a contract for negotiation, and enter into a Fixed Fee Professional Services contract to accomplish the identified work. The remaining sections of this RFP provide general information, requirements, constraints, instructions for submitting responses, required response content, evaluation procedures, and terms and conditions of the expected agreement.

### III. Project Overview

- A. TCPH envisions an EMRS that will be a complete solution designed for an enterprise wide-area networked environment to implement a totally paperless office by allowing patient records to be accessed at the actual point-of-care via a wireless pen pad or stationary personal computer (PC) and by managing all clinical, administrative, and follow up processes electronically. Public Health would leverage and deploy Health Information Technology (HIT) with Health Information Exchange (HIE) framework in its operations. Vendor will provide TCPH with technical specifications for required equipment. TCPH will review specifications and purchase approved equipment. HIT includes: 1) Computerized processes for maintaining patient medical records; 2) Automating administrative tasks of patient management; 3) Making patient records available at the point of care; 4) Linking clinical information to billing systems; and having an appropriate communications infrastructure for sharing of information. HIE initiatives would focus on areas of technology, interoperability, standards utilization, harmonization, and business information systems. HIT/HIE embraces the EMRS concept with functional capabilities consisting of:

#### Scheduling

- Full Featured Scheduling & Calendars
- Appointment Rules
- Find First
- Schedule Optimizer
- Complex Schedules
- Rooms & Resources
- Multi-facility Support

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### **Registration**

- Full Featured Patient Registration
- Automated Eligibility
- Participation Programs
- Referral Tracking
- Statistics
- Duplicate Detection
- De-duplication

### **EMRS**

- Health Status Alerts
- Patient Dashboard
- Encounters
- Allergies
- Social History
- Problem List
- IHI Self Management Goals
- Medical History
- Clinical Summary
- Real-time Lab Results
- Electronic Lab Ordering
- LOINC Code Support
- Patient Pictures
- Barcode Generation
- Barcode Scanning and Workflows
- Decision Support
- SOAP
- Draw-over images
- ID Cards/Magstrip support
- Patient Portal/History from Home
- PDF Forms
- PDF Reports
- Labels

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- On-demand Super-bill/forms
- CCR Records
- Specialty Configurations
- SNOMED Code Support
- Live Bookmarks/ Work-lists/ RSS Feeds
- Data sharing/Patient Portal

### **Mobility**

- Mobile Devices
- iPhone
- Blackberry
- RSS Feeds

### **Billing**

- Electronic ERA
- Electronic Submission (X12)
- Realtime status
- Real-time eligibility
- Paper claims
- PDF Specialty Forms
- Accounts Receivable
- Reporting
- Custom Super-bill / Electronic Super-bill

### **Reporting**

- User definable reports
- PDF templates
- Excel/CSV exports
- Data Source Exports
- SQL Support

### **Speciality Modules**

- OB/GYN
- Chiropractic
- Urology
- Oncology

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- DME
- Home Health
- Mental Health
- Dermatology
- Proctology
- Anal Dysplasia
- Radiology

### **Integration**

- HL7
- CCR
- Web Services
- Timed import / export
- XML

### **Technology**

- Web-based
  - Ease of deployment
  - Remote access
- B. EMRS provides a computerized system for accessing in real time the history of a patient's care. The content of an EMRS is analogous to the paper record, but the electronic format creates usable data for medical outcome purposes, improves the efficiency of care, and makes for more efficient communication among providers and easier management of health plans.
- C. An open source, open standard department wide solution will enable TCPH to implement a comprehensive EMRS for all its clinical areas and immunization registry. This will involve an extensive replacement of manual and paper driven procedures with electronic access and communication.

## **IV. Project Requirements**

- A. Contractor will be responsible for implementing an EMRS which includes determining the business objectives, examining workflow processes, analyzing the existing county systems and technical support capabilities, and assessing the capacities and applications currently in use in each program. Contractor will need to identify how those requirements could be transitioned in the context of the operational EMRS or other compatible system solution. TCPH implemented an



## RFP FOR CONTINUATION OF ELECTRONIC MEDICAL RECORDS SYSTEMS

- EMRS in the AHS and PMC clinics in co-pilot projects which was a step toward an enterprise-wide electronic records system for public health. TCPH readiness assessment report provided significant findings toward the development of department wide solution for an EMRS (Reference Attachment 1). TCPH requests that the EMRS continuation project make a concerted effort to build upon and incorporate the output of the current open source, open standard EMRS in the AHS and PMC. Contractor's assessment should be performed onsite at Tarrant County Public Health.
- B. Contractor will provide onsite professional consulting and onsite technical support for the implementation of an operational EMRS system for the TB, BCCCP, and Travel Health Clinics, and immunization registry.
- C. The contractor will develop an implementation schedule for the operational EMRS for the TB, BCCCP, Travel Health Clinics, and TCIR to be operational within one year of contract start date. The schedule will include phases such as installation, training, and support.
- D. The Proposer must assume responsibility as Prime Contractor for this contract. Subcontracting is allowed for this Procurement, subject to the prior written approval of the County and the provisions set forth in this RFP. Proposed subcontractors must be clearly identified in the Proposal.
- E. It is imperative that the proposer's proposal addresses the following elements:
1. Defines software requirements and cost;
  2. Defines hardware requirements and cost;
  3. Defines database design considerations;
  4. Determines communication considerations;
  5. Determines annual maintenance and/or technical support resources needed and costs; including first year maintenance and options for annual maintenance contracts. Maintenance contracts should include support to maintain system functions as proposed for five (5) years. Maintenance and support contracts should include patches, minor releases and at least one (1) major release per year. Proposer should include copies of proposed maintenance contracts in proposal.
  6. Assure compliance with TCPH and County requirements for security, network compliance, HIPAA, and one of the following architectural definitions J2EE, .NET, LAMP, and SQL. NOTE: Open source, open standard applications running on VMWare shells or native Linux platforms are the only acceptable architectures.
- F. List of deliverables:
1. A project implementation plan will be prepared as part of the project that will include the following elements:

## RFP FOR CONTINUATION OF ELECTRONIC MEDICAL RECORDS SYSTEMS

- Workflow analysis including utilizing current County IT/TCPH infrastructure and current applications being used in TCPH.
- Implementation plan and schedule including integration of existing forms and creation of new forms to support TB, BCCCP, Travel Health, and TCIR.
- Training and support plan including first year annual maintenance support and projected costs for five years.

### V. General Requirements for EMRS

- A. An EMRS will store all clinical data in a format that can be easily retrieved.
- C. The activity of searching for paper records will be eliminated.
- D. Daily, weekly, monthly, quarterly, and annual data summaries will be generated without manual collection of data.
- E. Data searches will be made real time. System response time for user queries or input commands shall not exceed 5 seconds under nominal workload conditions and must be demonstrated as a critical acceptance criterion by TCPH. An acceptance test criterion is required with proposed plan. Proposer should include published literature verifying the proposed system meets this requirement.
- F. Special research projects can be easily conducted in collaboration with universities and pharmaceutical companies.
- G. System will have an easy and effective means to transfer medical data between Public Health departments, hospitals and other medical facilities within the county.
- H. System must have security with password protection to insure client privacy and compliance with HIPAA laws

### VI. Clinical Requirements for EMRS

- A. Input of clinical data with capability of touch screen displaying anatomy with progressive zoom in and checklist of symptoms (desirable but not mandatory).
- B. Templates of normal exams and abnormal exams.
- C. The system must maintain a list of procedures, vital signs, allergy list, prescription list, consultation, scanning, and memo utilities, search capabilities, patient education screens, and evaluation and management coder; and medication alerts in relation to individuals' prescriptions, and referrals.
- D. EMRS must effectively share data not only with healthcare providers but also within TCPH e.g., epidemiology, environmental, biosurveillance and other entities identified during previous need assessment.

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- E. The general features of EMRS should include HL7 compatible (import & export) capability, Windows compatible, OCR scanning, manual scanning of X-rays and documents and role based security but not limited to those features only.
- F. The system must have capacity for doing frequent clinical reminders.

### VII. Vendor Qualifications

#### A. General Requirements

1. Tarrant County is seeking an experienced vendor of an open, source open standard EMRS that will aid in the implementation of the requirements for an EMRS. A Proposer is any individual, organization, or firm eligible to respond to this RFP. A Proposer's response will be called a Proposal. A Proposer selected to provide the services described in this RFP will be referred to as the Contractor.
2. The County's Public Health needs are well defined, and the responses will be evaluated in accordance with predetermined criteria, with clarifications and best and final offers, as the County deems necessary. All Proposers are advised to begin preparation of their responses immediately, as the requirements of this RFP are complex and must be responded to carefully.
3. The Proposer must demonstrate to the sole satisfaction of the County that the Vendor can successfully deliver services of the type and scope set forth in this RFP. The Proposer must provide a resume for each proposed Project Team member that clearly demonstrates technical and subject matter expertise required by this RFP. The Proposer must also demonstrate:
  - a. Familiarity with the Public Health departments, policies, process and structures.
  - b. Experience in surveying, interviewing and collecting information from clinical and/or public health end-users to ascertain business and operational requirements.
  - c. The Proposer must demonstrate experience in developing open source, open standard EMRS solutions.
  - d. Ability to cite and compare EMRS solutions with current medical records management and techniques.
  - e. Capability with OpenEHR, ClearHealth, OpenMRS, Open VISTA or other open source, open standard EMRS solutions.
  - f. Experience (minimum 3 years) with web-based and/or client server solutions e.g., open source EMRS.

### VIII. Contract Requirements

- A. The Contract for this Requirements Study will be deliverable-based using a **fixed fee** pricing model.

## RFP FOR CONTINUATION OF ELECTRONIC MEDICAL RECORDS SYSTEMS

- B. The terms and conditions of the Statement of Work and Contract will be fully negotiated.
- C. The Contractor must conduct a weekly client review session and provide written status reports that indicate progress against deliverables.
- D. Tarrant County expects to provide Project Management, Business Analysis, Application Support, Quality Assurance, and Deployment resources to support the project.
- E. The financial proposal must include all costs (software, hardware, professional services, travel expenses), that are required for full completion of the Statement of Work.
- F. Tarrant County expects the contract to begin in May 2010.

### **IX. Proposal Submissions**

Proposals should be submitted with the information placed in the following order and divided into sections:

- A. Section 1 – Required Forms
  - 1. Proposal Signature Form
  - 2. Addendum Signature Form(s) (if applicable)
  - 3. Form for Disadvantaged Business Enterprises
  - 4. HUB certification forms (if applicable)
  - 5. Insurance Certificates
  - 6. Deficiencies and Deviations Form
- B. Section 2 – Experience and Capability
  - 1. Executive Summary –brief narrative highlighting company background:
    - a. This includes a brief description of the company including the length of time the company has been in business and years of experience in application development and support projects.
  - 2. Proposer should include a brief narrative that clearly demonstrates compliance with the Vendor Qualifications listed in Section VII. Include examples of past projects and experiences.
- C. Section 3 – Project Approach and Management
  - 1. Proposer should include a narrative that clearly demonstrates the Proposer’s approach toward meeting the goals and objectives of this RFP. Proposer should address how each specific requirement of the RFP will be met by the proposed solution in the context of the model prototype EHR implementation. Further, any desirable features of this approach should also be explained. Clarity of description of the proposed solution is the aim and, therefore, use of product boilerplate and marketing releases throughout this section is discouraged.

## RFP FOR CONTINUATION OF ELECTRONIC MEDICAL RECORDS SYSTEMS

2. This section should contain a brief description of how the Proposer proposes to successfully manage this project. The Proposer should include a description of how the project team will be structured, its roles and responsibilities, location within the company's organizational framework and chain of command.
  3. Proposer should include a detailed timeline and milestone schedule including phases for assessment, installation, training and support.
  4. Brief two page resumes of the Proposer's staff assigned to this project along with their assignment are to be included in this section. Since Proposer's staff experience and knowledge are a vital component of project success, Tarrant County expects and requires that resumes submitted are for staff actually assigned to the project.
  5. Impact on Information Technology Departments - Performance of the Requirements of this RFP cannot be completed without consultation with Tarrant County IT departments. At the very least, this will include Communications, Database, Security, Servers, Development Support, and Enterprise Support. An estimate must be provided of the time that will be required with each IT department (See paragraph IV, Item E. #5).
- D. Section 4 – Technical Approach
1. The Technical Response must set forth the proposed technical solution in response to this RFP and should be limited to no more than 100 pages, excluding Project Team member resumes. The Proposer must demonstrate to the sole satisfaction of Tarrant County that the Proposer can successfully deliver services of the type and scope set forth in this RFP. The Proposer must provide a resume for each proposed Project Team member that clearly demonstrates technical and subject matter expertise required by this RFP. The Proposer must provide a preliminary Statement of Work that describes products to be delivered and the work to be performed by the Proposer during this engagement.
- E. Section 5 - References
1. Submit three (3) vendor references, other than Tarrant County, who can verify your performance as a vendor.
- F. Section 6 – Financial Information
1. This section should contain information on a Proposer's financial stability, capability and viability. Proposer must demonstrate financial stability and viability to the sole satisfaction of the County. This section should include the following documentation:
    - a. A current Financial Statement that has been prepared no more than six months prior to the date of submission of the Proposal.

## RFP FOR CONTINUATION OF ELECTRONIC MEDICAL RECORDS SYSTEMS

- b. Three (3) most recent annual audits or independently reviewed financial statements, and the most recent quarterly statement.
- c. Financial statements should include corresponding balance sheet, income statement and statement of cash flow.

### G. Section 7 – Vendor Contracts

1. Proposer's are to include one (1) original of any or all vendor-required contracts (i.e., purchase contract, lease/purchase contract, maintenance contract, license contract, etc) in their proposal response. Proposer should ensure that ALL applicable contracts are included with their bid response, and that ONLY applicable contracts are included. Failure to provide contracts as instructed or to cause an unnecessary and untimely delay in getting contracts reviewed and signed may result in the rejection of the proposal.
2. During the evaluation process (and prior to making an award recommendation), the Proposer(s) who appear successful in their proposal will have their contracts subjected to review by Tarrant County's District Attorney's office.
3. Following this review, the Proposer should incorporate any necessary changes or addenda into the contracts and quickly provide four (4) signed originals to Tarrant County for the County Judge to sign in the Commissioners Court when a contract award is made. Once award has been made, and the County Judge has signed the contracts, one (1) complete set will be returned to the Proposer by Tarrant County. **Failure of the Proposer to provide ALL applicable contracts in a timely and orderly manner may jeopardize award recommendation.**

### H. Cost Proposal

1. Cost proposal and price summary must be placed in a separate, sealed envelope and clearly marked with the proposer's name and RFP number.
2. The Cost Proposal must set forth all costs associated with the proposed Response to this RFP. Any contract signed will be a fixed cost contract and no other costs will be allowed for performance of proposed solution.
3. Include first year annual system maintenance fees, license fees and other costs and projected costs for five (5) years.

### X. Alternate Approaches

- A. If Proposer wishes to propose a business offering which incorporates different primary business partners, Proposer must submit separate Proposals incorporating each proposed project team.

<b>RFP FOR CONTINUATION OF ELECTRONIC MEDICAL RECORDS SYSTEMS</b>
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- B. If Proposer wishes to submit multiple project approaches or solution(s) using the same proposed project team, Proposer may submit alternative solutions within a single Proposal provided that each alternative solution must independently and completely satisfy the mandatory requirements of this RFP on its own merits. The intention of allowing alternative solutions is to consider all business solutions for evaluation and award based solely upon the best interests of the County.

***The County is under no obligation to consider alternative approaches.***

**XI. Subcontractor(s) Declaration**

- A. Use of subcontractors for this project is subject to the provisions of this RFP. If subcontractors are proposed for this contract, including wholly owned corporate subsidiaries, the Proposal shall include a description of all proposed subcontractors on the forms set forth in *Subcontractor(s) Declaration (Pages 31 and 32)*.

**XII. Proposal Evaluation and Award**

**A. Approach**

1. The Tarrant County Purchasing Department will guide the evaluation of the responses received. An Evaluation Committee will be established to evaluate and score the submitted Proposals. The Evaluation Committee may consist of representatives from various County Departments.
2. The County reserves the right at its sole determination to include additional Department(s), Employee(s), or Contractor(s) in the evaluation of proposals, as the County deems necessary.

**B. Evaluation Process**

1. The County will use the following criteria to conduct evaluation of the proposal responses:

a.	Technical Approach	0 – 130 points
b.	Project Approach and Management	0 – 130 points
c.	Proposer’s Qualification/Experience	
	(1) Financial Statement Review	
	(2) Experience in Open Source Open Standard EMRS solutions	0 – 80 points
d.	References	0 – 60 points
e.	Cost Proposal	0 – 100 points
<b>Total Possible Points</b>		<b>500 Points</b>
2. The County reserves the right at its sole discretion to determine the process for proposal evaluation and may elect to accelerate the evaluation process by combining or eliminating evaluation phases, if it is deemed in the public interest to do so.

## RFP FOR CONTINUATION OF ELECTRONIC MEDICAL RECORDS SYSTEMS

### **C. Evaluation of Cost Proposal**

1. Cost Proposal responses will be evaluated separately using the following formula:  
(Lowest Cost Proposal / Proposer's Cost Proposal) x 20.  
*Maximum Cost Proposal Points: 20 points*

### **D. Presentations**

1. Tarrant County may at its discretion, elect to have Proposers provide oral presentations and respond to inquiries from the evaluation committee related to their proposal.

### **E. Best and Final Offer (BAFO)**

1. The Proposers determined to be in the competitive range may be invited to prepare a Best and Final Offer for consideration by the Evaluation Committee.
2. The County reserves the right at its sole discretion to determine if pursuing BAFO(s) is in the best interest of the County. The County is under no obligation to pursue BAFO(s).
3. In the event, the County elects not to pursue BAFO(s); Contract Negotiation will be conducted based on the Final Rankings previously described.

### **F. Contract Negotiation**

1. The Tarrant County Purchasing Department may conduct Contract Negotiations along with representatives from Public Health, Information Technology and the District Attorney.
2. The County reserves the right at its sole discretion to determine if a pursuing Contract Negotiation is in the best interest of the County. The County is under no obligation to pursue Contract Negotiation.

## **XIII. Inducements**

- A. Tarrant County submits this RFP setting forth certain information regarding the objectives of Electronic Health Medical Records Project and Tarrant County's desire to mitigate risk throughout the life of this Project by using expert consulting services. Therefore, Tarrant County will consider the Proposer's Offer in response to this RFP all representations contained in the Offer, presentations, other printed material, correspondence, discussions, and reliance upon the expertise of the Proposer in performing similar activities for entities such as Tarrant County. Tarrant County accepts these representations as inducements to enter into a mutually beneficial relationship with the Proposer under the terms and conditions of this RFP.





## TARRANT COUNTY

### HISTORICALLY UNDERUTILIZED BUSINESSES (HUB) POLICY

#### I. POLICY STATEMENT

The Tarrant County Commissioners Court, being the policy development and budgetary control unit of county government, will strive to ensure that all businesses, regardless of size, economic, social or ethnic status have an equal opportunity to participate in the County's procurement processes. The County is committed to promote full and equal business opportunity for all businesses to supply the goods and services needed to support the mission and operations of county government, and seeks to encourage the use of certified historically underutilized businesses (HUBs) through the use of race, ethnic and gender neutral means. It is the policy of Tarrant County to involve certified HUBs to the greatest extent feasible in the County's procurement of goods, equipment, services and construction projects while maintaining competition and quality of work standards. The County affirms the good faith efforts of firms who recognize and practice similar business standards.

#### II. DEFINITIONS

Historically underutilized businesses (HUBs), also know as a disadvantaged business enterprise (DBE), are generally business enterprises at least 51% of which is owned and the management and daily business operations are controlled by one or more persons who is/are socially and economically disadvantaged because of his or her identification as a member of certain groups, including women, Black Americans, Mexican Americans and other Americans of Hispanic origin, Asian Americans and American Indians.

Certified HUBs includes business enterprises that meet the definition of a HUB and who meet the certification requirements of certification agencies recognized by Tarrant County.

Businesses include firms, corporations, sole proprietorships, vendors, suppliers, contractors, subcontractors, professionals and other similar references when referring to a business that provides goods and/or services regardless of the commodity category.

Statutory bid limit refers to the Texas Local Government Code provision that requires competitive bidding for many items valued at greater than \$25,000.

### **III. POLICY GUIDELINES**

- A. Tarrant County, its contractors, their subcontractors and suppliers, as well as all vendors of goods, equipment and services, shall not discriminate on the basis of race, color, creed, gender, age, religion, national origin, citizenship, mental or physical disability, veteran's status or political affiliation in the award and/or performance of contracts. All entities doing business or anticipating doing business with the County shall support, encourage and implement affirmative steps toward a common goal of establishing equal opportunity for all citizens and businesses of the county.
- B. Tarrant County will use and recognize the State of Texas certification process in conjunction with the implementation of this policy. The County may recognize other agencies' certification processes recognized by the State of Texas. Tarrant County reserves the right to review the certification status of any vendor applying to do business with the County. This review will be accomplished to determine the validity and authenticity of the vendor's certification as a HUB.
- C. The Commissioners Court may establish HUB target goals. Through a systematic approach of soliciting quotes, bids and proposals from certified HUBs and in compliance with applicable state and federal law this policy will strive to meet those goals.
  1. Target goals should consider:
    - the availability of HUB firms within the specific category of goods or services to be procured; and
    - the diversity of the county's population.
  2. The goals should be reviewed and amended periodically.
  3. The program may apply to all County procurements including construction and professional services.
  4. Particular attention will be given to HUB participation on purchases in excess of the statutory bid limit.
  5. The Commissioners Court herein establishes a 20% good faith target goal for Tarrant County.

- D. Tarrant County will actively seek and encourage HUBs to participate in all facets of the procurement process by:
1. Continuing to increase and monitor a database of certified HUB vendors, professionals and contractors. The database will be expanded to include products, areas of expertise and capabilities of each HUB firm.
  2. Continuing to seek new communication links with HUB vendors, professionals and contractors to involve them in the procurement process.
  3. Continuing to advertise bids on the County's website and in newspapers including newspapers that target socially and economically disadvantaged communities.
  4. Continuing to provide copies of bid specifications to minority Chambers of Commerce.
- E. As prescribed by law, the purchase of one or more items costing in excess of the statutory bid limit must comply with the competitive bid process. Where possible, those bids will be structured to include and encourage the participation of HUB firms in the procurement process by:
1. Division of proposed requisitions into reasonable lots in keeping with industry standards and competitive bid requirements.
  2. Where feasible, assessment of bond and insurance requirements and the designing of such requirements to reasonably permit more than one business to perform the work.
  3. Specification of reasonable, realistic delivery schedules consistent with the County's actual requirements.
  4. Specifications, terms and conditions reflecting the County's actual requirements are clearly stated, and do not impose unreasonable or unnecessary contract requirements.
- F. A HUB Policy statement shall be included in all specifications. The County will consider the bidder's responsiveness to the HUB Policy in the evaluation of bids and proposals. Failure to demonstrate a good faith effort to comply with the County's HUB policy may result in a bid or proposal being considered non-responsive to specifications.
- G. The Purchasing Department will actively seek the participation of HUB firms in the quotation process for purchases under the statutory bid limit. HUB firms will be identified on the computerized database and linked to the commodities they represent. Buyers will be encouraged to use available internal and external databases of certified HUB firms.

- H. Nothing in this policy shall be construed to require the County to award a contract other than to the lowest responsive bidder as required by law. This policy is narrowly tailored in accordance with applicable law.

#### **IV. ADMINISTRATIVE GUIDELINES**

- A. The Purchasing Department shall serve as the County's HUB Office with responsibility for the implementation, monitoring and general operations of the HUB policy. The Purchasing Agent shall serve as the County HUB Officer.
  - 1. The HUB Officer will establish procedures to implement this policy across the full spectrum of the procurement process. The County HUB Office will periodically review with department head and elected officials regarding procurement opportunities.
  - 2. Managing the policy and training buyers and other County personnel in order to meet County goals will be the responsibility of the HUB Office.
  - 3. The HUB Office will cooperate with other local government entities to increase HUB participation throughout the county and region. The HUB Office is encouraged to participate in educational and other outreach programs to assist HUB firms.
  - 4. The HUB Officer will receive and review complaints and recommendations regarding the implementation of the HUB Policy and the good faith efforts of bidders. Further, the HUB Office will audit for compliance to the HUB Policy on eligible projects after award, during the performance of the contract and after completion, while also making any recommendations to Commissioners Court regarding any irregularities or misrepresentation of facts as they relate to compliance with the policy. The HUB Office will review documentation submitted by HUB firms in compliance with this policy.
  - 5. An annual report along with recommendations shall be provided to the Commissioners Court and Purchasing Board. The annual report will provide statistical data and efforts reflected in the number of purchase orders, value of goods and services purchased, percentages to HUB firms, and outreach and marketing efforts. Other statistics may be required or requested by the Commissioners Court or Purchasing Board.

**510 Historically Underutilized Businesses Policy**

*Adopted: Court Order 64788 (December 17, 1990)*

*Amended: Court Order 69958 (December 7, 1993)*

*Amended: Court Order 99651 (December 28, 2006)*

**RFP FOR CONTINUATION OF ELECTRONIC MEDICAL RECORDS SYSTEM**

**FOR DISADVANTAGED BUSINESS ENTERPRISES ONLY**

**Disadvantaged Business Enterprises (DBE)** are encouraged to participate in Tarrant County's bid process. The Purchasing Department will provide additional clarification of specifications, assistance with Bid Proposal Forms, and further explanation of bidding procedures to those DBEs who request it.

Representatives from DBE companies should identify themselves as such and submit a copy of the Certification.

The County recognizes the certifications of both the State of Texas General Services Commission HUB Program and the North Central Texas Regional Certification Agency. All companies seeking information concerning DBE certification are urged to contact.

Texas Building and Procurement Commission  
Statewide HUB Program  
1711 Jacinto Blvd.  
PO Box 13047  
Austin, TX 78711-3047  
(512) 463-5872

**OR**

North Central Texas  
Regional Certification Agency  
624 Six Flags Drive, Suite 216  
Arlington, TX 76011  
(817) 640-0606

**If your company is already certified, attach a copy of your certification to this form and return with proposal.**

COMPANY NAME: \_\_\_\_\_

REPRESENTATIVE: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

CITY, STATE, ZIP: \_\_\_\_\_

TELEPHONE NO. \_\_\_\_\_ FAX NO . \_\_\_\_\_

**Indicate all that apply:**

- \_\_\_\_\_ Minority-Owned Business Enterprise
- \_\_\_\_\_ Women-Owned Business Enterprise
- \_\_\_\_\_ Disadvantaged Business Enterprise

**RFP FOR CONTINUATION OF ELECTRONIC MEDICAL RECORDS SYSTEM**

**VENDOR REFERENCES**

Please list three (3) references, **other than Tarrant County**, who can verify your performance as a vendor. Performance includes but shall not be limited to, sales and/or services, delivery, invoicing, and other items as may be required for Tarrant County to determine your firm's ability to provide the intended goods or service of this RFP. The County prefers references to be from customers for whom your firm has provided the same items (sales and/or services) as those specified in this RFP. Inaccurate, obsolete or negative responses from the listed references could result in rejection of your proposal.

**REFERENCE ONE**

GOVERNMENT/COMPANY NAME: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_  
CONTACT PERSON AND TITLE: \_\_\_\_\_  
TELEPHONE NUMBER: \_\_\_\_\_  
E-MAIL ADDRESS: \_\_\_\_\_  
SCOPE OF WORK: \_\_\_\_\_  
CONTRACT PERIOD: \_\_\_\_\_

**REFERENCE TWO**

GOVERNMENT/COMPANY NAME: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_  
CONTACT PERSON AND TITLE: \_\_\_\_\_  
TELEPHONE NUMBER: \_\_\_\_\_  
E-MAIL ADDRESS: \_\_\_\_\_  
SCOPE OF WORK: \_\_\_\_\_  
CONTRACT PERIOD: \_\_\_\_\_

**REFERENCE THREE**

GOVERNMENT/COMPANY NAME: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_  
CONTACT PERSON AND TITLE: \_\_\_\_\_  
TELEPHONE NUMBER: \_\_\_\_\_  
E-MAIL ADDRESS: \_\_\_\_\_  
SCOPE OF WORK: \_\_\_\_\_  
CONTRACT PERIOD: \_\_\_\_\_

**THE ORIGINAL AND EIGHT (8) COPIES OF THIS FORM MUST BE RETURNED WITH PROPOSAL!**

**RFP FOR CONTINUATION OF ELECTRONIC MEDICAL RECORDS SYSTEM**

**PROPOSAL SIGNATURE FORM**

The undersigned agrees this proposal becomes the property of Tarrant County after the official opening.

The undersigned affirms he has familiarized himself with the local conditions under which the work is to be performed; satisfied himself of the conditions of delivery, handling and a storage of equipment and all other matters which may be incidental to the work, before submitting a proposal.

The undersigned agrees if this proposal is accepted, to furnish any and all items/services upon which prices are offered, at the price(s) and upon the terms and conditions contained in the Specifications. The period for acceptance of this Proposal will be sixty (60) calendar days unless a different period is noted by the proposer/respondent.

The undersigned affirms that they are duly authorized to execute this contract, that this proposal has not been prepared in collusion with any other Proposer/Respondent, nor any employee of Tarrant County, and that the contents of this proposal have not been communicated to any other proposer/respondent or to any employee of Tarrant County prior to the official opening of this RFP.

Vendor hereby assigns to purchaser any and all claims for overcharges associated with this contract which arise under the antitrust laws of the United States, 15 USCA Section 1 et seq., and which arise under the antitrust laws of the State of Texas, Tex. Bus. & Com. Code, Section 15.01, et seq.

The undersigned affirms that they have read and do understand the specifications and any attachments contained in this RFP package.

**NAME AND ADDRESS OF COMPANY:**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Tel. No. \_\_\_\_\_

E-Mail Address: \_\_\_\_\_

**AUTHORIZED REPRESENTATIVE:**

Signature \_\_\_\_\_

Date \_\_\_\_\_

Name \_\_\_\_\_

Title \_\_\_\_\_

FAX No. \_\_\_\_\_

**AFTER HOURS EMERGENCY CONTACT:**

Name: \_\_\_\_\_

Tel. No. \_\_\_\_\_

**COMPANY IS:**

Business included in a Corporate Income Tax Return? \_\_\_\_\_ YES \_\_\_\_\_ NO

\_\_\_\_ Corporation organized & existing under the laws of the State of \_\_\_\_\_

\_\_\_\_ Partnership consisting of \_\_\_\_\_

\_\_\_\_ Individual trading as \_\_\_\_\_

\_\_\_\_ Principal offices are in the city of \_\_\_\_\_

**THIS FORM MUST BE SIGNED AND THE ORIGINAL AND EIGHT (8) COPIES RETURNED WITH PROPOSAL**

**CERTIFICATION OF ELIGIBILITY**

**RFP FOR CONTINUATION OF ELECTRONIC MEDICAL RECORDS SYSTEM**

**(This provision applies if the anticipated contract exceeds \$25,000)**

By submitting a bid or proposal in response to this solicitation, the bidder/proposer certifies that at the time of submission, he/she is not on the Federal Government's list of suspended, ineligible, or debarred contractors.

In the event of placement on the list between the time of bid/proposal submission and time of award, the bidder/proposer will notify the Tarrant County Purchasing Agent. Failure to do so may result in terminating this contract for default.

---

Authorized Signature





**RFP FOR CONTINUATION OF ELECTRONIC MEDICAL RECORDS SYSTEM**

**Proposed Subcontractors**

Provide an overview of subcontractors proposed for the Project, if any. Proposer must provide further description of each subcontractor on the following sheets, and must include Subcontractor Information for each proposed subcontractor.

**(List in descending order [largest to smallest] of scope of services provided to project.)**

<b>Subcontractor Name</b>	<b>Team Size</b>	<b>Role</b>	<b>Responsibilities</b>

**THE ORIGINAL AND EIGHT (8) COPIES OF THIS FORM MUST BE RETURNED WITH PROPOSAL!**

**RFP FOR CONTINUATION OF ELECTRONIC MEDICAL RECORDS SYSTEM**

**Proposer/Subcontractor Information**

An authorized representative of Proposer/Subcontractor who is legally authorized to certify the information requested in the name of and on behalf of the Proposer/Subcontractor is required to complete and sign the Required Certifications. All of the requested information and certifications must be provided in order to be eligible for award. Proposer/Subcontractor's authorized representative must certify as to the truth of the representations made by signing where indicated below.

<b>Proposer/Subcontractor Information</b>	
<b>Name:</b>	
<b>Entity's Legal Form:</b>	<input type="checkbox"/> Corporation <input type="checkbox"/> Partnership <input type="checkbox"/> Sole Proprietorship <input type="checkbox"/> Other _____
<b>Address:</b>	
<b>Designated Contact:</b>	
<b>Phone:</b>	
<b>Fax:</b>	

The undersigned: (1) recognizes that the following representatives are submitted for the express purpose of assisting Tarrant County in making a determination to award a contract and/or approve a subcontract; (2) acknowledges and agrees by submitting the Certification, that the County may at its discretion, by means which it may choose, verify the truth and accuracy of all statements made herein; (3) acknowledges that intentional submission of false or misleading information may constitute a felony; and (4) certifies that the information submitted in this certification and any attached documentation is true, accurate and complete.

\_\_\_\_\_  
Signature of Proposer/Subcontractor

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Business Entity

**THE ORIGINAL AND EIGHT (8) COPIES OF THIS FORM MUST BE RETURNED WITH PROPOSAL!**

**RFP FOR CONTINUATION OF ELECTRONIC MEDICAL RECORDS SYSTEM**

**Proposed Financial Response**

Development of the Financial Response must set forth all costs associated with the proposed Statement of Work for the RFP. Proposers must acknowledge that all costs, including travel required to meet the RFP requirements must be included in the per hour rate. Any contract signed will be a fixed cost contract and no other costs will be allowed for performance of proposed solution.

**PROFESSIONAL CONSULTING SERVICES: Include Preliminary Workflow analysis, Implementation of EMRS, and System Training**

Per Hour Rate (Including Travel)                      \$ \_\_\_\_\_ /Per Hour

Total Estimated Hours Required                      X \_\_\_\_\_ =

Proposed Consulting Cost                              \$ \_\_\_\_\_

License Fees (for first year)                         \$ \_\_\_\_\_

Maintenance & Support Fees (for first year)     \$ \_\_\_\_\_

Data Migration                                         \$ \_\_\_\_\_

Documentation (Administrator's Manual)         \$ \_\_\_\_\_

System Administrative Overview Training and Manual (for end user)     \$ \_\_\_\_\_

Total Cost for Year 1:                                 \$ \_\_\_\_\_

**THE ORIGINAL AND EIGHT (8) COPIES OF THIS FORM MUST BE RETURNED WITH PROPOSAL IN A SEPARATE SEALED ENVELOPE!**

**RFP FOR CONTINUATION OF ELECTRONIC MEDICAL RECORDS SYSTEM**

Projected Cost for Years 2 - 5

License Fees	Year 2:	\$ _____
	Year 3:	\$ _____
	Year 4:	\$ _____
	Year 5:	\$ _____
Maintenance & Support Fee	Year 2:	\$ _____
	Year 3:	\$ _____
	Year 4:	\$ _____
	Year 5:	\$ _____
Projected Cost for Years 2 – 5:		\$ _____

**THE ORIGINAL AND EIGHT (8) COPIES OF THIS FORM MUST BE RETURNED WITH PROPOSAL IN A SEPARATE SEALED ENVELOPE!**

# ATTACHMENT “A”

## PUBLIC HEALTH SERVERS

### Server One

DELL-223-4541

Power Edge 1950 III Quad Core Intel® Xeon® X5460

2 x 6 MB Cache, 3.16 GHz, 1333MHz FSB

Operating System Red Hat Enterprise Linux 5.2AP, FI

x64, 3 yr, Auto-Entitle, Lic & Media R52AP3

[420-9802] 11

Additional Processors Quad Core Intel® Xeon®

X5460 2x6 MB Cache, 3.16GHz, 1333MHz FSB 2PH31 [311-7948] 2

Memory 8GB 667MHz (4x2GB), Dual Ranked DIMMs 8G4D6D [311-6197]3

Keyboards, Mice, Displays and Related Devices No

Keyboard or Mouse Selected NONE [310-5017] 4

Optional Feature Upgrades for Integrated NIC Ports

LOM NICs are TOE Ready TOE [430-2968] 6

PCI Riser Riser with 2 PCIe Slots PCIE [320-4648] 7

Primary Hard Drive 73GB 15K RPM Serial-Attach

SCSI 3Gbps 3.5-in HotPlug Hard Drive 73A15 [341-3029] 8

Primary Controller PERC6i SAS RAID Controller, 2x4

Connectors, int, PCIe, 256MB Cache PERC6I [341-5781] 9

Network Adapter Dual Embedded Broadcom®

NetXtreme II 5708 Gigabit Ethernet NIC OBNIC [430-1762] 13

Remote Management Dell Remote Access Card, 5<sup>th</sup>

Generation for PowerEdge Remote Management DRACS [313-3936] 14

CD/DVD Drive DVD-ROM, SATA, Internal DVDS [313-6770] 16

Bezel Rack Bezel RBEZEL [313-3937] 17

Backplane 1x2 Beckplane for 3.5-inch Hard Drives

And SATA Optical 1X225S [311-9630] 18

Documentation Electronic Documentation and

OpenManage DVD Kit EDOCS [310-7962] 21

2<sup>nd</sup> Hard Drive 73GB 15K RPM Serial-Attach SCSI

3Gbps 3.5-in HotPlug Hard Drive 73A15 [341-3029] 23

Hard Drive Configuration Integrated SAS/SATA RAID

1, PERC 6/i Integrated/SAS6/iR 6SR1 [341-5776] 27

Chassis Configuration No Rack Rails Included NORAIL [341-3089] 28

Hardware Support Services 3 Year ProSupport for IT

4HR 7x24 Onsite: Non Mission Critical U3IP4H

[984-1519][984-1528][987-0772][987-0972][987-5220] [989-3499] 29

Installation Services No Installation Assessment NOINSTL [900-9997] 32

Power Supply Redundant Power Supply with No Cord RPSNY3 [310-9927] 36

Power Cords Power Cord, NEMA 5-15P to C14, 15 amp, wall plug, 10 feet/3 meter WL10FT [310-8509] 38

## Server 2

DELL-223-8207  
PowerEdge Energy Smart 1950 III

Base Unit: Dual Core Intel Xeon L5240, 6MB Cache, 3.0GHz,  
1333MHz, FSB ES, PE1950 (223-8207)

Processor: Dual Core Intel Xeon 2<sup>nd</sup> Processor L5240, 6MB Cache 3.0GHz  
1333MHz, FSB, PE1950 (311-8650)

Memory: 16GB 667MHz (8x2GB), Dual Ranked DIMMs, Energy Smart, PE (311-6957)

Video Card: LOM NICs are TOE Ready (430-2968)

Video Memory: Riser with 2 PCIe Slots for PowerEdge 1950 (320-4648)

Hard Drive: 73GB 15K RPM Serial-Attach SCSI 3Gbps 2.5 in  
HotPlug HardDrive (341-4727)

Hard Drive Controller: PERC6i SAS RAID Controller 2x4 Connectors, Int, PCIe 256MB Cache  
(341-5781)

Operating System: Red Hat Enterprise Linux 5 x 32 and x64, 1-2 socket, 3yr FI x64, auto-entitle  
(420-7441)

NIC: Dual Embedded Broadcom NetXtreme II 5708 Gigabit Ethernet NIC (430-1762)

Modem: Dell Remote Access Card, 5<sup>th</sup> Generation for PowerEdge Remote Management (313-  
3936)

CD-ROM or DVD-ROM Drive: 24X IDE CD-RW/DVD ROM Drive for PowerEdge Servers, All OS  
(313-3918)

Sound Card: Bezel for PE 1950 (313-3937)

Speakers: 1x4 Backplane for 2.5-inch Hard Drives (311-7957)

Documentation Diskette: Electronic Documentation and OpenManage DVD Kit (310-7622)

Additional Storage Products: 73GB 15K RPM Serial-Attach SCSI 3Gbps 2.5-in HotPlug HardDrive  
(341-4727)

Feature: Integrated SAS/SATA RAID 5 PERC 6/1 Integrated (341-5777)

Feature: Sliding Rapid/Versa Rails and Cable Management Arm, Universal (341-3090)

Service: Non-Mission Critical: 4-Hour 7x24 On-Site Service After Problem Diagnosis, Initial Year  
(987-5220)



Service: Non-Mission Critical: 4-Hour 7x24 On-Site Service After Problem Diagnosis, 2 year Extended (987-0772)

Service: Dell Hardware Warranty, Extended Year(s) (984-1528)

Service: Dell Hardware Warranty Plus Onsite Service Initial YR (984-1519)

Service: ProSupport for IT: 7x24 HW/SW Tech Support and Assistance for Certified IT Staff, 3 year (987-0972)

# ATTACHMENT “B”

# EMR Readiness Assessment Report

Tarrant County Electronic Medical Records (EMR) Readiness Assessment  
*A Detailed review of current processes and procedures as well as potential steps to improve readiness for future EMR utilization and requirements*

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## *Executive Summary*

The consultant was engaged by Tarrant County to implement a pilot EMR system at its Adult Health Services Clinic (AHSC). As part of that project this EMR readiness assessment was requested. A thirty-day intensive information gathering effort was performed at the outset of the project and the details of what was found at that point as well as ongoing research and interactions with TC staff and programs are reflected in this document. The AHSC implementation was structured in four stages, of which four have now been completed. With all the information gathered it is possible in many cases to offer concrete conclusions and firm guidance and we have done so where possible.

Throughout this process and during the completion of these four stages, the consultant performed extensive information-gathering on many Tarrant County public health areas of operation including the AHSC, DIS, PMC, TB, Immunizations, Lab and higher level public health management such as medical direction. What was found is that in a majority of ways Tarrant County is prepared for comprehensive EMR system usage but some significant long term policy questions need resolution and some on-the-ground training and education steps will better prepare staff for the transition to EMR. With the recent definition of "Meaningful Use" and the nearing finalization of incentive rule-making, some additional feedback is provided on how those issues can be coordinated with choices of implementation for some of the departments. This report identifies the opportunities to improve processes and operations to facilitate comprehensive EMR utilization across all Tarrant County Public Health departments.

Overall TCPH is appropriately positioned to stay current with national EMR usage trends. However in one particular area, the consultant found that across TCPH as a whole, training and education in standardized coding and datasets could provide strong long-term benefits and dramatically reduce the manual efforts put into many types of reporting done. Additional training and education in CPT, ICD, SNOMED (ICD10), NDC/RxNORM (ePrescribing codes), and NPI would provide important skills directly aimed at the forthcoming changes to the healthcare landscape and apply universally to a large variety of operational scenarios. Our recommendation is that as part of ongoing CME efforts more of this material is targeted for providers and that courses and seminars provided by payers, federal agencies and pharmaceutical companies be encouraged for TCPH employees who do not pursue CME. Paid training programs are also available from many industry associations for these items.

## **Areas of Operation Reviewed**

The consultant performed an on-site visit as well as extensive telephone interviews with relevant personnel regarding each of the following areas.

### *AHSC*

The Adult Health Services Clinic is the specific target for implementation of the pilot open source EMRS. We conducted extensive interviews with its operations manager, Mark P. Wilson, its clinical staff supervisor Eve Roussin, and several other staff involved in front office, clinical and DIS operations.

(Refer to Exhibit A)

After conducting a thorough review of its work flow, which consisted of mainly paper-based activities supplemented with a handful of hosted applications (such as TX state medications ordering), Mobius document scanning, and STD\*MIS for limited demographics and encounter support, the consultant has a complete understanding of the issues at this facility. Less extensive reviews were done at other clinical sites.

A new work-flow based on the features of the consultant practice management and EMR system was proposed and accepted by the staff at AHSC and Santos Navarette, the Associate Director of Public Health overseeing that facility and the pilot project. The new work-flow is attached as Exhibit A and is broken into 3 phases reflecting the difficulty of jumping from a paper-based workflow to one that is completely electronic in a single step. The 3 phases reflect incremental changes in workflow, focusing initially on practice management and coordination of patient data, the second on resolving lab interaction and "accessory" processes that are critical foundations to clinical care and the third focusing on full digitization of all clinical activities.

The AHSC has a relatively simple clinical workflow focused on *testing and treatment of acute infections from sexually transmitted diseases. There is still significant opportunity to streamline procedures and improve reporting data using an EMR system. Significant case management and biological surveillance activities are conducted that can benefit from higher level interoperability with an EMR that offers case management activities such as a combination case management system and EMR that are highly interoperable.*

*(Over 53,000 clinical lab tests performed in 2008, and over 6,000 communicable diseases reported and over 8,000 STD clinic visit) 38 or more users in clinical work area*

#### *PMC*

The vendor interviewed several PMC staff including Jason Nevoit, their operations manager. (Refer to Attachment B) The PMC provides primary care to patients diagnosed with HIV/AIDS, coordinating the treatment of that disease, its complications and their regular care including chronic diseases such as diabetes, hypertension and so forth. Their clinical operations are significantly more complicated than those at the AHSC because of the particular treatment aspects of HIV care as well as that of primary care.

Since the time of this data gathering, the consultant has been awarded a contract to complete a EMRS implementation for the PMC focusing on their more complex clinical workflow. (Refer to Exhibit B)

*(Conducted over 6,200 clinic visits in 2008, and over 700 HIV care caseloads) 12 or more users in clinical work area*

#### *TB*

The vendor had an in-depth question and answers session with the TB program director and performed further data gathering regarding day-to-day operations of the TB clinic and its interaction with the PMC. Only superficial analysis on the TWICES and TBNET systems was conducted but enough was completed to offer basic guidance.

*(TB and Refugee clinics conducted over 15,600 clinic visits in 2008, and over 13,000 directly observed therapy doses administered in the work field) 40 or more users in clinical work area*

#### *Immunization Program*

Preliminary information gathering and an interview with the immunization program direction were conducted. Currently the immunization program does use an in-house system to track administration, inventory and basic reporting. While the system does seem to meet current functional needs it will require extensive modification to continue to be compliant with "meaningful use" reporting and interaction with the National Health Information Network as those standards continue to develop. More research should be conducted to compare the relative costs to continuing the current system and updating to meet current and pending requirements versus transitioning the program to the comprehensive EMR used by AHS and PMC and to be used by most of the other TCPH programs.

*(Provided over 127,000 immunizations in 2008, and over 670,000 WIC clinic visits) 70 or more users in clinical work area*

## *BCCCP*

Preliminary information gathering and a meeting with the programs director were conducted. This program is a strong candidate for inclusion in the comprehensive EMR activities being rolled out to PMC and AHS and will offer several features to make administration of the program easier, as well as streamlining and centralizing the ability to perform the reporting necessary as part of the program's mandate.

*(Provided screens to over 1,200 clients in 2008, and over 500 case managed clients) 3 or more users in clinical area*

## *Medical Direction*

The vendor met with the Tarrant County medical director Dr. Parker and reviewed additional potential usage of standardized codesets, systematic problem lists, and other areas regarding consistency of records across facilities.

## *Technical Systems Reviewed*

- **STD\*MIS**

This system is utilized to record and report statistics on certain STD infections and to facilitate biological surveillance. Data is fed upstream to several organizations based on jurisdictional requirements.

- **Mobius**

This system is a county-wide document storage management solution geared to general purpose office use and archiving. Several limits were found with respect to its use in medical facilities. Historical batch scanning was conducted, which adequately meets legal and archival requirements but did not delineate documents based on type or date and provides only minimal searching with a small number of indexed attributes.

For day-to-day operations at medical facilities, an alternate system that is medically specific is more appropriate such as the one included in the prototype the vendor system, which provides for unlimited document types, simple tagging and dynamic indexing on a user-definable number of axes.

The hardware provided for the AHSC prototype only has sufficient capacity for that site for a 1-3 year period, future expansion will require a Storage Area Network (SAN).

- **ARIES**

This system is utilized by the PMC site to record and report on data specific to HIV/AIDS cases and in dealing with federal requirements including the Ryan White foundation programs. Necessary information gathering was completed to identify means for automatically exporting data to ARIES from a system such as the open source EMRS, avoiding double entry.

- **Medisoft**

Some electronic billing experimentation has been done using a Medisoft system, at the time of review it was still in its setup period. To facilitate optimal EMR usage across all Tarrant County sites, the establishment of central billing office operations is probably the most cost-effective mechanism in the long term rather than piecemeal usage of independent systems for each site.

- *TBCMS , TIMS , HARS/EHARS, DSHS COHORT ,TCIR , NEDSS, PHIN , HIDPort, RODS , ESSENSE , BioSense , BCCCP*

These systems were reviewed and for the most part do not present an immediate need for integration from either the standpoint of the system or the needs of potential clinical work-flows. The most likely candidate for future integration would be the TIMS immunization tool, which could be integrated to reduce double entry for some visits.

### **Personnel Surveys**

The vendor conducted a survey of the AHSC staff asking several questions about experience, expectations, and EMR perceptions. Less than a quarter of the respondents (7 out of 31) reported previous experience with PM or EMR systems. Nearly all of the staff surveyed (27 out of 31) claimed to be familiar with the term "web-based."

As for ease of implementation, staff was asked to select from responses ranging from "easy" to "difficult" regarding the switch from paper-based to digital tasks. The majority (25 out of 31) believed the switch would be "straightforward" with only some problems along the way. Three respondents, however, believed it would be "complicated" while one predicted it would be "easy." None of those surveyed believed the process would be "difficult."

The survey asked staff about their expectations of a PM/EMR system and the most important benefit they see it providing. The most common response was that such a system would allow for easier and more efficient access to records. Faster access was also emphasized; in fact, 15 out of 31 respondents identified "reduced time" as the criterion most important for them to consider the implementation a success. Asked how they envisioned the new system improving their role at AHSC, individuals again mentioned benefits such as less wasted time and easier access to patient information. They also believed the time saved could be passed down to patients, lessening their wait times.

The majority of those surveyed (18 out of 31) believed incorrect information given by the patient is the number-one cause of medical errors. But the surveys also showed that about a fifth of the respondents (6 out of 31) felt problems in transcriptions were the main culprit in medical errors.

*Survey results largely indicated an AHSC personnel-base that is eager to adopt a PM/EMR system that improves accessibility and efficiency. The majority of the staff considered themselves adequately adept at utilizing computer technology and recognized the benefits an electronic system can provide them.*

### **Equipment (Refer to Exhibit D for AHS and Exhibit E for PMC)**

An underpinning of successful EMR implementations operating a completely digital work-flow is convenient and ubiquitous access to workstations. At both the AHSC and PMC, a sufficient number of base workstations is available for phase 1 and phase 2 EMR operations. It is likely that some relocations and additional stations will be needed to fully facilitate the completely digital clinical work-flows of phase 3. Because most clinical interactions take place with minimal traveling by the provider staff, the usage of full mobile devices such as tablets may be difficult to justify based on cost. More limited types of mobile devices for the purposes of read-only operations, queuing and alerting are likely to be part of an optimal work-flow. The existing RIM infrastructure may be able to meet this need provided HIPPA privacy and security issues can be resolved.

### **County IT Support**

In the pilot implementation of the EMRS at the AHSC, the consultant is contracted to provide all application level support. Should a comprehensive EMR system be used across all

facilities, it may be the most cost effective option to have a team of general support cross-trained to provide support for Tier 1 EMR application issues. With respect to clinical workflows, timeliness is crucial and that may require special ticketing processes for medical personnel needing assistance with EMR-specific issues.

The current contracting process for EMR has favored the cost-effectiveness and control garnered in systems such as the open source EMRS is provided under an Open Source license. It is common that open source solutions are supported by, and require the usage of, other low-level open source components, which enable and enhance their basic cost-effectiveness. These systems, such as Linux (Redhat Enterprise Linux or others), the Apache web server, the MySQL database server (or PostgreSQL), the PHP Scripting language (or others like Python & Ruby) and Firefox web browser are often new territory to many existing personnel and processes in institutional IT. It is invaluable to enable low pressure exposure to these systems as part of ongoing training and development activities. This minimizes the perceived encroachment many existing IT departments can feel when new technologies and methodologies such as Open Source enter into operations.

### **Availability and Redundancy**

In a silo model, technology is duplicated for sites so that to some extent, aspects of availability and redundancy are minimized, with disruptions most likely to apply only to a particular clinical site. In an integrated model it is vital that sufficient layers be in place to reduce or eliminate disruptions as they would apply to all clinical sites. It is vital that, with respect to low level technology such as the desktops themselves (for example should they be deployed with a terminal server element, dependence on single sign on, etc) to physical networking through switches all the way to the PM/EMR equipment, no single point of failure exists that would affect multiple sites, or even multiple distinct areas within sites. Commodity clustering and mirroring solutions are supported by the vendor and most PM/EMR systems to provide industry standard availability for redundancy.

### **Silo Data (HIE) Vs. Integrated Data**

Tarrant County currently operates all of its clinical sites on a largely independent basis with some centralized medical direction. A key organizational decision will need to be made determining whether in the long term each facility will operate as a separate data silo with structured sharing (health information exchange) or as a central system with some partitioning between sites but a single operational system. This is probably a very similar process to what was involved in the County's origination of the SAP system it uses for general business management and accounting. In many ways, the use of an EMR/PM system at clinical sites mirrors that of a large ERP system at business sites.

In the pilot EMRS implementation, this issue is largely deferred as that installation affects only the operations at the one site, the AHSC.

Because in their current processes the TC clinical sites are quite separate with distinct management, different processes, guidelines, clinical decision making and contracting (for things such as labs, drugs, etc) this may be a difficult transition to a more centralized and consistent operational model that favors a single PM/EMR system. It is outside the scope of our review to take into account a myriad of important business, cost, and medico-legal reasons to maintain this separation between sites.

In a silo model, each clinical site will operate a separate instance of the PM/EMR system and maintain significant autonomy about its use and operation. For a particular patient, multiple independent records will exist across sites. Data entered and stored in a system such as the



open source EMRS is communicated to a central data warehouse for certain reporting processes and between other sites utilizing HIE technologies including an MPI and record locator service. A system such as the open source EMRS supports these operations. The main downsides to a silo model are the duplicative costs and additional staff necessary to operate multiple processes at each site for similar activities such as billing, labs, reporting and so forth. Additionally, the infrastructure and technology required to operate HIE and data warehousing are costly and maintenance-intensive.

Were the Tarrant County clinical sites more physically distinct with many physical separation factors such as commute times, separate data centers and completely separate patient pools, more justification would be present in balancing the silo model versus the business factors that justify the operational separation. Solely from an EMR readiness standpoint, the physical proximity, sharing of staff and inherent opportunities for centralization, we found the single operational system model with integrated data has a stronger appeal based on the factors we considered.

In an integrated model, a single operation system exists in which patients have a single record across all clinical activities, though partitioning for security and privacy will limit access by particular staff or use cases to that data. Because all operations occur within the context of a single system, more consistency is required at the clinical sites. The transition from the current TC model of total separation to a more consistent and centralized model of operation with a centralized billing office, centralized reporting activities and consistency amongst similar medical care lines (same formularies for same conditions, coding practices, streamlining of paperwork such as intakes and superbills) presents many organizational challenges. These challenges need to be balanced against the benefits of an integrated data system which offers simplified maintenance and training, a minimum of duplicative effort, streamlined operations and smaller long-term total cost of ownership.

The pilot EMRS also supports an integrated data system model. This approach is substantively favored by our existing customer base including other counties.

### **Centralized Billing Office**

TCPH does not currently do a substantive number of billable procedures at the combination of its facilities in the way a stand-alone, for-profit outpatient center might. However, current billing operations are very scattered and work in completely different ways, and it seems that not all activities and opportunities for billing are explored. As a public health entity, clearly the main priority is on the delivery of the care, though in our analysis we do think that some additional opportunities for reimbursements under certain programs, better supporting data for various granting opportunities and streamlined compliance with regulatory requirements (reporting) would be possible were billing operations to be centralized. Even should a silo data model be selected, a CBO can still be used.

On current volumes as we understand them, a clearing house and single staff member (possibly part time) could perform 100% of billing operations across all sites as well as providing a coordination and supporting role in reporting and the proactive patient outreach that is possible with a fully digitized EMR work-flow.

Specifically with chronic diseases, a fully-digitized EMR work-flow will be able to deliver improved outcomes (this statement has not been evaluated by the FDA) by ensuring patients receive proper notification of opportunities for prevention (such as LEAP exams in diabetic patients) and also ensuring that activities across sites and care lines are properly coordinated. Follow-ups on inbound and outbound referrals can also be tracked to improve compliance.

## **NPI Numbers**

In our interactions with the staff at AHSC it was discovered that the RN's had not received National Provider Identifier numbers. While not a strict requirement for most activities today, it is certain to become a requirement in the future and provides myriad benefits and coordination of work-flow today. We strongly recommend that Tarrant County ensure that any persons who act as providers, either in a direct capacity or as a supervised mode, receive NPI numbers. The process to receive an NPI is available to all MD, FNP, RN providers and in most cases MA, PA staff as well. Should a centralized billing office approach be desired, Tarrant County should make sure that its facilities have NPIs that are correctly linked within the national database of sites of the larger TCPH organization rather than independent entities.

## **Standardized Coding**

In our interviews with staff, there seemed to be a lot of confusion regarding coding standards and proper utilization of superbill documents, additionally it seems that the most recent codesets were not being used. Ongoing training to improve familiarity with codesets including CPT, ICD9, ICD10 (a requirement in 2010-2012), SNOMED and RXNORM offers an opportunity for more accurate coding of clinical encounters, better and more streamlined design of work-flows, new opportunities for improving patient outcomes using population specific clinical guidelines and alerting and better quality data in a variety of reporting operations.

## **Centralized Formulary**

At each of the clinical sites, completely independent processes are used in determining what drugs are used in what cases and from which drugs selections are possible. Certainly amongst different lines of care, completely different drugs being used, as well as certain drugs being provided on a no-cost basis or being sourced from state level programs, it is necessary to have some level of separation. It would nonetheless be desirable to have some centralized planning in drug usage for similar conditions, application of automated clinical guidelines and alerting and responses to recalls, or other types of follow-ups specific to medication lots. Maintenance of formularies can be time consuming so even in a silo based system, centralization of this aspect of medical direction offers benefits. For ePrescribing, it is necessary for a site to maintain and evaluate a formulary on a recurring basis.

## ***NQRI, PQRI, ePrescribing Incentive***

To the best of our knowledge, TC clinical sites are not currently participating in any of the national quality reporting programs or ePrescribing initiatives. These present potential opportunities for revenue, improved patient outcomes and compliance with forthcoming requirements. In overall medical direction, it is important that all of these programs be reviewed and eligible programs be implemented. The open source EMRS supports virtually all of the national reporting initiatives as well as the ePrescribing incentives (which are potentially even applicable at a site such as AHSC that fills no outside prescriptions; consult the CMS applicability guidelines). Under the passing stimulus legislations and based on all available information coming from CMS and ONCHIT, these programs represent the future of healthcare operations and reporting. Facilities that begin the process of adopting them now will be at an advantageous position as they become requirements.

## ***Electronic Lab Ordering and Resulting***

The primary problem currently standing as a roadblock to complete digital EMR work-flow at the AHSC is the interaction with the in-house TCPH lab. The in-house lab performs 100% of the tests at the AHSC and does so by interactions occurring via paper order sheets (stat and regular) and paper result reports. Within the lab, samples and orders are tracked via a manually assigned ascension number. During some intermediate points, an excel sheet is used for temporary tracking of some data points including results. The majority of orders

coming from AHSC are done on a STAT basis and are handled by a separate STAT work-flow at the TCPH lab.

At a minimum, in order to complete a fully digital EMR work-flow at the AHSC, it will be necessary for the TCPH lab to make some adjustments to its work-flow to support receiving lab orders in electronic format and to be able to report those results back in electronic format. This will reduce significantly the double entry which is done today and also reduce the likelihood of transcription errors.

A system such as the consultant does support order entry and resulting with an in-house lab. Use of the open source EMRS for this purpose would require work-flow adjustments in the lab to handle the orders and results from the AHSC that differ from other testing work-flows. Alternatively, the lab can implement an LIS system, which is the best solution in the long term.

Currently, bar coding is not utilized in the sample tracking and testing equipment. The open source EMRS supports such labeling and will be adding barcodes to labels generated using the system at the AHSC and PMC. Because many of the tests done at the TCPH lab are performed manually, there is limited benefit to reducing errors within the testing workflows themselves. But this activity can be used to reduce sample mislabeling and mix-ups as well as to provide real time status information about where samples are and tests being conducted, which is particularly important with STAT testing.

A variety of LIS systems are possible options for the lab including some that have some specific features for public health laboratories such as the The vendor WebVista LIS system, which is not part of the AHSC implementation. The use of an LIS would also deliver many benefits for the medical testing conducted for outside medical sites not directly operated by Tarrant County.

With the addition of a few automated lab testing machines for common panels, a large number of the tests at the PMC center and other clinical sites could be conducted at the in-house lab, helping to cost-justify the implementation of an LIS. Tied in with barcoding, this would provide industry standard processes to reduce testing work-flow errors.

Further complicating issues are the non-medical tests that TCPH performs on water and other environmental testing. The analysis presented here does NOT take into account factors regarding that testing, as the vendor does not have the sufficient background to advise on those matters.

## ***EMR Phases***

In the vendor's extensive research of EMR system implementation failures (in our 6 years of operation we have not had a single failed EMR implementation), we identified the number-one cause of failure to be a result of trying to implement too much change in too short a period of time. In describing implementations, we identified three primary stratifications of EMR usage in terms of three phases, the simple phase, the hybrid phase and the advanced phase.

The simple phase involves utilizing automated data sources such as labs and pre-printing paper documents, populating available fields. Most recording is still done on paper, though some secondary data entry (after the fact) may be completed.

The hybrid phase involves the same steps as the simple phase but also sets the goal that 100% of paper is scanned into the open source EMRS using the document storage system and focuses on generation of those paper documents with pre-populated information where available.

The advanced phase is where all data that can and should be reasonably collected into the open source EMRS is collected either during patient interaction, immediately there-after (cafe style) or batched at the end of the day.

It is generally not possible for an organization to “jump” EMR phases and instead each phase must be incrementally implemented. Attempting this jumping was what caused the majority of EMR failures; this was at sites currently operating a paper-based workflow attempting to implement a completely digital one. Incremental steps are crucial to successful implementations, and this is the approach the vendor is using at the AHSC. Additional transitions to more advanced phases are completed over the course of the first year of operations driven by conditions at the site; this continuing transition process is included in our ongoing support.

### ***Future Directions***

At current point in time, June 2009, the AHS clinic at TCPH has concluded its final phase of implementation having now used the open source EMRS for a month with great success. The PMC center is more than half-way into its implementation project and continuing at a strong pace. Overall, TCPH is substantially further along on its path to comprehensive EMR usage since it began the prototype project in November 2009. Compared to similar institutions nationwide, TCPH is well positioned towards meeting forthcoming definitions of “meaningful use” and well ahead of most public health departments.

TCPH has determined a consistent set of policies regarding cross clinic/program visitation by patients that provides for a single patient record within all of public health. This policy is strongly consistent with the goals of the National Health Information Network and should make future participation in that network as it continues to take shape much easier.

Several facilities and programs remain to be enabled with comprehensive EMR including the TB program, updates to the TCPH lab systems, the BCCCP program, and the Immunizations program. Expanding the existing vendor implementation at AHSC and PMC offers a streamlined path and minimal costs, though there are some tangential items that need resolution.

At the TCPH lab the absence of a fully electronic mechanism for ordering and reporting results presents an ongoing hurdle for activities at AHS and the TB program. It is strongly recommended that some basic level of laboratory information system be enabled so that at a minimum, results can be retrieved electronically using the HL7 lab standard. This also ensures that manual data entry is the responsibility of the lab which has better equipment and has personnel with more expertise on that type of data. Currently, results for AHS are in essence triple entered, with one entry occurring in the lab for its own audit purposes, the information is recorded again on a paper sheet to provide the results to AHS and then entered in to the computer again at AHS; this presents significant additional costs and opportunity for inevitable human error. Because AHS exports this data to other organizations at the state level, a single error in entry has the potential to disseminate many times.

One of the most easily derived benefits from comprehensive EMR is the automated calculation of health status alerts (also known as health maintenance items or clinical decision support). In many cases these items are driven by algorithms that include lab values. At a facility like AHS, because of the delays involved with manual entry, it is not possible to derive benefits from this type of tool. We also feel strongly that a facility like the PMC could utilize the TCPH lab for a number of specific test domains with implementation of some basic LIS and process updates that will result in substantially reduced long term costs and improved turn around time.

Available data strongly supports that an appropriate follow-on project to the completion of implementation at PMC is roll-out of the comprehensive EMR at the remaining facilities, the TB program, the BCCCP program and the Immunizations program as well as extension of the system at the AHS and PMC sites to support their complete work-flows and auxiliary sites (such as Arlington at AHS).

A single project can be specified to roll-out the remaining sites with the project beginning and executing concurrently, though with staggered live dates at each site to minimize

disruption.

Existing hardware is not likely to be able to meet all of the needs of all sites but does provide a base on which to add some additional equipment to provide an industry standard cluster technology to provide high redundancy, high performing delivery of the EMR system to all of the visits conducted by TCPH across all programs as well as to support reasonable future growth with modest additions.

Estimated costs for converting the current hardware implementation to a high reliability, high performance cluster most appropriate for operating a diverse enterprise as TCPH with very high levels of availability are under \$30,000.00 including a Storage Area Network (SAN) that will support scanning and digital archiving of most records. The SAN is especially cost-justifying by delivering savings against physical storage costs currently needed for many records. The existing Mobius system offers similar benefits to Tarrant County but lacks some critical features with respect to integration with the EMR and necessary indexes to permit medical context searching and linking (for example linking patient completed worksheet to an electronic clinical note or order).

The vendor estimates that it will take approximately 7-12 months from the beginning of a follow-on project to the point where all facilities can be activated with comprehensive EMR utilization that is consistent with "meaningful use" guidelines and well-positioned for inclusion in federal and state level efforts for interoperability and data analysis.